

PREHISTORIC INDIANA ARCHAEOLOGY.

S. F. BALCOM.

First impressions are responsible many times for our persistent ideas of things. The colored maps of the school atlas, which divided the continent into sections based on political lines, stamped on our minds certain squares and irregular forms as constituting the divisions of what we are pleased to call the new world. Physical Geography corrected our ideas to quite an extent and we remember that there is an eastern and a western mountain chain in our portion of the continent, and that the latter extends through Mexico and Central America and on into South America. But how many are there who, having had opportunities of traveling over the country, take note of its formation and realize how one part after another has developed and is dependent on some other part, as for instance upon the Gulf of Mexico?

In a paper read before the Indiana Academy of Science a few years ago, Mr. M. S. Markle called attention to the fact that the glacial drift reached as far south as the Ohio River, as evidenced by local flora in certain portions of Indiana and Ohio. And that plants common to an Arctic flora still remain in bogs and cool, shady ravines, and at times are surrounded by the southern flora that came in the wake of the retreating ice. A study of the primitive races in our northern continent shows traces of a shifting about, quite similar to these marches and countermarches of nature in building the land. And from remains which the Indians have left we are led to believe that the Indian stoic of the woods in Ohio knew as much of the geographical layout of the country,—that is, its mountain territory, its lake country, its prairie region, its converging valleys and their relationship to the great gulf at the south as do most of his civilized successors, excepting, of course, those who have made a special study of the face of nature in a geological and geographical way. For on the Scioto River in Ohio are remains of a race which speak of an intertribal trade extending to the Atlantic on the east, along the Mississippi to the gulf on the south, and then west to the mountains of Mexico, if not to the canyon country by way of the Red River or other water courses.

Geology explains to us the formation of our continent, and how it has been formed on similar lines to that of the old world, yet it may be said to have an individuality of its own. Anthropology says the same of the primitive American races, for a development peculiar to themselves is indicated, in which certain characteristics of physical make-up and certain elements of the various languages, point to a common origin, and as not having been materially influenced by any old-world culture. It remains for Archaeology to trace the routes by which the branches of that prehistoric Indian race developed,—diverging in some instances, combining in others, and yet through it all leaving traces more or less distinct which point out the paths which they trod.

The director of the Field Museum at Chicago advised me, upon inquiry, that some five distinct cultures are traceable in Illinois; and Prof. Mills, Curator of the Ohio State Archaeological and Historical Society, says that about as many minor cults are said to have existed in Ohio, although they have not been definitely traced. Indiana, in between, must have harbored all of them more or less, and an interesting field, consequently, is here open for investigation.

The great pyramidal mounds at Etowah in Georgia and Cahokia in Illinois, with their associated tumuli, are evidences that a race with great power and high ideals once occupied the Mississippi valley. They seem to have passed up to the headwaters of the Mississippi and also branched off into the comparatively mild valley of the Ohio, leaving traces in Indiana and Kentucky.

In Ohio two quite distinct groups developed, reached their zenith and passed into oblivion, for their characteristics were not common to the native tribes which occupied that section at the beginning of our historical period.

The earlier of these two cultures is marked as peculiar by having been the first to build immense earth walls. The largest of these embankments are located at a point some 40 miles north of Cincinnati, on a headland with steep sides and some 200 feet above the Little Miami River which adjoins it, and is known as Fort Ancient. They inclose about 100 acres of level ground and are over $3\frac{1}{2}$ miles in length; they contain about three million cubic feet of earth which was carried from a distance to construct them. In places they are twenty feet in height with a base about four times the height. Openings were left in the embankment every 200 feet or so and these openings average something like 20 feet. This feature interferes with the inference that they were the walls of a fort, and point rather to their being of a ceremonial nature.

At Marietta, Ohio, at the mouth of the Muskingum River, and at Newark, in the upper Muskingum valley, some 40 miles east of Columbus, were traces of this early Fort Ancient culture in the form of pyramidal mounds at the former place and remarkable earthworks at the latter. These embankments while not being any ways near as large as those at Fort Ancient, being only from about 2 feet to 8 feet in height, were constructed with a wonderful geometrical accuracy. They were in groups enclosing areas of from 2 to 50 acres, and the groups were distributed over an area of four square miles. Many of these groups being connected by passageways outlined by low parallel walls 8 to 12 feet apart, indicating an extensive ceremonial use on a tremendous scale.

Large sepulchral mounds with indications of cremation burial are lacking with the culture or cultures at Fort Ancient and at Newark, but in the Scioto valley a culture developed to an almost unbelievable perfection. Here earth embankments of wonderful geometrical accuracy are accompanied by sepulchral mounds which contain evidences of ceremonial rites in connection with elaborate cremation burial, the most remarkable of artistic pottery and carving in stone which undoubtedly will place them at the forefront of stone-age peoples, and above any

others in the delicacy of their pottery and the artistic proportion and finish of the same; and above all the accurate delineation of animal and bird forms carved in pipestone, which show the striking qualities of a master sculptor by presenting the pose and even the facial expression of animals and birds, which were at the same time fashioned in the form of platform pipes. Along with this are evidences of a nation-wide inter-tribal trade, for the mounds contain copper which must have come from the great lakes or Mexico; large quantities of mica probably from North Carolina; hematite apparently from Missouri; galena ore similar to that of Illinois; ocean shells from the Atlantic or the Gulf; and, most remarkable of all, obsidian in very large specimens of spear heads which could not have been quarried closer than Mexico. In all of this they formed a distinct culture far above the Newark stage mentioned.

At Anderson, a county seat northeast of Indianapolis, is a small group of earthworks similar to those at Newark, and are distributed over an area of about five acres. They are known as Mounds Park and are located on a bluff adjoining a beautiful stretch of White River. The park is reached by both traction and street car lines from Anderson; it has a large shelter house and would be an ideal place to invoke the inspiration of the leaders of that unknown race, for the archaeological researches now contemplated among these examples of their handiwork. One of the circular embankments of this group covers about two acres, in the center of which is a small ceremonial mound; it has a single gateway with level ground leading to this mound. The earth for this embankment was taken from the inside, forming a ditch about 8 feet in depth, which with the height of the embankment added presents from the inside a slope of quite imposing height. This same feature of an interior ditch exists at the embankment in the Fair Grounds at Newark, Ohio.

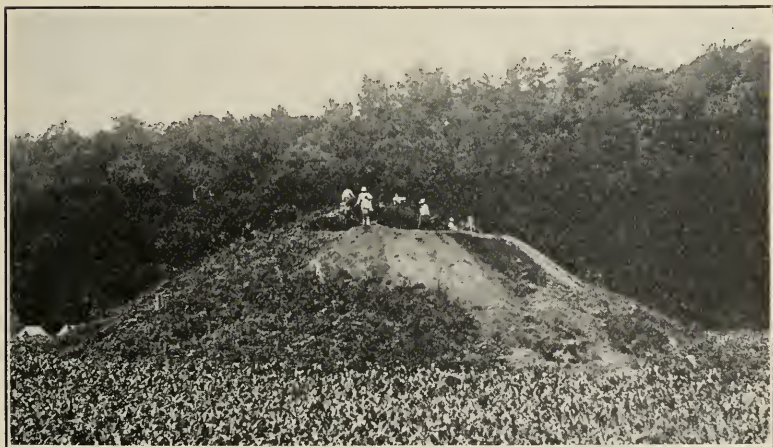


Fig. 1. Exploration of Adena Mound.

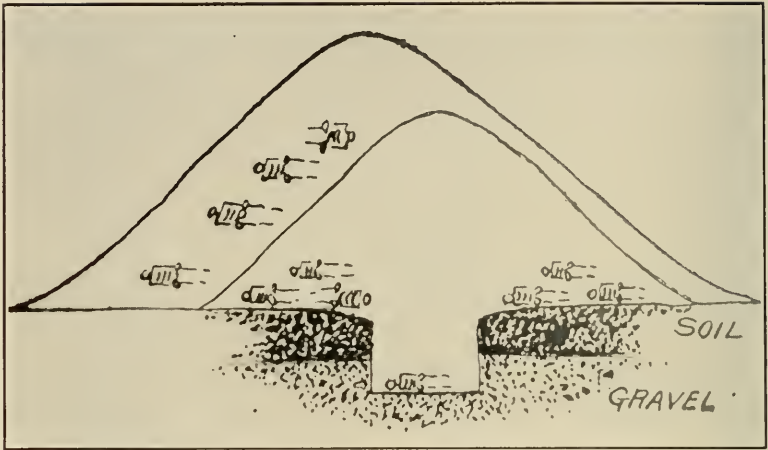


Fig. 2. Cross-section of Adena Mound.

Figure 1 shows the first stage of work in excavating the Adena mound near Chillicothe, Ohio, done some 20 years ago by Prof. W. C. Mills, Curator and Librarian of the Ohio State Archaeological and Historical Society. Figure 2 shows by a cross-section of the mound how it was built at two separate periods. It will be noted that the grave in the middle of the original mound is the only one placed below the ground level, the others being at four different levels, marking

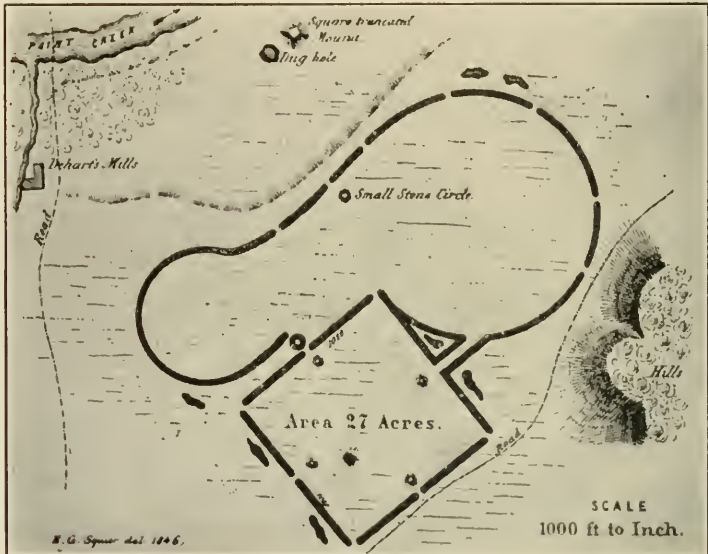


Fig. 3. Square truncated mound and the Baum geometrical earthworks.

apparently that many different periods or stages in the construction of the mound. This central grave was on a large scale, being about 12 by 14 feet and nearly 7 feet in depth, walled with logs, which had decayed, leaving only the space or mold. No copper ornaments were found in this grave, but fine specimens were found in some of the other graves, indicating that the remarkable use of copper came a little later than the date of this the most pretentious of the burials.

At the Baum earthworks and sepulchral mounds, some 14 miles from Chillicothe, shown in Figure 3, a radical change in custom and ceremonial rites was found in the square truncated mound, explored by Squier and Davis in 1846, from those at the Adena Mound. At the latter place logs were used in the formation of sepulchers but here they were used upright, forming an enclosure which was a perfect circle 26 feet in diameter, with the posts set 10 inches apart. It was paved on the ground surface by logs radiating from the center. All interments were within this enclosure and were found at various levels placed upon layers of sand, indicating a progress in the construction of the mound similar to that of the Adena mound. Here to somewhat larger extent than at the Adena mound the practice of cremation was found, but at each place it was incidental and not the general practice. No copper or foreign substances were found, and the few stone articles did not show high aboriginal art and it is inferred that the construction of the mound antedated that of the earthworks. The construction of a square monument around a circular mortuary chamber would indicate a relationship with the early cult which built rectangular truncated mounds in the Ohio and Mississippi valleys. And the incentive prompting the use of an unusual geometrical feature in the construction of this mound would seem to be the governing incentive leading to the construction of the ideal group of earthworks found at this place.

A group of earthworks identical in nature with the Baum group except that the arrangement places the smaller circle adjoining the square enclosure and both connected with the larger circle, is located about 8 miles south of Chillicothe, and known as the Harness mounds, named for the original owner of the land. A very large sepulchral mound is associated with the earthworks, but in this case it is inside of the large circular embankment and at a point such that it forms the prominent feature of all three enclosures. This group was surveyed and examined by Squier and Davis in 1846, and was completely explored by Prof. Mills in 1903. It was elliptical, being 160 feet long, 85 feet maximum width and about 20 feet maximum height. The height of the walls of the large circle was about 4 feet, with the walls of the smaller circle somewhat heavier and those of the square heaviest of all. The walls are unaccompanied by a ditch and the square incloses some 30 acres, the larger circle containing about one-half more than the square. While at the Adena and Baum mounds the practice of cremation was exceptional, the reverse obtained at the Harness mound, for here separate burnt clay or puddled platforms, or basin-like cists, were prepared for the cremated, or more often partially cremated, remains. These receptacles were in most cases for individuals, but in some cases four burials were placed on a platform and occasionally

cremated remains and perfect skeletons were found occupying the same platform. As at the Baum mound, the burials were within a mortuary chamber, outlines of which could be traced by the post molds left after the decay of the wood. A wealth of ornaments, utensils, artifacts and weapons were placed with the remains, as may be judged by the fact that Prof. Mills secured 12,000 specimens from the Harness mound after two previous explorations for other institutions had been made. Among these articles were those of copper, flint, obsidian, mica, slate, bone,

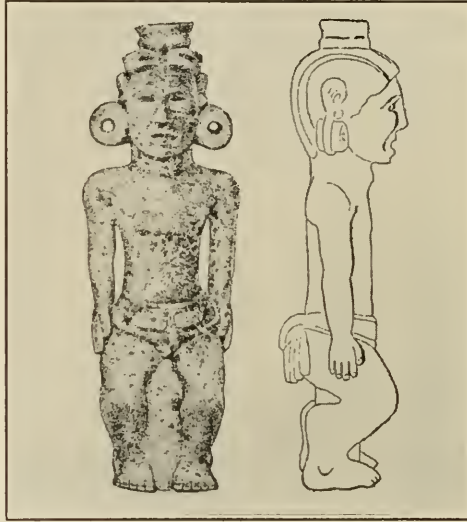


Fig. 4. Effigy pipe from Adena mound.



Fig. 5. Mask of Mexican god Xipe.

ocean shells, pearls, crystals of galenite and large lumps of lead ore, also a few platform pipes of limestone and steatite. Most abundant of the copper pieces were the spool-shaped ear ornaments of various sizes and make, and are most important by indicating an inter-tribal trade extending to Mexico. They were found on each side of the head in the cases of uncremated burials, so were judged to be ear ornaments. That they were used as such is substantiated by an effigy tubular pipe found

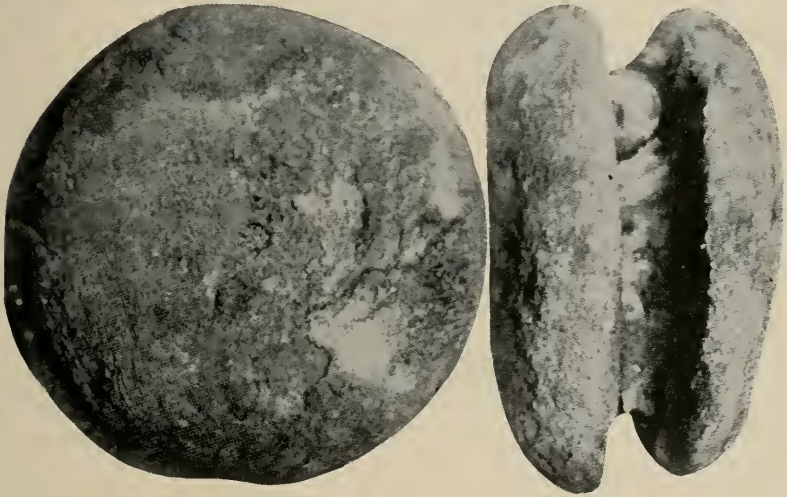


Fig. 6. Copper Ear Ornaments.

in the Adena mound (see Figure 4). This figurine is a peculiarly Mexican design, and similar ear ornaments appear in carvings of most Mexican gods or idols. This is plainly to be seen in Figure 5, the mask of a Mexican god in the British Museum. This god Xipe was the Mexican deity known as the God of Sowing, and the invocation to this god is interesting to us here in the land of maize or Indian corn, as it voices the following appeal: "Put on your golden garment; why does it not rain? It might be that I perish,—I, the young maize plant." And yet no similar carving representing a deity or idol has been found among the American Indians. It is said that idolatry was unknown in Mexico previous to the reign of the Aztecs. Possibly this Ohio culture antedates the Aztec period. One of these copper ear ornaments is shown in Figure 6. It is in five separate pieces, hammered from the thin sheets of copper found frequently in the graves. It was a far cry from Ohio to old Mexico, but aboriginal man seems to have been equal to it in more cases than one.

Another characteristic relic of this latter culture is the grooved axe, made of the hardest stones, mostly of granite. They had some special use, for they are peculiar to the Ohio valley and the territory west, of which Illinois is about the center. They range from considerably less than a pound in weight to over thirty pounds, and a majority

of them are marvels of symmetrical carving and polishing, and how they had the skill and patience to work them out in granite by hammering and rubbing with other stones is almost beyond comprehension. They are rare in the eastern and southern states and none to speak

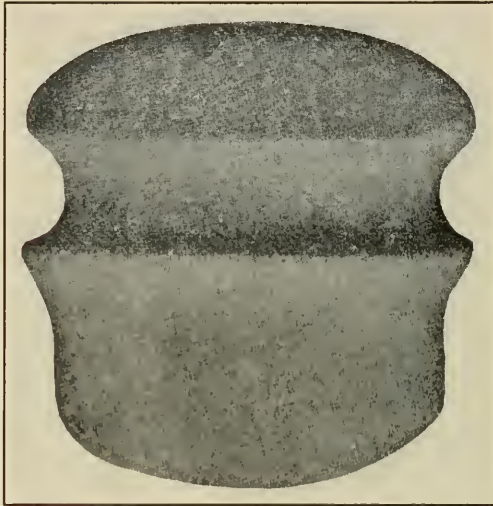


Fig. 7. Grooved Stone Axe.

of are found in Mexico. Figure 7 shows a most symmetrical grooved axe. While its symmetry is most striking, it would not be expected that art features would be worked out in granite. The polls of these axes are usually as carefully proportioned as the blade and seldom show hard wear, although a good many show rough usage. The contrary is usually the case with the blade, as a large proportion show evidences of having been carefully worked over, as in case of the specimen illustrated, which evidently has been worked over and over to give a sharp cutting edge. The deep groove is a problem, for the work to secure it is all out of proportion to what would be necessary to hold a withe wrapped for a handle. The use, whatever it might have been, to which this implement was put, must have been a most important one, and one requiring skill and accuracy. It has been thought that the spalls, flakes or blanks chipped from masses of flint for use in subsequently fashioning arrow and spear heads were secured by knocking them off with hammer stones. This would seem a very crude process for so delicate a requirement. While the writer has not known of the grooved axe or its companion piece, the symmetrical and sharp-edged celt having been mentioned as suitable for this flaking process, that method is offered here as a possible solution. Flint specimens are found which are worked to a knife edge and to a needle point, and it is understood to have been done with a notched bone implement under steady and skilful pressure. It is known that flint and glass work with a cleavage

produced by a shock or pressure acting strongly in any desired plane, as in cutting glass with a diamond. It occurs to the writer that a heavy, symmetrical tool with a reasonably good edge, held firmly in exactly the right position and tapped carefully in the proper or necessary way, would come the nearest to producing desired results of any method that the aborigines could have employed. The grooved axe of granite or diorite, to give a tough, homogeneous texture; perfect symmetry in shape, to give a pressure or shock that could be calculated and depended on; a deep groove to provide for a close grip of the handle, that an exact position of the implement might be secured and a firm contact be had with the material to be worked upon; would apparently give an implement exactly suitable to their needs. And great credit should be given them for so perfect a tool and for the remarkably perfect artifacts that were produced in flint, jasper, chalcedony and obsidian.

We, then, here in Indiana, are in the environment of a most wonderful archaeological field which is beginning to claim attention because of its remarkable attainments in the stone age, and further than that we are in the center of a territory which was occupied apparently by a culture antedating the first of the two cultures mentioned in Ohio, that is to say the people who erected embankments and mounds along the Mississippi valley, traces of whom have been found in the lower Wabash valley.

Prof. Moorehead made extensive explorations at the Cahokia mounds, across the river from St. Louis, this past season, and the results will be of great interest. Prof. Moorehead made explorations which gave the exhibit of Ohio archaeology for the World's Fair in Chicago, which is now in the Field Museum at Chicago, and has since then been Curator for the Phillips Academy at Andover, Massachusetts. The Cahokia explorations as reported by him will surely throw much further light on the progress of this ancient aboriginal race from the South to their final abiding place in Ohio.

Why, then, should we not take steps to unravel some of the mysteries connected with a race which stood head and shoulders above the stone-age peoples of the Old World, and who as a people in historical times have shown themselves to have been in the front rank of uncivilized aborigines, having a personality, independence and ability far above other savage races?

We have occupied their lands, turning them into vast wealth. We have used their names of places and things which have given us the most picturesque feature of our language. So it should be with gratitude as well as pride that we take up Prehistoric American Archaeology and make it the beginning of American History.

Indianapolis.

