

24

DIAN NOTES
MONOGRAPHS



CHEROKEE AND EARLIER
REMAINS ON UPPER
TENNESSEE RIVER

INDIAN NOTES



MUSEUM OF THE AMERICAN I

AND MONOGRAPHS



HEYE FOUNDATION

HARRINGTON—CHEROKEE REMAINS

PL. 1



TYPICAL SCENE ON UPPER TENNESSEE RIVER

INDIAN NOTES AND MONOGRAPHS

EDITED BY F. W. HODGE

[*Miscellaneous series*]



[*no. 24*]

A SERIES OF PUBLICA-
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AMERICAN ABORIGINES

✓ CHEROKEE AND EARLIER
REMAINS ON UPPER
TENNESSEE RIVER

Mark Raymond
BY *(anal)*
M. R. HARRINGTON

NEW YORK

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HEYE FOUNDATION

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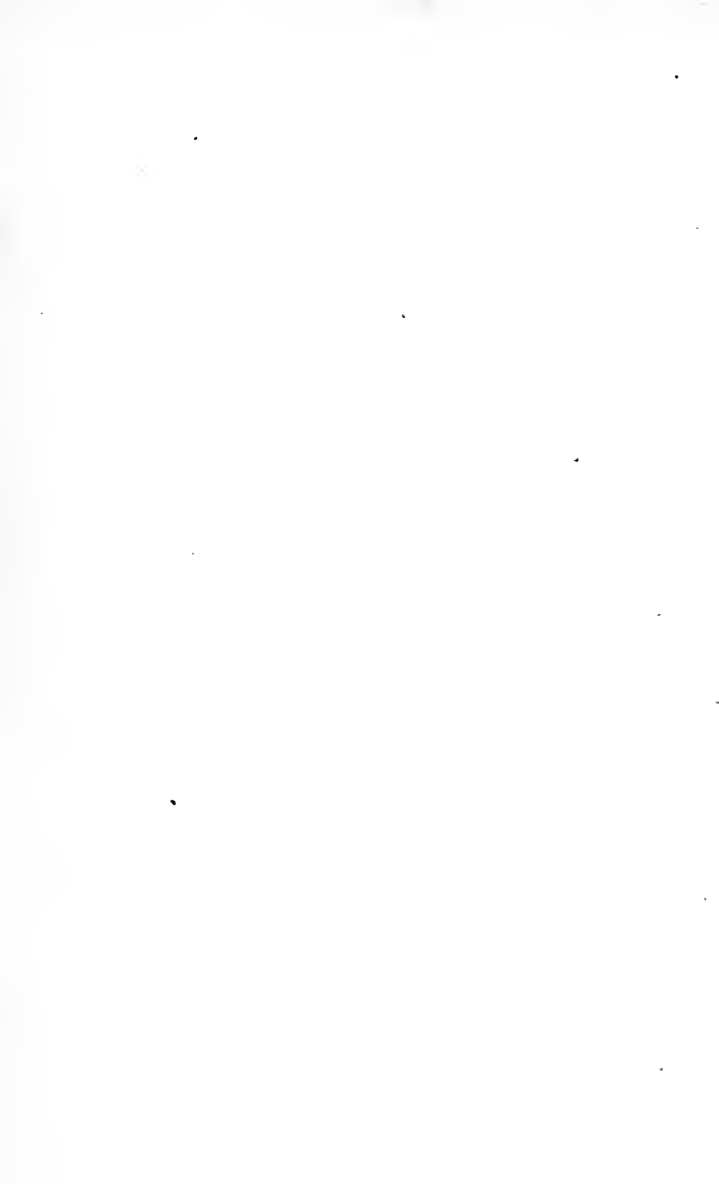
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CHEROKEE AND EARLIER
REMAINS ON UPPER
TENNESSEE RIVER

BY

M. R. HARRINGTON



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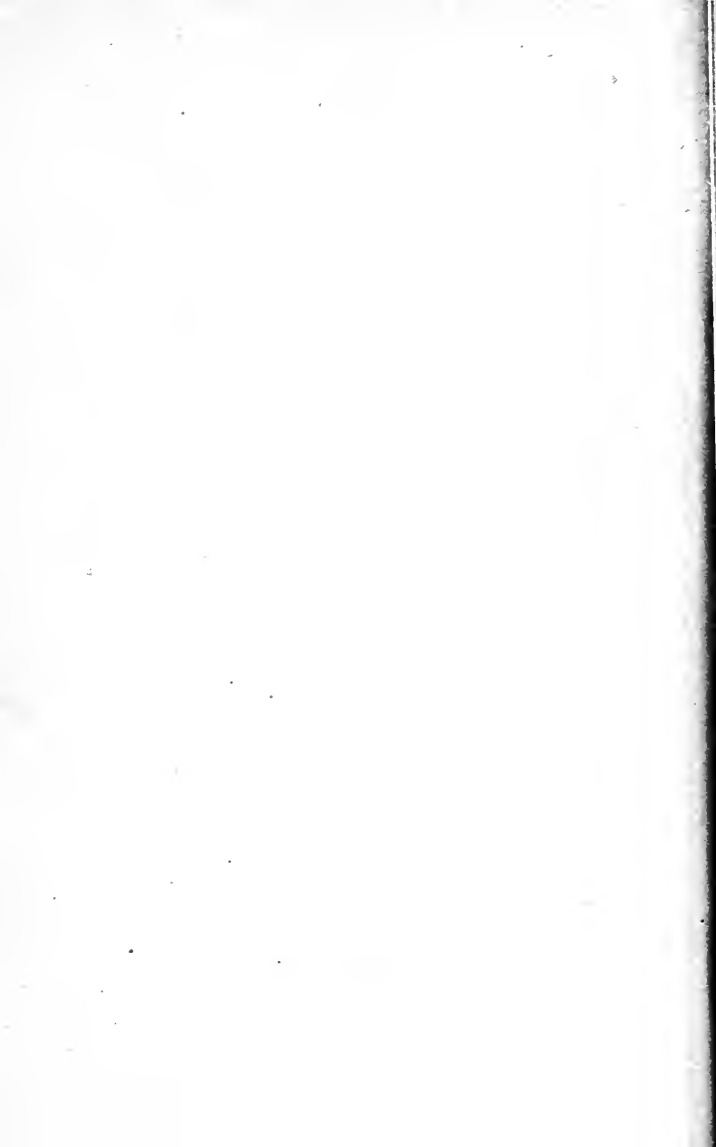
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FOREWORD

FOR the reasons presented in the introduction to this volume, it appeared important that a study of the archeology of Tennessee river between Nashville and Chattanooga should be made; and through the suggestion and aid of Mr Clarence B. Moore, a Trustee of this Museum, the expedition—the results of which are embodied in the present volume—was made possible. Although Tennessee river between the cities mentioned was reconnoitered for archeological sites, the actual work was confined to that part lying between its tributaries, the Little Tennessee and Hiwassee rivers, a distance of one hundred and two miles. The research along this particular part of the river was conducted by Mr Harrington,

INDIAN NOTES

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CHEROKEE REMAINS

assisted by Mr Charles O. Turbyfill, between August and December, 1919.

GEORGE G. HEYE,
Director

INDIAN NOTES

CHEROKEE AND EARLIER REMAINS ON UPPER TENNESSEE RIVER

By M. R. HARRINGTON

I. THE UPPER TENNESSEE VALLEY



FROM the aboriginal point of view, the valley of the upper Tennessee river (pl. 1) from the vicinity of Chattanooga eastward must have been unusually attractive as a place of habitation. Its climate, rarely severe in winter and seldom excessively hot in summer, was and is most agreeable. The great river itself furnished fish, mussels, and turtles in abundance, and also constituted not only a natural migration route, but a highway for ready transportation and trade between the tribes which at different times settled along it, and others to the south and

west. The fertile bottom-lands, through which the stream threads its meandering course, still yield abundant corn crops to the modern farmer, as they undoubtedly did to his Indian predecessors; and the once plentiful supply of game commenced to disappear only within the memory of men now living.

SIGNS OF ANCIENT OCCUPANCY

That the tribesmen appreciated these natural advantages is evident from the immense number of sites showing ancient occupancy which may be found scattered along the banks of the river and its tributaries, large and small, and on its islands—sites marked in some instances merely by a few stones broken by the action of fire, scattering flint chips, and occasional arrow-points; in others by beds of camp refuse or middens, including blackened earth, charcoal, ashes, decaying musselshells, the split bones of wild animals, numerous fragments of pottery, and frequent implements of stone and bone, whole and broken, besides the fire-cracked stones, chips, and

points just mentioned. Sometimes, especially in the district lying between Hiwassee island and Lenoir City, and from this point up the Little Tennessee river, these sites are also marked by mounds which occur singly or in groups.

FORMER EXPLORATIONS

As might be expected in a region showing such abundant traces of ancient occupancy, this district has been by no means neglected archeologically, having been the scene, at different times, of a number of expeditions, among which perhaps the earliest was the work undertaken by the Rev. E. O. Dunning, about 1869, for the Peabody Museum of Harvard and the Peabody Museum of Yale, and reported on by MacCurdy.¹ Another important exploration was made about 1887 by Mr J. W. Emmert for the Bureau of American Ethnology and was described by Thomas;² while the latest of importance was that conducted by Mr Clarence B. Moore in 1914 and 1915, and described by him in his *Aboriginal Sites on Tennessee River*.³

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INCEPTION OF THE PRESENT WORK

In his introduction to the work mentioned, Mr Moore states:

“Beginning at Hiwassee Island in eastern Tennessee, and continuing up the river to Lenoir City, a distance of 101 miles by water, in almost continuous sequence are groups of mounds, blunt cones in shape, few more than 10 or 11 feet in height and most much less than that. These mounds, erected for burial purposes, in all probability contain, so far as is known, but few artifacts in connection with the burials, which are but sparsely encountered in them. They have been largely dug into in a limited way, by people having an exaggerated idea of the value of Indian objects . . .”

Now, Mr Moore's visit to the region mentioned was a hurried one, owing to the rapid fall of the river at that time, which made it imperative for him to make a rapid survey only and to leave before the steamer from which the explorations were conducted should be stranded. Although the limited excavations made by him conveyed the impression expressed in the paragraph quoted above, certainty was lacking; hence to procure further data on the subject, the Museum of the American Indian, Heye

Foundation, undertook an archeological exploration of the region, the present writer being selected to conduct the excavations.

RESULTS OF THE WORK

While few of the specimens obtained during the course of our investigation represent types not already described and illustrated by Moore,⁴ MacCurdy,⁵ Thomas,⁶ and others, the additional data we secured bearing on the material culture of the "Overhill" Cherokee, on the builders of these particular mounds, on the relative ages of the different forms of interment, and on the succession of cultures in this part of the Tennessee valley, may perhaps prove of value. These will be considered at length in our final chapters; for the present it is necessary only to state that most of the artifacts recovered by the expedition, and the majority of the burials encountered in mounds and cemeteries, may undoubtedly be referred to the Cherokee who were found in full possession of this district by the first European visitors; that another and older class of burials is of doubtful origin,

but may, from the scant evidence at hand, be also Cherokee, but representing an earlier period; and, finally, that in some places appear indications of a different and possibly Algonkian people who preceded the Cherokee wherever their comparative antiquity could be studied.

EXPLORATION COMMENCED

Although the principal district to be explored lay from Lenoir City down-stream, it was considered advisable to start from Knoxville, as here there was more chance of procuring a suitable boat and of purchasing the necessary outfit and supplies. So the writer proceeded to Knoxville, arriving August 1, 1919, and meeting at this point Mr C. O. Turbyfill, also a member of the Museum staff, who accompanied the writer throughout the trip.

Considerable delay was encountered in obtaining a houseboat large enough to accommodate the party, yet not too large to maneuver with oars should occasion arise, in altering it to suit our purpose, in getting

our stock of provisions stowed aboard, and in engaging a man to serve as cook and general assistant; hence it was not until the morning of August 8 that we finally cast off our moorings, and, all hands at the sweeps, pulled our clumsy craft out upon the rolling yellow waters of the Tennessee.

It will not be necessary to recount in detail the incidents of that eventful trip, our adventures with baffling headwinds, rocks, and treacherous rapids, and numerous and vexatious delays. Sufficient it is to state that on the fourth day our cook decamped with all the money and valuables he could lay hands on, and several days were lost in trying to catch him and in hiring another man, so that we did not arrive at Lenoir City until August 16.

FIRST SITES VISITED

We examined the banks of the river from time to time en route, visited several sites partially explored by Mr Moore, among which the most favorable in appearance was the extensive village and burial site

on the right bank of the river at the head of Little River shoals,⁷ owned by Mr R. A. Sharp, and, to a lesser degree, a similar though not so extensive a site on Prater's or Maxey's island.⁸ Both were in corn at the time of our visit, and could not be worked.


CAVES AND ROCK-SHELTERS

We were also successful in locating several rock-shelters and caves in a high bluff on the left bank of the river, about a mile and a half below the little village of Louisville, but the largest and best of these had been thoroughly dug out, by whom or for what purpose we could not learn, and the others contained but scant traces of habitation, test-holes showing merely a few potsherds and split deer-bones, not enough to warrant further excavation.

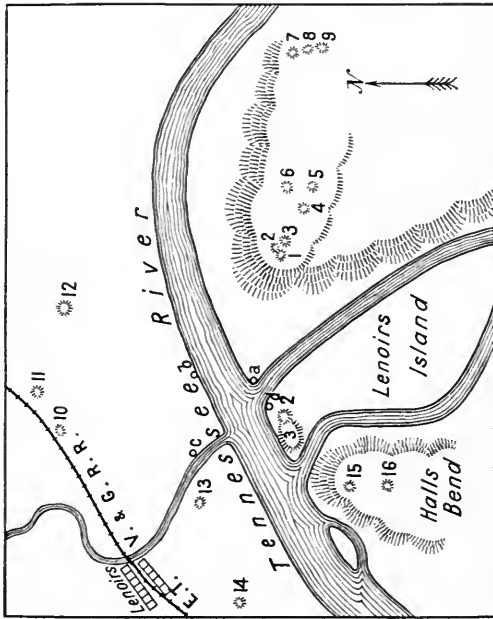
Another small shelter was observed just above the large spring on the left bank of the river, a short distance below Prater's Ferry. This showed abundant signs of occupancy in the form of decaying mussel-

shells and of flint chips and potsherds clearly visible on the surface, but as digging here would have muddied the waters of the spring, sole source of supply for several families, it was not attempted.

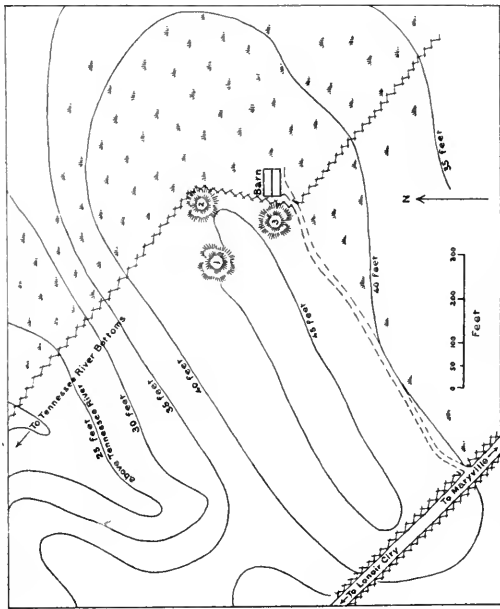
II. MOUNDS NEAR LENOIR CITY

HE account and the map (pl. II) of the mounds near Lenoir City in Loudon county, Tenn., published in the Twelfth Annual Report of the Bureau of American Ethnology,⁹ had prepared us to find at least nine mounds on the point between Little Tennessee river and the Tennessee itself (called Holston river at the time the report was published), and we were therefore disappointed to find but six remaining when we visited the place, of which three seemed to have been pretty well torn to pieces by previous diggers. A close examination of the remaining three, however, showed but slight traces of disturbance, and it was decided to attempt their excavation, if the owner would permit it.

We found the owner, Mr J. W. Bussell, of Lenoir City, and his sons, who have di-



MOUNDS NEAR MOUTH OF LITTLE TENNESSEE RIVER IN 1887
(After Thomas)



MOUND GROUP ON THE BUSSELL PLACE, LENOIR CITY,
TENNESSEE

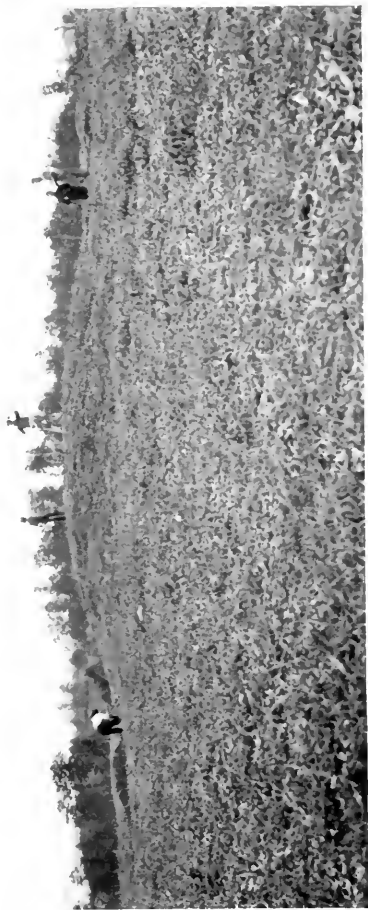
rect charge of the plantation, willing to have the mounds explored, providing we would agree to demolish and level them completely so that the field where they stood might be more easily cultivated. To this we acquiesced, and lost no time in commencing operations, with the help of Mr George Ivins, a resident of the vicinity, and several colored laborers.

The three mounds, as may be seen by our map (pl. III), stand in such manner as to mark the three angles of a triangle, on the eastern end of a knoll which, lying about three-quarters of a mile east of the mouth of the Little Tennessee, constitutes the highest point of the ridge dividing the two streams. They seem to correspond with numbers 4, 5, and 6 of Thomas's map, which we reproduce in pl. II. The Bureau explorer, who was Mr J. W. Emmert, says of no. 4 (our no. 3), that it was "42 ft. in diameter, 3½ ft. high, was excavated, and, like all the upland mounds in this section, consisted wholly of red clay. It contained neither skeleton nor relic," and also, "Nos. 5 and 6 [our 2 and 1] were opened and

found to consist as usual of red clay with a few human bones in each." Our excavations revealed the fact that his opening of the last two consisted in sinking a small shaft in the center of each, and that his "excavation" of the first means that he had driven a trench from one side of the tumulus to a point just beyond its center, and that the reason he found "neither skeleton nor relic" was because he did not carry his digging quite far enough, as will appear later.

FORM AND STRUCTURE OF MOUND 1

It must be confessed, however, that with the exception of this one mound, we too found the results disappointing. We commenced digging in the tumulus listed by Thomas as Mound 6, but called by us Mound 1 (shown in pl. iv), which was the largest, measuring about 56 ft. in diameter, with an almost circular outline, and although plowed over many times, still retaining a height of nearly 5½ ft. The digging had not progressed far when we discovered that the foundation of the tumulus consisted of a layer, reaching a depth of 2.2



MOUND 1, BUSSELL PLACE, LENOIR CITY, TENNESSEE



MOUND 3. BUSSELL PLACE, LENOIR CITY, TENNESSEE

ft. in the middle, of dark compact soil, resting on the solid red clay of the hilltop, capped with a mixed layer of yellowish-brown surface soil which composed the rest of the mound. In this, on a level about 8 in. above the dark layer just mentioned, were occasional patches showing the effects of burning, and the cap of surface soil combined more admixture of clay on the western than on the eastern side. Throughout were scattered bits of charcoal and flint chips. The arrangement of layers may be seen in the section (fig. 1), which shows them continuous from side to side as originally

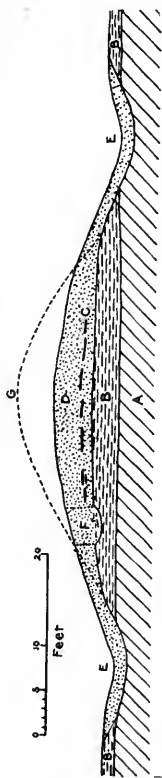


FIG. 1.—Section of Mound 1, Bussell place, Lenoir City. A, red clay subsoil; B, top soil; C, burned layer; D, mixed mound soil; E, ditch; F, grave no. 3; G, probable original form.

laid down, and not broken in the middle by the previous investigator's shaft, as we found them. The material for the mound seems to have come in part from a trench at the base surrounding it, except on the extreme northern edge—a trench still 12 to 14 in. deep in spite of years of plowing.

CONTENTS

Seven burials were encountered in this mound, all in very bad condition, distributed as shown in the plan (fig. 2), at depths which ranged from a foot below the surface to about six feet, one at this latter depth being found, for which a grave had been dug into the red clay subsoil to a depth of eight inches. As may be seen in fig. 2, three of the four skeletons whose positions could still be determined headed in a generally westerly direction, while one headed south, all being flexed on the right side. As for the other three, no. 1 showed bare traces only of bone; in no. 3 the remains had apparently first been cremated and the ashes and calcined fragments of the skeleton then

gathered and placed in the bottom of a pit in the mound, where we found them mixed with bits of charcoal and charred cane, burnt earth, flint chips, and a few rude,

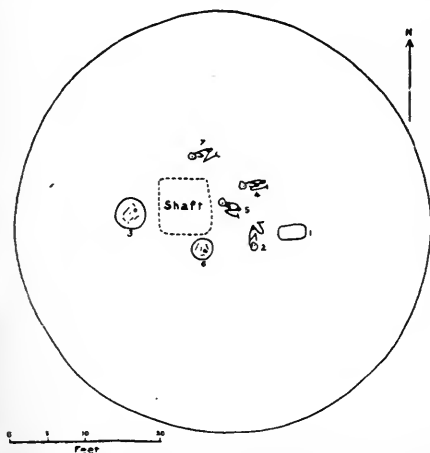


FIG. 2.—Plan of Mound 1, Bussell place, Lenoir City. The area marked "shaft" represents a former excavation.

irregular arrowpoints cracked by the heat; and no. 6 comprised the disjointed and broken bones of an adult and a child scattered over an area perhaps a yard square.

Only two of the burials, besides no. 3 described above, were accompanied with any artifacts whatsoever; these were no. 4, which had two triangular arrowpoints and several chips and flint fragments near the right shoulder; and no. 7 which had, in a similar position, not only two triangular arrowheads, but a carefully worked stone resembling a thick gorget (pl. LXXIX, *b*), yet without perforations; a broken flint drill, four or five unfinished points, and many flint chips. That there was probably at least one additional burial may be inferred from the fact that Thomas reports "human bones" in the shaft dug by Mr Emmert.

FORM AND STRUCTURE OF MOUND 2

The second mound (Thomas's no. 5) measured 54 ft. from east to west and 48 ft. from north to south, with a height of about 4 ft. above the surrounding field. Its structure differed slightly from that of the first, as seen in our section (fig. 3), for at the bottom, on the red hardpan (A) lay the original dark surface soil of the hill (B), undis-

turbed except where penetrated by two graves, one of which appears in the section (c), the mound proper being built of mixed soil (E), like no. 1. Unlike it, however, Mound 2 seemed to have been capped with a layer of clay, which, although plowed off from the top, may still be seen on the sides (FF). Like no. 1, it was nearly surrounded by a ditch (GG), from which at least part of the material composing it had been derived. The probable original contour is shown by the dotted line H.

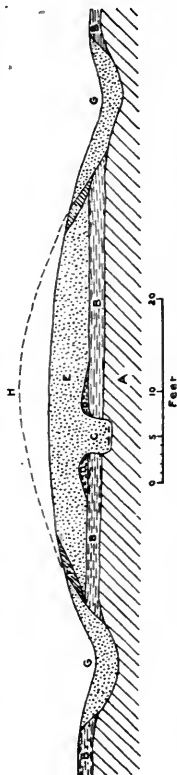


FIG. 3.—Section of Mound 2, Bussell place, Lenoir City. A, red clay subsoil; B, top soil; C, deep grave; D, dirt from grave; E, mixed mound soil; F, clay cap; G, ditch; H, probable original outline.

CONTENTS

The contents of this second mound was even less satisfactory, for not one of its ten burials was accompanied (with the ex-

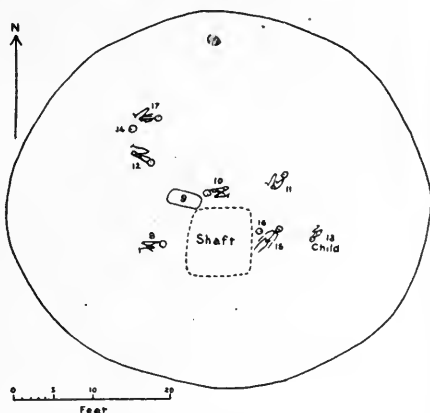


FIG. 4.—Plan of Mound 2, Bussell place, Lenoir City. The area marked "shaft" represents a former excavation.

ception of one arrowpoint) with relics of any kind. The arrangement of these skeletons may be seen in fig. 4, in which it will be noticed that there was no uniformity

of orientation, and that while some were flexed on the right side, as in the preceding mound, this was not general. Two of the burials were represented by skulls only. Depths varied from 1.3 ft., in the case of Burial 15, to the deep grave (9) which extended into the subsoil to a level 5.9 ft. below the surface of the mound. Although few traces of bone and no artifacts at all were found in this grave, it appeared to have been the first burial made in the mound—in fact, the grave had been dug down from the original surface through the top soil into the red-clay hardpan beneath, and the earth taken from it piled around the hole; then the body had been lowered into place and the mound raised over it without throwing back the original earth that had come from the grave (fig. 3, DD). The other graves seemed to have been dug down from the surface of the tumulus after its erection. As in the preceding mound, all the skeletons were found in very bad condition through decay, conveying the impression of considerable antiquity, and flint chips and bits of charcoal were scattered throughout.

Both mounds contained occasional sherds of quite thin, but rather poorly made, porous pottery, apparently fragments of an almost globular type of cooking-pot of which we afterward found complete examples in some of the later graves.

FORM AND STRUCTURE OF MOUND 3

The third mound of this group (Thomas's no. 4) measured 50 by 52 ft., with a height of 4.5 ft., and, like the others, was nearly surrounded by a ditch from which some, at least, of its material had been obtained (pl. v). Its structure was very much like that of Mound 2, except that, while there was no trace of a clay cap on the mound, there was a somewhat larger proportion of red clay mixed throughout the soil of which it was built.

CONTENTS

One grave, and one only, was found in this mound, which, like the others, we completely demolished; and as Mr Emmert, the representative of the Bureau of Ethnology, discovered none, it seems most

probable that there never had been more. This solitary burial lay on the red hardpan about eleven feet west and a little north of the center of the tumulus, and for this reason was missed by our predecessor's trench. Only parts of the skull and long-bones remained, but there was enough to indicate that the body had lain flexed to the right, and had headed southeast by east. On the spot where the breast had been, was a squarish ornament of native copper (pl. LXXXIII), about 5 in. in diameter, with a row of little bosses about the edge and a hole in the center. Beneath it lay a small piece of matting preserved by the copper salts (fig. 45). In all probability the mound had been raised to honor this single individual.

CONCLUSIONS

So few were the specimens found in these mounds that conclusions are difficult. The exclusive use of the triangular stemless arrowpoint, however, suggests the Cherokee, and the positions of the skeletons are not different from those observed in graves of a

later period that are certainly Cherokee. On the other hand, the copper ornament, resembling a specimen in the Joseph Jones collection, from Jackson county, Alabama, in the Museum of the American Indian, Heye Foundation, seems to connect these Indians with a culture which Mr William Edward Myer, of Nashville, regards as Siouan—a people who left many remains in central Tennessee and eastward at least as far as the vicinity of Chattanooga. These questions will be more fully considered in our final chapters.

III. MAINLAND VILLAGE-SITE

SITUATION

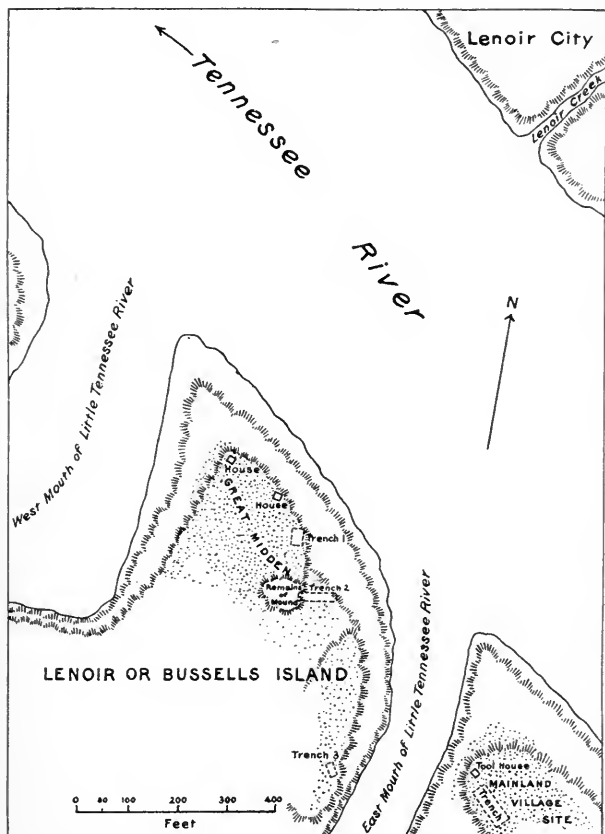
DURING our work in the mounds last described, we left our house-boat tied to the bank of Little Tennessee river a few yards above its mouth, and from this point walked to the excavations, our path crossing the bottoms and then leading up a steep but short incline to the first terrace. Here, on the very point of this terrace, lying between the Big and Little Tennessee rivers and adjoining one of Mr Bussell's barns, we often noticed, in passing, a considerable deposit of decaying musselshells and black dirt extending over perhaps half an acre. We realized, of course, that these things signified the site of an Indian village, but having seen many such in the neighborhood, we gave the matter little attention until we

AND MONOGRAPHS

noticed one evening that the place had been plowed during the day.

CEMETERY FOUND

Walking along a "dead furrow" to see whether the plow had turned out anything of interest, the writer suddenly came on a few minute but unmistakable fragments of human bone, and a little scratching with a trowel revealed the fact that the plow, running this time a little deeper than usual, had struck, and partly torn from its resting place, an adult skeleton, and, not far away, the skeleton of a child. This suggested the presence of a cemetery. As the weather was too dry to sow the oats for which the plowing had been the first step of preparation, Mr Bussell consented to let us excavate here. We laid the mound work aside for the time to take advantage of this opportunity, and called the place the "Mainland village-site" to distinguish it from the larger village- and burial-site on Lenoir's or Bussell's island, also part of the same plantation. The respective situations of both sites are shown in our map (pl. vi),



SITES ON LENOIR OR BUSSELL'S ISLAND AND ADJACENT MAINLAND, LENOIR CITY, TENNESSEE



MAINLAND VILLAGE-SITE, BUSSELL PLACE, LENOIR CITY, TENNESSEE

while the appearance of the site as the first two burials were being uncovered may be seen in pl. VII.

THE EXCAVATIONS

Starting a short distance southeast of these burials, a trench about 30 ft. wide was dug northwestward along the brow of the bluff, and was carried to a distance of 85 ft., encountering in all 22 burials; but was stopped at this point, at the owner's request, for a rain, opportune for him but not for us, had made possible the sowing of oats. On starting this trench we found a village layer, averaging about 20 in. in depth, but sometimes attaining as much as 30 in., composed as usual of blackened soil containing many decaying musselshells; stones broken by the action of fire; the split bones of wild animals; numerous potsherds; broken, unfinished, and occasionally perfect implements of stone and bone, and many fragments and chips of flint; while fragments of soapstone cooking vessels were abundant in the lower portion. The graves were found either within this layer or beneath

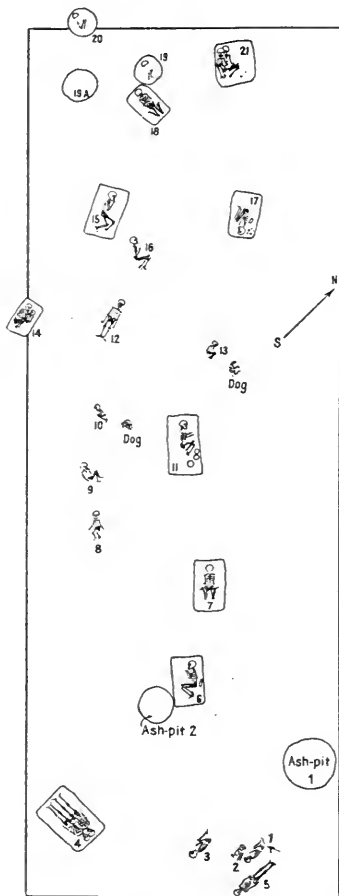
it in the underlying red-clay subsoil. Their distribution and the respective positions of the different skeletons may be seen in the plan (pl. VIII), in which the outlines of the graves, whenever these penetrated the subsoil and their form could be determined, are also indicated.

TYPES OF GRAVES

The graves resolved themselves into two distinct types, the most numerous being of the ordinary rectangular form (of which there were 19) which we later identified with the Cherokee culture, while the rarer, circular form, represented here by only three examples, was clearly very much older, for the earth filling them was much more compact than that filling the ordinary graves, and the bones were so far gone through decay that for the greater part they were barely traceable—a decided contrast to the others.

THE CIRCULAR TYPE

· In only one case was there enough of a skeleton left in a circular grave on this site to determine its position; it had been very



BURIALS FOUND IN THE EXPLORATION TRENCH. MAINLAND VILLAGE-SITE. BUSSELL PLACE, LENOIR CITY, TENNESSEE



TYPICAL CHEROKEE BURIAL IN RECTANGULAR GRAVE, MAINLAND VILLAGE-SITE,
LENOIR CITY, TENNESSEE

tightly flexed on its left side, heading westward, and had been forced down into a round, well-like hole only 2.9 ft. in diameter—a hole 2.7 ft. deep. Another of these graves, containing traces only of the skeleton, yielded two stemmed arrowpoints (pl. XLVIII, *i*), the only specimens found in any of the circular graves on this site; and it was these that first gave us the hint, substantiated by later work, that the circular form represents another culture; for all the arrowpoints found in the rectangular type of grave had been of the stemless, triangular variety.

THE RECTANGULAR TYPE

The 19 rectangular graves, the form of which was clearly traceable wherever they penetrated the subsoil (pl. IX), contained the remains of 22 individuals, 16 of whom were adults, including one aged person and one adolescent; of the others, two were infants and four older children (pl. X). Six of the adults were plainly women and several more may have been, but the sex could not be determined with certainty.

P O S I T I O N O F S K E L E T O N S

As to position, 16 of the skeletons were flexed (pl. ix), four lay extended on the back (pl. xi), and two had been placed face-down, with the thighs extended in the plane of the body, but the lower legs doubled back on them until the heels touched the hips—a unique form of burial in the writer's experience up to that time. This position may be seen in pl. xii.

Of the flexed skeletons, 11 lay on the left side, or on the back with the legs drawn up to the left, while the remaining five lay on the right side, or had their limbs flexed to the right. As to orientation, there seemed to be a decided preference for the northwest, 13 of the skeletons heading in this general direction, while only four headed southward, three westward, and two eastward. Depth of burial ranged from 6 in. to 4 ft., the majority lying from 2.7 to 3.7 ft. deep.

I N F E R E N C E S

The principal inferences that can be drawn from these data are two: That the Indians of this village (whom we later identified as



CHILD BURIAL. MAINLAND VILLAGE-SITE. LENOIR CITY, TENNESSEE



EXTENDED CHEROKEE BURIAL, MAINLAND VILLAGE-SITE,
LENOIR CITY, TENNESSEE

Cherokee) preferred the flexed position, usually on the left side, for their burials, and that for some reason, perhaps because it was toward Big Tennessee river, they laid their dead with their heads toward the northwest more often than in other directions.

MORTUARY DEPOSITS

Only four of the 19 rectangular graves were without accompanying objects of some sort; the rest were more or less well provided with mortuary offerings, which usually took the form of beads or ornaments, utensils and implements being found more rarely. It should be remembered, however, that the artifacts found with these burials are probably but a small part of the original offerings, all the objects of wood, basketry, skin, and feathers having disappeared through decay, together with the matting and woven fabrics.

INDIVIDUAL GRAVES

The first grave to show a mortuary deposit of special interest was no. 8, which contained the remains of a child about four

years of age, lying on its back, heading northwest, with the legs flexed loosely to the right, at a depth of 1.7 ft. About its neck and far down on its breast lay what had been a necklace composed of 106 large, round, shell beads, and 46 smaller ones of cylindrical form; back of the head lay another round bead, and about the knees 9 more. In addition to these, a pair of unusual, perforated, spool-shaped shell ear-plugs (pl. LXXXII, *c, d*) lay at the sides of the head, and a pair of long shell ear-pins on the abdomen (pl. LXXXII, *e, f*). These, of course, were not implements, but ornaments.

Even better provided with beads was an infant (Burial 10), which lay flexed to the right, headed west; for with it were found no fewer than 551 aboriginal shell beads of six different types. Most of these, 437 to be exact, were small and cylindrical, and resembled wampum (fig. 50); these were wrapped about the wrists, and with them were several disc-beads and a tiny *Margarella* shell, perforated for suspension. About the neck were a string of *Oliva* shells, and another composed of medium-sized,



BURIAL SHOWING HEELS FLEXED BACK AGAINST HIPS,
MAINLAND VILLAGE-SITE, LENOIR CITY, TENNESSEE



BURIAL WITH THREE POTTERY VESSELS, MAINLAND VILLAGE-SITE,
LENOIR CITY, TENNESSEE

round, shell beads combined with others of cylindrical type, but considerably larger than the wampum mentioned. Directly under the chin were found two perforated bear-teeth which seemed to have been hung on a separate thong or string (fig. 56).

The first utensils found on this site with burials appeared with no. 11, which was interesting for several reasons. The friends who dug the grave had evidently intended at first to bury the remains in an extended position, for they had prepared a neat rectangular hole "six feet by three" and 4.5 feet deep, but for some reason had finally decided to flex the body and had at last deposited it in this position, heading northwest, in one end of the long grave, as shown in pl. XIII. Just south of the knees lay a pottery vessel shaped to represent a frog (pl. LIX), and a cracked, decorated pot with handles (pl. LIII), while a similar but larger vessel lay at the feet. At the neck were found 39 large, round, shell beads.

The next grave of special interest was no. 14, which contained an adult flexed tightly on its left side, heading northwest

by north, at a depth of nearly 3 ft. Under its left upper arm lay a small disc of stone, while at the right armpit appeared a similar object made from a pottery fragment. Beneath the adult was the skeleton of a child, about eight or nine years of age, flexed on its right side, near whose neck appeared ten perforated *Oliva* shells which had once doubtless constituted a necklace.

A typically masculine mortuary offering was unearthed from Grave 17, which contained the skeleton of a man flexed on its left side, with hands near the face, heading south-southeast, at a depth of 3.7 ft.; for at the back of the head were found five triangular arrowpoints in perfect condition, another broken, and still another unfinished, all pointing toward the head of the grave; and near the middle of the back the carapace of a box-tortoise (pl. XIV) covered with a large musselshell and containing a neatly-made stone pipe (pl. LXXXIV, *a*) and part of the lower jaw of a dog or a wolf.

Perhaps the most interesting grave of all was the last one excavated, no. 21, which contained two adult skeletons, both head-



BURIAL 17, SHOWING POSITION OF TORTOISE-SHELL PIPE CASE, MAINLAND VILLAGE-SITE, LENOIR CITY, TENNESSEE



DOUBLE FLEXED BURIAL, MAINLAND VILLAGE-SITE,
LENOIR CITY, TENNESSEE

ing northwest. Below lay the remains of a man of mature age flexed to the left, the legs tightly folded, but placed at right angles to the spine, the left hand at the side, the right resting on the abdomen; while above him were placed the remains of a woman flexed to the right, with the hands near the face. There was considerable space in the bottom of the grave at the man's left—so much that it seems strange that she should have been buried above instead of beside him, unless she did not die as soon as expected, and the grave had to be filled and re-opened for her later. In the filling of the grave above the skeletons was found the bone fleshing tool or spatula seen in pl. LXXI, *a*, while at the man's feet, pointing toward the foot of the grave, were five triangular arrowpoints, all perfect but one, and at his right hip, but pointing toward the head, five more of even finer workmanship. Beneath his head, as seen in fig. 5, had been placed a fine ten-inch flint knife, shown in pl. LXXII, pointing southwest, and near the right elbow a long object of antler, its extremities badly rotted, but

still showing two perforations near one end. The woman had nothing but a few pearl and



FIG. 5.—Position of flint knife beneath skull, Burial 21 Mainland village-site, Lenoir City.

shell beads near the skull. That her consort may have met a violent death is suggested by the finding, with its point against



DOUBLE EXTENDED BURIAL, MAINLAND VILLAGE-SITE,
LENOIR CITY, TENNESSEE



BURIAL FACE-DOWN WITH HEELS FLEXED BACK TO HIPs,
MAINLAND VILLAGE-SITE, LENOIR CITY, TENNESSEE

the spine, of one arrowpoint which had pierced his abdomen, and another among the bones of the throat. Pl. xv shows the appearance of this burial when laid bare.

Interesting because of the position of the two skeletons it contained was Burial 4, illustrated in pl. xvi. As may be seen, they lay extended in close contact, heading east, at a depth of 2.8 ft., but the only accompanying relic was a perfect bone awl which stood point-upward beside the skull, to the left in the picture. The finding of skeletons face-down with feet bent back to the hips, has been mentioned, and is illustrated in pl. xvii, representing Burial 7, in which the celt protruding from beneath the left leg should be noted. Other burials were often accompanied with aboriginal shell beads, and occasionally with arrowpoints, bone awls, and other ordinary objects.

DOG BURIALS

Three dog burials were encountered, scattered among the graves of their masters, but only one was in sufficiently good condition to determine the position. This lay

curled up as if asleep, at a depth of a little more than a foot.

PITS

The so-called ash-pit, a familiar feature of ancient village-sites in some parts of the country, was not commonly met during our work in Tennessee; but two pits appeared on this site. One of these was a cup-shaped hole, its outlines easily traced, about $5\frac{1}{2}$ ft. in diameter and 3 ft. deep, filled with a homogeneous mass of black earth containing many animal bones and potsherds, and a few arrowpoints. No. 2, of similar form, measured only 3.7 ft. in diameter, with a depth of 2.5 ft., and, unlike the first, was filled with irregular layers of ashes which yielded many potsherds of varying types, including some fragments of the unique painted ware first found by Mr Moore near Chattanooga (fig. 30).

CONCLUSIONS


It was evident that all the burials found on this site, except the old round graves mentioned above, and most of the specimens

unearthed, should be attributed to one people, whom we finally identified as the Cherokee found in possession of this district by the whites; while from the circular graves we inferred that before the founding of the Cherokee village another people had used this point of land for burial, a people who occasionally at least used stemmed arrowpoints. Later work, especially that on the nearby Lenoir or Bussell's island, shed further light on the culture of the "Round Grave people," and furnished clues which point toward Algonkian influence, if not relationship. As to the period of use, we should have assumed the site to have been entirely pre-colonial, if we had not found with one skeleton a small jingler which seems to be made of sheet-copper of European origin, and brings the date of this burial at least up to the time of contact with white people. From the fact, however, that this was the only article not strictly native in character which we found, it may be inferred that, while the site must have been occupied either permanently or from time to time for many years before the

coming of the whites, to accumulate so much refuse, it was finally abandoned soon after their arrival.

Stopping work on this site at the owner's request, as before related, we finished the mound excavation which had been suspended, and then proceeded to Bussell's island, formerly known as Lenoir island, which lies directly in the mouth of Little Tennessee river, part of whose waters run to the east and part to the west of it. To do this, we had merely to pull our houseboat across the narrow eastern channel to the island, along which we coasted until we found a suitable place to tie her up again—certainly an easy and convenient way to move camp. The lower end of the island, as seen from down-stream, is shown in pl. XVIII.

IV. LENOIR OR BUSSELL'S ISLAND FORMER EXPLORATION

HE expedition of the Bureau of Ethnology, under Mr Emmert, who conducted its work about Lenoir City, gained its best results from two mounds which in Emmert's time (1887) stood on Lenoir (at present called Bussell's) island. Both have now disappeared, hence it is interesting to note that the first was "very symmetrical, the base almost an exact circle 100 feet in diameter and 6½ ft. high," and that it contained 14 skeletons, all of them in an extended position, according to the published plan, but that few aboriginal objects were found with them—merely some sheets of mica and a stone knife. One adult skeleton, heading in a direction different from the rest, had blue-glass beads about its neck, while a child, lying apart from the others.

AND MONOGRAPHS

was provided with not only glass beads but iron bracelets. The present writer thinks that both these may have been interred at a date considerably later than that of the rest of the burials.

The second mound, a tumulus 108 ft. in diameter and 11 ft. high, contained no fewer than 67 skeletons, of which all but two lay extended on the back. That only two of the entire number were flexed seems extraordinary in view of the fact that we found this to be the favorite position, and extended burial quite the exception, in all of our work near Lenoir City.

The present writer must disagree with Thomas's report on what he terms the "terrace," or "annex," to this mound, which he regards as intentionally artificial.¹⁰ Such a terrace still exists, it is true, but our investigations show it to be a great midden of village refuse, of gradual accumulation, and not artificial in the sense of being a mound constructed for a definite purpose. Mr Emmert was driven away from this deposit by high water before he had succeeded in doing much work, but he says of it:



TENNESSEE RIVER NEAR LENOIR CITY, LENOIR OR BUSSELL'S ISLAND IN CENTER



a



b

“ROUND GRAVE” BURIALS LENOIR OR BUSSELL’S ISLAND, LENOIR CITY, TENNESSEE

"In a single trench, 24 ft. long and 10 ft. wide, cut lengthwise in the center to the original surface, 9 skeletons were discovered. The first was that of a child at a depth of 18 inches; the bones were badly decayed and unaccompanied by relics of any kind. The other 8, all adults, were found at a depth of 7 feet, close to the bottom, and in a much better state of preservation than that of the child. With them were three whole pots and a few broken beads."

SCOPE OF OUR WORK

Our excavations on Bussell's island were three in number, the first, as our map (pl. VI) shows, made near the top of the slope of the great midden near its northern edge, some 200 ft. from its extreme point; the second, about 130 ft. to the south, running from the low ground east of the midden up its slope westward to the site of the mound excavated by the Bureau of Ethnology; the third, about 400 ft. south-southeast of the last, on a low ridge parallel with the east mouth of Little Tennessee river. These operations resulted in the discovery of 41 burials, representing two distinct types of interment, and in securing a very fair collection.

THE GREAT MIDDEN

The most remarkable feature of the site on this island was the great midden,—the formation that Mr Emmert considered an artificial terrace,—one of the largest deep Indian refuse deposits ever seen by the writer. Thomas's report gives the "height" as 8 ft., but the deepest places found by our party did not measure more than $6\frac{1}{2}$ ft., not counting graves and pits, and the average was less— $4\frac{1}{2}$ to 5 ft. But when one realizes that the deposit covered an area approximately 400 ft. long by 200 ft. wide (Thomas has it 570 by 380), its magnitude can be appreciated, and also the large population and the length of time required to produce it; for it is made of solid blackened earth, musselshells, and refuse, without a trace of the intermixture of raw soil such as one expects to see in a mound purposely erected, except at the point near its southeastern end where a real mound had been dug down by the Bureau expedition, as before related. As our digging proceeded, ash-layers of varying sizes and hearths

came to light at various levels, but no layers running continuously for any great distance; the deposit had been of gradual growth. And it was noticed that near the bottom the artifacts were of a character different from those found higher up: rather coarse pottery of a single type, a variety of arrowpoints, mostly of stemmed forms, and many fragments of steatite vessels, all of which offered a decided contrast to the varied and often ornate pottery, the arrowpoints of one type only (the triangular), and the absence of steatite sherds, noted above. These two distinct groups of objects seemed to point to the presence of two cultures, but unfortunately there were no distinct layers dividing one from the other; in some places the older group of objects might be found anywhere from the middle of the deposit downward; in other areas only within a few inches of its bottom. Evidently the surface configuration of the midden left by the earlier people does not correspond with that of the present one, laid down on it by the Cherokee.

The ancient village here must have been

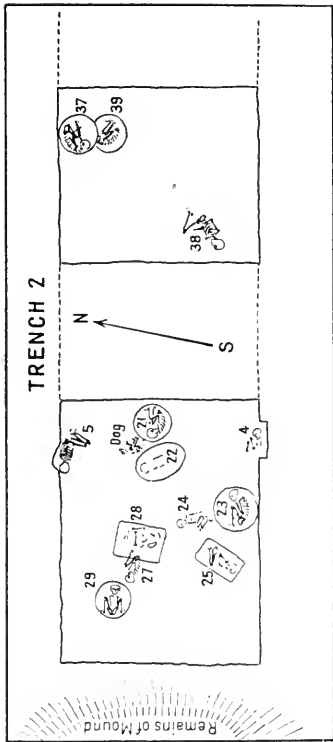
analogous to a modern railway-junction town, which is often more populous than its neighbors because of its advantageous position at the intersection of two lines of travel, insuring it more traffic; but in this instance the lines were not railroads but rivers—the Big and the Little Tennessee, both navigable for many miles by the Indian's most efficient freight carrier, the canoe. And it is probably to this, rather than to any other feature, that we may ascribe the selection of this island, by at least two peoples successively, as the site of an important village, and the final accumulation of the extraordinary Great Midden.

TYPES OF INTERMENTS

As at the Mainland village-site before described, the graves found here are divisible into two distinct classes; one of them the ancient round form, of which there were 9 examples, the other the ordinary type of grave, here attributed to the Cherokee, the outline of which, when traceable, was usually rectangular. Of these there were 32.



"ROUND GRAVE" BURIAL, LENOIR OR BUSSELL'S ISLAND.
LENOIR CITY, TENNESSEE



TRENCH 2, LENOIR OR BUSSELL'S ISLAND, SHOWING ARRANGEMENT OF BURIALS

THE ROUND GRAVES

The "round graves," as the name implies, were almost circular in outline (one of them was slightly oval), and were very small, usually only 2 to 3 ft. in diameter. This necessitated folding the corpse as compactly as possible by flexing the legs tightly against the chest, often breaking several bones in the process, and forcing the head forward and downward between the knees. The bodies were crowded into the grave so as to lie on the side, as a rule (pl. XIX, *b*; XX); but in two instances they lay on the back (pl. XIX, *a*). Fortunately the skeletons, although far gone in decay and so brittle that but few of them could be preserved, were in better condition than those found on the Mainland village-site, and for this reason we were enabled to take the photographs here reproduced to illustrate this unusual form of interment.

All the round graves were found in the otherwise undisturbed subsoil beneath the Great Midden, giving them a present depth of from 4.2 to 8.9 ft., but probably when

dug none of them was more than 4 ft. deep, and most of them were considerably less. Certain it is that they can be traced but a short way up into the midden, as shown in fig. 6, *a*, *b*, and equally certain it is that the earth filling them never contains

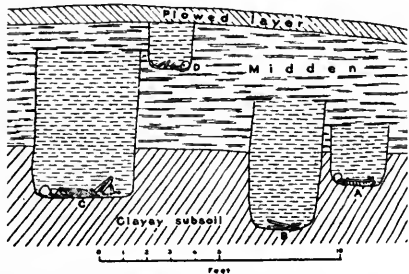


FIG. 6.—Diagrammatic section of Great Midden, Lenoir or Bussell's island, Lenoir City, showing levels of origin of the two types of graves. A, earlier round grave; B, later round grave; C, prehistoric rectangular grave; D, historic rectangular grave.

anything in the way of pottery except the simple ware characteristic, as before noted, of the lowest levels of the Great Midden, and the equally characteristic fragments of steatite vessels; and that the few arrow-points found are usually of the stemmed

variety. That they are older than the rectangular (here Cherokee) type of grave can not be questioned.

The "Round Grave people" seem to have preferred to orient their burials in a westerly direction, six out of the nine heading west, northwest, or southwest, and the remaining three heading east. Four of the nine lay on the right side, two on the left, and two on the back; while the position of one could not be determined.

MORTUARY DEPOSITS.—Mortuary deposits were few and sparse in the round graves, but Burial 6 had a small bone awl on the right shoulder; Burial 23 a stemmed arrowpoint on the left upper arm; Burial 29, the only child's skeleton found, had 14 perforated animal teeth, mostly of the lynx, about its skull and along its right arm (fig. 24); while Burial 39 had a curved tablet of bone or of antler with two perforations (fig. 23), perhaps a "bracer," near the right arm.

The deepest of these graves (no. 22), which measured 8.9 ft. from the present surface and contained traces only of bone, was interest-

ing in an unusual way, for its slightly plastic clayey walls still retained imprints of the hands and the naked limbs and bodies of its diggers, clearly seen when the looser filling was removed with care. It was traceable about two feet up into the deposit, showing that the midden of the "Round Grave people" must have had a depth of two feet at this point at the time the interment was made.

THE RECTANGULAR GRAVES

A tabulation made of the 32 rectangular or Cherokee graves discloses the following facts: that all of them contained single skeletons except one, which yielded three; that of these 34 individuals, 23 were children under ten years of age and eight of these infants; that four of the remaining 11 adults were plainly women, and several others may have been; that evidently we had not found the place or places where most of the adults were buried; perhaps the mounds explored by the Bureau of Ethnology had contained most of these. For this reason it seems extraordinary that all but 2 of the 81

skeletons which Emmert found in these mounds are recorded as having lain in an extended position, whereas of our 34, apparently representing the same people and period, and found in the immediate vicinity, every one was flexed except 2 whose position, due to decay or to previous disturbance, could not be determined. Hence, even these may have been flexed.

As at the Mainland village-site, the majority of the skeletons, 19 to be exact, lay on the left side; but here the west, with 12 individuals, seemed to have been the favorite direction for orientation, and 20 (including these) headed in the directions embraced in the quadrant from west to south. Their positions may be seen in the plans of the three trenches (pl. XXI, and figs. 7 and 8).

MORTUARY DEPOSITS.—Fourteen of these skeletons were accompanied with objects of one kind or another, but these offerings displayed neither the quantity nor the variety seen at the Mainland village-site. A few graves, however, deserve special mention, of which no. 34, found in Trench 3 on

a knoll some distance from the Great Midden, is perhaps the most interesting. This con-

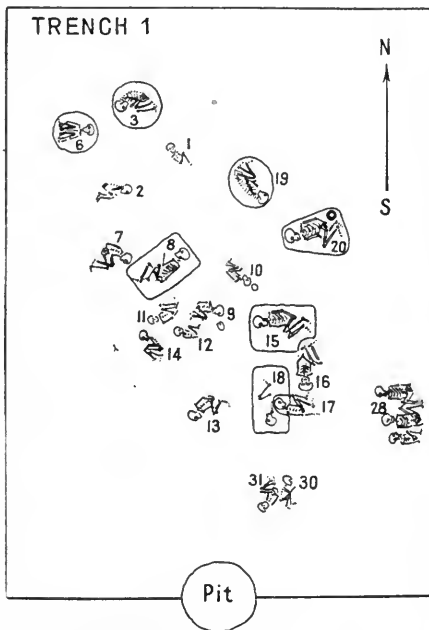


FIG. 7.—Burials in Trench 1, Lenoir or Bussell's island, Lenoir City.

tained, at the depth of 5 ft., the badly decayed bones of a half-grown child flexed on the left side, heading southwest, above

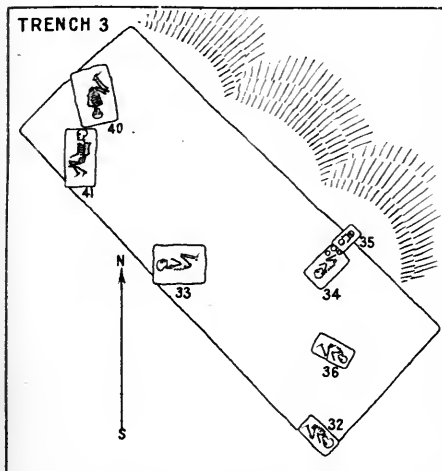


FIG. 8.—Burials in Trench 3, Lenoir or Bussell's island, Lenoir City.

which, perhaps 10 in. above the bones, were the traces of a series of cedar sticks, laid crosswise of the grave, some six inches apart. In the northern corner of the grave

stood a neatly-made red earthenware water bottle (pl. LVIII), a vessel of unusual form (pl. LVI), and a small cooking-pot of ordinary type, with handles. Cut into the foot of this grave was another, no. 35, only 3.2 ft. deep and containing the remains of an infant, together with a rude effigy bowl representing a bird (pl. LX, *a*).

Another good find of pottery was made with Burial 20, that of a woman flexed to the right and headed west, at a depth of 4 ft.; for near her hips, as seen in pl. XXII, stood a pottery vessel of a style resembling one of the western Iroquoian types (pl. LIV), containing a small pot with handles; and inside this again a tiny vessel, provided with holes for suspension (fig. 32). Although this woman was probably a Cherokee, like the rest, her grave, instead of being neatly rectangular, was somewhat pear-shaped. Other graves of the older Cherokee group contained an occasional vessel, or a few shell beads, and the like; and one, a child's, had a large pottery disc (fig. 34) resting on its head; and still another, also a child's, a



CHEROKEE SKELETON WITH THREE NESTED POTTERY VESSELS. LENOIR OR
BUSSELL'S ISLAND, LENOIR CITY, TENNESSEE



FRAGMENTS OF LARGE POTTERY VESSEL IN SITU. LENOIR
OR BUSSELL'S ISLAND, LENOIR CITY, TENNESSEE

pottery disc, a stone disc with a cross marked on it (fig. 63, *a*), and a tiny pot.

BURIALS OF THE HISTORIC PERIOD

The preceding graves all appeared to be prehistoric: at least, nothing was found in them to indicate contact with Europeans, while some must be very old, judging from their low level of origin in the midden (fig. 6, *c*). Nevertheless, we found five, all those of infants or of young children, that undoubtedly belonged to the historic period, for not only were their bones in a better state of preservation than most of the others, and their graves traceable to the present surface (fig. 6, *d*), but they were amply provided with glass beads made by the whites, and in two cases with beads and conical jinglers or ornaments made from sheet-copper or brass, perhaps from pieces of kettles (fig. 54). One of the latter had also an aboriginal circular gorget of shell (pl. LXXXII, *b*), the other some bracelets of iron, some red paint, and a pearl bead.

It is interesting to note in this connection that the Bureau of Ethnology explorer also

found in his mounds on this island several skeletons accompanied with glass beads and iron bracelets. Evidently the site was occupied up to and into the historic period.

DOG BURIAL

One dog burial, and one only, came to light here, lying at a depth of 4.3 ft. in Trench 2, on the left side, head toward the north. It must have belonged to the Cherokee period of occupancy, for the grave had been dug from a level well up toward the top of the Great Midden.

PITS

Two pits were noted during our excavations on the island, one apparently belonging to the "Round Grave people," the other to the Cherokee. The first, as may be seen in the plan of Trench 1 (fig. 7), lay to the south of the group of burials, and extended to a depth of 5. ft. 8 in. below the present surface, penetrating the subsoil fully 20 in., with a diameter of about 4 ft. It could not be traced far up into the midden, however,

and this, with the fact that it yielded only the simple pottery and stemmed arrow-points characteristic of the lower levels, led us to attribute it to the earlier people. It also contained numerous split deer-bones, and, most interesting of all, part of an especially fine gorget of slate (fig. 21). This was much finer in workmanship than anything of the kind we saw or found from the Cherokee, which led to the reflection that, if this was indeed what it appeared, a pit of the "Round Grave people," these latter, in spite of their simple pottery, must have been capable of superior work in stone.

There was no doubt, however, about the classification of the second pit found on low ground to the east of the Great Midden near the beginning of Trench 2, for it took its origin from the surface and contained a number of typical Cherokee potsherds in addition to its chief contents—the greater part of a very large pot (pl. I), lying crushed on its bottom (pl. XXIII), at a depth of 2.8 ft. On the sherds lay a stone weighing perhaps 20 lbs.

GENERAL DIGGING

From our general digging, particularly in the upper levels of the Great Midden, we gathered a very fair collection of pottery fragments of many styles, and implements of stone and bone, similar in most respects to our collection from the Mainland village-site. With the exception of the comparatively few articles found on the lower levels, and a few painted potsherds representing the "Second Culture," to be discussed later, the relationship of which to the Cherokee is doubtful, these specimens, in the writer's opinion, may be attributed to the Cherokee. If there were other relics of the "Second Culture" besides the polychrome sherds, they could not be distinguished from those of the Cherokee.

CONCLUSIONS

To summarize our conclusions, we find evidence that two aboriginal peoples (and perhaps three) have occupied Lenoir or Bussell's island; that the earliest (whose traces were noted) cramped and squeezed

INDIAN NOTES

their dead into the round graves of small diameter, employed pottery of a rather coarse and simple type and also vessels of soapstone, used arrowpoints of the stemmed types largely, if not exclusively, made some bone implements such as awls and bracers, and perforated animal teeth for use as ornaments. This is practically all we know about them, unless we admit the evidence of the fine gorget fragment that they were capable of unusually good work in rubbed stone, and add that they left a midden on the island, in some places at least two feet in depth.

A few painted sherds may suggest another culture following the first, before the arrival of the latest people, whom we judge to have been the Cherokee (the evidence will be produced later). In contrast with the customs of the "Round Grave people," the Cherokee buried their dead, as a rule, rather loosely flexed, lying on the side, in rectangular graves; employed, especially in later years, a great variety of pottery forms, coarse and fine, but no steatite pots at all; used arrowpoints of the triangular

form exclusively, made a variety of bone implements which fall into very definite types; and, although far from the sea, were especially fond of using beads and other ornaments made from ocean shells. This, of course, implies considerable intertribal trade. They occupied the island well into historic times, until they could obtain glass beads, sheet-brass or copper, and iron, and when they departed left not only two mounds but an enormous midden which to this day measures 4 to 6 ft. in depth, 400 ft. long, and about 200 ft. wide. The lower part of this midden, however, as before indicated, was already in existence when they arrived.

We left Lenoir or Bussell's island with regret, for we knew that all the work done by the Bureau of Ethnology, in addition to our own, was but a scratching of the surface, and that we were abandoning a treasure of specimens and information. But the season was far advanced and we had other sites to visit; consequently, on a rainy morning in October, we loosed our moorings and floated down the river.

V. MOUNDS NEAR RHEA SPRINGS

REALIZING the lateness of the season, we selected, from the almost innumerable sites along the river, two of the most important recommended by Mr Moore, and resolutely closed our eyes to all the rest. These two were: the Upper Hampton place, near Rhea Springs in Rhea county, almost directly across the river from Euchee; and Hiwassee island, in Meigs county, at the mouth of Hiwassee river below Dayton, Tenn. Circumstances made it advisable to explore the latter first, but as the Upper Hampton place comes next geographically to the sites we have been considering, we shall give it priority here.

This property is the easternmost of a number of farms, at different points along the Tennessee, that had been owned by the late Walter Hampton of Chattanooga, but

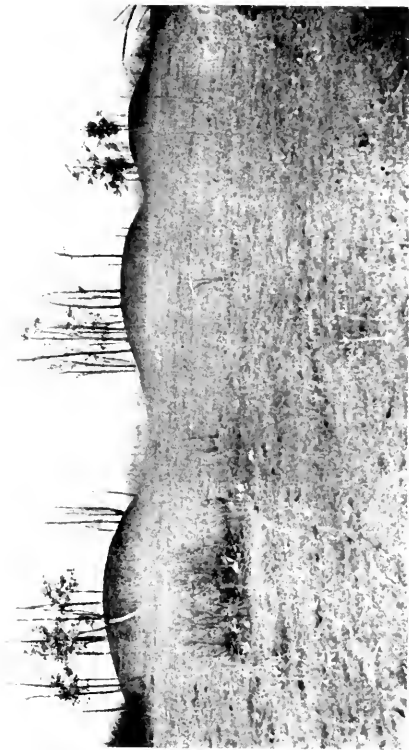
at the time of our visit the lessee, Mr Charles G. Butler, was in charge. He kindly granted us permission to open such mounds as we desired. To this gentleman and to Mr J. R. Wilson, owner of a nearby plantation, who entertained us most hospitably at his home during our entire stay, the writer takes occasion to express his grateful appreciation.

THE MOUND GROUP

The Upper Hampton place group, so named by Mr Moore,¹¹ who explored one of the tumuli, consists of five mounds whose comparative size and respective situations may be seen in the appended map (fig. 9), standing on the edge of the bluffs overlooking the wide bottoms of Tennessee river which here makes a great bend, and in plain sight of the stream itself (pl. xxiv). They form one end of a series comprising about twenty distinct mounds found in groups (pl. xxv) and singly from this point for the distance of a mile or more downstream, along the bluffs which cross the adjoining Lower Hampton place.



TENNESSEE BOTTOMS, FROM MOUND GROUP, UPPER HAMPTON PLACE,
NEAR RHEA SPRINGS, TENNESSEE



PART OF LOWER HAMPTON PLACE MOUND GROUP. NEAR RHEA SPRINGS, TENNESSEE

Although at the very edge of an open field, these mounds have never been under cultivation, but are still covered with heavy timber, as shown in pl. XXVI, an especially large oak standing directly on no. 2, the

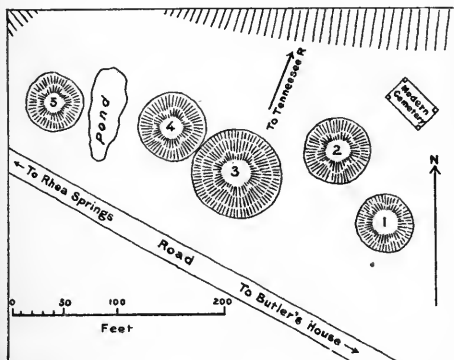


FIG. 9.—Mound group, Upper Hampton place, near Rhea Springs.

tumulus we chose for exploration. We naturally thought that the earth used for building these structures must have come from the pond-hole shown in the map, but were informed by the neighbors that this had been a clay-pit from which material

for brick-making had been dug within recent years. In spite of this, it is possible that the hole was started by the Indians.

PREVIOUS EXPLORATION

None of the mounds of the Upper Hampton group showed traces of extensive previous digging, except no. 1, which was investigated by Mr Moore, and is reported on by him in his *Aboriginal Sites on Tennessee River*.¹² The measurements of this he gives as: diameter of base, 50 ft.; height, 6 ft. 4 in.; and writes of it:

“Selecting the smallest mound for investigation, a hole about 11 ft. square reached the base line at a depth of 4 feet 4 inches, showing that the mound had been increased in height, presumably by the washing away of adjacent ground, which could easily be the case, the mound being on a slope.

“Not far from the center of the excavation, on the dark material marking the original surface of the ground, were remains of a skull, no other bones being present. With the skull was part of the columella of a conch-shell.

“At one corner of the excavation were the remnants, here and there, of bones, which from their position, indicated that they had formed part of a skeleton lying at full length. Near the



MOUND GROUP, UPPER HAMPTON PLACE, NEAR RHEA SPRINGS, TENNESSEE



MOUND 2, UPPER HAMPTON PLACE MOUND GROUP, NEAR RHEA SPRINGS, TENNESSEE

skull were two parts of the columella of a conch; two similar ones had been placed near where the left shoulder had been."

MOUND 2

We selected for investigation the next mound to this (pl. xxvii), which, as stated above, was Mound 2, recorded by Moore as being 55 ft. in diameter and 10 ft. 2 in. high. It was made of reddish and yellowish upland surface soil, with a little mixture, now and then, of the bright-red clay which forms the subsoil here, occasional decomposed musselshells, scattered flint chips, bits of charcoal, and a few arrowpoints, strangely enough of the stemmed type.

CIRCULAR STONE GRAVES.—Six burials only were found in this mound, arranged as shown in fig. 10, but two of these were of a decidedly unusual character, different from anything found by us in the region. They were circular stone graves of diminutive size, situated just beneath the surface, one of them, Burial 2 (pl. xxviii), composed of twelve small limestone slabs about 12 or 14 in. long and 8 in. wide, set

up on edge and overlapping in such a way as to form an almost circular cist 1.4 ft. in diameter, with no evidence of a cover, but furnished with a bottom made of two sim-

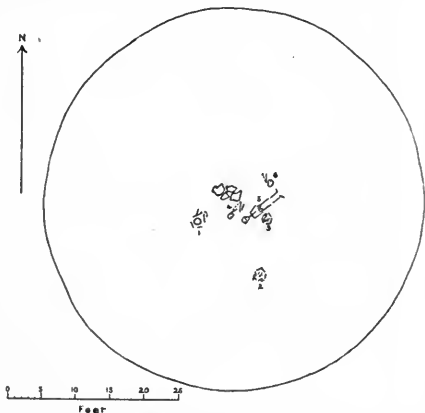


FIG. 10.—Plan of Mound 2, Upper Hampton place, near Rhea Springs.

ilar slabs. This contained parts of the skull and other bones of a young adult, in very bad condition from decay, and without accompaniments—obviously a “bone burial,” a disjointed skeleton brought here for



CIRCULAR STONE GRAVE, MOUND 2, UPPER HAMPTON PLACE, NEAR RHEA SPRINGS, TENNESSEE



EXTENDED SKELETON IN MOUND 2, UPPER HAMPTON PLACE, NEAR RHEA SPRINGS,
TENNESSEE

interment after the flesh had disappeared. The skull had been placed at the eastern side of the cist. Burial 3 had been placed in a similar but less neatly-made cist, composed of eleven instead of twelve slabs, and like the preceding had evidently been a "bone burial," also without mortuary objects. Judging by the fragmentary jaw and other bones, the remains were those of a person advanced in years.

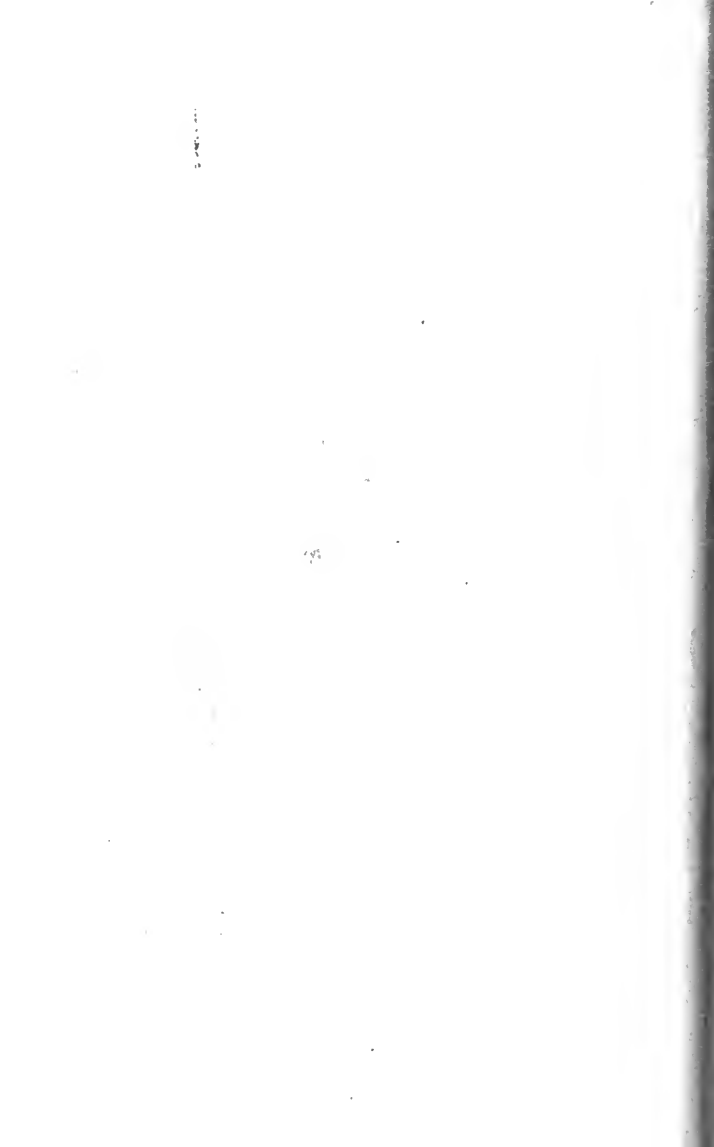
OTHER BURIALS.—Of the remaining burials the most interesting was no. 5, an adult lying extended on the back, heading west-southwest, at a depth of 7.5 ft., near the middle of the mound. Near the left shin were 20 triangular arrowpoints, some of them of unusually fine workmanship, for the greater part pointing toward the foot of the grave as if they had been attached to the arrow-shafts when buried; while to the left of the skull lay a rectangular block of stone, apparently purposely placed there, but unworked. Many of the bones had disappeared. The remainder were in bad condition, but still enough of them were left to photograph (pl. xxix). The

remains lay in a bed of ashes somewhat larger than the skeleton and some 12 in. thick; and this, together with the fact that no disturbance was visible in the mound soil above it, gave the impression that the body had not been buried in a grave like the rest, but that the mound had been raised over it.

Other burials, none of which were accompanied with mortuary offerings, were no. 1, a "bone burial," apparently of an adult, lying just beneath the surface; no. 4, the remains of a child of about twelve years, lying flexed on the right side, heading southwest, at a depth of 4 ft.; and no. 6, the skull and bones of the body of an aged woman, lying on the right side, heading south, at a depth of 5.5 ft., but lacking the legs. These were in a layer of earth, 3 or 4 in. thick, that had been burned bright-red, and the skull was slightly charred. No other bones were found, but just north of Burial 4 lay four slabs of limestone arranged as if to form the top or the bottom of a stone grave, as may be seen in pl. xxx.



ARRANGEMENT OF STONES, MOUND 2, UPPER HAMPTON PLACE, NEAR RHEA
SPRINGS, TENNESSEE



REMAINING MOUNDS

Time was lacking to explore the remaining mounds of this group, one of which in particular looked especially favorable on account of the numerous stone grave-slabs protruding from almost every part of it. This was no. 3, a fine conical example about 15 ft. high and 85 ft. in diameter, which would have taken at least several weeks to examine properly. The others are more ordinary in appearance, no. 4 being 9 ft. 8 in. high, with a diameter of some 60 ft.; and no. 5, 6 ft. 9 in. high and 55 ft. in diameter.

CONCLUSIONS

Judging by the condition of the bones found by both Mr Moore and the writer's party in the mounds of this group, and from general appearances, these mounds, like the upland mounds at Lenoir City, seem considerably older than the obviously Cherokee burials, even the prehistoric ones, found in the Bussell Place cemeteries and later in the mounds on Hiwassee island. Yet the only artifacts found with a burial, the fine triangular points, seem to be of

Cherokee type, and the finding by Mr Moore of conch columellæ with a burial in another mound here suggests the fondness of this people for imported ocean shells. These characteristics were shared, however, by at least one other people farther down the river, who also partially burned the bodies of some of their dead after laying them in the graves, as was observed in this mound, but whose connection with the Cherokee is doubtful.

VI. FIRST WORK ON HIWASSEE ISLAND



HIWASSEE, formerly known as Jolly's island, is situated in Meigs county, Tenn., its position in the Big Tennessee at the mouth of the Hiwassee being similar to that of Lenoir or Bussell's island at the mouth of the Little Tennessee. The nearest town of importance is Dayton, across the river in Rhea county, about 6 miles distant. It is the property of Mr and Mrs P. D. Benham, who kindly granted us permission to excavate; and the writer wishes to take this opportunity to express his grateful appreciation not only for this favor, but for their cordial assistance in many ways and their generous hospitality to the members of the expedition.

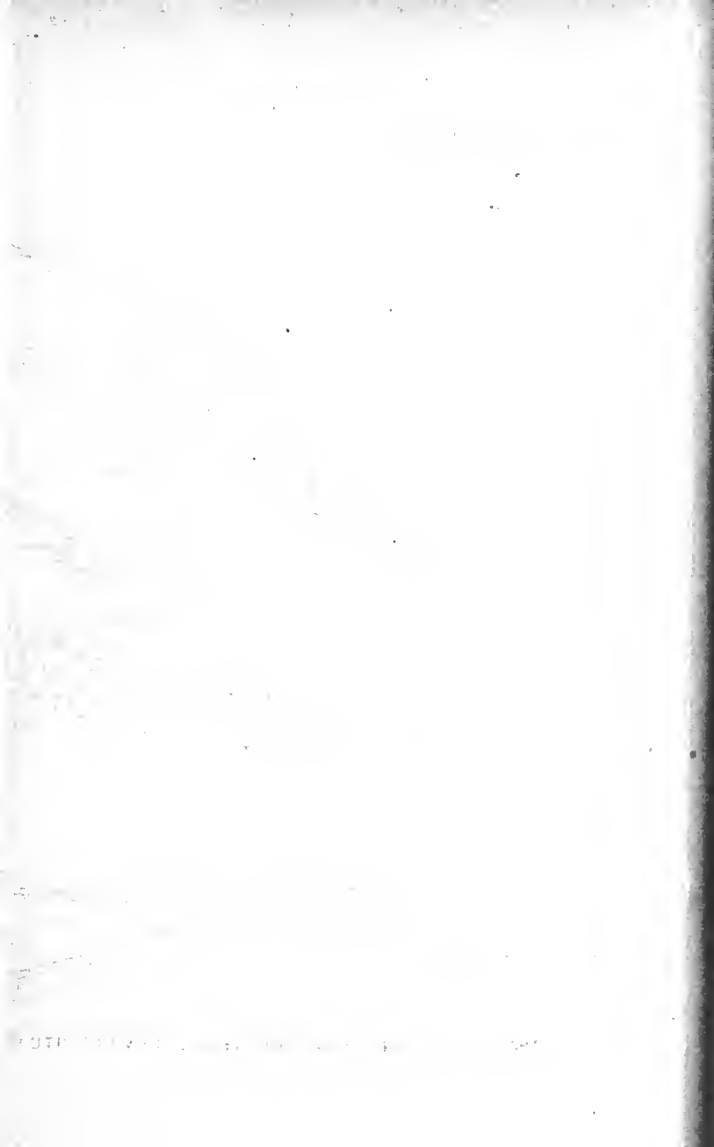
GENERAL CHARACTER OF THE ISLAND

The island is roughly triangular, as may be seen by the accompanying map (pl. xxxi), with a length of nearly two miles

on Tennessee river, a width of a little more than a mile, and an area of 740 acres. The surface, which is fairly level, with a few slight ridges, has an elevation sufficient to be out of reach of all but the highest floods on the river; and even in these the ridges are rarely submerged. In fact, Mr Benham has heard of but one occasion, about 1867, when the entire island was under water, and even then the great Indian mound at the upper end was not covered, but afforded a place of refuge for the inhabitants and their live-stock. As is the case with Lenoir or Bussell's island, the position of Hiwassee island at the confluence of Hiwassee and Tennessee rivers, and consequently at the junction of two aboriginal travel routes, is probably responsible in large measure for its former importance to the Indians as a place of residence, and consequently for the abundance of its ancient remains today.

HISTORY

Historically, the island possesses an unusual interest as the former home of John



Jolly (Ahu'lude'gī),¹³ the Cherokee chief who was the special friend and adopted father of Gen. Sam Houston, and whose name was long applied to it. This affords us a definite basis for identifying the latest aboriginal culture of the island, which bears evidence of contact with the whites, as Cherokee, and this in turn helps us with other problems, as will appear. Although this locality falls well within the Cherokee domain, as later established,¹⁴ Haywood cites a tradition to the effect that while this tribe found no other Indians up-stream on the Tennessee when they first occupied the country, there were some Creeks living near the mouth of the Hiwassee at that time, and that the latter Indians claimed all the streams to the southward. From these historical data, the importance of establishing the identity of the last Indian inhabitants of the island is evident.

Of Houston and his relations with Jolly, Mooney¹⁵ says:

"Being of an adventurous disposition, he [Houston] left home when 16 years old, and, crossing over the [Tennessee] river, joined the

Cherokees, among whom he soon became a great favorite, being adopted into the family of Chief Jolly, from whom the island at the mouth of Hiwassee takes its name."

Jolly removed to Arkansas from his home at the mouth of the Hiwassee in 1818,¹⁶ since which date there have probably been only occasional visits to the island by the Indians. One of these visits took place as late as 1907, when an elderly Cherokee came to the island, apparently merely to see how it looked. He told the Benhams that his people had formerly lived on the upper end, near the big mound, and that his grandmother was buried there.

PREVIOUS EXPLORATION

The writer succeeded, with the help of Lieut. Dayton Benham, son of the owners, in locating and plotting 16 ancient mounds on Hiwassee island, as may be seen by the accompanying map (pl. xxxi); but Thomas,¹⁷ in his Catalogue of Prehistoric Works, mentions "a group of twenty-four mounds on Jolly's Island at the junction of Tennessee and Hiwassee rivers," on the authority

of J. W. Emmert, who, he states, explored five of them. As Moore¹⁸ says, there may well have been twenty-four mounds traceable at the time of Mr Emmert's visit, of which eight have since been destroyed by cultivation, if not leveled during the course of his operations, of which, by the way, the writer has seen no published account, although the island and the large mound are mentioned in the Bureau of Ethnology report.¹⁹

Another exploration of the island, of which no account has been published, was made by Mr George D. Barnes, of Dayton, Tenn., who, with Lieutenant Benham, spent several months in excavation during 1911. They thoroughly explored one mound at the lower end (pl. xxxi, no. 8), finding five burials, one of which was accompanied with a single arrowpoint and numerous beads, some of them unfinished, made of large marine shells. Then, after testing the mound we call no. 1 without success, except for the discovery of a few human bones, they dug a number of trenches in the vicinity of the big mound (no. 16). Here they found

many skeletons representing in the main the colonial and late pre-colonial periods of Cherokee occupancy, if we may judge by the fact that while some graves contained articles of iron and brass, and glass beads, obtained from the whites, in addition to those of Indian make, many contained native artifacts only. That all were from the same tribe may be inferred from the fact that all the native material in the graves was of similar character, whether found with traders' goods or not; and that this tribe was Cherokee is evident from the fact that they and they alone are historically known to have inhabited the island throughout the colonial period and up to 1818. Lieutenant Benham's share of the collection may still be seen at his residence on the island; but Mr Barnes' share had been sold and scattered.

According to Jones,²⁰ part of what seems to have been this cemetery was uncovered by the spring freshet of 1867, and "long rows of graves, clay pots, teeth and other relics" were disclosed. Local report has it that in 1900, or a little later, a small image

or idol of stone was plowed up in or near the mound we designate as no. 1, and that the finder immediately set to digging and unearthed six more, the whole lot ranging in height from 10 to 20 in.; that he sold them, and that they are now scattered in private collections.

The last exploration before the arrival of our expedition was that of Mr Moore,²¹ who says:

“This island, as to which there is a report respecting the finding of a stone image, has an added interest as being the starting point of a great chain of groups of comparatively low conical mounds extending up Tennessee river to Lenoir City, a distance of 101 miles by water.”

After giving the dimensions of the principal tumuli, Mr Moore describes his excavations of Mound E, called by us Mound 9, as follows:

“To avoid disturbing trees, an excavation 10 feet long by about 6 feet wide was made somewhat away from the center. The mound was composed of sandy clay of a brown shade. Thirty inches down a fragment of decaying bone about one inch in length was encountered. Other than this fragment, no bones were dis-

covered in the mound, nor was any fireplace or midden-débris found in the digging.

“At a depth of 5 feet 10 inches an indistinct basal line was discovered, beneath which was undisturbed, yellow clay.

“Not central in the excavation, but nearly so as to the base of the mound, a pit was discovered, 3 feet by 3 feet 4 inches, extending one foot into the yellow clay and filled with the brown soil of the mound. How far this pit extended into the body of the mound, if at all, could not be determined. The contents of this pit were removed with the utmost care with the aid of a trowel, having in view the possible presence of a burial, but not even the crown of a tooth was unearthed.

“Together, on the base of the pit, in a little pile, were: a hone of sandstone, elliptical in outline, 4.5 inches by 3.5 inches; a pebble-hammer, discoidal, 2.25 inches in diameter; a triangular point of flint, about 2 inches in length; an object of slate, about 5 inches long, resembling a celt but having a rounded, blunt edge and possessing on one side, at one end, a lustre, as if conferred by wear; a similar object of slate, slightly more than 3 inches long, having lost a part of one end through an unsuccessful attempt to make a perforation, and having a depression below the fracture where another hole had been attempted; still another object of slate, of the type of the foregoing, 3.3 inches in length, this one, however, having a perforation at one end.”

This was the only mound explored by Mr Moore on this site.

THE MOUNDS

As before related, an early report places the number of mounds on the island as 24; we found but 16 still traceable, of which six were outwardly in good condition, never having been under cultivation, while the rest were more or less damaged by the plow, by erosion, and through the work of previous investigators. Their situation on the island is brought out by the accompanying map (pl. xxxi), in which the mounds still in good condition are shown in solid black, the damaged ones by black circles. The mounds we explored or tested are numbered from 1 to 5, the rest from 6 to 16. Of the group in general, Mr Moore²² says:

“At the extreme upper end of the island, and in sight from most of it, is a mound (A) 22.5 feet in height,²³ which probably has been square or nearly so as to its basal dimensions, but at present, through wash in periods of high water, its outline is irregular. Its basal diameter is 136 feet, 58 feet of which are under the summit-plateau, which is flat, wooded, including an oak-tree of great age, and gives no indication of ever having been under cultivation.

“At various distances apart, extending down the island, not in line, are three mounds, B. C.

and D, while near together, toward the lower end of the island, are two mounds, E and F. There are also scattered over the island various humps and rises and parts of mounds that have been mostly plowed away. . . .

"As the owners of the island take great interest in archeology, and desire, so far as possible, to preserve intact the mounds now on their island, none of those herein particularly described has been plowed over or dug into to any appreciable extent, excepting, of course, the one (E) investigated by us."

MOUND 1

The first tumulus examined by our expedition (no. 1), although long under cultivation, still retains a height of about 5 ft., its length from north to south being about 70 ft., its width 60 ft. It lies nearest of all the group to the great platform mound (no. 16), and this, together with the fact that the seven stone images are said to have been found in or near it, led us to select it for our first investigations on the island.

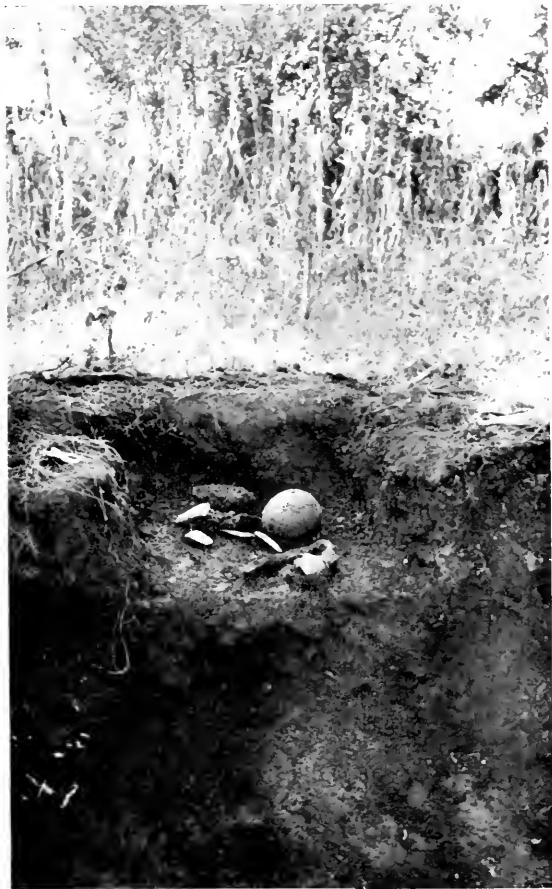
STRUCTURE.—It was soon found that the mound consists of earth of various kinds, patches of brownish-looking, weathered surface soil and of sand being mingled with others of village refuse and of yellow, clayey

subsoil. Where, for instance, a small patch of black "village dirt" occurred, showing distinctly in a mass of other materials, it was noticed that the amount was usually about a bushel, more or less, that is, about what a man could conveniently carry, and the explanation seemed to be that the builders had scraped up the soil into baskets or robes wherever they could get at it conveniently, in or about the village, and had dumped it, a load at a time, upon the growing mound. Part may have come from the large crescentic excavation lying just west of the tumulus, but this was also in all probability the source of much of the material for the great platform mound.

CONTENTS.—Our excavation of this mound consisted merely of a single trench about 15 ft. wide, commenced on the eastern side, and carried westward to a point well beyond the center, a trench which revealed but eight burials besides the loose bones found in Mr Barnes' shaft. Most were traceable only by crumbling fragments of skulls and long-bones, the respective placing of which indicated that most if not all of the bodies

had been lying on their sides in a flexed position. All the burials except one appeared to belong to about the same period as those in the Bussell mound group near Lenoir City, and those at the Upper Hampton place, which, although possibly Cherokee, are obviously much older than the average of Cherokee burials, such as were found at Lenoir island, the Mainland village-site near Lenoir City, and later on Hiwassee island itself.

Four of the eight burials were entirely without mortuary offerings, but one was accompanied with a triangular arrowpoint and a pottery disc, another with a large triangular arrowpoint, a third with the crumbling fragments of a globular vessel of earthenware, a fourth with an interesting collection of artifacts. This latter was Burial 5, shown in pl. xxxii, the only really interesting interment found in the entire mound. Hardly 16 inches below the present surface, fragments of bone indicated the remains of a full-grown man, lying flexed on the left side, heading a little south of west. Near where the feet had been was a small inverted pot



BURIAL IN MOUND 1, HIWASSEE ISLAND, NEAR DAYTON,
TENN., SHOWING POSITIONS OF VESSELS
AND IMPLEMENTS



of thin, hard, ware, bearing an incised decoration (pl. LII), while near the left shoulder was another of larger size, but plain, also inverted. At the back of the head were two globular vessels, one representing the head of an owl, both so badly disintegrated that they could not be restored; while 10 inches to the southwest lay a sunfish effigy-bowl (pl. LXI), in fair condition. In spite of the disintegrated condition of the bones, nearly as bad as that of the other skeletons in the mound which undoubtedly date from an early period, the pottery found with this burial identifies it as Cherokee, for fragments of such vessels were abundant in all the Cherokee deposits we examined. On the back of the crumbling skull itself lay a large celt; where the right shoulder had been, a smaller one; and along the remains of the left arm-bones were ranged four adze-blades of stone (pl. LXXIX, *a*). On the pelvis appeared some fragments of cut mica, perhaps the remains of an ornament.

The presence of so many woodworking tools in this grave derives an added interest from the fact that the fragments of the lower

leg-bones exhibited a serious pathological condition,* due to rheumatism, perhaps, which must have crippled the victim and prevented him from hunting as a means of livelihood. For this reason he probably took up woodworking—the manufacture of wooden canoes, bowls, etc.—and exchanged his products for food and clothing. It is interesting to note in this connection that the writer has seen several instances of woodworking and arrow-making tools buried with the remains of cripples, one of them on the Silverheels site near Irving, N. Y., explored by Mr Arthur C. Parker, now State Archeologist of New York, and himself in 1904, for the Peabody Museum of Harvard University.

LIMESTONE BASIN.—Another interesting feature of Mound 1 was a curious structure found at a depth of 2.4 ft. in the north-western portion, consisting of a kind of basin, circular in form, about 2 ft. in diameter and 8 in. deep, made of ten small pieces of limestone fitted together. It contained nothing affording a clue to its purpose, but about one foot above, and a little

to the north, lay a small, neat discoidal of limestone. Perhaps the structure was a small, circular, stone grave, like those found at the Upper Hampton place, intended as the receptacle for a "bone burial," all traces of which in this case had disappeared.

GENERAL DIGGING.—The general digging in Mound 1 yielded but few artifacts, merely a few triangular arrowpoints and ordinary potsherds, with one fragment of polychrome ware such as was found by Moore²⁴ on the Bennett place below Chattanooga.

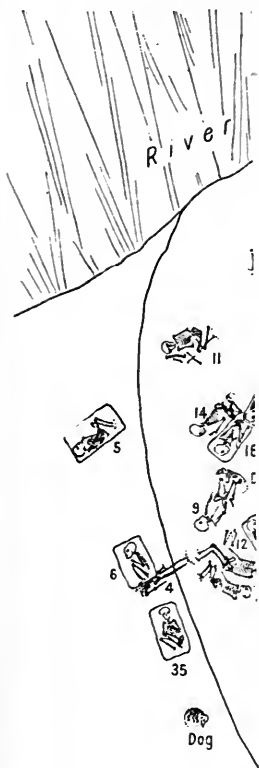
VII. EXCAVATION OF MOUND 2

SITUATION AND STRUCTURE



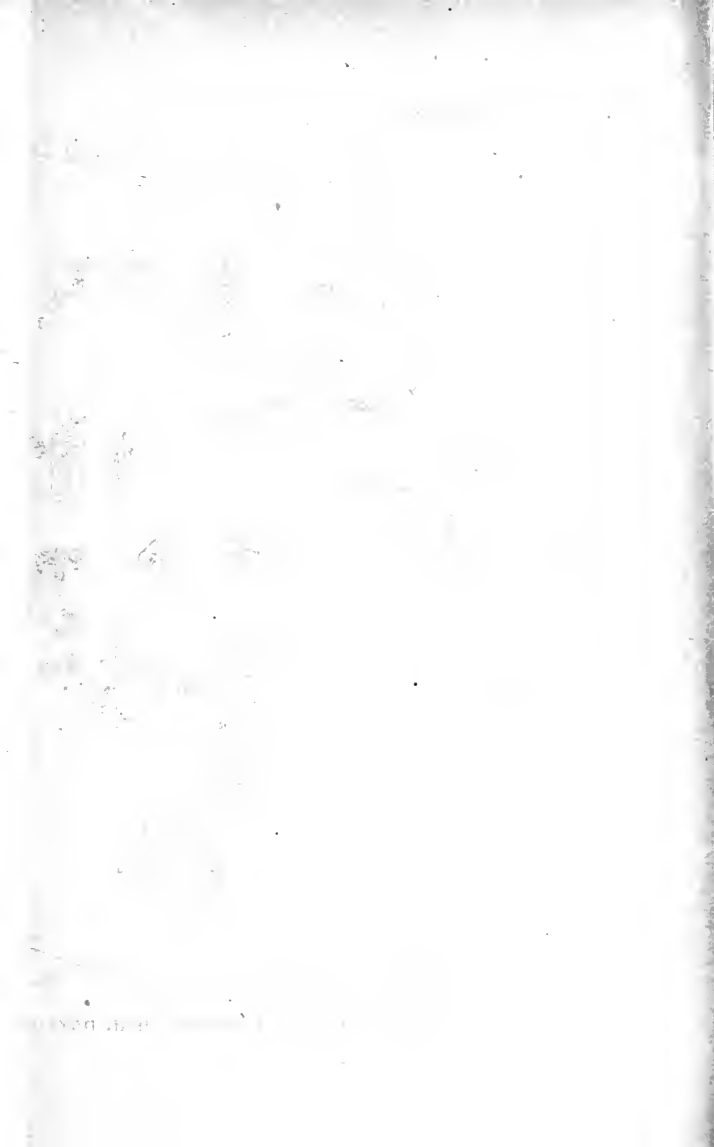
THE first mound on the river-bank, going down-stream, distant some 1200 ft. from the high platform mound (no. 16), is Mound 2, which yielded the largest number of burials (fifty-seven) of any found during the entire expedition. Oval in form, with the longest axis north and south, some 10 or 15 ft. of its northern extremity has been washed away by the river; but the part remaining still measures approximately 50 by 60 ft., and has the outline shown in pl. xxxiii. The height, apparently, has been considerably reduced by frequent plowing, for it measured only about 4 ft. at the highest part, near the river-bank, and the edges showed a deposit of mixed débris evidently dragged from the crest by cultivation. Our excavations

HARRINGTON—CHEROKEE REMA



Scale of feet
5 4 3 2 1 0 5 1

PLAN OF MO



showed that the original mound had been built in almost circular form on an ancient village layer apparently left by the "Round Grave people," of "village dirt," sand, and a little clay-loam subsoil in irregular patches, scraped up largely from the immediate vicinity of the mound itself in such a way as to leave a peripheral ditch (fig. 11). There were also in places patches of coarse, gray, river sand, apparently brought up from the bed of the Tennessee.

At a later period layers of musselshells (pl. xxxiv) and clay were added about the

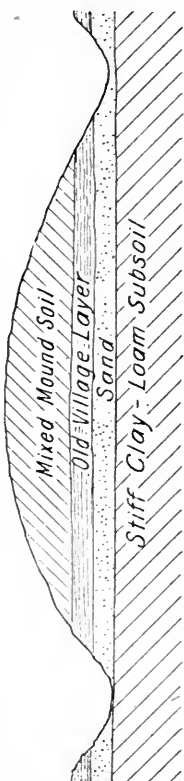


FIG. 11.—Diagrammatic section of Mound 2, Hiwassee island, as first built.

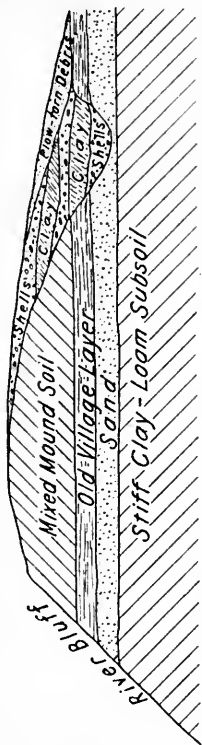


FIG. 12.—Diagrammatic section of Mound 2, Hiwassee island, as found in 1919, showing partial destruction by the river and addition of clay and shells.

periphery, particularly on the southern side (fig. 12), filling up the ditch, making the mound considerably larger, and changing its outline from circular to oval. It was noticed that the potsherds found mixed with this added material were simpler than the usual Cherokee ware, and had an appearance much more like the pottery made until recently by the Creeks than like typical Middle Mississippi Valley styles. Fragments of large bowls with incurving rims,

somewhat like that shown in pl. XLIX, *b*, were in the majority, with a few pieces of cazuelas like *f* of the same plate, and sherds of large pots somewhat like *g* but without handles—entirely without decoration except for a slight suggestion of fabric marking. A curious feature not seen elsewhere in this region was the presence of fragments of vessels with legs. Some sherds also appeared which may be assigned to the “Round Grave people” from whose village layer part of the material for the addition to the mound was derived, but the series as a whole seems to represent either an early and undeveloped stage of the potter’s art among the Cherokee, or the presence of a different but unknown people, following not only the “Round Grave” period, but the builders of the original mound.

UNDERLYING VILLAGE LAYER

The old village layer above mentioned, on which the mound had been constructed, varied in depth from 10 in. to 15 in. and yielded fragments of coarse pottery (including some from vessels with pointed

bottoms), fragments of steatite pots, and arrowheads of stemmed types very different from the triangular stemless form employed by the Cherokee, all of which are characteristic of the "Round Grave" culture found near Lenoir City. Stones cracked by heat were also abundant in the deposit, but no burials belonging to this culture appeared, although one small pit containing a single stemmed arrowpoint was found.

BURIALS

No fewer than 57 burials were uncovered by our excavations in this mound, five of them containing two and one three distinguishable individuals; besides which there have been a number plowed out, if we may judge by the scattered fragments of human bones picked up on the surface. That these were not all without mortuary offerings may be assumed from the fact that an earthen vessel containing a mask made from a large marine shell was turned out by the plow on or near this mound a few years ago, and now reposes in Lieutenant Benham's collection, with his share of the

material found in the cemetery near the big mound.

The interments in Mound 2 had evidently been made from time to time over a considerable period, for there were marked differences in the condition of the bones of the various skeletons. An adult skeleton might be found in such a state of decomposition that disintegrating fragments only of skull and long-bones remained, while beside it another would appear lying at the same depth and under similar conditions, but fairly well preserved. In condition, the older skeletons resembled those found in the mounds of the Bussell group, at the Upper Hampton place, and in Mound 1 on Hiwassee island; just described; and like them they had been placed in the same positions as the later burials; and the objects found with them were similar in character to those with the more recent interments. No articles of European origin were encountered.

Of the 64 individuals found with the 57 burials, comprising 53 adults, 5 infants, and 6 older children from two to ten years of

age, we classified 21 as belonging to the early period, and 30 to the late, while 13 seemed to be intermediate, a class to which the richest burials belonged. It was noticed also that all the early burials lay within the original mound, but that some of the intermediate and late ones lay in the peripheral extension built later.

Studying the orientation of early burials, we find more heading southwest, or rather heading in directions between south and west, than in all the other directions together; nearly half of the intermediates headed in the same directions; but the majority of the later burials were headed toward the quadrant between north and east, nearly equal numbers, however, heading toward the southeast and southwest quadrants. From these data we may infer that while the earlier people had a distinct preference for interring their dead with the head to the southwest, the later Cherokee were not so particular.

Depths ranged from 8 in., within reach of the plow, to 4.7 ft. As to position, the early people seemed to prefer to flex the

remains on the right side, 10 of the skeletons being found in this position, whereas only 6 lay on the left side. Four were extended at length on the back, and a fifth was extended, but face-down.

It seems to have made little difference, in the intermediate period, on which side the dead lay, for we found 5 on the right side and 5 on the left; 2 lay on the back with knees bent in such manner that the heels touched the hips; while one was so fragmentary that the position could not be determined.

In the later period, burial flexed on the right side was by far the most general, for 18 skeletons were in this position, while only 6 lay on the left side; one was extended, face-upward; another, face-down; 2 lay on their backs with knees raised; one was a disarticulated "bone burial," and one was too fragmentary to afford any idea of its position.

Only six of the 53 adults could positively be recorded as women, but the proportions of the sexes were probably about equal, for although the greater number of skeletons could not be conclusively identified in this respect, those with lighter lower jaws and

slenderer, smoother bones, which were probably women, seemed fully as numerous as the heavy-jawed skeletons whose stronger bones with prominent ridges for the attachment of the muscles suggested males.

MORTUARY OFFERINGS

EARLY PERIOD

Turning now to that feature of the burials which holds most interest for us—the placing of artifacts with the dead,—we find that only eight of the 21 early burials showed anything of the kind, and of these only two had really interesting deposits. The most noteworthy of these was Burial 23, the crumbling skull and long-bones of which alone remained to indicate, as shown in pl. xxxv, that the body had been buried in an extended position, face-down, heading just south of west, with thighs crossed. Although found only 15 in. beneath the surface, it was evident that the original depth, before the height of the mound was reduced by cultivation, had been considerably greater. Under the skull and between it



LAYERS OF MUSSELSHELLS IN EDGE OF MOUND 2, HIWASSEE ISLAND, NEAR DAYTON,
TENNESSEE



BURIAL IN MOUND 2, HIWASSEE ISLAND, NEAR DAYTON,
TENN., SHOWING POSITION OF CONCH CORES
AND IMPLEMENTS

and the right shoulder were found 165 beads made of small marine shells (*Olivella*); at the right shoulder three beads, six inches long, made from the columellæ of conch-shells; along the right arm 11 similar columellæ, some more than 9 in. long (pl. LXXX, *e*) and only a few perforated, were arranged as seen in pl. xxxv, in addition to a large celt; near the waist, on the right side, an adze-blade, a rasp of sandstone, a small celt, a small discoidal stone, three pieces of split deer-bone, and several musselshells; and at the right knee, pointing eastward, four triangular arrowpoints, two of them of fine workmanship. On the left side of the back lay an engraved, thick, stone gorget broken into two pieces (fig. 57), a small concretion probably used as a paint-cup, a black paint-stone, apparently graphite, a rasp of sandstone, a flint knife, three triangular arrowpoints, a core (fig. 40), three blocks, some chips, and three chipped stones, all of flint; while near the left arm appeared three more triangular points; at the neck two flint knives, and beneath the left side of

the skull a piece of a neatly-made and highly-polished bone bodkin (pl. LXXV, *b*).

The second interesting burial of the early group was no. 52, the barely distinguishable bones of a young person about fifteen years of age, seemingly a girl, lying flexed loosely on the left side, head toward the south, at a depth of 3 ft. About the neck had been a necklace comprising 62 beads of *Olivella* shell, six disc beads of shell, about three-quarters of an inch in diameter, eight beads of conch-shell, of ordinary type, 13 pendants made of small conch-columellæ, and four other shell pendants.

Other graves containing specimens were no. 15, having a small triangular arrow-point near the hips, and some loose animal and human bones, among which was part of a bone implement showing decoration by engraved lines; no. 20, with the columella of a conch-shell lying on the skull; no. 38, which had a lump of baked clay, molded into form by hand, at the head; no. 47, a broken celt; no. 49, a conch-columella near the breast, and no. 50, one



SKELETON IN UNUSUAL POSITION, MOUND 2, HIWASSEE ISLAND, NEAR DAYTON, TENNESSEE



BURIAL SHOWING POSITION OF LARGE CELT AND DISCOIDAL STONES,
MOUND 2, HIWASSEE ISLAND, NEAR DAYTON, TENNESSEE

conch-columella at the chin and three in the hands.

Besides these, another early skeleton (no. 9) had a dog buried at its feet; and one (no. 22) had one triangular arrowpoint against the bones of the right hip and another under the edge of the right shoulderblade, both of which had apparently been shot into the flesh from the front. The right arm of this skeleton was thrown across the head as the photograph (pl. xxxvi) shows, a most unusual position. No. 20, mentioned above as having a conch-columella buried with it, had evidently been shot in the left upper arm with an arrow, for a triangular flint point was found there, its tip resting against the bone.

INTERMEDIATE PERIOD

Of the 13 graves apparently belonging to the intermediate period, two were especially interesting on account of their mortuary deposits, while four others contained at least some artifacts. One of the richest was no. 44, which was that of an adult, flexed on the right side with head toward

the south-southeast, at a depth of about 9 in., just out of reach of the plow. The left arm was folded across the abdomen, the right extended naturally at the side. On the right shoulder lay a thick discoidal stone of the biconcave type, on the lower right breast a similar one, while between them was a large celt, painted red (pl. LXXIV, *b*), all of which are shown *in situ* in pl. XXXVII. When the celt was lifted, five excellent triangular arrowpoints and a slender flint drill were found beneath it; while on the left breast a mass of worked bones included four double-pointed bone awls, an awl made from a bone with the joint left as a handle (pl. LXXV, *c*), an awl made from a turkey-bone, another from a splinter of deer-bone, a broken bone spear- or arrow-point, a fine long bone awl painted red, and a number of fragmentary awls and pieces of bone, the latter apparently saved as material for implements. At the shoulders were groups of long shell beads, some of them showing, besides the longitudinal perforation, a transverse hole near one end (pl. LXXX, *b*), as if for pendants;



BURIAL SHOWING IMPLEMENTS AND SHELL GORGET IN SITU. MOUND 2, HIWASSEE ISLAND, NEAR DAYTON, TENNESSEE



CHEROKEE BURIAL SHOWING POSITION OF PIPE NEAR SKULL,
MOUND 2, HIWASSEE ISLAND, NEAR DAYTON, TENNESSEE

perhaps these beads were strung together as ear-ornaments. Near the right shoulder also appeared a mass of dark-red paint, together with an unfinished arrowpoint, a flint core, and a flint chip, while under the right knee were three finely-worked triangular points of flint, their tips toward the northwest. The most curious feature of the burial, never previously seen by the writer, was a number of *Olivella* shell beads, some eleven hundred in all, covering parts of the breast of the skeleton from chin to waist in such a way that they seemed to have been sewn on a garment of some kind.

The other unusually rich burial which we attributed to the intermediate period, no. 48 (pl. xxxviii), was provided with a similar but more elaborate garment, to which had been attached more than 9000 *Olivella* shell beads, covering the skeleton from chin to waist. This skeleton, which lay flexed on the left side, heading east, at a depth of 17 in., was provided also with a large pendant of conch-shell (pl. lxxxI, b) on the breast, a large barrel-shaped biconcave discoidal stone beneath the left knee

(pl. LXXXV, *a*), and a deposit in front of the face consisting of a long bone spearhead decorated with transverse engraved lines (pl. LXXI, *b*), a thin celt, and several musselshells. Among these lay a fine triangular arrowpoint. Back of the skull were the remains of a large bone tube, once evidently highly polished. The whole body had evidently been covered with matting, the imprints of which could still be plainly seen. The legs of this skeleton were raised some six inches higher than the skull, and investigation showed beneath them the crumbling skull and part of the bones of a two-year-old child, separated from the bones of the adult by an inch or two of earth. The diggers of the adult's grave had apparently encountered this previous interment, and not wishing to disturb it, had left it covered with a little earth, even though it raised the legs of the body they were burying higher than its head.

Other burials of this period with mortuary offerings were: no. 6, with two arrowpoints behind the skull; no. 12, of which the lower jaw, arms, and hands only were

left, with five conch-columellæ and one fine triangular arrowpoint; no. 25, with one triangular arrowpoint near the middle of the back; and no. 37, with a small, rectangular, stone tablet engraved with a cross on each side (fig. 63, *b*), a small awl made of fish-bone, a triangular arrowpoint, a flint core, and the bones of a young dog. This last burial lay in an almost solid deposit of musselshells, and for this reason the bones were all present, as the lime from the shells saturated the filling of the grave and prevented the lime of the bones from leaching away as it would naturally have done if they had been buried in soil. Most of the animal matter had disappeared, however, for the skeleton was very brittle.

LATER PERIOD

Turning to the 30 later graves, we find 12 of them containing mortuary deposits, but sparse ones, each skeleton having but few objects. Burial 1, for example, contained the flexed skeleton of a two-year-old child, at the sides of whose head lay a pair of shell ear-pins (pl. LXXXII, *h*, *i*), while a

mass of disarticulated bones of a man lay above and to the west of it. Near the feet of Burial 2 were found the remains of a large, red, earthen bowl containing the fragments of a black pot with handles; near the right shoulder of no. 3 (pl. xxxix), which lay beneath it, a large earthen pipe (pl. lxxxiv, *b*), and near its left knee a smoothing-stone.

A circular shell gorget (pl. lxxxii, *a*), with scalloped edges and traces of a "triskele" pattern engraved on one side, was found clutched in the right hand of Burial 13, as shown in pl. xl, while no. 19 had only one arrowpoint. The skull of this burial showed that the individual had been scalped, but had survived for some time—long enough for the wound to fester, seriously affecting the bone. To the north of this skeleton, in the same grave, lay the remains of a child of twelve years, buried face-down in an extended position.

About the neck of no. 21 had been a string of 65 large shell beads, while at the sides of the head were two long, slender, shell ear-pins; no. 28 had two well-made



CHEROKEE SKELETON CLUTCHING SHELL GORGET IN
RIGHT HAND, MOUND 2, HIWASSEE ISLAND,
NEAR DAYTON, TENNESSEE



CHEROKEE SKELETON WITH POTTERY VESSEL AND SMALL
CELT, MOUND 2, HIWASSEE ISLAND, NEAR DAYTON,
TENNESSEE

arrowpoints and a large potsherd; no. 33 the stem portion of a stone pipe; no. 40, a large cylindrical bead made from a fossil crinoid stem; no. 41, part of a bowl made from a large marine shell, the rest having been plowed away; and no. 43, a conch-shell pendant and 9 triangular arrowpoints, some of them finely made. Finally, Burial 54, of a young woman, was provided with a pottery vessel with handles, and a small stone celt or chisel, as shown in pl. XLI. No article of white man's manufacture was found with any of these burials.

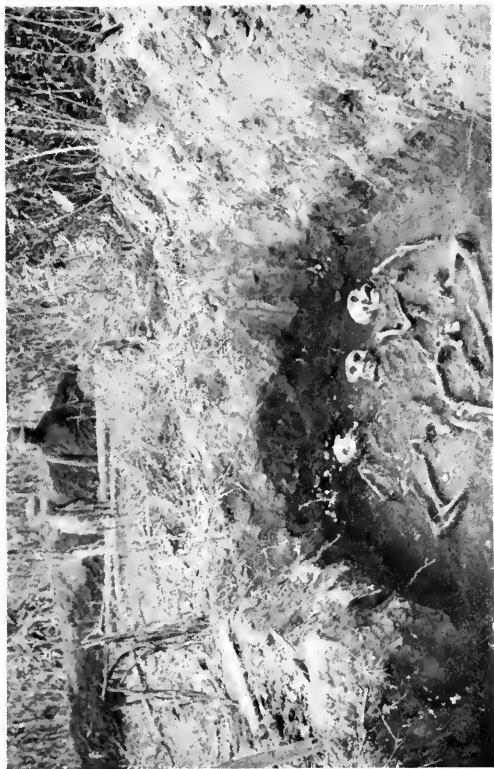
ARROW WOUNDS

War, or at least fatal arrow fights, must have been quite common in the late pre-historic period, for four of the skeletons showed arrow wounds. One of these was Burial 24, the skeleton exhibiting two arrowpoints in the thoracic cavity, shot in from the front, another which had stopped against the ribs after penetrating the right shoulder-blade from the back, and a fourth shot from the back into the base of the neck. Also fatally wounded with arrows

was no. 35, which had two arrowpoints among the ribs, another in the pelvic cavity, another in the left wrist, and still another among the bones of the right hand. The foot-bones of this skeleton were somewhat charred, as was one knee; yet there was no charcoal, burnt earth, nor ashes in the grave; hence it seems possible that the victim had either been tortured with fire or had been caught in a burning dwelling. The skeleton showing marks of scalping has already been mentioned. A curious feature of the arrow-wounded skeletons of both the earlier and the later periods was that all the arrowpoints found among their bones were triangular, differing little if at all from those in everyday use by the Cherokee, and often buried by them with their dead as part of the mortuary deposit.

TRIPLE BURIAL

An unusual grave containing three skeletons without accompaniments, lying side by side, is shown in pl. XLII.



TRIPLE BURIAL, MOUND 2, HIWASSEE ISLAND, NEAR DAYTON, TENNESSEE




DOG BURIAL, MOUND 2, HIWASSEE ISLAND, NEAR DAYTON,
TENNESSEE

DOG BURIALS

No fewer than eight dog burials were found in this mound, the situation of seven of which are shown in the plan (pl. XXXIII). Two accompanied human burials, the rest lay alone at varying depths and in differing positions, for the greater part curled up or outstretched on the side, while one lay on the abdomen, with nose downward. From the fact that some were in very good condition, as seen in pl. XLIII, while others were far gone toward decay, we inferred that in the case of the dogs, as with the human burials, interments had taken place from time to time through a period of many years.

VIII. OTHER WORK ON HIWASSEE
ISLAND

MOUND 3

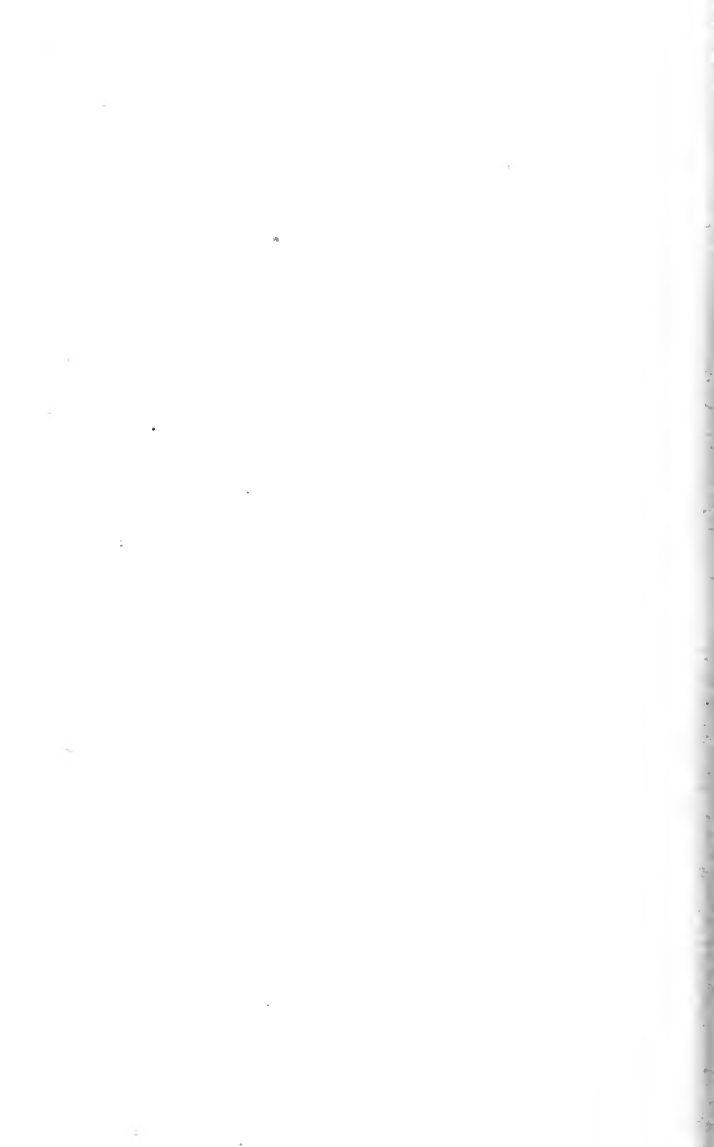
 ABOUT 187 feet down-stream, from Mound 2, measuring from center to center, and 77 feet in from the river-bank, is Mound 3, a circular structure of sand and musselshells about 50 ft. in diameter and now only 3.5 ft. high, due probably to the destructive effect of years of cultivation. Small test-holes dug in this showed the presence of both human skeletons and dog-burials, but, as our time was short, we thought it best to spend what little was left on one of the high mounds. The situation of this tumulus is shown on the map of the island (pl. xxxi).

MOUND 4

In an interval of the other work a small mound (no. 4), situated near the road just east of one of the Benham's corn-cribs,



MOUND 5, HIWASSEE ISLAND, NEAR DAYTON, TENNESSEE



was examined. It was only about 30 ft. in diameter and 18 in. high; and a test-hole 8 by 12 ft. in the center revealed only a solitary but handsomely made triangular arrowpoint, and a small pile of river pebbles lying on the original surface of the ground, but no trace of a burial.

MOUND 5

This is one of the high mounds of conical form, covered with timber (pl. XLIV), which has never been under cultivation, and is situated in a field about 750 ft. westward from the Benham residence. Moore,²⁵ calling it Mound D, gives its dimensions as 45 ft. in diameter by 9.2 ft. high, but he attempted no excavation. We would have liked to explore every inch of it, but as our time was so short we were obliged to content ourselves with a central excavation 8 ft. wide by 16 ft. long, the longer axis running almost east and west.

STRUCTURE

This excavation, besides encountering 18 burials, revealed some interesting facts

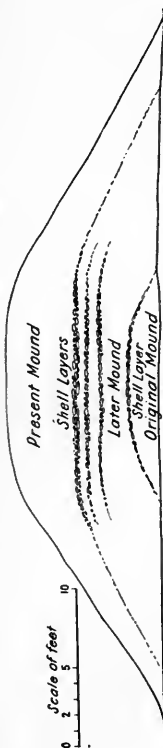


Fig. 13.—Section of Mound 5, showing shell layers, each marking a stage in its construction.

concerning the construction and therefore the history of the mound: first of all that the original structure, the nucleus outlined by the lowest shell layer in the section (fig. 13), was only about 2.6 ft. high and 15 ft. in diameter, yet had contained at least five burials (pl. XLV, *c*), the shell layer running unbroken above them; that subsequently the mound had been raised to a new level, marked by a layer of shells, and then another, finally reaching the height of a little more than five feet, represented by the highest and thickest shell layer, at which elevation it must have remained for some time, since five inter-

ments were made from this level (pl. XLV, *b*), cutting through the shell layers beneath, as shown in fig. 14. Finally, after how long a period no one can say, work on the mound was again resumed, and it was raised to its

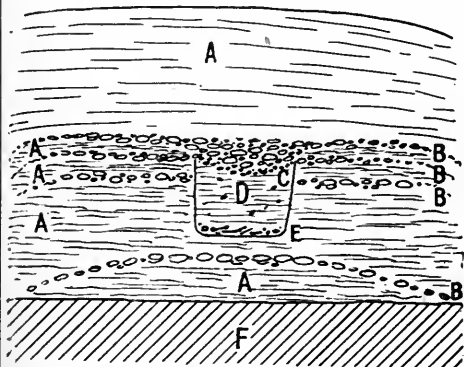


FIG. 14.—Section of Mound 5, showing a grave dug from the surface of the later mound. A, mixed mound soil; B, shell layers; C, layer of charred nuts; D, grave; E, charred layer containing skeleton; F, undisturbed subsoil.

present level and at least seven more interments made (pl. XLV, *a*). Whether the last four feet of the mound's height were completed in a single operation would be difficult to say; we know at least that if

done at intervals no shell layers nor other indications were left to mark the stages of the work.

Except for the shell layers, the entire mound was built of stiff, yellowish-brown, clayey soil, which, a foot or two beneath the surface, became hard, tough, dry, and exceedingly difficult to dig. No excavation was observed in the vicinity from which the material for the mound could have been derived. It is evident that the earth was either scraped up from the surface in many places or that the excavation was a shallow one and has now been obliterated by the plow.

BURIALS

ORIGINAL MOUND.—Considering the five burials in the original mound forming the nucleus of Mound 5, we found four of them, as nearly as could be determined from the position of the fragments of bone remaining, lying in flexed positions, three on the left side and one on the right, and heading in different directions, as shown in pl. XLV, *c*. The fifth (no. 13), the only



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one to penetrate the subsoil beneath the mound, could be traced only by the disturbed earth of the grave, which measured 3 ft. from east to west, and 2.5 ft. in width, with a depth of 1.8 ft. in the subsoil, or of 11 ft. below the surface of the present mound. In the bottom of this, softer streaks and casts in the hard yellow soil alone remained to indicate the former presence of bones.

Only one artifact was found with any of these burials, a *stemmed* arrowpoint (pl. XLVIII, *j*) lying near the right shoulder of no. 14. But this, the only point of its type found by us with a mound skeleton during the entire expedition, seemed to have been shot into the flesh and not buried with the body as a mortuary offering.

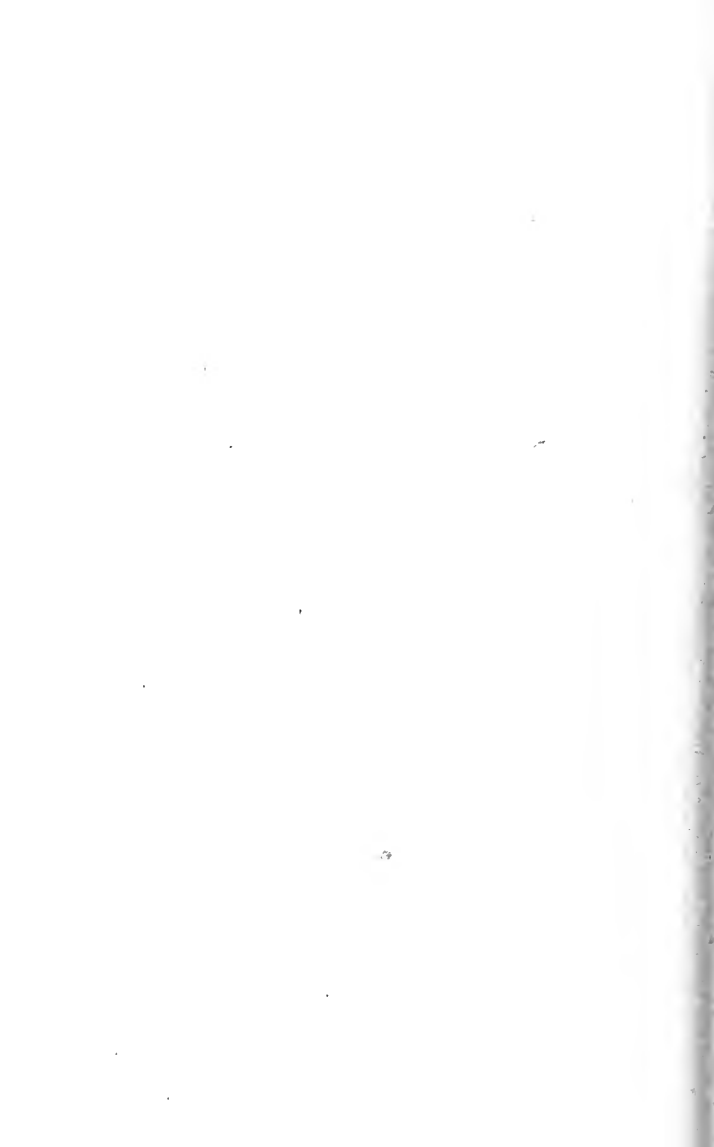
LATER MOUND.—The later mound, next to the latest stage of Mound 5, whose surface is represented by the highest shell layer seen in fig. 13, contained only five burials in the part we explored, three of them being those of children, all in flexed positions and heading in different directions, as shown in pl. XLV, *b*.

Three of these burials, nos. 8, 9, and 18, had mortuary deposits. About the neck of no. 8, a child of about five years of age, were 11 flat disc-beads and four long cylindrical ones, all of conch-shell, while from breast to knees a layer of about 2400 *Olivella* shell beads had evidently once covered a garment. These were arranged longitudinally, side by side, as shown in fig. 47. The skeleton was covered with a layer of charcoal, evidently either put on hot or remaining from a fire built on the body; for some of the more projecting bones were slightly scorched and a few of the *Olivella* shell beads calcined.

This burning had gone even further in the case of Burial 9, a section of whose grave is shown in fig. 14, for the bones of the skeleton, also that of a child of five or six years, were found nearly consumed in a layer of charcoal, marked *e* in the section. This grave had clearly been dug from the level of the highest shell layer down through the two immediately beneath it nearly to the shell layer marking the surface of the original mound. A curious feature was the



CHEROKEE SKELETON IN UNUSUAL POSITION, VILLAGE-SITE,
HIWASSEE ISLAND, NEAR DAYTON, TENNESSEE



layer of charred nuts (*c*) shown in the section, but the only artifact consisted of the decayed remains of a bone awl, found beneath the skull.

Another child's skeleton, no. 18, showed no traces of burning, but with it were found more than 3000 *Olivella* shell beads, which had apparently been strung and wound many times about the neck, but not sewed to a garment.

Burial 12, of an aged woman, although without objects, showed traces, in the form of charcoal and reddened earth, of a fire which had charred some of the more projecting bones.

LATEST MOUND.—The burials found above the highest shell layer, and consequently four feet deep or less, were seven in number, but there was also another, no. 10, which, although it penetrated the upper shell layer, seemed to have been dug from the present surface or near it, and for that reason was added to this group, making eight in all. It is very probable that there are others belonging to the same period in the edges of the mound not

reached by our excavations. That one of these may be a stone grave is indicated by slabs protruding from beneath a stump near the southern edge of the tumulus.

Of the eight burials, seven were of adults, the other of an infant; there was no uniformity of orientation, as may be seen in the plan (pl. XLV, *a*); but four skeletons lay flexed on the left side, two on the right, one lay extended on the back, while of another only the skull was found. Most were in bad condition.

The richest in mortuary deposits was Burial 10, the one which had penetrated the highest shell layer, for it had a necklace of five cylindrical and four disc-beads of conch-shell, to which had been attached five whole but small conch-shells, the tips perforated transversely for suspension (pl. LXXXII, *g*). Also about the neck were the remains of a collar, made of hundreds of *Olivella* shells, which had either been strung and woven together, ten rows wide, or had been sewed to a piece of skin or of fabric. This skeleton, too, was covered with burnt

earth and charcoal, and some of the bones were slightly charred.

Most of the burials had a few objects: a fine celt being found near the hips and a good triangular arrowpoint near the thighs of no. 2; no. 3 had five triangular points; while no. 5, which was merely a skull without even a lower jaw, had 15 *Olivella* shell beads. Part of a well-made stone gorget lay near the legs of the infant, no. 6, and two fine, small, triangular arrowpoints accompanied no. 7.

OTHER MOUNDS

Mound 5, just described, was the last we excavated or tested. The other mounds, the locations of which are indicated in pl. xxxi, were: no. 6, near the Hiwassee landing, a low shellmound about 35 ft. in diameter; no. 7, a high, conical mound, called Mound F by Mr Moore, situated near the lower end of the island, and measuring 54 ft. in diameter by 9 ft. 10 in. high; Mound 8, a low tumulus near the last, excavated and almost obliterated by Mr Barnes; Mound 9, called Mound E by Mr

Moore and explored by him, as before related, diameter 30 ft., height 5 ft. 7 in.; Mound 10, called B by Moore, elliptical in form and 10 ft. 3 in. in height, the base measuring 63 ft. by 48 ft., dug into by someone, but not badly damaged; Mound 11, a low shellmound lying a short distance southwest of the last, nearly obliterated by cultivation; Mound 12, a shellmound, 60 ft. in diameter and still about 5 ft. high, although long under cultivation, containing burials as shown by plowed-out fragments of human bones; Mound 13, a low mound, about 66 ft. in diameter, composed largely of shells; Mound 14, similar but slightly smaller; Mound 15, near the southeastern corner of the island, a high, conical example, called Mound C by Moore, measuring 8 ft. 2 in. in height, with a diameter of 48 ft., showing a test shaft perhaps sunk by Emmert; and finally the great platform mound, no. 16, at the northeastern corner of the island, 22.5 ft. in height, called Mound A by Moore, whose description of it has previously been quoted in Section VI. Someone has also dug a

small central shaft in this tumulus, but the damage is slight.

LARGE VILLAGE-SITE

Habitation sites, marked by decaying musselshells, fire-broken stones, flint chips, potsherds, and occasional implements, are of frequent occurrence on Hiwassee island. We have indicated the situation of some of the larger ones by dotted areas on the map. The largest, which truly deserves to be called a village-site, is situated near the northeastern corner, reaching from Mounds 2 and 3 to the vicinity of the great platform mound 16, and including the cemetery partially explored by Messrs Barnes and Benham.

The little digging we were able to do in this village-site was more in the nature of a test than anything else, for we realized that there was no time for extended excavation. We discovered, however, a village layer averaging 2 ft. to 2.5 ft. deep, containing many animal bones, potsherds, occasional scattered implements, and fragments, preserved by burning, of the clay

plastering from "wattle-and-daub" houses. Sections of clay floors were also encountered, and there is little doubt that careful and extended excavation would reveal not only many specimens, but much in the way of information. Most of the deposit may be referred to the Cherokee; the lower portions, although exhibiting a somewhat simpler culture, are possibly also from the same people. However, it was this lower portion that yielded a number of fragments of the polychrome ware (pl. LXII) before mentioned, which does not seem to appear among the later Cherokee remains. As before mentioned, there was, near Mound 2, a still older layer which we attributed to the "Round Grave" people.

BURIALS

Our test-holes encountered nine graves in this village-site, many of them containing the remains of two and three individuals, resembling in general character the latest group of graves in Mound 2, and nearly all belonging apparently to the late prehistoric and early historic period of

Cherokee occupancy. A typical example is shown in pl. XLVI. One only was not flexed, and this extended burial, although provided with a cylindrical stone pestle (fig. 37), had also many glass beads which placed it within the historic period. Very few of the others were accompanied with artifacts, one having merely three small and very sharp bone implements, another a peculiar notched stone, and two of them a few bone beads apiece. An unusual feature was the presence in one of the graves of the remains of a cedar post standing upright in one corner.

OTHER HABITATION SITES

Besides the large village-site, there was another situated not far from the southeastern corner of the island, near Mound 15. We conducted no excavations here, but the finding of many stemmed arrow-points in the vicinity led us to suspect that it dates, in part at least, from the pre-Cherokee "Round Grave" period. Other shell deposits marking habitation sites were noted, and are shown on the map

(pl. xxxi), near Mounds 4, 6, 13, and 14, and along a ridge near Mound 12, the smaller ones being only 30 or 40 ft. in diameter. But this is by no means a complete list; we noticed but failed to record a number of others scattered about.

CONCLUSIONS

After closing our altogether too brief investigations on Hiwassee island, examining Lieut. Dayton Benham's collection, and reviewing our results, incomplete as they were, the writer felt that certain conclusions were justified, the first of which was that the island had been inhabited at an early date by a people who made rather rude earthen vessels with pointed bottoms, vessels of soapstone and stemmed arrowheads. These were the people who were probably responsible for the occasional grooved axes picked up on the surface of the island, a type of implement rarely if ever found associated with Cherokee remains. Although no burials of this people were found on the island, the artifacts we attributed to them were identical with those

found associated with what we called the "Round Grave" culture near Lenoir City. While no other name can be given them at present, there is evidence, which will be discussed later, connecting them with the eastern Algonkian group of tribes.

These first settlers were succeeded by a second group who used no soapstone vessels, and whose arrowheads, axes, and pottery were different—a people whose products, although less varied, resembled closely for the greater part those of the Cherokee who are known to have been the last aboriginal dwellers on the island.

That they were really the ancestors of the Cherokee is rendered doubtful by the fact that their pottery is decidedly simpler than that of the Cherokee, except in the line of polychrome ware, which, although occurring frequently in deposits of this period, is seldom if ever seen in the later ones we know to have been of Cherokee origin. Moreover, the "second people" possessed a custom apparently unknown to their Cherokee successors—that of partially burning the bodies of some of their

dead after laying them in the graves, and occasionally walled their graves with stone.

Whoever they may have been, the gap between this second people and the known Cherokee is bridged to a certain extent by the burials of the "intermediate period" in Mound 2, and those of the highest level in Mound 5.

In late prehistoric times the aboriginal population seems to have been larger than before, for the majority of the burials and of the artifacts thus far found on the island seem to belong to this and to the following periods. These people, who were undoubtedly Cherokee, used the celt form of axe and the triangular type of arrowpoint exclusively; made many bone implements; used discoidal stones, large and small, and seem to have had a great liking for ornaments made of marine shells, brought in by intertribal trade; while the more or less globular form of pottery vessel with handles was the most popular, and sunfish, bird, and frog effigy-vessels were frequently seen. In most of these particulars the people of this

period resembled their immediate predecessors, but in addition, as time went on, they adopted many of the pottery forms of their neighbors to the southeast.

The coming of the whites is marked by the presence in the graves of such articles as glass beads, iron knives, bracelets of copper wire and ornaments of sheet-copper, along with the kind of celts, triangular arrowpoints, shell ornaments, and the like, that had figured in mortuary deposits for many years—in fact, since our so-called “second people” arrived. This period terminated in 1818, when Hiwassee island was finally abandoned by the Cherokee chief John Jolly and his followers.

The writer has no proof that the possibly Algonkian “Round Grave people” were the first to inhabit the island, but can say that they were the earliest of whom traces were found during our explorations. In the same way the statement that the next inhabitants were possibly Cherokee and that the most recent were certainly of that tribe, does not mean that traces of other

cultures may not appear on more thorough investigation. It merely means that such were the inferences from our explorations, so far as they went.

IX. EARLIEST REMAINS

THE "ROUND GRAVE PEOPLE"



TURNING now to the discussion of the cultures of this part of the upper Tennessee valley, as exemplified by the artifacts found during the course of our explorations, described in the preceding chapters, we will first consider the products of the earliest culture whose remains we encountered—the people we have called on account of the distinctive circular form of their graves, the "Round Grave people," but whose real appellation is lost in the mists of the past.

DISCOVERY

We first suspected the existence of a distinctly pre-Cherokee culture during the excavation of the Mainland village-site on the Bussell place near Lenoir City, when we

observed that fragments of vessels made of steatite (soapstone), while quite abundant, were found only near the bottom of the village layer, here 30 in. deep in places, and that stemmed arrowpoints occurred only at about the same level, or were scattered about the fields away from any habitation sites, the points in the upper portion of the deposit being all triangular. The suspicion was strengthened when we found, on the same site, three circular graves, one of them containing stemmed arrowpoints, and all of obviously earlier date than the more abundant rectangular graves which we attributed to the Cherokee, and in which triangular arrowpoints only were found.

Suspicion did not become certainty, however, until we commenced work in the Great Midden on Bussell's island, where we found, in the lower levels, not only pieces of stone vessels and stemmed arrowpoints, but many sherds of pottery quite distinct in character from the Cherokee ware above mentioned. Nine of the characteristic "round graves" like those found before appeared here also, and some of them

yielded fragments of stone pots, the same class of arrowpoints, and identical pottery, but not one of them contained anything characteristically Cherokee.

There was no distinct stratification to guide us, but the contrast between these things found in the lower levels of the Great Midden, and the known Cherokee artifacts from the upper levels, was so marked that we did not hesitate to ascribe them to a different culture.

Later we found an undisturbed village layer, apparently of the same culture, underlying Mound 2 at Hiwassee island, with the same kind of fragments of soapstone pots and stemmed arrowpoints, together with similar pottery, but no burials.

STONE VESSELS

Very characteristic of this early "Round Grave" culture, but not found by our expedition among the remains of later date, were the numerous fragments of bowls or pots made of steatite. While none appeared in perfect condition, it was evident, from a study of them, that although

some of the vessels had been circular in form, the majority were more or less oval,

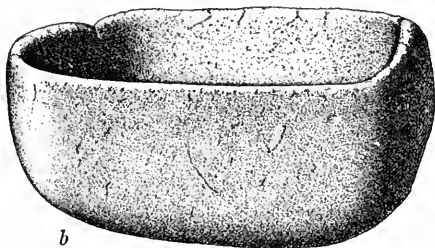
*a**b*

FIG. 15.—Types of stone vessels: *a*, Kentucky; *b*, Tennessee. (Length of *b*, 10.6 in.)

or even rectangular. How they probably appeared when perfect is shown in fig. 15, which represents two stone vessels now in

this Museum, *a* being from Kentucky, *b* from central Tennessee.

In material, the fragments ranged from a very fine-grained, greenish-gray steatite through various shades of gray and degrees

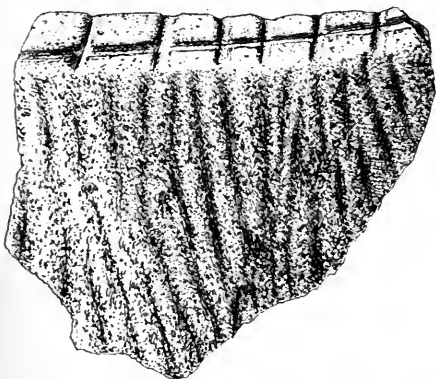


FIG. 16.—Fragment of decorated steatite vessel, "Round Grave" culture, Lenoir or Bussell's island. (Length, 2.6 in.)

of coarseness to a coarse yellowish variety of almost sandy texture; while in thickness they varied from nearly an inch, in the case of one fragment of what seems to have been the bottom of a vessel, to less than a quarter of an inch, the thickness of a rim piece.

Many of the fragments show plainly on the outside the marks of the sandstone rasp with which they were finished, and others distinct strokes of a narrow-bladed shaping

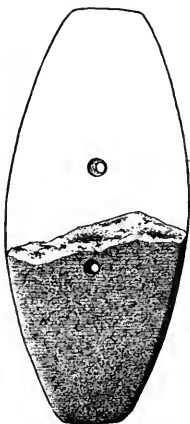


FIG. 17.—Gorget of steatite, "Round Grave" culture, Lenoir or Bussell's island. (Length, 2.2 in.)

tool, purposely placed parallel to one another to produce a kind of decorative effect; the inside is usually worn smooth.

Attempt at decoration is also found in the transverse parallel lines or notches scratched into the tops of some of the rims, as seen in fig. 16, which also shows a longitudinal line intended to be ornamental.

As to purpose, the coating of soot on many of the fragments leaves little doubt that these stone vessels were used over the fire for cooking, but even when broken their usefulness was not always

ended, for gorgets like that shown in fig. 17, and other articles like the one, perhaps



FIG. 18.—Sinker (?) of steatite, "Round Grave" culture, Hiwassee island. (Length, 3.3 in.)

a sinker, shown in fig. 18, might be made of the pieces.

POTTERY

Judging from the potsherds found in our excavations, the only type of earthen vessel used by the "Round Grave people" seems to have been more or less egg-shaped, with pointed bottom (fig. 19), of a form

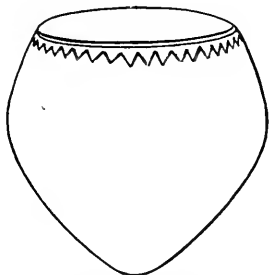


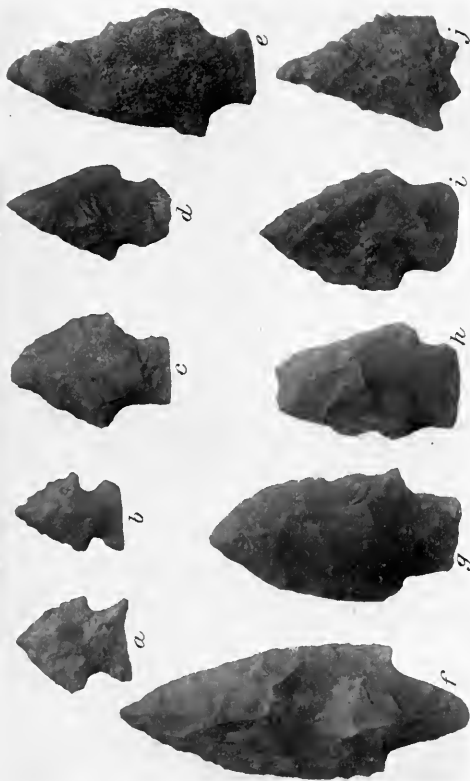
FIG. 19.—Type of pottery vessel used by the "Round Grave people," determined from fragments.

commonly found in the Algonkian districts of the Middle Atlantic slope.²⁶ Examples of the ware are shown in pl. XLVII.

It was soon noticed that most of the sherds were marked with parallel corrugated indentations quite different from anything seen in the Cherokee deposits.



CHARACTERISTIC POTSHERDS OF THE "ROUND GRAVE" CULTURE.
LENOIR CITY, TENNESSEE
Length of *b*, 3 in.



CHARACTERISTIC ARROWPOINTS OF THE "ROUND GRAVE" CULTURE
g, h, j, From Hiwassee island; remainder from the Lenoir City sites
Length of *f*, 3.4 in.

These were at first considered a species of decoration produced by pressing a cord-wrapped stick into the clay while still plastic, but later, when wax impressions of the sherds were made, it was seen that the marks are the imprints of a stiff fabric consisting of a warp of rushes and a weft of twisted fiber cords. Holmes²⁷ illustrates a specimen of this kind from a piece of pottery found in Carter county, Tennessee, and regards the warp as composed of bundles of fiber; but we have one specimen in which the weft has worn away, revealing the warp to consist of rushes (fig. 20, *b*). Moore²⁸ found identical fabric in a charred condition with burials at the Bennett place on Tennessee river below Chattanooga, of which he says in one instance, "This burial lay in part at least on a kind of mat made of reeds or of small canes placed parallel in contact and joined together with cords crossing at right angles." The writer has examined fragments of this, now on exhibition in the Academy of Natural Sciences of Philadelphia, and thinks from the manner in which the fabric has been folded, and

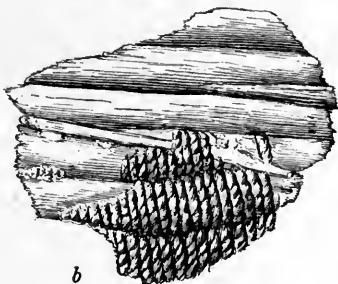
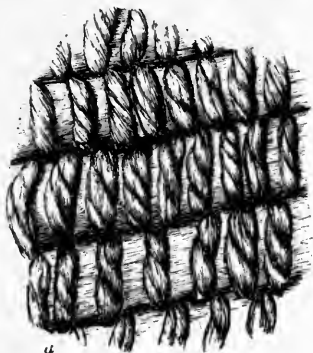


FIG. 20.—Textiles of the "Round Grave people" as shown by imprints on their pottery.

the appearance of the broken ends, that the warp is of rushes, which are fairly pliable, rather than of canes, which are much stiffer. That the object has been a sleeping mat or rug, rather than a bag or a basket, seemed evident.

The character of the fabric is shown in fig. 20, from a drawing of wax impressions of sherds of this type. Whether the vessels were built up inside of bags of this kind of weaving, or whether pieces or straps of the material were impressed into the clay to produce a decorative surface, can not be determined until larger pieces of the ware are obtained and we observe whether or not the imprints are continuous. Some of the sherds collected certainly indicate that the ware was made by the usual coiling process, whether in a bag or not. One sherd also shows an attempt at decoration in the form of a faint zigzag incised line encircling the vessel just below the rim (fig. 19), and another, a band of parallel oblique lines.

The color of the pottery is merely that of the burned clay, yellowish to brownish; the

texture is firm; the thickness is not excessive, averaging little if any greater than that of the usual Cherokee ware; tempering material is sometimes sand or crushed stone, but more often, like that of the "Over-hill" Cherokee, crushed musselshell, which in some cases has decomposed and leached away, leaving the ware porous.

STONEWORK

Most abundant of the products in stone of the "Round Grave people" found by our expedition, with the exception of the fragments of stone vessels already described, are the arrowpoints, of which typical examples are shown in pl. XLVIII, where it will be noticed that all illustrated are provided with stems to facilitate attachment to the shaft—a feature which Cherokee arrowpoints lack. Specimens *a*, *f-j* were all found in the lower levels of the Great Midden on Lenoir or Bussell's island; *b* came from the old village layer beneath Mound 2 on Hiwassee island; *c* from a pit extending into the subsoil from this same layer; *d* is one of two similar points found

in a round grave at the Mainland village-site near Lenoir City; while *e* is the point, before mentioned, that had been shot into the shoulder of a person buried in the oldest part or nucleus of Mound 5 on Hiwassee island. There is nothing peculiar nor unusual in the workmanship of these arrowpoints; the material is commonly the grayish flint often seen in this region, although *e* has a pinkish tinge, and *j* is of dark quartzite, and several points of white quartz were found.

It so happened that we found no axes of any kind in the unmistakable "Round Grave" deposits, but the writer suspects that the grooved axes occasionally seen on the surface in the region may be attributed to these people—certainly he has never found even a fragment of a grooved axe in the Cherokee deposits where axes of the celt type are frequent. Pestles of the "bell" type, such as is seen in pl. LXXXVI, *a*, are also sometimes picked up in this district, but whether or not they belong to the "Round Grave" culture the writer can not say. He has never seen them in

the Cherokee deposits either, although cylindrical pestles are sometimes there found.

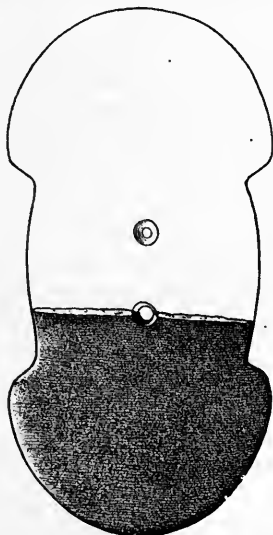


FIG. 21.--Gorget of the "Round Grave" culture, Lenoir or Bussell's island. (Length, 2.1 in.)

That the "Round Grave people" were skilful in the manufacture of ornaments of stone is evidenced by the finding of two

fine fragmentary gorgets in the lower part of the Great Midden on Lenoir or Bussell's island. One, made of greenish banded slate, had been oval in form, with two perforations; the other, of the unusual shape shown in fig. 21, seems to be made of a very fine-grained sandstone, and is brownish gray in color. A third broken gorget of steatite, and not so well made, has been already mentioned and illustrated (fig. 17). The few hammerstones, net-sinkers, and the like, unearthed in the lower part of the "Great Midden," did not differ apparently from those of the Cherokee found above them.

WORK IN BONE

The same may be said of the "Round Grave" bone awls, examples of which are shown in fig. 22: they are merely sharpened splinters of deer-bone, indistinguishable from the poorer products of the Cherokee. Different from any of the Cherokee products found by us, however, is the thin, curved, bone object with two perforations near one edge, shown in fig. 23, possibly a

“bracer” to protect the wrist from the snap of the bow-string, found near the right

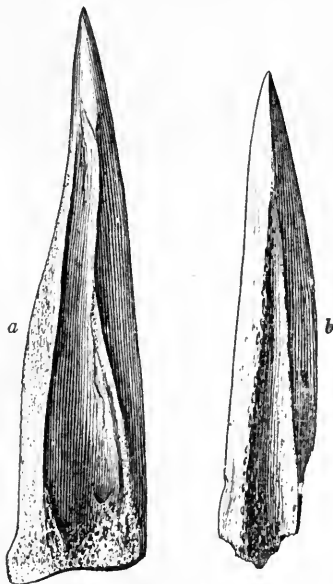


FIG. 22.—Bone awls of the “Round Grave” culture, Lenoir or Bussell’s island. (Length of *a*, 3.2 in.)

lower arm of a “Round Grave” skeleton.
The necklace of perforated animal teeth

found with a skeleton of this period has already been mentioned in the chapter on



FIG. 23.—Bracer of bone, "Round Grave" culture, Lenoir or Bussell's island. (Length, 3.7 in.)

Lenoir or Bussell's island; these in the main seem to be the canine teeth of the lynx, and while in the majority of cases the perforation seems to have been effected by drilling from one or both sides in the usual manner (fig. 24, *a*), in some cases it has been done by scraping or grooving with a sharp flint, as seen in fig. 24, *b*. Nothing was found in the line of ornaments made of marine shell, nor objects of native copper, to indicate intertribal trade.

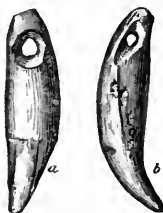


FIG. 24.—Lynx-teeth, perforated for suspension: *a*, Drilled; *b*, Scraped. "Round Grave" culture, Lenoir or Bussell's island.

When we repeat that these people folded their dead into an almost unbelievably small compass, with the knees usually tight against the chest and the head forced down between them, and crowded them either on the back or on the side into circular, well-like pits of small diameter, often breaking bones in the process, we have, with what has preceded in this chapter, told all we know, objectively, about the "Round Grave people."

DISTRIBUTION

As to the distribution of this people in Tennessee, we found their remains at Hiwassee island near Dayton, and at the Lenoir City sites, while Holmes, as before noted, reports pottery which seems to be identical with their distinctive ware, from Carter county in the eastern extremity of the state. The curious textile, imprints of which are seen on much of the "Round Grave" pottery, was not, however, used only by them, for, as before noted, charred fragments of it were found by Mr Moore at the Bennett place, associated with an en-

tirely different series of artifacts—a distinctly different culture.

Mr Moore²⁹ did find, however, what seems to be a station of these people farther down Tennessee river, on Kodger's island in Lauderdale county, Alabama, where soapstone vessels were encountered, associated with two-holed gorgets and with arrow-points which, although not described in the text, proved, when examined by the writer in the Academy of Natural Sciences of Philadelphia, to be mainly of stemmed types.

Also discovered by Mr Moore³⁰ were tightly folded burials in circular grave-pits of small diameter on the Hampton place below Chattanooga, but many of the skeletons he found were placed vertically instead of horizontally, and were accompanied with glass beads and articles of iron and brass, showing contact with the whites; while almost every grave-pit was covered with a layer of burnt clay, not directly on the skeleton as seen elsewhere, but near the surface of the ground, a feature not observed in any round grave examined by us; there-

fore, although Mr Moore found some stemmed points with burials here, the connection between the makers of his circular "grave-pits" and those of our "round graves" remains doubtful.

RELATIONSHIP

Our best method of gaining a clue to the relationships of the "Round Grave people" is to look for a group whose products, taken as a whole, are similar. Where, then, do we find a cultural complex comprising simple egg-shaped pottery vessels with pointed bottoms, abundant soapstone vessels, arrowpoints of the stemmed types, well-made gorgets, and bone implements usually of simple form? The nearest area where such a series is found in its entirety, for the greater part unobscured by the presence of other cultures, is the Middle Atlantic slope, from Virginia to the eastern tip of Long Island, New York, and, in a slightly modified degree, onward up the New England coast, a region found by the first Europeans in possession of a group of

Algonkian tribes, who were undoubtedly the makers of the products in question.

It thus seems logical to state that our "Round Grave people" were either Algonkians closely related to those of the Middle Atlantic slope, or had at least been profoundly influenced by them.

SUCCESSORS OF THE "ROUND GRAVE PEOPLE"

RESEMBLANCES TO CHEROKEE

After the disappearance of the "Round Grave people," whoever they may have been, came another, the builders of most, at least, of the conical mounds along the Tennessee between Lenoir City and Hiwassee island. They buried little with their dead, unfortunately, but what few artifacts we found resembled for the greater part those of the Cherokee. As before stated, they seem, like the Cherokee, to have employed the triangular form of arrowpoint and the celt type of axe exclusively; and also, like them, to have used many ornaments made of marine shells obtained by intertribal barter from the

Gulf region or the Atlantic coast; while their forms of burial were, on the whole, similar. Unfortunately, however, these characteristics do not seem to have been confined to the Cherokee, but were also the property of other peoples living farther down the river. The limited amount of pottery found, whose connections with this culture can be established, has, with one exception, little character, and while it might be early Cherokee, it also might not be.

DIFFERENCES

In some respects, however, the people who followed the "Round Grave" group seem to have differed from the known Cherokee: for instance, in the partial burning of some bodies after laying them in the grave, noticed at the Upper Hampton place and in Mound 5 on Hiwassee island, while the embossed native copper ornament discovered with a skeleton in Mound 3 of the Bussell group near Lenoir City, an object resembling a specimen in this Museum, found far down the Tennessee

river in Alabama, finds no counterpart among known Cherokee remains.

Then we have the problem of the polychrome pottery, which, although it was found only occasionally, and in fragments, in the general digging of the mounds, appeared quite frequently in refuse deposits later than those of the "Round Grave" period, but below those we know surely to be Cherokee.

PROBABLE SOLUTION

Now, Mr Moore³¹ found at the Bennett place on Tennessee river below Chattanooga, a cultural complex which embraces all the non-Cherokee features mentioned above—the burned burials, the embossed copper ornaments, and the polychrome pottery, combined with celt-axes, triangular arrowpoints, ornaments of imported shells, and positions of burial resembling those of the Cherokee.

It appears, then, that our mound-building Indians who followed the "Round Grave people" were probably the same as those who occupied the Bennett Place site,

and that these, while they resembled the known Cherokee in some respects, differed from them in others. That they were the ancestors or relatives of the Cherokee is possible, but their use of embossed copper ornaments and of polychrome pottery suggests a connection with a culture centering at one time in Cumberland valley, a culture which Mr William Edward Myer,⁵² who has devoted considerable study to the subject, regards as Siouan. Of course it is true that the polychrome pottery of this last people is somewhat different from the ware found by Mr Moore on the Bennett place, and by our expedition farther up the river; and it is equally true that the embossed copper, like the ornaments of Gulf shells, might have come in by trade; hence perhaps it is not safe to lay too much emphasis on these features in attempting to determine relationships.

So far as the very simple pottery of Southern character found in the general digging of the addition to Mound 2 is concerned, these sherds may be relics of the traditional Creek settlement at the mouth of the

Hiwassee, mentioned by Haywood, and may have nothing to do with any of the three other cultures under discussion.

MERGING OF CULTURES

Whether or not the mound-building Indians who followed the "Round Grave people" were in reality the ancestors of the Cherokee, it is true that on long-inhabited sites like Hiwassee island their remains merge imperceptibly into those of the precolonial and colonial Indians whom we know to have been Cherokee.

X. REMAINS OF THE CHEROKEE: POTTERY

IDENTIFICATION

BEFORE proceeding to a description of the artifacts which we attribute to the Cherokee culture, let us look a little more closely than before at our justification for so identifying them. In the first place, we know that when the whites first began to visit the upper Tennessee valley they found it occupied exclusively by the Cherokee,³³ and also that this people remained there through the colonial period, in spite of frequent conflicts, until finally displaced by the newcomers early in the nineteenth century,³⁴ when a large part of the tribe was removed westward. We even know that, as before recorded, Hiwassee island itself was the home of the Cherokee chief John

Jolly, who abandoned it in 1818. In view of these facts, when we find Indian burials of a given type, accompanied with traders' products showing contact with the whites, common in this region, we can be reasonably certain that this type may be called Cherokee. Moreover, these known Cherokee graves containing articles of trade also frequently yield native artifacts, which in this manner can be identified as Cherokee. Thus prepared, we can go to graves of an earlier period, before the coming of the whites, and when we find them of known Cherokee type and containing known Cherokee artifacts we can identify them too as Cherokee, and in this manner work back from the historic to the pre-historic. Proceeding by these methods, the writer feels that the artifacts we are about to describe may be considered as typical of the Tennessee Valley settlements of the Cherokee, unless otherwise noted.

DISTRIBUTION OF POTTERY

On the whole, particularly during the earlier part of their stay in eastern Tennes-

see, the pottery of the Cherokee may be said to belong to the Middle Mississippi group as defined by Holmes,³⁵ which extends approximately from eastern Arkansas and Missouri eastward to the Appalachian ranges, including Tennessee, Kentucky, and parts of the states adjacent on the north and south.

While many forms are widely distributed throughout the whole area, and must have been the common property of many separate tribes, there are certain types of vessels and features of decoration that are much more restricted, and these, as Holmes says, enable us to recognize a number of subgroups which may have a tribal or cultural significance. One of these, which embraces some forms reminiscent of the Iroquois patterns, occupies the territory from eastern Tennessee northward across Kentucky into Ohio; and with this subgroup may be classified the ware of the Cherokee in the earlier part of their occupancy of eastern Tennessee. As time went on, however, we find more and more influence creeping in from the southeast—

stamped ware, and the cazuela type of vessel,³⁶ both characteristic of the Southern Appalachian group, become numerous, associated with the old types which were still retained. In some, at least, of the Cherokee towns east of the mountains, Southern Appalachian forms seem, finally, in early Colonial days, to have dominated, to the partial exclusion of the old types,³⁷ and the ware made recently by the Cherokee is quite distinctly Southern Appalachian for the greater part. Most of the bottoms of the larger modern vessels are flat instead of rounded, as in the old forms, but this change was brought about to facilitate standing them on modern shelves and tables.

GENERAL CHARACTERISTICS

In color, Cherokee ware is usually yellowish or brownish, sometimes with a tinge of red, but these are merely the natural tints of the fired clay without artificial coloring. Occasionally the inner surface still retains, however, a black tinge due to the process to be described later, by which the vessels

were rendered impervious, and the exterior is sometimes coated with soot from the ancient camp-fires.

The surface of the ware, even when not purposely roughened, is seldom very smooth, and the texture is usually quite coarse, owing to a heavy admixture of pounded musselshells used in tempering; but a few fragments of especially well made bowls, of fine texture and with a smooth polished surface on both sides, show that a better class of ware was known. It is interesting to note here that the Cherokee ware made at the Nacoochee mound in northern Georgia was not as a rule tempered with shells, but with sand or crushed stone; and that these last are the only tempering materials remembered by the modern Cherokee potters met by the writer in North Carolina.

In thickness, the Cherokee pottery found on Tennessee river by our expedition varies from one-tenth to seven-tenths of an inch, with an average of about three-tenths. Besides the decoration produced by free-hand drawing with a pointed instrument on

the clay while still soft, and by stamping it with a carved paddle, both surviving until lately among the modern Cherokee, the ancient sherds show patterns formed by the imprints of the end of some kind of hollow cylinder, such as a quill or a piece of cane; dots produced by pressing a solid point into the clay; and a body-finish effected by strokes of a paddle wrapped with cord, by brushing with a bundle of stiff grass, or, in the case of the coarse basins or vats of the salt-pan type, by constructing the vessel in a hole lined with pieces of native fabric which left its imprint on the finished product.

POT-LIKE FORMS

Commonest of all Cherokee pot types, insofar as these are preserved by the fragments found in the refuse heaps in eastern Tennessee, is the large cooking-vessel of oval outline, with a vertical or insloping neck of considerably smaller diameter than the body, and from two to four broad, flat handles connecting the edge of the rim with the bulge of the body below, as seen

in pl. XLIX, *a*, *d*, and in fig. 25, *a*, surmounted by a decorative point. The plain, flat handle was the typical form, but some-

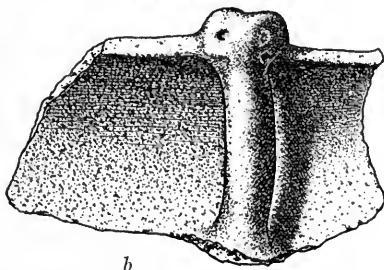
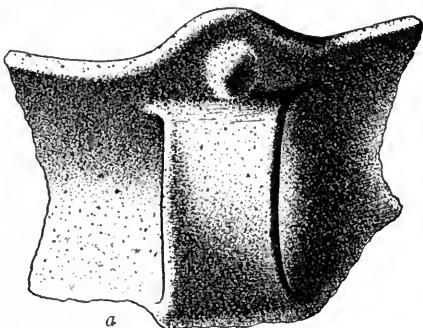
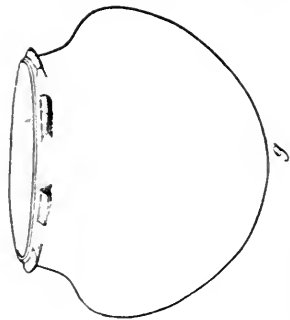
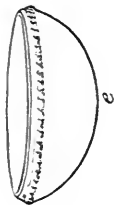
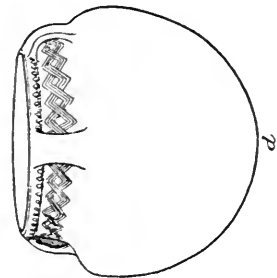
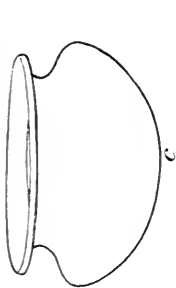
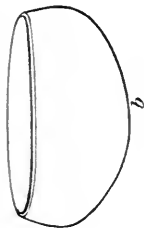
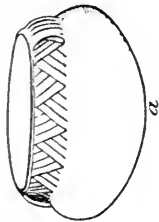


FIG. 25.—Handles of pottery vessels: *a*, Flat, from Hiwassee island; *b*, Round, from Mainland village-site. (Length of *a*, 2.4 in.)

HARRINGTON—CHEROKEE REMAINS



CHEROKEE POTTERY TYPES OF EASTERN TENNESSEE

HARRINGTON—CHEROKEE REMAINS

PL. I



LARGE POTTERY VESSEL, LENOIR OR BUSSELL'S ISLAND,
LENOIR CITY, TENNESSEE
Diameter of mouth, 11.1 in.

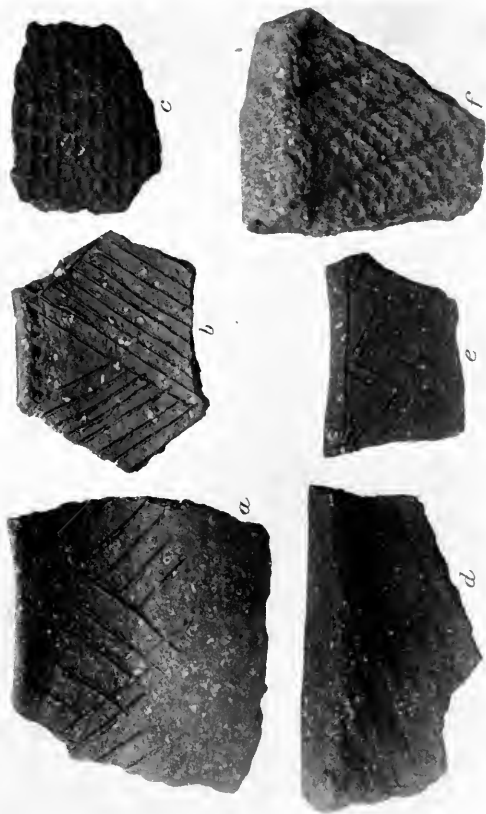
times handles of circular section (fig. 25, *b*) were used, and occasionally handles were replaced by projections or lugs, as seen in pl. I, representing a large vessel, lacking only the bottom, found at Lenoir or Bus-sell's island, the complete restoration of which appears in pl. XLIX, *g*. These pro-jections were sometimes rounded, as in this specimen, sometimes pointed, and some-times bifurcated or notched; and it was noticed that vessels with this kind of lugs were much more abundant at the Lenoir City sites than on Hiwassee island. All or most of these types can be traced across the mountains at least as far as the Nacoo-chee mound in northeastern Georgia, explored for the Museum of the American Indian, Heye Foundation, by Messrs Heye, Hodge, and Pepper,³⁸ a mound yield- ing specimens which for the greater part may be attributed to the Cherokee.

Other types of vessels besides these large pots are sometimes provided with similar projections or lugs, which in some cases are almost knob-like.

When decorated at all, these large vessels,

which sometimes measure 15 in. or more in height, are usually encircled at the neck by the widely distributed incised design composed of a series of triangles, each consisting of parallel lines arranged as shown in pl. XLIX, *a*, and LI, *a*, *b*; while not so common, but equally characteristic, is the band of adjoining quadrangles formed by interlocking zigzag lines shown in pl. XLIX, *d*, and on the small vessel in pl. LII. The bodies of such vessels, like those of the smaller ones of similar form next to be described, have in some cases been given a roughened decorative surface, as seen in pl. I, by repeated strokes of a paddle wrapped with cord, applied while the clay was still plastic. Vessels of similar form and design are of common occurrence in eastern Kentucky and southern Ohio.²⁹

Related to these large oval vessels in general characteristics are numerous smaller ones, which differ from those just described in having a flattened spheroidal instead of an ovoid body—a type found throughout the Middle Mississippi Valley district, before mentioned. Many are plain, but



CHEROKEE POTSHERDS

a, b, e, Hiwassee island, near Dayton; *c, f*, Mainland Village-site; *d*, Bussell's island, near Lenoir City, Tennessee. Length of *d*, 3.2 in.

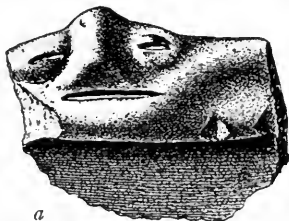


POTTERY VESSEL WITH HANDLES, SHOWING INCISED
DECORATION. HIWASSEE ISLAND, NEAR DAYTON, TENNESSEE
Diameter of mouth, 3 in.

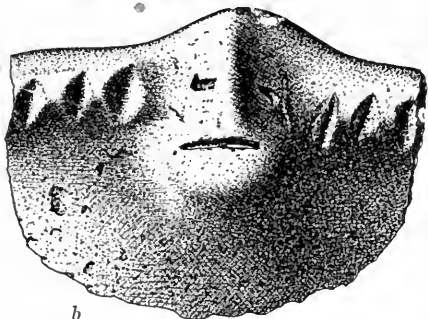
pl. LII shows a decorated example, a mortuary offering from Mound 1 on Hiwassee island; while pl. LIII illustrates a type with decorative projections on the body, found with a burial on the Mainland village-site near Lenoir City. That these projections, with the curved lines above them, may constitute a conventionalized representation of an owl's head, may be suspected from the fact that another one, similar, but surely an owl's head effigy, was found in a grave on Hiwassee island; but this, unfortunately, was so badly disintegrated that it could not be restored.

A related form with notched projecting rim which resembles the western Iroquois styles, and which the writer regards as a connecting link between the pottery of the Cherokee and that of their linguistic relatives, the Iroquois proper of the north, is shown in pl. LIV, which, except for the heavy shell tempering, would not seem out of place if found in the old Seneca territory of western New York. Variations of the notched rim are shown in pl. LV, *d-f*, and

other rim types suggesting Iroquois styles are represented in *a-c* of the same plate.



a



b

FIG. 26.—Effigies of the human face used as rim decoration: *a*, Hiwassee island; *b*, Lenoir or Bussell's island. (Length of *b*, 2.1 in.)

Such notched rims are also frequent on Cherokee sites east of the mountains.



POTTERY VESSEL WITH HANDLES, SHOWING INCISED
DECORATION AND NODES, MAINLAND VILLAGE-
SITE, LENOIR CITY, TENNESSEE
Diameter of mouth, 4.2 in.



POTTERY VESSEL SUGGESTING IROQUOIAN FORMS. LENOIR
OR BUSSELL'S ISLAND, LENOIR CITY, TENNESSEE
Diameter of mouth, 5.1 in.

Suggesting Iroquois usage in principle, if not in detail, is the use of the human face as a rim decoration for pottery, seen in fig. 26, which in just this form seems to be a characteristic Cherokee phenomenon, found at Hiwassee island and the Lenoir City sites, and also across the mountains at the Nacoochee mound in Georgia;⁴⁰ but not outside the Cherokee domain, so far as the writer knows.

Another pot form, distinguished by a very widely flaring rim (pl. XLIX, *c*), and found by us only at Hiwassee island, is also reported from the Nacoochee mound⁴¹ in somewhat modified form; while the pot seen in pl. LVI, found in a child's grave at Lenoir or Bussell's island, is an eccentric type representing a bowl resting on a pot, and seems quite widely distributed through the Middle Mississippi Valley region.

BOWLS

The three most abundant types of Cherokee bowls are seen in *b*, *e*, *f*, of pl. XLIX, of which *e* is typical and widely distributed in the Middle Mississippi group, while *b*

and *f*, variants of a type of bowl called *cazuela* by the writer in a previous paper,⁴² are more characteristic of the Southern Appalachian group in the United States, and of the Taino culture of the West Indies. The type shown in *b* is usually plain; *e*



FIG. 27.—Pottery bowl, cazuela type, found at Lenoir island by Emmert. (After MacCurdy)

seldom has more than the encircling notched ridge, as shown; but *f*, strange to say, seems to have been especially singled out for decoration. We found many fragments of this type of bowl (pl. LVII, *a-d*), but no complete examples, in which we were not so fortunate as Mr Emmert, who unearthed



CHEROKEE POTSHERDS
a, b, c, Hiwassee island, near Dayton; *d, e, f*, Sites near Lenoir City, Tennessee. Length of *e*, 2.9 in.



POTTERY VESSEL, UNUSUAL FORM, LENOIR OR BUSSELL'S
ISLAND, LENOIR CITY, TENNESSEE
Diameter of mouth, 6.2 in.

the cazuela shown in fig. 27 on Lenoir or Bussell's island, a specimen now in the Wesleyan University collection, and figured by MacCurdy.⁴³ In form, and especially in decoration, this specimen seems to be typical of the old Cherokee domain, almost identical examples having been found in Kentucky and at the Nacoochee mound in Georgia (now in this Museum), and by Mr Moore on Tennessee river in Alabama, not far from the Tennessee border.⁴⁴ Bowls, as a rule, seem to have been 12 in. or less in diameter; but fragments of one, like that shown in pl. XLIX, *e*, were found, that had been at least twice as large, and sherds of very coarse, heavy, fabric-marked "salt-pan" ware (pl. LI, *d, f*) sometimes appeared—pieces of very large vessels whose shape had apparently ranged from the true bowl (pl. XLIX, *e*) to the typical salt-pan or evaporating vat for salt making (fig. 28). The textile markings on these sherds will be considered later.

The use of the carved paddle in decorating pottery,⁴⁵ applied mostly to bowls of the cazuela type (pl. XLIX, *b, f*), but some-

times to pots like *c* and even *g* of the same plate, does not seem to have been as popular at the settlements of the Cherokee on Tennessee river as it became among these people east of the mountains; yet numerous examples were unearthed, such as the

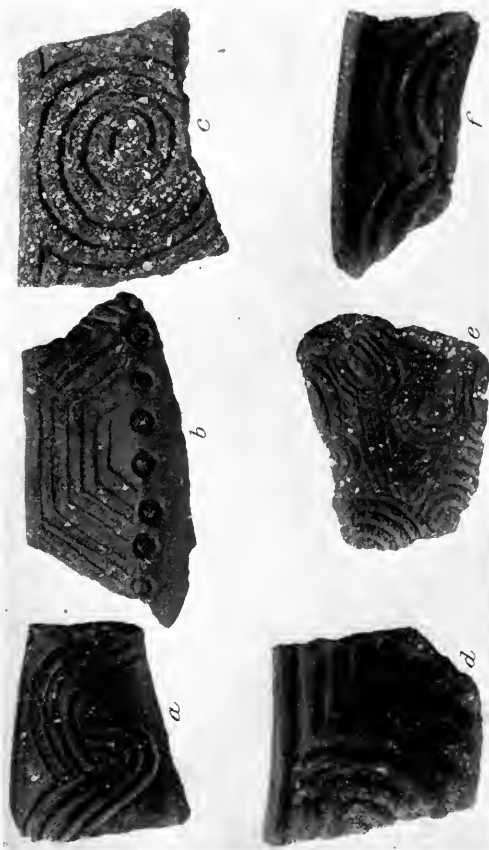


FIG. 28.—Restoration of pottery "salt-pan."

sherd shown in pl. LI, *c*, and pl. LVII, *e*, which latter form has been found by the writer as far north as prehistoric Iroquois sites in New York state.

BOTTLES

One type of pottery vessel—the earthen bottle—which is very characteristic of the Middle Mississippi group and of the Caddo culture adjoining on the southwest, is exceedingly rare on our Cherokee sites, being represented only by one perfect speci-



CHEROKEE POTSHERDS
a, b, f, Hiwassee island, near Dayton; *c, d, e*, Lenoir or Bussell's island,
near Lenoir City, Tennessee. Length of *b, 3, 3* in.



BOTTLE OF EARTHENWARE, LENOIR OR BUSSELL'S ISLAND,
LENOIR CITY, TENNESSEE
Height, 5.5 in.

men of reddish ware from Lenoir or Bussell's island (pl. LVIII), found in a child's grave, and by a few fragments, lighter in color, from this and Hiwassee island.

EFFIGY VESSELS

Equally typical of the Middle Mississippi group, as a whole, are the sunfish, frog, and bird effigy vessels which seem to have found considerable favor with the Cherokee, for we obtained a number of perfect or nearly perfect examples from graves—a frog (pl. LIX) at the Mainland village-site, a bird (pl. LX, *a*) on Lenoir or Bussell's island, and a fish (pl. LXI) in Mound 1 at Hiwassee island, with scattered fragments in all three places.

As may be seen from pl. LIX, the frog is an excellent representative of its type, the head with its bulging eyes and even its nostrils being modeled on one side of the vessel to the left; a point representing the base of the spine on the opposite side; and the legs, represented by ridges, between them; while the rim of the vessel is encircled by a notched ridge. The bird is much

cruder (pl. LX, *a*), and the tail is missing, but the head and wings are plainly indicated. A good bird-head from a similar vessel is shown in fig. 29, while pl. LX, *b*, represents a crude form from Lenoir island which may have been based on the bird

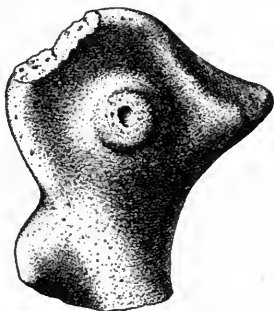


FIG. 29.—Bird-head effigy from pottery vessel, Hiwassee island. (Length, 2 in.)

type. The fish (pl. LXI) is well executed, and shows plainly the head, eyes, tail, and fins.

All these forms have a wide distribution, as above noted; and fragments of them appear, moreover, on Cherokee sites east of the mountains, for example, among the sherds,



POTTERY VESSEL, FROG EFFIGY, MAINLAND VILLAGE-SITE, LENOIR CITY, TENNESSEE
Diameter of mouth, 4.4 in.



a



b

POTTERY BOWLS

a, Bird effigy (diameter, 4.2 in.); *b*, With lugs (diameter, 5 in.). Lenoir or Bussell's island, Lenoir City, Tennessee

now in this Museum, found at the before-mentioned Nacoochee mound, although plainly not so common there.

POLYCHROME WARE

Mr Moore seems to have been the first to call attention to the existence, on upper



FIG. 30.—Vessel of polychrome ware, collected by C. B. Moore near Chattanooga. (After Moore)

Tennessee river, of a peculiar variety of pottery characterized by striking angular patterns in red painted on a ground of light-yellow. Of the first vessel of this type found (fig. 30), which lay at the head of a child's skeleton in a stone grave in a

mound on the Bennett place below Chattanooga, he says:⁴⁶

“This bowl . . . is of special interest in that it has had a striking design painted in red on a background of yellow slip, the nature of the design differing entirely from anything found or heard of by us along Tennessee river, except between the Bennett Place and Citico creek, about thirty miles farther up, where fragments of vessels of this kind were found, as was also the case at the White Place, an intermediate point. We have been unable to learn, though the foremost authorities have been consulted, that designs of the kind on this vessel and on the other bowl from this mound have been discovered elsewhere in the State of Tennessee. Evidently vessels of this kind belonged to a culture local and restricted in area.”

We found some sherds of this kind at the Mainland village-site, where one fragment had been painted solid red, and typical specimens on Lenoir or Bussell's island near Lenoir City, which extends the distribution of the ware up the river to the mouth of the Little Tennessee. Several dozen pieces of it were also collected on Hiwassee island, examples of which are shown in pl. LXII, fragments of vessels which, when perfect, probably had resem-



POTTERY VESSEL, FISH EFFIGY, HIWASSEE ISLAND, NEAR
DAYTON, TENNESSEE

Length, 4.4 in.



POTSHERDS, PAINTED DECORATION, HIWASSEE ISLAND,
NEAR DAYTON, TENNESSEE
Length of *a*, 2.7 in.

bled Moore's bowl seen in fig. 30. We were also fortunate enough to find examples of similar painting in black instead of red, an example of which appears in fig. 31, *a*, which shows a fragment of a bowl whose



FIG. 31.—*a*, Fragment of polychrome vessel, Hiwassee island; *b*, Restoration of same. (Length of *a*, 3.3 in.)

probable form, when perfect, is seen in fig. 31, *b*. With respect to the distribution of the ware, it is interesting to note at this point that Mr Harlan I. Smith found a piece somewhat similar at May's Lick, Kentucky,⁴⁷ and that this is apparently the

most distant place from which such pottery has been reported.

The probability that this ware is not of Cherokee origin, but is possibly of local development, near Chattanooga, of a culture resembling that of Cumberland valley, has been mentioned, and this theory finds support in the fact that the polychrome sherds are different in texture from the usual Cherokee ware, being much harder and more compact, while the shells used for tempering are ground much finer and the color is lighter, as a rule, in all of which they resemble the best Cumberland Valley products. The forms of the vessels made of this ware (figs. 30, 31, *b*) also differ from those of the Cherokee; so our final decision was that the presence of these sherds on Cherokee sites is due either to early visits to these places by their makers, whoever they may have been, or to trade between them and the first Cherokee settlers.

USES OF POTTERY

That the pottery vessels of the ordinary types were frequently used for cooking is

indicated by the sooty condition of the outer surface of many fragments, and that the smaller forms, especially the bowls, were often employed in serving the food does not require specific proof, but follows

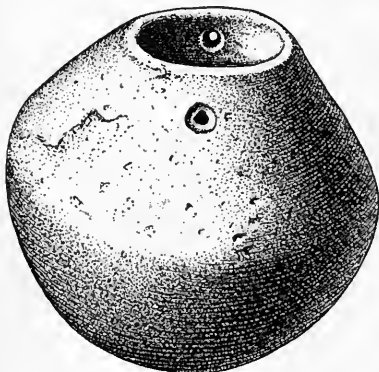


FIG. 32.—Small pottery vessel, Lenoir or Bussell's island. (Height, 2.2 in.)

as a matter of course. When the writer visited the Cherokee still in North Carolina, he found tiny vessels made for the children to use as toys, which furnishes an explanation for such small vessels as that shown in fig. 32, found with a burial on Lenoir or

Bussell's island. This, however, has holes drilled near the rim for suspension, and may have been employed in preparing medicine. The bottle forms were, of course, intended as receptacles for liquids.

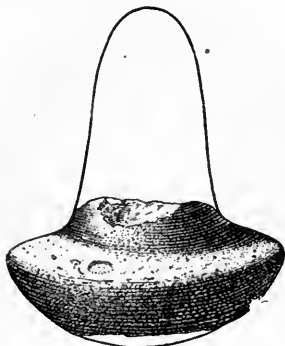


FIG. 33.—Modeling tool or trowel of earthenware, restored, Hiwassee island. (Length, 2.7 in.)

Pipes were also often made of earthenware (pl. LXXXIV, *b*), as were modelers or trowels of the type shown in fig. 33, of which we found only fragments; while secondary uses of pottery included the making of pot-covers from large sherds chipped

and ground into disc form (fig. 34), and smaller but similar discs probably used as game counters, varying from 0.8 in. to 3.5 in. in diameter.



FIG. 34.—Pot-cover made from a sherd, Lenoir or Bussell's island. (Diameter, 4.6 in.)

MANUFACTURE OF POTTERY

The Cherokee on the Qualla reservation in North Carolina still retained a number of pottery vessels in daily use when visited

by the writer in 1908, and at least one skilful potter still practised the art. To make a long story short, the writer studied her methods, and the results of his investigations were published by the State of New York,⁴⁸ from which report the following account of the processes involved, which probably are practically the same as in prehistoric times, is quoted:

“Mr. James Mooney had given me the name of one potter, Iwi Katâlsta, and I lost no time in making her acquaintance. Inquiry resulted in the discovery of but one more, an aged woman known as Jennie Arch, whose feeble hands had all but lost their skill. For this reason I confined myself almost entirely to Iwi’s methods of pottery-making. Fully half the pottery I secured from the Eastern Cherokee is said to be the work of her hand.

“Her tools were few, and with one exception, simple, consisting of a hammerstone for pounding the clay, a sharpened bit of stick for making lines and notches, and a fine grained, waterworn pebble for smoothing, showing the polish of long use (pl.



POTTER'S TOOLS OF THE MODERN CHEROKEE
a, c, Stamping paddles; *b*, Smoothing stone. Length of *a*, 9.2 in.



CHEROKEE WOMAN POUNDING CLAY FOR POTTERY
Courtesy of the New York State Museum

LXIII, *b*). The exception is the carved paddle for stamping the pottery—a broad-bladed wooden affair about 8 in. long, carefully carved to produce a checkerwork pattern when struck against soft clay (pl. LXIII, *a*). More paddles bearing different figures were later collected, some quite complex (pl. LXIII, *c*). Other accessories were a common axe, a bucket of water, a low-sided wooden tray for kneading clay, and a flat, oval piece of wood used as a stand to build large jars upon and provided with a handle at each end for convenience in turning; some saucers of china or gourd, and some pieces of cotton sheeting.

“After Iwi Katâlsta had dug her clay from a bed on Soco creek, the exact location of which she did not seem inclined to reveal, she was accustomed to mold it into a cake some 14 in. long, resembling in form a loaf of bread, in which shape it was dried and laid away for future use. When we visited her home at ‘Yellow Hill’ and requested her to make us some pottery, she broke off the end of this cake and proceeded to pulverize it on her hearthstone, using the

back of a common axe as a crushing instrument. In old times, she explained, a 'long rock' was used for this purpose.

"When sufficiently pulverized the clay was placed in a wooden tray, moistened and again thoroughly pounded (pl. LXIV). This time Iwi used a hammerstone which she kept especially to crush hickory-nuts, but which she often used in place of the axe in pounding the dampened clay. From time to time the mass was kneaded and a little more water or dry clay added as seemed necessary to obtain the required consistency. Sometimes, I was informed, a fine sand was added at this stage as a tempering material; but in this case it was omitted.

"Iwi had a vessel of the pot form in mind. Taking a large handful of the clay, she patted it into a ball, which she took in both hands and pressing her thumbs deeply into one side, began to turn it rapidly. In a surprisingly short time a small bowl with fairly thin sides was produced to serve as a base for the future vessel. During this process she had taken care to keep

her hands wet. Then supporting the inside of the bowl with the fingers of her left hand she struck it sharply on the outside with her carved paddle, slightly turning the embryo vessel before each stroke and moistening the paddle now and then in a vessel of water which stood near. The bowl-shaped base was then carefully laid upon a bit of cotton cloth resting on a common china saucer. When questioned as to what the Indians used before saucers were available, Iwi replied through the interpreter that she had heard that for large vessels the base was set in a hole in the sand lined with some sort of cloth, the sand being often inclosed in a basket for convenience. For small vessels, she said, a saucer made of gourd was just as serviceable as one of china, and as I liked the old style, she would take care to use gourd supports hereafter in making pottery for me. It was her custom, she continued, when making the large, flat-bottomed hominy jars to set the base on the oval, flat utensil of wood before mentioned especially made for the purpose and pro-

vided with a handle at each end to facilitate turning.

“The bowl-shaped base having been safely ensconced in the saucer, she pinched its edges thin with wet fingers; then, rapidly rolling out a lump of clay on a plank into a long thin cylinder (pl. LXV), she applied it just inside the rim of the base and projecting above it about half its width, pinching it fast the while until the circuit was completed (pl. LXVI). The coil proved a bit too long, so she broke the superfluous piece off and blended the two ends together with care. Then by careful pinching and smoothing with wet fingers and fingernails, the coil was blended with the bowl-shaped base and thinned at the top to receive another coil which was also applied inside. The object of applying each coil inside instead of directly on top of the preceding was to produce strength by overlapping. Thus the coiling proceeded until the required form and height were reached, when the rim coil was applied outside the one beneath. After being blended in the usual way, this was pinched into lateral



ROLLING THE COIL OF CLAY PREPARATORY TO MAKING A
POTTERY VESSEL

Courtesy of the New York State Museum



APPLYING A COIL TO THE BASE OF THE VESSEL
Courtesy of the New York State Museum

protuberances, and notched, dotted, or marked with a sharpened stick to suit the fancy. After each coil had been applied and blended, the vessel was allowed to dry and harden a few minutes before the next one was added; and after the jar had received its shape, it was allowed to become quite firm before the final stamping was applied.

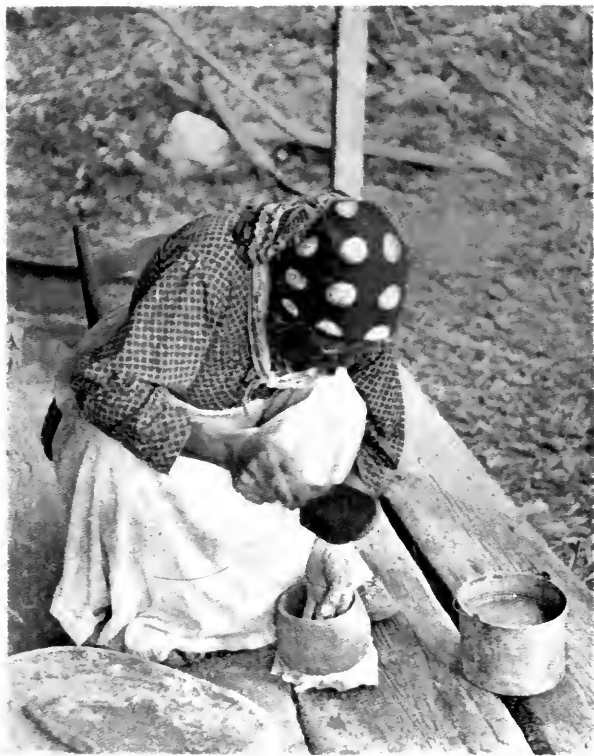
“It will be remembered that the base of the vessel had already been stamped before being placed in the saucer, so it was now necessary only to strike the body briskly with the wet paddle until the surface was covered with its imprints (pl. LXVII). In one jar the stamping was complete before the rim was added. After stamping, the vessel was set away to dry.

“The fact that Iwi used no tools except the paddle, the marking stick and her fingers, seemed remarkable to me, in view of the numerous smoothing tools of gourd, shell, bone, and wood, employed by the Catawba.⁴⁹ Inquiry revealed the fact that while they had apparently never heard of gourd smoothers, the Cherokee formerly

used mussel-shells and a marine shell, probably some species of *Cardium*, for this purpose. Iwi herself sometimes used a chip of wood in making large vessels.

“After drying,—a process that takes from one to three days, depending on the weather,—the vessel was carefully rubbed and polished on the inside, and on the outside whenever necessary, with the smoothing stone kept wet by continual dipping in water.

“When a number of vessels had been made and dried, the next step was to prop the vessels up on their sides around the fire, mouth toward the blaze, until a faint brown color, beginning near the fire, crept over the whole of the vessels—a sign that they were hot enough for firing. Then the potter, with a long stick, rolled them over, mouth-down, upon the embers (pl. LXVIII), and covered them with pieces of dry bark to the depth of 2 or 3 inches. Making sure that the bark had caught fire all around (pl. LXIX), she left them to their fate. About an hour later the bark had burned away, leaving the rounded bottoms of the



THE USE OF THE STAMPING PADDLE
Courtesy of the New York State Museum



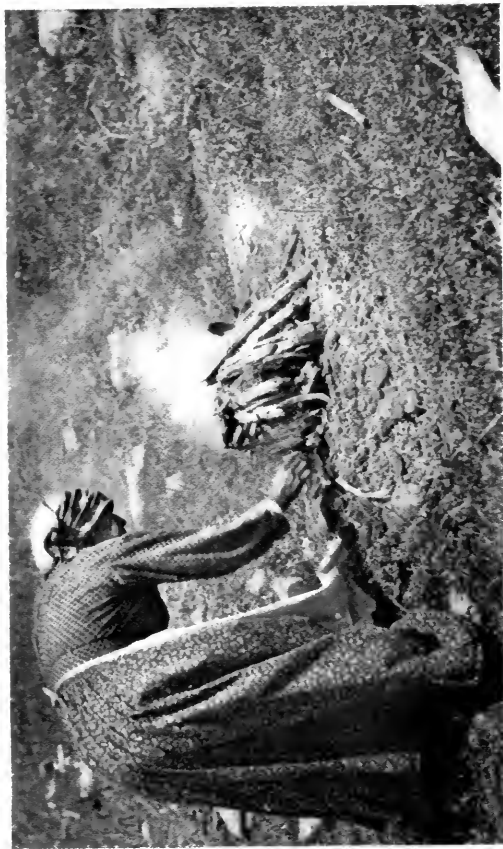
ARRANGING THE VESSELS FOR FIRING
Courtesy of the New York State Museum

pots protruding through the ashes. Then, taking her long hooked stick, Iwi rolled the vessels from the fire, tapping them sharply to detect cracks. If a vessel rang clear it was perfect.

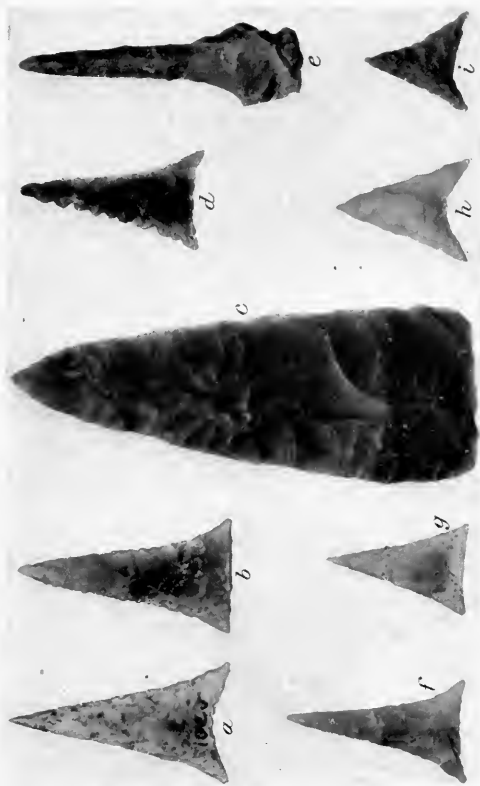
“In order to be good for cooking, these pots should be smoked,” she said. “If this is not done, the water will soak through.” So she dropped a handful of bran in each one while they were still almost red-hot, stirred it with her stick, tipped the pots this way and that, and finally, turning out the now blazing bran from each in turn, inverted the vessels upon it. In this way the inside was smoked black and rendered impervious, and this without leaving any odor of smoke in the vessels when they became cold. Generally, Iwi told me, crushed corncobs were employed for this purpose, but she always used bran when cobs were not available. This probably explains the black color of the inner surface so often seen in aboriginal pottery.

“I was told that in later times the firing has been generally done indoors, because an absolutely still day was necessary for a

successful burning in the open air, any breeze being liable to crack the vessels. The firing of my pottery was, however, done outdoors, the fire being built on a rude hearth of flat stones sunk level with the ground."




FIRING THE CLAY VESSELS
Courtesy of the New York State Museum



FLINT IMPLEMENTS OF THE CHEROKEE, HIWASSEE ISLAND, NEAR DAYTON, TENNESSEE
Length of *c*, 3 in.

XI. REMAINS OF THE CHEROKEE: IMPLEMENTS AND UTENSILS

GENERAL CHARACTER

 WE HAVE already discussed the pottery of the Cherokee as found on the sites of their villages on Tennessee river. Of their other utensils and implements we can say only that, with few exceptions, they differ little from what we might expect to find on a large proportion of the aboriginal sites of the late precolonial and early colonial periods in a district reaching northward from eastern Tennessee across Kentucky into Ohio, whatever the tribe occupying them. The objects seem to have a regional rather than a tribal distribution, a phenomenon which may still be observed: for instance, in the distribution of certain types of woven bags common to the

AND MONOGRAPHS

Menomini, Potawatomi, Kickapoo, and other Central Algonkian tribes, and also to such Siouan tribes as the Iowa and the Winnebago. There are certain features, however, such as the exclusive use of celt-axes and triangular arrowpoints, and the forms of some pipes and bone implements, which seem to have more individuality.

HUNTING AND WAR EQUIPMENT

Even to the more or less agricultural tribes of the Eastern Woodland area, the chase, although perhaps not so important as to the hunting peoples farther west and north, was still a very important factor of food supply, and the necessary implements, although simple, received careful attention. The equipment needed for war was similar, in this district, at least, and the weapons or parts of weapons remaining cannot be distinguished from those used in hunting. Indeed, among some Eastern tribes a man might say, "I am going to hunt men," instead of "I am going to war" or "I am going out to fight." Undoubtedly, how-

ever, special head-dresses, charms, and regalia were used in war which have now disappeared.

ARROWPOINTS OF FLINT

Like their linguistic relatives, the Iroquois, the Cherokee seem to have used the triangular type of arrowpoint exclusively; indeed we did not find so much as a single stemmed arrowpoint with any Cherokee burial, nor with any of the earlier burials resembling those of the Cherokee, except one with a very old skeleton in the nucleus of Mound 5 at Hiwassee island, and this seems to have been shot into the flesh rather than buried with the body as a mortuary offering. Lest it should be said that the triangular points were used for war arrows only, and for this reason were buried with dead warriors, and that the Cherokee may have used stemmed arrowpoints for hunting, we must add that not only did we fail to find stemmed arrowpoints with Cherokee burials, but they did not appear in the refuse deposits of this people, the

only points of this type in the collection having come from deposits of the "Round Grave" period, or from the surface away from any deposits of village refuse.

The material of which the typical Cherokee stone arrowpoints were made in this district is a flint, sometimes quite translucent, and ranging in color from light-gray to black, with a few white and yellowish specimens. The form is always triangular, as noted above, usually rather narrow in proportion to its length, as seen in *a*, *b*, *d*, *f*, *g*, of pl. LXX, but sometimes broader as in *h*, *i*, while the bases may be straight as in *b*, or indented as in *a* and *i*, and the base often expands sharply to the sides, as seen in *b* and *f*. Sometimes points are serrated on one side, like *d*, sometimes on both sides; the workmanship is usually excellent. It is interesting to note here that as a rule the arrowpoints found at the Nacoochee mound in northern Georgia, associated with Cherokee remains, are of the elongate triangular type, and the bases are often concave,⁵⁰ but the workmanship of

the Georgia examples is not so good as that of the points from Tennessee. In length, the arrowpoints we found varied from 0.8 in. to 2 in., with an average of about 1.3 in. One fact was particularly noticeable—the arrowpoints used by the early mound-building tribe which followed the “Round Grave people” and whose relationship to the Cherokee is doubtful, cannot be distinguished from those we know to be Cherokee.

In the vicinity of Lenoir City another form of triangular, stemless arrowpoints appeared with slightly bulging edges, very much like the knife shown in pl. LXX, *c*, but of course smaller in size.

ARROWPOINTS OF ANTLER

In all probability most of the stone arrowheads the Indians made are still in existence somewhere, if only in fragments, as flint is practically indestructible; but the same can not be said of the arrowpoints made of deer-antler, of which large numbers were probably used, but most of which have

now disappeared, owing to the perishable character of the material. The few that we



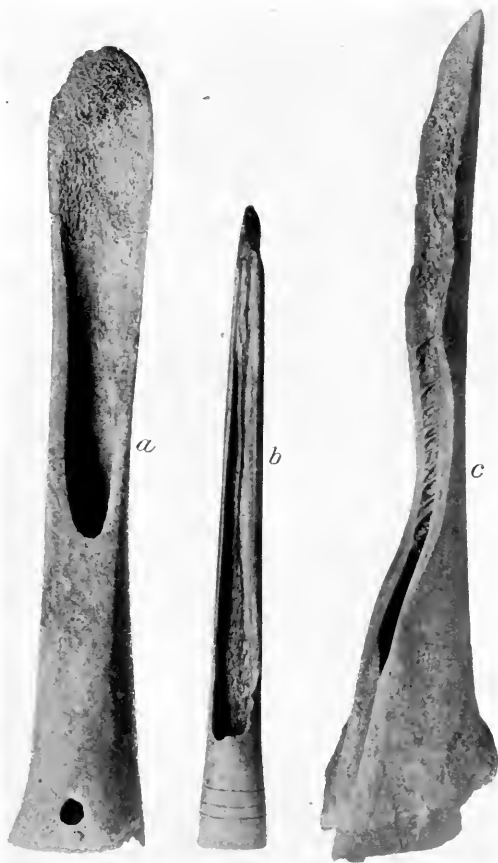
FIG. 35.—Arrowpoint of deer-antler, Hiwassee island. (Length, 1.6 in.)

were able to secure were of the type illustrated in fig. 35, which is merely the conical tip of an antler prong, cut approximately square across, sharpened, and a hole drilled in the base for the reception of the shaft. Another example, apparently not quite finished, is seen in pl. LXXVIII, *a*. A few fragments were

found which may be from arrowpoints of bone; but no whole specimens appeared, hence we can not be quite sure of the shape.

BOWS AND ARROWS

If we may judge by the style of arrows in use among the Cherokee within recent years, the arrowpoints just described were once affixed to the ends of arrows 3 ft. or more in length, which were equipped with two feathers bound on with sinew; and



BONE IMPLEMENTS OF THE CHEROKEE

a, c, Sites near Lenoir City; *b*, Hiwassee island, near Dayton, Tennessee.
Length of *c*, 9.9 in.



FLINT KNIFE OF THE CHEROKEE, MAINLAND VILLAGE-SITE,
LENOIR CITY, TENNESSEE
Length, 10 in.

these arrows were propelled with 5-foot bows of rectangular section, $1\frac{1}{2}$ in. to 2 in. wide, and half to three-quarters of an inch thick, and provided with a string of tough, twisted woodchuck-skin. The Cherokee also use a blowgun made of a long tube of cane, through which slender arrows of cane or of wood 18 or 20 in. long and feathered with thistledown, are blown with the breath, giving them force enough to kill small game; but as all these materials are perishable, no trace of blowguns appears in archeological excavations.

SPEARS

Whether or not the Cherokee used spears in hunting or in war would be hard to say; certainly we found nothing that with probability could be called "spearheads," except the bone object shown in pl. LXXI, *b*, which is provided with a socket in the base, into which the end of a shaft could be fitted. Two or three similar but somewhat smaller implements also appeared, but these lacked the three decorative incised

lines encircling the base that are seen in the specimen illustrated.

KNIVES

As a necessary implement for both hunting and war, the knife must have possessed no little importance to the Cherokee; and as large flint blades were difficult to make, they doubtless were of considerable value. In shape and size the flint knife seen in pl. LXX, *c*, may be considered typical, and this is also a common type among the Iroquois relatives of the Cherokee in the north; but another familiar pattern is the fine ten-inch blade seen in pl. LXXII, which is made of a mottled gray flint. This, which was found at the Mainland village-site, is similar in material to the knife found at Nacoochee mound, and is like it also in form, except that the latter has a pointed instead of a square base; another was discovered by Messrs Barnes and Benham on Hiwassee island, and such knives are reported from other parts of the old Cherokee domain. Flint knives were probably



CHEROKEE CELTS. FLAT TYPE

a, *c*, Sites near Lenoir City; *b*, Hiwassee island, near Dayton, Tennessee.
Length of *b*, 4.6 in.



CHEROKEE CELTS, HIWASSEE ISLAND, NEAR DAYTON,
TENNESSEE
Length of *b*, 9.3 in.

here, as elsewhere, provided with a short handle of wood.

AXES

Useful in war and on the hunt, as well as at home, the axe was also an important implement to the Cherokee. Like the Iroquois tribes of the north, they seem to have used the grooveless or celt type exclusively. Not even a fragment of a grooved axe was found by any member of our party in any Cherokee deposit, other axes (of the celt form), whole or in fragments, being quite common.

Two distinct types of celts may be recognized, most abundant being a flat type with rectangular section seen in pl. LXXIII and LXXIV, *a*, which is like that once popular among the Iroquois; and the rounded type, with elliptical section, seen in pl. LXXIV, *b*, *c*. In length these celts range from 4 in. to 9 in.; the material is a variety of hard, tough, fine-grained stones, usually grayish or bluish, sometimes greenish or black. Some of the smaller specimens, like that in pl. LXXIII, *a*, which is

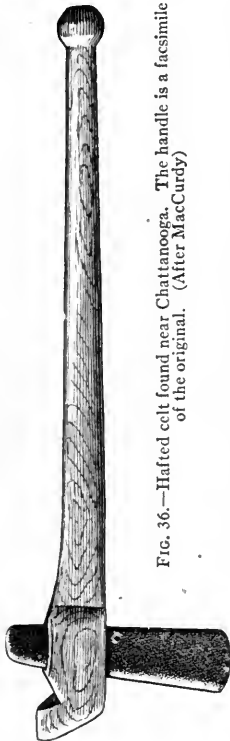


FIG. 36.—Hafted celt found near Chattanooga. The handle is a facsimile of the original. (After MacCurdy)

double-bitted, were probably used as chisel- or adze-blades, but most seem to have been true axes. Such celts are found all through the old Cherokee country, the Nacoochee mound being no exception; and for that matter far beyond their domain, so that caution must be exercised in attempting to use their presence as a criterion of culture.

The writer is not in a position to tell whether the use of the celt type of axe to the exclusion of the grooved form is a strictly Iroquoian characteristic not



CHEROKEE AWLS AND FISHHOOK OF BONE
a, f, Sites near Lenoir City; remainder from Hiwassee island, near Dayton,
Tennessee. Length of *a*, 5.2 in.



PESTLES OF STONE

a, "Bell" type, Wright's Ferry, near Knoxville; *b*, Showing upper end ground to a celt edge, Hiwassee island, near Dayton, Tennessee.

Length of *b*, 9.8 in.

shared by some other tribes; but he can state definitely that when axes of any kind are found in graves anywhere in the eastern half of the United States, whatever the culture-area or tribe, such axes are usually of the celt type, and whether or not the tribe in question used the grooved axe also must be determined by the excavation of their refuse deposits.

The Cherokee manner of hafting these celts was probably more or less like that shown in fig. 36, which represents a hafted celt found near Chattanooga, the handle being a copy of the original.

FISHING TACKLE

Judging by the numerous fish-bones still to be found in the Cherokee refuse heaps on Tennessee river, fishing must have been, to these people, an important means of adding to the food supply. Little is left, however, in the way of artifacts to indicate how the fishing was done: merely a few fishhooks of bone (pl. LXXV, *g*), in shape somewhat similar to the hooks of metal used today, but barbless; and "net-sinkers,"

which are simply flat natural pebbles artificially notched at the sides to keep the cord which bound them to the net from slipping off. Such sinkers have been used until modern times by a number of tribes.

Lieutenant Timberlake,⁵¹ however, who visited these Indians in 1762, explicitly states that, "Having as yet no nets, the Indians catch the fish with lines, spears, and dams;" but it appears from other accounts that they used ropes of vines weighted with stones to drag down the streams to drive the fish into these "dams" or traps. Therefore it is possible that our "net-sinkers," if nets were really not used in this district, were employed to weight these vine ropes. The finding of thousands of shells of freshwater mussels and of some of the larger univalves still existing in the river show the use of these molluscs as food; but nothing is left to show exactly how they were taken, if indeed any apparatus was needed other than a basket to carry them in as they were picked out of the shallow water by hand.

Among the shellfish most used were four

species of mussels: *Unio gibbosus* (Barnes), *Lampsilis ventricosa* (Barnes), *Lampsilis ligamentina* (Lamarck), and *Quadrula pustulosa* var. *pernodosa* (Lea), with the addition of such large river snails as *Io turrita* (Anthony) and *Io spinosa* (Lea), and such smaller species as *Anculosa praerosa* (Say), *Pyramidula alternata* (Say), and *Pleurocera canaliculatum* (Say), all of which shells were kindly identified for the writer by Dr W. G. Van Name of the American Museum of Natural History.

No harpoons or fish-spears were found, unless some of the carefully made awl-like objects of bone, the bases of which are rounded as if for insertion in a handle or a shaft, may have formed part of an implement of this kind.

AGRICULTURAL IMPLEMENTS

Occasional carbonized grains of Indian corn and charred pieces of cobs, encountered in the ancient ash layers, afford visual proof, if such were needed, of the use of this grain by the Cherokee; but being perishable it has not survived in sufficient

quantity to give a fair idea of its economic importance to the people, which must have been great. Hoes of wood and of bone were probably much used in the cultivation of maize, but the only implements for the purpose which seem to have survived are crudely chipped, flat implements of limestone, slate, and sandstone, of oblong form, those we found being about 3 in. wide and from 3.2 in. to 6 in. long, sometimes slightly notched to facilitate attachment to the handle, their edges often showing polish and striation due to constant abrasion by the soil.

IMPLEMENTS FOR FOOD PREPARATION

The implements used in securing food by hunting, fishing, and farming, having been described, we now turn to those whose use seems to have been chiefly in the preparation of their products. For the hunter's provisions, besides the knives to skin and cut up his game, and the pots in which to boil the meat, which have been already described, there is little to record, except perhaps the hammerstone. This,

used to crack the bones in order to extract the luscious marrow, was usually a flat, rounded, waterworn boulder small enough to hold in the hand, battered about the periphery from long use, and sometimes provided with a pit pecked into the center of each side to afford a firm hold for thumb and finger.

The same flint knives would be of service in scaling and cutting up fish, and the same pots for cooking them; but when we turn to the products of agriculture, we find other implements necessary.

The Cherokee of today crush their corn in a large wooden mortar with a heavy wooden pestle; but a cylindrical stone pestle found in a grave (fig. 37), and another picked up on the surface, both from Hiwassee island, show that in former years stone as well as wood was sometimes used for this purpose. The latter specimen is very unusual in that, while one end is rounded for grinding in the ordinary manner, the other is beveled to a celt-like edge, as may be seen in pl. LXXVI, *b*. The other pestle shown in this plate (*a*) represents one of



FIG. 37.—Pestle of stone, Hiwassee island. (Length, 14.5 in.)

the "bell" type, and although found within the Cherokee country, it is probably not of Cherokee origin.

The long, cylindrical pestles were doubtless intended for use with deep wooden mortars; for the mortars of stone not infrequently found on Cherokee sites are mere slabs, containing but shallow, bowl-shaped cavities in which a small, rounded boulder or grinding stone would be more useful than a long pestle.

To the list of implements used in preparing food we must add the pitted "nut-stones," a good example of which appears in pl. LXXVII, still used by the Cherokee to crush the nuts required in making several native dishes,

and called by them *"gamu'gwalâ'sti"*. It appears that the stone is set



PITTED STONE FOR CRACKING NUTS, HIWASSEE ISLAND,
NEAR DAYTON, TENNESSEE
Greatest diameter, 6.3 in.



OBJECTS OF BONE AND ANTLER, CHEROKEE
a-d, Sites near Lenoir City; *e*, Hiwassee island, near Dayton, Tennessee.
Length of *a*, 4.7 in.

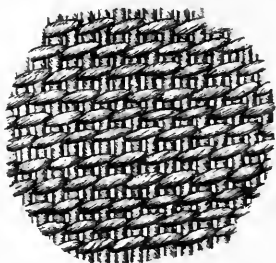
in a basket, and a number of nuts are placed on it at one time, each in a pit; they are then all crushed by one blow of a hammer-stone, are brushed off into the basket, and the process repeated. Shells and kernels are afterward separated by first running them through a coarse basketry sieve which takes out the larger bits of shell; then crushing the product as fine as possible in a mortar, after which it is placed in a fine basket sieve and water poured through it. This washes out the meats in the form of fine particles, leaving the shell behind. The resultant fluid may then be mixed with corn soup or otherwise employed—it certainly imparts a delicious flavor, as the writer knows by experience.

CLOTHING AND IMPLEMENTS FOR ITS MANUFACTURE

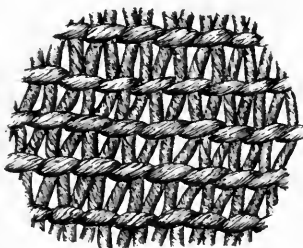
Like most of the Indians of the South-eastern district, the Cherokee men seem to have worn the breechclout, mantle, and moccasins, with leggings on occasion; and the women a similar costume except that in their case the short skirt, or rather a

blanket-like piece of skin or fabric belted skirt-wise about the waist, replaced the breechclout. Deerskin seems to have been the most general material for moccasins, but clouts and skirts could be either of this material or of some kind of fabric usually made of vegetal fiber; while the robes might be made of deerskin, fiber fabric, and furs for cold weather, or of fine feathers on a woven base. Of fabrics the Cherokee village-sites examined by our expedition yielded nothing except imprints of textiles seen on vessels of the "salt-pan" type, imprints that have been aptly termed "fossil fabrics." Wax casts of these give a good idea of the manner of weaving, which, although always based on the "twined" technique, shows considerable variation, as may be seen by the accompanying drawings (figs. 38, 46), made from the casts of three typical specimens. Of these the fabric shown in fig. 38, *a*, is possibly part of a skirt, breechclout, or mantle, and *b* may represent a like garment, although the weave is rather open; but the fabric shown in fig. 46 seems to be part of a woven bag such as may still be

met among the Central Algonkian and Southern Siouan tribes.



a



b

FIG. 38.—Cherokee textiles as shown by imprints on potsherds.

No implements with which this weaving was done appeared during our excavations,

or at least, if found, were not recognized as such, but the highly polished bone "pin" shown in pl. LXXVIII, *a*, and some of the implements seen in pl. LXXV, classed as awls and bodkins, may have had some such use.

When we turn to the preparation of skins and their manufacture into clothing, we find that time has spared to us a larger assortment of implements whose purpose can not be doubted. The first of these, in order of use, after the flint knife (pl. LXX, *c*; LXXII) had made the incision, was probably the spatula-like bone implement seen in pl. LXXI, *a*,. This, besides its probable use in separating hide and flesh during the skinning process, was undoubtedly employed, as are similar implements among many tribes today, as a flesher for cleaning the inner surface of the skin after its removal, the perforation at the top furnishing attachment to a thong which was passed around the wrist to steady the implement.

Combining a flesher like the last with a beaming tool, or "dehairer," is the very unusual implement seen in pl. LXXI, *c*, one end serving the former purpose, while the

middle portion is cut out so that it could be used, after the manner of a draw-shave, to remove the hair from skins. Both fleshers and beaming tools, especially the latter, are frequently met in different parts



FIG. 39.—Scraper of flint, Hiwassee island. (Length, 1.6 in.)

of the country, both on ancient sites and still in use among surviving tribes; but the writer has never before seen the two combined in one implement.

Flint scrapers of the pattern seen in fig. 39 probably served also for cleaning the

flesh side of skins; while rudely chipped, flat discs of stone, the edges showing signs



FIG. 40.—Flint core from which many flakes have been struck, Hiwassee island. (Length, 2.7 in.)

of long wear, seem to have been used for softening them.

The skins once dressed, the next step was to cut and sew them into garments. For cutting skins, especially deerskin, which is exceedingly tough, the ordinary flint knives were not serviceable, but the writer has found by experiment that carefully selected, fresh flint flakes will do the work with ease and dispatch, leaving a smooth cut. Very likely the flint core shown in fig. 40, which was found with a burial, was used as a source of flakes for this and for other purposes.

The sewing was accomplished by forcing the point of an awl through the skin and thrusting the stiff sinew thread through the hole thus formed. The awls used ranged from the crude forms (merely sharpened splinters of



FIG. 41.—Rude bone awl with rounded base, Lenoir or Bussell's island. (Length, 3.5 in.)



FIG. 42.—Bone implements of unusual form, Lenoir or Bussell's island. (Length, of *b*, 5.3 in.)

deer-bone such as were used by the "Round Grave people") to carefully finished examples such as appear in pl. LXXV. Most typical of the Cherokee are those figured in *a* and *e* of this plate, provided with a sharp point at one end and a dull or a rounded one on the other, as if for insertion in a handle of wood. Such awls are neatly and carefully made, as a rule, but occasionally a rough example will be found, as in fig. 41, which, although belonging to the sharpened-splinter type, has the base rounded for insertion in a handle.

As in many other localities, the joints of bones from which awls were made were often left

on as handles (pl. LXXV, *f*), and slender forms of bird-bone, like *c* of the same plate, are not uncommon. Rarer forms, like the neatly rounded and polished bodkin, minus the base, seen in *b*, and the double-pointed awl represented in fig. 42, *a*, occasionally appeared, as did awl-like implements like fig. 42, *b*, whose points are flat instead of rounded, and whose use is not at all obvious, unless to serve as creasers in puckering moccasins. Of course it is possible that all these implements of awl-like form were not actually used as sewing tools: some may have been employed in weaving, as noted before; some may have figured in games; while others were perhaps even arrowpoints or spearpoints.

WOODWORKING TOOLS

The Cherokee had use for woodworking implements in cutting poles and timbers for house-building, in making dugout canoes, and bowls and spoons of wood, in shaping bows, arrows, spearshafts, axe-handles, hoe-handles, war-clubs, blow-guns, and many other things now forgotten.

For cutting poles and small trees the stone axe of the celt type (pl. LXXIII, LXXIV), hafted more or less like that shown in fig. 36, seems to have been reasonably satisfactory, although requiring a good store of patience, and bruising its way through the wood rather than cutting it; but for felling large trees, fire was probably here, as in many other localities, brought into play, and the axe used simply for chopping out the charcoal as the burning progressed, and bruising loose fresh fibers for the fire to consume. Here, as elsewhere, wedges and mauls of wood were probably used for splitting logs, but time and decay have left no trace of them, although a few battered stone celts showing secondary use as wedges came to light. Wedges of deer-antler, often seen elsewhere, were not found here.

The adze, useful in hollowing out canoes and bowls of wood, seems to have taken two forms here, the blade in one case resembling an exceptionally flat celt, sometimes double-edged (pl. LXXIII, *a*), and usually made of the same kinds of material as the



ADZE BLADE *a*, FROM HIWASSEE ISLAND NEAR DAYTON:
GRINDING STONE *b*, FROM BUSSELL PLACE, LENOIR
CITY, TENNESSEE

Length of *a*, 5.9 in.



BEADS AND PERFORATED CORES OF CONCH-SHELL
a, c, Sites near Lenoir City; *b, d, e*, Hiwassee island, near Dayton,
Tennessee. Length of *e*, 7.2 in.

celt proper; while the other type (pl. LXXIX, *a*) was made of flint or of similar material, carefully chipped and ground into form. The shape is somewhat curved, one side being slightly convex, the other concave or flat; while the bit is narrower than the body of the implement. On account of the hardness of the material, these adzes took a very keen edge and must have been quite effectual, especially when used in connection with fire. That they were really set with their edges perpendicular to the handle, like a true adze, and not parallel with it, like an axe, is shown by a polish due to friction against the handle, always observed, when existing at all, on the concave side of the implement, which was evidently toward the user. At this point we may recall the finding of several such adzes, together with some celts, with the skeleton of a cripple on Hiwassee island, an unfortunate who, when incapacitated for hunting by rheumatism or some other disease which had affected the bones of his legs, had apparently taken up the

manufacture of bowls and canoes as a means of livelihood.

For finer woodwork, flint knives like



FIG. 43.—Flint knife, Hiwassee island. (Length, 3.8 in.)

those before mentioned, or other types like fig. 43, which seem to have had no handles, were probably used for sawing and grooving; holes were bored with flint drills, of which pl. LXX, *e*, is a good example, while flint scrapers like fig. 39, together with flakes and chips of the same, seem to have served for dressing down the work as a modern carpenter uses a bit of broken glass. Adzes and axes were probably sharpened on gritty rubbing stones, such as is shown in pl. LXXIX, *b*, while thinner pieces of coarser sandstone took the place of rasps and sandpaper.

Many Eastern tribes used chisels made of the incisor teeth of the beaver for their finer woodwork; but if these were employed by the Cherokee, we found no evidence of such use.

IMPLEMENTS FOR STONWORKING

On account of the resistant nature of the materials used, implements of stone in all stages of manufacture are still numerous on the Cherokee village-sites, but the tools used in making them, particularly those

used in chipping flint, are none too abundant. They consisted merely of hammerstones, which were probably employed, among other things, for percussion flaking; cylinders (pl. LXXVIII, *d*) and truncated

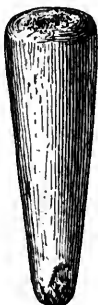


FIG. 44.—Flaking tool of antler, Hiwassee island. (Length, 1.6 in.)

cones of antler (fig. 44) with worn and battered tips, probably, as Holmes⁵² suggests, interposed between hammerstone and flint, after the manner of a punch, to knock off large flakes; and a few slivers of bone whose deeply worn edges suggest use in flaking by pressure. These processes need not be de-

scribed in detail here, for this has been ably done by Holmes⁵³ and others. They seem to have been in quite general use among American tribes, with but slight local variation, in regard to which the material we found on the Cherokee sites told us nothing.

The processes employed in making celts is well illustrated by a series of specimens

in all stages of manufacture found in the peripheral addition to Mound 2 on Hiwassee island. Here appeared boulders and blocks of material, of hard, tough stones, roughly battered and chipped by heavy blows into approximate form; while others showed the progress of the pecking process, the second step of celt-making, effected by repeated blows of a hammer of hard stone, each blow crumbling a bit of the surface until all irregularities had been reduced and the implement had taken its final form. Nearly finished celts showing the third process, that of grinding with coarse, gritty stones, were not so common. This in many cases seems to have been the last process, the product then being regarded as a finished axe-head; but some seem to have been polished after the grinding was completed. Most of these specimens, especially in the later stages, had been broken in making, and for that reason had been discarded unfinished. With them appeared boulders whose battered edges show long use as hammerstones for heavy work; some of

these were pitted to furnish a grip to thumb and fingers, while other smaller hammerstones of flint and of other very hard materials seem to have served as pecking tools.

Similar methods were probably also employed in making the fine discoidal stones so characteristic of this region (pl. LXXXV, LXXXVI); in fact we found an unfinished one showing both pecking and grinding. Adair⁵⁴ says: "The hurling stones they use at present were, from time immemorial, rubbed smooth on the rocks and with prodigious labor;" but such objects as pipes and pendants, the material of which is softer, were evidently worked by much the same methods as were used for wood, with the aid of the flint knife, scraper, and drill, together with convenient chips and flakes of flint. Drilling seems to have been done also in this region with a hollow point of cane or a solid one of wood, used with water and sharp sand; but few articles showing this kind of work remained on the Cherokee village-sites to indicate that they used other kinds of drills besides the ordinary flint type (pl. LXX, *e*).

TOOLS FOR BONEWORK

The implements used in the manufacture of awls, fishhooks, arrowpoints, and other objects of bone and antler, seem to have been the same as those employed for shaping wood and soft stone; namely, the flint knife used for sawing and grooving, the flint scraper, the flint drill, and chips and flakes of the same material, not to mention the pieces of sandstone which served both as rasps and as sandpaper. The use of the flint knife to cut, with a sawing motion, a groove about a piece of bone preparatory to breaking it off, is shown in pl. LXXVIII, *b*; the antler arrowpoint seen in *e* of the same plate shows traces at its base of having been cut around and broken off in the same way; while the antler point seen in fig. 35 shows not only the striæ made by the stone scraper with which it was sharpened, but the base hollowed with a flint drill to receive the arrowshaft. The marks of the gritty grinding stones with which they were finished still show plainly on *a*, *d*, *e*, of pl. LXXV.

IMPLEMENTS FOR SHELL-WORKING

We have little to indicate that the shell ornaments so abundantly used by the Cherokee were extensively manufactured by them, although the presence of raw materials in the form of numerous cores of conch-shells from which the whorls had been broken off, but otherwise unworked, would seem to indicate that some things at least were made at home. As to the methods and the tools employed, those above described as being effectual for shaping bone and antler, especially the grinding stones, would doubtless answer for shell to a considerable extent. We learn from Dumont⁵⁵ that the Louisiana Indians made their shell ear-pins from "handsome shells of a spiral form called '*burgaux*' by rubbing them a long time on hard stones and thus giving them the shape of a nail provided with a head." With regard to the circular or oval shell gorgets, the same observer says:

"The savages also wear at the neck plates made of pieces of this shell, which they shape in the same way with stones, and to which they

give a round or oval form about three or four inches in diameter. They then perforate them near the edge by means of fire and use them as ornaments."

Dumont's account of the importance of grinding stones in making the ear-pins is confirmed by an unfinished specimen from Florida in the Museum of the American Indian, Heye Foundation, a conch core about which two grooves have been cut by grinding with the rounded edge of a flat slab of a gritty stone which must have been about half an inch thick. These two grooves outline the head of the ear-pin; the intention evidently was to deepen one of these grooves until the core was severed; then to grind down what was left of the shell beyond the other groove to make the shaft of the pin.

POTTERS' TOOLS

The wooden stamping paddles (pl. LXIII, *a, c*) used by the Cherokee in marking the surface of many of their pottery vessels have of course disappeared from the sites on Tennessee river, and they do not seem to

have made such paddles of earthenware here as they did at Nacoochee.⁵⁶ Other wooden implements likewise have vanished; in fact, the only things we found that were used by the ancient potters were round, smooth pebbles, like that represented in pl. LXIII, *b*, showing the polish of long service, used for smoothing the ware as related in Section X, and the stone mortars made of slabs with shallow, cup-shaped hollows, which were employed, among other things, for grinding musselshells for mixing with the clay of which the pottery was made. Speaking of musselshells, it should be noted here that some were found whose worn, rounded edges suggested that they too had been used in pottery-making.

HOUSE FURNISHINGS

The Cherokee of today report that their ancestors used in their homes large mats of split cane woven in the same way as their present baskets, which are made in the "twilled" technique. Such mats have been found in caves⁵⁷ in or near the old Cherokee domain; but the only thing in



FIG. 45.—Fragment of matting, Mound at Lenoir City.
(Length, 2 in.)

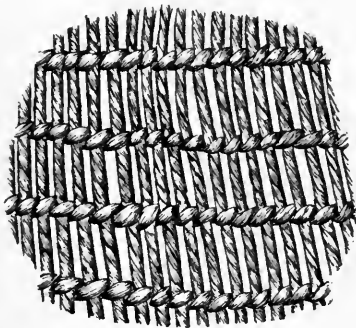


FIG. 46.—Cherokee textile, probably part of a bag; from an
imprint on a potsheid.

this line obtained by us was the fragment of ancient matting shown in fig. 45, preserved by contact with the large copper ornament found in a very ancient grave in a mound near Lenoir City (the connection of which with the Cherokee is doubtful), although we also noted imprints of matting over certain skeletons in Mound 2 on Hiwassee island, and stains due to contact with matting on a stone pendant from the same mound.

Also perhaps to be included under the head of house furnishings were bags of fiber cords, used as containers for food and various belongings, woven more or less as shown in fig. 46, taken from a cast of a potsherd showing textile markings, bags of which complete ancient examples have been found in a cave in Kentucky⁵⁸ and which are still made and used by a number of Central Algonkian and Southern Siouan tribes, a bag from the Osage in the collection of this Museum showing the same weave exactly.

XII. REMAINS OF THE CHEROKEE:
ORNAMENTS, PIPES, GAMES, AND
CEREMONIAL OBJECTS

IN GENERAL

FOR personal adornment the Cherokee used a very large number of beads, pendants, and ear-ornaments, made of marine shells imported through intertribal trade, from the Gulf or the Atlantic coast, and a few beads from pearls found in the mussels of their own rivers; in which respects they differed little from most of the tribes in the district extending from the Ohio valley to the Gulf, and from the Mississippi valley eastward to the Appalachian range. Their pendants made of animal teeth find their counterparts throughout most of the continent, as do their cylindrical beads made by cutting into lengths the bones of birds.

AND MONOGRAPHS

One pendant of stone, with its single perforation near one end, resembles the Iroquois style, but this was found in one of the earlier graves whose Cherokee origin is doubtful; and the only native copper ornament found is probably from some other people.

In the way of pipes, we find a number of forms used by the Cherokee on Tennessee river, some of which are of wide distribution, a few apparently tribal; few if any show marked resemblance to the styles made by the Iroquois of the north, the linguistic relatives of the Cherokee.

In using the discoidal stones characteristic of the Kentucky-Tennessee district and vicinity, the Cherokee do not seem to have differed from their neighbors—these objects seem to have a regional rather than a tribal distribution.

ORNAMENTS

BEADS

Most numerous of all the beads found during the course of the expedition were those made of the shells of *Olivella mutica*

(Say), a small marine univalve averaging perhaps three-tenths or four-tenths of an inch in length, which were prepared for use as beads by grinding off the spire with a gritty stone, thus making an aperture which permitted them to be strung. These



FIG. 47.—Beads of *Olivella* shell as arranged on a garment, Hiwassee island. (Length of largest, 0.35 in.)

were found usually near the necks of skeletons as if constituting simple necklaces, but in one instance there had been so many strings hung about the neck of a child that the beads numbered more than 3000. Another child had evidently been provided with a garment of some sort, apparently a kind of jacket reaching from breast to knees, which in front had been entirely covered with such beads, fastened side by side in regular rows, as

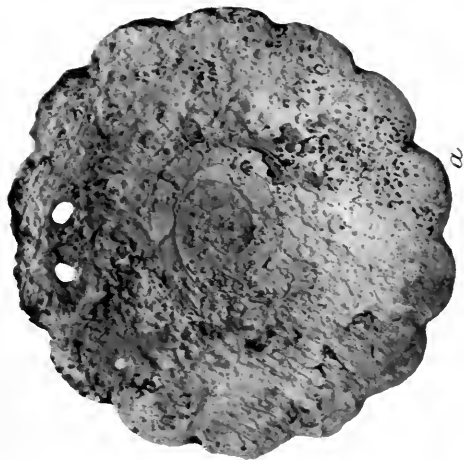


FIG. 48.—Bead of *Oliva* shell, Mainland village-site. (Length, 1.4 in.)

shown in fig. 47, to the number of about 2400. An adult also had been provided with a similar garment, reaching from chin to waist, but the bead decoration had been applied to this in parts only, for the *Olivella* shells totalled only about 1100; while another adult's jacket had been entirely covered with more than 9000 of these beads.

Like the *Olivella* beads in form, but much larger in size, are those made in a similar manner from the shells of *Oliva litterata* (Lamarck) shown in fig. 48, which measure about an inch or a little more in length, and were used in the form of single strings as necklaces, while smaller even than the *Olivella* were a few tiny univalve beads, perhaps *Marginella*.

The foregoing beads are entire sea-shells, perforated for stringing, but there is also an extensive class made from parts of marine shells, most of them from the core or columella of large conchs. Such cores, some of them exceeding 9 in. in length, from which the whorls have been carefully chipped away, but without further elabo-



PENDANTS OF CONCH-SHELL, HIWASSEE ISLAND, NEAR DAYTON, TENNESSEE

Length of *b*, 4 in.



CHEROKEE ORNAMENTS OF SHELL

a-f, Sites near Lenoir City; *g-i*, Hiwassee island, near Dayton, Tennessee.
Length of *e*, 4.3 in.

ration, are frequently found with burials, probably imported from the Gulf or the Atlantic coast in this condition as material to be manufactured into beads and ear-pins at home. Some of these long cores have been perforated, although still left rough, as in the case of the one shown in pl. LXXX, *e*; others have not only been perforated, but show careful smoothing to make them into long beads, as in *d* of the same plate. The writer has still to discover how these long perforations of small caliber were produced with primitive tools; that the work was done in pre-European days can hardly be doubted, for the grave containing the longest examples of such drilling seemed to be a very old one—so old, in fact, that we cannot be certain that it was of Cherokee origin. It is interesting to note that in some instances the drilling had not been accurate, but had broken through to the surface before the end of the object was reached, in which case the core had been redrilled.

Usually these cores were cut up into shorter segments, sometimes more, but

frequently less, than an inch in length, and worked down into beads of different types, as shown in fig. 49 and in pl. LXXX, *a-c*. A similar but smaller variety of shell bead, resembling wampum, but more irregular in

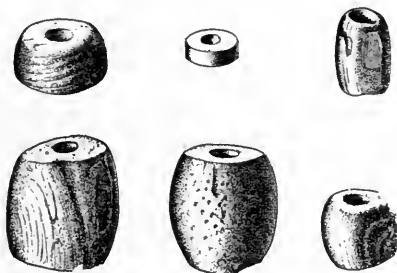


FIG. 49.—Beads of shell from various sites.
(Length of largest, 0.6 in.)

size and appearing only in white instead of white and purple, is seen in fig. 50; this was quite abundant, particularly at the Mainland village-site near Lenoir City; but true disc-beads, like fig. 51, were not common, appearing mainly at Hiwassee island. The example illustrated measures about 1.2 in.

in diameter, and was probably made from one of the flatter parts of a conch-shell.

As before indicated, beads were also sometimes made of pearls, such as still occur in the mussels of Tennessee river, both symmetrical and baroque forms being



FIG. 50.—Small shell beads resembling wampum, Mainland village-site. (Length of largest, 0.3 in.)



FIG. 51.—Disc-bead of shell, Hiwassee island. (Diameter, 1.1 in.)

utilized, as may be seen in fig. 52. The stems of crinoid fossils were occasionally used on account of their naturally bead-like form.

When we mention the fact that bone beads, which are merely cylindrical segments cut from hollow bird-bones, were found on the Cherokee sites, our list of strictly aboriginal beads is completed, so

far as the results of our work are concerned. Harlan I. Smith thinks that such objects, of which he found a number during his excavations at May's Lick, Kentucky, were used in constructing snares to make the noose run easily,⁶⁹ but the writer found a number of bone beads in at least two cases near the necks of skeletons during the work on Tennessee river, in such a position that their use as necklaces could hardly be



FIG. 52.—Pearl beads, Mainland village-site.
(Diameter of largest, 0.4 in.)

doubted. A plain specimen is shown in fig. 53, and an ornate one, made from the lower leg-bone of a turkey-cock, is seen in pl. LXXVIII, *c*.

Such were the beads of truly aboriginal character; but there were also found, as before related, a few graves of the colonial period which contained beads of white men's material or make. Under the first head may be mentioned those of sheet-copper of European origin (fig. 54), per-

haps pieces of kettles, which vary in length from 0.2 in. to 1.2 in., and in diameter from 0.1 in. to 0.3 in., all of them made by cutting out an approximate rectangle of sheet-copper and rolling it into the form of a hollow cylinder. These were often strung in alternation with beads of glass.



FIG. 53.—Bone bead, Hiwassee island. (Length, 1.6 in.)



FIG. 54.—Beads of sheet-copper, Lenoir or Busse's island. (Length of a, 0.5 in.)

The glass beads, of European origin, are white, dark-blue, and light-blue in color, with a few purplish ones which may originally have been red. In size they vary from less than 0.1 in. to more than 0.2 in. in diameter for the more or less globular

sorts, which are in the majority. The few cylindrical examples measure about 0.2 in. by 0.5 in., and are red in color, with four white, longitudinal stripes.

PENDANTS

As might have been expected, most of the pendants found were made of marine shells; one had been a fine circular gorget with scalloped edges on whose disintegrated surface may still be seen traces of an incised decoration, the "triskele" (pl. LXXXI, *a*) frequently found in eastern Tennessee. Another type of which we obtained a number is shown in *b* of the same plate; these are always plain.

We were not successful in procuring any examples of the mask type of shell gorget, also well known, from this region, but a number of good specimens of these were found by Messrs Barnes and Benham during their digging on Hiwassee island, some of which may still be seen in Lieutenant Benham's collection, along with a well-preserved specimen of the "triskele" gorget. Whatever other people or peoples may

also have used the triskele, mask, and rattlesnake types of shell gorgets, the writer is convinced that the Cherokee owned and wore many of them, whether they actually made them or not. His reason for this belief lies in the fact that not only were they discovered in Cherokee graves by Messrs Barnes and Benham but that Mr Moore found them associated with a series of artifacts, which the writer from his own studies considers typically Cherokee, on a site near Citico creek⁶⁰ in the vicinity of Chattanooga; and MacCurdy⁶¹ reports them so associated at the Brakebill mound near Knoxville.

Worn with a string of sheet-copper and glass beads was the circular, plain, shell gorget seen in pl. LXXXII, *b*, found with the remains of a child at Lenoir or Bussell's island, as was the pendant (*a* of the same plate) made from part of a marine bivalve shell; while on Hiwassee island were unearthed a number of pendants like *g*, made from whole but diminutive conchs. When we mention the fact that small, flat fragments of conch-shell, not an inch in

diameter, were perforated near the edge and used as pendants, and that some beads, such as that shown in pl. LXXX, *b*, received



FIG. 56.—Pendant made of a bear's tooth, Mainland village-site. (Length, 2 in.)

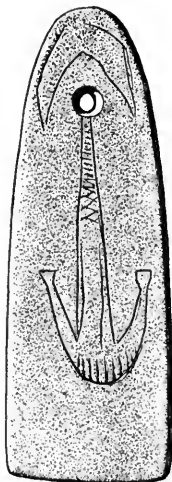


FIG. 57.—Carved pendant of stone, Hiwassee island. (Length, 4.2 in.)

transverse perforations and were so used, we have completed our list of shell pendants, unless we include the shell object



ORNAMENT OF NATIVE COPPER, MOUND ON BUSSELL PLACE,
LENOIR CITY, TENNESSEE
Greatest diameter, 5.2 in.



a



b

PIPES OF THE CHEROKEE

a, Of sandstone, Mainland Village-site, Lenoir City; *b*, Of earthenware, Hiwassee island, near Dayton, Tennessee. Length of *b*, 3.3 in.

shown in fig. 55, which may have been a pendant in process of manufacture.

Among pendants of materials other than shell may be mentioned two perforated bear-teeth, of which one is shown in fig. 56, found protruding from under the chin of a child's skeleton at the Mainland village-site near Lenoir City, and the carved flat specimen of gray, slaty stone, seen in fig. 57, its single perforation near one end, reminiscent of Iroquois forms. This might have been taken as another connecting link between the Cherokee and the Iroquois, had it not been found in one of the very old graves in Mound 2 on Hiwassee island, whose connection with the Cherokee is not certain. Still more dubious is the meaning of the incised design which adorns it.

Doubtful also in its connection with the Cherokee is the five-inch square gorget of native copper (pl. LXXXIII) found on the breast of a barely traceable skeleton, apparently very ancient, the sole occupant of Mound 3 on the Bussell place at Lenoir City. This ornament, which is provided with a central perforation, has for its only

decoration a border of small embossed nodes. As before mentioned, it resembles much more the work of a tribe living farther down Tennessee river (for instance, at the Bennett place below Chattanooga, explored by Moore⁶²), which seems to have made a speciality of embossed native copper ornaments, than anything we know



FIG. 55.—Unfinished object of shell, perhaps a pendant, Mainland village-site. (Length, 0.8 in.)



FIG. 58.—Pendant or jingler of sheet-copper with pearl bead attached, Lenoir or Bussell's island. (Length, 0.7 in.)

to be of Cherokee origin. Perhaps the Cherokee, like their relatives the Iroquois, took little interest in objects made of this material. Of course, if we decide that the mound-building Indians who followed the "Round Grave people" were the ancestors of the Cherokee, this copper gorget is easily explained by the same system of intertribal

trade through which these inland people acquired so many marine-shells.

The only pendants of non-native materials found by us were a number of "jinglers" of sheet-copper cut and rolled into conical form in much the same manner as that by which the cylindrical beads were made. One of these, tipped with a pearl bead, is shown in fig. 58.

EAR-ORNAMENTS

Quite a number of pairs of the shell objects usually classified as "hair-pins" (pl. LXXXII, *e, f, h, i*) were discovered with burials, usually lying one at each side of the skull at about the point where the lobes of the ears had been, with the rounded heads turned forward. Mr Moore⁶³ has identified these objects as ear-ornaments rather than "hair-pins," and in this the writer agrees with him, for not only are they commonly found as stated, but frequently are provided with a slight groove just back of the head (pl. LXXXII, *h*) for the reception of the ear-lobe, the perforation in which must necessarily have been

large, while others show a mark or stain at the same place caused by the decay of the flesh after burial. This idea of the use of the shell pins finds historical support also, for Du Pratz,⁶⁴ speaking of the Louisiana Indians, says, "The women adorn themselves with ear-ornaments made of the core of a large shell called 'burgo,' of which I have spoken. This ear-ornament is as large as the little finger and at least as long. They have a hole in the lower part of each ear large enough to insert this ornament. It has a head a little larger than the rest, which prevents it from falling out." Dumont⁶⁵ adds some interesting details in his more extended account, of which the following is a translation:

"One finds also on the sea shore handsome shells of spiral form called *burgaux* . . . it is of these *burgaux* that the savage women make their ear-pendants. For this they take the tip which they rub a long time on hard stones, thus giving it the form of a nail provided with a head; so when they put the ornaments in their ears they are stopped (from slipping through) by this species of pivot, as these natives have holes in their ears much larger than those of

our French women; so much so that one could pass his thumb through, however large."

Another type of ear-plug of shell with holes for the attachment of feathers or other decorations is seen in pl. LXXXII, *c*, *d*.

Some of the pendants before mentioned may well have been worn suspended from the ears, particularly the triangular form of the shell of a scallop-like marine bivalve (pl. LXXXII, *a*), and the conical sheet-copper examples of the historic period like fig. 58, some of them considerably larger than the example shown, one pair, measuring about 1.5 in. long and 0.8 in. across the base, being found at the sides of a child's skull on Lenoir or Bussell's island.

PAINTS

An account of the personal adornment used by these people would not be complete without a mention of paint, although we found nothing of this nature that differs from what might occur in many parts of the country, regardless of tribe or culture. Judging by our collection, the Cherokee obtained their red by grinding or scratch-

ing hematite or limonite iron ore (fig. 59), their black from a kind of impure graphite, and their white and yellow by scraping clay-stones of the shade desired. More easily obtained, of course, was black from soot, and white, yellow, and red from clays of these colors; but that these were actually employed we have not objective evidence.

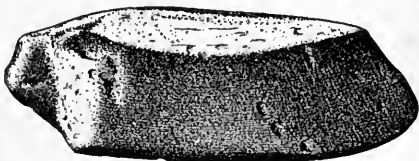


FIG. 59.—Fragment of limonite scraped for paint, Lenoir or Bussell's island. (Length, 3.6 in.)

PIPES

We were able to find only two complete pipes, both of which are shown in pl. LXXXIV, *a* being of fine-grained sandstone, and *b* of pottery. The type is simple, yet it seems very characteristic of the Cherokee culture, and so far as the writer can discover, has been found only within their

territory. MacCurdy⁶⁵ illustrates a pipe resembling *a*, from the Brakebill mound in Knox County, and another, still more like it, from the McBee mound in Jefferson



FIG. 60.—Cherokee pipe of earthenware, Lenoir or Bussell's island. (Length, 2.8 in.)

county, Tennessee, both well within the old Cherokee domain. Similar specimens were obtained by the expedition of this Museum at the Nacoochee mound⁶⁷ in northeastern Georgia, and scattering exam-

ples have been found in Kentucky and North Carolina. The fragmentary pipe shown in fig. 60 is somewhat similar, but has less character; while the style shown in fig. 61, of which we found only frag-



FIG. 61.—Cherokee pipe of earthenware, Lenoir or Bussell's island. (Length, 1.7 in.)

ments, has more character, and this too may be considered a distinctively Cherokee form. Moore found a number of good specimens of this in the extensive cemetery explored by him near Citico creek above Chattanooga, along with what, as before

mentioned, the writer regards as a typically Cherokee series of artifacts; MacCurdy⁶⁸ figures it from the Lisle mound in Greene

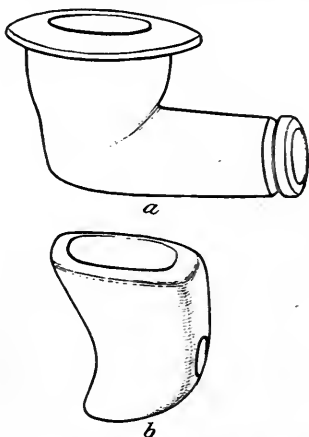


FIG. 62.—Pipe forms used by the Cherokee: *a*, McBee mound, Tenn. (after MacCurdy); *b*, Nacoochee mound, Georgia.

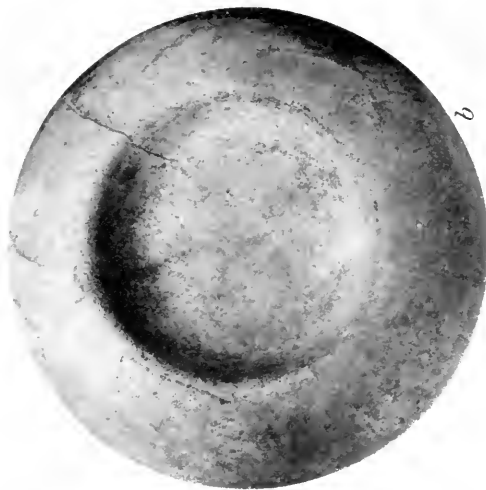
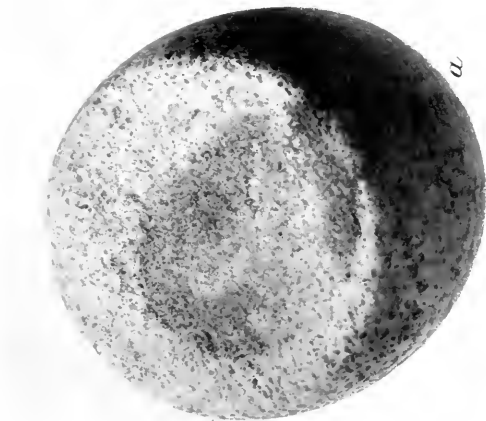
county, Tennessee, also in Cherokee territory, and a number were found in the Nacoochee mound in Georgia.⁶⁹

The writer regards this type as representing in a conventional way a celt in its

wooden handle, the bowl being the blade and the stem portion of the pipe (in which a reed stem was doubtless fitted) the handle through which the point of the celt seems to pass.

Not found by us, but belonging to Cherokee culture apparently, is a type like that in pl. LXXXIV, *a*, in most respects, but with the mouth expanded into the form of a disc (fig. 62, *a*); this is illustrated by both Moore and MacCurdy, and also appears in the Nacoochee collection; and this type, and this only, seems to show some connection with northern Iroquois forms, the pipe bowl surmounted by a disc (fig. 61, *a*) occurring occasionally in western New York and in eastern Ontario. The writer has personally found such pipes on an Erie village-site and cemetery near Ripley, New York, a site subsequently more fully examined by Parker.⁷⁰

Another form (fig. 62, *b*), with pointed base, which seems to be either the effigy of an animal-claw or of a bird's beak, appears on Cherokee sites, but seems to have a regional rather than a tribal distribution.



DISCOIDAL STONES

a, Hiwassee island, near Dayton; *b*, Mainland Village-site, Lenoir City, Tennessee. Diameter of *b*, 4.4 in.



DISCOIDAL STONES, LENOIR OR BUSSELL'S ISLAND, LENOIR CITY, TENNESSEE
Diameter of *a*, 3.2 in.

extending up across Kentucky into Ohio. The fanciful earthen pipe-forms so abundant at Nacoochee seldom appear on the Cherokee village-sites on Tennessee river.

GAMES

Practically the only objects found which might have been used as games were the discoidal stones of varying types, examples of which may be seen in pl. LXXXV and LXXXVI, of which *a* of the former plate is a thick, biconcave form of light-colored granitic stone, from a grave in Mound 2 on Hiwassee island; *b* a typical, thinner "bicave" of white quartz with yellow markings, from the surface of the Mainland village-site near Lenoir City; while in the second plate (LXXXVI) both specimens are slightly convex on both sides, and both came from the Great Midden at Lenoir or Bussell's island. The larger is of light-gray limestone, the smaller of pinkish conglomerate. Similar examples appeared also on Hiwassee island, hence it seems probable that this type was quite general. An unusual discoidal, purchased at Lenoir

City, had been found near the Mainland village-site, an unfinished "bicave" showing distinctly the application of both pecking and grinding.

That these were used in the game of "chunkey," the Southeastern form of the "hoop-and-pole" game so widespread among North American tribes, there can be little doubt. Mooney⁷¹ says of this game:

"It was played with a stone disk and a pole which had a crook at one end. The disk was rolled ahead and the object was to slide the pole after it in such a way that the disk would rest in the curve of the crook when both came to a stop. It was usually played in the larger towns upon a piece of ground regularly prepared for the purpose, called by the traders the 'chunkey yard' or 'chunk yard,' adjoining the town square, or central plaza, in which the most important public ceremonies were performed."

More definite details as applied to the Cherokee of what is now eastern Tennessee are furnished by Lieutenant Timberlake,⁷² who made his observations on Little Tennessee river in March, 1762. He says:

"At . . . Chote . . . the Indians resolved to amuse themselves with a game they

call nettecawaw; which I can give no other description of, than that each player having a pole about ten feet long, with several marks or divisions, one of them bowls a round stone, with one flat side and the other convex, on which the players all dart their poles after it, and [when stone and poles come to rest] the nearest counts according to the vicinity of the bowl to the marks on his pole."

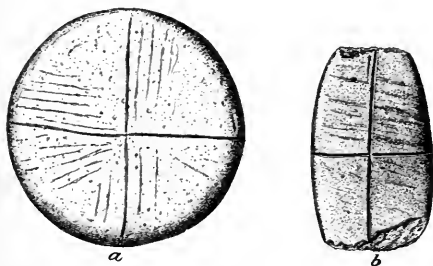


FIG. 63.—Gaming stones: *a*, Lenoir or Bussell's island; *b*, Hiwassee island. (Diameter of *a*, 1.9 in.)

Undoubtedly the form described, flat on one side and convex on the other, was only one of several types used.

That this game was by no means confined to the Cherokee, but was widely distributed among the Southeastern tribes, is evidenced not only by the accounts of early travelers, some of which are quoted

by Jones,⁷³ but also by the distribution of discoidal stones as noted by archeologists. As Fowke⁷⁴ says, "The finest specimens in greatest numbers come from the states south of the Ohio river and from Arkansas eastward to the Atlantic," and this territory was of course occupied by a number of distinct peoples.

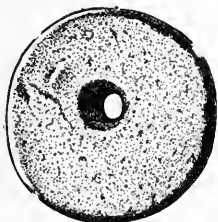


FIG. 64.—Perforated disc of pottery, Lenoir or Bussell's island. (Diameter, 1.1 in.)

Too small to roll in the game above mentioned is the little discoidal of limestone shown in fig. 63, *a*: it may, however, have been used in some kind of dice game, for one side is marked with an incised cross.

Similarly marked, and perhaps used for a similar purpose, is the flat oblong stone seen in *b* of the same figure; and many small discs, chipped and ground from potsherds, may have served as game counters, some of these being perforated as shown in fig. 64.

CEREMONIAL OBJECTS

Little was found that could be called "ceremonial," unless the group of three small, sharp, awl-like implements of bone found with a burial at the large village-site on Hiwassee island may have formed part of a ceremonial "scratcher" or scarifier such as is still used ritualistically to draw blood from the arms and backs of athletes about to take part in the ball-play among the modern Cherokee, and is still made of similar sharpened splinters of bone mounted in the quill of an eagle-feather.

OBJECTS OF UNKNOWN USE

Among the objects of unknown use, whose connection with the Cherokee can hardly be doubted, are the perforated musselshells of which an example appears in fig. 65. Farther north such objects, of larger size, seem to have been used as hoes,⁷⁵ but those found by our expedition were not only too small for such purpose, but they do not show signs of wear. They

could, however, have been strung together to form rattles, or they might even have served as sinkers.

Also unknown as to use is the object of steatite shown in fig. 66, which seems to be a variant of the class of problematical

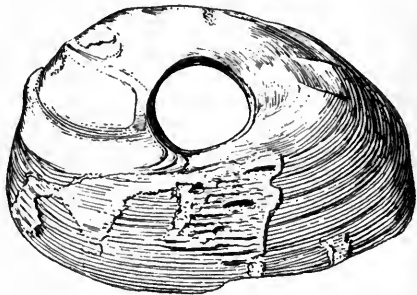


FIG. 65.—Perforated musselshell, Lenoir or Bussell's island. (Length, 3.2 in.)

objects known as "boat-stones," but in this case the resemblance to a boat or canoe is so slight that the attempt to explain it in the light of the Iroquois custom of using tiny model boats as charms against disaster by water will hardly avail. Its connection with Cherokee culture is also

doubtful, as it was picked up on the surface of the nearly obliterated Mound 8 on Hiwassee island, and its original source could not be determined.


A third class of objects whose use is problematical includes large bone tubes, of



FIG. 66.—“Boat-stone” of steatite, Hiwassee island.
(Length, 2 in.)

which we obtained several fragmentary examples. The largest appears to be made from a bear tibia with the proximal joint cut off, the spongy material below it removed and the edges ground thin with the bevel inward, while the outside shows striations due to smoothing with a gritty stone. Another specimen of this class had been highly polished.

XIII. SUMMARY

UMMARIZING the results of our explorations, we find that the district along Tennessee river between Lenoir City at the mouth of the Little Tennessee and Hiwassee island at the mouth of the Hiwassee, is uncommonly rich in ancient mounds, and shows the sites of many aboriginal settlements, some of them large and long inhabited.

SITES EXPLORED

Of these remains we were able to explore three mounds on the Bussell place near Lenoir City in Loudon county, and partially examine two village-sites with accompanying cemeteries on the same plantation; one mound at the Upper Hampton place near Rhea Springs in Rhea county was also examined; while at Hiwassee island, in Meigs county, we completely

excavated two mounds and partially explored two others, besides devoting a few days' digging to the large village-site at the upper end of the island.

MOUNDS

Most of the mounds visited or explored in this district were of the blunt conical type, with circular or oval base, although many were more or less hemispherical in form, in some cases, at least, due to cultivation and erosion; and a few large, flat-topped pyramids, notably the great mound at the head of Hiwassee island, were observed.

The first two types seem to have been built solely for mortuary purposes, in some cases being erected over a single burial, other interments being often added later, while in one instance a burial mound had been increased in height at least twice and new burials added each time. Still another was found which had been enlarged in diameter and new interments made in the added portion, but as this mound had been long under cultivation, we were unable to

determine whether the height also had been increased at the same time. We failed to find any veritable stone graves in any of the mounds we investigated, although several small, circular cists containing "bone burials" were encountered; nevertheless, Mr Moore⁷⁶ found a few such graves in certain of the mounds of the region, and their presence in some others not yet explored may be surmised from slabs of limestone lying on the surface. So far as has thus far appeared from the explorations in these mounds conducted by Mr Moore and by our expedition, they all seem to belong to about the same period—quite an early one—and to have been made by the same people, so far as we can determine from the few artifacts the original builders placed with their dead. Some of them, however, contain, besides the original burials, others of an obviously later period, and these are sometimes better provided with mortuary offerings.

None of the large platform mounds was opened by us, but they were evidently domiciliary—great elevated platforms upon

which stood the "town house" so well described by Bartram,⁷⁷ -who found these dome-shaped assembly halls, sometimes crowning the tops of artificial mounds, still in use in the eighteenth century among the Cherokee and other Southeastern tribes. Some may contain burials also, as did the great town-house mound at Nacoochee, and one would expect such when found to be of important people accompanied with mortuary deposits of interest. The exploration of some of these mounds is needed if we are to determine the identity of their builders or the period of their erection. The writer has been told by several Cherokee that such town-house mounds were built by their ancestors, yet Bartram⁷⁸ claims that in his day the Cherokee, while using these mounds, denied all knowledge of their builders.

VILLAGE-SITES

All of the three village-sites that were partially explored showed heavy deposits of relic-bearing black soil containing midden refuse, in one case, that of Lenoir or Bus-

sell's island, taking the form of a "Great Midden" $4\frac{1}{2}$ ft. to $6\frac{1}{2}$ ft. deep and about 400 ft. long. None of these sites was explored in a satisfactory manner, but enough was accomplished to reveal ash-beds and clay house-floors at different levels, and most important of all the fact that each of the three village-sites investigated had been occupied by at least two and perhaps three different cultures. There were not, as a rule, however, any distinctly marked strata: the fact was determined merely by the difference in character between the artifacts found in the lower levels of the deposits and those appearing in the upper.

THE EARLIEST CULTURE

We found one culture whose traces, lying at the bottom of every deposit in which they appeared at all, seemed to antedate all the others—a culture to which we applied the name "Round Grave" on account of the characteristic method of burial, which was to fold the corpse into very small compass, with the chin between

the knees, and then to force it into a circular, well-like hole of small diameter. These "Round Grave people" used numerous round and oblong vessels of steatite, egg-shaped pottery vessels with pointed bottoms and but little attempt at decoration except by impressions of a very unusual sort of fabric made of reeds and fiber cords, rude bone awls, arrowpoints of many forms, the majority of them stemmed, fine two-holed gorgets, bracers made of bone, and pendants of perforated animal-teeth. We found none of their axes *in situ*, but the writer suspects that the grooved axes found in this district, which are certainly not Cherokee, may be attributed to these people.

This series of artifacts connects the "Round Grave people" with the Algonkian culture of the middle Atlantic seaboard, and points to decided influence if not to actual relationship. In eastern Tennessee we found unmistakable evidences of the "Round Grave" culture at both Lenoir or Bussell's Island and on Hiwassee island, while Mr Moore found another site, apparently

of the same people, on Kodger's island in the Tennessee river in Alabama.

The mere use of circular graves of small diameter cannot be considered *per se* a sign of the presence of this culture, however, nor of great antiquity, for Moore⁷⁹ found on the Hampton place near Chattanooga a number of such "grave pits" associated with an entirely different set of artifacts, many of which were trade objects of the colonial period. These graves differed from ours, however, in that the skeletons were often placed more or less vertically in them instead of laid flat, and that many showed near the surface a burned layer implying the ceremonial use of fire, of which custom we found no trace connected with the circular graves.

THE SECOND CULTURE

Following the "Round Grave people" came another, the builders of most of the burial mounds, whose culture resembled in many ways that of the Cherokee, the latest aboriginal inhabitants of the region, but differed from it just enough to make their

relationship doubtful; while resembling the preceding culture only in the use of the curious mat-like fabric made of rushes and cords.

Like the Cherokee, these second people used the triangular type of flint arrowpoint and the celt form of axe to the exclusion of other styles, their burials were loosely flexed or sometimes extended, and they employed many beads and other ornaments made from ocean shells derived by intertribal trade from the Gulf or the Atlantic coast.

Their pottery, however, although somewhat similar, was for the greater part simpler and plainer than that of the known Cherokee; moreover they seem to have possessed also a kind of polychrome ware not seen in the later Cherokee deposits, very well made vessels of yellow or white decorated with striking painted designs in red or black. They also differed from the known Cherokee in having ornaments of native copper pounded out thin, with embossed designs; in the custom, seen in a number of burials, of partially burning the corpses of their dead, after laying them in

the grave, by covering them with hot coals or heated clay, and in the occasional use of stone graves.

Moore⁸⁰ explored a burial mound of this people on the Bennett place below Chattanooga, with typical artifacts and charred skeletons, and we noted their traces not only on the Lenoir City sites but at the Upper Hampton place and on Hiwassee island. It is still doubtful in the writer's mind whether they should be considered the ancestors or relatives of the Cherokee, or whether their relationships, on account of the polychrome pottery and thin copper ornaments, are more with the culture, well developed on Cumberland river in central Tennessee, which Mr Myer regards as Siouan. The fact that later burials at Hiwassee island seem to bridge the gap and merge imperceptibly into those we know to be Cherokee, would incline one toward the former theory.

In connection with our "second culture" it is interesting to note that in the bottom of the Nacoochee mound⁸¹ in Georgia were found *stone graves*, a *copper axe*, and an

effigy bottle of *polychrome ware* identical with the "Siouan" pottery of central Tennessee. These were in one of the small original mounds upon which the later Cherokee structure was built, and their connection with Cherokee culture is doubtful.

The finding of a lot of simple pottery somewhat suggesting that of the Cherokee, but much more reminiscent of modern Creek ware, in the addition to Mound 2 on Hiwassee island, may represent still another culture succeeding the original mound-building Indians—in fact, may be relics of the Creek settlement which the Cherokee, according to their legend, quoted by Haywood,⁸² found at the mouth of Hiwassee river when they arrived in the Tennessee valley.

THE CHEROKEE CULTURE

Last of the aboriginal peoples on this part of Tennessee river were the Cherokee, and these were the makers of most of the artifacts collected by our expedition. Burials we know to be Cherokee were

found in considerable numbers, along with older ones, in mounds built by the people of the second culture, who may or may not have been their ancestors; and while we explored no mounds that did not date back to this earlier period, it seems probable that the later Cherokee of this region built some tumuli and enlarged others that had been constructed by their predecessors.

Comparing the Cherokee artifacts found by us on upper Tennessee river with those collected by Heye, Hodge, and Pepper, east of the mountains at the Nacoochee mound in northeastern Georgia, we find a very strong similarity, but at the same time certain differences which might be expected even in the same tribe, in the case of bands so widely separated geographically and whose dialects were so distinct.⁸³ The differences seem to lie mostly in the ceramic field and to be the result of influence from the Southern Appalachian region upon the Cherokee at Nacoochee, an influence felt less strongly in the "Overhill Towns" on Tennessee river, where the ware still retained in larger measure its character typical of

the eastern division of Holmes' "Middle Mississippi Valley" ceramic group.

POTTERY

More specifically, the Cherokee pottery of upper Tennessee river, by the presence of frog, fish, and bird effigy vessels, occasional slender-necked water bottles, "salt-pan" ware, and squat spheroidal pots with broad band handles, may be classed in the great Middle Mississippi Valley group: the large, oval cooking-pots and certain decorative designs place it in the eastern division of this group; the presence of bowls of the "cazuela" type and fragments showing complex designs stamped with a carved paddle show Southern Appalachian influence; and some vessels and fragments suggesting Iroquois types, perhaps the influence of that people. The Nacoochee Cherokee pottery, while retaining in some degree the Middle Mississippi character, shows much more stamped ware and many more cazuelas and other Southern Appalachian forms in proportion, and the pot-

tery made of late by the Cherokee is of almost pure Southern Appalachian style.

STONWORK

In stonework we find that both the Overhill Cherokee on Tennessee river and the eastern Cherokee at Nacoochee used the triangular arrowpoint and the celt type of axe exclusively, and preferred the leaf-shape form of flint knife, in all of which respects they resembled not only their linguistic relatives, the Iroquois of the north, but their predecessors on Tennessee river (those of our "Second Culture"), who may have been their ancestors.

Two-holed gorgets of stone, or stone gorgets with a central perforation, were not found in Cherokee deposits, nor were "banner-stones" nor "bird-stones," but stone pendants with the perforation near one end do appear occasionally, in all of which respects the Cherokee seem to have resembled the Iroquois. They did, however, sometimes use cylindrical stone pestles, one being found in a Cherokee grave of the historic period, an implement

which was seldom employed by the Iroquois, occurring only on their older sites.

In their use of discoidal stones the Cherokee resembled many Middle Mississippi Valley and Southern tribes; while their pitted stones, mortars, hammerstones, stone hoes, and "net-sinkers" show nothing by which they might be distinguished from such implements as produced by many other tribes.

BONEWORK

Their arrowpoints, their punches for flint-working, made of antler, and their bone fishhooks, bone beads, and some of their bone-awl forms represent widely distributed types, but their spatula-shaped fleshing tools of bone are much more restricted in distribution and may be characteristic of the tribe. The well-made bone awls, with a sharp point on one end and a rounded one on the other, while not so widely spread as the first group of bone and antler objects, occur in Kentucky and Ohio as well as in eastern Tennessee.

SHELL ORNAMENTS

In shell, their beads, which consisted of *Olivella* and *Oliva* shells, perforated for stringing, as well as many cylindrical and globular forms shaped from conch columellæ, disc-beads made of fragments of conch-whorls, and freshwater-pearl beads, do not differ in any marked respect from those of many of the more advanced tribes of the Middle Mississippi and Southern districts; nor do their pin-shaped ear-ornaments, nor their plain gorgets made of conch-shell. But their circular gorgets with the rattlesnake and triskele designs are much more restricted; yet these seem regional rather than tribal in distribution, being found outside of Cherokee territory, particularly to the west.

The trade in marine shells from the Gulf, the Atlantic, or both, must have been very extensive in prehistoric times to have supplied so many inland tribes with such a great number of ornaments, and should furnish an interesting subject for special study.

COPPER

As to copper, the Cherokee, like the Iroquois, do not seem to have taken much interest in this metal until contact with white traders afforded an abundant supply, the native copper ornament found by us in a mound at the Bussell place, and the copper axe obtained at Nacoochee, being discovered under circumstances which make their connection with the Cherokee doubtful.

FABRICS

The fabrics found impressed on potsherds in Cherokee deposits seem to have been for the greater part from woven fiber bags such as are still to be found among the Central Algonkian and Southern Siouan tribes, with a few that may have been used as garments; all show twined techniques widely distributed in eastern North America. Traces of matting seen with some Cherokee burials seemed to have been of split cane, in the twilled technique of weaving.

PIPES

In pipes, more than in anything else, the Cherokee on Tennessee river seem to have shown individuality, although the forms are simple. One of the commonest has the bowl set at a slightly obtuse angle to the stem-piece, with the rim of the bowl and the proximal end of the stem-piece strengthened by a flange, while in some cases this flange about the edge of the bowl is enlarged into a disc. Also characteristic is a pipe which the writer regards as representing a hafted celt. All these pipes may be regarded as typical; all were made to use with a separate stem of cane or of wood, and while pottery seems to have been the favorite material, stone was sometimes employed. Another type with the base more or less pointed, besides being found occasionally on Cherokee sites, is also reported as appearing in eastern Kentucky and southern Ohio.

At Nacoochee the pipe-making industry seems to have reached a high state of development, for in addition to the simple

forms above described used in the "Overhill towns," a number of other forms in earthenware were employed, some of them ornate to the point of being grotesque.⁸⁴ None of the small pipes of dark steatite, decorated with animal effigies, such as have been made and used by the modern Cherokee, was found either on Tennessee river or at Nacoochee, so in all probability this type has been originated within the last century.

CONCLUSIONS AND THEORIES

Basing conclusions on the archeological evidence, Cherokee material culture, for some generations at least before the coming of the whites, must have been very similar indeed to that of most of the tribes of the Middle Mississippi Valley district, particularly those of eastern Kentucky and parts of Ohio. It shows, however, a strong influence from the Southern Appalachian region, especially in ceramics, which naturally made itself felt mostly in the Cherokee towns situated east of the mountains; and it possessed some features in

common with the Iroquois, such as the forms of arrowheads and axes.

Our theory for explaining this state of affairs must depend on whether or not we accept the "Second Culture" people as ancestors of the Cherokee. If we do, we must first of all discount the embossed copper ornaments and polychrome pottery as importations, like the marine-shell ornaments, or as local and temporary developments, and admit that the Cherokee, having at some time used stone graves and practised the ceremonial partial burning of bodies, for some reason, abandoned these customs.

We can then proceed to picture the Cherokee arriving in the upper Tennessee valley at an early date and displacing the more primitive Algonkian tribes which then occupied the region. That they probably came from the west or northwest may be surmised from the fact that the little pottery whose connection with the builders of the mounds is unmistakable, belongs to the Middle Mississippi Valley rather than to any Southern or Eastern

group. Here they established themselves, constructing many burial mounds as the years went on, as well as occasional large platform mounds upon which to erect their assembly houses. Their culture developed by association with neighboring tribes of the Middle Mississippi Valley type; then, when a branch of the Cherokee established itself east of the Appalachian ranges in contact with the Southeastern tribes, their culture commenced to show influence from this direction.

More in accordance with one Cherokee tradition⁸⁵ is the alternate theory, which postulates at the beginning that our "Second Culture" people, although similar to the Cherokee in many respects, were really a separate and distinct tribe. We may then suppose that the Cherokee came in from the upper Ohio valley in comparatively recent times, finding either the people of the "Second Culture" in possession, or (according to one account received by Haywood)⁸⁶ that these had disappeared, leaving the whole upper valley depopulated except for a settlement of Creeks at the

mouth of the Hiwassee, and that "the mounds exhibited the same appearance upon the arrival of the Cherokee as they now do."

If this is true, the Cherokee brought with them an eastern modification, already highly developed, of the Middle Mississippi Valley culture, which became influenced after their arrival by contact with the Southern Appalachian group of tribes, as above noted.

According to this theory the Cherokee may have separated from the other Iroquoians in the Ohio valley, the latter developing their own peculiar forms in pottery and pipes after their arrival in what is now Ontario, New York state, and part of Pennsylvania, the former adopting new types from the Southeast, but both branches of the Iroquoian stock retaining their original triangular arrowpoints and celt-axes.

The writer has noted in other cases that the pottery forms of American tribes seem to have been more susceptible to outside influence and change than was their stone art; this becomes more comprehensible when we realize that among most tribes

women were the potters and men the stone-workers, and that captive women were often adopted into the tribe of their captors, naturally bringing with them and practising the potter's art as they had learned it among their own people and thus introducing new forms, while the men prisoners were usually disposed of and their knowledge of their own tribal stone art thus lost.

Whatever influence this factor may have had on the development of Iroquoian culture, both Cherokee and northern, the writer can only hope, in concluding, that at some time further work will determine which, if either, of the above theories is correct, and will solve other problems connected with the identity of the earlier peoples of the upper Tennessee valley.

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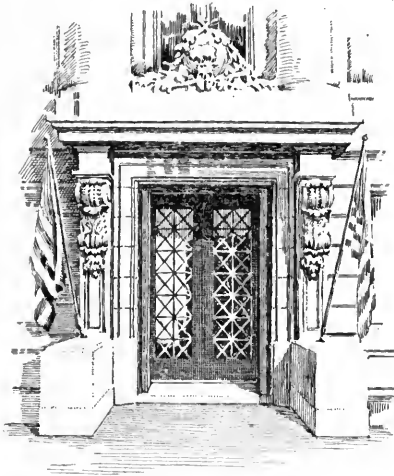
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