ently to a stronger connection between the Toltec of Chichen Itza and at least some of the Classic Maya than has generally been supposed.

BIBLIOGRAPHY

LOTHROP, SAMUEL K.

1952. Metals from the Cenote of Sacrifice, Chichen Itza, Yucatan. *Memoirs of the Peabody Museum of Archaeology and Ethnology*, Vol. 10, No. 2. Cambridge.

PROSKOURIAKOFF, TATIANA

1950. A Study of Classic Maya Sculpture. *Carnegie Institution of Washington*, Publication 593. Washington.

1951. Some Non-Classic Traits in the Sculpture of Yucatan. *The Civilizations of Ancient America. Selected Papers of the XXIXth International Congress of Americanists*, pp. 108-18. Chicago.

PROSKOURIAKOFF, TATIANA, AND J. ERIC S. THOMPSON

1947. Maya Calendar Round Dates such as 9 Ahau 17 Mol. *Notes on Middle American Archaeology and Ethnology, Division of Historical Research, Carnegie Institution of Washington*, No. 79. Cambridge.

RANDS, ROBERT L.

1953. The Water Lily in Maya Art: A Complex of Alleged Asiatic Origin. *Bureau of American Ethnology, Bulletin 151 Anthropological Papers*, No. 34. Washington.

ROBERT L. RANDS
Department of Sociology and Anthropology
University of Mississippi
University, Mississippi
April, 1953

ADDITIONAL NOTES ON THE POVERTY POINT SITE IN NORTHERN LOUISIANA

The two large mounds at the Poverty Point and Motley sites in West Carrol Parish, Louisiana, were first adequately described by C. B. Moore (1913, Fig. 29), and for a long while these structures and the cultural remains scattered about them remained one of the principal puzzles in the archaeology of the lower Mississippi Valley. Clarence Webb has made extensive surface collections from this locality for a number of years and his three articles in *American Antiquity*, the last written with Haag, form the bulk of the information which we have on the culture (Webb, 1944, 1948; Haag and Webb, 1953). The purpose of the present brief note is to report some newly discovered facets of the Poverty Point cultural complex.

The writer was able to work a few weeks at the site in the spring of 1952 and again in 1953. However, the most remarkable discovery was not made in the field but in the Cartographic Laboratory of the Mississippi River Commission in Vicksburg. An examination of air photographs showed clearly that in the fields where most of the cultural refuse lies, to the east of the large Poverty Point mound, there is an arrangement of six concentric earth ridges forming a portion of what probably was originally a complete octagonal figure three-quarters of a mile in diameter. This figure has not previously been discovered by observation on the ground simply because it is on too large a scale.

A map of the Poverty Point site, made as a tracing from an enlarged air photograph is given in Figure 73. As can be seen, the large peculiarly-shaped Poverty Point mound is located one-half mile west of the bluffs over Bayou Macon. The shape of this structure is shown in detail by Figure 74, a plane table map which was made in 1952. This is a somewhat more accurate representation than the sketch map published by Moore but basic measurements are in agreement. The highest part of the mound is between 65 and 70 feet above the surrounding almost flat terrain. In the spring of 1953, the writer sank a 4 inch bore hole 60 feet deep into the mound from its highest point. Varicolored soil, indicative of basket loading, was encountered for the entire depth of the hole. This seems to eliminate the possibility of a pre-Wisconsin erosional remnant having been utilized as a core for this structure.

In the site map, Figure 73, the draftsman has shaded the artificial ridges which form the portion of the octagonal figure to conform to the air photograph — the tops of the ridges are indicated by light areas and the swales lying between ridges are darkened. The ridges are rounded elevations from 4 to 6 feet high and the tops of these elevations are approximately 100 feet apart. At the corners of this fragment of an octagonal figure are gaps in the ridges, gaps which form a sort of aisle leading toward the center of the figure. Most of the area of these six concentric ridges is in cultivation and in these fields is found a profusion of the baked-clay "Poverty Point objects," flint scraps, and other occupation refuse that has been described by Moore, Webb, and Haag. In 1952 the writer ran 5-foot wide trenches through the ridges at three points. They are obviously artificial and the fill contains quantities of dwelling refuse, with an occasional fireplace, but no alignments of postholes or other positive evidence of buildings were found. However, the excavations were not extensive enough to be certain that building remains will not be found; it appears obvious that the ridges were extensively utilized as dwelling sites.

A notable feature of the Poverty Point site and the related Motley mound is the orientation. As is shown by Figures 73, 74, the Poverty Point mound lies almost exactly to the west of the concentric octagonal ridges. The high narrow ridge on the mound is aligned north-south. In addition the Motley mound, not shown on these maps, is situated one and one-half miles almost exactly north of the center of the fragmentary octagonal figure. Like the Poverty Point mound, it has a high ridge, the crest of which slopes each way from a central eminence that is 51 feet high. The ridge of this mound runs east and west and on the southern side, toward the octagon, there is a wide sloping apron suggestive of the platform of the Poverty Point mound but not flat on top. Borrow pits made in the side of this structure by local farmers show basket loading of soils.

The relationship of the Poverty Point site to the physiographic history of the Mississippi alluvial valley as developed by Fisk (1944) has been worked out in some detail but is too involved to report in this brief

note. Briefly, both the large mounds and the ridges forming the fragment of an octagon are on Macon Ridge, a level surface that is elevated 15 to 20 feet above the Mississippi floodplain to the eastward. Macon Ridge is an outwash fan formed by the Arkansas River in Fisk's stages A_1 to A_3. The site happens to be on an A_1 portion of the surface. The estimated age for this surface is about 4000 B.C., thus giving a limit to the age of the constructions.

In Fisk's stage C_1 the Mississippi River, at that time a braided stream, moved westward and trimmed the edges of the Arkansas outwash fan until the bluffs separating this higher surface from the Mississippi floodplain were only from one-half to three-quarters of a mile to the east of the center of the octagon. Stage C_1 (estimated age about 1500 B.C.) is a possible dating for the constructions and it is particularly attractive in view of the excellent evidence for relating this same cultural complex to a C_1 course of the Ohio River at the Jaketown site in Mississippi.

The upper limits for relating Poverty Point with the river channel chronology is provided by a Stage H course of the Arkansas River which further trimmed the edge of Macon Ridge cutting away a portion of the octagonal earthworks. Stage H dates approximately 500 B.C. Further cutting into the bluffs upon which the northern segment of the octagon is located was done by a meander of Bayou Macon. This meandering appears to have taken place in Stage 1 (100 A.D.) when this bayou was an active diversionary channel for the Arkansas River.

The question of the actual age of the Poverty Point complex is far from settled. While Fisk's channel chronology is plainly a valid sequence, the exact age estimates depend on a number of factors, and, as Fisk is the first to insist, will have to be modified as evidence accumulates. The one radiocarbon date which we have for the Poverty Point complex at the Jaketown site is 2350±80 years (Kulp et al., 1951, sample 114). If this complex does date about 400 B.C., then some considera-

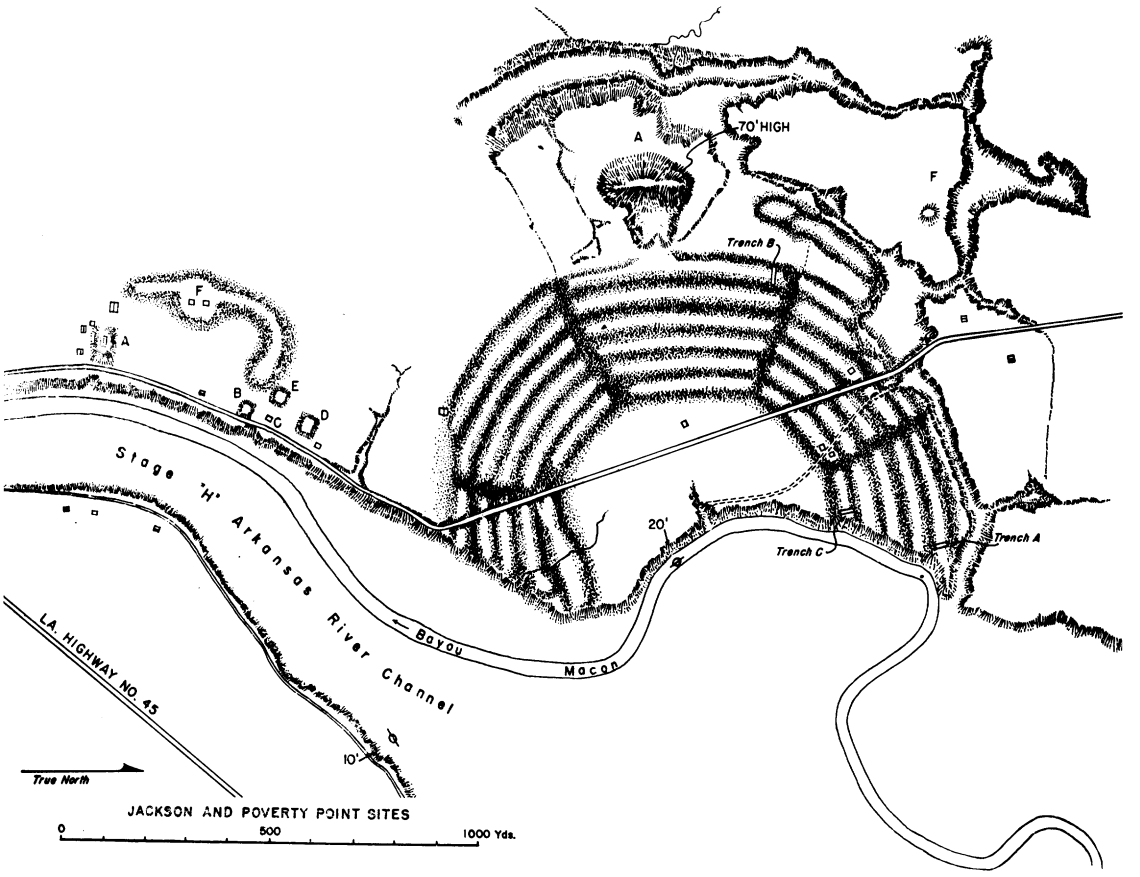

FIG. 73. Map of the Jackson and Poverty Point sites traced from an enlarged air photograph. The Jackson site dates in the Troyville and Coles Creek periods. The low ridges to the east of the large Poverty Point mound A are indicated by the same shading that shows in the photograph; the swales between ridges are dark while tops of the ridges are light. The locations of three trenches dug across these ridges are shown. The small rectangles are modern farm houses.

tion will have to be given to changing the estimates for the river channel chronology.

It has been a matter of considerable surprise to the writer, at least, that such large and complex earthworks should have been built by preceramic peoples at such an early date in the lower Mississippi Valley. Additional research will doubtlessly clarify the problem, but it is not too soon to offer a few surmises. It has occurred to the writer that perhaps the two peculiarly shaped mounds are large bird effigies, the high peak representing the head, the flanking ridges the wings, and the platform the tail, while the resemblance of the octagonal figure to the earthworks at the Newark, Ohio, Hopewell group is obvious.

A possibility which deserves consideration is that the date obtained at Jaketown and the Ohio and Illinois Hopewell sites dates may be substantially correct. The prepottery Poverty Point complex may be coeval with the early phases of upper Mississippi Valley Hopewell and rather closely related to it. This would explain certain divergences which Poverty Point shows from other late preceramic horizons in the southeast, notably those in the valleys of the Tennessee River.

BIBLIOGRAPHY

FISK, HAROLD N.

1944. *Geological Investigation of the Alluvial Valley of the Lower Mississippi River.* War Department, Corps of Engineers, Mississippi River Commission, Vicksburg.

HAAG, WILLIAM G. AND CLARENCE H. WEBB

1953. Microblades at Poverty Point Sites. *American Antiquity*, Vol. 18, No. 3, pp. 245-8. Salt Lake City.

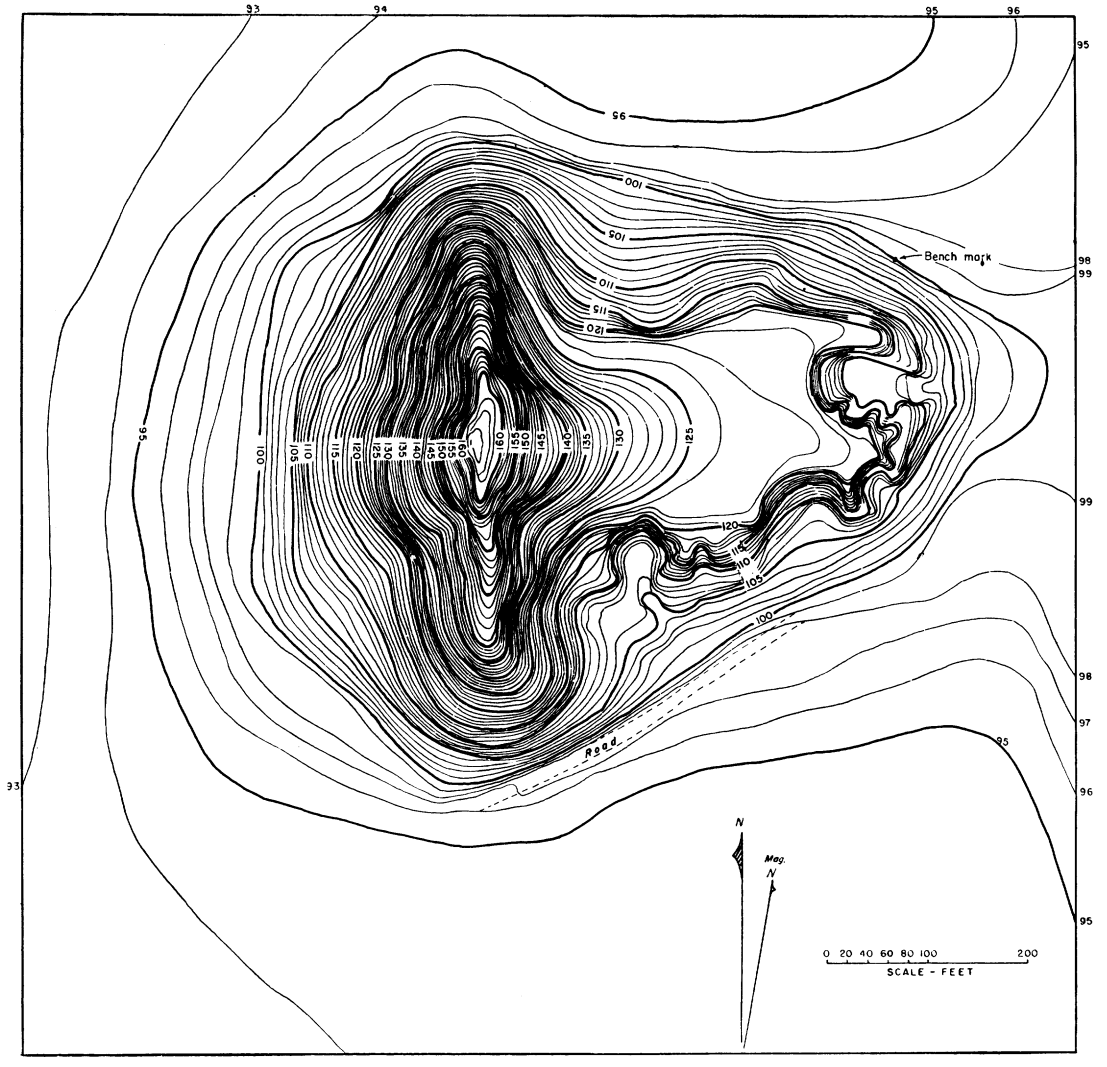

FIG. 74. Contour map of the large mound A at the Poverty Point site. (Datum has an assumed elevation.)

KULP, J. LAWRENCE, HERBERT W. FEELY, AND LANSING E. TYRON

1951. Lamont Natural Radiocarbon Measurements, I. *Science*, Vol. 114, No. 2970, p. 566.

MOORE, CLARENCE B.

1913. Aboriginal Sites in Louisiana and Arkansas. *Journal of the Academy of Natural Sciences of Philadelphia. 2nd series*, Vol. 16, pp. 66-76.

WEBB, C. H.

1944. Stone Vessels from a Northeast Louisiana Site. *American Antiquity*. Vol. 9, No. 4, pp. 386-94.

1948. Evidences of Pre-pottery Cultures in Louisiana. *American Antiquity*, Vol. 13, No. 3, pp. 227-32. Salt Lake City.

JAMES A. FORD
American Museum of Natural History
New York 24, N.Y.
April, 1953

SITE ON FREMONT ISLAND IN GREAT SALT LAKE

The existence of an enigmatic site on Fremont Island in Great Salt Lake has been brought to the attention of the University of Utah by Earl Stoddard of Ogden, Utah. The archaeological specimens which Stoddard gathered from the site, especially the stone bowls, do not seem to bear any relationship to known cultural materials from northern Utah; consequently the site is being reported here in order to call attention to the unusual assemblage of artifacts. The materials reported and illustrated are in the possession of Stoddard.

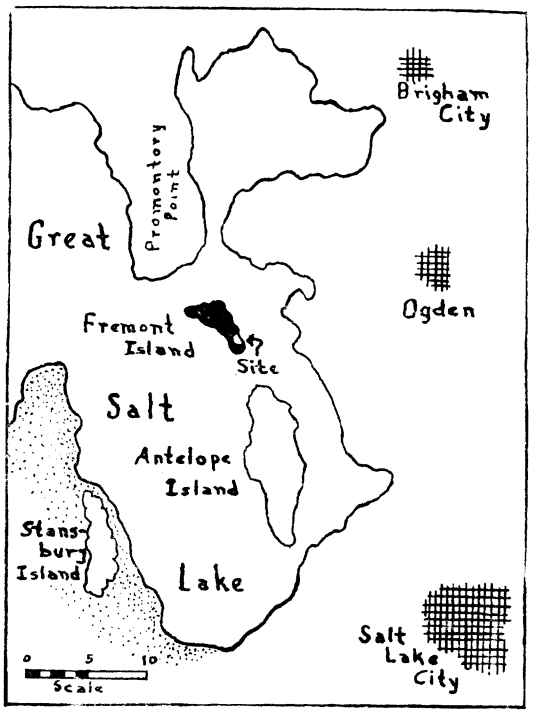

FIG. 75. Fremont Island, Great Salt Lake, Utah.

Fremont Island is five miles long, two miles wide, and contains approximately 2,945 acres (Morgan, 1947). It lies twenty-two miles west and south of Ogden, Utah, and only four miles south of Promontory Point (Fig. 75). It is the second largest island in the lake, and the second island to yield definite evidence of aboriginal human occupation; Stansbury Island was the first island on which archaeological materials were found (Jameson, 1948). Stansbury Island differs from Fremont in that the former is not now truly an island. It is situated on the present edge of the lake and is accessible by road. Archaeological materials have been reported from Antelope Island, the largest true island in the current lake, but as yet no survey has been made of the island to determine the extent or significance of reported materials.

Fremont Island is usually completely detached from the mainland except during periods of low lake level. The present (1953) level of Great Salt Lake is 4200.2 feet above sea level and Fremont Island is completely surrounded by water. It is possible to walk to the island dry-shod when the lake level stands at 4194.5 feet or lower; that is, 5.7 feet lower than the present lake level. The most recently recorded low period of the lake was between 1935 and 1940, when the lake dropped to an elevation of 4194.8 feet above sea level. Other lows were recorded in 1905 when the lake stood at 4196 feet and 1860 when it was at 4199.5 feet above sea level.

The site being reported is situated near the southern tip of the island. It lies on the southern slope of a hill which rises gradually to a height of approximately 300 feet above the present lake. Immediately east of the site there is a steep escarpment which drops off to a narrow beach. Several brackish seep springs are located along the base of this escarpment. The site is approximately 1000 feet long and 150 feet wide, and extends down the slope of the hill from its crest and along the edge of the escarpment. The cultural materials at the

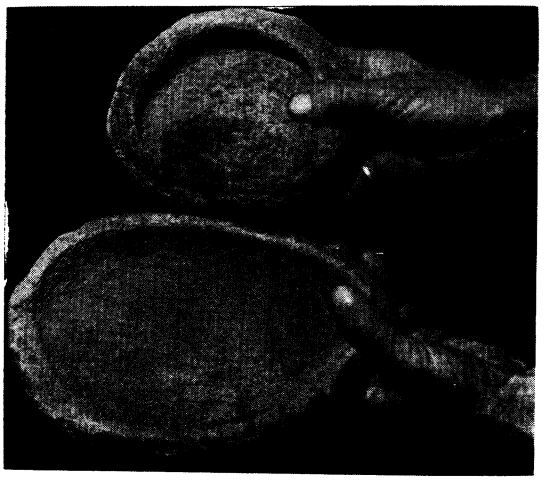

FIG. 76. Fremont Island stone bowls of ferruginous quartzite.