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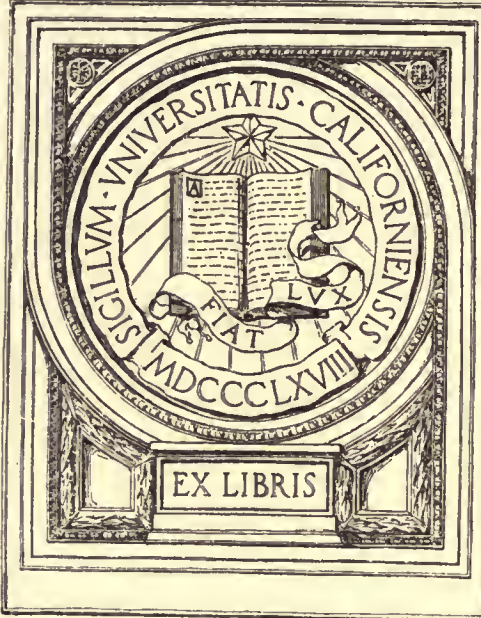
SOME ABORIGINAL SITES

ON

RED RIVER

By CLARENCE B. MOORE

EXCHANGE



EX LIBRIS

WRITINGS ON ARCHÆOLOGY.

BY CLARENCE B. MOORE.

- Certain Shell Heaps of the St. Johns River, Florida, hitherto unexplored. The American Naturalist, Nov., 1892, to Jan., 1894, inclusive. Five papers with illustrations in text, and maps.
- Certain Sand Mounds of the St. Johns River, Florida, Parts I and II. Journal of the Academy of Natural Sciences of Philadelphia, Philadelphia, 1894. Vol. X. Quarto, 130 and 123 pages. Frontispieces, maps, plates, illustrations in the text.
- Certain Sand Mounds of Duval County, Florida; Two Mounds on Murphy Island, Florida; Certain Sand Mounds of the Ocklawaha River, Florida. Journ. Acad. Nat. Sci. of Phila., 1895. Vol. X. Quarto, 108 pages. Frontispiece, maps, plates, illustrations in text.
- Additional Mounds of Duval and of Clay Counties, Florida; Mound Investigation on the East Coast of Florida; Certain Florida Coast Mounds north of the St. Johns River. Privately printed, Philadelphia, 1896. Quarto, 30 pages. Map, plates, illustrations in text.
- Certain Aboriginal Mounds of the Georgia Coast. Journ. Acad. Nat. Sci. of Phila., 1897. Vol. XI. Quarto, 144 pages. Frontispiece, map, plates, illustrations in text.
- Certain Aboriginal Mounds of the Coast of South Carolina; Certain Aboriginal Mounds of the Savannah River; Certain Aboriginal Mounds of the Altamaha River; Recent Acquisitions; A Cache of Pendent Ornaments. Journ. Acad. Nat. Sci. of Phila., 1898. Vol. XI. Quarto, 48 pages. Frontispiece, maps, illustrations in text.
- Certain Aboriginal Remains of the Alabama River. Journ. Acad. Nat. Sci. of Phila., 1899. Vol. XI. Quarto, 62 pages. Map, illustrations in text.
- Certain Antiquities of the Florida West-Coast. Journ. Acad. Nat. Sci. of Phila., 1900. Vol. XI. Quarto, 46 pages. Maps, illustrations in text.
- Certain Aboriginal Remains of the Northwest Florida Coast, Part I; Certain Aboriginal Remains of the Tombigbee River. Journ. Acad. Nat. Sci. of Phila., 1901. Vol. XI. Quarto, 100 pages. Maps, illustrations in text.
- Certain Aboriginal Remains of the Northwest Florida Coast, Part II. Journ. Acad. Nat. Sci. of Phila., 1902. Vol. XII. Quarto, 235 pages. Maps, illustrations in text.
- Certain Aboriginal Mounds of the Central Florida West-Coast; Certain Aboriginal Mounds of the Apalachicola River. Journ. Acad. Nat. Sci. of Phila., 1903. Vol. XII. Quarto, 136 pages. Maps, illustrations in text.
- Sheet-copper from the Mounds is not Necessarily of European Origin. American Anthropologist, Jan.-March, 1903. Plates in text.
- The So-called "Hoe-shaped Implement." American Anthropologist, July-Sept., 1903. Illustrations in text.
- Aboriginal Urn-burial in the United States. American Anthropologist, Oct.-Dec., 1904. Plate.
- A Form of Urn-burial on Mobile Bay. American Anthropologist, Jan.-March, 1905.
- Certain Aboriginal Remains of the Black Warrior River [Moundville]; Certain Aboriginal Remains of the Lower Tombigbee River; Certain Aboriginal Remains of Mobile Bay and Mississippi Sound; Miscellaneous Investigation in Florida. Journ. Acad. Nat. Sci. of Phila., 1905. Vol. XIII. Quarto, 206 pages. Maps, illustrations in text.
- Moundville Revisited; Crystal River Revisited; Mounds of the Lower Chattahoochee and Lower Flint Rivers; Notes on the Ten Thousand Islands, Florida. Journ. Acad. Nat. Sci. of Phila., 1907. Vol. XIII. Quarto, 144 pages. Maps, illustrations in text.
- Certain Mounds of Arkansas and of Mississippi (including Doctor Hrdlička's paper on the Crania). Journ. Acad. Nat. Sci. of Phila., 1908. Vol. XIII. Quarto, 130 pages. Maps, illustrations in text, eight colored plates.
- Antiquities of the Ouachita Valley. Journ. Acad. Nat. Sci. of Phila., 1909. Vol. XIV. Quarto, 170 pages. Maps, illustrations in text, eight colored plates. (In addition in this number is Doctor Hrdlička's paper on the skeletal remains.)
- Antiquities of the St. Francis, White, and Black Rivers. Journ. Acad. Nat. Sci. of Phila., 1910. Vol. XIV. Quarto, 112 pages. Maps, illustrations in text, twenty colored plates.
- Some Aboriginal Sites on Mississippi River. Journ. Acad. Nat. Sci. of Phila., 1911. Vol. XIV. Quarto, 116 pages. Map, illustrations in text, eight colored plates.
- Some Aboriginal Sites on Red River. Journ. Acad. Nat. Sci. of Phila., 1912. Vol. XIV. Quarto, 163 pages. Map, plans, illustrations in text, eight colored plates.

Some Aboriginal Sites on Red River

BY

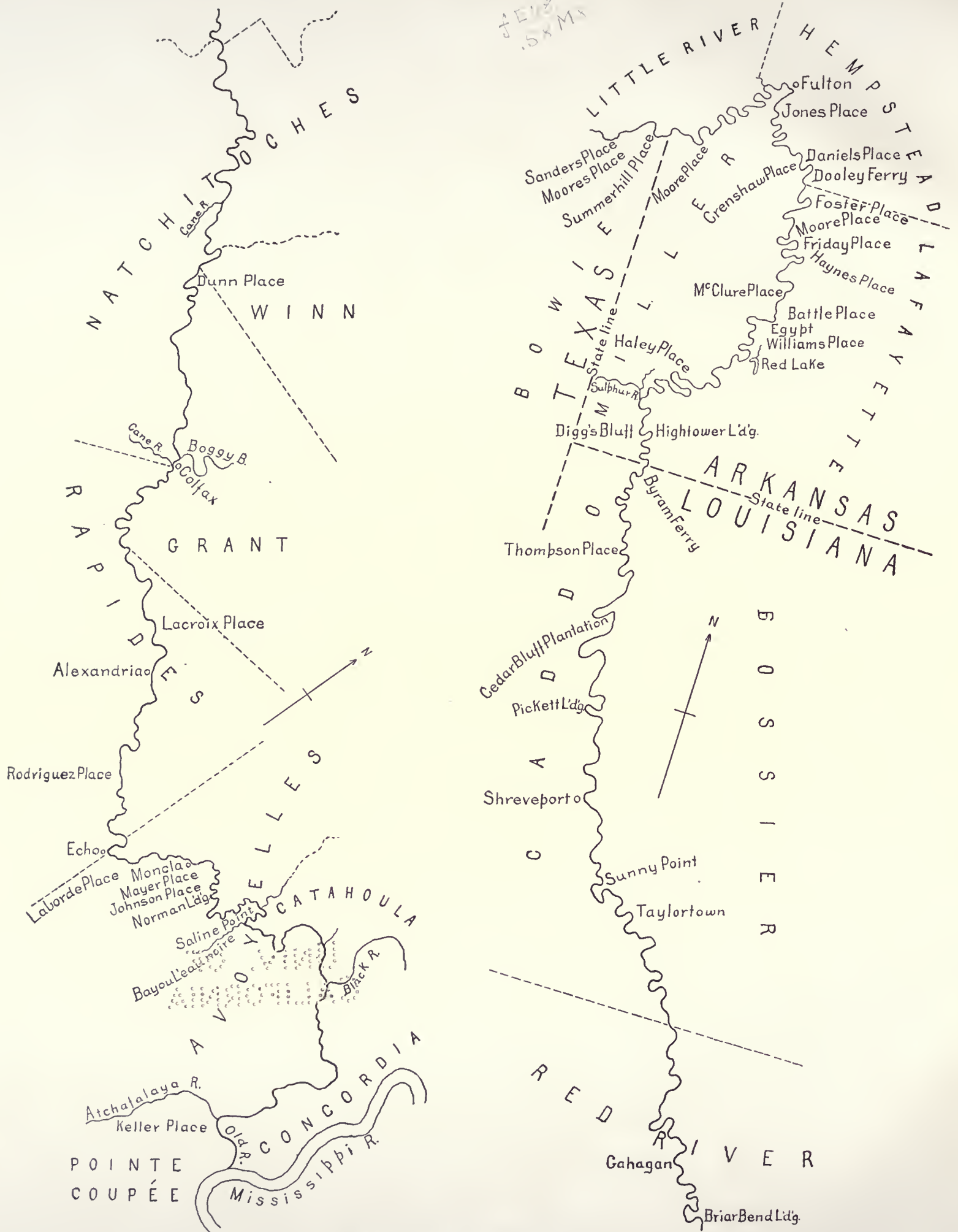
CLARENCE B. MOORE.

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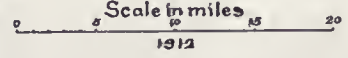


PHILADELPHIA :
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MAP OF PART OF RED RIVER



1912



SOME ABORIGINAL SITES ON RED RIVER.

BY CLARENCE B. MOORE.

INTRODUCTION.

Red river has its source in extreme northwestern Texas and takes an easterly course, bounded most of the way on the north by the State of Oklahoma and on the south by Texas, until southwestern Arkansas is reached, where the river continues in the same direction, having Little River county, Arkansas, on the north and Bowie county, Texas, on the south. Next, Red river, still pursuing an easterly course into Arkansas, has part of Little River county to the north of it and Miller county to the south until within a short distance from the town of Fulton, whence the stream takes a southerly course, having Hempstead and Lafayette counties on the east and Miller county on the west, until it enters the State of Louisiana.

In Louisiana, Red river flows in a southerly and then southeasterly direction until it joins the Atchafalaya river (locally pronounced Chaf-al-eye-yeh) which continues southward, while a continuation of Red river, called Old river¹ on charts prepared by the United States Corps of Engineers, goes a distance of eight miles by water eastward to Mississippi river.

Our investigation, this season, occupied slightly less than five months of the latter part of 1911 and the earlier portion of 1912 and covered Red river (and Old river) from the junction with Mississippi river to a point 37 miles by water² above Fulton, Arkansas, or 519 miles in all, as the river runs.

As we have explained in previous reports, our archæological investigation is conducted from a steamer of light draught, one hundred feet in length, over all, which enables us to carry material necessary for the work and an ample force of men to attend to it.

Mr. J. S. Raybon, captain of our steamer, as a rule goes over in advance such territory as we have selected for our investigation, ascertaining the exact location of mounds and of cemeteries and the names and addresses of the owners of these aboriginal sites, so that, later, our work may be carried on without the delay incidental to search and to correspondence.

¹ Presumably in former times what is now called Old river was part of the Mississippi. As Red river is now connected with the Mississippi by Old river, this river may be regarded as a continuation of Red river, and in fact the junction of Old river with Mississippi river is almost universally spoken of as the mouth of Red river.

² Measured miles, as given by charts furnished by the United States Corps of Engineers.

The preliminary work of Captain Raybon and a companion occupied parts of two summers and covered Old river and all that part of Red river investigated by us with the exception of the small portion above Fulton and of that part of the stream which lies between its union with Black river and its junction with Atchafalaya river, 27 miles by water, which is mainly swamp and which we, in our boat, searched over three times with negative results.

Near Natchitoches (pronounced Nack-ee-tosh) Red river divides, uniting near Colfax, below, a distance of about 43 miles by water. The westernmore course of the river is known as Cane river. This part also, now navigable only in times of fairly high water, was carefully searched by Captain Raybon but was not investigated by us since the report as to the antiquities along it was unfavorable.

Previous to our work there had been no investigation of the antiquities of Red river: digging by treasure-seekers; the occasional putting down of small holes in mounds by local residents impelled by curiosity; or infrequent demolition of portions of high places by collectors with the aid of scoops drawn by horses, can scarcely be termed investigation.

Unfortunately, our own investigation of that part of the river covered by us was of necessity far from complete. Aboriginal cemeteries which are in level ground where unlimited digging may be done, for reasons to be given later, are almost absent along Red river, so that our field for productive work was restricted to mounds. Now, much of the Red river country is an overflow region, and mounds are often places of refuge for domestic animals and occasionally for inhabitants, in periods of high water, so that the destruction of mounds or work done on them which may lead to their destruction through wash of water, is entirely out of the question. Consequently, we were not always able to determine the exact nature of mounds. However, in the case of large, flat-topped tumuli along Red river we believe it can be said, as of the same class of mounds in many other regions, that they were built for places of residence and that they do not contain burials except occasionally, and when burials are found in them they are superficial.

Our investigation along Red river was impeded also by the flood that prevailed during the latter part of our trip, which prevented our visiting a few mounds and in several cases interfered with our work in others. Nevertheless, we believe we shall be able to give a general idea of the antiquities of somewhat more than the lower five hundred miles of Red river.

As is well known, the lower part of Red river was explored by the French not long after their settlement in Louisiana. Tonti tells us that the Indian nations there waged cruel war on each other. Pénicaut, early in the eighteenth century, went up Red river to the village of the Natchitoches, which he estimates as about 195 miles above the mouth of the river. This distance would place the settlement very near the site of the present Natchitoches, which is not far distant from the old French fort built by La Harpe a few years after Pénicaut's visit.

We endeavored in vain to identify the former settlement of the Tassenougoula,

or Nation¹ of the Rocks, which Pénicaut says formerly dwelt with the Natchez and whose customs and religion were the same as those of the people of that tribe. Pénicaut places this village as six leagues above Saline river,² at the base of a chain of hills extending north and south. Hills of this description are now about ten miles farther up Red river than according to Pénicaut's account. However, it should be borne in mind that the course of the river is continually changing, and that Pénicaut, though he made a close estimate as to the location of Natchitoches, was not in a position to give distances with any degree of certainty. Careful inquiries made by us near the base of these hills were without result.

Throughout the Red river region in Louisiana, one hears almost nothing of the finding of bones or of artifacts, and we know it requires but few discoveries to start considerable talk. But little seems to have been placed in such mounds as there are in that region, and presumably fields containing cemeteries, when on high ground, have been denuded of the soil in which the burials were by the action of rain on earth loosened by the plow, and when on lowlands they have been washed bare by the river or covered by deposits from it in periods of high water. The waters of Red river in flood time are charged with mud to a degree beyond any we have seen elsewhere. Our Captain Raybon informs us that after the flood of 1908 he saw six inches of deposit on the floor of a building there; and the bottom lands have been exposed to many floods.

Along Red river in Arkansas conditions in the main are different. Stories of the discovery of Indian objects—especially pottery—and mounds containing burials, some of them richly endowed with artifacts, are fairly abundant. Indeed, we know of no other region in all our fields of investigation where the proportion of deposits with the dead was so great. In the middle Mississippi region (which lies to the northward of the Red river region investigated by us), where the lavish use of pottery with burials has been so often described, the investigator has reached the maximum when a cemetery yields an average of two or three vessels to a burial. Assuredly many burials there have more than three vessels, but many others, on the other hand, have nothing. Along Red river in Arkansas, to come upon a burial unaccompanied by artifacts is indeed a rare occurrence.

One is impressed in that region, however, with the few burials in the mounds,—we found no cemeteries there, as the reader may perceive,—and we believe it likely that the mounds contain the burials of persons of note and that the cemeteries filled with burials of the commoner people have gone in the same manner as, presumably, aboriginal cemeteries disappeared in the Red river region of Louisiana. This would account for the small number of burials found in the Red river region

¹ Pénicaut speaks of another "nation" of Indians which numbered only about two hundred men, so it is hardly likely that the Tassenogoula were very numerous. "*Ils avoient avec eux une nation sauvage de leurs amis, d'environ deux cents hommes, sans leurs femmes et enfans.*"—Pierre Margry. "*Découvertes,*" etc., Part 5, p. 498.

As to the name Tassenogoula see John R. Swanton, "Indian Tribes of the Lower Mississippi Valley and Adjacent Coast of the Gulf of Mexico."—Bulletin 43, Bur. Am. Ethn., p. 24 *et seq.*

² There is also a river of this name in Arkansas.

of Arkansas in proportion to the number of aboriginal sites encountered there, and would explain the unusually great deposits of artifacts associated with the dead.

So little pottery was found by us in the Red river region in Louisiana that it would be unwise to draw conclusions.

The aboriginal pottery of that part of Arkansas through which Red river runs (the extreme southwestern portion) is interesting, as is, in fact, that of much of the entire State.

The Red river pottery of Arkansas as a rule is tempered with fine gravel or sand, or with small bits of pottery, though kitchen vessels there often are shell-tempered. The ware, as a rule, is thin and carefully modeled; even vessels designed for culinary purposes are symmetrical, as a general rule.

The aboriginal potters along Red river in Arkansas evolved but few unusual shapes; grotesque forms or life-forms (except a few bowls with rude birds' heads projecting vertically and conventional tails extending outward) were not attempted by the potters of the region, who perhaps considered such forms incompatible with their ideas of art.

Many vessels from some of the sites of the Red river, Arkansas, region bear a high polish, and nearly all have incised or trailed decoration, though the designs vary but little. Circles, often series of concentric circles (probably sun-symbols), form a frequently-recurring design.

Pigment on the pottery of this region was commonly employed in one manner only, namely, incised decoration filled in with red (oxide of iron) or with white (kaolin); and this was done very freely. A few vessels have scrolls in red on a background of the ware, and some of the pottery has a uniform coating of red, sometimes in connection with incised decoration, but this application of the pigment lacked care or skill, and vessels thus decorated generally present a shabby appearance. Decoration in polychrome was very exceptional.

Incidentally it is interesting to note that the pottery of that part of southwestern Arkansas investigated by us differs in many respects from the earthenware of the St. Francis Valley and from the sites in northeastern Arkansas, near Mississippi river, as might be expected to be the case, since the northernmore territory lies in the Middle Mississippi region, while the more southerly region probably may be included in the Lower Mississippi province.¹

In the region to the north we find earthenware modeled with grotesque figures and life-forms, decoration in polychrome, and comparatively infrequent occurrence of polished surface on the ware and of line decoration of merit. Besides, there are in northeastern Arkansas great numbers of vessels of coarse, thick ware, "lop-sided" (for asymmetrical is too mild a term to use in connection with them), and practically without decoration. All this is materially different from the character of the ware of the Red river region of the State, where more attention generally

¹C. B. Moore, "Some Aboriginal Sites on Mississippi River," p. 370 *et seq.* Journ. Acad. Nat. Sci. of Phila., Vol. XIV.

was devoted to the ceramic art—even some cooking vessels there showing careful modeling and profuse decoration, as will be seen later in this report.

A really remarkable feature—indeed we may call it a unique one—in connection with some of the mounds of the Red river, Arkansas, region, is the great depth to which aboriginal grave-pits were carried, one reaching a maximum of 15.5 feet. Burials are often found elsewhere at considerable depths in mounds, but in these cases the mounds have been built up above them, and when deep graves are found in dwelling-sites much of the depth is due to the accretion of material above the original surface of the grave. But in this southwestern Arkansas region grave-pits of great depth were dug (as for instance in the remarkable mound on the Haley Place), and undoubtedly with aboriginal appliances, since not in a single site in this section was any object found indicating contact with white people.

In our season's work along Red river thirteen skulls and some other skeletal remains were found in a condition to preserve—some in Louisiana, some in Arkansas. These skeletal remains have been sent as a gift to the United States National Museum, and Dr. Aleš Hrdlička, in charge of the Division of Physical Anthropology of the Museum, kindly has prepared a paper on the most interesting of these remains, which will be found at the close of this report.

All important objects found in our season's work are displayed at the Academy of Natural Sciences of Philadelphia.

Much of the pottery found was badly broken, but the more interesting pieces have been cemented together, sometimes with slight restoration. When such restoration has been made, however, it has been done with a material differing in shade from that of the ware, so that no confusion as to original parts may arise.

All measurements given in this report are approximate, and all reductions in size in the illustrations are linear.

Dr. M. G. Miller this season, as in all our previous archaeological investigations, accompanied the expedition as anatomist and has lent assistance in putting this report through the press, as he has done in the case of all our previous reports.

Mr. S. G. Weir, as assistant, and Capt. J. S. Raybon, commander of our steamer, aided the expedition in various ways.

The thanks of the Academy are tendered Prof. F. A. Lucas for identification of bones of lower animals; Dr. H. A. Pilsbry and Mr. E. G. Vanatta for determination of shells; Mr. F. J. Keeley for identification¹ of minerals and of rocks; Dr. H. F. Keller for chemical determinations; Miss H. N. Wardle for suggestions, and aid with the index; and Mr. F. W. Hodge for literary revision of the report.

The Academy also wishes to express its warmest thanks to owners of properties along Red river who, in the most courteous way, placed them at the disposal of the Academy for investigation, and who otherwise rendered the expedition every assistance that lay in their power.

¹ As sections from the specimens could not be furnished, Mr. Keeley was limited to the surface appearance for his determinations.

SITES INVESTIGATED.

(In order¹ from the mouth of the river upward.)

Keller Place, Pointe Coupée Parish,² Louisiana.
 Near mouth of L'Eau Noire Bayou, Avoyelles Parish, La.
 Lower mound on Saline Point, Avoyelles Parish, La.
 Upper mound on Saline Point, Avoyelles Parish, La.
 Near Norman Landing, Avoyelles Parish, La.
 Johnson Place, Avoyelles Parish, La.
 Mayer Place, Avoyelles Parish, La.
 Moncla, Avoyelles Parish, La.
 Laborde Place, Avoyelles Parish, La.
 Rodriguez Place, Rapides Parish, La.
 Lacroix Place, Rapides Parish, La.
 Near Colfax, Grant Parish, La.
 Near Boggy Bayou, Grant Parish, La.
 Dunn Place, Grant Parish, La.
 Near Briar Bend Landing, Red River Parish, La.
 Gahagan, Red River Parish, La.
 Near Taylortown, Bossier Parish, La.
 Sunny Point, Bossier Parish, La.
 Near Pickett Landing, Caddo Parish, La.
 Cedar Bluff Plantation, Caddo Parish, La.
 Thompson Place, Caddo Parish, La.
 Near Byram Ferry, Bossier Parish, La.
 Near Hightower Landing, Lafayette County, Arkansas.
 Near Diggs Bluff Landing, Miller County, Ark.
 Near Sulphur River, Miller County, Ark.
 Haley Place, Miller County, Ark.
 Near Red Lake, Lafayette County, Ark.
 Williams Place, Lafayette County, Ark.
 Egypt Place, Lafayette County, Ark.
 Battle Place, Lafayette County, Ark.
 McClure Place, Miller County, Ark.
 Haynes Place, Lafayette County, Ark.
 Friday Place, Lafayette County, Ark.
 Moore Place, Lafayette County, Ark.
 Foster Place, Lafayette County, Ark.

¹ Although the sites are given in order going up-river, they were not all investigated in this order, some having been visited as we ascended the river when the water happened to be low, while others were dug into on our way down when the stream was in flood.

² That division of the commonwealth known as "county" in all other states of the Union is called "parish" in Louisiana.

Near Dooley Ferry, Hempstead County, Ark.
Crenshaw Place, Miller County, Ark.
Daniels Place, Hempstead County, Ark.
Jones Place, Hempstead County, Ark.
Near Jones Place, Hempstead County, Ark.
Moore Place, Miller County, Ark.
Summerhill Place, Bowie County, Texas.
Moores Place, Bowie County, Texas.
Sanders Place, Bowie County, Texas.

MOUND ON THE KELLER PLACE, POINTE COUPÉE PARISH, LOUISIANA.

The Keller Place, on Old river (see map), is the property of Mr. George Keller, of New Orleans.

About one-half mile in a southeasterly direction from Keller Place Landing, in a field long under cultivation, is a mound 9 feet 8 inches in height and 109 feet by 86 feet in basal diameters, the summit-plateau being 43 feet by 36 feet. The mound probably had been oblong at one time, and fairly symmetrical, but trampling of cattle, which we were informed sometimes herded there, and wash of rain, no doubt have contributed to give the mound its present somewhat irregular appearance.

There was evidence on the summit-plateau of some digging previous to our coming, which, however, seemed to have been desultory in character.

Trial-holes in the summit-plateau almost at once came upon burials. Two and one-half days, with eight men to dig, were devoted to a partial investigation of the mound, which proved more arduous than is usually the case with similar mounds, owing to the heat and drought which had made so hard the clayey material of which the mound was composed that the pick and grubbing-hoe were constantly called into requisition.

As it seemed probable that this mound had been a domiciliary one, and that burials were superficial and that graves had been dug only from the summit-plateau or from it and its immediate neighborhood, diggers were placed around the slope 10 feet down from the plateau, and much of that part of the slope included was dug through at a depth of from 2 to 3 feet. Also somewhat more than one-third of the plateau was dug and picked away to a depth greater than 3 feet, and deeper when graves required it.

Burials were numerous, and nearly all encountered in the course of the digging we have described seemingly had been put down from the surface, though the pits could not be traced to the present level of the plateau, owing to the presence of a superficial layer of earth about one foot in thickness, which probably had been trampled by cattle above and mingled by roots below until all outlines of pits had disappeared from it.

Up to the under surface of this layer, however, most of the grave-pits easily

were traceable, though several of the deeper graves (one 52 inches in depth) seemed for part of their depth to be beneath unbroken strata.

In order to determine the nature of the mound, therefore, an excavation 5 feet by 9 feet, approximately, was sunk from the summit-plateau to a depth of 9 feet, when undisturbed soil of a sandy character was reached.

In this excavation eleven burials were encountered, the deepest 8 feet below the surface; most of them were plainly in graves, none of which reached the surface, but were covered at different depths from the surface by unbroken layers.

Presumably this mound had been domiciliary in character, but occupied at different levels, from which burials were put down.

Fire-places were abundant throughout.

In all, fifty-seven burials were noted, omitting from the count, however, many scattered bones, mainly fragmentary.

Burials were as follows:

Extended on the back, 9

Closely flexed on the right side, 6

Closely flexed on the left side, 3

Partly flexed on the right side, 6

Partly flexed on the left side, 5

Extended on the back to the knees, the legs flexed against the thighs, 1

Single skulls, 2

Disturbances, aboriginal and recent, 7

Child, 1

Bunched burials, 17

Of the thirty-one burials of individual skeletons, the heads of which were in various directions, twenty-nine were of adults; one, of an adolescent; and one, of a child. The comparative absence of children's skeletons, which are found so numerous in some aboriginal places of burial, can be accounted for, perhaps, by disappearance through decay, the condition of the bones from this mound being such that no skulls and few other bones approached a condition to enable preservation. Curiously enough, it may be noted parenthetically, some of the bones from the lower part of the mound were in a less advanced state of decay than were many from the upper part.

The seventeen bunched burials had with them skulls as follows:

With one skull, 3

With two skulls, 7

With three skulls, 1

With five skulls, 1

With seven skulls, 1

With eight skulls, 2

With twenty-eight skulls, 1

A bunched burial extending under the base of the mound had one skull, so far as investigated.

No skulls or other bones having belonged to children were noted among the bunched burials, probably owing to the crushed condition of the bunches and to the state of decay already described.

Burial No. 30, a bunched burial with twenty-eight skulls, extended for a considerable distance into the mound and lay in a pit about 3 feet in depth and an equal distance in width. At its maximum (it tapered considerably toward the extremities) the burial consisted of skulls and various other bones (the long-bones placed parallel longitudinally) to a depth of 1.5 foot along the bottom of the trench. In the earth above this mass numerous single bones were scattered in all directions.

It has seldom been our fortune to investigate a mound in which remains of the dead were accompanied by so few artifacts.

Burial No. 1, a bunched burial, had an interesting little arrowhead of flint, of most unusual shape (Fig. 1), unfortunately with a part missing.



FIG. 1. — Arrowhead of flint. Keller Place, La. (Full size.)

Burial No. 14, which lay closely flexed on the right side, had a biconcave, discoidal stone of sandstone, 2.3 inches in diameter.

Burial No. 18, a skull, perhaps all that was left of a disturbance, had on one side two flint pebbles and on the other side a spherical pebble about the size of a child's fist—perhaps a hammer-stone, though no abrasions are present upon it.

Burial No. 30, the large bunched burial already described, had a mass of red oxide of iron, doubtless pigment.

Burial No. 41, a skeleton partly flexed on the right side, had at the neck a tooth of an alligator. No midden refuse lay near this burial to account for the presence of the tooth in a way other than its former use as an ornament. The proximal part of the tooth, in which a perforation for suspension would be, is absent through decay.

Apart from human remains there came from the mound: four barbed arrowheads of flint, of medium size, found together; two diminutive arrowheads, also barbed, lying apart; two flat pebbles and various scattered fragments of earthenware. These sherds, found singly, and presumably introduced by accident in the making of the mound, were, as a rule, of fair quality, hard, and tempered with small fragments of pottery. None showed any trace of color and nearly all were without decoration of any kind. One small fragment of excellent ware, however, showed more ambitious effort than did the rest, the margin of the vessel to which it belonged having been decorated with small, angular projections bearing short, trailed lines.

Careful inspection and a small amount of digging to test the composition of the soil failed to disclose any sign of an aboriginal cemetery in the vicinity of the mound.

MOUNDS NEAR THE MOUTH OF L'EAU NOIRE BAYOU, AVOUELLES PARISH, LA.

About one mile westerly from the mouth of L'Eau Noire Bayou, which is now crossed by the levee, in woods, is a mound mainly on property of Mr. C. P. Voisel, of Marksville, La., but in part on land belonging to Mr. William T. Guillot, living nearby. These gentlemen joined in cordial consent to our investigation.

The mound, about square, the sides facing the cardinal points of the compass, has a basal diameter of about 165 feet; that of the summit-plateau is 82 feet.

The height of the mound, determined from the southern side, where the ground is level, is 8 feet. The northern side is on the crest of sloping ground which gives the mound an appearance of added height.

Trial-holes almost at once came upon many burials. Continued investigation indicated that much of the summit-plateau centrally had been used for burial to a considerable extent to about 3 feet below the surface. The soil contained quantities of scattered human bones, whole and fragmentary, while burials, and parts of burials, left where other interments had cut through, were numerous. In fact the area in question to the depth we have named, seemed to have been dug and redug in the making of graves until almost all trace of individual pits had been obliterated. The soil was much darker in this area than it was found to be superficially in that part of the plateau that bordered its margin, or than was the light-colored alluvial material that underlay the superficial 3 feet of the plateau.

A very limited number of burials were found in the outer parts of the plateau, but it was evident that this space had not been used for burial purposes to any extent.

In order to ascertain the nature of the mound, an excavation 6 feet by 8 feet and 8 feet in depth was made centrally in the plateau, proving, as at the Keller Place, to be a somewhat difficult task, as the lower 5 feet of the mound could be removed only with the aid of a pick.

In the upper 3 feet of this excavation burials were numerous, as might have been expected from the results obtained by the trial-holes. There were found also, however, three burials, each about 4 feet 5 inches from the surface, all beneath an unbroken layer which commenced about 3.5 feet down. One of these burials lay in a small but clearly distinguishable pit which extended down about one foot below the bottom of the stratum in question.

Still another burial was encountered 5 feet 8 inches from the surface. Below this depth no bones were met.

It does not seem likely that this mound was constructed for burial purposes. It is on land subject to overflow, and one of the owners of the mound informed us that he had seen the water almost reach the level of the summit-plateau. Presumably a domiciliary mound of insufficient height was occupied for a time and buried in superficially to a limited extent, and was then increased in height, and graves were dug from the surface, as was sometimes done in the case of domiciliary mounds.

The condition of the bones in this mound was such that but few could have been saved even under favorable circumstances. As it was, all bones lying in the dry part of the mound were subject to breakage on removal. Nevertheless, two crania, one without the lower jaw, were saved in good condition.

Dr. Aleš Hrdlička refers to these skulls in connection with his description of the crania from the remarkable mound on the Haley Place, Arkansas, which is given at the close of this report.

Thirty-nine burials were noted by us in this mound, no account having been taken of the great quantity of scattered bones to which reference has been made, or of a few burials that were not entirely removed from the hard material in which they lay. Presumably but a small proportion of the burials in the mound came under our observation.

The burials recovered by us were as follows :

Adults extended¹ on the back, 18²

Children, 6

Aboriginal disturbances, 5

Bunched burials, 10

Of the bunched burials, one had a single skull; one had two skulls; four had five skulls; one, six skulls; one, seven skulls; one, eight skulls; one, eleven skulls.

One bunched burial with five skulls included one of a child; and two bunched burials, one with five skulls and one with six skulls, had each two crania belonging to children.

If the aborigines who dwelt on and buried in this mound habitually placed tributes with the dead, most of the mortuary offerings must have been of a perishable character.

Burial No. 2, that of a child, had at the skull what remained of a mussel-shell; and a large mussel-shell, broken when found, was with burial No. 6, a bunched burial.

Burial No. 9, an extended skeleton, had single mussel-shells in fragments at the right of the skull and at the right wrist. As mussel-shells (*Unio*) were not encountered apart from burials in this mound, it is likely their placing with the dead was intentional.

Burial No. 14, a skeleton at full length, had at the left side of the skull an earthenware vessel, badly broken and with parts of the rim missing. This vessel, a bottle of rather unusual shape (Fig. 2), has an incised design shown in the illustration. There has been some restoration of the neck of the vessel, which the presence of a part of the neck with rim fully justifies. The ware of this bottle is gray, and apparently has undergone imperfect firing, which seems to be characteristic of much of the ware of the lower part of Red river in Louisiana.

¹ One had the left ankle crossing the right one.

² Some skeletons, badly decayed, may have belonged to adolescents.

Burial No. 15, extended on the back, had a small group of pebbles at each ankle, doubtless having belonged to rattles.

Burial No. 31, a full-length skeleton, had a mass of red oxide of iron, prepared for use as pigment, beneath the right shoulder.

Burial No. 37 had a badly broken vessel over the right humerus.



FIG. 2.—Vessel No. 1. L'Eau Noire Bayou, La. (Height 8.8 inches.)

No other burials at this place were found with artifacts in association.

Apart from human remains, though no doubt with them at one time, were found separately: a pebble of attenuated pear-shape, 2 inches in length, grooved at one end for suspension; and a barbed arrowhead of flint.

Not immediately with bones, but near many scattered bone fragments, lay fragments of parts of several vessels. One of these, of which about two-thirds were present, had been a large bottle of soft, gray ware. The decoration, faintly incised,

consists of four similar designs, each separated by a vertical line in a blank field. Each design is made up of incised lines forming a cross within a circle, which circle is surrounded by another one, concentric, having radiating from its circumference triangles filled in with reticulate lines, save in one instance where on one side space was wanting. Similar triangles project toward the circles from vertical lines which enclose the spaces, and there are also similar angles with apices turned toward the neck of the bottle, having as bases a circle surrounding the neck.

Some of the earthenware from this mound is tempered with small fragments of pottery, some with a mixture of minute pebbles and bits of broken stone. A few sherds showing the use of red pigment for decoration were present in the soil, one fragment having additional decoration in the form of broad, incised lines.

About seventy-five yards in a northerly direction from the mound just described, on property belonging to Mr. C. P. Voisel, is another mound, slightly more than 10 feet in height. Its outline is somewhat irregular, but presumably at one time the mound was square, or nearly so, as basal measurements were 114 feet by 122 feet, which are fairly approximate considering the difficulty of determining just where the base of a mound begins.

As the summit-plateau of this mound had been used for burials in recent times, and as cutting into the sides of the mound would not have been justifiable in an area subject to overflow, no investigation of this mound was attempted.

A short distance from these two mounds are the remnants of a low, flat mound, most of which had been removed in the construction of the levee. It is currently reported that quantities of human bones and much fragmentary pottery were removed with the material throughout the work, and, in point of fact, inspection showed numerous bits of human bones, and many fragments of pottery, most of which, however, were without decoration.

LOWER MOUND ON SALINE POINT, AVOYELLES PARISH, LA.

On Saline Point, in full view from the residence of Mr. Landry Norman, on whose property it is situated, is a mound in sight from the river bank. This mound, of circular basal outline, with a diameter of 73 feet, is about 11 feet in height.

The mound was deeply furrowed by wash of rain, and in addition had been dug into centrally to a considerable extent previous to our coming.

As the property of Mr. Norman is subject to overflow in times of unusually high water, when the mound becomes a place of refuge, its destruction was not considered.

In material thrown out by previous digging we found a small earthenware pipe of the "monitor" class, having one end missing.

Eight trial-holes in the upper part of the mound came at once upon raw, yellow clay, dried hard and containing no indication of previous burials therein. It seemed likely that the superficial parts of the mound, probably loosened by tramp-

ling of cattle, had been washed away by rain and that burials near the surface went at the same time.

A more thorough examination of this mound, while desirable, is, under the circumstances, out of the question.

UPPER MOUND ON SALINE POINT, AVOYELLES PARISH, LA.

The property of Mr. L. M. Clavrie is on Saline Point, bordering the river, but somewhat farther up than Mr. Norman's place.

About 300 yards back of Mr. Clavrie's residence is a mound in woods, which has been considerably worn and washed. Its original shape is not apparent; possibly at one time it was square or nearly so. Its present basal diameter is 88 feet, about one-third of which is the diameter of the summit-plateau. The height of the mound is slightly more than 10 feet.

Many trial-holes over the surface of this mound showed that many burials had been made in much of the summit-plateau and, in places, partway down the slope. The deepest burial discovered was at a depth of 3.5 feet from the surface.

In the course of about two days' work seventeen burials were come upon, as follows:

Burial No. 1. This burial, which was just below the surface, consisted of a number of bones bunched together, including a single skull.

Burial No. 2, also superficial, was a bunched burial, having nine skulls in connection with it. Near one of the skulls were two vessels, one in fragments, and two flint pebbles together with a much-decayed canine tooth of a large carnivore, without perforation or groove for suspension. With other parts of this burial were two small vessels together, and near these a diminutive pot. Probably a child's remains had been included with this bunched burial, but if so, its bones had decayed away.

Burial No. 3. This burial was made up of more than one individual, burnt to small fragments. Several bits of pottery lay with the calcined remains. Du Pratz¹ says that no nation of Louisiana practised cremation. It is very unlikely that the customs of the Louisiana Indians had changed in Du Pratz's time. This writer, careful as a rule, was hardly in a position to formulate a general negative in connection with so large a territory.

Burial No. 4. This burial, another cremation, also included remains of two or more skeletons, as parts of two different skulls were determined in it.

Burial No. 5. A bunched burial including two skulls, one of which had been deposited upon some fragments of pottery placed together.

Burial No. 6. Cremated remains of several individuals. This burial differed in one respect from other cremations present in the mound, for while the others had been carefully gathered and deposited without any other material showing

¹ "Histoire de la Louisiane," Vol. III, p. 24, Paris, 1758.

trace of fire, there were with this one masses of burnt clay, some larger than a man's fist, and also wasps' nests of clay hardened by fire, including two nests on the bases of which are distinct imprints of matting. It is probable that these wasps' nests originally had been on a wigwam burnt when the remains were cremated.

In the middle of this deposit of cremated bones was a vessel into which material from the deposit had fallen.

Burial No. 7. A bunched burial with one skull.

Burial No. 8 consisted of the skull of a child, in fragments (as were all skulls recovered by us from this mound), also two femurs and one tibia, of adult growth. With this curious mixture were a pot and part of another vessel; also a quantity of pigment—powdered red oxide of iron.

Burial No. 9 was a bunched burial of bones so badly decayed that but little about them could be determined.

Burial No. 10, a bunched burial with which no skull was noted.

Burial No. 11, a skeleton of an adult, lying partly flexed on the right side.

Burial No. 12. A bunched burial with two skulls.

Burial No. 13, a bunched burial with which were seven skulls. With this burial were numerous fragments of a vessel, widely scattered as if broken ceremonially and thrown with the remains.

Burial No. 14, a few scattered fragments of calcined bone, perhaps the result of aboriginal disturbance. With this burial, however, was a bowl containing a circular pebble, perhaps a smoothing stone.

Burial No. 15. This burial consisted of a small deposit of cremated remains with which were a few fragments of unburnt bones.

Burial No. 16 lay at a depth of 3.5 feet, and consisted of only traces of decaying bones with which were two vessels of earthenware, both badly broken.

Burial No. 17. A deposit of finely-burnt fragments, presumably of a single skeleton, perhaps that of a child. With this deposit were three vessels,—a pot and two bowls.

Fourteen vessels, some very badly broken, came from this mound, all but one lying in association with burials. These vessels, pots and bowls (the bottle not being represented) bore in the majority of cases incised decoration of an unambitious kind. None was decorated with pigment, though sherds on which was a uniform coloring of red came from the mound. The tempering of some of the vessels consisted of small fragments of stone. We shall now describe in detail certain vessels from this mound.

Vessel No. 2. A rude pot, of very inferior ware, having on part of its surface a crude decoration made up of circles and diagonal lines. Height 4.75 inches.

Vessel No. 4 borders on the wide-necked bottle in form. The ware is soft, and the decoration, having in the main the scroll as a motive, is scanty and poorly executed (Fig. 3).

Vessel No. 7. A pot of inferior, yellow ware, having incised designs four times shown, each somewhat resembling the log-symbol found farther eastward along the Gulf (Fig. 4). This vessel, otherwise uninteresting, has one feature worthy of



FIG. 3.—Vessel No. 4. Saline Point, La. (Height 3.1 inches.)



FIG. 4.—Vessel No. 7. Saline Point, La. (Height 4.5 inches.)

remark. In the center of the base is a hole about .25 inch in diameter, which is not an accidental break or made by vegetable growth in the mound, but a perforation made previous to the firing of the pot, as is shown by bulging of the ware around the hole in the interior of the vessel. We have here a ceremonial vessel with a perforation made to "kill" the pot in order to free its soul to accompany that of its owner to the spirit land, a custom practised chiefly by the aborigines of Florida.

Vessel No. 8. A diminutive vase, half-fired, bearing rudely-incised decoration and evidently made as a toy for a child.

Vessel No. 9. A bowl (Fig. 5) of fairly well-fired ware, though the surface is lacking in smoothness. The decoration of the vessel, a scroll combination, presents no novelty in the way of design, but in its execution the bowl greatly excels the pottery of Red river, found by us, south of Gahagan, Louisiana, which is a long distance farther up.

Incidentally it may be noted that the beautifully-decorated earthenware found on Ouachita river, La., is encountered north of the town of Monroe, which is about on a line with Shreveport on Red river. Shreveport is about forty miles by land above Gahagan.

Vessel No. 11. This pot, of soft yellow ware (Fig. 6), has a design four times shown. This design, which closely resembles one found on a vessel from a mound on the Mayer Place, to be described shortly in this report, seems

¹ "Certain Mounds of Arkansas and of Mississippi," p. 587, Fig. 4. Journ. Acad. Nat. Sci. of Phila., Vol. XIII.



FIG. 5.—Vessel No. 9. Saline Point, La. (Diam. 6 inches.)



FIG. 6.—Vessel No. 11. Saline Point, La. (About full size.)

Vessel No. 13. A very rude, scaphoid vase, parts of which only were present in the mound. Body and flat base are covered with rude, trailed designs.

Vessel No. 14. A bowl (Fig. 7) of half-fired ware, having a decoration made up of four designs of incised and punctate markings, each somewhat resembling an arrowhead in shape.

A rude knife of chert was found apart from the burials.

If an aboriginal cemetery was near this mound its discovery would be difficult, as the territory is subject to overflow and in places is covered by a deposit from the river.

At this place we were given by Mr. Louis Neck, whose place adjoins that of Mr. Clavrie, a pendant or charm-stone, of hematite, 3.5 inches in length, having the shape of an elongated pear, and grooved near one end for suspension. This



FIG. 7.—Vessel No. 14. Saline Point, La. (Diam. 3.6 inches.)

object, Mr. Neck informed us, had been ploughed up on a property belonging to him, near the town of Marksville, Avoyelles Parish, about eight miles distant.

MOUNDS NEAR NORMAN LANDING, AVOYELLES PARISH, LA.

About three-quarters of a mile SE. by S. from Norman Landing, on property of Mr. F. Saucier, living in the nearby settlement, is a symmetrical mound with circular base, the diameter of which is 150 feet, and that of the summit-plateau 20 feet. The height, determined from what seemed to be the general level, measured slightly less than 20 feet, though when the mound is regarded from neighboring depressions whence, no doubt, material for its building was taken, the height seems considerably greater.

A number of trial-holes showed the upper parts of the mound to be of a material composed largely of yellow clay and having no admixture of organic matter.

The shape of this mound indicates that perhaps it was built for a purpose other than a domiciliary one, but the size of the mound precluded an investigation without material injury.

In a field, above reach of the river, is what long cultivation has left of a small mound containing burials. Investigation showed the material of which it was composed to have the dark shade one looks for where organic matter is mixed with the soil.

About one foot below the surface remnants of a human skull were found, and in another place were decaying fragments of human bones and a human incisor.

The height of this remnant of a mound, which was about 200 yards SSW. from the large one, was 4 feet; its present diameter, 45 feet. Evidently the superficial parts, in which probably most of the burials were, had been plowed away. Mr. Saucier informed us that much broken pottery had been uncovered in cultivating the mound in time gone by.

In the surrounding field some digging was done by us without coming on burials, though a drill of flint was unearthed.

In the opening part of this report we refer to Pénicaut's statement that the Tassenogoula, or "Nation of the Rocks," was, at the time of his visit, six leagues above Saline river, on the banks of a small stream at the base of a chain of hills extending north and south. Hills running as described are some miles farther up Red river, but at this place, where, by the way, a bayou enters the river, there is high, flat land running back in a southeasterly direction.

CEMETERY ON THE JOHNSON PLACE, AVOYELLES PARISH, LA.

The Johnson Place, belonging to Mr. Richard J. Johnson, who lives upon it, is in part above the reach of high water. A portion of this high ground is a field two acres in extent, one-quarter of a mile from the river, approximately. This field is much darker as to color of soil than are adjacent fields, though pasture land also adjoining it is said to consist of the same black soil, and to have formed part of the aboriginal dwelling-site. However, as the field was covered with grass, the fact was not evident on inspection, though it is said to have been apparent when the pasture land was under cultivation, some time ago.

Over the cultivated part of this site are scattered numbers of fragments of pottery, flint chips, and other debris.

A part of the field, slightly higher than the rest and about 100 feet by 75 feet, roughly speaking, had on its surface, in addition to the other debris, almost innumerable fragments of mussel-shells, while bits of human bones and even parts of skeletons together could be seen there at the time of our visit.

A small collection of arrowpoints, some neatly serrated, were collected by us from this and from other parts of the field.

In the restricted area in question and near it, fifteen trial-holes came upon human remains in seven places, two of which only were worked out, it being impossible, under any circumstances, to obtain an accurate idea of what the site had been, as it had suffered so greatly from long cultivation and from wash of rain.

The black soil was found to be about 5 inches in depth, when undisturbed, yellow clay was reached. Burials had been made in pits extending into the clay, the distance from the surface at which they were found probably conveying but little idea of their original depth.



FIG. 8.—Vessel of earthenware. Johnson Place, La. (Diam. 5.6 inches.)

The first pit investigated was about 10 feet by 7 feet, and 30 inches deep. It contained five skeletons,—four of adults, one of an adolescent,—all extended on the back and all heading W. by S., or rather the heads of all had been directed in that way. The skull of one burial was missing. Three of these skeletons lay directly on the bottom of the grave, near together, while two lay almost immediately above them.

At the right of the skull of one of the adult skeletons was a pebble. Also near the skull was a bowl in fragments, and of somewhat better ware than is the average from this region, but inferior to much found farther up Red river. This vessel has a trailed decoration, as shown in Fig. 8.

There was also in this pit part of a skeleton in order, the remainder of which had been disturbed or had not held together when the burial was transferred from

the bone-house. With the skull of this burial was a pebble, and at the neck were three beads, each about one inch in length, made from sections of the columella of a conch (*Fulgur*).

The remainder of the pit was filled with a great quantity of bones in complete disorder, including fifty-one skulls, four having belonged to children. With these bones were: a spherical, shell bead about one-half inch in diameter; two mussel-shells together, each with a small perforation near the hinge; a celt of quartzite, somewhat less than 2 inches in length.

The second pit was 10 feet in length. One end was 5 feet across; the other, which was somewhat curved, was 3 feet 6 inches. The depth of this grave was 22 inches. In this grave were four skeletons of adults, each extended on the back, having the heads directed WSW. Two of these skeletons lay on the bottom of the grave, while the remaining two were almost immediately above them.

One of the skeletons had, near the skull, together, a bit of flint, and two celts of quartzite, each a trifle less than 2 inches in length.

There were in this grave also three parts of skeletons and a great quantity of disconnected bones, including thirty-seven skulls and a fragment of the skull of an infant. With the disconnected bones were occasional pebbles, and a discoidal stone 2.5 inches in diameter, rudely made from a stone naturally flat.

Four crania were saved from this place.

MOUND ON THE MAYER PLACE, AVOYELLES PARISH, LA.

In woods and dense underbrush on property of Mrs. G. L. Mayer, of Marksville, La., is a mound about one mile SW. from the landing on the adjacent John-

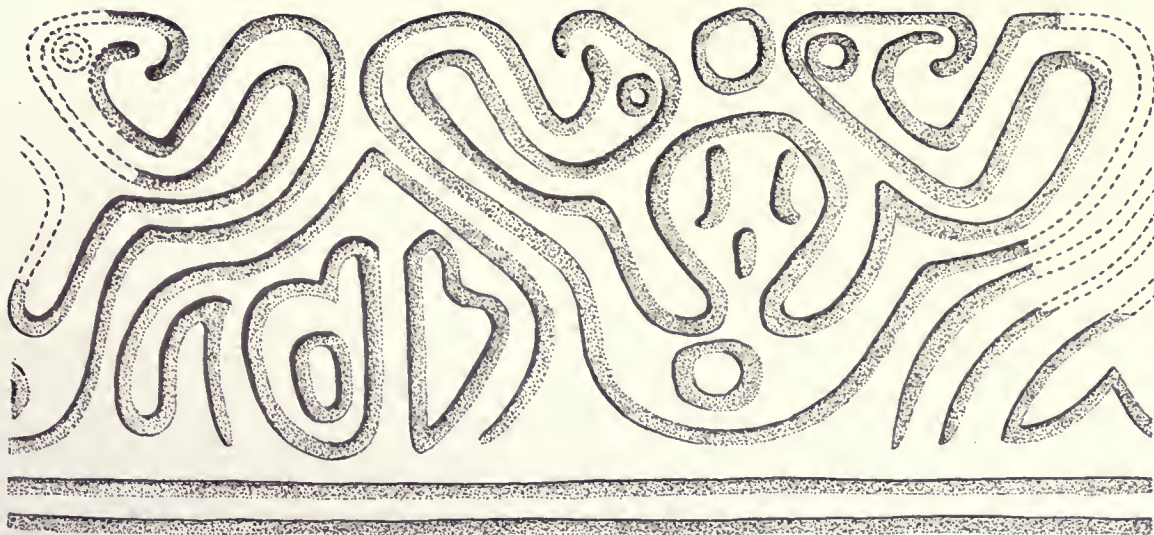


FIG. 9.—Vessel of earthenware. Decoration. Mayer Place, La. (Three-quarters size.)

son Place. The mound is about circular in outline of base, is 40 feet in diameter and 2.5 feet in height, measured from the outside.

Eight trial-holes showed the mound to be a mixture of sand and clay. There seemed to be no definite base-line marking the original surface of the ground, undisturbed clay lying beneath the material of which the mound was composed, though this material extended down considerably deeper than was indicated by the exterior measurements of the height of the mound.

No pits of any kind were noted, nor was any trace of human bones found, though one hole at a depth of 38 inches came upon fragments of an undecorated vessel, and a boat-stone, rudely made from a pebble, having a concavity at the base but no perforations.

About half a foot below these objects was a broken vessel of very soft, porous, yellow ware, with a design (Fig. 9) twice shown, somewhat resembling one described as coming from the upper mound on Saline Point (page 498). Presumably a serpent is represented.

In another hole, about 3.5 feet from the surface, were two undecorated vessels, badly crushed.

Presumably burials formerly present in this mound had disappeared through decay.

MOUND AT MONCLA, AVOYELLES PARISH, LA.

Moncla is a settlement on the bank of Red river.

In view from the water, in a cultivated field, on prairie land said to be above the reach of high water, is a mound with sides too steep to permit the use of the plow. A hole in the summit, dug previous to our visit, showed the upper part of the mound, at least, to be composed of raw, yellow clay.

The mound, circular in outline of base, slightly more than 10 feet in height, has a diameter of 80 feet. The summit-plateau, at the time of our visit, was 17 feet in diameter, but deep furrows in the slope of the mound, caused by wash of rain, indicated that the plateau had been of greater extent in the past.

There is no history of any discoveries in connection with this mound, nor is any debris visible on the fields which surround it.

The owner of the mound, who was written to, and later visited, by us, required more time to reach a conclusion as to our investigation than the expedition could accord, considering the unpromising appearance of the mound and the character of the region in which it is situated.

The ridiculous idea that treasure has been buried in these mounds is widespread and sometimes acts as a deterrent to the ignorant when permission to dig is requested.

MOUND ON THE LABORDE PLACE, AVOYELLES PARISH, LA.

About five miles in an easterly direction from the town of Echo is the plantation of Mr. Adolphe Laborde, who resides on it. This place is some distance in from the river, but is near a former course of the stream. On the property is a mound well known along the river for a considerable distance, and sometimes

called the Island mound, not because it is actually an island, but for the reason that it forms an apex to some elevated ground which is not covered in periods of high water.

This mound, 10 feet 6 inches in height, circular in basal outline, has a diameter of 95 feet. It has had a considerable summit-plateau, but its extent was difficult to determine owing to much digging in it in recent times, which had left a deposit of soil on its surface, and to the fact that it had been plowed.

A number of trial-holes were put down from the summit-plateau, one of which was 18 feet 6 inches by 14 feet. Parts of this hole were carried to a depth of 4 feet 6 inches and 6 feet respectively, and a smaller hole from the bottom was extended beyond the base of the mound.

Trial-holes showed that the superficial part of the summit-plateau was filled with burials. These burials, which were from 20 inches to somewhat more than 4 feet in depth, were in grave-pits, as sometimes the lower parts of the pits could be seen cutting through layers of clay which differed from the mixed material used in filling the graves, though the upper few feet of the mound had been so thoroughly mingled that the material composing it resembled that found to have been used in filling the pits. No doubt the pits had been put down from the surface. So nearly as could be determined (for sometimes intersecting graves could be differentiated owing to their bases being at different levels) thirteen graves were encountered, some of which, however, had been lessened as to their contents by other graves which had been put down through parts of them.

The form of burial, as a rule, consisted of placing layers and heaps of bones in no order whatever, though in several instances a skeleton had been interred at full length on the back and quantities of bones had been placed in the grave alongside of and on top of it.

Not needlessly to occupy space, we shall confine our account to the more interesting burials.

Burial No. 1 consisted of the skeleton of an adult extended on the back, in connection with bones including sixteen skulls, which, like all crania found at this place, were past preservation. Some of the bones with this burial showed marks of fire, the only ones so treated which were encountered by us in the mound.



FIG. 10.—Earthenware pipe.
Laborde Place, La. (Full
size.)

At the upper part of the right humerus of the extended burial was an undecorated pipe of earthenware (Fig. 10), made without extension for the reception of the stem. Near the outer side of the upper part of the left humerus was a bone implement in fragments.

Burial No. 2 was made up of scattered bones, including twelve crania, on one of which were stains of copper. Among these bones was an undecorated bottle of ware imperfectly fired, and elsewhere in the deposit, together, were four pebbles and a fragment of flint.

Burial No. 3 was without a complete skeleton, being made up of eleven

crania and a complement of other bones. On the bottom of the grave was red pigment.

Burial No. 4 was a skeleton at length on the back from the feet to the pelvis, where it had been cut away by another grave. A mixture of bones, having four crania, lay with this part of a burial.

Burial No. 7 was the skeleton of an adult, extended on the back, accompanied by bones including twenty crania. Near one skull was a small arrowhead of flint, and a projectile point of the same material was with other bones, as was a small quantity of red pigment (hematite). Lying transversely between the left forearm and the body was one of the most gracefully wrought celts it has been our fortune to see, the cutting edge, the body, and the rounded extremity being very symmetrical. The material is quartzite; the length, 3 inches. At the middle of the inner side of the left tibia, together, were sixteen pebbles, some about the size of the end of one's finger, some smaller.

Burial No. 8 had twenty-eight crania lying with quantities of other bones. At the verge of the deposit, somewhat separated, were four vessels of earthenware and various fragments of pottery. Two of these vessels are diminutive pots with scanty line-decoration; one is a bowl of about one quart capacity, having an attempt at a uniform coating of red on the outside (which, however, took effect in places only), and with four encircling, parallel, incised lines below the rim.

The fourth vessel is a small bowl (Fig. 11), having on the inside a fairly good



FIG. 11.—Vessel No. 4. Laborde Place, La. (Diam. 4.5 inches.)

coating of red pigment. On the outside, however, the pigment appears irregularly at places, its absence in part being due, not to wear, but to the fact that the pigment was unskilfully applied and failed to adhere. This bowl bears an incised, scroll decoration. Incidentally it may be noted that in the lower Mississippi region (south of the Arkansas river) incised decoration is often found on vessels in connection with the use of pigment. On the other hand, in the middle Mississippi region, vessels adorned with pigment practically never bear incised decoration.

The remaining burials from this mound, less noteworthy than those described, offered but one point of interest, namely, the presence of glass beads with one of them, which lay at a depth of 2.5 feet. Probably all the burials in this mound were post-Columbian.

An examination of the lower parts of the large excavation showed no pits. The smaller excavation to which reference has been made came upon a well-marked base-line at a depth of about the height of the mound as determined from the outside.

Southwest of the mound and contiguous to it is a field of considerable extent, the soil of which is dark and is literally covered with dwelling-site debris, fragments of flint, pebbles, innumerable bits of inferior pottery being scattered around, but no human bones, so far as could be determined. From this field were gathered many arrow-points of flint, all rather rudely made; two ear-plugs of earthenware, of different sizes; a large part of a shell ornament 1.1 inch in diameter, with central hole and scalloped margin, and having a perforation for suspension.

Trial-holes in this field showed the dark soil to extend about one foot to underlying clay. Possibly grave-pits were present in places, but as the field was covered with growing cotton, a full investigation was out of the question.

MOUND ON RODRIGUEZ PLACE, RAPIDES PARISH, LA.

On the Rodriguez place, which belongs to Mr. E. S. Rodriguez, who lives upon it, about one mile south from the landing is a mound in a cultivated field. This mound, about circular in basal outline, had a diameter of 65 feet. Mr. Rodriguez informed us that the field in which the mound is, had been cleared nine years before, and pointed out the stump of a large tree near the center of the mound as marking its height at that time, but added that much had been plowed away from the mound in parts surrounding this stump, and in fact the stump and soil immediately surrounding it were considerably above all other parts of the mound. The level of the ground where the stump was, was somewhat less than 3 feet above the level of the field; much of the mound, however, did not exceed the general level by more than 1.5 to 2 feet.

On and about the mound several arrowheads of flint (one barbed and serrated on the edges of the lower half of the blade) and many fragments of flint and of pottery were found.

According to Mr. Rodriguez, bones had been plowed from the mound, and many long, red beads had been found on its surface by children living nearby. Confirming this, we found on the mound a tubular bead of red jasper, .94 inch in length; .2 inch in diameter and having a perforation bored through from one end, with a diameter of .12 inch at one end and .07 inch at the other end. This perforation, certainly a fine example of aboriginal skill, is evenly placed, though, as stated, the opening at one end is slightly wider than it is at the other.

The mound was investigated by us in a spirit of expectation which, unfortunately, was not fulfilled.

In the shallower parts of the mound trial-holes were sunk without return. Centrally in the mound was dug out a space 10 feet square, which included the removal of the stump before referred to, and resulted in the finding of a single burial under where the stump had been. This burial, that of an adult extended on the back, the head directed toward the north, lay 2 feet 7 inches from the surface, the measurement being taken to the upper parts of the skeleton. No object of any kind was in association.

Seemingly the burial lay on the original surface of the soil, or had been placed a few inches below it. Determination as to this was difficult, however, as the percolation of water into the hole where the skeleton lay greatly interfered with the work. One thing was certain: the burial had not been made in a grave dug through any part of the mound, as the light-yellow clay of which the mound was made was undisturbed above the skeleton.

Various holes dug from what seemed to be the base of the mound gave no indication of any pit or pits extending beneath it.

In parts of the mound, distant from the burial, were found: a rough arrow-head of flint; a flint drill, or possibly an arrow-head, 2.75 inches in length, and somewhat less than .5 inch in maximum width, made from a flint pebble, the original surface of which is still apparent in places.

MOUND ON THE LACROIX PLACE, RAPIDES PARISH, LA.

In an open field, about four hundred yards from the landing on the Lacroix Place, of which Mr. John L. Lacroix, of Alexandria, La., is the owner, is a mound, circular in basal outline, 6 feet in height and 62 feet in diameter.

This mound, which had every appearance of having been dug into to a great extent previous to our coming (probably by seekers after treasure), is in the main made up of bright yellow clay with admixture of sand. In the central part of the mound, however, the material has a much darker appearance, and there two trial-holes came upon fragments of human bones, greatly scattered. Presumably these skeletal remains, taken out by previous diggers, had been returned in partial filling of the holes.

A number of other trial-holes put down by us were in the yellow soil to which reference has been made, and unearthened neither bone nor artifact.

On the surface of the field surrounding the mound were a few fragments of flint, but no other signs of a dwelling-site were apparent.

MOUND NEAR COLFAX, GRANT PARISH, LA.

On property belonging to Mrs. C. P. Calhoun, of Colfax, about 100 feet south from the township road running eastward from Colfax (which is about 2.5 miles distant), is a small mound on a ridge. In the body of the mound had been dug out previous to our coming, presumably by seekers after treasure, a hole 20 feet in diameter. The height of the remaining part, which evidently had been increased

by soil thrown out by the former diggers, was 5.5 feet; the diameter, probably increased in the same way, was 48 feet.

The soil of the mound is sandy clay containing masses of sandstone, some more than 2 feet in diameter.

Seven trial-holes dug into the apparently unexcavated part of the mound were unproductive, and no human remains or artifacts were noticed in the soil thrown out by previous diggers.

The area surrounding the mound gave no indication of having served previously as a place of abode.

MOUND NEAR BOGGY BAYOU, GRANT PARISH, LA.

A mound on a high ridge, on property belonging to Mr. C. H. Teal, is about two miles in a direct course north of Colfax and one-quarter mile west of the township bridge over Boggy Bayou.

This mound, which had been much dug into, is at present 13 feet 7 inches in height, and is 93 feet in diameter of base. An excavation 34 feet by 21 feet, with a depth of 7.5 feet at the time of our visit, had been made into the central part of the mound before our coming, while smaller excavations had been made in the sides.

The mound is composed of coarse sand, much of it red but not artificially colored, with a few small masses of sandstone scattered through it.

In seven trial-holes nothing was found to indicate the use of the mound for burial, and no fragments of bone or artifacts were seen about the old excavation.

The surrounding ground gave no sign of the former presence of aborigines.

DWELLING-SITE ON DUNN PLACE, GRANT PARISH, LA.

About one-half mile SSW. from Dunn Landing, in a field on a point of alluvial land, the property of Mr. R. M. Dunn, living on the plantation, is a dwelling-site about one acre in extent. The surface of the site is somewhat higher than surrounding ground, and shows soil darkened by organic matter. Fragments of pottery, shells, and animal bones are scattered about.

In forty-eight trial-holes put down by us the dwelling-site material was shown to consist of dark soil with which was mingled debris similar to that seen on the surface. The maximum depth of this dwelling-site material, as shown by the trial-holes, was 28 inches. No human remains were encountered.

In the digging, separately, were found: a small, barbed arrowhead of flint; a drill of the same material; a short, slender piercing implement of bone; an implement of bone with rounded point and having at the opposite end the articular part still remaining.

The fragments of pottery found above and below the surface on this site were

of fairly good quality, but without incised decoration. One sherd, coated with red paint on both sides, was encountered.

MOUND NEAR BRIAR BEND LANDING, RED RIVER PARISH, LA.

On a high ridge, about three-quarters of a mile east from Briar Bend Landing, in a cultivated field forming part of the plantation of Mr. J. J. Stanfill, Sr., who resides upon it, is a symmetrical, conical mound of sand, 8 feet 7 inches in height and 55 feet in diameter of base. In the summit of the mound previous diggers had made an excavation 6 feet in diameter and 4.5 feet in depth, approximately.

A central excavation 7.5 feet by 11 feet was carried by us to a depth of 12 feet 3 inches without coming upon a distinct base-line, but at a depth of 9 feet 2 inches, at the central part of the mound, the red sand composing it rested upon sand, gray-brown in color, which apparently represented the surface upon which the mound had been built. From the margin of the mound on the eastern side, a trench 9 feet in width and extending below the base was dug in to connect with the central excavation. In addition, seven trial-holes were sunk in various parts of the mound.

Although this symmetrical mound, which, judging from its measurements, must have been originally without a summit-plateau of any extent (the previous digging involved the throwing out of much material and prevented a determination at the time of our visit), had every appearance of having been built for burial purposes, yet but few burials, apparently, had been placed in the body of the mound.

In sand cast out by previous diggers were small fragments of human bones, and a skull (all that remained of a skeleton) was encountered at a depth of 4.5 feet, at the margin of the previous excavation.

Of nineteen burials found by us in place¹ the two shallowest were 6 feet in depth, and these, found where the mound sloped considerably, were not far from the base. Other burials were from 7 feet to 12 feet 3 inches in depth—a number being from 10 to 11 feet down.

In view of the fact that so large a proportion of burials found by us lay considerably below the original surface of the ground, it seemed possible that the mound had been built above a cemetery, but various trial-holes put down in the level ground around the mound failed to reveal any indication of one.

The burials, which were so badly decayed that at times it was hard to distinguish traces of them, were as follows:

- Partly flexed on the right side, 1
- Partly flexed on the left side, 1
- Closely flexed on the right side, 8
- Closely flexed on the left side, 3
- Aboriginal disturbance, 1
- Bones in caved sand, 1
- Cremations, 4

¹ Some scattered bones fell in caved sand.

The cremations were all small deposits of calcined human bones, none of which had been burnt where found.

The comparative absence of artifacts in this mound which had so promising an appearance, was a great disappointment. With one burial was a rude arrowhead of flint; with another burial lay a flat pebble of irregular outline. Still another burial had in association a small mass of galena (lead sulphide) with a perforation countersunk at each side, for use as a bead.

In the sand thrown out by the previous digging were three pairs of copper ear-ornaments of the spool-shaped variety, some broken into two parts. Each of these ornaments is made of two cones of sheet-copper, the apices of the cones apparently connected by inserting the apex of one cone into that of the companion cone and spreading the sheet-copper on the inside to hold it in place. The concave part of each cone has been covered with a second thickness of sheet-copper which is held in place by an overlapping margin.

There was also found near the ear-ornaments what seems to be the lower half of an ill-made, ceremonial axe belonging to the hoe-shaped class, having part of a perforation in the blade. The material apparently is a soft claystone which would unfit the axe for any practical use.

Throughout the digging there were found in the mound only two small fragments of earthenware, both undecorated.

The surrounding area showed no evidence of having served as a place of abode.

MOUND AT GAHAGAN, RED RIVER PARISH, LA.

At Gahagan, a settlement near Red river, is the plantation of Mr. W. R. Hollingsworth, of that place. In aboriginal times a considerable population must have inhabited this place, to judge from the number of remnants of mounds that are scattered throughout the fields.

In sight from Gahagan, and also from the river, in the middle of a cultivated field, is a mound of clay with a small admixture of sand, which has suffered greatly from the plow and from wash of rain on the loosened soil. Presumably the diameters of the mound at one time were approximately 80 and 110 feet, but at present so much has been plowed and washed from its sides that it appears like a peak of much less diameter placed on the central part of a platform from 2 to 4 feet in height. On this platform are stumps of small trees, recently cut, whose roots are denuded of soil from 1 to 3 feet above the surface, showing how much the mound has lost in height in its outer parts even in very recent times.

The height of the mound from the level ground to the summit of the peak is slightly more than 11 feet, measured from the outside.

Various trial-holes in the lower parts of the mound were without result, but an excavation 12 feet square, put down about centrally in the peak we have described, intersected a grave-pit. This pit was not noticed by us at first, as the upper 5 feet of soil on the mound was moist and was approximately uniform in color, but below

this moist ground the soil was dry and hard, and local layers in it were plainly distinguishable. A careful examination made after the grave-pit was recognized showed it in one place to extend upward through the moist soil to within 3 feet of the surface, where it was lost, but in all probability the grave had been put down from the surface.

The pit, which was traceable with the greatest ease in the lower and dry part of the mound, the mixed material with which the pit was filled contrasting with local layers through which the grave had cut, had two sides running about NW. and SE. These sides differed slightly in length, one being 12 feet 2 inches and the other, 13 feet. The ends of the grave, which were about at right angles to its sides, were 8 feet 9 inches and 7 feet. The grave expanded somewhat in the middle, the distance across it there being 9 feet 8 inches.

The depth of the grave-pit, determined from the highest part of the mound above it, was about 11 feet. Approximately 7 inches below the bottom of the grave was a layer of dark soil, a few inches in thickness, which evidently was the original surface of the ground. Presumably, however, the proximity of the bottom of the pit to the base of the mound was accidental.

On the bottom of the grave lay five skeletons, all at full length on the back, as follows:

Burial No. 1, adult, the head directed NW.

Burial No. 2, adult, the feet 18 inches apart, head NW.

Burial No. 3, adult, head NE.

Burial No. 4, adolescent, head NW.

Burial No. 5, adolescent, having an arrangement of the arms different from that usually found in the case of extended burials, where the arms, as a rule lie at length along the sides of the body. In this case the right forearm extended across the trunk diagonally down, while the left forearm was doubled up, the hand resting on the left shoulder. The head of this burial was directed NE.

Burials Nos. 1 and 4, as may be seen by the plan of the grave (Fig. 12), lay each along a side of the grave, while Burial No. 5 rested across one end of it. Parallel to the opposite end and somewhat more than 2 feet from it was Burial No. 3. Burial No. 2 lay in the space enclosed by the others.

Burials Nos. 4 and 5, the adolescents, had no artifacts in immediate association.

Burials Nos. 1, 2, and 3, the adults, lay in such a way that the skulls of two of them were but 3 inches apart, while the skull of the third (Burial No. 1) was about 2 feet from the other two.

Carefully arranged within the space between the three skulls, but apparently more closely related to Burial No. 2, were: a group of slender, bone pins, badly decayed and broken; an ornament of sheet-copper, evidently originally of considerable size, represented when found only by small fragments; a celt of a compact rock, 2.75 inches in length; a graceful lancehead of flint, 3.75 inches long; a handsome, barbed arrowhead of flint, about 1.5 inch in length, with five flint

points, some .5 inch long, some slightly more, near it; a handsome boatstone¹ of diabase, 3.75 inches long, having the usual concavity in the base but without perforations; remnants of two small ornaments of sheet-copper, decayed through and through; a cylinder, about 2 inches long and .5 inch in diameter, of decaying ligneous material which Prof. George B. Sudworth, Dendrologist of the United States Department of Agriculture, Washington, kindly has determined to have been wood of

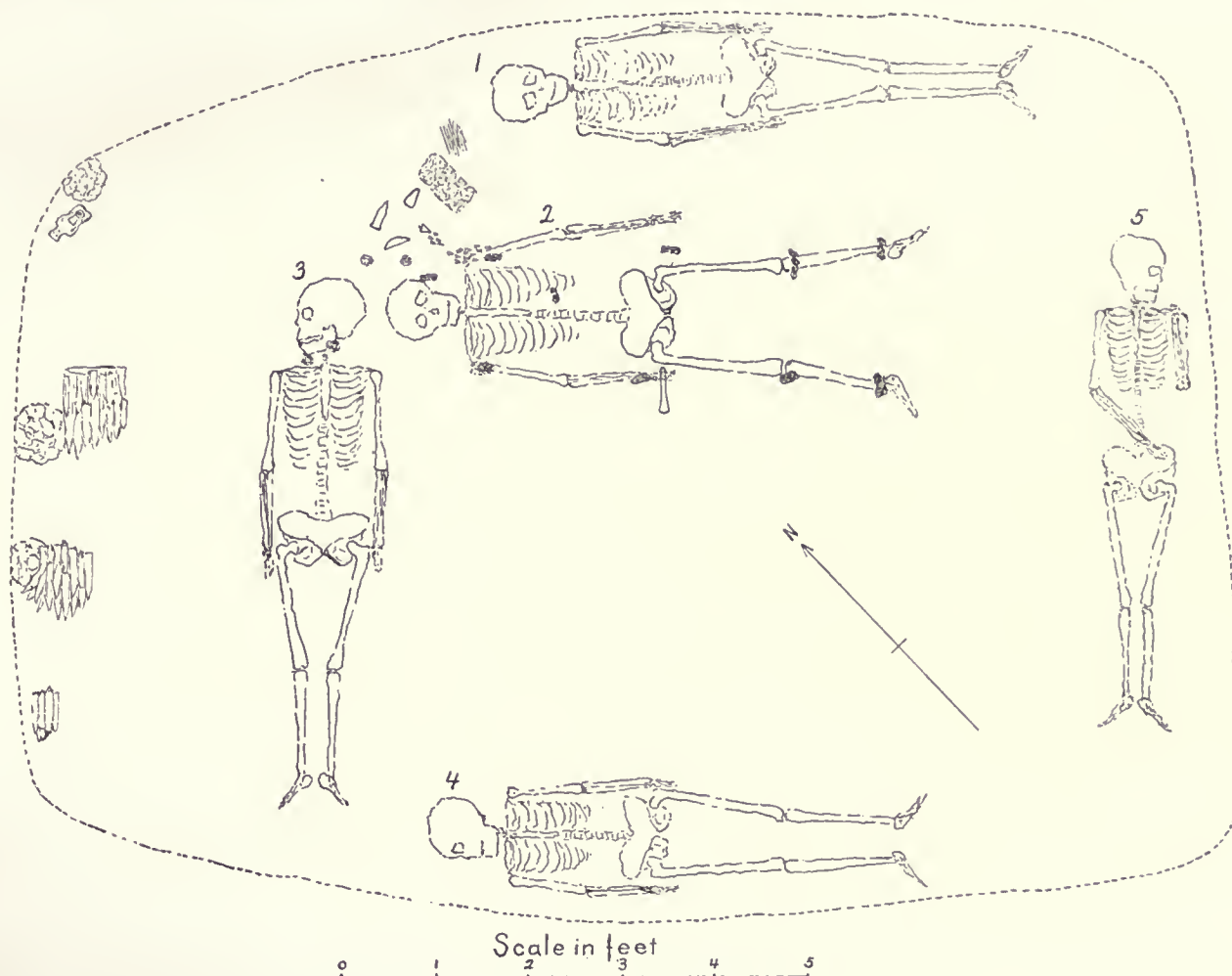


FIG. 12.—Plan of grave. Mound at Gahagan, La.

the elm (*Ulmus americana*). This last ornament, like similar ones from this mound, had been copper-coated but was too badly decayed for preservation as a whole.

With the exception of the deposit just described, which extended to the skull of Burial No. 2 and continued with this burial, and presumably belonged to it,

¹For other boatstones found west of Mississippi river see our account of the mounds near Chandler Landing, Prairie Co., Ark. (White river), in which a number were found, including one of rock crystal. "Antiquities of the St. Francis, White and Black rivers," p. 345, 346. Journ. Acad. Nat. Sci. of Phila., Vol. XIV.

Burial No. 1 had no artifacts in close association with it. It is possible, however, that various objects to be described later, which lay along one end of the grave, were put in for the dead in common, in which event the remains of the adolescents also shared in the offering.

Burial No. 2, continuing the deposit described as enclosed by the three skulls, had under the skull an ornament of sheet-copper and wood, greatly decayed.

Along the left humerus, a continuation of the deposit of arrowheads already noted, were fourteen others similar to the smaller ones in it.

At the upper part of the left humerus was a tubular bead of the kind already described. A similar one lay on the thorax.

At the right shoulder were traces of sheet-copper.

At the right wrist was a mass of galena,¹ and under the right hand, lying transversely, was a carefully-made ceremonial axe of quartzite, 6.25 inches in length.

Lying by the outer side of the upper part of the left femur was a copper-coated bead like the others, and around the upper part of the left tibia were fragments of a number of similar beads which, strung together, probably had encircled the leg.

At the right knee was a small ornament of decayed wood which had been coated with copper, in fragments, and which had been a rattle, as shown by the presence of a number of small pebbles.

At both ankles were the remains of a number of ornaments of wood, copper-coated, crushed together and completely out of shape, among which were small pebbles, showing that here, too, rattles had been present. With these were some very small, shell beads.

Burial No. 3 had, under the chin, a circular ornament of wood, in the form of a disk, about 1.5 inch in diameter, copper-coated on both sides, and the decaying remains of sheet-copper and wood at the left of the lower jaw.

Along one end of the grave, and nearest to Burial No. 3, but 18 inches and

¹Galena, lead sulphide, as is well known, is often found in the mounds, and when thus found is usually coated with the white, lead carbonate. Lead carbonate is the white lead of commerce. The aborigines did not possess the chemical knowledge to make this carbonate from lead, but some of them scraped the carbonate deposit from galena for use as paint. Lumps of galena were found by us in the mounds and cemeteries of the great site at Moundville, Ala., where also numerous ceremonial palettes of stone, smeared over with the white, carbonate paint, were recovered.

The mass of galena found in the mound at Gahagan differs from the masses of this material hitherto met with by us in that it is lighter in weight and much more friable. It seemed to us, from its appearance, that the mass had been pulverized rather than having been a solid lump, when left in the mound. The mass was submitted to Doctor Keller, who reported upon it as follows: "The material from Burial Number 2, Gahagan, La., consists chiefly of carbonate of lead. It was undoubtedly formed by gradual oxidation from galena, of which particles are still contained in it. I have endeavored to ascertain whether this material was originally in the form of powder or massive, but I confess that I am unable to arrive at a definite conclusion as to this. On the one hand I have seen such earthy nodules of cerusite with streaks of unaltered galena in them, and, on the other, I find on removing the carbonate with acetic acid that the remaining galena is in very fine particles. The external shape of the lump is not unlike that of nodules of natural earthy cerusite. There is considerable silicious matter admixed to the lead compound."

If this mass consisted of powdered galena, probably held together by grease, it was doubtless used by the natives as a cosmetic, as it is used today by natives of Nigeria and farther north. See J. D. Falconer, "On Horseback Through Nigeria," pp. 67 and 116.

more from it, extended various deposits in a line. At the northern corner, together, were Vessel No. 1 and a pipe of earthenware.

This unique pipe, 5.5 inches in height (Figs. 13, 14, 15, 16), consists of a human figure seated on the lower limbs which extend parallel beneath, the feet turned inward. The figure is not turned toward the outside world as figures on



FIG. 13.—Pipe of earthenware, with interior passage between the bowl and the mouth of the figure. Gahagan, La. (Height 5.5 inches.)



FIG. 14.—Earthenware pipe. Side view.

the pipes of the white man invariably are, but faces the smoker, as aboriginal pipes sometimes were constructed, the mind of the savage apparently possessing a smaller share of altruism (or an inferior measure of vanity, shall we say?) than that of civilized man.

The figure is represented as holding, not a simple pipe-bowl (as figures of this kind in connection with aboriginal pipes usually do, the orifice for the stem being in the figure), but a regular biconical pipe complete.



FIG. 15.—Earthenware pipe. Back view.

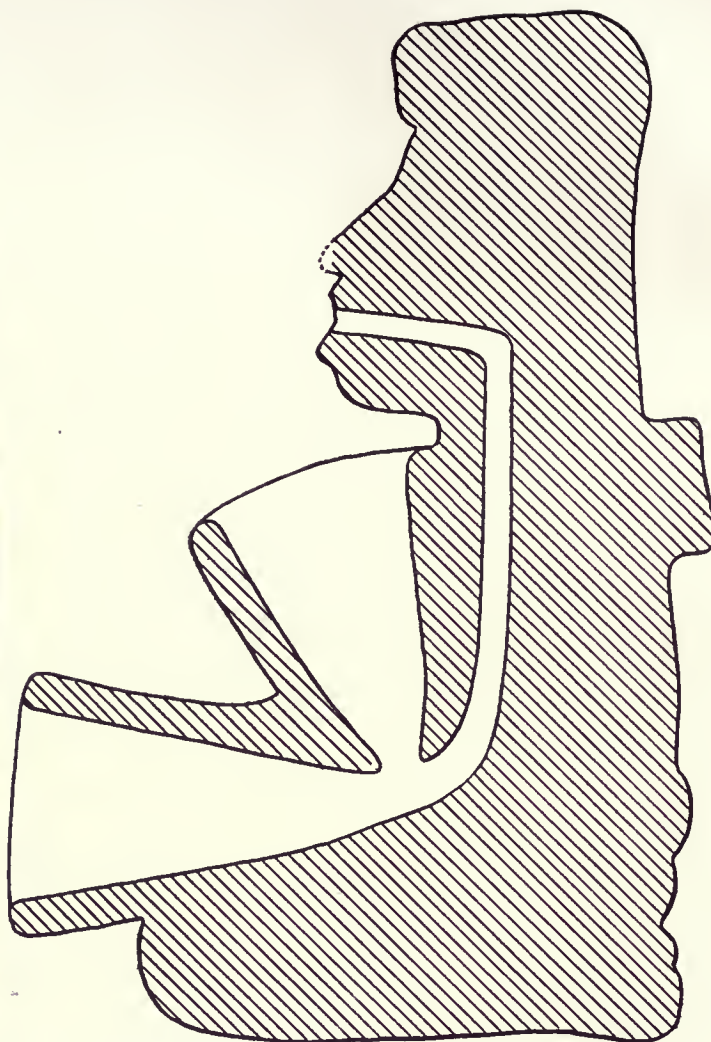


FIG. 17.—Earthenware pipe. Vertical section, showing passageway between the bowl of the pipe and the mouth of the image. (Full size.)



FIG. 16.—Earthenware pipe. View of base.

We now come to the most striking feature of all. Connected with the base of the pipe-bowl is a passageway ascending through the body of the figure, as shown in the diagram (Fig. 17), and ending at the mouth, which is open, in a way that smoke can be made to emerge from the mouth when the pipe is in use. This feature we believe to be hitherto unreported in connection with aboriginal pipes.

Dr. J. Walter Fewkes writes as to this pipe as follows:

"I do not recall ever having seen an aboriginal pipe constructed in the way you describe, but I can readily see how it is possible to combine a 'cloud blower' and a



FIG. 18.—Selection of flints from Deposit No. 1. Gahagan, La. (Full size.)



FIG. 19.—Selection of flints from Deposit No. 2. Gahagan, La. (Full size.)

pipe in such a way that smoke could be blown on sacred objects at the same time the priest smokes.

"Some tubular pipes are used by the Hopi as cloud blowers, smoke being blown through them as I have described in my account of the 'Snake Ceremonial at Walpi' (Journ. Amer. Eth. and Arch., Vol. IV, p. 32), in others smoke is sucked into the mouth. Combine both and change form, and you have your pipe."

We now return to the deposit. Somewhat farther along was a deposit of twenty-eight points and blades of flint, one gracefully curved for use as a knife, ranging in length between 4.1 and 8 inches. This deposit, which was 8 inches in height, included but two points or blades not directed the same way. One of these was reversed; the other lay transversely across one end of the pile. A selection from these flints is shown in Fig. 18.

Parallel with the deposit of flints and placed between some of them were a number of bone pins (at least seven) very badly decayed and broken, and one flat implement of bone.

Also with the flints were thirteen small chips of the same material, and Vessel No. 2, in fragments, as were all vessels from this place, lay against the wall nearby.

Still farther along was another deposit of flints, also consisting of twenty-eight blades and lance-points, ranging in length between 3.9 inches and 8.9 inches. Three selected specimens from this deposit are shown in Fig. 19. With this deposit were part of a large blade, and two well-made arrowheads of flint, with triangular blades. The deposit lay in a pile with no uniformity as to direction of the points. With it also were: twenty-three chips, all of black flint, somewhat irregular in shape, none more than 1.1 inch in maximum diameter; a large number of badly-decayed, bone pins, crushed together; a sandstone hone for sharpening points by longitudinal application and having at one end a semi-circular notch, perhaps for the smoothing of shafts of arrows (Fig. 20); a number of bone implements decayed past preservation; a beautiful little chisel of shale, 4 inches in length; red pigment; a small sandstone hone and part of another.



FIG. 20.—Hone of sandstone. Gabagan, La. (Full size.)



FIG. 21.—Deposit No. 3. Flints. Gahagan, La. (Full size.)

Partly surrounded by the flint deposit was Vessel No. 3, a bottle.

The final deposit along the wall consisted of six points of flint between 2.75 inches and 5.75 inches in length and having no uniformity of direction as to the points (Fig. 21).

As we have said, Gahagan (see map) is much farther up on Red river than are the other Louisiana sites in which pottery was met with by us. The earthenware from Gahagan is of very different quality from that found by us in sites farther down the river, that from Gahagan being hard, black, and with a surface having considerable polish, which readily lent itself to incised decoration.

As noted, but three vessels came from the interesting mound at Gahagan, but all three are distinctive of the place, bearing decoration, profuse in two instances, consisting of series of extremely fine, parallel lines, very closely placed, in combination with spaces partly cut through the ware. Red pigment has been in the lines and in the excised spaces.

Vessel No. 1. A graceful vase with flat bottom, the body first expanding and then constricted toward the rim. The decoration is made up of series of diagonal and circular lines in connection with spaces of the kind already described (Fig. 22).

Vessel No. 2. A wide-mouthed bottle with flat base, undecorated as to the body, but having around the neck a series of lines, some diagonal, some vertical, in connection with the excised spaces found on the pottery from this place. Height, 5.1 inches.

Vessel No. 3. A bottle, with tapering neck and base almost flat (Fig. 23), having by way of decoration designs similar to those described as on Vessel No. 1.

Various holes sunk by us from the bottom of the grave and in parts of the peak outside the grave came upon the dark layer which we have described as marking the surface before the mound was built. Trial-holes in the shallow parts of the mound came upon it also, consequently, so far as our knowledge extends, no pit below the base of the mound is present; but to determine this matter definitely and to learn if any other burials are in the mound, its demolition would be necessary.



FIG. 22.—Vessel No. 1. Gahagan, La. (Height 4.9 inches.)



FIG. 23.—Vessel No. 3. Gahagan, La. (Height 9 inches.)

MOUND NEAR TAYLORTOWN, BOSSIER PARISH, LA.

About one mile NNW. from Taylortown, on property of Mr. A. J. Hall residing there, on the edge of a field bordering Flat river,¹ is a mound of alluvial soil, 3 feet high and 43 feet in diameter of base. These dimensions of the mound as it appeared at the time of our visit do not, however, convey an exact idea of the former size of the mound, inasmuch as the river, in time of flood, has left a considerable deposit around the mound, thus lessening its height by about one foot, as shown by measurements made by us which reached gray soil, indicating the original surface of the ground, at a depth of about 4 feet below the top of the mound, and a road made through part of the mound has, to some extent, lessened its diameter.

An excavation, central in the mound, approximately 5 feet in diameter and 3 feet in depth at the time of our visit, had been dug by seekers after treasure. We were informed by our agent that at the time of his visit to the mound in his preliminary search, fragments of human bones lay on the surface, near this excavation.

Thirteen large trial-holes were sunk by us into the mound proper and into the level ground traversed by the road to which we have referred. Thirteen burials were encountered, remains being found in most of the holes.

With the exception of one burial 10 inches down, none was encountered at a depth less than somewhat more than 3 feet, while most of the burials were from 4 to 5 feet down and one was a trifle in excess of 5 feet in depth. Hence it will be noted that some of the burials were below the original surface of the ground.

The thirteen burials, none of which was in a condition to save, were of the following kinds:

Skeletons partly flexed on the right side, 5

Skeletons partly flexed on the left side, 3

Bunched burials associated with cremated human remains, 4

Bunched burial without cremated human remains, 1

The calcined fragments of human bones with the bunched burials sometimes were in a small deposit with the unburnt bones of the burial, and sometimes lay scattered throughout the burial.

Of the five bunched burials, one was without a cranium, while the others had two, four, seven, and thirteen, respectively. These crania were in no case recovered entire.

Artifacts found in this mound were dishearteningly few, and nothing was met with in the soil apart from human remains, not even a sherd.

With Burial No. 1, which was 10 inches from the surface, and consisted of a few unburnt bones without a skull, was an undecorated pot 5 inches in diameter and about 3 inches in height.

Burial No. 3, which was bunched, with seven skulls and cremated remains, had in association a bone of a deer, badly broken, having the articular part removed at

¹ We are informed that this "old river" leaves Red river at one place and joins it at another. Doubtless Flat river at one time was part of Red river, and probably then the mound in question stood on its bank.

one end and partly cut away somewhat obliquely at the other end. With this were fragments of at least two slender bone implements and the penis-bone of a raccoon, from which the distal end is broken.

A human lower jaw from this mound, presented by us to the Army Medical Museum, Washington, D. C. (catalogue number 14,237), is pronounced by the authorities of the museum to show *osteitis deformans*.

The area surrounding the mound is covered by alluvial deposit to an extent practically precluding all chance of discovering aboriginal cemeteries, if any are present.

MOUND AT SUNNY POINT, BOSSIER PARISH, LA.

This quadrangular mound, about one-quarter mile from the river, on Sunny Point, is about 6 feet in height at the present time, though it is apparent that a deposit of mud from the river in times of overflow, has considerably lessened the original altitude. The basal diameters N. and S. and E. and W. are respectively 72 and 93 feet. The diameters of the summit-plateau, in the same directions, are 32 and 50 feet. This mound was covered with recent graves, and permission to dig into it was withheld.

MOUNDS NEAR PICKETT LANDING, CADDO PARISH, LA.

About two miles in a straight line westwardly from Pickett Landing is the plantation of Mr. H. L. Heilperin, of Shreveport, La., on which is a fine group of mounds. Near some of these are small ponds whence material for the mounds was taken.

These mounds, seven in all (not taking into account several insignificant rises of the ground), form an irregular ellipse, two mounds facing each other ESE. and WNW. at a distance of about 615 yards. The transverse diameter of the ellipse is 150 yards. On the southern side of the ellipse are two mounds, the remaining three being on the northern side.

These mounds, all but one of which have houses upon them, range between 2 and 15 feet in height. All probably have been quadrilateral, with flat tops, though all but two have been worn and washed by rain to an extent that makes the determination of their original shape almost impossible.

The westernmost mound, which forms one extremity of the ellipse, is fairly symmetrical, square, with diameter of base somewhat more than 150 feet and with a perfectly flat summit-plateau about 70 feet in diameter. Its sides do not face the cardinal points, one being opposite to NNE.

The other of the two most symmetrical mounds of this group lies east-south-eastwardly from the one just described and has no intervening mound. It is quadrangular, with a flat summit-plateau, and has basal diameters (similar in direction to those of the other mound) NNE. and SSW. 160 feet, and WNW. and ESE. 220 feet. The summit-plateau in corresponding directions is 90 feet and 145 feet. The height of this mound is a trifle more than 15 feet.

There seems to be no history of discovery of bones or of artifacts at this place, and with the exception of a few sherds, probably exposed by wash of rain on the surface of the largest mound, nothing was found by us either superficially on the plantation or in numerous trial-holes put down in the summit-plateaus of the two largest mounds and in two smaller mounds, on all four of which dark soil indicated former aboriginal abode.

Dwelling-site material, probably indicating the presence of cemeteries at this place, no doubt lies beneath layers of deposit from periods of overflow.

In some of the mounds of this important site probably interesting burials might be found did not the presence of buildings upon the mounds make a careful investigation impossible.

MOUND ON CEDAR BLUFF PLANTATION, CADDO PARISH, LA.

Cedar Bluff Plantation is the property of Mr. J. S. Swann, whose residence is on Cedar Bluff immediately across the river and opposite the plantation.

About one-quarter mile in a northwesterly direction from Cedar Bluff Plantation Landing, in full view from the levee as it was at the time of our visit, was a mound of sand, 4.5 feet in height, having a very irregularly circular outline, due probably to tillage. Its basal diameter is 73 feet.

Eight trial-holes came upon a layer of dark sand, having a maximum thickness of 3 inches. This layer was 3.5 feet below the highest parts of the mound and proportionately less under more marginal parts. In places in the layer was midden debris, including fragments of shells, parts of bones of lower animals, and several fragments of pottery, two of them of excellent ware, having decoration conferred with a fine point but somewhat lacking in regularity. No burials or artifacts other than pottery were encountered.

MOUND ON THE THOMPSON PLACE, CADDO PARISH, LA.

On the plantation of Mr. A. R. Thompson, who resides on it, is a mound slightly more than 7 feet in height, about three-quarters of a mile W. by N. from the landing. This mound, which has been quadrangular, has been under cultivation, so that the corners are somewhat rounded. Its sides almost exactly face the cardinal points. The basal diameter N. and S. is 105 feet; the minor diameter, 72 feet. The diameters of the summit-plateau are 53 feet and 20 feet respectively.

Eight trial-holes sunk into this mound, the soil of which was dark and had a promising appearance, soon penetrated sand of a raw, yellow shade, in which was found no indication of the presence of burials. The surrounding area showed no sign of having served as a place of abode in aboriginal times.

MOUNDS NEAR BYRAM FERRY, BOSSIER PARISH, LA.

About one mile ESE. from Byram Ferry, in woods belonging to Mr. A. L. Byram, who resides some distance back in the hills, are two mounds within a few yards of each other.

The larger of these mounds, somewhat less than 9 feet in height, is oblong, with rounded corners. Its sides practically face the cardinal points; its diameter of base, N. and S., is 132 feet. The diameter of the summit-plateau in the same direction is 80 feet. The minor basal diameter is 98 feet, about 50 feet of which is covered by the summit-plateau, which is not flat but has an upward slope from south to north.

Trial-holes put down from the plateau of this mound showed the northern part of it to be of clay superficially, which being dug through gave place to fine sand. Excavations in the southern part of the mound were in sand from the beginning.

No bones, human or animal, were found, and no artifacts, fragmentary or entire, were met with in the digging.

The smaller mound, of sand, 4 feet in height, had a circular outline of base with a diameter of about 75 feet. The summit-plateau was 35 feet in diameter.

In this mound trial-holes were put down and in addition a central excavation 18 feet square. A layer of dark material, about 6 inches thick, was encountered 4 feet 10 inches from the surface. This layer evidently marked the original surface of the ground. It was without break of any kind, and it was evident that no pits extended below it. Nothing was found in the digging except one rude arrowhead of flint.

We now come to sites along Red river in Arkansas.

MOUND NEAR HIGHTOWER LANDING, LAFAYETTE COUNTY, ARKANSAS.

About one mile NNE. from Hightower Landing, in woods, is a mound about 4.5 feet in height, oblong, with rounded corners. Its sides face the cardinal points; its diameter N. and S. is 78 feet, and 57 feet E. and W. The summit-plateau, in the same directions, respectively, is 58 feet and 40 feet.

No bone or artifact of any kind was found by us in this mound, which proved to be of sand with a slight admixture of clay.

MOUND NEAR DIGGS BLUFF LANDING, MILLER COUNTY, ARK.

Diggs Bluff Landing is a short distance below Diggs Bluff, which is the end of low hills there approaching the river.

About one-half mile ESE. from the landing, in a cultivated field forming part of a plantation belonging to Mr. C. L. Bailey, of Doddridge, Ark., is a mound which, in the past, has been under cultivation. Owing to this, probably, its present shape is decidedly irregular, though seemingly the mound has been quadrangular with a considerable plateau. The basal diameters are 196 feet and 106 feet, the plateau having diameters of 138 feet and 62 feet. The mound is 6.5 feet in height.

Sixteen trial-holes put down from the summit-plateau showed the mound to be almost exclusively of sand. No bones, midden debris, or sign of grave were encountered.

MOUND NEAR SULPHUR RIVER, MILLER COUNTY, ARK.

In swamp, dry at the time of our visit, is a mound which may be reached by going about one mile up Sulphur river, a tributary of Red river, when the mound will be found 100 yards north of Sulphur river and an equal distance west of a bayou tributary to it. This mound, 6 feet in height, originally quadrilateral with a summit-plateau, has lost much of its symmetry through trampling of cattle and wash of water. Its basal diameter ENE. and WSW. is 126 feet, and 116 feet NNW. and SSE. The corresponding diameters of the summit-plateau are 82 feet and 67 feet.

Investigation showed the mound to be a mixture of sand and clay. No evidence of use for burial purposes was observable.

MOUNDS ON THE HALEY PLACE, MILLER COUNTY, ARK.

The Haley Place, well known some distance along the river for its aboriginal mounds, is the joint property of Mr. T. G. Batte, living nearby, and of the Merchants and Planters Bank of Texarkana, Ark.

The Haley Place in part borders Red river, but its upper portion is shut off from the river by another property. In this upper part of the Haley place is a short segment of a former course of the river, now closed at each end, known as Haley Lake.

Near this "lake" is what remains of a mound after continued wear and wash. Upon it is a frame building. Farther back, but in full view from the "lake," to which one of its shorter sides is about parallel, is a mound which has been quadrangular, no doubt, but whose sides and corners have been considerably worn by trampling of cattle and by wash of water. This mound, slightly more than 17 feet in height, has a basal diameter E. by S. and W. by N. of 160 feet, and of 120 feet S. by W. and N. by E. The summit-plateau is 105 feet and 90 feet in the same directions respectively. It is not level. In the western part a slope upward begins, and continues for 18 feet until a height of 3.5 feet above the eastern end of the plateau is reached. Level ground then continues to the western end of the plateau. These 3.5 feet are included in the total height of the mound as given by us. In sight from the mound is a considerable depression whence material for its building was taken.

Trial-holes in this mound soon came to raw-looking sand, while other holes reached the sand after passing through several feet of dark soil.

Presumably this mound was the one used as a place of abode by the chief of the aborigines who occupied this site.

About 60 yards in a northwesterly direction from the domiciliary mound is another whose sides have been subject to considerable wash from rain, and probably, as to their lower parts, from the river in flood time. Our measurement, taken from the surrounding level, determined the height of this mound to be slightly in

excess of 11 feet. It is 78 feet across its irregularly circular base; its summit-plateau, also circular, is 32 feet in diameter. This mound had the appearance of having been erected for some purpose other than domiciliary. About centrally in the summit-plateau an excavation was made having dimensions as follows: 12 feet at the northern end, 15 feet at the southern end, 16 feet at the eastern and western sides, which extended about N. and S. The excavation was carried to a depth of 10 feet 10 inches, where it came upon a layer of soil 8 inches in depth, approximately. This layer was black and had every appearance of having been the surface of the ground prior to the building of the mound. Evidence of disturbance found in this layer led to the discovery of a remarkable, central pit under the mound, which will be described in due course.

In addition to the excavation referred to and to the complete investigation of the great pit, shafts were cut from the sides of the excavation into the remainder of that part of the mound which lay beneath the summit-plateau, and these shafts, in some cases, came upon pits running down to graves, some in the mound proper, and some below it, all of which were carefully explored.

The mound was composed of a mixture of clay and sand, the clay largely predominating. The material varied considerably in color and many local layers were present. Altogether the mound was an ideal one for the discovery and delimitation of pits, which often are difficult to determine in mounds of homogeneous material.

Incidentally it may be said that after excavating the upper 2.5 to 3 feet, where the earth was moist and fairly soft, the digging was through material so dry and hard that picks were needed throughout and the work was slow and difficult. The entire excavation was filled at the close of our work, leaving the mound as useful a place of refuge as we found it.

BURIAL NUMBER 1.

At the NE. corner of the excavation (see plan, Fig. 24), at a depth of 6 feet 4 inches to the upper part of the burial, was the skeleton of an adult, extended on the back. The skull, whose direction, had it been present, would have been N. by E., was missing. This burial, doubtless like all the others in the mound or below it, lay at the bottom of a pit, but as the burial was in the main excavation and was dug down upon by those engaged in the general digging, it was found before the limits of the pit were recognized.

At the right shoulder were two bottles in fragments. Over the right elbow was a shell drinking-cup, much decayed and badly broken. Outside the right elbow and the right forearm respectively, were two pipes of earthenware, in fragments, from which mouth-pieces were absent. These pipes, which lay in line, the stems directed toward where the skull would have been, are of an interesting type, to which belong all the numerous earthenware pipes found in this mound, with one exception. As this type will be fully described and figured later in this account, it will suffice to say here that the bowl and stem are one piece, and that the length ranges between 5.5 inches and 22.6 inches.

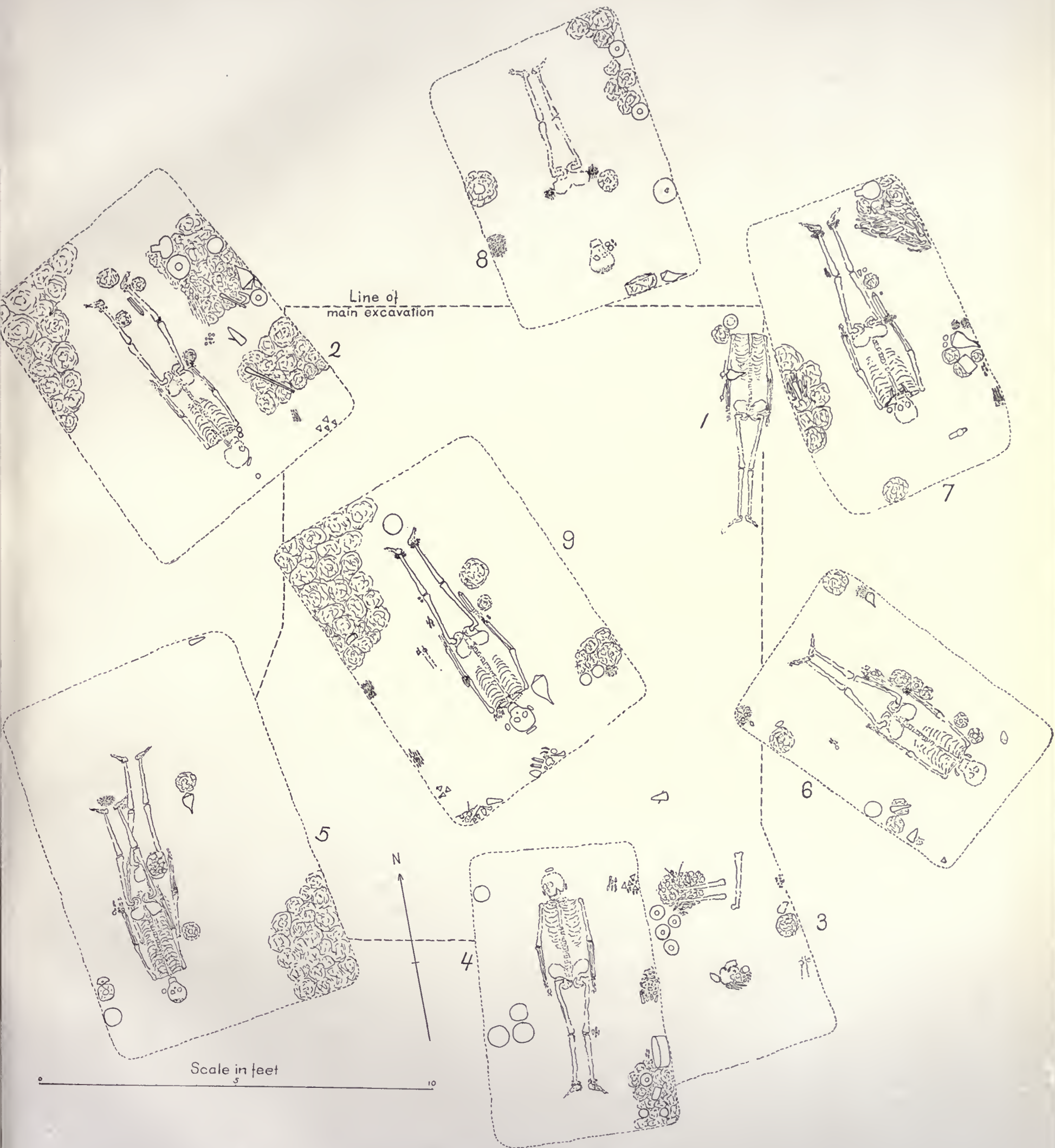


FIG. 24.—Plan showing burials. Mound at Haley Place, Ark.

With decaying fragments of ribs (all the bones of this skeleton were in bad condition) was a small arrowhead of flint, somewhat broken.

BURIAL NUMBER 2.

Near the NW. corner of the main excavation a pit was encountered. It was not possible to determine exactly where this pit began, since, as we have said, the soil of the upper few feet of the mound was moist and soft and had a homogeneous appearance. Not far below this material, however, the pit was clearly defined, the sides of it enclosing a broken, mixed, and granular material readily distinguishable in the digging. The downward course of the pit, moreover, was apparent where it cut through local layers in the mound, and was darker and more variegated.

The pit continued down, cutting through the 8 inches of the dark layer marking the base of the mound, and extending 2 feet 8 inches farther, so that, if it began at the surface, as no doubt it did, it had a depth of about 14 feet—a depth, we believe, previously unheard of in connection with aboriginal graves. From the line of the base down to where the pit ended, it ran through red clay, which, to a certain depth, was the underlying soil of the field. With this red clay the mottled material filling the grave-pit was in still more marked contrast than it was with the mixture of sand and clay composing the mound, so that the graves extending below the base of the mound were almost as readily distinguishable, in that part, as they would have been if they had been walled around with brick.

The pit at the base was almost oblong—about 8 feet in length, 5 feet 10 inches at one end and 6 feet 6 inches at the other end—as may be seen by the plan which was drawn to scale on the spot.

About centrally on the base lay, extended on the back, a skeleton of an adult, probably a male, the head directed SE. by S., the face turned to the right side. The bones were decayed and crushed. About 6 inches from the skull lay an imperforate, undecorated shell disk about 1.25 inch in diameter.

Near the forehead, parallel with the body, was a bead of shell, almost tubular, 3.75 inches in length, .6 inch in diameter.

At the neck were twenty-one pearls, from .12 to .4 inch in diameter, perforated for use as beads. With these was an imitation of a canine tooth of a large carnivore, wrought in shell, perforated for suspension, which probably had served as a pendant with the pearls.

Between the right shoulder and the face lay two shell disks, both undecorated and imperforate, each about 2 inches in diameter.

At the right wrist were seven shell beads, globular and each about .75 inch in diameter. Near these was a pottery vessel crushed to fragments.

At the inner side of the right tibia and parallel with it lay a handsome quartz crystal, about 7 inches in length and 1.5 inch in maximum diameter, the point of the crystal toward the knee of the skeleton.

At the right ankle were nine beads of shell, each about .6 inch in diameter. Near these lay a water-bottle, badly crushed.

At the inner side of the left leg was a small earthenware vessel, and at the left ankle were nine shell beads averaging about the same in size as do other shell beads found with this skeleton. A bowl much broken lay at the feet.

In addition to these various objects placed immediately with the skeleton, an interesting mortuary deposit had been arranged in the pit. Placed vertically near the eastern corner of the grave were four earthenware pipes, the bowls downward. These pipes, of the type to which reference has been made, included two somewhat incomplete, they either having been put into the mound with parts missing, or parts of them had been thrown back and lost by our diggers who came upon them unexpectedly. One of the other two pipes, which were entire, was 22 inches in length. This deposit was not upon the base of the pit, the bowls of the pipes having been placed some distance above it, the stems projecting upward. The bowl farthest down (the bowls were not on the same plane) was 7 inches above the base.

A little farther in and a few inches above the base of the pit were ten arrowpoints of flint. On the base, to the right of the skeleton, but a short distance from it, and extending to the

margin of the grave, was a layer of crushed pottery vessels on which lay a beautiful ceremonial axe of slate, with flaring blade, 14.7 inches in length (Fig. 25).

Adhering to some of the pottery fragments was a small amount of red oxide of iron, powdered for use as pigment, and a quantity of purple material respecting which Doctor Keller reports as follows:

"The 'purple pigment from Haley mound, Burial No. 2,' consists of oxide of iron, silicious matter, and carbonate of lime. The peculiar purplish red-brown color suggests that of burnt sienna, and is very similar to that which the red iron pigments assume on ignition. I cannot find any other coloring matter than oxide of iron in this material, and believe that it must have been strongly heated." This treatment by heat presumably was intentionally done to obtain the purple color, as we also have occasion to state in our description of pigment of this kind, found with Burial No. 9 in the great pit.

Below the pottery were ornaments of shell, including three disks, imposed on which were bosses of sheet-copper, badly decayed.

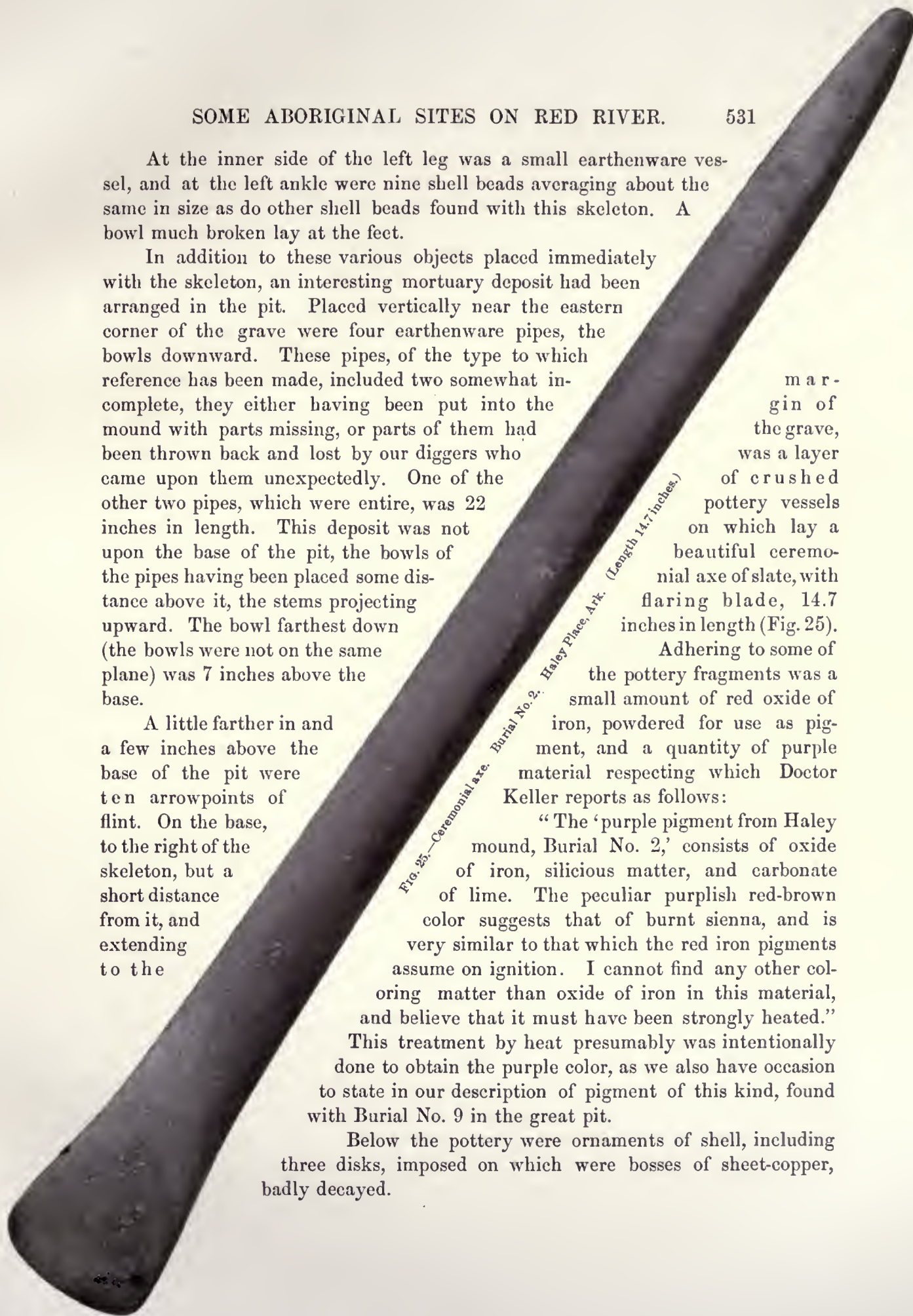


FIG. 25.—Ceremonial axe. Burial No. 2. Haley Place, Ark. (Length 14.7 inches.)

On a space intervening between the layer of earthenware we have described and a somewhat similar one farther along on the right-hand¹ side of the grave, lay a handsome celt of basanite, 6.8 inches in length, beneath which was part of the stem of an earthenware pipe. Near the celt were several small objects of shell. These objects—small disks, small oblong sections of shell, triangles, etc.—were numerous found in this mound. As a rule they are imperforate and without decoration. A few, however, have holes in them. On some are traces of asphalt, showing them to have been fastened to other objects. We believe them to have belonged to head-ornaments and perhaps to ornaments otherwise worn.

On the second deposit of pottery to which we have referred, which was mostly crushed but included several entire vessels, near the right hand of the skeleton, were five earthenware pipes, all broken and some crushed to fragments. Two of these pipes, the broken parts cemented together, are 22.25 and 22.6 inches in length respectively.

On this pottery deposit also lay a chisel-shaped ceremonial axe of slate, 9.1 inches in length. A drinking-cup wrought from a conch-shell (*Fulgur perversum*), whose excellent state of preservation made us regret the entire absence of incised decoration upon it, was at the edge of the pottery deposit, as was a large mussel-shell (*Unio*) in fragments.

On the base, among the pottery, resting against a water-bottle of a kind unusual in the region and probably brought from Missouri (Plate XXXVII), lay a human lower jaw having an end of the ceremonial axe we have referred to lying upon it. This jaw, which is in an excellent state of preservation, far better than were the bones of the skeleton, had no connection anatomically with the skeleton, which had a mandible in place. The detached jaw bears numerous scratches and marks of scraping, which seemingly indicate that the flesh was removed from the jaw with the aid of some instrument preparatory to preservation. The mandible, moreover, is smooth, even almost polished in places as if it had been in possession of its secondary owner for a considerable period of time. Its excellent state of preservation calls to mind that of many bone tools which have thoroughly hardened before inhumation, and whose state of preservation usually excels that of the skeleton with which the tools are found. This human jaw was evidently a valued possession of the occupant of the grave, when alive, and, found under these conditions, it opens a wide field for speculation.

Beneath the pottery deposit were a number of fragments of sandstone, several seemingly intentionally shaped, one being in the form of a rudely-fashioned, six-pointed star. One bit of sandstone in the lot was grooved by sharpening of pointed implements, as was a small flat mass of ferruginous sandstone that lay with it.

Filling the western corner of the base of the pit was a layer of pottery vessels, badly crushed, fragments mingled together in almost inextricable confusion. These vessels had been piled one upon another to form a great deposit, and when the pit

¹ By this we do not mean the right-hand side of the observer as he stands facing the grave, but the side to the right of the skeleton as it lay. We shall employ the terms right- and left-hand in this sense throughout our descriptions of graves.

was filled no doubt were broken to some extent and were ground to pieces when the mass of earth above them commenced to settle. Among these were many cooking vessels, some large, one of which is shown in Plate XXXIX. Also with these vessels was a huge bottle, similar to others from the Haley Place, 17.7 inches in height, the neck, however, being only 3.5 inches high.

The ten arrowpoints noted as present with this burial are of black flint, slender, and each about 1.5 inch in length. They lay parallel in a little heap, their points in one direction—at least in all probability they did so, though determination as to all was not possible, as one or two were disarranged by a blow from a pick, which also caused the loss of a considerable part of one of the arrowheads. An interesting feature connected with these little points is that the shanks of seven of them have small projections on two opposite sides. Of the remaining three arrowheads one is without the projections, one was interred with the shank broken, and one is that described as having been broken by the pick. A selection from this deposit is shown in Fig. 26.



FIG. 26.—Arrowheads of flint. Haley Place, Ark. (Full size.)

The two interesting, chisel-shaped, ceremonial axes found with this burial are of a rare class which we have figured and described¹ before and notably as coming from a mound on White river, Ark. Axes of this shape are sometimes found showing plainly the mark left by the grip of the handle. This mark is about two-thirds back from the cutting edge and shows the object to have been helved like an axe and not hafted like a chisel. The two specimens found with Burial No. 2 in this mound show no mark of rough usage and unquestionably were designed for ceremonial use.

BURIAL NUMBER 3.

The pit containing Burial No. 3 was 7.5 feet deep, if dug from the surface, as presumably it had been. Its limits were not exactly defined by us, it having been cut into by another grave.

The burial consisted of a skull, and then, at some distance from it, a femur out of position, two tibiae, and fibulae and full complement of foot bones, all correctly

¹ "Antiquities of the St. Francis, White, and Black rivers, Arkansas," p. 345. Journ. Acad. Nat. Sci. of Phila., Vol. XIV.

placed. The distance between the skull, which was that of an adult, and the heads of the tibiae, was but 2 feet 7 inches, a distance insufficient for the intervening bones in order if the burial originally was extended. Presumably there had been



some disturbance of the skeleton, though we did not succeed in tracing its cause with certainty, as the grave-pit which we have described as cutting into that of Burial No. 3, did not directly interfere with the skeleton. However, if the grave of the interfering burial (No. 4) was dug soon after that of No. 3 had been filled, it is possible that loose soil filling the pit of Burial No. 3 may have caved out with some of the bones of that burial. If this happened (and we are by no means convinced that it did) the diggers of the grave of Burial No. 4 must have returned a pottery deposit to its place and also the bones of the legs and feet without disturbing their connection by ligaments.

Across the forehead of the cranium of Burial No. 3 were a number of implements of bone, with the articular parts remaining. These implements were badly decayed.

To the right of the forehead lay a small sandstone hone.

To the right of the skull were two disks of shell, undecorated and imperforate, each about 2.5 inches in diameter, and six small ornaments of the class so often found in this mound, cut from the body whorl of marine univalves, oblong and of kindred shapes, imperforate and undecorated, from 1 to 3 inches in length.

To the left of the cranium lay a large mussel-shell (*Unio*) in fragments.

Back of the skull were the remains of an object of bone, which probably had been a hair-pin (Fig. 27).

At the feet was a confusion of crushed pottery vessels, an earthenware pipe, and part of another pipe in fragments.

Somewhat farther along were four unbroken vessels.

Near the left foot was a pile of ten slender arrowpoints of flint, of different shapes, three serrated as to the lower parts of the blades. These projectile points were slightly disturbed in removal, but seemingly they lay parallel, with the points all in the same direction.

Two feet beyond the foot bones lay a handsome, flat hatchet of basanite, 5 inches in length, with the marks of the handle plainly apparent upon it. Under this hatchet was part of the stem belonging to a pipe in the pottery deposit already described.

Near the right-hand wall of the pit, about one foot from the femur, were ten

FIG. 27.—Bone pin. Haley Place, Ark. (Full size.)

shell beads, and a little farther along was a mussel-shell in fragments, near which was a vessel, badly crushed.

Still farther along the right-hand wall, continuing toward the head of the grave, were parts of two pipes in fragments, lying parallel, the bowls in the same direction. These pipes each had only about 6 inches of stem, the other parts being missing through breakage before interment, as was clearly apparent from the appearance of the broken surfaces. It is probable that pipes of the type found in this mound, having bowl and stem in one piece, the stems, in some cases, of considerable length, were not discarded when parts of the stems were broken off, but were continued in use by the owner and later were interred with him.

BURIAL NUMBER 4.

The beginning of the pit which contained Burial No. 4 was not apparent, though the pit evidently had its commencement well up in the mound. Presumably it started from the surface and, in this event, was 12.5 feet in depth, or one foot below the dark, basal layer of the mound. This grave-pit, of course, varied slightly in dimensions in its downward course. At the bottom where the burial lay, the side of the pit to the right of the skeleton was 7 feet 7 inches in length; and that to the left was 7 feet 3 inches. Across the end of the pit nearest the skull the distance was 4 feet 2 inches, and the opposite end was 4 feet 9 inches.

The skeleton, probably of a male, was of an adult advanced in years. It lay extended on the back, the head directed almost due N. The face was turned partly to the right. None of the bones was in condition to save.

At the skull of this burial was a long bead of shell similar to others found near skulls in this mound. Its exact position in respect to the head was not determined as the spade which came upon the burial disturbed the bead.

At each side of the skull, at the ear, was an ear-ornament consisting of a disk of shell to which, centrally on one side, a boss of sheet-copper had been attached. There is a perforation in the center of each disk to allow attachment to something (probably of a perishable nature, since it was not found) which went behind the lobe of the ear.

About one foot to the left of the skull were eight flint arrowheads whose position was somewhat disarranged in removal owing to the hardness of the soil in which they lay.

At the neck had been pearls perforated as beads, a few of which, badly decayed, were recovered in company with fragments of others.

Strangely enough, no mortuary deposits lay on the chest or near the arms and hands of this burial.

At the outer side of the left knee were four arrowheads of flint.

About 10 inches from the right knee was a group of three pottery vessels, all upright.

Nine shell beads were at the right ankle and eleven were at the left.

Away from the burial and near the wall of the grave were various deposits.

At the right-hand wall, 10 inches from the northern end (that nearest the head), was a pot standing upright. At the left-hand wall, one foot from the northern end, approximately, were four pipes of earthenware, placed vertically, bowls downward, and intact. These pipes range in length between 6.5 inches and 5.3 inches. With the pipes were five flint arrowheads, disturbed in removal.

Three feet six inches from the northern end, along the left side of the grave (in line with the pelvis of the skeleton), was a deposit made up as follows: several pebbles; fragments of a bone implement, badly decayed; a number of mussel-shells (*Unio anodontoïdes*); a bit of sandstone; two tines of deer antler, badly decayed; three arrowheads of rock-crystal, rather carelessly made; nineteen small fragments of quartz-crystal, some with sharp edges which could have been used for cutting; a small chisel of chipped flint; a celt of quartzite, 4 inches in length; a chisel of shale, 2.4 inches long.

Five feet down the left wall of the pit was a large vessel on its side, containing two oval ornaments of shell, each about one inch in length and perforated. Near this vessel was a deposit of four arrowheads of flint. This vessel was the outer limit of a deposit of pottery filling the left corner of the base of the grave, among which were several whole vessels and a number of other vessels crushed into small fragments, which were mingled together. This deposit seemed to have been heaped in, as one vessel at least was in the soil, 13 inches above the base of the pit.

Also some distance above the base of the grave, but not in the vicinity of the pottery deposit, were encountered separately a chisel made from a flint pebble, 2.4 inches in length, and an imperforate object of shell bordering on triangular, about an inch in length, flat on one side and convex on the other.

BURIAL NUMBER 5.

Burial No. 5 was a double interment. A skeleton, measuring 5 feet 3 inches as it lay, was extended on the back, the head directed S. by E. The skull, somewhat broken, was sent to the National Museum and is pronounced by Doctor Hrdlička to be that of a male.

Immediately under the thorax of this skeleton was the skull of another skeleton, crushed flat. The skeleton to which this skull belonged lay in part under the first skeleton.

The pit in which these skeletons lay could be traced to within about 4 feet from the surface and probably, like the others in the mound, it had been sunk from the summit-plateau.

From the summit of the mound to the base of the grave the distance was 14 feet 6 inches, or about 3 feet below the dark layer marking the base of the mound. The head of the grave was 6 feet 6 inches wide, and the opposite end was about the same. The two longer sides were nearly equal in length, each being about 9 feet 6 inches.

In every case of a single, complete burial found by us in this mound the skeleton lay about centrally on the base of the grave-pit, but in this instance the two skeletons had been placed well over toward the left-hand side of the pit, leaving unoccupied a considerable part of the grave, which seemingly was needlessly large.

On the skull of the upper skeleton were fragments of shell. These could not have belonged to a large bead of the kind found on some of the skulls in this mound as they were flat, and perhaps came from a mussel-shell broken by decay.

At the left side of the skull was a shell disk, covering part of which on one side were the remains of a boss of sheet-copper, evidently an ear-ornament, like others found at this place. The mate to this ornament was not discovered on the opposite side of the head, though probably it had been there and had disappeared through decay, as the one found was in a very friable condition.

About 15 inches to the left of the head was a bowl, in the bottom of which was a material found a number of times at this place and identified by Doctor Keller as being impure clay with brown organic matter.

About one foot to the left of the left shoulder was a bottle, badly broken but in part held together by the material in which it lay. Leaning against the lower part of this vessel was a fresh-water shell (*Unio plicatus*), centrally perforated for the insertion of a handle—a hoe.

At the right elbow was a bottle, crushed, as was nearly all the pottery with this burial. Near it was a minute fragment of sheet-copper. At the left wrist were two shell beads and parts of a badly decayed bone implement. The beads, which were of different sizes, were much affected by decay, and presumably other beads originally present with those found had disappeared.

At the right thigh lay fragments of an earthenware vessel, and beside the right ankle were small pebbles, evidently all that remained of a rattle. At the feet was a mass of gray material—impure clay.

In the right upper corner lay a large deposit of pottery—perhaps a dozen vessels, though this is hardly more than a guess—lying crushed into fragments in the hard clay. Vessels had been placed side by side and when crushed their parts had mingled. Examination of some of the larger fragments showed the vessels to be without decoration or, when possessing it, to have as a rule only a few rude, encircling lines around the upper parts. Three bottles unusually large were in the deposit. The remains of these, crushed into many scores of fragments and almost inextricably mingled, were preserved by us, but have not been put together as they are practically without decoration and present no novelty in form.¹ Much smaller vessels, incidentally it may be said, when thus broken and mingled, require many days of careful work to restore. With these vessels had been one containing impure clay with brown organic matter.

The pottery in this grave, which presumably was placed there for the burials in common, included a large cooking vessel which contained an arrowhead of flint (Fig. 28).

Above this pottery deposit, in the clay, together, were two flat objects of shell of elliptical outline and a triangular section of shell, with rounded apex, each about 2 inches in length. These objects are of the class which we have



FIG. 28.—Arrow-head of flint. Haley Place, Ark. (Full size.)

¹ A bottle similar to these, 17.7 inches in height, is described in connection with Burial No. 2.

described as probably being ornaments formerly attached to other objects that have disappeared.

To the right of the lower part of the burial, but not immediately with it, was a shell drinking-cup having a perforation through the beak and another near the opening, between the shoulder and the suture. Unfortunately, immediately across the opening of the cup, where a third perforation probably was, the shell has been broken by a blow of a pick. By the aid of three holes placed as described, the cup could hang horizontally. This cup, the usual *Fulgur perversum*, like others found in this mound, is neatly smoothed as to the outer surface, but bears no engraved decoration. Immediately beyond this shell lay an earthenware vessel in fragments.

In the right-hand lower corner of the grave, 13 inches above its base, however, lay a celt of silicious rock, 5 inches in length.

BURIAL NUMBER 6.

The pit in which Burial No. 6 lay was distinguishable downward from about 2 feet 5 inches below the surface, where it was lost in the moist ground. The grave, 13 feet below the summit-plateau, measured, where the burial lay, 6 feet 8 inches and 7 feet 2 inches as to the sides, and 4 feet 6 inches and 4 feet 9 inches as to the ends.

The skeleton, that of an adult and probably of a male, lay at full length on the back, the head pointing SE. The skull was badly crushed, and the other bones were in equally poor condition.

Near the right knee were five pipes—or at least five bowls and stems or parts of stems—in fragments. The stems of the pipes lay along the thigh, the bowls



FIG. 29.—Arrowheads of flint. Haley Place, Ark. (Full size.)

being toward the knee. These pipes formed the lower limit of a group of objects which continued in line up along the thigh in the following order: a kitchen pot; a bottle; a kitchen vessel. These vessels were crushed to bits, as were all from this grave, with one exception.

About one foot to the left of the middle of the left thigh, together, were four flint arrowheads of interesting shape (Fig. 29), and near these was a shell object, flat,

elliptical in outline, and about .75 inch in length, belonging to the class of objects we have described as probably being fastened to other objects worn as ornaments.

At the right wrist were thirteen discoidal beads of shell, each about .25 inch in diameter.

At the right humerus was a bottle, crushed, and another at the right shoulder.

At each side of the neck was an imitation in shell of a canine tooth of a carnivore, 2.25 inches in length, perforated for suspension.

One foot from the skull lay a mussel-shell in fragments.

In the left-hand upper corner of the grave was a pipe placed vertically. This pipe was struck several times by the spade of a digger who had been instructed to remove soil above where the troweling was in progress and who carried his work too near the plane on which mortuary objects were. It is possible that other pipes with this one were crushed and thrown back by the digger, as groups of pipes placed vertically were found at several points in this mound.

A little farther down the left wall was a mass of red pigment, determined by Doctor Keller to be red oxide of iron with some lime, and a flat celt of quartzite, 5.5 inches in length. The pigment and the celt lay abreast of the left shoulder.

Farther down the left-hand side was a ceremonial axe of slate, 7.5 inches in length (Fig. 30), with a handsome, flaring, cutting edge at one end and a cutting edge also at the opposite end, which marks the specimen as a variant (shown in section in Fig. 31). The mark of the handle is plainly visible, and shows that the ends of the axe projected before and behind. This axe had been placed upright against the wall, and was on a plane somewhat above the base of the grave.

In a group of which the axe formed part were three vessels, across the opening of one of which lay a celt of basanite, 4 inches long. This hatchet had been smeared with glauconite.



FIG. 30.—Ceremonial axe.
Haley Place, Ark.
(Length 7.5 inches.)



FIG. 31.—Ceremonial
axe, longitudinal section.
(Full size.)

Twenty-two inches from the lower end of the left-hand wall was a cooking-pot and a broken mussel-shell which probably, when whole, had served as a spoon.

In the left-hand lower corner was a mass of material identified by Doctor Keller as impure clay with brown organic matter, on which were two small, imperforate, flat, semicircular objects of shell, and a little beyond, a diamond-shaped object of shell, about 1.5 inch in length, having a perforation.

A bowl had been placed in an erect position in the right-hand lower corner of the grave, and a little farther along the right-hand wall was a mass of material similar to the one described, lying alongside of a bowl.

BURIAL NUMBER 7.

The pit containing this burial, like others in the mound, could be traced into the upper few feet. It extended through the dark basal layer below to a total depth of 15.5 feet, if we assume that it commenced at the surface of the summit-plateau.

The upper and lower ends of the grave were 4.5 feet and 4 feet 1 inch, respectively. The grave, however, widened somewhat in the middle, where it was about 5 feet across. The right-hand side of the grave was 7 feet 7 inches in length, and the opposite side, 7 feet 10 inches.

Burial No. 7 was the skeleton of a powerfully built adult in the prime of life, doubtless a male. The skeleton lay at full length on the back, the head directed S. by E. The skull was crushed and the other bones were in friable fragments.

At the left of the skull, one upon the other, were remnants of two shell disks, one having two perforations near the upper margin, the other having lost through decay the corresponding part where perforations might be expected. There were no objects on the opposite side of the head. As these disks are not perforated centrally, they can hardly have been ear-ornaments.

At the neck were fifteen pearls, some nearly .5 inch in diameter and all large. With these, about 3 inches apart, were two imitations in shell of canine teeth of large carnivores, each about 3 inches in length, perforated for suspension. These ornaments were on the upper part of the thorax and probably were pendants at each side of the string of pearls.

At the right wrist were seven beads of shell, each about one inch in diameter.

Parallel with the upper part of the right thigh, at the right side of the pelvis, and over the right hand, lay a quartz crystal about 8.5 inches in length and 2.25 inches in diameter. Near this was a small disk of shell, covering part of one side of which is a boss of wood, much decayed. The shell below the wood has a green stain as through infiltration of carbonate of copper.

At the outer side of the right femur, just above the knee, was a vessel in fragments, and near it were two curious little objects of shell, one about an inch in length, the other somewhat smaller, resembling flat pins with circular heads. With these, and probably having belonged on the head of one of them, was a minute boss of sheet-copper.

At the right knee was a neat little chisel wrought from a pebble of flint and,

near it, two imperforate disks of shell, each about 1.25 inch in diameter, lying one upon the other. Four slender arrowheads of flint, the points all directed the same way, lay in a little pile at the outer side of the left tibia, just below the knee.

At the right and at the left ankles were shell beads, each about one inch in diameter, ten at each ankle.

At the head-wall of the grave, one foot from the left-hand corner, lay a cooking vessel in fragments, and about two feet farther along and one foot from the wall was an earthenware pipe (Fig. 32), the only one of earthenware found in the mound differing in general shape from the pipes so abundantly met with in it.



FIG. 32.—Pipe of earthenware. Haley Place, Ark. (Length 6 inches.)

Along the right wall, beginning about one foot from the upper corner, was a considerable deposit of objects. First came sixteen flint arrowheads, three of which were disturbed in removal. The points of the remaining thirteen were in the same direction. A selection from these is shown in Fig. 33.

Next came a deposit of four arrowheads, disturbed in removal; then three pottery vessels, crushed to fragments, one of which had been additionally wrecked by the deposit above it of two large sandstone hones, deeply grooved.

Next in order lay a shell drinking-cup wrought from a conch (*Fulgur perversum*), neatly smoothed on the exterior surface, but differing from other shell cups found in this mound in that the protuberances which are present around the periphery, or shoulder of the conch, in this instance have not been ground away.

Near the cup lay two imperforate, elliptical objects of shell, each 2 inches by 1.65 inch. Curiously enough these objects show not the slightest trace of decay, though coming from a grave in which a number of other objects of shell were greatly deteriorated.

Next, side by side, were masses of bright red pigment and of what no doubt was used as a blue-black paint. These have been determined by Doctor Keller to be respectively oxide of iron, soft and uniform, and oxide of manganese (psilomelane), impure. With these was just a trace of decaying sheet-copper.

In one of the vessels of this deposit was a quantity of the material found in many vessels in the mound, consisting of impure clay mixed with brown organic matter.

Above all this deposit, and elsewhere throughout this grave, usually somewhat above other objects, were small ornaments of shell—disks, triangles (sometimes with rounded apices) and oblong sections, and objects of elliptical outline. These ornaments are almost without exception imperforate, though two small disks have central holes and several of the other ornaments have on them traces of bitumen, showing how they were fastened to other things of a perishable character, to which they belonged. It is possible that the small, flat, circular or elliptical objects of shell (which usually were found in pairs) may have served as eyes in masks of wood.

Five inches to the right of the right tibia and continuing to the wall on the right-hand side, where it extended down to the lower corner, was a deposit made

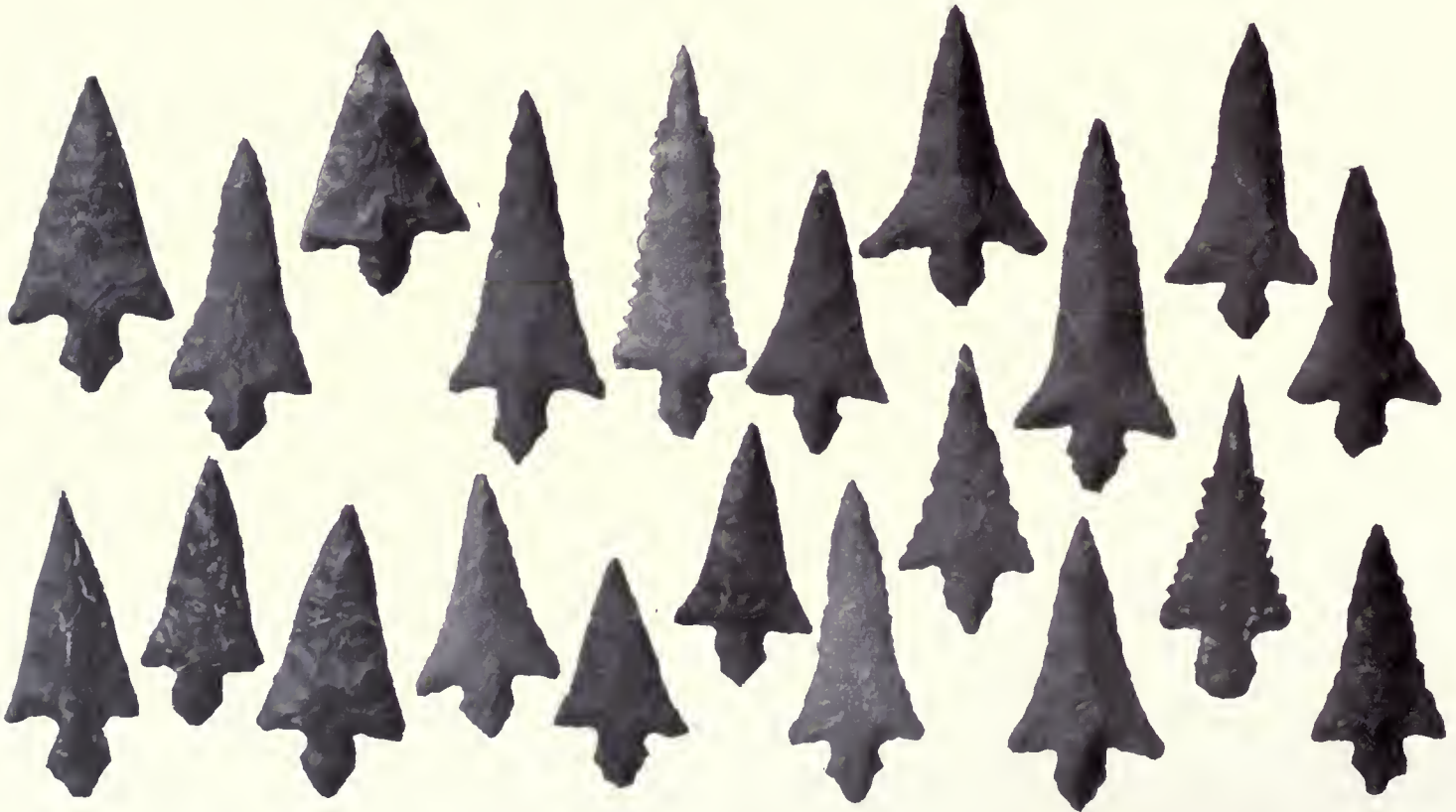


FIG. 33.—Arrowheads of flint. Haley Place, Ark. (Full size.)

up of a number of bones, badly decayed, evidently intended for the manufacture of piercing implements. With these lay a slender spearhead of flint, the point unfortunately missing, 5.75 inches in present length. A mussel-shell, badly broken, and five vessels, one of which was recovered almost entire, completed the deposit.

About midway along the left wall was a deposit containing several pottery ves-

sels, badly crushed, the fragments mingled. One of these vessels had contained another one, and in the inner vessel had been placed: a celt of porphyry, 6.5 inches long; a sandstone hone; two flint pebbles, one about the size and shape of a man's finger slightly bent; seven bone implements with rounded points, all badly decayed; a tine of deer antler.

In the soil a little above the base of the grave was the bowl of a pipe and a small part of the stem belonging to it, perhaps an accidental deposit.

BURIAL NUMBER 8.

Burial No. 8 lay at a depth of 8 feet 5 inches from the surface. The head-end of the grave was 4 feet 10 inches across, and the foot-end, 5 feet 2 inches. The right and left sides were respectively 7 feet 2 inches and 6 feet 9 inches in length.

The skeleton, that of an adult in the middle period of life, lay with the skull directed S. by E. Though badly crushed, the cranium showed little evidence of decay, the lower jaw being in excellent condition. Curiously enough, when we consider the state of the skull, the rest of the skeleton was badly decayed. No bones were present down to the pelvis with the exception of distal parts of the forearms, which perhaps, owed their preservation to the presence of shell beads and the consequent reinforcing infiltration of lime. The presence of the skeleton at the pelvis and below could be traced only by decaying fragments.

On top of the skull and across it, in a flat band, were many small marine shells (*Olivella mutica*), perforated for stringing. Doubtless these had formed a head-dress of some kind.

At the right of the head were two disks of shell, similar to those described as found with Burial No. 7. With the disks with this burial were a few very small shell beads and two small objects of shell, which perhaps were fastened to the disk to form some kind of ornament.

At the right forearm was a badly-crushed vessel.

Twenty-one and nineteen shell beads were at the right and left wrists respectively.

Along the head-wall, about 3 feet from the left-hand corner, lay a vessel in fragments, and a short distance farther was a shell drinking-cup, badly decayed.

Along the left wall, 2 feet from the left upper corner, was a mass of gray material, largely clay, and about one foot farther along was a bottle in many fragments.

Along the right wall, 2 feet from the right-hand upper corner, was a kitchen vessel badly broken, though held in shape by the soil. In this vessel, placed vertically, the bowl down, was a pipe of earthenware, having a part of the stem and the mouth-piece missing, from a break previous to the time of interment.

Slightly more than four feet from the right upper corner of the grave there began, along the right wall, a deposit of pottery including at least nine vessels, two of which are entire and are the only ones so found with this burial. This deposit of vessels extended to the right-hand lower corner.

No further burials were found in the body of this mound, though our exploratory excavations radiating from the main, central one practically covered that part of the mound which lay beneath the summit-plateau.

BURIAL NUMBER 9 (THE GREAT PIT).

Numerous references have been made to a dark layer of soil about 11 feet below the summit-plateau of the mound, which we believed to mark the original surface of the ground on which the mound was built. When in the course of our main excavation this layer of soil was reached, it was noticed that about centrally in it (and consequently nearly centrally in the base of the mound also) this layer had been cut through, thus denoting the presence of a pit. As small local layers in the mound but short distances above this disturbance of the basal layer were intact, it was evident that a pit had been dug from the surface of the ground before the mound was built, and as no thin, dark layer denoting either use as a dwelling-site or decay of vegetable matter, as the case might be, lay above the upper surface of the pit, it is fair to assume that the mound, or a part of it, was reared soon after the filling of the pit.

The pit was nearly oblong, the long diameter being NNW. and SSE. The two sides were 8 feet and 8 feet 8 inches in length respectively; the ends each about 6 feet across. Through the upper part of the pit its outline was clearly defined.

After our digging in the pit had been continued from the level of the upper surface of the dark basal layer to a depth of 5 feet 7 inches, through mixed material filling the grave, which material, for a distance down, was surrounded by the red clay already described, we reached sand with a slight admixture of clay, giving but little indication of previous disturbance. However, close examination showed here and there small masses of clay, and at a depth of 7 feet 8 inches part of the lower jaw of a deer was found, showing conclusively that we were not in undisturbed, underlying soil. In this part of the pit its outline was rather indefinite as the red clay which surrounded the upper part of the pit had given place to sand.

At a depth of 12 feet below the level of the upper surface of the basal layer a human skeleton was encountered. The skeleton, that of an aged male,¹ lay at full length on the back, the head directed toward SSE. The burial, of which the cranium and a few other bones were saved in fairly good condition, rested on a dark layer about one inch in thickness, which clearly marked the bottom of the pit. This layer presumably owed its color to the decay of perishable material which had been placed upon the base of the pit at the time of the burial—skins, feather-work, wood, matting, various other fabrics, any or all. In two places on the base of the pit where deposits of objects were found, this layer of discolored soil extended upward a short distance against the sides of the grave as if some perishable objects placed on the remaining deposit had decayed there.

The objects found with this burial were fairly numerous. Near the feet was an undecorated pot of good, polished, black ware, of about two quarts capacity.

¹ See description of this skeleton, by Dr. Aleš Hrdlička, at the close of this report.

In the corner adjacent to the left foot and extending along the side was a deposit of pottery, badly crushed and mingled, in which could be distinguished the remains of a large, black bottle which had stood upright in a red pot with conspicuous handles, shown in Plate XLI. In one of the vessels was a mass of yellow material that evidently had been used as a pigment and which Doctor Keller has determined to be impure, ferruginous clay.

Under this pottery deposit lay a small heap consisting of ten arrowheads of flint of various colors, all barbed and all pointing in the same direction.

About 2 feet from the outside of the left knee of the skeleton, immediately in the pottery deposit under description, which extended along the left side of the grave, was a pipe. This pipe, of limestone, 3.25 inches in length, is an effigy of a human figure on all fours, to use a homely expression. The legs are clearly shown in relief, while the arms, undefined, merge into a single support. The most remarkable feature of this pipe, and one which none of a number of experts consulted on the subject has been able definitely to explain, is that a third leg in relief, but much smaller than is each of the other two, is seen in the rear of the figure, just below the orifice made for the reception of the stem.

From appearances one might be led to believe that a representation of child-birth with prolapse of a leg was intended. If, however, such was the case, either the incised lines which the small leg has on the ankle, in common with the larger ones, were intended simply to define the ankle, or else the aboriginal artist, perhaps in a desire to enhance the ornamental effect, put beads upon the leg of the child, as well as upon those of the adult, ignoring or not considering the natural requirements of the case.

This interesting pipe is shown in three positions in Figs. 34, 35, 36.

Carbonized material in the bowl proves the pipe to have been in use. On the base of the pipe has been incised, with a fine point, a design of some kind, perhaps a rude representation of a human figure, but, apparently through wear, the figure is too faint to determine with exactitude.

On the left side of the pit, 4 inches beyond where the pottery deposit ended, was a pile of sixteen arrowheads, all but one having the points directed down the left side of the grave. These arrowheads, all barbed, are of flint of various colors; some had been deposited with parts missing through breakage.

At both ankles were barrel-shaped beads of shell, each about one inch in length: eighteen at the right ankle, nineteen at the left ankle.

Two shell beads came from the left knee.

At the outer side of the upper part of the right femur lay a quartz crystal 7 inches in length, the point directed toward the knee of the skeleton. Beautiful crystals of quartz are numerous in the region near the Hot Springs, Ark.

Also near the right thigh were the fragments of what had been a large cooking pot of earthenware.

Near the middle of the left thigh were six arrowheads of flint of different colors, all barbed, one serrated. These projectile points were disturbed in removal so that their original position in the grave is not known.



FIG. 34.—Pipe of limestone, side view. Haley Place, Ark.
(Length 3.25 inches.)



FIG. 35.—Pipe of limestone, front view.



FIG. 36.—Pipe of limestone, rear view.

Eight inches to the left of the upper part of the left femur began a deposit consisting of two pottery pipes, similar to those found in the mound proper, extending parallel—or rather parts of two pipes, as the full complement of fragments was not present. This deposit was removed carefully with a trowel, so there seems to be no chance that any parts were lost at the time of the investigation.

Near the right hand were the fragments of a small vessel of pottery, and at the right wrist were two minute shell disks with remains of copper bosses centrally placed upon them.

The right humerus bore the green stain of carbonate of copper, marking the former presence of the metal there.

At the right shoulder lay a shell drinking-cup, carefully smoothed as to the exterior surface, but without engraved decoration.

Over the left elbow lay a fresh-water mussel-shell (*Unio*), badly decayed.

At the left shoulder, the flat surfaces parallel, were two imperforate, undecorated, shell disks, each about 1.5 inch in diameter, and seven rudely-elliptical sections of shell, each 1.25 inch by .4 inch, approximately.

Along the left wall of the grave (at the risk of repetition we would remind the reader that it was that part of the grave to the left of the skeleton as it lay) was a deposit of fifteen arrowpoints, slender, like nearly all from the mound, the maximum 1.5 inch in length, eight of flint, seven of rock-crystal. A number of the projectile points in this deposit were rudely made and several were imperfect. With this deposit was a bone determined by Prof. F. A. Lucas to have belonged to a collared peccary (*Tayassu angulatum*), an animal now extinct in Arkansas.

At the neck were forty-eight pearls perforated for stringing.

At each side of the skull, at the ears, was a shell disk, 1.75 inch in diameter, having a boss of sheet-copper, centrally placed upon it (Fig. 37). Each disk has a

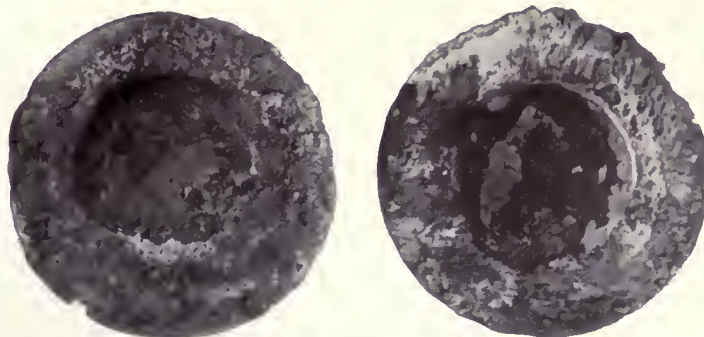


FIG. 37.—Ear-plugs of shell, with wooden bosses formerly coated with sheet-copper. Haley Place, Ark. (Full size.)

central perforation to allow of attachment to some object to be placed behind the lobe of the ear, in this case made of perishable material.

Transversely on top of the skull was a shell bead, 3 inches in length, similar to two found on burials in the mound proper.

Eighteen inches to the right of the skull a group of earthenware vessels had been placed, two of which, small, undecorated pots, were intact, the remaining ves-

sels being badly crushed. With this deposit was a mass of purple pigment, about the size of a cocoanut, which Doctor Keller has proved to be oxide of iron that had been subjected to heat, thus changing it from the original red. Presumably this change was wrought intentionally and not through accident, as we have explained in connection with similar material found with Burial No. 2. Nothing else with the burial had been exposed to fire.

About one foot beyond the skull, toward the head of the grave, was a banner-stone of the "butterfly" pattern, made from rock-crystal. One wing has been broken in former times and the area of fracture carefully smoothed to allow the continued use of the ornament (Fig. 38).



FIG. 38.—Part of banner-stone of crystal.
Haley Place, Ark. (Full size.)

It is interesting to note in this connection that we found in a mound at Thornhill Lake, Volusia County, Florida, two pendent ornaments, each made from the wing of a banner-stone.¹ Our late friend, Andrew E. Douglass, Esq., first called our attention to the origin of these ornaments and informed us he had found a similar one in a mound on Tomoka Creek, about thirty-six miles north of Thornhill Lake.

With this ornament and extending 18 inches above the level of the head of the grave was a group of objects as follows: two quartz crystals, each about 3.5 inches

in length; a mussel-shell (*Unio purpuratus*); a small amount of red pigment; a pebble; a bone piercing implement, badly decayed; remnants of a rattle of shell (tortoise or turtle) with numerous pebbles still adhering, and one part pierced, probably for suspension; two alligator teeth, each about 3 inches in length and each pierced at the proximal end to serve as a pendant.

In the upper left-hand corner of the grave was a deposit of pipes of earthenware, of the kind of which so many were found in the body of the mound. These pipes, four in number, were all somewhat broken, one being badly crushed. Two of the pipes had been interred without the proximal ends of the pottery stems. With this deposit of pipes were: a celt of quartzite, 5 inches in length; a small chisel; an arrowhead of flint; a bone implement, very badly decayed.

Near this deposit, but farther down the left side of the grave, were three earthenware pipes together, placed vertically, the bowls downward. One, 6 inches in length, has all parts present, but the proximal ends of the other two are missing. This deposit, like all objects in this grave, was carefully removed with a trowel so that the chance of loss of any parts of the pipes in removal may be regarded as negligible.

The pottery vessels from this grave were disappointing. One might fairly

¹ "Certain Sand Mounds of the St. Johns River, Florida," Part II, pp. 168, 170.

assume that the personage honored by the erection of this mound (and there seems little reason to doubt that such was the intention of the builders) would have been favored with the best earthenware the place afforded, but the vessels deposited with this burial were mainly of the kitchen variety, while nearly all the rest were without striking decoration.

We here close the account of the individual burials.

As stated, but one kind of pipe of earthenware (with a single exception) was found at the Haley Place, though, as we have seen, a considerable number of pipes were unearthed there.

The pipes in question, with bowl and stem of one piece and ranging in length between 5.5 and 22.6 inches, have bowls resembling inverted, truncated cones placed on the stems (which are circular in transverse section), some distance from the terminations of the stems, which extend beyond the bowls. These projecting parts are invariably hollow and would serve as receptacles for undesirable liquid material derived from the smoking of tobacco or other plants, though we have no knowledge that the ends were made hollow for that purpose.

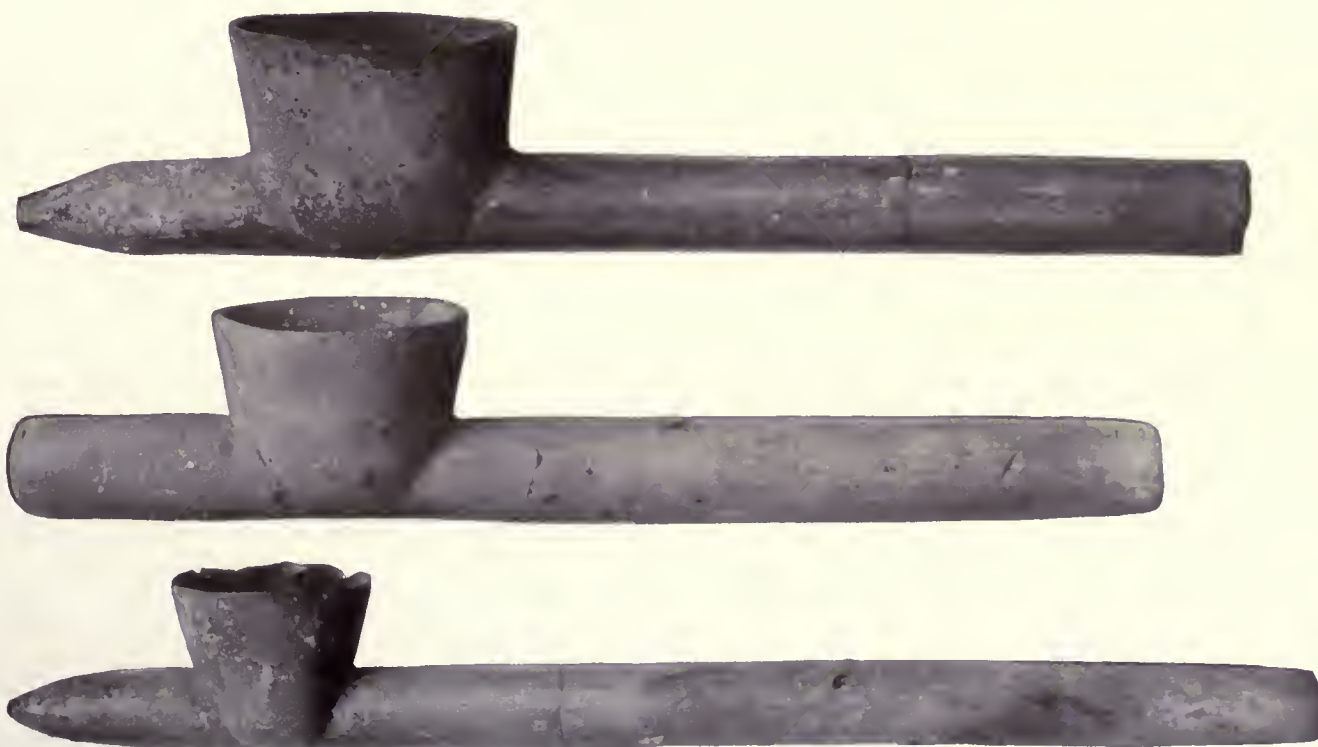


FIG. 39.—Pipes of earthenware. Haley Place, Ark. (The two upper ones are full size; the lower one is 9.3 inches in length.)

These projecting parts, which probably bring the pipes within the class known as "monitor," terminate in three ways: in points; in blunt points; or flat, the end having little or no diminution in the diameter of the stem, as shown in Fig. 39.

The ends of the stems destined for the mouth are not diminished in diameter

in any way, but their annular margins are neatly rounded when the pipe is complete. As we have noted, however, some pipes were found having instead of a smoothed end for the mouth, a rough, broken surface. Such pipes were sometimes found apart from any fragments, and, as we have already had occasion to point out in this report, it is evident that the aborigines who formerly inhabited the Haley Place site, continued the use of pipes after parts of the stems had been broken off. As we all know, the same thing is sometimes done under like circumstances at the present time.

In a number of cases, pipes from the Haley Place, from which parts of the stems have been broken, show more or less careful chipping around the margins of the breaks, doubtless to make the broken surfaces more convenient for further service.

Many of the bowls of these pipes from the Haley Place contain coatings of carbonized material, while, on the other hand, a considerable number evidently never have been used.

We believe this form of pipe to be new in connection with the aborigines. At all events an aboriginal pipe of earthenware, all of one piece, nearly 23 inches in length, is something unheard of before.

We are unable to give the number of vessels represented by the masses of fragmentary and mingled sherds found during our investigation of this interesting mound, or even to form an estimate which would in any way approach the exact number. As we have seen, the vessels in most instances had been placed in deposits together, and when the earth above them commenced to settle, they were ground to fragments and the fragments were mingled. Never before in all our mound investigation have we seen such wreckage of earthenware. The vessels from this place, in consequence, were not numbered as they were removed from the ground, as it has been our invariable custom to do before, but the more interesting ones have been arbitrarily numbered since the reunion of their parts—which reunion was in some instances a formidable task.

While many interesting vessels came from this place, there are many others bearing almost no decoration, three encircling lines below the neck having been considered sufficient decoration for most of the bottles, while many bowls, though of good ware, bear but little ornamentation. Many cooking vessels also were found, the decoration of most of which, while abundant, offers but little variety.

We shall now consider some of the more interesting vessels from this place.

Vessel No. 1. (Burial No. 2.) This bottle (Plate XXXVII), in the combination of its coloring, white (probably kaolin) and black which is hardly more than a stain, and of the designs of its decoration—crosses, circles, many-pointed stars—is totally dissimilar from any vessels from Arkansas we have seen or of which we have heard. Presumably it is an importation from southeastern Missouri, some bottles from which region it greatly resembles. A depression surrounds the union of the neck with the body.

Vessel No. 14. (Burial No. 2.) This bottle (Fig. 40) bears incised decoration which can be more clearly seen in the illustration than described by us. The line-work has been filled in with red.



HALEY PLACE, ARKANSAS, VESSEL NO. 1 (BURIAL NO. 2). (HEIGHT, 7.4 INCHES.)



FIG. 40.—Vessel No. 14. Burial No. 2. Haley Place, Ark. (Height 7.2 inches.)



FIG. 41.—Vessel No. 17. Burial No. 2. Haley Place, Ark. (Height 7 inches.)



HALEY PLACE, ARKANSAS, VESSEL NO. 5 (BURIAL NO. 2). (HEIGHT, 9.8 INCHES.)



HALEY PLACE, ARKANSAS, VESSEL NO. 11 (BURIAL NO. 2). (HEIGHT, 10.8 INCHES.)

Vessel No. 17. (Burial No. 2.) In Fig. 41 is shown a bottle having incised decoration including the scroll and other designs met with in this region.

Vessel No. 5. (Burial No. 2.) This vessel, shown in Plate XXXVIII, is of black ware giving evidence of an attempt at polish. The decoration, incised and punctate, has at one time been filled in with white pigment. The handles, almost solid, have slender, vertical perforations. Another vessel, also found with Burial No. 2, is similar to this one as to size, shape, and decoration with the exception that the line and punctate work has been filled in with red instead of with white pigment.

Vessel No. 4. (Burial No. 2.) This bowl (Fig. 42) of excellent black ware, has a neatly-made, incised and punctate decoration made up of two similar designs, one appearing on each side of the bowl.



FIG. 42.—Vessel No. 4. Burial No. 2. Haley Place, Ark. (Diam. 6.8 inches.)

Vessel No. 8. (Burial No. 2.) This interesting vessel (Fig. 43) is a fair example of some of the better class of those used for culinary purposes by the aborigines who occupied this site, and illustrates the care bestowed by them on the shaping and decoration of some of these vessels. On the body, in relief, are conventional representations of the cords with the aid of which doubtless the vessel was suspended. It is hardly likely the handles served a utilitarian purpose.

Vessel No. 11. (Burial No. 2.) The cooking-vessel shown in Plate XXXIX is one of the best of its class found at this site and shows even more care in its construction than the one just under description.

Vessel No. 16. (Burial No. 2.) This great bottle, 17.7 inches in height, of which but 3.3 inches is the length of the neck, has been referred to in the account of this burial. The ware is black, the body ovoid, flattened at the base. The sole decoration consists of three incised, concentric, encircling lines around the body just below its union with the neck. Projecting from the outer circle are the markings seen on some sun-symbols on pottery from this region. A considerable number of bottles of about this size and shape were found at this place, some of which, in fragments, with a great many other vessels also in fragments, have been presented by us to Peabody Museum, Cambridge, Mass.



FIG. 43.—Vessel No. 8. Burial No. 2. Haley Place, Ark. (Height 8.7 inches.)



FIG. 44.—Vessel No. 4. Burial No. 3. Haley Place, Ark. (Height 7.4 inches.)

Vessel No. 4. (Burial No. 3.) Of this bottle, shown in Fig. 44, it may be said, as of some of those from the preceding burial, that its decoration is more

readily understood from view than from verbal description. This decoration, which includes sun-symbols, has been filled with red pigment.

Vessel No. 7. (Burial No. 3.) This bottle, quadrilateral with four equidistant projecting parts, is covered as to the body with incised sun-symbols, the line-work of which has been filled in with red (Fig. 45).

Vessel No. 5. (Burial No. 3.) This bowl of yellow ware, bears by way of decoration over the outer surface, a number of rudely-made knobs. In addition, is a representation of a cord, no doubt arranged in a way in which vessels probably often were suspended. There are perforations below the rim on two opposite sides of the bowl (Fig. 46).

Vessel No. 2. (Burial No. 3.) This bottle (Plate XL) of fine, black, polished ware, is a striking example of the best work in pottery found in this region. The incised decoration, beautifully executed, based largely on the scroll, has been filled in with white pigment, much of which remains and greatly enhances the general effect.



FIG. 45.—Vessel No. 7. Burial No. 3. Haley Place, Ark. (Height 6.5 inches.)



FIG. 46.—Vessel No. 5. Burial No. 3. Haley Place, Ark. (Height 4 inches.)



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HALEY PLACE, ARKANSAS, VESSEL NO. 2 (BURIAL NO. 3). (HEIGHT, 9.2 INCHES.)



FIG. 47.—Vessel No. 2. Burial No. 4. Haley Place, Ark.
(Height 8.1 inches.)



FIG. 48.—Vessel No. 5. Burial No. 4. Haley Place, Ark.
(Height 4.2 inches.)

Vessel No. 2. (Burial No. 4.) This bottle (Fig. 47) has a neck of a kind often met with along Red river in Arkansas, which tapers slightly upward. Below the union of the neck and body are three incised, encircling lines—a favorite decoration in this region. On three sides, in relief, presumably are representations of cords, showing the manner in which the bottle was suspended for use.

Vessel No. 5. (Burial No. 4.) This pot of rather common ware, having two holes for suspension, has a coarse, incised and punctate decoration showing traces of red pigment of which, however, but little remains (Fig. 48).

Vessel No. 8. (Burial No. 4.) This fine bowl (Fig. 49), found in a multitude of fragments, has been pieced together with considerable success. The decoration, incised, consists of a pattern six times shown on the upper part of the body. Below the flaring rim, on the outside are four encircling lines in which white pigment can be distinguished in places.

Vessel No. 11. (Burial No. 4.) This bowl which has slight incised and



FIG. 49.—Vessel No. 8. Burial No. 4. Haley Place, Ark. (Diam. 12.2 inches.)

punctate decoration exteriorly, though it is not shown in the illustration (Fig. 50), has as a principal feature, projections radiating horizontally from the margin such as sometimes are shown on symbols of the sun, incised on pottery from this region. The ware is black and has some polish.

Vessel No. 1.
(Burial No. 5.) In Fig. 51 is shown another cooking-vessel of the same class as others from this site, already described and illustrated.

Vessel No. 6.
(Burial No. 6.) This bowl (Fig. 52) coated inside and out with a dull red pigment, has, in addition, on the upper part, rather rude, incised decoration. As the reader is aware, incised decoration in conjunction with the use of coatings of pigment, is most unusual north of the Arkansas river,

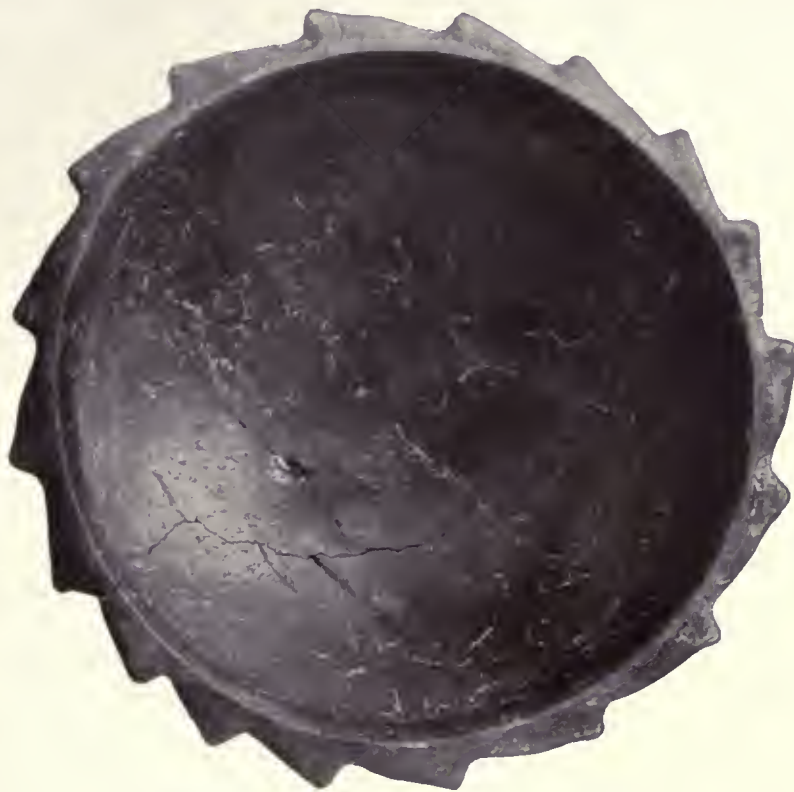


FIG. 50.—Vessel No. 11. Burial No. 4. Haley Place, Ark. (Diam. 7 inches.)

though found in regions to the south of it, including that under description in this report. A bowl similar to this one but smaller, came from this site.

Vessel No. 4. (Burial No. 6.) In Fig. 53 is shown a large cooking-vessel differing in minor details from others from this site.

Vessel No. 6. (Burial No. 7.) This vessel of yellow ware (Fig. 54) has incised and punctate decoration based on the circle and scroll. The base is flat as are the bases of so many vessels from this region.

Vessel No. 2. (Burial No. 7.) A bottle 8.4 inches in height, having by way of decoration a design so frequently met with in this region and too often, unfortunately, with no other in conjunction, namely, three encircling, parallel lines, which, in the case of bottles, are incised below the union of the neck with the body. The base is flat; the ware has considerable polish.

Vessel No. 4. (Burial No. 8.) This bottle (Fig. 55) is decorated with two sets of concentric circles, each set surrounding a cross of the four directions. Some of the circles, incised, are filled in with punctate markings.

Vessel No. 5. (Burial No. 8.) The vessel shown in Fig. 56, a platter, perhaps



FIG. 51.—Vessel No. 1. Burial No. 5. Haley Place, Ark. (Height 10.4 inches.)



HALEY PLACE, ARKANSAS, VESSEL NO. 10 (BURIAL NO. 9). (HEIGHT, 9.3 INCHES.)

represents some quadruped, though the designs which may be intended to indicate legs are not regularly placed, possibly, however, through lack of skill in spacing.

Vessel No. 3. (Burial No. 9.) In Fig. 57 is shown another of the considerable number of cooking-vessels found at this site.

Vessel No. 10. (Burial No. 9.) This vessel (Plate XLI), coated with red pigment inside and out, has in addition on the upper part of the body an incised design in conjunction with bosses. Large handles add to the general effect of the vessel.



FIG. 52.—Vessel No. 6. Burial No. 6. Haley Place, Ark. (Diam. 9.7 inches.)

In several respects the mound on the Haley Place is notable, and in one respect—the depth of some of its grave-pits—is the most remarkable one it has been our fortune to investigate. As stated in the Introduction to this report, mounds that have been built high above burials are common enough, but the making of pits of such depth as were some of those in the mound at the Haley Place, with the means at the disposal of the aborigines, must have been a very difficult task, and if the earth at the time of their work was as thoroughly dry and hard as we found it to be, the difficulty of their achievement must have been greatly increased.

There is another interesting feature connected with this mound. With the exception of one grave that cut slightly into another, there was no interference between the graves. One who has had to do with the investigation of aboriginal places of burial knows how common an occurrence it is to find grave cutting through grave, and one can almost believe, in the absence of this in the mound at the Haley Place, that it was not only erected in honor of the occupant of the great pit below the mound, but that the burials whose graves were dug through the mound, or through parts of it (all probably persons of note, for who ever heard before of such numerous deposits with all the burials in a mound?), were made soon after the erection of the mound when the reason for its construction was still fresh in the minds of men. Not only, as we have said, did the graves not interfere one with



FIG. 53.—Vessel No. 4. Burial No. 6. Haley Place, Ark. (Height 7.4 inches.)

another, but no interment was made in the central part of the mound—and that part almost surely would have been selected for graves under ordinary circumstances.

It is to be regretted that the demolition of this mound is out of the question, even though our trenches radiating from the sides of the main excavation made, as we have noted, the existence of any undiscovered grave in that part of the mound under the summit-plateau almost an impossibility. The mounds at the Haley Place, however, are a valuable asset as a place of refuge in times of high water; in fact they did good service in the flood of 1908, and no doubt were again made use of in the still greater flood of 1912, shortly after our investigation terminated. In



FIG. 54.—Vessel No. 6. Burial No. 7. Haley Place, Ark.
(Height 5 inches.)

FIG. 55.—Vessel No. 4. Burial No. 8. Haley Place, Ark.
(Height 6.4 inches.)

view of the great need for the mounds, not only could their demolition not be permitted, but permission for the investigation as carried on by us was an act of marked courtesy.

Doubtless a cemetery exists in the level ground on the Haley Place, but all signs of it have been covered by deposits from various floods. Careful digging was done in three places where rises above the level ground were noted, but although evidence of aboriginal occupancy was present in all these places, numerous trial-holes failed to reveal any signs of burial.

About 1.5 mile back from the Haley Place are two mounds which were visited

by a member of our party. On one of the mounds are two houses, and a building is on the other one. Furthermore the mounds are used as sites for apiaries, and the bees, active at the time of our visit, were reported as likely to resent the intrusion of strangers. The investigation of these mounds was not urged by us.



FIG. 56.—Vessel No. 5. Burial No. 8. Haley Place, Ark. (Length 11.3 inches.)

MOUNDS NEAR RED LAKE, LAFAYETTE COUNTY, ARK.

Red Lake is a former course of Red river. About half a mile in from the river, on the farther side of the "lake," is some swamp land in the process of clearing at the time of our visit. On this property, near together, are two low mounds of irregularly, circular outline, which were visited by us. We could not determine the nature of these rises, whether aboriginal mounds or remnants of ridges partly washed away by water. We were unable to obtain permission to investigate at this place, as the property was in process of sale and no one seemed authorized to act.



FIG. 57.—Vessel No. 3. Burial No. 9. Haley Place, Ark. (Height 13.7 inches.)

MOUNDS ON THE WILLIAMS PLACE, LAFAYETTE COUNTY, ARK.

On the border of the Williams Place, which is about one mile in from the river, are three mounds, two in woods and one bordering the woods but in a cultivated field. These mounds, all in sight of one another, are variously from 3 to 5 feet in height. Their bases are irregular in outline, but circular in the main. The two largest mounds have been dug into centrally to a considerable extent. The owner of this property did not seem inclined to grant permission to investigate, and as the mounds (which we visited) were of little promise because of their imperfect condition, the matter was not urged.

MOUNDS ON THE EGYPT PLACE, LAFAYETTE COUNTY, ARK.

On the Egypt Place, a plantation about one mile back from the river, are two mounds which were visited by our agent. The place has a reputation for the discovery of aboriginal relics. The owner, however, refused us permission to investigate.

THE BATTLE PLACE, LAFAYETTE COUNTY, ARK.

The Battle Place, which takes its name from that of a former owner and not from having been the scene of a conflict, is one of numerous properties belonging to Mr. Henry Moore, Jr., of Texarkana, Ark., which kindly were placed at our disposal by him. This plantation has a considerable reputation as a site where relics of the aborigines have been unearthed by the plow.

The plantation does not border the river but lies about one mile back from it, near Battle Lake, a former course of Red river, no doubt, which was itself the river when the aborigines occupied the site.

A short distance from Battle Lake is a large mound of peculiar shape. This mound, extending N. and S. has a basal length of 592 feet. Beginning at the southern end, the upper surface of the mound is outlined by a series of levels and slopes, some of the latter very steep, others less so. From the general level at the southern end three slopes and two plateaus carry the mound to a third plateau, where it attains a maximum height of 33 feet. From this plateau, a descent, another plateau, and a slope bring the mound to the surrounding territory on the north.

The basal width of that part of the mound which is under the main plateau is 157 feet, which includes that of a roadway extending up the eastern part of the mound, from south to north.

The width of the mound contracts materially in proportion to the proximity to the ends. The width of the main plateau is 28 feet; the height of the southernmost plateau is slightly more than 10 feet.

A number of trial-holes dug into various parts of the great mound were without return except the finding of a flint pebble on which a cutting edge had been carefully ground, though no additional work had been done on the pebble.

To the eastern side of the great mound is a cultivated field in which, in full view from the mound, were four low humps and rises of the ground that long culti-

vation evidently had considerably spread. The surface of the field showed in places bits of flint, pebbles, fragments of pottery, and in one instance, parts of a human skull were found. Several arrowheads also were picked up on the surface. The field is clay, probably a river deposit, under which is sand with some clay intermingled.

The four rises of the ground were all carefully investigated and, in addition, a number of places in the field were dug into, which, though level, had scattered over them debris which invited investigation. Also a low mound to the SW. of the great mound was carefully dug through. The only place where our search was rewarded was in one of the rises, which was of little appreciable height,—perhaps one foot in some places and less in others,—and had no determinable boundaries. A space in it, located as nearly centrally as we could judge, having a diameter of about 50 feet, was carefully investigated and five burials were found in it, ranging in depth between 1 foot and 2 feet 6 inches.

Three of these burials were of adults extended on the back, and one probably was an aboriginal disturbance. This last burial consisted of the skull of an adult with the lower jaw, and in the neighborhood were two other mandibles. Somewhat farther in and deeper was another skull.

Burial No. 2, that of an adult, had been disturbed by the digging of a grave for Burial No. 1 and thereby had lost the skull. The remainder of the skeleton was intact. Near the upper end of the skeleton were two skulls of adults, in fragments. One of these skulls probably belonged to the skeleton.

Burial No. 5, that of an adult, had an additional skull lying near it.

Of the three extended skeletons, one headed north and the skulls of two were directed toward the south. All the skeletal remains in this mound were too much decayed for preservation.

With the exception of a decaying columella of a marine shell, which lay near one of the skeletons, nothing except pottery remained with them, but of this each had an ample allowance.

Thirty-five vessels, most of them broken, and many scattered fragments of earthenware came from this little mound, two of the vessels being found apart from burials.

Some of the vessels were interestingly placed. Burial No. 1, adult, had at the inner side of the left foot and leg, and extending over the right foot and leg, a group of seven vessels, six upright, one inverted. At the outer side of the right forearm was another vessel, and still another at the right elbow. The slight separation of the legs of this skeleton to permit the placing of vessels between them, was an interesting feature.

Burial No. 3, a child, had grouped over the head, six vessels, the head being centrally beneath them.

The earthenware from the Battle Place (with the exception of the cooking vessels) is of excellent quality, thin and some of it polished. The vessels are symmetrical, and nearly all, even the cooking pots, bear much incised decoration,

though that on the vessels used for culinary purposes is, of course, inferior to the rest. There is comparatively little variety in shape or in decoration, however. Red pigment is in much of the line-work. Some designs are partly in interrupted lines, a specialty of this region.



FIG. 58.—Vessel No. 26. Battle Place, Ark. (Height 6.5 inches.)

The following are the most interesting vessels from this place:

Vessels Nos. 26 and 30. The bottles shown in Figs. 58, 59, respectively, are of excellent ware, of graceful form and bear incised designs mainly based on the circle and on the scroll. The line-work has been filled in with red pigment. The

SOME ABORIGINAL SITES ON RED RIVER.

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swelling seen in the neck of each vessel denotes a compound form and is a conventionalized representation of a cup imposed on the opening of the bottle. Bottles



FIG. 59.—Vessel No. 30. Battle Place, Ark. (Height 7.3 inches.)

similar to these are found farther to the eastward, in Louisiana near the junction of Bayou Bartholomew with the Ouachita river, though red pigment is absent from the line decoration in the Ouachita region.

Vessel No. 33. In Fig. 60 is shown a very interesting bottle and like the two just described, compound in form though in this instance we have an additional feature. On a bowl a bottle is represented and this bottle has for a neck a conventionalized cup.

Vessel No. 10. In Fig. 61 is shown a vessel presenting on the sides four



FIG. 60.—Vessel No. 33. Battel Place, Ark. (Height 6.3 inches.)

equidistant projections each surrounded by concentric circles very carefully incised. Spaces above and below are filled with series of parallel lines.

Vessel No. 19. This bowl, showing as decoration four similar designs made

up of scrolls and circles, the designs separated by parallel lines, has traces of white pigment still in places in the line-work (Fig. 62).



FIG. 61.—Vessel No. 10. Battle Place, Ark. (Height 3.3 inches.)



FIG. 62.—Vessel No. 19. Battle Place, Ark. (Diam. 4.7 inches.)

Vessel No. 13. This bowl of black ware (Fig. 63) is covered exteriorly (with the exception of a small circle forming the base) with incised decoration rather

unevenly done, principally based on the current scroll and circles. Red pigment, with which all the line-work has been filled, still remains in fairly good condition.

Vessel No. 6. This bowl bears an incised decoration chiefly consisting of circles and spaces with reticulate lines. In all the line-work are traces of red coloring material (Fig. 64).



FIG. 63.—Vessel No. 13. Battle Place, Ark. (Diam. 6 inches.)

Vessel No. 12. In Fig. 65 is shown a bowl with the rudely-modeled head of a bird, projecting from one side. Vessels of this class are about as near to the life-



FIG. 64.—Vessel No. 6. Battle Place, Ark. (Diam. 5 inches.)

form as was attained by the aboriginal potters inhabiting that part of Red river running through Arkansas. On the conventional tail is a curious figure we are unable to explain.

Vessel No. 9. A bottle 3.1 inches in height, with swelling neck indicating a compound form. The decoration, incised, is made up of partly interlocked scrolls. The base is flat.

Vessel No. 11. A bottle 3.6 inches in height, of black ware showing considerable pol-

ish. The decoration consists of current scrolls and circles, the ground being filled in with reticulate lines. The incised work on this bottle is still filled in with a brilliant red pigment having an unusual degree of intensity. Unfortunately, the neck of this bottle had been carried away by previous disturbance of the mound, but as the bottle, in ornamentation, shape and size greatly resembles Vessel No. 9 (whose description just precedes this one), the neck has been restored in imitation of that on Vessel No. 9.

In sight of the great mound, to the north of it, is a cultivated ground which is unusually black, and has considerable debris of aboriginal dwelling-sites on the surface. There is history of bones and of artifacts plowed up at this place. Probably, however, most of the burials that formerly were there have been removed in the course of cultivation, as fifteen trial-holes resulted in the discovery of but one burial (Number 6), the skeleton of an adult extended on the back, the head directed to the east. This burial was unaccompanied by artifacts. A neatly-made hatchet unearthed at this place was given by us to Mr. Moore, the owner of the plantation.



FIG. 65.—Vessel No. 12. Battle Place, Ark. (Height of bowl 2.4 inches.)

Adjoining the Battle Place is the Harrell Place, where, in the past, it is said, aboriginal artifacts have been exposed by the plow. The spot where these discoveries had been made,—level ground strewn with debris of an aboriginal site,—was dug into by us without success, though eight arrowpoints of flint, some slender and delicately made, were picked up on the surface.

About 3 miles above the Battle Place, on the same side of the river, is the Cabinas Place. Here, near the present course of the river, it is said that workers, while engaged with scoop-shovels drawn by horses, in the construction of a levee, unearthed at one place skeletons and a number of earthenware vessels.

We examined some vessels which Mr. Cabinas, the owner of the property, told us were a part of those found on his place. These vessels resemble some from the Battle Place.

We carefully investigated the spot where the pottery is said to have been found, and where many fragments of pottery and of human bones lay on the surface, but were unable to come upon human burials in a considerable amount of digging. Presumably the cemetery had been a small one and the makers of the levee destroyed all the human remains there were in it.

A skeleton, however, was found by us,—probably that of a dog, judging from the size and general appearance,—which fell into fragments on removal. The skeleton lay in a shallow grave, and on the skull was a large fragment of pottery.

MOUNDS ON THE McCLURE PLACE, MILLER COUNTY, ARK.

The McClure Place, several miles below the town of Garland, is the property of Mr. Dan W. McClure, who resides upon it.

About one-quarter mile in a straight line SW. from the landing at the McClure plantation, in a cultivated field, are two mounds, both of which have been plowed over for a considerable time and no doubt have lost some of their height through cultivation.

On the surface of both these mounds, which Mr. McClure informed us were not submerged in the great flood of 1908, were fragments of flint and bits of pottery.

One of these mounds, which is but a short distance from the other, resembles somewhat a small ridge extending N. and S., with a slight increase in height near the ends. The southern end, the greater in height, has a rise of 1 foot 3 inches. The length of the mound is somewhat in excess of 100 feet; its width is from 40 to 45 feet.

The mound, which is composed of sand with some clay intermingled, was fairly riddled with trial-holes by us, and to an extent that it is almost inconceivable that a skeleton in it can have escaped discovery. Two burials were discovered, one in about the highest part of the southern end, and one similarly situated in the northern end.

Burial No. 1 (in the southern extremity), a child, 14 inches below the surface, had a small bottle at the right of the skull. At the outer side of the left forearm was a bowl, and another bowl lay at the upper part of the left femur, having been placed upright above another vessel. Three of these vessels were small and evidently were intended for a child, while one was of moderate size. All were more or less broken. A mussel-shell was at the right of the right knee.

Burial No. 2, adult, probably a woman, lay extended on the back, the head directed S. by W. The depth was 3 feet 8 inches, though no pit was apparent, save that the burial lay in light sand which underlies the soil at this place and of course the burial must have been placed in an excavation made for it. This skeleton, which was in excellent condition and which was saved almost entire, was richly endowed with mortuary deposits in the shape of vessels of earthenware, which, however, when recovered by us, were nearly all badly crushed. At the outer side of the left shoulder was a vessel, and two others were at the outer side of the left forearm. A small bowl had been turned over the right hand and contained the bones of

it when removed from the soil. At the outer side of the middle of the right femur were some decaying bones of a small fish. At the upper part of the left femur was a badly-broken vessel, and a cooking-pot had been placed at the lower part of the same bone. Beneath this vessel was another in fragments. A small vessel lay between the knees, and a vessel badly crushed was at the left tibia. At the outer side of the right ankle was a bowl having the head of a bird, rudely represented, rising perpendicularly from the margin, and a conventional tail on the opposite side—a poor example of a type common in regions to the eastward. Also at the right ankle, and extending to the foot, were a small bottle and a rude kitchen vessel. At the inner side of the middle of the left femur, a mussel-shell (*Unio hydianus*) had been placed.

The vessels from the two burials in this mound (Nos. 1 to 16, inclusive) present no striking feature. The decoration, except in the case of kitchen vessels, is trailed rather than incised.

The remaining mound at this place was 3.5 feet in height, though the stump of a tree upon it showed the mound had lost at least one foot in altitude in recent times, presumably by wash of rain after the clayey sand, of which the mound was composed, had been loosened by cultivation. The base, which was irregularly circular, was 70 feet in diameter.

This mound, like its neighbor, was so filled with trial-holes by us, some of which extended into one another, that it is hardly likely that any burial in it remained undiscovered. Two burials were found near together in the central part of the mound.

Burial No. 3, the skeleton of an adult, probably male, extended on the back, the head pointing S., lay at a depth of 3 feet 8 inches. We were unable to trace a pit from the surface down, but the lower 16 inches of the grave had been filled in with mixed material and evidently to that extent, at least, the burial had been let into the mound.

At the outer side of the right humerus was a vessel which, like one similarly placed at the left humerus, was badly crushed. At the right forearm was a bottle, and at the left wrist were some bones which Prof. F. A. Lucas has determined as having belonged to a lynx, probably *Lynx ruffus floridanus*. A bowl had been placed in an inverted position at the outer side of the upper part of the right thigh, and at the upper part of the left tibia lay a vessel crushed to fragments.

Burial No. 4. This burial was the skeleton of an adult, probably male, lying at full length on the back, the head directed S.¹

The bones were well preserved, practically all belonging to both skeletons being in a condition to save. The bone of the left thigh of this skeleton showed an interesting fracture at about the middle part, with union of overlapping ends, shortening the bone about one inch, judging by comparison with the bone of the other thigh.

This skeleton had at the left of the skull, a bottle, and at the left of the pelvis,

¹ The heads of both burials in this mound pointed between S. and S. by E., one-half point from due south, to be exact.

a bowl placed vertically, under which, also upright, was another bowl, the bones of the left hand lying between the two vessels. Over the middle of the left tibia was a rude jar, which evidently had been used for culinary purposes.

An interesting deposit was at the right hand of the skeleton, extending somewhat up the forearm. In a mass, together, were fifty fresh-water mussel-shells,¹ all of the same variety (*Unio parvus*), each of which apparently had been treated in the same manner. The length of each is a little less than 2 inches. At slightly varying distances from the hinge, but always near it, is a perforation, doubtless for suspension. The opposite end of the shell apparently has been removed by grinding.

Forming a part of this interesting deposit was a large mussel-shell (*Unio gracilis*) broken into many fragments. Through this shell had been several series of circular perforations, in lines.

With this deposit also lay the shell of a small turtle or tortoise, far advanced in decay and very fragmentary. Sufficient of the carapace remained, however, to show a perforation at one end near the margin. A careful search for pebbles within the shell was without success.



FIG. 66.—Earthenware pipe. McClure Place, Ark. (Full size.)

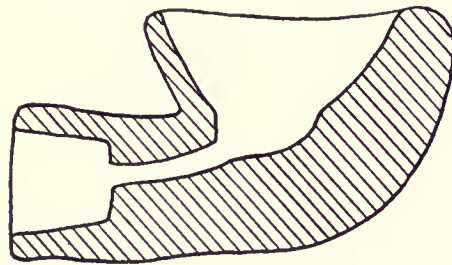


FIG. 67.—Pipe. Vertical section. (Full size.)

Lying among the shells was an earthenware pipe (Fig. 66), which, though bearing no incised decoration and not pretentious in appearance, presents two features of interest. The opening suitable for the reception of a large stem extends inward a certain distance where the stem would meet a shoulder, beyond which a slender passageway for the smoke continues, as shown in section (Fig. 67).

At the front of the bowl of the pipe is a flat addition in relief. Some pipes of this region have projections extending horizontally beyond the bases of the bowls, doubtless allying them with the "monitor" class. Now the flat addition to the pipe in question, which is placed vertically on the front of the bowl, seems to be simply this horizontal projection turned up against the bowl.²

The earthenware vessels from this mound include two beautiful bottles, which, with other vessels from the McClure Place, will be described in detail.

Vessel No. 20. This bottle (Fig. 58) on which the attempt to confer a polished surface has been in part a failure since much of the vessel remains the original yellow, has an incised decoration mainly consisting of sun-symbols. There are faint traces of red pigment in some of the line-work.

¹ One of the fifty, found in fragments, no doubt had been uniform with the others, though determination is not possible.

² For additional details and illustrations, see at the close of this report.



FIG. 63.—Vessel No. 20. McClure Place, Ark. (Height 8.4 inches.)

Vessel No. 23. This bottle, also decorated with incised sun-symbols, the line-work of which has been filled with red, is shown in Fig. 69.

Vessel No. 1. This little bottle of compound form, the swelling neck representing a cup set in the mouth of a bottle, is of yellow ware, the decoration is punctate and trailed, the design in the main being founded on the scroll (Fig. 70).

Vessel No. 15. This bowl of black ware is decorated over the space forming



FIG. 69.—Vessel No. 23. McClure Place, Ark. (Height 8.8 inches.)

the upper part of a kind of projecting shoulder, with circles and a current scroll in a field of reticulate lines. The decoration shown in the illustration (Fig. 71) completely covers the base and consists of two series of concentric circles with spaces on each side filled in with series of curved lines.

Vessel No. 14. A bowl of ordinary ware (Fig. 72) having on the upper part of the body rude, incised decoration which has been filled in with white pigment,



FIG. 70.—Vessel No. 1. McClure Place, Ark. (Height 3.2 inches.)



FIG. 71.—Vessel No. 15. McClure Place, Ark. (Diam. 4.75 inches.)

is of interest only in that it seems to be a compound form, a bowl with a saucer placed upon it. Small handles are seen in four places on the rim of the lower vessel.



FIG. 72.—Vessel No. 14. McClure Place, Ark. (Height 3.4 inches.)



FIG. 73.—Vessel No. 2. McClure Place, Ark. (Diam. 3.6 inches.)

Vessels Nos. 2, 13, 16, shown in Figs. 73, 74, 75, respectively, are three other vessels with incised decoration from this place.



FIG. 74.—Vessel No. 13. McClure Place, Ark. (Diam. 5.7 inches.)



FIG. 75.—Vessel No. 16. McClure Place, Ark. (Height 2.8 inches.)

MOUNDS ON THE HAYNES PLACE, LAFAYETTE COUNTY, ARK.

On the Haynes Place, of which Mr. W. P. Haynes, who lives upon it, is the owner, are three mounds in sight of one another, near the bank of Red Lake¹, a former course of Red river.

The largest mound, which is on the edge of a cultivated field, is on fairly level ground; its height, measured from two sides, gave the same result, namely, 7 feet 6 inches. The upper part of the mound was much too steep for cultivation, but it is possible that the lower parts have been plowed over. At the time of our visit, however, no signs of this were apparent.

¹ There are several "lakes" of this name along Red river.

The basal outline of the mound was roughly elliptical; the diameters E. and W. and N. and S., respectively, were 82 feet and 62 feet. The diameter of the summit-plateau, which originally had been small, was difficult to determine owing to the presence of a trench and of debris thrown out in its making. This trench, made by former diggers,—faint-hearted ones if they were treasure-seekers,—began near the margin of the southern part of the mound and continued up, so nearly as we could determine, to what had been the center of the summit-plateau, where a hole about 3 feet in diameter at the surface, tapering almost to a point had been sunk to the basal part of the mound.

The trench, about 5 feet in diameter on top, converged considerably. Its depth was about 2 feet. So far as any interference with the investigation of the mound was concerned, this trench could be ignored.

The mound had every appearance of having been made for burial purposes. As Mr. Haynes, the owner of the plantation, probably felt that his land, which was high in places, would not all be submerged even if the levee which surrounded the estate gave way, permission was accorded us to treat the mound as we saw fit, and in consequence it was completely demolished, our diggers carrying out the work on a level from 1 to 2 feet below the base of the mound, judging from its height as ascertained by us. In addition, narrow but deep pits were frequently dug down from the level of the work to aid in a search for graves.

The mound was variously composed. Much of it consisted of a mixture of clay and sand—mostly clay—brown in color. Also, there was considerable red clay in places, and, locally, very considerable layers of light-yellow sand. There was no uniform stratification throughout.

This mound was a problem. No line of original base or trace of such a line was apparent, and digging below where the base-line might have been expected to be, in places came upon yellow sand, seemingly undisturbed, and elsewhere upon solid red clay without a trace of disturbance. Hence the original base of the mound could not have been below the level of our digging. Why the black stratum which usually marks the base of the mound (of little thickness if it is the result of decayed vegetation alone, more marked if the debris of aboriginal life has contributed toward its making) was absent from this mound only can be surmised. Possibly, prior to the making of the mound, the ground had been cleared by the aborigines for some reason, or perhaps the region recently had been subject to wash from the nearby river.

Throughout the demolition of the mound, with the exception of a burial to be described in due course, the only internal evidence of the erection of the mound by the hand of man was the mixture of the component materials. Bits of pottery, bones of lower animals, fire-places, fragments of stone, were absent.

Five feet six inches south of an imaginary vertical line passing through the meeting-point of the axes of the basal plane of the mound, but on a level 2 feet 4 inches below this plane, if we consider it to have been at a depth of 7.5 feet (which, as we have said, was the height of the mound when measured from the outside),

was a deposit of cremated remains. This deposit lay upon hard, red clay, evidently undisturbed soil, but though the depth of the deposit was, as we have said, about 2 feet in excess of the supposed height of the mound, no pit was evident, though great care was exercised by us to determine the matter. We are inclined to think that the deposit of cremated remains had been placed on the level ground and a mound about 9.5 feet in height built over it. Later, deposits of soil probably filled in around the mound, reducing its height to the extent of about 2 feet.

The cremated deposit, whose maximum length, breadth, and thickness were respectively 43 inches, 28 inches, and 6 inches, was composed of two contiguous deposits, each of a different degree of incineration. One of these, somewhat less in amount than the other, consisted of cremated human bones in fragments, some exceptionally the size of a man's finger and furnishing complete evidence for determination.

The other and greater deposit was almost exclusively made up of fine particles of cremated material, probably human remains in the main, as a few bits of human bones were in it.

Presumably such belongings of the dead as had been selected for interment with the remains of the individual (if the burial was that of a single individual, which presumably was the case) had been subjected to cremation at the same time as the remains. With the deposit of small particles were a few discoidal shell beads each about .25 inch in diameter.

With the large fragments of calcined bones were scattered: other discoidal beads; one tubular shell bead; a flat, rectangular bead of shell, about .75 inch in length, pierced through its major axis. Also in this deposit were: a considerable number of fragments having belonged to several roughly-chipped implements of flint (one a fragment of a spearhead, 1.75 inch in length); a small part of an earthenware vessel; a bit of stone belonging to a celt. All the objects from these deposits had been subjected to fire. The beads are calcined; the stone had been shattered by heat; even the bit of earthenware shows the effect of prolonged exposure to flame.

It was clear that the cremation of the remains had not been performed in the place where they were found, since there were no marks of fire there. Furthermore, though the cremated deposit was carefully searched, missing parts of the objects referred to were not found, and these, presumably, were left at the place of cremation.

The remaining two mounds on the Haynes Place are but a few feet apart. There is a report that relics were taken from one of them, or from near one of them, when material was obtained to make the nearby levee. One of these mounds, about 4 feet high at present, is of no particular shape, owing to wear and wash. Upon it are a frame house and a small out-house.

The other mound, just within the limit of the cultivated field, originally small, no doubt, has been plowed over until but a few inches remain above the general level.

Trial-holes in these mounds were not rewarded.

MOUNDS ON THE FRIDAY PLACE, LAFAYETTE COUNTY, ARK.

The Friday Place is another of the plantations on Red river so courteously placed at the disposal of the Academy for investigation, by Mr. Henry Moore, Jr., of Texarkana, Ark. Our search at the Friday Place was made under unfavorable conditions. Red river was in flood and had gone over its banks in places. It was necessary for us to visit the mounds on this place in boats, the water extending to the very bases of the mounds and oozing through the mounds themselves, filling with water the lower parts of excavations of any depth.

MOUND A.

In sight from the river bank, on the border of woods, is a beautifully-symmetrical mound of circular outline, 70 feet in basal diameter. Its height is 7.5 feet. A causeway joins the mound on the southern side at a level of about one-half its height. In this causeway was an oval space appearing as if it had been dug out, though no evidence of material obtained from it was in sight. As we have noticed similar depressions in other aboriginal causeways, we are inclined to believe they were made intentionally by the aborigines for a reason of which we are ignorant.

Ten trial-holes, many of which were greatly enlarged, were put down from the summit-plateau of Mound A. Those in the western half of the mound came upon a fire-place which proved to be about 16 feet by 21 feet in extent. This fire-place, which had a maximum thickness of 1.5 foot, was 6.5 feet (measured from the under surface) below the summit-plateau.

The fire-place was worked by our diggers throughout its extent, with the exception of a comparatively small part below a large tree on the center of the mound, where, however, possibly a pit may have been. Our digging, which was carried to a depth of about 8.5 feet, came upon no indication of a pit elsewhere in the mound.

Below the fire-place, that is, 6.5 feet down, there seemed to be an unbroken base-line, though from the height of the mound one would expect such a line at a somewhat greater depth. This base-line was much less distinctly marked in the eastern part of the mound, where the fire-place did not extend. It seemed possible to us that the infiltration of water through burnt material may have accentuated the color of the basal line, which lay beneath the fire-place.

Our trial-holes, passing through this base-line, went several feet into seemingly undisturbed material, river sand and fine gravel in places, the mound itself being composed of a mixture of clay and sand, the sand preponderating.

Nothing but the demolition of the mound could answer the question as to its former use, but this method of inquiry in this region, and especially at a time when horses and mules were taking refuge on the mound, was entirely out of the question.

MOUND B.

This mound, in sight in a northerly direction from Mound A, was small and so surrounded by water that its investigation was not practicable.

MOUND C.

About one-third mile S. by W. from Mound A, in woods, is another mound having a height of but 2 feet 8 inches, yet fairly symmetrical owing to the comparative steepness of its sides and the extent of its level summit-plateau which is 36 feet across, while the diameter of the circular base of the mound is but 50 feet. This mound has an annular approach (resembling the causeway leading to Mound A), its diameter being 41 feet, and the excavated part 23 feet. The height of the causeway is about one foot.

Four trial-holes sunk into the mound reached a basal layer about 2.5 feet from the surface. Further digging under prevailing conditions was deemed inadvisable, and the mound was left (of course, after the careful filling of the holes), to the horses and mules which were approaching it for refuge.

MOUND D.

Two hundred yards approximately S. by W. from Mound C, also in woods, was another mound of irregularly-circular outline. Its diameter was 38 feet; its height, 2.5 feet. In this mound, which was composed of sand with a slight admixture of clay, a central excavation 18 feet square first came upon an interesting little vessel entirely apart from any other object. This vessel, a bowl, containing clay of a degraded white, doubtless used as a pigment, has rudely-executed, trailed lines encircling it. Four equidistant projections, which are hollow and contain small objects that rattle when shaken, are on the body. Other and more interesting vessels of this class will be described in our account of the Foster Place, somewhat farther up Red river.

Six burials came from this mound, five of adults, one of a child, each extended on the back,¹ and all with the heads directed S.²

Burials Nos. 1, 2, and 4 lay together. Burials Nos. 1 and 2, adults, almost certainly a male and a female respectively, lay side by side, about one foot apart. Burial No. 4, adult, lay in part immediately below Burial No. 1, the feet of Burial No. 4 being under the pelvis of the other skeleton, and the upper part of the body extending beyond it. The bones of these skeletons were considerably decayed, though the skull of Burial No. 1 was preserved, the only one saved from the mound.

These three burials lay in a pit, the dimensions of which, so nearly as we could determine, were: length, 11 feet; width at lower end, or near where the feet of the skeletons were, 6 feet; the measurement of the upper end of the pit was prevented by the caving in of sand.

The base-line of this mound was come upon at a depth of 5 feet below its highest part. This base-line, of irregular thickness, ranging between 2 and 6 inches, had been cut through by the pit in which these burials lay and which extended about 4 feet below the base-line. No sign of a pit was noticeable above the base-

¹ One skeleton had the legs crossed at the ankles, the right over the left.

² Two skeletons had the heads directed S. by E., the rest almost due S.

line. Presumably, the grave was made prior to the building of the mound, which probably was erected to commemorate the triple interment.

As in the case of the mound at the Haley Place, already described in this report, burials had been made in the body of this commemorative mound.

Burials Nos. 3 and 5, a child and an adult respectively, lay side by side 2.5 feet below the surface of the mound. No pit was apparent, though it is quite possible that at this depth there was one which was not distinguishable.

Burial No. 6 lay in a pit 8.5 feet in length and slightly less than 5 feet in width at each end. This pit, which was not traceable above the base-line, was plainly apparent cutting through it and extending about 6 inches below it, the base-line in the part of the mound where this burial lay being 4 feet 4 inches down. No doubt a pit had been made in the mound (since a grave from the surface would be deeper than 6 inches), but as water was oozing through the side of the mound when this last burial was encountered, delimitation of a pit in the wet sand was impossible.

As the artifacts found with the three deepest burials were recovered from mud and water, sometimes 2 feet in depth, a statement of their exact positions in respect to the skeletons could hardly be expected, though where most of the objects had been placed was determined, we believe, with the exception of the pottery that lay apart from the skeletons and seemed to have been placed in the grave for the burials in common.

With the burials were eighteen earthenware vessels, nearly all badly broken.

Burial No. 1 had at each side of the head an ear-ornament, blunt pins of shell, each 4.25 inches in length, the heads directed forward. Adjoining the head of each is a shallow, encircling groove, doubtless to accommodate the lobe of the ear.

At the right wrist of this burial were a number of small strips of shell, like those found at the Haley Place, with the exception that those from the Haley Place are undecorated, while these have faint line-work upon them, which once probably formed part of the decoration on some larger object, since it is not complete on the strips.

At the outer side of the left thigh was a shell drinking-cup wrought from a conch (*Fulgur perversum*) from which a circular part containing the spire of the shell evidently had been accidentally broken out. To repair the cup, which no doubt was of value so far from the Gulf of Mexico, whence the shells were brought, a circular part containing the spire had been cut from another conch in such way as to make the part larger than the orifice in the broken shell. Presumably the shell from which this part was cut was intended for a purpose other than the making of a cup, in which case the part containing the spire would not be needed. Next, four equidistant holes had been made in the broken shell surrounding the missing part and four corresponding perforations had been drilled in the portion intended for repair. Doubtless, then, this portion had been placed above the missing part and lashed on with cord, sinew, or strips of hide, and the marginal parts of the addition coated with material to render the junction water-proof, probably gum, since no asphalt was present. The shell cup showing the circular

opening uncovered, then closed with the shell addition, and lastly the addition itself, are shown in Figs. 76, 77, 78.

At the feet of this burial was a mass of gray material, probably an impure clay used as pigment; and between Burials Nos. 1 and 2 were two shell disks, each about 2.25 inches in diameter, parallel and about 1.5 inch apart. Neither disk has decoration or perforation of any kind. A number of similar disks were found by us elsewhere along Red river in Arkansas.



FIG. 76.—Shell cup showing broken part and portion of another shell for repair. Friday Place, Ark.
(Diam. of body 6.7 inches.)

Burial No. 3, the child, had over the right femur a small bowl, and at the neck a pendant (Fig. 79) made from green slate, to resemble a lizard in outline. Two holes take the place of eyes and served for suspension.

Burial No. 5 had, near the skull, two bottles of medium size, both undecorated, and at the left femur a bowl. Three other vessels lay near the feet.

Burial No. 6 had been favored with twelve vessels variously placed in the pit. At the outer side of the left femur was a shell drinking-cup, and a double-pointed bone implement, very slender, 7 inches in length, lay with part of a similar implement about 2 feet from the head.

At the outer side of the right thigh and extending up it were six or more shell strips and one small, shell disk, all imperforate.

Thirty-eight vessels of earthenware came from this mound, of which eight were unbroken, though some included under this head are cracked to such an

extent that their inclusion for long in a list of unbroken vessels is problematical.

The vessels from this place, which present no features new to the region, have as usual among them many upon which the presence of soot indicates their former use for culinary purposes. In two of the vessels were mussel-shells.

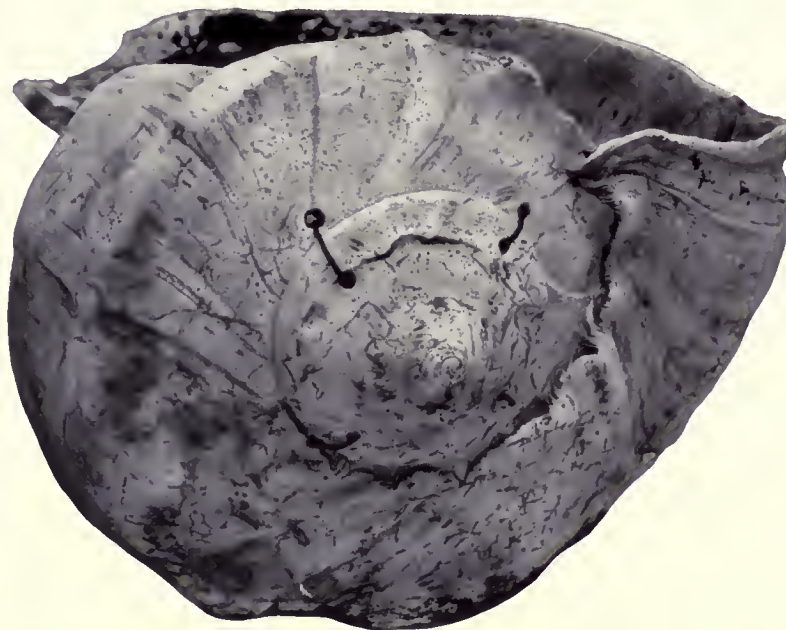


FIG. 77.—Shell cup with added part tied in place. Friday Place, Ark. (Diam. of body 6.7 inches.)

It is impossible to say whether or not other vessels remain in Mound D, as the increasing height of the water around the mound made further investigation impossible.

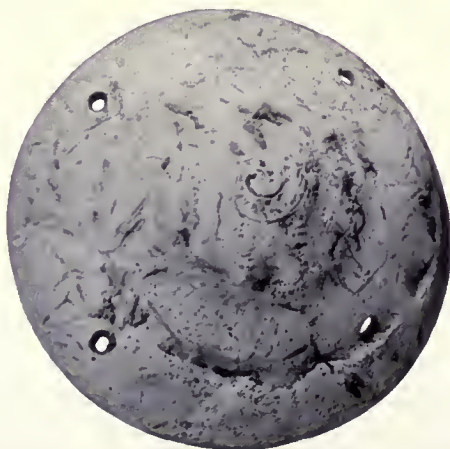


FIG. 78.—Part of another shell used to repair shell cup. Friday Place, Ark. (Diam. 2.2 inches.)



FIG. 79.—Pendant of slate, in form of lizard. Friday Place, Ark. (Full size.)

Vessel No. 17. This bottle (Fig. 80) upon which contact with roots has conferred a rough appearance, has, surrounding the union of the neck with the body,

a series of diamond-shaped, concentric figures beneath which are designs based on the scroll. The line-work seemingly is trailed.



FIG. 80.—Vessel No. 17. Friday Place, Ark. (Height 8.4 inches.)

Vessel No. 28. This vessel (Fig. 81), which has been used for culinary purposes as shown by the soot upon it, has an incised decoration forming scrolls in connection with the background of the ware.

Vessels Nos. 6 and 33. These vessels with incised decoration which has been filled in with white pigment, are shown in Figs. 82, 83, respectively.

Vessel No. 1. This bowl, 1.7 inches in height, is decorated with deeply-trailed, circular lines and has four equidistant projections which contain objects which rattle when shaken. It is of the same variety as is Vessel No. 80 described in our account of the pottery of the Foster Place, though the vessel from the Friday Place is smaller than the other.



FIG. 81.—Vessel No. 28. Friday Place, Ark. (Diam. 7 inches.)



FIG. 82.—Vessel No. 6. Friday Place, Ark. (Height 5.1 inches.)



FIG. 83.—Vessel No. 33. Friday Place, Ark. (Diam. 7 inches.)

MOUND ON THE MOORE PLACE, LAFAYETTE COUNTY, ARK.

On the Moore Place (formerly the Murphy Place), belonging to Mr. Henry Moore, Jr., of Texarkana, Ark. (whose Battle Place and Friday Place already have been described in this report), in sight from the river, is a mound part of which has been under cultivation. Portions from one end of it have been removed for the construction of a levee, and a road passing over the mound gradually has worn away and divided the elevation into two parts which usually locally are referred to as two mounds.

The mound, whose present length is about 75 yards and whose maximum width is 35 yards, approximately, extends NW. and SE., the maximum height, about 5 feet, being attained at the northern end, whence the mound gradually slopes to the general level of the field.

Though a few bits of earthenware and chips of flint lay on the surface of the mound, indicating possible occupancy in aboriginal times, trial-holes, except in two or three instances where the soil was darker, went through yellow sand. All reached undisturbed clay. The sole object encountered was a small, flat, flint pebble, rudely chipped.

MOUNDS ON THE FOSTER PLACE, LAFAYETTE COUNTY, ARK.

On the Foster Place, belonging to Mr. L. A. Foster, of Hope, Ark., is a mound half, or almost half, eaten away by the river. The major diameter of the remaining part is about 50 feet; its height, 4 feet. Considerable digging in and near this remainder of the mound came upon no aboriginal remains of any kind.

About 200 yards E. from the digging just described is a mound in the corner of a cultivated field, though but a small part of the mound itself has been under

cultivation. This mound, which is irregularly circular, has a diameter of about 50 feet and a height of 4.5 feet. A tree 14 feet in circumference 2.5 feet from the ground monopolizes the central part of the mound.

On the plowed ground nearby were many fragments of pottery and chips of flint, but, curiously enough, no arrowheads rewarded a careful search.

Trial-holes, one of which, SW. of the central tree, was 7.5 feet by 13 feet, were sunk over the surface of the mound and carried to a maximum depth of 7 feet 9 inches to underlying yellow sand in search of sub-basal pits. Some of the trial-holes came upon burials in the southern half of the mound, mostly well down the slope. Others were similarly successful in ground extending from the southern side of the mound into the cultivated field. The ground at that place was somewhat higher than the rest of the field and had risen under deposits made during aboriginal occupancy. From this ground had been plowed up the debris we have referred to which lay all over it and over parts of the field near it. Human bones and pottery, in fragments, were found in places on this ground.

The very irregular space in which burials were found, though persistent digging was done for days in all parts of the mound and its vicinity, was an area about equivalent to 35 feet square. Eleven burials were encountered, ten of adults, one of a child, none with bones in condition to preserve. The adult skeletons lay extended on the back; the legs of two of the skeletons were separated, doubtless to allow the introduction of the pottery vessels which were found between the legs.

Six of the ten adult skeletons lay with the skulls directed S. or within two or three degrees from S.; the remaining four headed respectively N., N. by E., N. by W., S. by E., or very nearly so.

The burials lay in pits, which, however, with one exception, were difficult to trace with exactness as they were large, and in the restricted space in which they had been placed, sometimes intersected one another. Furthermore, though there was much clay in the made-ground locally, there was also much sand, so that in attempting to dig out the pits one encountered serious downfalls of material which obliterated the boundaries of the graves.

Though the lower part of the slope of the mound and the made-ground extending from its southern side had been cultivated, and we found burials there disturbed by the plow, nevertheless a pit 5 feet 8 inches in depth was discovered in the made-ground outside the limits of the mound proper. Other burials in this ground ranged in depth between the superficial ones cited and one at a depth of 3 feet 10 inches.

A pit in the body of the mound, the exception we have noted, began as to its northern boundary near the southwestern side of the central tree and extended somewhat down the southern slope. Its limits were clearly defined, the material in which it was differing somewhat from that of the made-ground of the extension from the southern part of the mound in which most of the burials were. Its dimensions were: length, 9 feet 2 inches; width, northern end, 6 feet 10 inches; southern end, 6 feet 8 inches. The depth of this pit, which was traceable from the surface, was 7 feet 8 inches to clear, yellow sand.

On the bottom of this pit lay two adult skeletons (Nos. 3 and 9) extended, but in reverse directions, one (No. 3) placed immediately above the other, the right foot resting on the left shoulder of the under one, the left foot over the skull. The left foot of the lower skeleton was under the right shoulder of the upper one, and the right foot lay under the cranium. The skeletons were not centrally placed in the pit, but lay somewhat diagonally, approaching the western side at the northern end and the eastern side at the southern end.

All the burials at the Foster Place had been well provided with mortuary tributes. In addition to other objects the eleven burials there had with them no fewer than two hundred and forty-six vessels of earthenware and probably many more. That there were more vessels than the number given (which is the total of the score taken when the vessels, broken and whole, were removed from the graves) is certain, as from one confused mass of broken pottery counted as one vessel on removal several almost complete vessels afterward were put together under our directions.

Out of all the great number of vessels found, but sixteen were removed unbroken, owing to the deplorable wreckage that had ensued in consequence of the method followed by the aborigines at this place in depositing the vessels. The receptacles as a rule, had not been arranged singly, or, if in a group, at some little distance apart, but had been heaped together, one above another and one against another, so that later, when the pit was filled, and later still when the ground settled, the vessels were crushed to bits into and against each other and remained in layers of intermingled fragments. In addition, this grinding together presumably was the cause of the state of disintegration into which parts of many of the vessels had passed.

One of the great deposits, after having undergone the crushing process described, and, of course, having been greatly reduced in bulk, still had a height of 22 inches.

The deposits of vessels, as a rule, were not immediately with the skeletons, but presumably often had been piled against the walls of the pits (in the corner perhaps), though generally they were connected with the burial through the presence of a few other vessels arranged much less closely between the deposit and the burial. It was among such vessels that the few entire ones obtained by us at the Foster Place were found.

The vessels among themselves had been variously placed. Some contained other vessels; some were covered by others inverted, or by vessels imposed in an upright position; in several instances shell cups had been inverted over the necks of bottles—all of which could be distinguished as the shattered vessels lay in the ground prior to removal.

In a few of the vessels were badly decayed mussel-shells, spoons, placed singly. In a few were decaying bones of small fish and of the gray squirrel (*Sciurus carolinensis*) which Professor Lucas has determined for us. Bones of this animal also were found in five or six instances lying near burials, though not enclosed in vessels.

In the deep pit in the mound (Burials Nos. 3 and 9) were bones of the Virginia deer which presumably had been placed with the dead, contained in meat.

Other vessels held, in two or three instances, clay of a degraded white, pigment no doubt; and several times, also in vessels, was found green pigment which Doctor Keller describes as "a mixture of glauconite and a soft and friable clay, probably kaolin. It contains a large proportion of iron in the ferric and ferrous states, and a little potash. The outer crust is oxidized and shows some red spots of ferric oxide."

As detailed in our description of individual vessels from this place, a considerable number were found here smeared over with green pigment, not in connection with the decoration, since the green coating was often found over vessels already decorated with pigment or otherwise, but placed as a coating as if done in fulfilment of some ceremonial rite of mourning. Much of this coating was removed when the vessels were washed, but on a number of them, usually bottles, a considerable amount of the glauconite pigment still adheres.

Four small earthenware pipes came from the Foster Place, one of which is shown in Fig. 84. This pipe resembles one, figured in this report, which came from the McClure Place, on which is, presumably, the extension present on a class of "monitor" pipes, so called, but in these instances pressed up against the bowl instead of projecting horizontally below it. The projection shown on the pipe from the McClure Place is square at the end, like some found in the mound on the Haley Place, while that on this pipe from the Foster Place is pointed, as are the projections on other pipes from the Haley Place.



FIG. 84.—Earthenware pipe. Foster Place, Ark. (Full size.)

Another pipe from this place has the same pointed extension turned up against the bowl, and in this case this part is less broad than it is on the pipe just described, and resembles more closely the pointed projections seen on some of the pipes from the Haley Place.

A third pipe from the Foster Place has a mere indication of the upturned projection, which is a still more conventionalized treatment of the projection. This pipe, also, has the peculiar "shoulder" against which the stem of the pipe abutted, as described and shown in our account of the pipe found at the McClure Place.

The fourth pipe from this place was badly crushed and much of it was missing.



FIG. 85.—Arrowhead of flint. Foster Place, Ark. (Full size.)

We have referred to the fact that no arrowheads lay with the midden debris on the surface at this place. But few were found with the burials—three in one deposit, two singly, all of flint. One of the single arrowheads is shown in Fig. 85.

In one deposit were four masses of kaolin (which the reader will recall is a white clay used as pigment by the aborigines), each somewhat smaller than a closed hand. Of this material Doctor Keller writes: "This specimen is almost pure kaolin of the variety known as lithomarge. The bulk of it is pure white, but it shows veins of red ferruginous clay, both at the top and bottom."

From the Foster Place, with other objects, came a small amount of material resembling asphalt, as to which Doctor Keller writes as follows:

“The little black pieces marked ‘Asphalt? Burial No. 2, Foster Place, Ark.’ are an asphalt-like material which differs from true asphaltum in that it is not soluble in liquids like ether, carbon disulphide, and turpentine, and in that it does not melt on heating. It gives a pure brown powder on grinding, and leaves a perfectly white ash on burning. This ash, which constitutes about 10 per cent. of the substance, consists almost entirely of lime and magnesia, containing traces of phosphoric acid.”

Four flint pebbles, each about 1.5 inch in major diameter, all slightly chipped, lay together with a burial.

With separate burials were three small, chisel-shaped, ceremonial axes, on one of which the mark where the handle was is plainly visible. These little axes, of slate, of silicious rock, of shale, are respectively, 4.2 inches, 3.8 inches, 3.3 inches, in length.

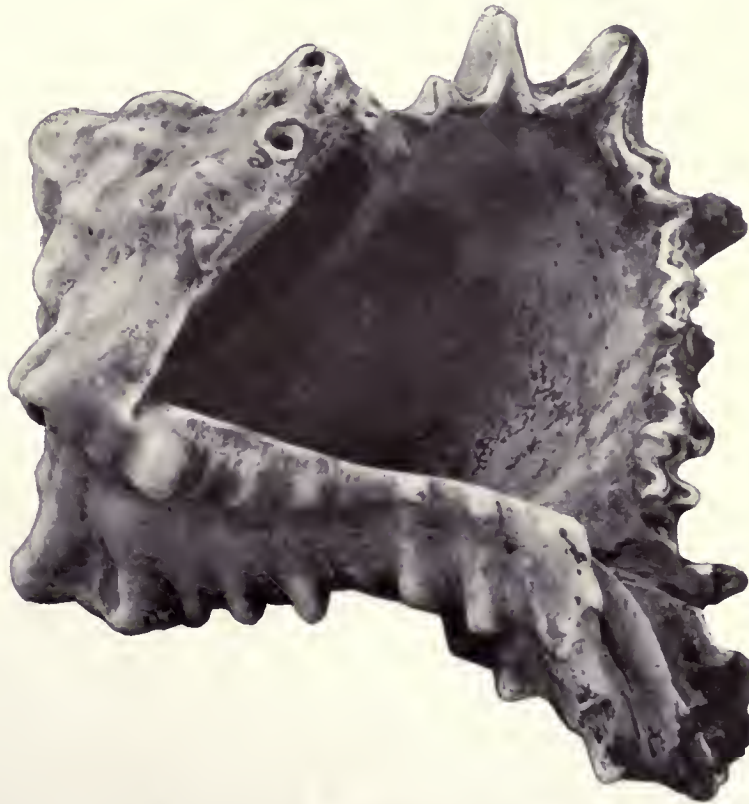


FIG. 86.—Shell cup. Foster Place, Ark. (Length 5.1 inches.)

Several piercing implements of bone, all badly decayed, were found singly with burials, as was a deposit of slender, bone pins somewhat similar to those to be described later in the account of this place, which, however, are in a much better condition.

The aborigines who dwelt at the Foster Place employed shell to a considerable extent for practical use and for ornament. Pearls placed at the neck, all badly

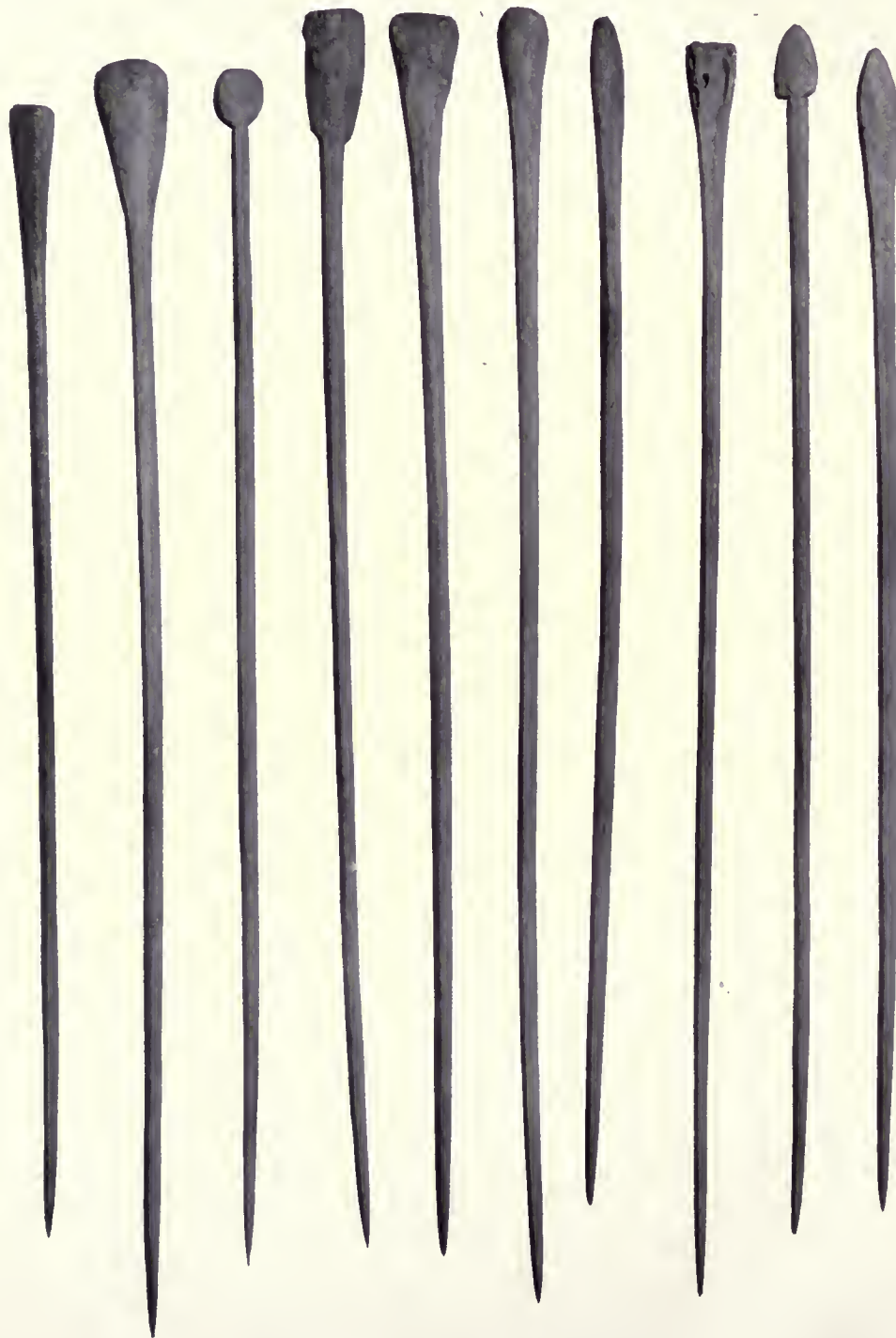


FIG. 87.—Bone Pins. Foster Place, Ark. (Full size.)

decayed, lay with three burials; and shell beads, some 1.5 inch in major diameter, were encountered seven times, though not with that number of interments.

In thirteen cases small, shell disks and sections of shell, usually oblong, were found, the disks in pairs, parallel, a little distance apart. As a rule these objects are imperforate, though a pair of disks each have a small perforation on one side, and small, single holes are present in two of the oblong sections. In one instance some of these shell sections lay near pin-shaped ear-ornaments, each 4 inches in length, and may have been attached to them in one way or another.

Thirteen shell cups lay with burials, two of which cups merit description. All but one were wrought from conch-shells (*Fulgur perversum*). The exception is a shell with projecting spines (*Murex spinacosta*). The columella and part of the body whorl have been removed and perforations for suspension have been made, one at the beak, one near the shoulder (Fig. 86). The other cup has engraved decoration on the outside, which, owing to decay and incrustation, is none too plainly visible. The design, however, consisting of groups of curved lines, is rudely executed and would not be striking under any circumstances. This shell had, for purposes of suspension, two perforations near the shoulder and one at the beak. Some of the other shell drinking-cups also were perforated for suspension.

Two most interesting deposits were found at this place.

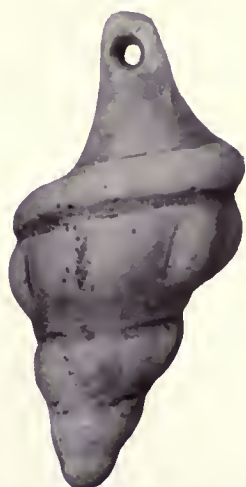


FIG. 88.—Pendant made from a small *Fasciolaria*.
Foster Place, Ark. (Full size.)



FIG. 89.—Pendants of shell, in form of lizards.
Foster Place, Ark. (Full size.)

Burial No. 4, the skeleton of an adult, had, near the head, a deposit as follows: eighteen delicate bone pins (a selection from which is shown in Fig. 87), placed together, almost vertically, all points down, some pins, in places, dyed green from contact with copper carbonate; a small shell drinking-cup; one of the ceremonial axes already described; a globular bead of marble, about one inch in diameter; a pendant made from a young marine shell (*Fasciolaria gigantea*), carefully smoothed and perforated for suspension (Fig. 88); a columella of a conch (*Fulgur*), 7.8 inches long, with a perforation at the lower end, having still attached to it the spire and a surrounding portion which, like the columella, have been carefully smoothed;



FIG. 90.—Pendant of claystone, in shape of a lizard, formerly coated with sheet-copper. Foster Place, Ark. (Full size.)

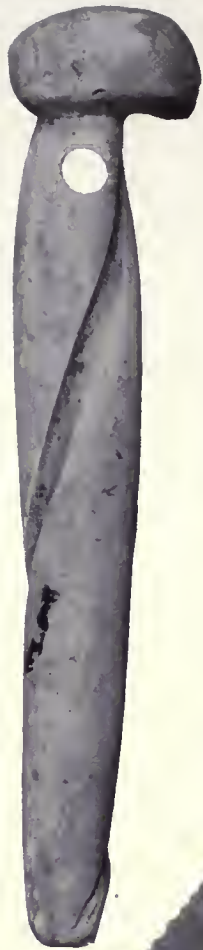


FIG. 91.—Shell ear-ornament. Foster Place, Ark. (Full size.)



FIG. 92.—Blade of flint. Foster Place, Ark. (Full size.)

FIG. 93.—Implement of flint. Foster Place, Ark. (Full size.)

seven pendants 2 to 3.5 inches in length, all made from columellæ of the conch, some with rude, line decoration; one small ear-plug of shell; two pendants (Fig. 89), and part of another one, of shell, each with perforation through the head for suspension; a lizard carved from limestone, with a perforation through the neck for suspension (Fig. 90). This pendant, on removal, was coated with sheet-copper which, however, badly carbonated, has almost entirely flaked from the stone. This ornament, when highly polished, before the deterioration of the copper, must have been effective indeed.

On each side of the head of this burial was a pin-shaped ornament of shell, 5.5 inches in length, one having a perforation through the shank just below the head, and both grooved there to accommodate the lobe of the ear (Fig. 91). These ornaments, wrought from the columella of the conch, are doubtless of the kind described by Du Pratz, which he says were made by the aborigines from the axis of a large shell called *burgo*, the ornament having a head somewhat larger than the rest to prevent its slipping through the perforation of the ear.

Burial No. 10, adult, had on the thorax a superb, double-pointed, leaf-shaped blade¹ of flint, 13.6 inches in length, 2.6 inches in width, and but .3 inch in maximum thickness (Fig. 92).

On this triumph of aboriginal endeavor in stone were piled, parallel, ten double-pointed implements, six of fossiliferous chert, four of flint. These implements, which range in length between 7 and 8.8 inches, do not proclaim their former use by their appearance. Some show polish as by wear. Several are pointed as for piercing; while some, on the other hand, have blunt points. One of these latter implements, shown in Fig. 93, has an added feature of interest. In its making, the implement has been broken, the two parts have been completed, and then marginal notches have been made near the broken areas to facilitate the lashing together of the two parts. That the breakage did not occur after the completion of the implement is evident from the fact that the faces of the two parts at the line of fracture do not correspond.

With the objects just described were: two shell gorgets, one placed on edge, the other lying flat (Figs. 94, 95); a small mass of glauconite (green pigment); a mass of red pigment (red oxide of iron).

Also with Burial No. 10, forming part of the deposit, and lying together at that end of it which was nearest the skull, were the two ear-ornaments of limestone, shown (after slight restoration) in Fig. 96, where the obverse of one, presenting a central boss surrounded by a marginal part sloping outward and upward, and the reverse of the other with the part used in fastening through the lobe of the ear, are illustrated. These ornaments, each with a maximum diameter of 4.4 inches, have been coated with sheet-copper on the obverse sides. Much of this material had

¹This region seems to have possessed able workers in stone in aboriginal times. In "The Stone Age in North America," by W. K. Moorehead, Vol. I, Fig. 199, are shown some beautiful "drills" (which we believe to be arrowheads), found by Mr. W. P. Agee, Jr., of Hope, Ark., who writes us that these points (more than two hundred of them) were found by himself in a mound in this region, near Red river, in 1906. They were found in one lot, all being placed around the head of a skeleton. They range in length between 2 and 4.5 inches.



FIG. 94.—Gorget of shell. Foster Place, Ark. (Full size.)



FIG. 95.—Shell gorget. Foster Place, Ark. (Diam. 4.5 inches.)



FIG. 96.—Ear-plugs of limestone, formerly copper-coated. Foster Place, Ark. (Full size.)

decayed away before the discovery of the ornaments, and still more of it was lost on removal and in cleaning.

With Burial No. 11 was a pair of ear-ornaments of the class just described. Each of these ear-plugs, also of limestone, with a maximum diameter of 3.1 inches, bears obversely, in relief, an eight-pointed star surrounding a central boss (Fig. 97). These ornaments apparently have been coated on both sides with sheet-copper, considerable of which, greatly carbonated, still remains on those parts of the ornaments that were exposed to view when the ornaments were in use. These ear-plugs, like those with Burial No. 10, lay together near the shoulder, and were not in place at each side of the head.

The pottery from this place, the best of which has been cemented together with unimportant restorations when needed, includes a number of large vessels coated with an inferior red, one of which is shown in Plate XLIII.



FIG. 97.—Ear-ornaments of limestone, having had coating of sheet-copper. Foster Place, Ark. (Full size.)

The ware of most of the better vessels found is of high grade and often bears a polished surface. Great care was given to modeling by the potters of this place, and asymmetrical vessels were not met with by us, even cooking-vessels being carefully made. Undecorated vessels were rare, though many, of course, have incised decoration to only a limited extent. Much of the incised decoration is filled in with white or with red, and a few vessels have a part of the line-work filled in with one color and a part with the other. There is comparatively small variety in shape, but the graceful form of the vessels leaves little to be desired. Taking everything into consideration, we believe we are justified in saying that the pottery found at the Foster Place is of a higher average excellence than that met with by us at any

other site on Red river, except possibly Gahagan, where, however, too few vessels were found to justify a comparison as to average.

Before proceeding to describe the vessels from this place that offer features of exceptional interest, we would quote from a letter from Mr. Charles C. Willoughby in relation to many of the symbols that appear on the pottery of Red river in Arkansas, including much earthenware from the Foster Place. Mr. Willoughby writes :

“The incised designs on the water-bottles are very interesting to me and I think there can be little doubt as to their general meaning. The sun-symbol seems to be prominent.



FIG. 98.—Vessel No. 93. Foster Place, Ark. (Height 4.3 inches.)

“Other cosmic designs—the circle or concentric circles with four radiating points (surrounding the necks of Vessels Nos. 20, McClure Place, and 239 and 240, Foster Place), the triskele, the swastika and the curved tadpole-like figure (near the neck of Vessel No. 23, McClure Place) so often connected with the eye of the horned serpent god, appear to be associated with the universe, and probably represent the sun, the four directions, the winds, the waters, and their various gods.

"These symbols seem to have been intimately associated with the religious ideas of various American tribes, but especially with those of the Mississippi basin, both historic and prehistoric."

Mr. Willoughby's paper on "An Analysis of the Decorations upon Pottery from the Mississippi Valley"¹ is of great service to those interested in the pottery of Southern United States.

We now take up the description of individual vessels from the Foster Place.

Vessel No. 93. There is shown in Fig. 98 an interesting vessel which we believe to be of a new variety. The body, covered with deep, trailed decoration, is circular with four equidistant projections, which are hollow and contain objects which rattle when shaken. The body of this vessel rests on four upright supports, which are joined to a base roughly annular in shape.

Vessel No. 25. This vessel is in all respects similar to Vessel No. 93, except as to size, its height being 3.6 inches.



FIG. 99.—Vessel No. 198. Foster Place, Ark. (Height 4 inches.)

Vessel No. 198. The vessel shown in Fig. 99 resembles the two just described as to the form of supports and base. The body, however, which is without the hollow projections, is thickly covered with small knobs. This vessel is partly filled with green pigment, glauconite, the constant use of which on vessels at this place has already been described.

¹ "Am. Journ. of Folk-Lore," Vol. X, 1897.



FIG. 100.—Vessel No. 115. Foster Place, Ark. (Height 7.9 inches.)

Vessel No. 80. This bowl is of the same description as Vessels Nos. 93 and 25 with the exception that it has been made without the upright supports and the annular base. The base of this vessel is flat. The maximum diameter is 9 inches. In the bowl was a mass of light-colored clay, doubtless a pigment.

Vessel No. 115. We have here a bottle of fine, polished, black ware with the usual symbols found on bottles from this region, incised in four series on the body. The line-work has been filled in with red pigment. In places the green, glauconite paint, presumably used in a ceremonial way, still adheres (Fig. 100).



FIG. 101.—Vessel No. 99. Foster Place, Ark. (Height 6.4 inches.)

Vessel No. 99. This gem (Fig. 101), a bottle of highly-polished, black ware, bearing sun and cosmic symbols, incised, and having in each of the four interior circles of the series a swastika, is another example of the beautiful bottles found at the Foster Place, most of which, however, as we have related, were woefully shattered. In the incised line-work is red pigment; and over the bottle, in places, still adheres the green glauconite.

Vessel No. 1. This bowl (Plate XLII) of polished, black ware with white pigment rubbed into the incised design, which consists mainly of series of crescentic lines, resembles a number found in this region. In this particular bowl more white pigment than is usually found remaining is present in the line-work.



FIG. 102.—Vessel No. 239. Foster Place, Ark. (Height 6.9 inches.) FIG. 103.—Vessel No. 45. Foster Place, Ark. (Height 5.8 inches.)

Vessel No. 239. In Fig. 102 is shown a bottle of black ware with an interesting, incised decoration based on sun-symbols, having much red pigment still remaining in the lines. The bottle is smeared with green pigment in places.

Vessel No. 45. This bottle (Fig. 103), of fine, polished, black ware, quadrilateral, has, by way of decoration, incised designs of the class usually found in this region. The line-work has been filled in with red pigment, and in places on the bottle, the green glauconite still remains.



FOSTER PLACE, ARKANSAS, VESSEL NO. 1. (DIAMETER, 6.6 INCHES.)



FIG. 104.—Vessel No. 103. Foster Place, Ark. (Height 6.4 inches.)

Vessel No. 103. This graceful bottle (Fig. 104), like others from this place, bears incised decoration showing symbols of the sun and having much of the line-work still filled in with red pigment. Traces of glauconite pigment are evident on the bottle.



FIG. 105.—Vessel No. 240. Foster Place, Ark. (Height 7 inches.)

Vessel No. 240. In this illustration (Fig. 105) is shown another bottle from this place with variations of the usual symbols, incised. The line-work has been filled with red; traces of green pigment are smeared over the bottle.



FOSTER PLACE, ARKANSAS, VESSEL NO. 56. (HEIGHT, 10.75 INCHES.)

Cookayne Boston



FIG. 106.—Vessel No. 37. Foster Place, Ark. (Height 7.4 inches.)

Vessel No. 56. This vessel (Plate XLIII) is one of six, all more or less similar, found in a grave at the Foster Place. This vessel, coated with red pigment inside and out, has, in addition, a rather scanty, incised decoration, not overcarefully done, in which in places traces of white pigment remain.

Vessel No. 37. This bottle (Fig. 106) has a decoration on the body largely

consisting of concentric circles and on the neck, of encircling bands. On the bottle bands of red alternate with the yellow of the ware, all being defined by incised lines in which traces of white pigment remain. To this extent the decoration is polychrome which it is unusual to find south of the Arkansas river, though the general use of kaolin or of the red oxide of iron in the line-work of vessels of this region probably accounts for the presence of the white in the incised lines of the bottle.



FIG. 107.—Vessel No. 44. Foster Place, Ark. (Height 4.3 inches.)

Vessel No. 44. This bowl of yellow ware (Fig. 107) which forms a background for the scroll decoration in bands of red, presents a rather unusual feature in that the red decoration is in relief, the ware having been scraped away in the intervening areas to make it so.



FIG. 108.—Vessel No. 114. Foster Place, Ark. (Diam. 7.9 inches.)

Vessel No. 114. This graceful bowl (Fig. 108) of hard, thin ware bears incised decoration in which still linger traces of red pigment. Four equidistant projections on the rim give a pleasing appearance, breaking as they do the usual monotonous effect of the rims of vessels of this class.

A considerable number of bowls of the same graceful form this one possesses, and similarly decorated as to pattern, but varying white or red as to the pigment in the lines, and with a considerable variation as to size, came from this region.



FIG. 109.—Vessel No. 245. Foster Place, Ark. (Height 6.5 inches.)

Vessel No. 245. This vessel (Fig. 109), almost a hopeless wreck when found, and whose fragments were mingled with those of several other vessels, has been, after very protracted effort, put together with slight restoration. The form is compound—a bowl resting on another bowl. The decorations, incised, are common to the region, that of the lower vessel having the line-work filled in with white pigment, while red pigment is in the line-work of the upper vessel.

Another vessel (considerable parts of which are missing) exactly like this one save that the placing of the pigment in the lines is reversed, the red being below and the white above, was found with Vessel No. 245.



FIG. 110.—Vessel No. 38. Foster Place, Ark. (Height 4.8 inches.)

Vessel No. 38. This vessel (Fig. 110) of fine black ware, has a compound form—a bowl set on the opening of a pot. The decoration, incised, which is on the exterior upper part only, has been filled in with white pigment. The handles, which confer a graceful effect, are about 3 inches in length and are for adornment solely as the perforations in them are but partial.

Vessel No. 128. In Fig. 111 is shown a bowl from which part is missing. The incised and punctate decoration has been filled in with white pigment, much of which remains. There is, on one side (and doubtless a similar one was present on the opposite side) a figure of a quadruped modeled in relief. The tail is missing.

Vessel No. 242. This bottle (Plate XLIV), a gem of the potters' art, quadrilateral, of highly-polished, black ware, bears a carefully-executed design in which the sun-symbol has a prominent part. The line-work has been filled in with red pigment which remains in almost perfect condition. This beautiful bottle, without a blemish of any kind, was found under favorable conditions, it having been placed alone in one part of the grave some distance above the burial.



FOSTER PLACE, ARKANSAS, VESSEL NO. 242. (HEIGHT, 6.1 INCHES.)



FIG. 111.—Vessel No. 12S. Foster Place, Ark. (Diam. 4.9 inches.)



FIG. 112.—Vessel No. 17. Foster Place, Ark. (Height 4 inches.)

Vessels Nos. 17, 21, 42, 139, 178, shown in Figs. 112, 113, 114, 115, 116, respectively, are fair examples of the form and of the incised and punctate decoration of some of the vessels from the Foster Place.



FIG. 113.—Vessel No. 21. Foster Place, Ark. (Diam. 4.3 inches.)



FIG. 114.—Vessel No. 42. Foster Place, Ark. (Height 4.6 inches.)

SOME ABORIGINAL SITES ON RED RIVER.

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FIG. 115.—Vessel No. 139. Foster Place, Ark. (Height 4.5 inches.)



FIG. 116.—Vessel No. 178. Foster Place, Ark. (Height 3.5 inches.)



FIG. 117.—Vessel No. 96. Foster Place, Ark. (Height 7.4 inches.)

Vessel No. 96. This striking bottle of beautiful, polished, black ware, with wide neck flaring near the rim (Fig. 117) has a decoration based on the scroll and filled in with punctate markings.

Vessel No. 81. This vessel of yellow ware and bearing carefully-executed line and punctate decoration (Fig. 118), has the shape of many cooking-vessels from this region but shows no effect of fire.



FIG. 118.—Vessel No. 81. Foster Place, Ark. (Height 6.7 inches.)

Vessels Nos. 14, 83, 218, shown in Figs. 119, 120, 121, respectively, are cooking-vessels displaying the care bestowed on many of this class in the region of Red river in Arkansas.

Vessel No. 118. This vessel, somewhat resembling an inverted, truncated cone in shape, is coated with red pigment inside and out. There is a small shoulder below the rim on which is rude, incised decoration of parallel lines. The rim is slightly scalloped. Height 8.7 inches.

But a few feet away from the mound just under description at the Foster Place is another which has been somewhat larger than its neighbor, but much of it has been scooped out and carried away for use on the nearby levee. Numerous trial-holes put down in the remainder of this mound and around it were without success.



FIG. 119.—Vessel No. 14. Foster Place, Ark. (Height 5.4 inches.)



FIG. 120.—Vessel No. 83. Foster Place, Ark. (Height 6 inches.)



FIG. 121.—Vessel No. 218. Foster Place, Ark. (Height 7.4 inches.)

MOUND NEAR DOOLEY FERRY, HEMPSTEAD COUNTY, ARK.

In sight from Dooley Ferry, on property belonging to Judge J. M. Hanegan, of Hope, Ark., is a mound much worn and washed, and having a large excavation in its upper part, the work of previous diggers. It is hard to say what the original shape of the mound has been. Its present height is about 7 feet, its diameter 85 feet. No sign of bone was seen where the former digging had been, nor was anything observed indicating the presence of an aboriginal site on the surface of the adjacent field. Some digging in the remaining part of the mound showed clay of a raw, red appearance. The investigation was not pressed.

MOUNDS ON THE CRENSHAW PLACE, MILLER COUNTY, ARK.

The Crenshaw Place, of which Mr. William Nichol, of Pine Bluff, Ark., is the owner, has a considerable reputation for aboriginal relics found there, especially after the great flood which swept over Red river valley in 1908.

This plantation was in use for pasturage at the time of our visit, so that surface debris from midden sites was less evident than otherwise it might have been. Nevertheless in places were broken pottery, flint pebbles, and a few arrowheads. On the place are six mounds, shown in the plan (Fig. 122), designated by letters for greater convenience in description.

MOUND A.

Mound A, oblong with a summit-plateau in the center of which is a large tree, is about 10 feet in height. Its present outline is much impaired, but probably it once was square. Its present basal diameter is 150 feet, approximately. The summit-plateau, however, is 80 feet in diameter N. and S., and but 52 feet E. and W. The mound yielded no indication of having been used for purposes other than domiciliary. The digging, however, was not carried to an extent to determine the matter.

MOUND B.

Mound B, about 5.5 feet in height, was furrowed by rain in places. Irregularly circular as to the base, its diameter was about 85 feet. It was composed of a mixture of clay and sand, in which the clay greatly predominated. About 3 feet from the surface this material was so hard that a pick was needed to remove it. Under such conditions one can imagine the state in which earthenware in it was recovered. This mound was fairly riddled with trial-holes, some of which, coming upon burials, were greatly enlarged.

Five burials were encountered (Nos. 1 to 5, inclusive).

Burial No. 1. This burial, the skeleton of an adult at full length on the back, heading N., lay at a depth of slightly more than 2 feet. The bones were badly decayed, as were all in this mound, none being in a condition to save. With the burial were two vessels of earthenware.

Burial No. 2 consisted of a layer of bones, including four skulls. With the deposit was a vessel of earthenware and a celt of quartzite, 4 inches in length.

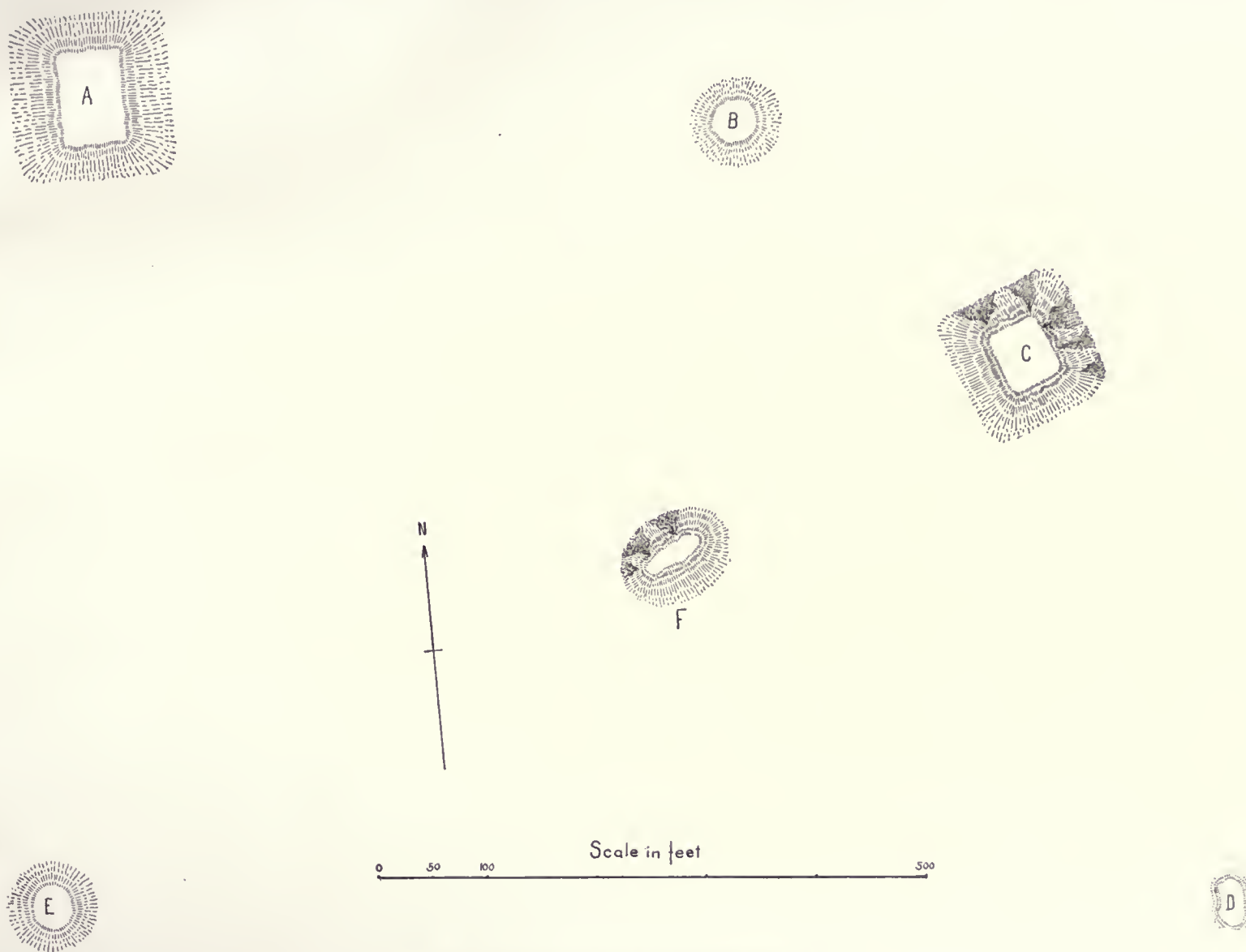


FIG. 122.—Plan of mounds. Crenshaw Place, Ark.

Burial No. 3 was a layer of bones which, beginning in the slope of the mound, at a depth of 2 feet 9 inches from the surface, continued in and ended 3 feet 9 inches below it. This great deposit of bones, which included seventeen skulls, was without arrangement save that the skulls were in two groups, one at the north-western, and one at the southwestern, margin of the deposit; and that in one place there had been an attempt to pile the long-bones parallel and horizontal.

Along the northeastern part of the deposit of bones were arranged ten earthenware vessels, one of which contained a mass of kaolin.

Burial No. 4 was a skull and a number of other bones thrown together without order, 3 feet from the surface.

Burial No. 5, the remains of the skeleton of an adult extended on the back, the head directed SE. by S., lay 3.5 feet from the surface. With this burial were: six earthenware vessels, one containing kaolin, and a small celt which we parted with before determining its material.

One pottery vessel was found unassociated, as were four others, placed together and having with them many pebbles and the decaying remains of a shell (tortoise or turtle), seemingly a rattle. Beyond question the bones belonging to a burial with which these vessels had been had disappeared through decay.

The earthenware vessels from this mound (Nos. 1 to 24, inclusive), many of which are broken, are of coarser ware than is generally found in this region, and the incised decoration, when present, does not reach the standard of that usually found along Red river in Arkansas.

The burials in this mound were comparatively shallow, and in the main the soil above them was moist. Three of the burials, moreover, lay in different planes, their graves intersecting or intersected, so that with one exception we were unable to trace the limits of pits.

MOUND C.

This mound has been quadrangular, but previous digging into its sides and wash of water have greatly impaired its outlines. Diameters measured in two directions were each 127 feet; but the summit-plateau in the same directions, WSW. and ENE., NNW. and SSE., is, respectively, 45 feet and 54 feet across.

Eight trial-holes were sunk from the summit-plateau, some of which were considerably enlarged. These holes came upon three burials (Nos. 6 to 8, inclusive).

Burial No. 6, which was 5.5 feet from the surface, consisted of a skull only, the rest of the skeleton presumably having disappeared through decay. It was impossible to determine if the burial lay in a pit, the ground surrounding it, clayey sand, showing no difference between it and the material composing most of the rest of the mound. It is certain, however, that a pit did not extend from the surface down, as a dark layer, entirely undisturbed at this place, covered that part of the surface of the plateau where this burial was found, to a depth of 2 feet.

At the left of the skull were fragments of sheet-copper, and a very small object of the same material, elliptical in outline and concavo-convex. This object, with others once probably like it but broken when found, perhaps had been attached to some kind of head-dress.

Burial No. 7. This burial, the badly-decayed skeleton of an adult, at full length on the back, heading SE., lay at a depth of 4 feet 10 inches. Near the skull was a coarse cooking-pot (Vessel No. 25). We could reach no conclusion as to whether or not this burial lay in a grave-pit.

Burial No. 8 was a full-length skeleton of an adult, very badly decayed, the head directed SSE. The skeleton lay at a depth of 4 feet in material that gave no satisfactory evidence as to having been dug and filled in.

MOUND D.

This mound, entirely of sand, had lost portions by the work of a previous digger who had used a scoop drawn by horses. There is an irregular remainder, 50 feet by 30 feet in diameter and 6 feet high. This altitude probably represents the height of the mound previous to the flood, as it is not likely the water rose above this seemingly central part of the mound.

Trial-holes were sunk all over the remainder of the mound and also were put down in numbers in parts from which much had been washed away, in the hope of coming upon burials that were too deep to have been affected by the wash. In point of fact such burials were found.

Five burials, Nos. 9 to 13, inclusive, were encountered in this mound, the maximum depth being 5 feet.

Burial No. 9. This burial, represented only by the crowns of teeth, was associated with four vessels of earthenware, one of which contained a mass of white and of red clay mingled. This mass did not cover the lower part of the vessel as is usually the case when pigment is found in vessels in the mounds, but seemed to have been molded into shape before its deposit. The dimensions of the mass were 5.5 inches by 4 inches by 1.75 inch. Just outside the opening of the containing vessel, which lay on its side, was a mass of similar material, of like size and shape.

Burial No. 10. A deposit of cremated remains 14 inches by 5 inches in extent. Calcined fragments were found of a size to show that the bones had belonged to the skeleton of an adult.

Burial No. 11. This burial, consisting of two skulls about one foot apart, had no other bones, nor were any artifacts present. The skulls lay near the surface in a part of the mound that had been subjected to wash, and perhaps had been dislodged by the water and again covered with a deposit of sand. About one foot from one of the skulls was a slender arrowhead of flint.

Burial No. 12. The remnants of a skeleton heading SSE. The ribs had entirely disappeared, as had many other parts. Near the left side of the skull were nine delicate arrowheads of flint whose arrangement was not determined owing to disturbance in removal.

Burial No. 13 had been a skeleton, presumably, though no other bones were found with the cranium, near which were two flint arrowheads and an earthenware vessel.

Two vessels were found apart from human remains.

The seven vessels from Mound D (Nos. 26 to 32, inclusive) were of a coarse, heavy ware, and almost without decoration. Most of them were badly broken.

MOUND E.

This mound is in woods that adjoin the field in which the other mounds are. Its height is 7 feet. The diameter of its circular base is about 85 feet. The mound, which was carefully dug into, yielded no indication of having been used for burial purposes.



FIG. 123.—Vessel No. 20. Crenshaw Place, Ark. (Height 7.5 inches.)

MOUND F.

Mound F had been badly washed by rain, perhaps coursing through unfilled diggings into its sides. It is elliptical in outline of base and is almost pointed. Its height is 21 feet. Its basal diameter N. by W. and S. by E. is 84 feet. The diameter taken through the mound at right angles to the foregoing is 106 feet.

This mound, which seems to be a mixture of sand and clay, largely clay, gave no indication of superficial burials. Its size is such that an attempt to investigate the base would have involved the destruction of the mound.

Considerable digging in the level ground where midden-debris was seen on the surface, yielded only negative results.

A number of small arrowpoints, all surface finds, were rudely made, some being hardly more than flakes chipped into the outline of arrowpoints, and differed materially from the points found with burials at this place, upon the making of which much care had been bestowed.

The pottery from the Crenshaw Place, thirty-two vessels in all, as stated, is of inferior quality as a rule. The following vessels merit special mention.

Vessel No. 20. This bottle, coated exteriorly with red pigment and having in relief two lizard-like figures on opposite sides, well illustrates the saying that misfortunes never come singly, inasmuch as the head of one lizard was lost in aboriginal times previous to the interment of the vessel, and that of the other disappeared under the blow of a spade in the hands of one of our diggers (Fig. 123).



FIG. 124.—Vessel No. 21. Crenshaw Place, Ark. (Height 4.5 inches.)

Vessel No. 21. This vessel (Fig. 124) has incised and punctate decoration in combination with series of circular markings, perhaps conferred with the aid of an end of a reed. There are holes for suspension on two opposite sides below the rim.



FIG. 125.—Vessel No. 23. Crenshaw Place, Ark. (Height 4.1 inches.)



FIG. 126.—Vessel No. 6. Crenshaw Place, Ark. (Height 5.1 inches.)

Vessel No. 23. This bowl has a rude scroll decoration in addition to circles and triangles filled in with imprints similar to those on the vessel just described. The ware is brown and of inferior quality. The upper part of the body is quadrilateral and the rim rises equidistantly in four places (Fig. 125).



FIG. 127.—Vessel No. 11. Crenshaw Place, Ark. (Height 9.7 inches.)

Vessels Nos. 6 and 11, shown in Figs. 126, 127, respectively, are examples of cooking-vessels from this place.

MOUNDS ON THE DANIELS PLACE, HEMPSTEAD COUNTY, ARK.

In woods, on the Daniels Place, for which Mr. Steve Carrigan, who has shown many courtesies to the Academy, is agent, but a short distance in from the river, is a mound, quadrangular with rounded corners, about 12 feet in height; it, however, appears of much greater height when viewed from a deep depression nearby, whence came the material for its making.

The mound NNE. and SSW. has a basal diameter of about 210 feet, of which 155 feet is covered by the summit-plateau. In width the mound has a diameter of 105 feet, the summit-plateau in the same direction being 60 feet.

Toward the southern end of this mound, built upon the summit-plateau, is a mound, circular in outline, with a basal diameter of 35 feet. The height of this little mound, which is almost entirely of sand, while the great mound seemed to have much more clay than sand in its composition, is 3 feet. This small mound, which we attacked with great expectations, yielded nothing whatever. Trial-holes in the large mound were equally unsuccessful.

A few yards distant from the northern end of the great mound is an irregularly-circular one slightly more than 4 feet in height, with a diameter of about 70 feet. This mound has a circular summit-plateau 32 feet in diameter.

Five or six yards from the southern end of the great mound is another mound, somewhat smaller than the one at the northern end. Thorough digging into both these mounds was without success.

In the woods, in the neighborhood of the northern end of the great mound, were three small ones, the largest of which had a diameter of 35 feet and a height of 2.5 feet. These mounds were carefully dug but gave no evidence of having been used for burial purposes.

MOUNDS ON THE JONES PLACE, HEMPSTEAD COUNTY, ARK.

On the Jones Place, which belongs to Dr. H. L. B'Shers, of Fulton, Ark., are three small mounds, near one another (two being almost contiguous), and all in sight from the landing. On one is a dwelling and an outhouse; the other two have been largely dug into.

The mound occupied by the buildings was not investigated by us, and the less-dug of the two other mounds yielded nothing to our search, though trial-holes were put into it and into some elevated ground extending from it into an adjacent, cultivated field, on which was some aboriginal debris from dwelling-sites. The other mound, circular, about 55 feet in basal diameter, had centrally a circular excavation 25 feet in diameter at the top, but converging. This excavation, made, we are told, by a former owner of the property, was not altogether deep, though diggings of small diameter extended well down in places.

The original height of this mound was indeterminate as the excavation referred to had been made long enough in the past to allow the soil thrown out at that time to become covered with vegetation and to appear similar in all respects to the mound itself. Probably the original height of the mound was between 3 and 4 feet.

Considerable digging in this mound came upon three burials, the depths of which were not taken as the interments lay below that part of the mound where the previous digging had been. These burials were all deposits of cremated human remains, respectively: 4 feet by 6 feet, by 3 inches in thickness;¹ 2 feet 3 inches by 3 feet 9 inches, and 4 inches thick; 1 foot 2 inches by 1 foot 10 inches, and 3 inches thick. These burials, seemingly, had been cremated in place, as charcoal and much clay hardened and discolored by fire lay with them. Whole bones lay in the deposit in places. The bones evidently had been exposed to great heat and fell into fragments on removal. In one instance (the bones of a right arm extended) the same degree of heat had not been applied throughout. The upper part of the humerus was calcined, and the soil above and below it showed the effect of intense heat. Toward the lower part of the arm, however, the heat had been less, as shown by the condition of the bone and of the surrounding soil, and also by the presence of charcoal. The bones of the hand were but slightly burnt; the soil was dark rather than red and the material which had served as fuel was only charred.

With one deposit were a calcined bit of deer antler and calcined bones not human. With another deposit was a cooking-pot in fragments. The deposits of calcined bones lay on the same level in the mound. Twenty-eight inches below their level, apart, were two rude vessels intended for culinary purposes.

MOUNDS NEAR THE JONES PLACE, HEMPSTEAD COUNTY, ARK.

About one-half mile N. by E. from the mounds on the Jones Place, on property belonging to Mr. J. B. Shults, of Fulton, Ark., in woods, near a "lake", a former course of Red river, are three mounds in sight of one another and in full view from the road. One of these mounds had been badly dug into in two places, but the remaining two seemingly were intact.

MOUND A.

This mound, the westernmost of the group, previously untouched, was 42 feet across its circular base and had a height of 3 feet 3 inches. This measurement, however, presumably was made from where there had been some filling in by wash of water, as a measurement taken in the course of digging, from the summit of the mound to an unmistakable base-line, showed the original height to have been 4.5 feet.

The mound was made of a mixture of sand and clay. Eight trial-holes, most of which were greatly enlarged later in the digging, all came upon the dark basal layer to which reference has been made. The holes in the central part of the mound showed on this layer the presence of charcoal and burnt clay. One hole near the center, in addition to the burnt material, came upon an earthenware bottle lying on its side upon the layer.

¹ A part of this deposit had been removed by the previous digging.

The central trial-hole, at a depth of 4.5 feet, laid bare a deposit of very fine, gray ashes, carefully heaped together, evidently the remains of a cremation of a human body, though no particle of bone found in the deposit was of a size to give any indication as to this. A considerable quantity of the deposit, however, was examined by Doctor Keller, who says that it consists largely of bone ash and contains large proportions of carbonate and phosphate of lime.

This deposit, which was irregular in outline, was, roughly speaking, 21 inches by 15 inches; the thickness of most of it was 1.75 inch, though a kind of pocket included in the deposit, 4.5 inches in diameter, had a depth of 13 inches.

Above the deposit and extending out around it in all directions charcoal and masses of clay had been piled. This material had been placed on the undisturbed basal layer, which was evidently the original surface before the mound was built. The thickest part of this superimposed heap was 16 inches.

Much of the clay showed the former presence in it of fibrous vegetable material which, no doubt, had fulfilled the same office for the clay that hair does for mortar. Also on the clay were imprints of posts. Presumably this burnt clay was what remained of a wigwam after burning, as it is well known that among some of the aborigines the burning of the house of a deceased occupant was part of the funeral obsequies.

In the deposit of gray ashes, and outside of it in the burnt clay, were three short, piercing implements of calcined bone and



FIG. 129.—Head of bone pin. Near Jones Place, Ark. (Full size.)



FIG. 130.—Bowl covering cremated remains. Near Jones Place, Ark. (Diam. 7 inches.)



FIG. 128.—Bone pin with head representing a hatchet. Near Jones Place, Ark. (Full size.)

many fragments of long pins of the same material. The three entire piercing implements are each about 1.5 inch in length and have shallow notches on one side of the upper end. Out of the fragments one whole pin has been put together

having a head representing a celt let into a handle. This handsome specimen is shown in Fig. 128. The head of another pin (Fig. 129) unfortunately has lost the extremities of two expanding arms which doubtless represented some ceremonial implement. These pointed implements of bone, for some reason, have withstood the heat better than did the human skeletal remains.

Lying on top of the deposit of ashes were two ear-plugs of shell badly broken by heat, though the complement of parts was together. These ear-plugs are annular and of the kind around the periphery of which is a groove enabling the ornament, as it were, to button into the lobe of the ear.

Inverted and pressed down into the heap of ashes and filled with the material was a bowl of about one pint capacity (Fig. 130), somewhat crushed but having all the parts in place.

Under the clay, at the edge of the ash deposit, were twenty-eight delicate arrowheads of flint, many serrated. Most of these points, which range between .8 inch and 1.25 inch in length, are shown in Fig. 131. They were not arranged in a

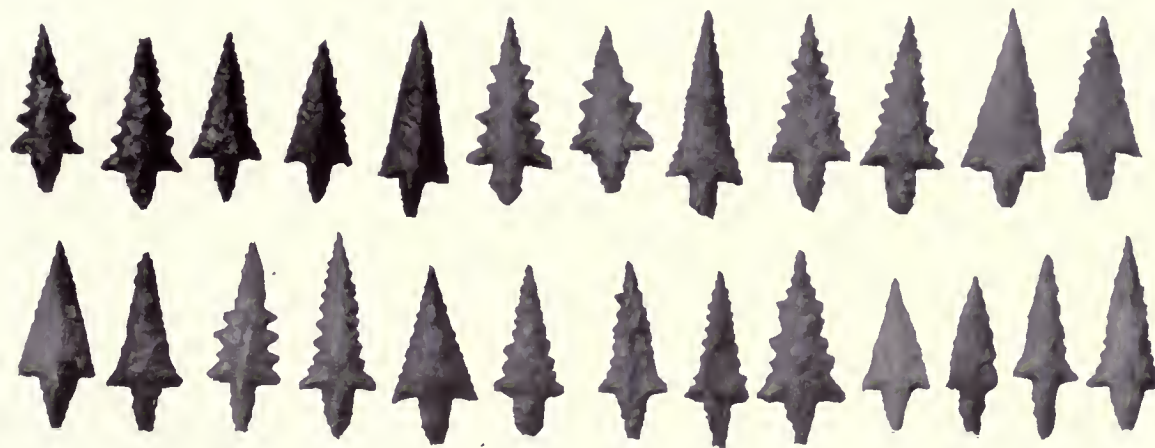


FIG. 131.—Arrowheads of flint. Near Jones Place, Ark. (Full size.)

pile, but lay together within a circumscribed space. Five are imperfect, perhaps through the somewhat rough sifting necessary to recover them from the material in which they were, or possibly through the effect of heat.

Under the burnt clay were widely scattered fragments, which, collected and put together, proved to be a chisel-shaped ceremonial axe of quartzite, 8.1 inches in length. Half of a similar object, also of quartzite, was found in the material thrown out from this deposit in the course of digging.

Around and over the deposit of ashes were fragments belonging to a number of earthenware vessels, including several bottles, but presumably all the fragments were not present in the neighborhood of the deposit of ashes, since everything taken from there by us was carefully sifted without finding sufficient parts to put the vessels together. As, however, parts of the same vessel often were separated by a considerable distance, it is possible that fragments of vessels not found lay farther out in the mound than our digging extended.

Possibly the vessels originally had been placed around the body before its cremation and, later, when material was collected to pile over the deposit of ashes, some parts of the vessels were gathered up with the clay while other parts may have been left behind. Lumps of burnt clay were found scattered at considerable distances from the deposit of ashes. The arrowheads and the ear-plugs must have been placed with the deposit after the cremation, since they were not separated, as they would have been had they been swept up with the cremated remains.

A part of a most unusual object of earthenware was found in four widely separated fragments. These fragments, when put together, form the handle of a ladle, with a small part of the bowl. This handle, of heavy ware, 14.5 inches in length and 1.25 inch in maximum diameter, is hollow, circular in transverse section, and tapers to a blunt point. Unfortunately, none of the very many fragments of pottery recovered from this mound united with the handle, though the sherd belonging to the opposite side of the bowl-part was found, on which is a depression indicating that the bowl and handle formed a ladle patterned after a gourd.



FIG. 132.—Vessel No. 2. Near Jones Place, Ark. (Height 1.9 inches.)



FIG. 133.—Pipe of earthenware. Near Jones Place, Ark. (Full size.)

The pottery vessels from this mound, as indicated by their fragments, are inferior, and the decoration, when present, was carelessly done. A small cooking-vessel from this mound is shown in Fig. 132. Two pipes, however, or rather part of a pipe and another in fragments which have since been put together (Fig. 133), are of excellent ware. The pipes are similar, each having a polygonal figure in relief on the base.

In this mound we have an interesting example of cremation of human remains and of the building of a mound over them. There can be but little question that the wigwam was burnt over an area that later formed the central part of the base of the mound, but we are unable to determine whether or not the human remains were cremated at the same time. It is clear, however, that these remains, where-

ever they were incinerated, were carefully gathered into a heap and occupied much less space than they originally did, and that over them and around them was piled some of the material left from the burning of the wigwam.

MOUND B.

Mound B, the northernmost of the three mounds, was circular in outline, with a basal diameter of about 38 feet and a height of 3 feet, approximately. The mound, however, as in the case of Mound A, presumably had undergone a deposit of material around its lower parts, which, by raising the level of the surrounding area, had correspondingly decreased the height of the mound.

Previous diggers had made two considerable trenches in this mound, without, however, having carried them to a depth to determine its nature, even had they possessed the experience to do so.

There was put down by us in this mound a central excavation 25 feet square, which included much of the former digging, passed beyond it, and at a depth of about 5 feet reached the dark layer, about 3 inches in thickness, which marked the original surface of the ground. On part of this layer had been a fire-place, and part of a grave was apparent, cutting through the fire-place and through the dark basal layer. The fire-place was clay, hardened and reddened by heat. It was distinctly not the remains of a burnt wigwam, but may have been the hearth of such a structure.

The grave proved to have a length of 10 feet 10 inches, a width of about 7 feet, and a depth below the base-line of somewhat more than 8 feet.

This grave-pit had been dug prior to the building of the mound, as was clearly shown by the material that had been used in filling the pit, which was mixed and which contained many masses of hard, red clay from the fire-place, through part of which, as noted, the pit had intruded.

On the other hand, the mound contained no masses of burnt clay, but was composed of two or three layers of sand and clay mixed, differing somewhat in shade. These layers were intact. Here, then, as at the Haley Place, an account of which has been given in this report, a grave had been dug from the surface of the ground, and, when filled, a mound had been erected over it.

The grave, in its major dimension, extended within two or three degrees of N. and S. The skeleton, that of an adult, at full length on the back, had the head directed S. From the upper surface of the burial to the original surface of the ground was a distance of 7 feet 9 inches.

This mound, unfortunately, was on bottom-land and near a swamp whose supply of water depended on Red river, which at the time of our visit was in flood. The depth at which the skeleton lay was below water level. While the foregoing data as to the burial were being obtained, part of the wall of the excavation caved in and the lower part of the pit filled with water.

Although an additional day, with a force of sixteen men, was devoted to reaching the burial again, the quicksand entered the lower part of the digging faster than

the material could be removed, so that all that was recovered from the burial were parts of three vessels of earthenware from near the feet, which were come upon at arms length through the sand and water. One of these, shown in Fig. 134, more complete than the others, has been put together.

As the river was rising rapidly and the flow of quicksand was increasing, and the walls of the excavation were falling, we were compelled, with great reluctance, to abandon our efforts to uncover the burial.



FIG. 134.—Vessel of earthenware. Mound B, near Jones Place, Ark. (Height 4.8 inches.)

MOUND C.

Mound C, the easternmost of the group, was irregularly circular in outline, with a diameter of 40 feet. Its height, measured from the surface, was 2 feet. An excavation 7 feet by 11 feet in the central part of the mound was carried to a depth of about 5 feet. No sign of burial was encountered, and the last two feet of the excavation was carried through clear, yellow sand without sign of disturbance.

MOORE PLACE, MILLER COUNTY, ARK.

The Moore Place, still another of the plantations which Mr. Henry Moore, Jr., of Texarkana, Ark., so courteously placed at the disposal of the Academy for investigation, was visited by us with the cordial consent of Mr. Floyd Thompson, of Texarkana, its lessee.

Beside the road which passes the Moore Place, on the western side, is the remainder of a mound, part of which has been cut away by the road and part on the opposite side has been leveled through cultivation. This remainder of a mound had a height of 4 feet, a diameter of about 60 feet. It was composed of clay and sand, the sand predominating.



FIG. 135.—Vessel No. 3. Moore Place, Ark. (Height 4.5 inches.)

The mound presumably had been circular, with a summit-plateau about 28 feet in diameter, which still remained. Into this plateau were put fourteen trial-holes, some of which were considerably enlarged.

Three burials were encountered, two being of children (Burials Nos. 1 and 3) at a depth of 3 feet 4 inches. One of these burials had cut through the other in part, breaking some of the vessels that were with it.

The third burial (No. 2), the skeleton of an adult at full length on the back, lay at a depth of 4 feet, the head directed NW. by N. This burial was without accompanying artifacts, a very unusual condition in the case of aboriginal burials in this region.

Burial No. 1 had at the right shoulder a small bottle with a faint, trailed decoration on the body and extending over the neck. At the outer side of the left humerus was a bowl, and at the outer side of the right femur a small cooking-pot carefully decorated with trailed and incised line-work (Fig. 135).

Near the skull of this burial were: a shell hoe (*Unio trapezoides*) having the usual perforation; part of the lower jaw of a deer, such as is described as having been used by the Iroquois for scraping maize from the cob. There was considerable midden-debris with these objects, and their presence near the burial may have been accidental.

Burial No. 3, that of a child, which we have described as an aboriginal disturbance, had with it four vessels, three badly broken, the fourth an undecorated pot without a rim.

Careful observation failed to distinguish grave-pits in the body of the mound. Presumably the mound originally was not so high as our measurement made it, the measurement perhaps being taken from a depression. In this event one may suppose that shallow burials dug from the original surface had a low mound built over them.

A few yards east of the mound just described was an irregular rise in a cultivated field, about 2 feet in height and 50 feet in diameter. This evidently had been a dwelling-site, as bits of pottery and fragments of flint were scattered over the surface. Considerable digging at this place, however, failed to come upon burials, although fire-places were discovered.

In the cultivated field in sight in an ENE. direction from the two places described, itself under cultivation, was a mound, circular in outline, with a basal diameter of about 65 feet. Its height was slightly less than 6 feet.

A central hole 8 feet by 9 feet and with a minimum depth of 6 feet, was carried to a considerably greater depth in places. The mound proved to be of the same material throughout, a yellow-brown mixture of clay and sand, largely sand. No indication of grave-pits was noted, nor was bone or artifact encountered.

Near this mound were two rises of the ground having superficial indications of former aboriginal occupancy, though our digging in them yielded no return.

On the edge of the field, and in sight from the mound last described, was the remainder of a mound, originally low, which had been reduced by cultivation, and into which a large hole had been dug. Careful digging into this mound was likewise fruitless.

MOUNDS ON THE SUMMERHILL PLACE, BOWIE COUNTY, TEXAS.

There are said to be three mounds of fair size on this place (which does not take its name from the present owner), about one mile back from the river. As we were unwilling to accede to the owner's condition that every object found during the investigation should become his property, the mounds were not dug into by us.

MOUNDS ON THE MOORES PLACE, BOWIE COUNTY, TEXAS.

On the Moores Place are two mounds of moderate size, on one of which were two buildings. The other mound had been very largely dug into. Although the owner of the property, Mr. E. H. Moores, who resides upon it, was willing to permit investigation, it was decided not to attempt it under the circumstances.

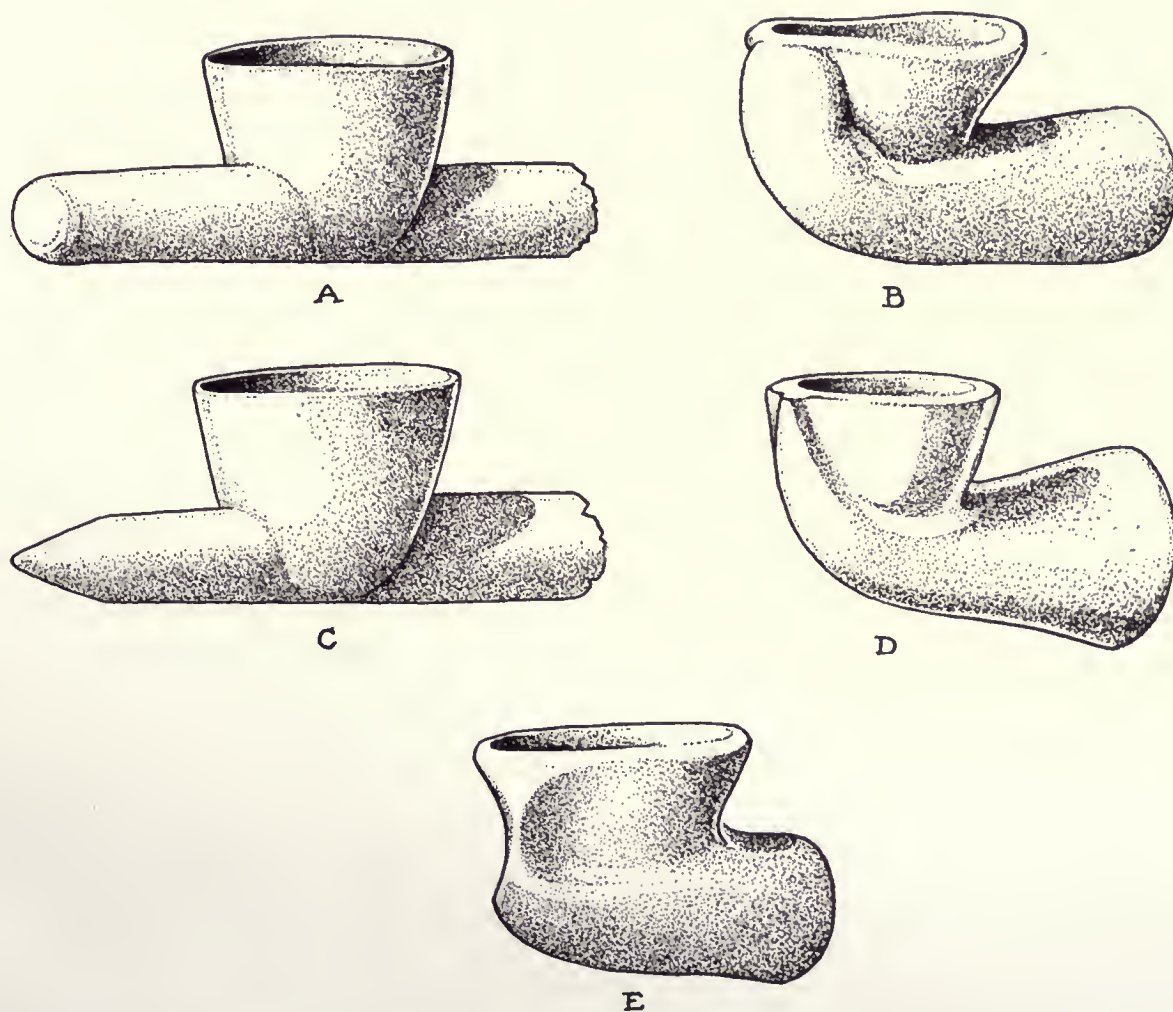


FIG. 136.—Pipes with horizontal projections; others showing these projections turned vertically. (Full size.)

MOUND ON THE SANDERS PLACE, BOWIE COUNTY, TEXAS.

On the Sanders Place, formerly known as the James Place, is a mound about 15 feet in height. The owner of this place was not within reach and the tenant did not care to assume responsibility of permitting investigation.

Thirty-seven miles by water, above Fulton, somewhat farther up Red river than the place last referred to, our investigation of the antiquities of Red river ended.

Numerous earthenware pipes found in the mound at the Haley Place, Ark., as set forth in this report, have continuations of the stems projecting horizontally beyond the bowls which projections, as we have said, probably bring the pipes into the platform, or "monitor" class.

On pipes from the McClure Place, and the Foster Place, Ark. (sites somewhat farther up Red river than the Haley Place), these projections are seen turned up vertically against the bowls of the pipes, as shown in the accounts of these places.

For fuller comparison, in Fig. 136 are shown: *A*, a pipe from the Haley Place; *B*, a pipe from the McClure Place; *C*, a pipe from the Haley Place; *D*, a pipe from the Foster Place.

E, a pipe from the Foster Place, shows where the projection, turned vertically, has become conventionalized and is hardly more than an indication.

REPORT ON SKELETAL REMAINS FROM A MOUND ON HALEY PLACE, NEAR RED RIVER, MILLER COUNTY, ARKANSAS.

BY DR. ALEŠ HRDLIČKA.

The skeletal remains submitted to the writer by Mr. Clarence B. Moore for examination were marked "Burial 5" and "Burial 9," Haley Mound, Red river, Miller County, Arkansas. They consist of two skulls with their lower jaws and parts of one of the skeletons.

The specimens show yellowish-brown discoloration. They are not perceptibly mineralized, and all the bones contain some animal matter. The left humerus of the skeleton from Burial 9 shows at its middle a large patch stained green, the result of decomposed copper (or brass).

The two subjects were plainly male adults, and the skulls are both artificially deformed, the deformation being of the "Flathead" variety. The deformation is exactly such as is seen in four crania from mounds on the McClure Place, near Red River, Miller County, Ark., which came from Mr. Moore in the same consignment; and it is also identical in type with that exhibited in numerous skulls from Arkansas and Louisiana collected by Mr. Moore on former expeditions.¹

Owing to the artificial deformation, which is quite pronounced, the original form of the skulls is not ascertainable. It is evident, however, that both belonged to individuals of strong muscular development and of probably more than medium stature; the latter conclusion is substantiated by the dimensions of the remnants of long and other bones belonging to Burial No. 9, the cranium of which is shown in Fig. 1.



FIG. 1.—Skull. Burial No. 9. Mound on the Haley Place, Ark.

The skulls (which now bear numbers 272,543 and 272,544 U. S. N. M.) show a good internal capacity, that of Burial No. 9 (272,543) reaching 1600 c.c., Burial No. 5 (272,544) which is slightly less capacious, is damaged and exact measurement in this respect is not possible.

¹ Report on a Collection of Crania from Arkansas. Journ. Acad. Nat. Sci. of Phila., Vol. XIII, 1908, pp. 558-563.

Report on an Additional Collection of Skeletal Remains from Arkansas and Louisiana. Journ. Acad. Nat. Sci., Phila., Vol. XIV, 1909, pp. 173-240, 9 Figs.

The various anthropologic features of the skulls, so far as they have not been altered by the deformation, show the prevailing characteristics of Indian crania of the neighboring regions, so far as is known from Mr. Moore's former explorations. The orbits are of medium or slightly above medium height; the nasal aperture is mesorhynchic; the nasal spine is very low; the upper alveolar process is rather high and quite markedly prognathic. The palates are large, and the mandibulæ strongly developed, indicating powerful muscles of mastication and considerable use of the jaws.

Skull 272,543 was that of an aged individual; it shows advanced obliteration of the sutures of the vault, and also the loss of all the teeth with the exception of one of the lower canines and one upper molar. The teeth, however, were not lost through senility. The free borders of the dental arches present throughout signs of an inflammatory process, and it was probably this which led in the main to the loss of the teeth, to the pronounced scarring, and in the posterior parts of the upper arch to some thickening.

On the left side and in the immediate neighborhood of the nasal aperture of skull 272,543 there is seen, on the surface of the left upper maxilla, a marked swelling which, on closer examination, is found to consist of hypertrophy of the bone about the root of an impacted tooth, possibly the left upper canine; traces of the crown of this tooth are visible in the edge of the dental process below.

Skull 272,544 belonged to an adult about 50 years of age. In this specimen most of the teeth are preserved, though showing advanced wear.

Neither of the crania, nor any of the bones that accompany them, show signs of injury in life, or of disease, with the exception of the remnants of the lumbar vertebræ from burial Number 9. The bodies of these vertebræ (particularly those of the third and fifth) show pronounced marginal exostoses, and that of the third shows in addition plain traces of branched fracture in the anterior part of its upper surface. The bone was evidently weakened through senile changes and fractured by some sudden increase in weight, or a shock, from above.

The remnants of the long-bones show no features worthy of special mention. The left humerus measures 33.1 cm. in length, its maximum and minimum diameters at middle being 2.35 and 1.85 cm. The left tibia measures, at middle, antero-posteriorly, 3.4 cm.; laterally, 2.5 cm. A comparison of these remains with those from the McClure mounds shows dissimilarity in color, the specimens from the latter site being somewhat lighter; otherwise the bones present close relationship. The difference in color does not necessarily indicate difference in age.

The collection includes also two crania marked "Mound A, near L'Eau Noire Bayou, Avoyelles Parish, La. (Red River), Burials 33 and 35." These two specimens differ to some extent from both of those from the Haley Place and from those of the McClure mounds. They exhibit only slight fronto-occipital compression, and permit the recognition of a subdolichocephalic or dolichocephalic type. It is quite possible that these crania belonged to people of a tribe different from that to which the two lots mentioned above pertained. The skeletons from the Haley Place and the McClure mounds may probably be safely ascribed to an extension of the Natchez people.¹

¹ Compare Swanton, J. R., *Indian Tribes of the Lower Mississippi Valley, etc.* Bulletin 43, Bureau of American Ethnology, Washington, 1911.

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