

POTTERY OF THE HOPEWELL TYPE FROM LOUISIANA

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INTRODUCTION

It is significant that pottery vessels similar to a type recognized in the upper or northern Mississippi Valley as belonging to the Hopewell Indian culture have been found in the east-central part of Louisiana, near Marksville. This paper, which includes a detailed description and a comparative study of the pottery from Marksville, may offer a clue regarding the migration and development of the northern Hopewell culture.¹

The pottery and associated artifacts herein described were excavated by the late Gerard Fowke during his archeological explorations in the Red River Valley of Louisiana, February to May, 1926 (figs. 1 and 6). No illustrations or detailed descriptions appear in his final report,² though in the preliminary report³ a few specimens were figured.

Further evidence was obtained by Dr. John R. Swanton at the Marksville works while making an ethnological reconnaissance in Louisiana during July, 1930. In examining the unfinished trench dug by Fowke⁴ in Mound 4, portions of two decorated vessels were recovered, and numerous potsherds similar to those found by Fowke, which closely resemble the typical Hopewell decoration.

Analyzing the restored vessels from Mounds 4 and 8, we find: The vessel on Plate 1 can be considered typically Hopewell, because of such features as the cross-hatched band and bisected cones just beneath the rim; the decoration consisting of smooth bands outlined by incised grooves; the roughened area outside the bands; the conventionalized eagles; and the four lobes.

¹ For a detailed description of Hopewell characteristics, see MILLS, W. C., and SHETRONE, H. C., *Exploration of Hopewell group. Certain mounds and village sites in Ohio*, vol. 4, pt. 4, pp. 297-305, 1926.—SHETRONE, H. C., *Culture problem in Ohio archeology*. *Amer. Anthrop.*, new ser., vol. 22, no. 2, pp. 144-172, 1920.—SHETRONE, H. C., and GREENMAN, E. F., *Explorations of the Seip group of prehistoric earthworks*. *Ohio Arch. and Hist. Quart.*, vol. 40, no. 3, pp. 343-509, 1931.—McKERN, W. C., *Wisconsin variant of the Hopewell culture*. *Bull. Public Mus. City of Milwaukee*, vol. 10, no. 2, pp. 228-241, 1931.

² Fowke, G., *Explorations in the Red River Valley in Louisiana*. 44th Ann. Rep. Bur. Amer. Ethnol., pp. 405-434, 1928.

³ Fowke, G., *Archeological work in Louisiana*. *Smithsonian Misc. Coll.*, vol. 78, no. 7, pp. 254-259, 1927.

⁴ Fowke, G., 44th Ann. Rep. Bur. Amer. Ethnol., p. 421, pl. 68, b, 1928.

The lower half of the vessels on Plate 2, A and B, has been decorated in much the same manner as the figure outlined on the four lobes of Plate 1. The figures on the upper half of the vessels bear no resemblance to those on the other vessels, yet the method of decoration is precisely the same as that on the lower half.

The manner of outlining by deeply incised grooves and the zig-zag roughening on the vessel shown on Plate 2, C, bears resemblance to the aforementioned three vessels. The band of decoration below the rim on this vessel is radically different from the typical Hopewell, yet it is closely comparable to the band around the neck of the vessel on Plate 3, C. This latter jar has slightly incised parallel lines running at a 45° angle, which may represent the unfinished cross-hatched design found on the typical Hopewell jars.

The vessel shown on Plate 3, B, has the characteristic smooth bands outlined with grooves, while the rest of the surface is roughened. Instead of the typical cross-hatched and punctate design below the rim, this vessel has only the line of punctations or bisected cones, while the area usually cross-hatched is smooth.

The two jars (pl. 3, C and D) differ most radically from the rest of the vessels as well as from the typical Hopewell. Jar C has the beginning of what appears to be the cross-hatched design below the rim, but the area around the neck is similar only to the design on the vessel shown on Plate 2, C. The design around the neck, however, and the fact that it was found associated with vessels from Mound 4 would be sufficient evidence to show that it belongs to the same culture though embodying an entirely different method of decoration, that is, the concentric grooves with narrow polished bands between.

The method of decorating vessels by the concentric or close-spaced incised grooves is at variance with the typical Hopewell, and yet the miniature vessel shown on Plate 3, D, which embodies this technique, clearly shows two conventionalized eagles facing each other. This conventionalization certainly resembles the decoration on Plates 1 and 2, A and B.

Figures C and D on Plate 4 are the only ones on that plate that show any resemblance to the aforementioned vessels. The method of decoration on vessel C, Plate 4, approximates the decoration on typical Hopewell vessels, while the fragmentary vase is similar to the two vessels on Plate 3, C and D.

This analysis indicates that the decorations on all the vessels from Mounds 4 and 8 of the Marksville works show a definite relationship to one another and that the decoration on some of them is analogous to the characteristic designs on vessels from the Hopewell culture in the upper Mississippi Valley.

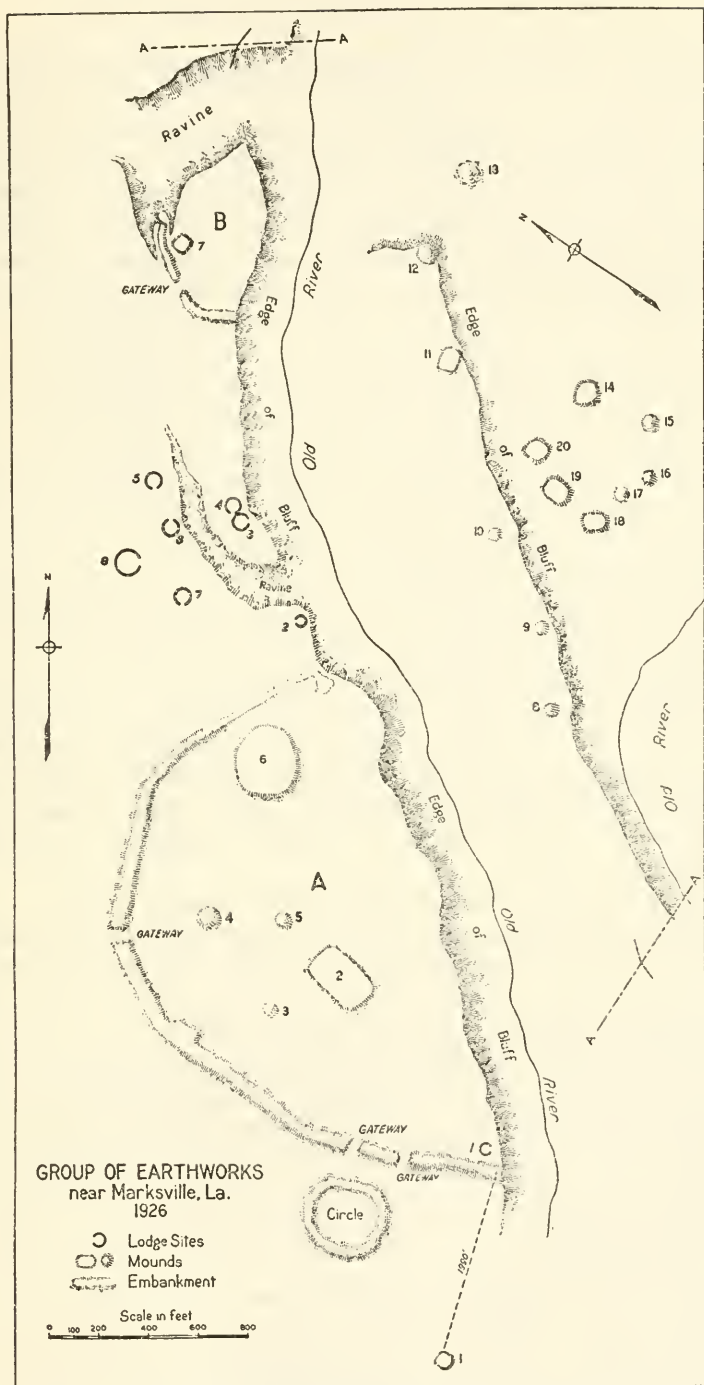


FIGURE 1.—Plan of the Marksville works (after Fowke). Lines A-A should be superimposed in order to place Mounds 8 to 20 in their respective positions

POTTERY FROM RECOGNIZED HOPEWELL SITES

In order to determine the dominant characteristics of Hopewell pottery, Table 1 has been made to show the decorated vessels and sherds illustrated and described in various publications⁵ dealing with the excavation of mounds in the upper Mississippi Valley reputed to have been built by Indians possessing the Hopewell culture. Four Hopewell pottery vessels from Ohio are illustrated on Plate 7. The table should indicate the outstanding characteristics of the pottery illustrated from these sites. If we allow for the incompleteness of the table, due to the fact that only the vessels and sherds that have been illustrated are considered, it seems obvious that the most outstanding feature of the decoration on the upper Mississippi Hopewell vessels and sherds is that the decoration on 31 have bands of various dimensions outlined with deeply incised grooves, the areas between or outside these grooves roughened uniformly either by roulette, zigzag, punctate, or cord marks. Nineteen of the illustrations show that the area just below the rim—in the case of jars—has been decorated with incised cross-hatched lines and an encircling line of bisected cones. The dominant tempering material is grit, the one exception being a vessel from the Mound City group described by Mills as having shell tempering. The forms vary: 12 bowls, 11 jars, and 2 vases. There are five examples of supporting feet. Seven jars are shaped with four lobes—the predominant style—one with six, and one with three. No vessels or sherds are illustrated or described with handles. Twelve have round, seven pointed, and five flat bases. No applied pigment is used for decoration.

How do the vessels and potsherds from Mounds 4 and 8 in the Marksville works compare with these? With regard to the decoration, 9 of the 12 restored vessels have bands outlined with deeply

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- ⁵ 1. Turner group of earthworks: Willoughby, C. C., *Papers Peabody Mus. Amer. Arch. and Ethnol.*, Harvard Univ., vol. 8, no. 3, pp. 1-98, 1922.
 2. Hopewell Mound group of Ohio: Moorehead, W. K., *Field Mus. Nat. Hist. Publ. Anthropol.*, vol. 6, no. 5, pp. 75-178, 1922; Mills, W. C., and Shetrone, H. C., *Certain mounds and village sites in Ohio*, vol. 4, pt. 4, pp. 79-305, 1926.
 3. Mound City group: Mills, W. C., *Certain mounds and village sites in Ohio*, vol. 3, pt. 4, pp. 245-406, 1922; Squier, E. G., and Davis, E. H., *Ancient monuments of the Mississippi Valley*, *Smithsonian Contr. to Knowl.*, vol. 1, pp. 187-190, pl. 46, 1848.
 4. Tremper mound: Mills, W. C., *Certain mounds and village sites in Ohio*, vol. 2, pt. 3, pp. 105-240, 1917.
 5. Edwin Harness mound: Mills, W. C., *Ohio Arch. and Hist. Quart.*, vol. 16, no. 2, pp. 113-193, 1907.
 6. Seip Mound No. 1: Shetrone, H. C., and Greenman, E. F., *Ohio Arch. and Hist. Quart.*, vol. 40, no. 3, pp. 343-509, 1931.
 7. Seip Mound No. 2: Mills, W. C., *Ohio Arch. and Hist. Quart.*, vol. 18, no. 3, pp. 269-321, 1909.
 8. Wisconsin variant of the Hopewell culture: McKern, W. C., *Bull. Public Mus. City of Milwaukee*, vol. 10, no. 2, pp. 185-328, 1931.

TABLE 1.—Hopewell pottery illustrated in various publications (see footnote 5, p. 4)

GROUP	FORM						BASE				TEMPER			DECORATION										
	3-lobed	4-lobed	6-lobed	Bowls	Jars	Vases	Unique	Handles	Pointed	Round	Flat	Peel	Grit	Shell	Potsherds or clay	Incised cross-hatched lines and punctate below rim	Parallel grooves terminated by groups of dots	Smooth or roughened bands outlined by incised grooves	Concentric grooves and narrow bands	Routelette	Zigzag	Punctate	Cord-marked	Painted
1. Turner.....		1	1		3	1			3	7		1	1			3		7		2	7	1	2	
2. Hopewell.....				2	3	1				1		1	1			3		5			3			
3. Mound City.....	2							1	2	2		2	1				3		1			1		
4. Tremper I.....																								
5. Edwin Harness.....																								
6. Seip No. 1.....					3				2	1		3				4		5		1	2		2	
7. Seip No. 2.....																3		2						
8. Wisconsin variant.....	1	4		10	2			4	3							6		9			4			
Total.....	1	7	1	12	11	2	0	0	7	12	5	5	7	1	0	19	0	31	1	4	19	2	4	0
9. Marksville.....		1		4	3	4	1			11					16		2	9	3	3	2	1		

1 No illustrations.

incised grooves. Either the bands or the remaining parts of the vessel were roughened uniformly; on three specimens by means of the roulette, three by concentric grooves or bands, two by means of zigzag lines, and one by the punctate method. In four cases the area just below the rim of the jars is decorated with cross-hatched incised lines and the encircling line of bisected cones. Thus far a similarity is obvious. However, the tempering used in the Marksville pottery differs radically from that common to the northern Mississippi type. In the former case either pulverized potsherds or small particles of hard clay are used; in the latter, grit or shell. The base of all the Marksville vessels so far as could be determined was flat. As to form, four of the Marksville vessels are bowls, four vases, three jars, and one unique in shape. Only one is 4-lobed.

Comparison between the Marksville and Hopewell wares shows a close similarity, while in the case of Plate 1 we have a vessel identical with the Hopewell type. Independent invention of so complicated a technique of decoration where there is such striking similarity would seem improbable. Either the pottery was carried into the South by the northern Hopewell Indians themselves or else it reached the region through trade. Definite evidence of contact between the North and the South is found in the northern Hopewell mounds. This consists of tortoise shells, barracuda jaws, and other articles from the Gulf. On the other hand, the Hopewell Indians and their characteristic culture could have originated in the South and spread or migrated to the northern Mississippi States. The former would imply a northern origin for the decorative technique; the latter, a southern. If the latter hypothesis were true, we should expect to find a relationship between this technique and other southern pottery decorations. This point will be considered later. Also, presuming the Hopewellians used pottery before the southern or Marksville type spread to the North, we might expect to find in the northern mounds a type of ware, different from the typical Hopewell vessels, that had been used before the intrusion of a southern type. Up to the present time there is no such evidence, so far as the writer is aware. Future investigations may prove that the Hopewell culture in the North is an amalgamation of certain characteristics—mound building, pottery, barracuda jaws, tortoise shells—derived both by trade and contact from the South and a definite group of characteristics—realistically carved stone pipes, copper, and obsidian—which originated with and were developed by the Hopewell people themselves.

Although there is not so much evidence of trade from North to South as *vice versa*, these vessels, nevertheless, might have been traded into the South. Yet this would hardly account for the variations from typical Hopewell decorations at Marksville, which

have never been reported from the North. Even though the direction of spread is not entirely clear, there seems to be an adequate basis for some correlation based on pottery alone. The study made later in this paper would seem to show that in comparison with other ceramic ornamentation in the Southeast the Hopewell style of decoration is not so outstanding nor so highly developed as it is when contrasted with the pottery from other cultures in the upper Mississippi Valley.

If the pottery from Mounds 4 and 8 in the Marksville works is sufficiently similar to be considered related to the northern Hopewell type, we should compare other artifacts as well as the construction of Mounds 4 and 8 with typical Ohio Hopewell sites.

Turning to Mr. Fowke's report, we gain a picture of the Marksville site, together with the burial customs practiced by the builders of Mound 4.⁶

The most striking resemblances are the use of bark-lined graves and the circular earthworks. The typical form of burial in the Ohio Hopewell mounds, however, consisted of placing the bodies on well-prepared earth platforms and surrounding the rectangular graves with parallel logs two or three tiers high. One might interpret the platform of clay found in Mound 4 as analogous to the well-prepared burial platforms among the Ohio Hopewell. The intrusive burials, described by Fowke, seem out of place among the more general Hopewell characteristics.

From Fowke's description of Mound 8,⁷ we find such characteristics as bark-lined graves and possibly cremated human burials, which are also found in the Ohio Hopewell mounds. Graves dug beneath the original level of the mound, however, while not typical in Ohio except in the Adena culture,⁸ have been found in mounds belonging to the Wisconsin⁹ and Illinois variants of the Ohio Hopewell.

Mounds 4 and 8 lacked artifacts made from obsidian, mica, and copper so common in the northern mounds. Then, too, other features, such as tortoise shells, pearls, conch shells, ear spools, head ornaments, ceremonial skulls, crematory basins, colored and plain textiles, carved animal bones, and effigy pipes, which are not found in all the Hopewell mounds but in the majority of them, were not found at Marksville.¹⁰

⁶ Fowke, G., 44th Ann. Rep. Bur. Amer. Ethnol., pp. 411-422, 1928.

⁷ *Ibid.*, pp. 423-424.

⁸ Greenman, E. F., *Excavation of the Coon mound and an analysis of the Adena culture*. Ohio Arch. and Hist. Quart., vol. 41, no. 3, pp. 411-502, 1932.

⁹ McKern, W. C., *Wisconsin variant of the Hopewell culture*. Bull. Public Mus. City of Milwaukee, vol. 10, no. 2, pp. 185-328, 1931.

¹⁰ For a detailed study of Ohio Hopewell artifacts, see Shetrone, H. C., and Greenman, E. F., *Explorations of the Seip group of prehistoric earthworks*. Ohio Arch. and Hist. Quart., vol. 40, no. 3, pp. 400-509, 1931.

The few similarities, therefore, in addition to the pottery seem insufficient at the present time to establish Mounds 4 and 8 of the Marksville works as *typical* Hopewell mounds. This fact, however, does not offset the outstanding resemblances between the pottery. It may indicate a variant or basic Hopewell culture in the Southeast with a greater variety of pottery decorations and a diminution of other characteristics.

DETAILED DESCRIPTION OF MARKSVILLE POTTERY

1. FLAT-BOTTOM JAR FROM MOUND 8¹¹

PLATE 1

This is the most perfect vessel with regard to design and workmanship of all the earthenware specimens from the Marksville works. It embodies the most typical characteristics of the so-called Hopewell pottery. (See Table 1.)

The vessel is tempered with either pulverized potsherds or small particles of clay, and breaks in irregular lines. Although the neck and rim are circular, when viewed from above, the body has been shaped into four rounded corners or lobes, which give the impression of a square body. Around the outside of the rim is a $\frac{3}{4}$ -inch band of cross-hatched lines, incised at an angle of 45°. The thin lines were incised first, and the heavier ones, cut from the lower part to the top of the rim, were made afterwards. Beneath this band is an encircling row of indentations made with a round instrument flat on the end, which had been applied to the wall at an oblique angle so that the indentations suggest a bisected cone, the apex of the cone pointing to the left. A polished area separates the rim decoration from that on the rest of the body. Below this is a deeply incised groove.

The body of the vessel is decorated with a beautifully executed design. On the four lobes a conventionalized bird has been outlined. Since only the head of the bird can be used for identification it is difficult to ascertain the species. Dr. Herbert Friedmann, curator of birds, United States National Museum, suggests that the head may represent that of an eagle.¹² Between the two birds facing each other is the outline of a Y; while between the two birds looking away from each other is the outline of a column, expanded on top and flow-

¹¹ My nomenclature regarding these vessels is as follows: Jar—the characteristic form of which is a gradual narrowing of the body and gently recurving to form the neck. Bowl—sometimes globular in shape with no narrowing between body and rim. Vase—straight sides and flat base.

¹² For other examples embodying conventionalized eagle designs, see Mills, W. C., *Exploration of Mound City group. Certain mounds and village sites in Ohio*, vol. 2, pt. 3, pp. 354–359, figs. 60–65, 1922. “Conventionalized” is used here as “a design based on traditionary or accepted models.” The drawings, copied from designs on various vessels from Marksville, were made by Richard G. Paine, aid in archeology, U. S. National Museum.

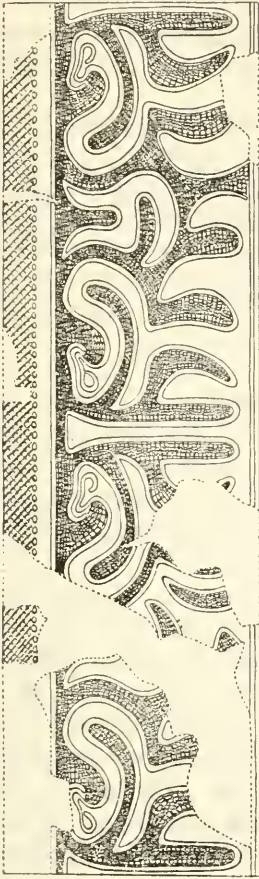


FIGURE 2.—Design from the vessel shown on Plate 1

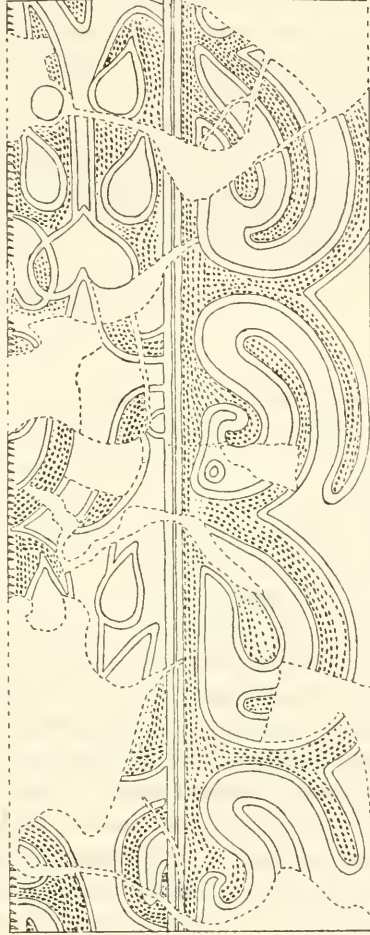
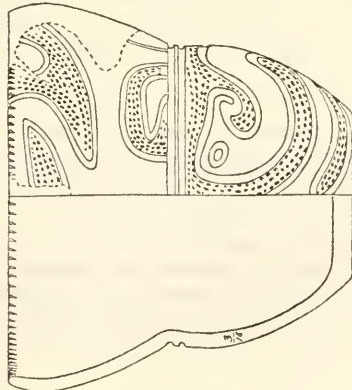
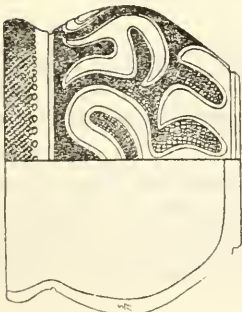


FIGURE 3.—Design from the vessel shown on Plate 2, B



ing into the design near the base (fig. 2). This design is accomplished by a polished band between two deeply incised grooves. The remaining area has been uniformly roughened by means of a roulette and a zigzag technique.¹³ Near the flat base a deeply incised groove incloses the decoration.

This vessel was referred to by Mr. Fowke¹⁴ as follows:

East * * * [of what was assumed to be the center of the mound] was another [grave] a little more than 6 feet long. There was no trace of bone or of anything else in it, except two small pots, one at each end, both of them broken by the pressure of the earth. * * * the other [pot] seems to be globular.

2. FLAT-BOTTOM BOWL FROM MOUND 4

PLATE 2, B

The sides of this inverted cone-shaped vessel are slightly constricted halfway between the base and rim. The tempering material again consists of pulverized potsherds or small particles of clay. Firing has produced a texture that is very uniform and only slightly brittle, breaking in rather straight lines. The surface can be engraved with the finger nail.

The rim is decorated on the outside with triangular notches, apex pointing to the right; on the inside the apex points to the left. Viewed from above, the outside notches point counterclockwise, while the inside notches point clockwise. The constriction of the vessel near the middle divides the decoration into two distinct parts. The motif on the upper half begins close to the rim and extends to the two deeply incised grooves near the middle. The figures, outlined by incised grooves, consist of heart- and pear-shaped objects, and meandering or curvilinear bands, which have been polished, while the rest of the area is uniformly roughened by means of the roulette (fig. 3). The design on the lower half consists of two conventionalized birds, the head of each again suggesting the eagle's. Between the heads seems to be a continuation of the body or wing.

If my interpretation is correct, Fowke¹⁵ refers to this vessel as follows:

* * * at about 20 feet from the beginning and * * * 6 feet up, in the east wall of the trench, were fragments of two pots; one was globular,

¹³ Holmes, W. H., *Aboriginal pottery of the Eastern United States*. 20th Ann. Rep. Bur. Amer. Ethnol., p. 190, fig. 72, 1903.

¹⁴ Fowke, G., 44th Ann. Rep. Bur. Amer. Ethnol., p. 424, 1928. Except in a few instances, it is impossible to determine precisely the specific artifacts Mr. Fowke refers to in the description of his excavation of the mounds. The artifacts described in this paper have been recorded in the United States National Museum files as coming from Mounds 4, 8, 10, and 15 in the Marksville works (fig. 1). In several cases potsherds have been assembled in the Museum to make a fairly complete restoration of the original vessel.

¹⁵ *Ibid.*, pp. 415-416.

with flanging top, of about a pint capacity, decorated with curves and figures impressed with a blunt point.

3. FLAT-BOTTOM BOWL FROM MOUND 8

PLATE 2, A

This bowl is so nearly identical in form and decoration with vessel 2 that further description is unnecessary. One is tempted to conclude that they were made by the same potter, so great is the similarity. If this were true, then Mound 8, containing this pot, would likely have been built about the same time as Mound 4, which contained the vessel previously described.

This vessel was found "west of the center [in a circular grave] * * * measuring close to 2 feet in diameter. * * * a pot ornately decorated; * * * broken into many pieces."¹⁶

4. FLAT-BOTTOM BOWL FROM MOUND 4

PLATE 2, C

This bowl contains the same tempering material as the other vessels. The texture is soft, breaking in straight lines.

Between two parallel encircling grooves 1 inch apart is a decorated band consisting alternately of a series of three parallel grooves 1 inch long and a series of nine indentations, three rows of three each, made with a blunt instrument. The design, somewhat resembling the base of a projectile point, is repeated three times around the vessel. It consists of alternating polished and roughened areas outlined by incised grooves. The outlined bands, which have been polished in one of the three areas, are roughened in the adjoining section (fig. 4). The roughening on this vessel is not made with the roulette but by the zigzag technique. So many fragments are missing that one can only guess as to whether the design is geometric or realistic. Mr. Fowke makes no direct reference to this vessel.

5. UNIQUE VESSEL FROM MOUND 4

PLATE 3, A

The tempering of this vessel seems to be pulverized potsherds. The elliptical base has been worn considerably, even though the surface is so hard that it can not be scratched with a finger nail. Only about two-thirds of the sides was found, which in this case was hardly sufficient to determine the complete design. One side and an end show that part of the decoration was executed by outlining smooth polished bands with deeply incised grooves, while the rest of the surface was roughened.

¹⁶ Ibid., p. 424.

6. SMALL BOWL FROM MOUND 4

PLATE 3, B

This vessel is more brittle than most of the lot, which may be due to its having been subjected to heat more intense or of longer duration. It breaks in rather ragged lines.

About an inch from the top of the rim is an encircling line of indentations made with a round tool one-tenth of an inch in diameter, which was forced into the wall at an oblique angle. The apex points to the right. On the more typical Hopewell vessels the space above these indentations would have been filled with a cross-hatched design of fine incised lines. This area, however, is smooth but not polished. Beneath the incised groove encircling the neck, the rest of the body is decorated with small outlined bands, highly polished, and a uniform roughening outside these areas. The roughening in this case has not been accomplished either by means of the roulette or the zigzag technique but rather by means of a small blunt instrument. The polished bands, parallel to one another and vertical to the base, average about $1\frac{5}{16}$ inches long and one-fourth inch wide. Beneath the globular portion of the vessel is a tapering pedestal-like attachment, around which are four parallel deeply incised grooves. The rest of the surface is polished. Not enough fragments were found to reconstruct the base.

7. SMALL FLAT-BOTTOM JAR FROM MOUND 4

PLATE 3, C

Both the interior and exterior surfaces have been polished. The surface can not be cut with a finger nail but only with a sharp-pointed steel instrument. An encircling band, three-eighths of an inch wide, below the rim has been decorated with lightly incised parallel lines at a 45° angle. The usual 45° lines running in the opposite direction completing the cross-hatched design are missing. Around the neck of the vessel is a decoration consisting of two deeply incised parallel grooves about $1\frac{5}{8}$ inches long, which terminate in a group of six circular indentations in two rows of three each. Covering the entire body are various patterns made by parallel incised grooves so close to one another as to give the effect of corrugated concentric triangles and diamond shapes. The narrow bands between the grooves have been highly polished. Two parallel encircling grooves separate the decoration from the plain flat bottom.

Mr. Fowke may have had the sherds of this vessel in mind when he wrote: "The other, of which there was only a part, was differently decorated."¹⁷

¹⁷ *Ibid.*, p. 416.

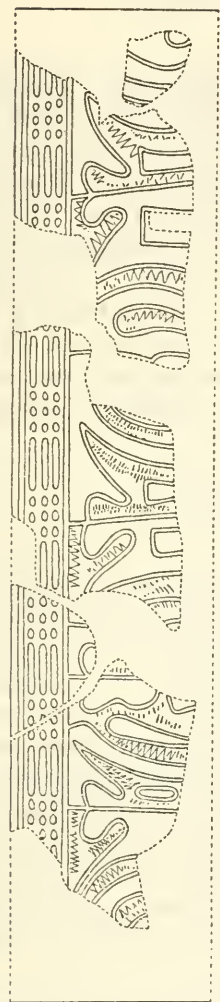


FIGURE 4.—Design from the bowl shown on Plate 2, C

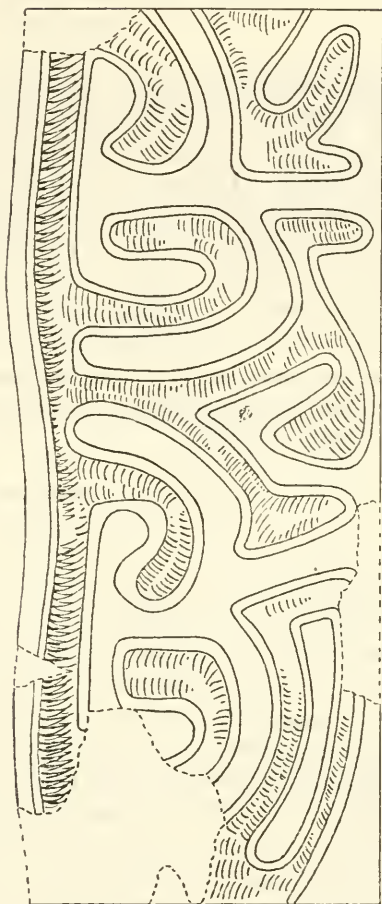
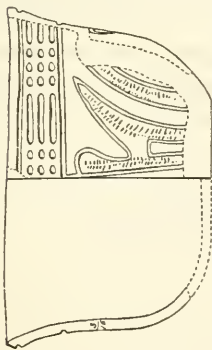
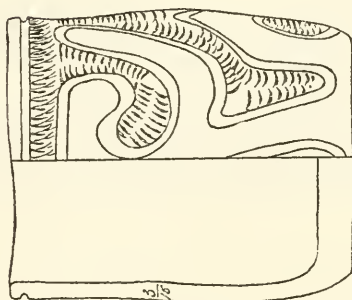


FIGURE 5.—Design from the vase shown on Plate 4, C



8. MINIATURE FLAT-BOTTOM JAR FROM MOUND 4

PLATE 3, D

The tempering of this jar is impossible to determine. The surface is rather hard and can be scratched only with a sharp steel point. Such a small portion of the rim remains intact that it gives no clue to its decoration. Below two incised parallel encircling grooves, the elements on the globular body are divided into two parts. The main feature on each half consists of two highly conventionalized birds—probably representing eagles—facing each other. The bodies or wings are outlined on the base of the vessel. This is the only vessel from Marksville that has the decoration extending around the base. The outlines have been formed by deeply incised grooves so close together that only a very narrow ridge remains between them, which has been highly polished.

9. MINIATURE VASE FROM MOUND 4

PLATE 4, A

The inside surface is rough and has the appearance of small particles of sand protruding; nevertheless these lumps are small pieces of clay consisting either of soft pulverized potsherds or of clay pellets not completely assimilated in the original mixing. The outside surface can be scratched with the finger nail. The rim, which is quite uneven, is decorated only on the outside with longitudinal indentations vertical to the wall of the vessel. Below the indentations is an encircling groove with five small circular indentations on one side of the vessel, none penetrating the wall. The rest of the decoration consists of meandering incised lines, about one-sixteenth of an inch wide, around the body. In certain areas between the grooves there is evidence of a roulette roughening, which was not entirely effaced when the vessel was polished.

Because this vessel was illustrated in Mr. Fowke's preliminary report¹⁸ it can be definitely identified as the one "20 inches above the bottom— * * * Among the remains was one decorated pot 2 inches high containing minute desiccated fragments of corn, squash, and perhaps other forms of food. A leaf, apparently a corn blade, had been placed over the top."¹⁹

¹⁸ Fowke, G., *Smithsonian Misc. Coll.*, vol. 78, no. 7, p. 259, 1927.

¹⁹ Fowke, G., 44th Ann. Rep. Bur. Amer. Ethnol., pp. 420-421, 1928.

10. FLAT-BOTTOM VASE FROM MOUND 4

PLATE 4, B

Tempering of this vase may be pulverized potsherds or hard particles of clay. The surface can be cut only with a sharp-pointed steel instrument; a finger nail makes no impression. The rim has been notched and three-eighths of an inch below it are two encircling shallow grooves. An area between these grooves and those near the base has been decorated with meandering shallow grooves. No roughening appears between them. The outside surface has been highly polished.

11. VASE FROM MOUND 8

PLATE 4, C

The tempering used in this vessel is either potsherds or clay, making the fired pot quite soft and breakable in straight lines.

The decoration somewhat resembles a T with two ascending curved bands beginning near the middle of the vertical bar and terminating near the rim (fig. 5). Here again the main element is outlined by deeply incised grooves with certain areas between the grooves polished and the rest of the vessel roughened with zigzag lines. This method of roughening is best described by Mr. Willoughby²⁰:

* * * and filled with zigzag patterns which were not made with a roulette, * * * but with a tool more or less gouge-shaped, having a plain or notched edge, which was pressed against the soft clay with a rocking motion, each opposite corner being raised and slightly advanced alternately, the tool not being wholly lifted from the vessel.

Both polished and roughened bands average about five-eighths of an inch wide.

Fowke²¹ refers to this vase as follows: "East of this grave was another a little more than 6 feet long. * * * two small pots, one at each end, * * * One was shaped like a common flowerpot and contained one valve of a mussel shell; * * *"

12. VASE FROM MOUND 4

PLATE 4, D

Besides the restored vessels, there is one small vase from Mound 4 partly restored. The tempering consists of either pulverized potsherds or small particles of clay. The surface is so soft that it can easily be scratched with the finger nail. It is decorated with deeply incised concentric grooves and intervening narrow bands.

²⁰ Willoughby, C. C., Turner group of earthworks, Hamilton County, Ohio. Papers Peabody Mus. Amer. Arch. and Ethnol., Harvard Univ., vol. 8, no. 3, p. 92, pl. 23, 1922.

²¹ Fowke, G., 44th Ann. Rep. Bur. Amer. Ethnol., p. 424, 1928.

13. MINIATURE VASE FROM MOUND 4

PLATE 4, E

The outside surface exhibits a certain roughness due to particles of either potsherd-tempering or unpulverized clay. It can be scratched with a finger nail. Except for minutely incised lines or scratches running in all directions, there is no decoration. The interior surface shows numerous shallow cracks, perhaps due to expansion and contraction when fired. On opposite sides of the vessel near the rim are two small holes through which a thong or cord may have been passed to suspend it.

The two small holes make possible our identification of this vessel from Fowke's report²²: "In the east wall of the trench, 10 feet out, 2 feet up, was an infant burial; with it was a 'flowerpot' vase less than 2 inches high, with two small holes near the top for suspension; * * *"

14. BOWLS FROM MOUND 4

PLATE 4, F-H

Three partially restored bowls from Mound 4 are made of rather flaky clay, the tempering being either pulverized potsherds or hard particles of clay. The inside and outside surfaces of the three specimens can be scratched with the finger nail. Since the vessels are not decorated they are very likely utilitarian or culinary bowls.

The variety of rim sherds from Mounds 4 and 8 is great. Enough of the decoration below the rim is present to indicate the similarity in decoration to that of the restored vessels illustrated.

Associated with the pottery from Mounds 4 and 8, Mr. Fowke found the following artifacts: Monitor or platform pipe of clay from Mound 4 (pl. 5, A); the fragmentary base of another platform pipe from the same mound (pl. 5, B); three projectile points (pl. 5, C.); sandstone rubbing or smoothing stones (pl. 5, D); impressions in clay of a vertically plaited matting consisting of over-two-under-two technique from Mound 8²³ (pl. 5, E).

The few artifacts from Mound 10 (pl. 6, A-C) show no resemblance either to the material from Mounds 4, 8, and 15, or to the general Hopewell culture. Mr. Fowke²⁴ describes the excavation of these artifacts as follows:

The usual pieces of pottery, charcoal and flint were found. There were also two small pieces of grooved burned clay similar to those occurring so abundantly north of Delhi; a small much used hammer or flint chipper of yellowish quartz, and a symmetrical, highly polished plummet made of magnetic iron ore.

²² *Ibid.*, p. 420.

²³ For similar matting from an Ohio Hopewell mound, see Mills, W. C., *Exploration of Mound City group. Certain mounds and village sites in Ohio*, vol. 3, pt. 4, p. 382, fig. 81, 1922.

²⁴ Fowke, G., 44th Ann. Rep. Bur. Amer. Ethnol., pp. 425, 1928.

The two unidentified baked clay objects (pl. 6, B) are similar to specimens in the United States National Museum found by C. B. Moore in a kitchen midden at Poverty Point, West Carroll Parish, north-eastern Louisiana. Associated with a burial on the Schwing Place (fig. 6), Iberville Parish, in the south-central part of the State, was a cache of 32 clay objects.²⁵

Mound 15, on the same side of the river as Mounds 4 and 8 and only a short distance from Mound 8 (fig. 1), seems to have been constructed by an entirely different group of Indians possessing a culture radically different from the builders of Mounds 4 and 8. Fowke²⁶ says:

* * * broken pottery with various designs incised or impressed, were profusely scattered loose in the earth. One small potsherd [pl. 6, F] had a decoration in red resembling those of Arkansas. Diligent search was made for other pieces like it, but none could be found. It was almost useless to hunt for anything in the mud.

The sherds (pl. 6, D, E, F) resemble the ware found throughout the Southeast, except D and E, which occur only along the Gulf coast. All of them, however, are unrelated in decoration and tempering to the pottery found in Mounds 4, 8, and 10 or in the upper Mississippi region.

HOPEWELL POTTERY FROM OTHER SOUTHEASTERN SITES

To enlarge upon the possibility that a basic Hopewell culture might have originated in the South and a branch spread or migrated and later developed in the upper Mississippi Valley, it seems imperative that the vessels from Mounds 4 and 8 be compared with pottery from the same region (fig. 6). C. B. Moore obtained pottery from mounds in Mississippi, Louisiana, and Arkansas, which is pertinent. M. R. Harrington found pottery in Arkansas, which is also comparable. Here again I have had to depend entirely on illustrations and descriptions for my examples.

From Anderson Landing, on the Sunflower River, Sharkey County, Miss., Moore²⁷ obtained two vessels that show definite Hopewell characteristics in their decoration. One flat-bottom jar has four lobes. Just below the rim is a cross-hatched band with an encircling line of indentations. The decoration over the body of the vessel consists of narrow, smooth bands outlined by deeply incised grooves and the rest of the surface uniformly roughened by means of a roulette.

²⁵ Moore, C. B., Some aboriginal sites in Louisiana and in Arkansas. *Journ. Acad. Nat. Sci. Philadelphia*, vol. 16, pp. 15; 72, pl. 2; 73-74, 1913.

²⁶ Fowke, G., 44th Ann. Rep. Bur. Amer. Ethnol., p. 430, 1928.

²⁷ Moore, C. B., Certain mounds of Arkansas and Mississippi. *Journ. Acad. Nat. Sci. Philadelphia*, vol. 13, pt. 2, pp. 586-588, figs. 3-5, 1908.

A vessel similar in its general manner of design but different in regard to the method used in roughening was found by Harrington²⁸ at the Washington site, Hempstead County, southwestern Arkansas.

Moore's second vessel, from Anderson Landing, has incised cross-hatching and cone-shaped punctations encircling the vessel just below the rim. Repeated three times around the body is the conventionalized design of a bird, the head resembling that of an eagle. This design is made by a smooth band outlined by two incised grooves. No evidence of roughening appears, but the bird somewhat

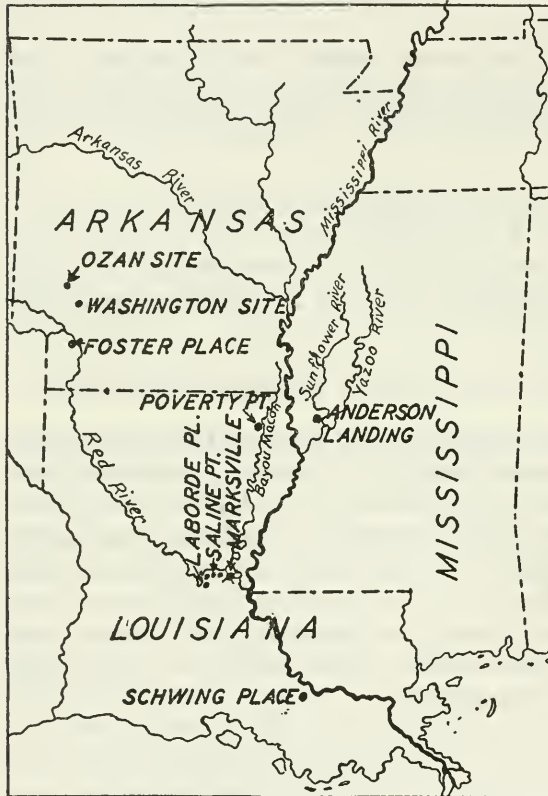


FIGURE 6.—Sites from which pottery is compared with that found at Marksville, La.

resembles the figures on four of the Marksville vessels (pls. 1; 2, A, B; 3, D). As to the tempering, Moore²⁹ states simply that neither of the above two vessels is shell tempered.

From the upper mound on Saline Point (fig. 6), Avoyelles Parish, La.—a few miles northeast of the Marksville works—on Red River, Moore found evidence of cremated bones and numerous potsherds and vessels.³⁰ With the exception of the jar, which he illustrates in Figure 6, page 499, one would hardly consider them of the Hopewell type. However, since all came from

the same mound, which had no apparent stratification, they might possibly be regarded as variations from the true Hopewell forms.

The design on the vessel shown by Moore as Figure 6, page 499, contains two distinct Hopewell traits, namely, cross-hatched incised

²⁸ Harrington, M. R., Certain Caddo sites in Arkansas. *Indian Notes and Monog. Mus. Amer. Indian*, Heye Foundation, New York, p. 144, pl. 51, b. 1920.

²⁹ Moore, C. B., *Journ. Acad. Nat. Sci. Philadelphia*, vol. 13, pt. 2, p. 586, 1908.

³⁰ Moore, C. B., *Aboriginal sites on Red River. Journ. Acad. Nat. Sci. Philadelphia*, vol. 14, pp. 498-500, 1912.

lines just below the rim and the conventionalized birds. The two parallel grooves and six indentations repeated around the neck are similar to two vessels from Marksville (pls. 2, C; 3, C).

A hemispherical bowl, with an unusual design,³¹ was found in the same mound. The surface is divided into two parts by a wide smooth band outlined by two incised grooves. The design is repeated twice on the vessel. It consists of straight and angular bands containing punctations outlined by incised grooves. Such roughening is unusual on the Hopewell vessels and on those from Marksville, but may be a clue to either the relation or spread of this technique in other southeastern pottery vessels.

Associated with a skeleton, in an excavated pit of a cemetery on the Johnson Place,³² Avoyelles Parish, La., was a flat-bottom vessel. Its straight sides are covered with deeply incised grooves so closely spaced that only a very narrow smooth band remains between them. The decoration consisting of narrow smooth bands is similar to that on two jars and the fragment of a vase from Marksville (pls. 3, C, D; 4, D).

In a mound located on the Mayer Place, 1 mile southwest of the Johnson Place, a vessel was found³³ that had been decorated with conventionalized birds having eagle heads. The figures are again outlined by deeply incised grooves. This is the fifth vessel from Avoyelles Parish upon which conventionalized birds have been used for decoration.

Burial No. 8, in the Laborde Place mound,³⁴ contained four vessels and several potsherds. One small hemispherical bowl resembles in decoration the aforementioned vessels only in the outlining of curved bands by deeply incised grooves. Below the two parallel encircling grooves near the rim is a design somewhat like the S-shaped line forming one-half of a swastika. The unusual feature of this decoration is that instead of roughening the area either inside or outside the grooves, for the desired contrast, the bands between the grooves had been painted with a red pigment. The inside of the bowl contained a fairly good coating of red pigment. This might be carrying the similarity too far, since no applied pigment has ever been reported on Hopewell pottery from the North. Yet the scroll design formed by the outlined bands shows some relationship to the swastika design on the vessel from Saline Point, and the vessels from Saline Point did embody true Hopewell characteristics.

Leaving the parish in which Marksville is located and considering the Foster Place³⁵ along Red River, in Lafayette County, Ark.,

³¹ *Ibid.*, p. 500.

³² *Ibid.*, p. 502.

³³ *Ibid.*, p. 503.

³⁴ *Ibid.*, p. 506.

³⁵ *Ibid.*, pp. 591-619.

Moore illustrates a large variety of painted and incised vessels. The majority seem to have no relationship to the Hopewell pottery, but a few show very general characteristics, which might have some connection with the pottery from Avoyelles Parish, La. Here again the most outstanding characteristic is the roughened or smooth bands of decorations outlined by deeply incised grooves.

A flat-bottom jar with a decoration around the body consists of alternating rough and smooth bands, which may represent some part of the swastika. The method of roughening in this case is radically different from any of the aforementioned vessels. It has been accomplished, seemingly, with a sharpened instrument the exact width of the band, and applied at right angles to the grooves. A jar very similar to this one was found by Harrington³⁶ at Site 1, Ozan, Ark.

Another jar from the Foster Place has been decorated by alternating, smooth, punctated, concentric, circular bands, outlined by incised grooves. This punctate roughening technique is similar to the bands on the vessel from Saline Point, Avoyelles Parish, La.

An unusual form from this mound on the Foster Place has a globular body with a very high straight-sided neck and a small out-flaring rim. The decorations encircling the neck and body are similar. A wide smooth band outlined by incised grooves forms the S-shaped figure of the swastika, while the rest of the surface has been uniformly roughened with shallow indentations in no particular order.

In the same mound were numerous other types of vessels—some painted and incised, others engraved and painted—which seem to show no relationship in their manner of decoration to those vessels from Avoyelles Parish, La., or the Hopewell types, but which show a definite relationship to pottery that has been called Caddo³⁷ from this region. Since Moore speaks of no apparent stratification in the mound, one may assume that vessels showing resemblances in their decoration to those from Avoyelles Parish might have been found associated with the more typical Caddo ware. Further research may develop this relationship. The vessels herein described from the Foster Place show no direct resemblances with the Hopewell pottery from the upper Mississippi Valley, but are comparable with specimens from Avoyelles Parish, La., while the Avoyelles Parish pottery, especially in the case of Marksville, does resemble typical Hopewell pottery.

Further investigations should throw more light on this interesting distribution. It would seem, however, from the foregoing facts

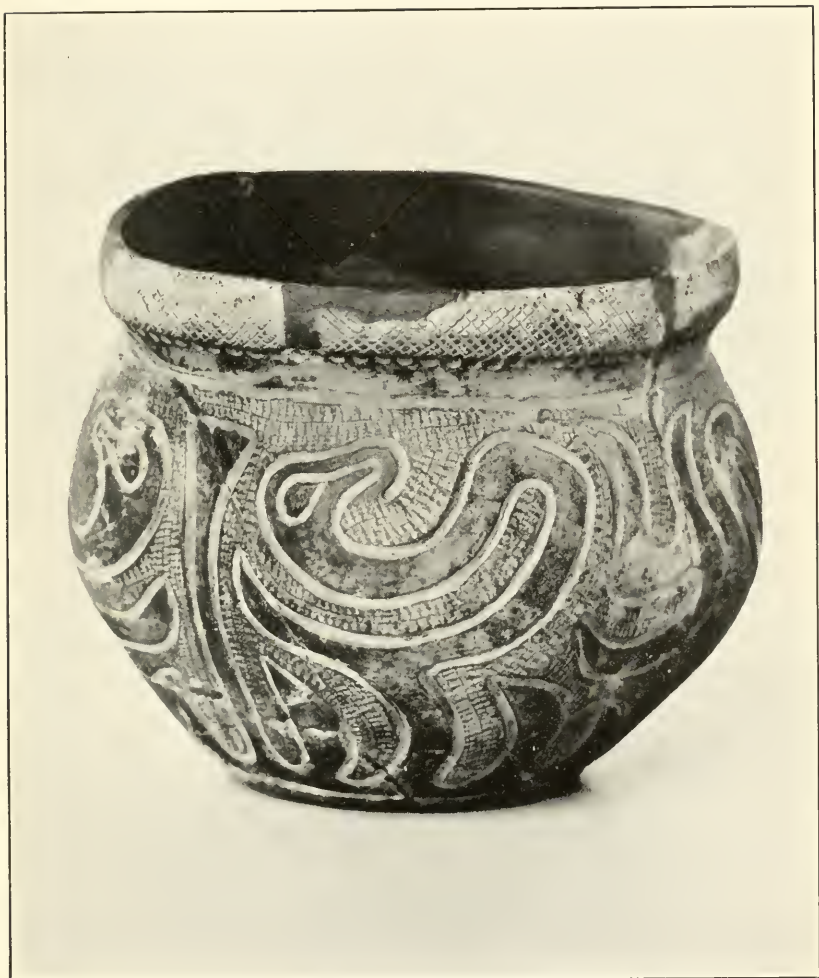
³⁶ Harrington, M. R., *Indian Notes and Monog. Mus. Amer. Indian*, Heye Foundation, New York, p. 144, pl. 51, a, 1920.

³⁷ For a detailed study of so-called Caddoan archeological sites, see Harrington, M. R., *op. cit.* These sites also seem to indicate a relationship to some of the other more general Hopewell characteristics besides pottery.

that Louisiana, Mississippi, and possibly Arkansas must be considered in the distribution of Hopewell-like traits. These similarities might be due entirely to commercial intercourse, but they seem too widespread for such a simple explanation.

A brief recapitulation shows that the Marksville works contained one vessel (pl. 1) that can be considered a typical Hopewell vessel. In addition, the other vessels from Mounds 4 and 8 embody one or more typical Hopewell characteristics. More than this, the variety of forms at Marksville not only shows designs characteristic of the typical Hopewell in the North, but these same vessels have certain features that are similar to other southeastern pottery decorations. These latter similarities make possible a comparison between certain pottery decorations from sites in which typical so-called Caddo pottery has been found associated with the Avoyelles Parish type of vessels.

At the present time no evidence has been found in Ohio, Indiana, Illinois, Iowa, Michigan, or Wisconsin that will enable anthropologists to determine either the ethnological or linguistic connections between this highly developed archeological culture and the recognized Indian stocks. It would seem from the Marksville evidence that further scientific investigations in this portion of the Southeast should produce definite evidence regarding the origin, development, and migration of this interesting archeological culture.



TYPICAL HOPEWELL VESSEL FROM THE MARKSVILLE WORKS
From Mound 8. Diameter, $3\frac{1}{4}$ inches; height, $4\frac{3}{8}$ inches. U.S.N.M. No. 331688.



BOWLS FROM MOUNDS 4 AND 8, MARKSVILLE WORKS

- A, From Mound 8. Diameter, $5\frac{1}{8}$ inches; height, $4\frac{13}{16}$ inches. U.S.N.M. No. 331689.
 B, From Mound 4. Diameter, $5\frac{3}{8}$ inches; height, $4\frac{3}{32}$ inches. U.S.N.M. No. 331697.
 C, From Mound 4. Diameter, $6\frac{23}{32}$ inches; height, 4 inches. U.S.N.M. 331696.



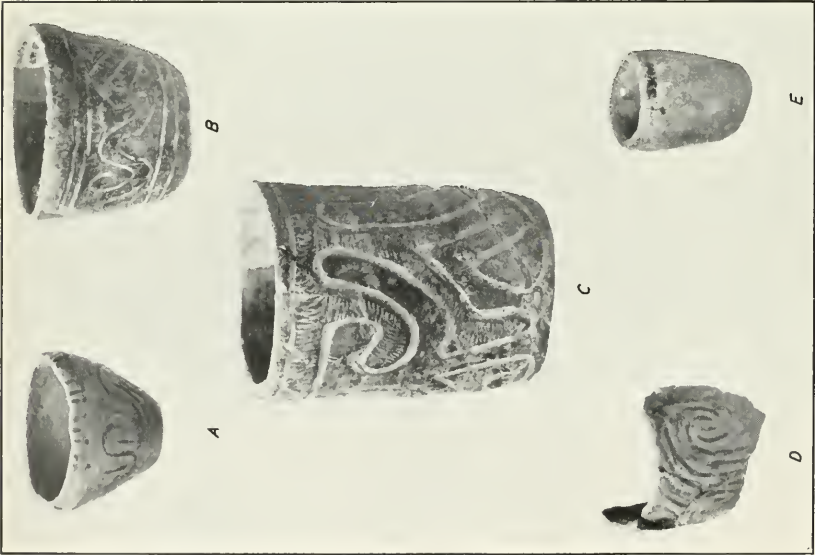
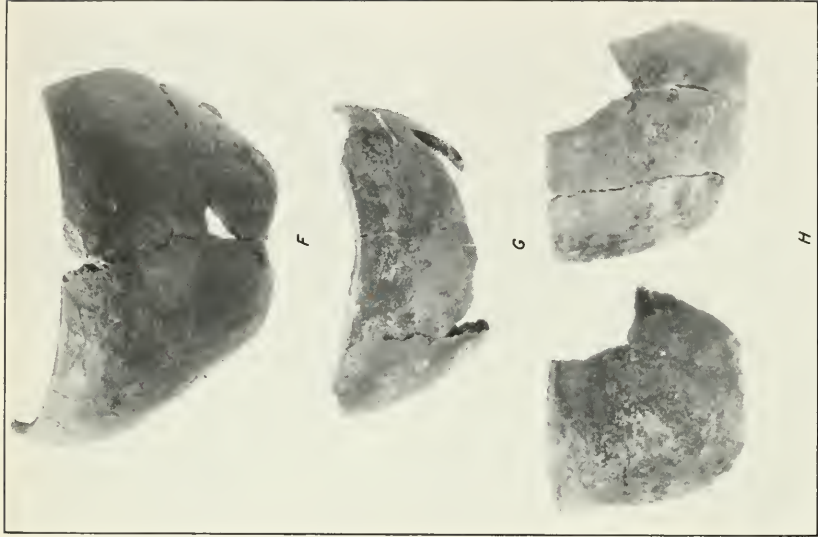
VESSELS FROM MOUND 4, MARKSVILLE WORKS

A, Unique form. U.S.N.M. No. 331694.

B, Hourglass form. U.S.N.M. No. 331700.

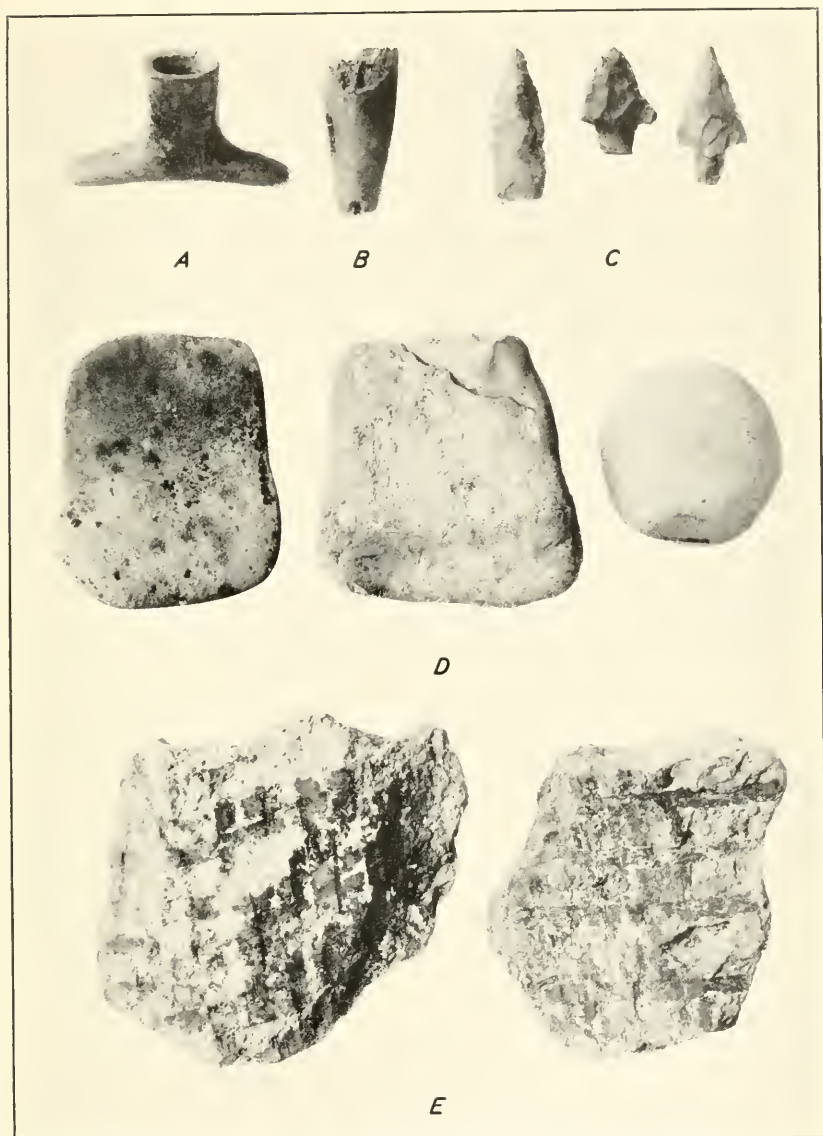
C, Diameter, $4\frac{1}{8}$ inches; height, $3\frac{11}{16}$ inches. U.S.N.M. No. 331697A.

D, Diameter, $2\frac{1}{4}$ inches; height, $1\frac{9}{16}$ inches. U.S.N.M. No. 331709.



POTTERY VASES AND UNDECORATED FRAGMENTS FROM MOUNDS 4 AND 8, MARKSVILLE WORKS

A, Diameter, 2½ inches; height, 1²³/₃₂ inches. U.S.N.M. No. 331692.
 B, Diameter, 3 inches; height, 2⁸/₈ inches. U.S.N.M. No. 331708.
 C, Diameter, 3¼ inches; height, 4⁸/₈ inches. U.S.N.M. No. 331686.
 D, U.S.N.M. No. 331705B.
 E, Diameter, 1¹⁶/₁₆ inches; height, 1¹³/₁₆ inches. U.S.N.M. No. 331683.
 F, U.S.N.M. No. 331695.
 G, U.S.N.M. No. 331698.
 H, U.S.N.M. No. 331705A.
 All from Mound 4 except C, which is from Mound 8.



ARTIFACTS FROM MOUNDS 4 AND 8, MARKSVILLE WORKS

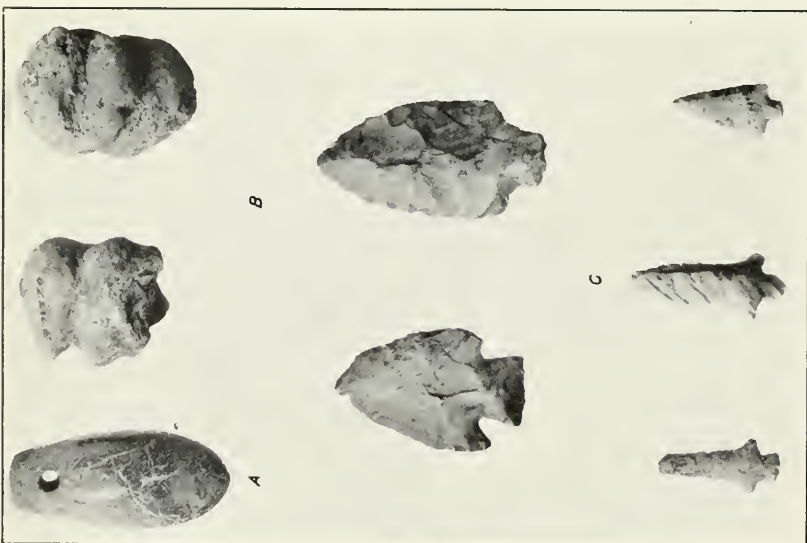
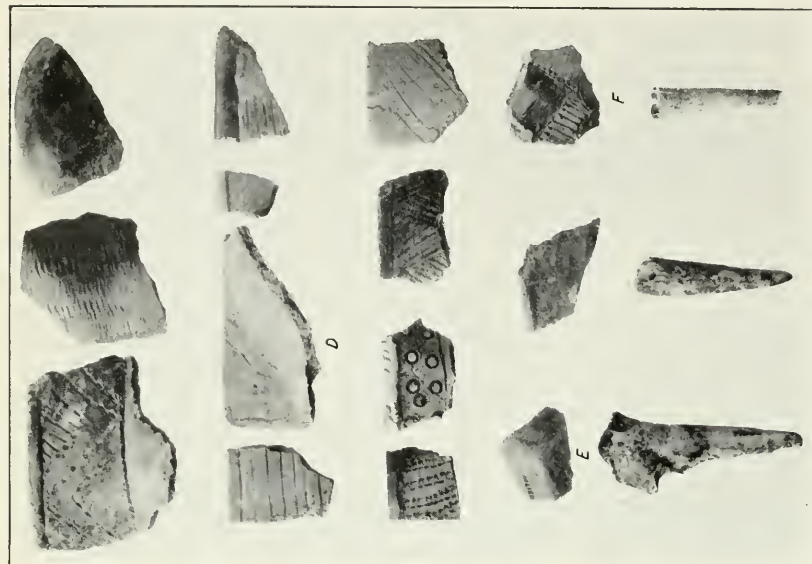
A, Clay platform pipe. U.S.N.M. No. 331691.

B, Fragment of clay platform pipestem. U.S.N.M. No. 331711.

C, Projectile points. U.S.N.M. No. 331703.

D, Sandstone rubbing stones. U.S.N.M. No. 331702.

E, Impressions of plaited matting in clay. Mound 8. U.S.N.M. No. 331687.

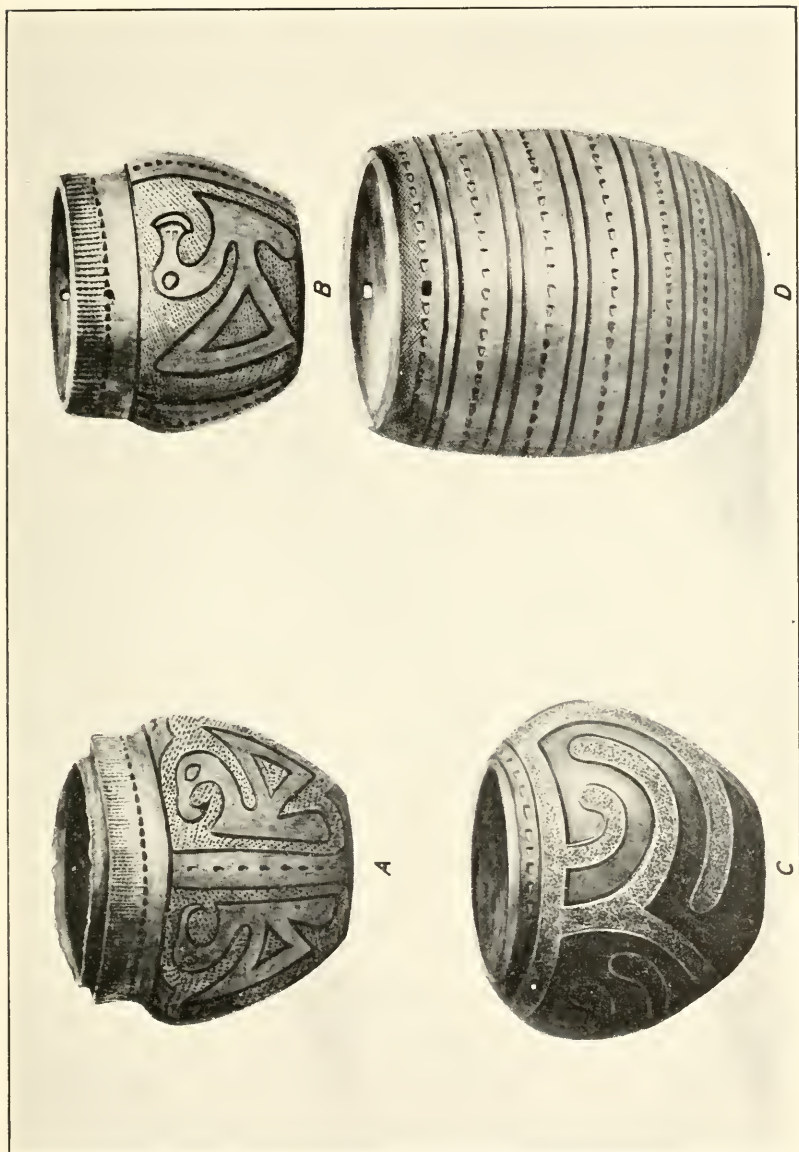


ARTIFACTS FROM MOUNDS 10 AND 15, MARKSVILLE WORKS

A, Magnetic iron-ore plummet. U. S. N. M. No. 331722.
 B, Unidentified baked-clay objects. U. S. N. M. No. 331720.
 C, Projectile points. U. S. N. M. No. 331719.

D, E, Type of sherds that usually occur along the Gulf coast. U. S. N. M. Nos. 331712-17 (D-F).
 F, Sherd with red pigment between incised lines.

A-C from Mound 10; D-F from Mound 15.



HOPWELL VESSELS FROM MOUND CITY GROUP, OHIO
FOR EXPLANATION OF PLATE SEE NEXT PAGE.

EXPLANATION OF PLATE 7

A copy of page 49 of "Sketches of Monuments and Antiques; Found in the Mounds, Tombs and Ancient Cities of America," a portfolio of drawings made by James Plunket in 1856 for Dr. E. H. Davis showing the archeological specimens in his collection. The portfolio is in the manuscript room of the Bureau of American Ethnology, Smithsonian Institution.

- A*, Hopewell vessel from the Mound City group, a few miles north of Chillicothe, Ohio. Illustrated in "Ancient Monuments of the Mississippi Valley" (Smithsonian Contributions to Knowledge, vol. 1, pl. 46, fig. 2, 1848), and again by W. C. Mills in "Certain Mounds and Village Sites in Ohio" (vol. 3, pt. 4, p. 332, fig. 39, 1922).
- B*, Hopewell vessel from Mound 1, 2, or 3 in the Mound City group of Ohio. Perhaps never before illustrated.
- C*, Hopewell vessel from the Mound City group illustrated in "Ancient Monuments of the Mississippi Valley" (op. cit., pl. 46, fig. 1).
- D*, Hopewell vessel probably from the Mound City group. Never before illustrated.

