published, we are perhaps warranted in concluding that the following districts or areas were occupied by different peoples or tribes. As a matter of course we can only designate these areas in general terms.

(1) The *Wisconsin district*, or area of the emblematic or effigy mounds. This embraces the southern half of Wisconsin, a small portion of the northern part of Illinois, and the extreme northeast corner of Iowa. The effigy or animal mounds form the distinguishing feature of the works of this district, but aside from these there are other features sufficient to separate the works of this section from those further south.

(2) The *Illinois* or *Upper Mississippi district*, embracing eastern Iowa, northeastern Missouri, and northern and central Illinois, as far south as the mouth of the Illinois River.

In this region the works are mostly simple conical tumuli of small or moderate size, found on the uplands, ridges, and bluffs as well as on the bottoms, and were evidently intended chiefly as depositories of the dead. They are further characterized by internal rude stone and wooden vaults or layers; by the scarcity of pottery vessels, the frequent occurrence of pipes, the presence of copper axes, and often a hard, mortar-like layer over the primary or original burial. The skeletons found are usually extended, though frequently in a sitting or squatting posture.

Walls and enclosures are of rare occurrence in this region.

(3) The *Ohio district*, including the State of Ohio, the western part of West Virginia, and the eastern portion of Indiana. Although the works of this region present some features which are common to those of the Gulf section, there are several peculiar characteristics which warrant us in designating it as a distinct district. Among other of these peculiar features we notice the great circles and squares of the enclosures, the long parallel lines of earthen walls, the so-called "altar mounds," or mounds containing structures chiefly of clay to which the name "altar" has been applied; the numerous carved stone pipes; the character of the pottery and the methods of burial.

(4) The *New York district*, confined chiefly to the northern and western parts of the State of New York, but including also the lake region of the central portion.

As the antiquities of this district have been shown by Squier to be chiefly due to the Indian tribes occupying that section at the time of its discovery by the Europeans, it is unnecessary to note the distinguishing characteristics. The works are chiefly enclosing walls, remains of palisades, and burial mounds.

(5) The *Appalachian district*, including western North Carolina, eastern Tennessee, southwestern Virginia, and part of southeastern Kentucky.

The characteristics which appear to warrant us in concluding that the works of this region pertain to a different people from those in the other districts, at the same time seem to show some relation to those of

the Ohio district. Such are the numerous stone pipes, the altar-like structures found in some of the mounds, and the presence of mica plates with the skeletons. But the peculiar features are the mode of burial, the absence of pottery, and the numerous polished celts and engraved shells found in the mounds.

Although it is probable that there are at least three districts in the southern portion of the United States, they appear to pass from one into the other by such slight changes in the character of the works as to render it exceedingly difficult to fix the boundaries between them. I therefore mention the following, provisionally, as being those indicated by the data so far obtained.

(6) The *Middle Mississippi area* or *Tennessee district*, including southeast Missouri, northern Arkansas, middle and western Tennessee, southern and western Kentucky, and southern Illinois. The works of the Wabash valley possibly belong also to this district, but the data obtained in regard to them are not sufficient to decide this point satisfactorily. This district, like the others of the south, is distinguished from the northern section by its larger mounds, many of which are pyramidal and truncated and often terraced, and which were, beyond question, used as domiciliary mounds. Here we also meet with repeated examples of enclosures though essentially different from those of Ohio; also ditches and canals. From the Lower Mississippi and Gulf districts, with which, as we have said, it is closely allied, it is distinguished chiefly by the presence of the box-shaped stone cists or coffins, by the small circular house-sites or hut-rings, and by the character of the pottery. This is pre-eminently the pottery region, the typical forms being the long-necked, gourd-shaped vase and the image-vessels. In this district the carved stone pipes are much less common than in the Illinois, Ohio, and Appalachian districts.

(7) The *Lower Mississippi district*, including the southern half of Arkansas, Louisiana, and Mississippi. There are no marked characteristics by which to distinguish it from the Middle district; in fact as we move southward along the Mississippi from the mouth of the Illinois river, the works and their contents indicate a succession of tribes differing but slightly in habits, customs, and modes of life, the river generally forming one natural boundary between them, but the other boundaries being arbitrary. For example, the Cahokia region appears to have been the home of a tribe from which at one time a colony pushed northward and settled for a while in Brown and Pike Counties, Illinois. The extreme southeastern counties of Missouri were probably the seat of another populous tribe which extended its borders into the western part of southern Illinois and slightly into northeast Arkansas, and closely resembled in customs and art the ancient people who occupied that part of the Cumberland valley in middle Tennessee. This subsection is principally distinguished by the presence of the small circular house-sites, which are slightly basin-shaped, with a low ring of earth

around them. As we move farther southward into Arkansas the house-sites change into low circular mounds, usually from 1 to 3 feet in height, and in nearly every instance containing a layer of clay (often burned) and ashes.

These small mounds, which are clearly shown to have been house-sites, were also burial places. It appears to have been a very common custom in this section to bury the dead in the floor, burn the dwelling over them, and cover the whole with dirt, the last operation often taking place while the embers were yet smouldering. Burial in graves was also practiced to a considerable extent. As we approach the Arkansas River, moving southward and from thence into Louisiana, the pottery shows a decided improvement in character and ornamentation.

(8) The *Gulf district*, including the Gulf States east of the Mississippi. The works of this section appear to be closely allied to those of the Lower Mississippi district, as here we also find the large flat-topped pyramidal mounds, enclosing walls, and surrounding ditches and canals. The chief differences are to be found in the forms and ornamentation of the pottery and modes of burial.

As we approach the Mississippi River the distinguishing features gradually disappear, although there appears to be a distinct subdistrict in the northern part of Mississippi, and as we enter the Florida peninsula a change is observed which appears to indicate a different people, but the data so far obtained are not sufficient to enable us to outline the subdistricts.

This districting is to be regarded as a working hypothesis rather than as a settled conclusion which will stand the test of future investigations. It is more than likely that other subdivisions will be found necessary, and that the boundaries of some of the districts given will have to be more or less modified; still, I believe the arrangement will be found substantially correct.

As a very general and almost universal rule, mounds of the class under consideration are more or less conical in form, and are common to all sections where earthworks are known to exist, in fact they form almost the only ancient remains of some localities. Often they are isolated, with no other monuments near them, but more frequently they occur in groups or are associated with other works. Squier and Davis say "they are generally of considerable size, varying from 6 to 80 feet in height, but having an average of from 15 to 25 feet."[1]

This is probably true in regard to the mounds explored by these archæologists in Ohio, but is erroneous if applied generally; as very many, evidently used and intended as burying places only, are but two or three feet high, and so far as the more recent examinations made in other sections — especially the explorations carried on under the Bureau of Ethnology — have shown, tumuli of this character are usually from 3 to

[1] Ancient Monuments, p. 161.

10 feet high, though some, it is true, are of much larger dimensions; but these are the exceptions and not the rule.[1]

As the authors just alluded to are so frequently referred to by writers, and their statements in reference to the works explored by them are taken as of general application, I will venture to correct another statement made by them in regard to mounds of this character. They assert that "these mounds invariably cover a single skeleton (in very rare instances more than one, as in the case of the Grave Creek mound), which, at the time of its interment, was enveloped in bark or coarse matting or enclosed in a rude sarcophagus of timber, the traces, in some instances the very casts, of which remain. Occasionally the chamber of the dead is built of stone rudely laid up, without cement of any kind."[2]

I have investigated but few of the ancient works of Ohio personally, or through the assistants of the Bureau, hence I can only speak in regard to them from what has been published and from communications received, but judging from these, Messrs. Squier and Davis, while no doubt correctly describing the mounds explored by them, have been too hasty in drawing general conclusions.

That burial mounds in the northern sections very frequently cover but a single skeleton is true, but that this, even in this section, is universally true or that it is the general rule is a mistake, as will appear from what is shown hereafter. Nor will it apply as a rule to those of the southern sections.

To illustrate the character and construction of these mounds, and modes of burial in them, I will introduce here brief descriptions of the leading types found in the different northern districts heretofore mentioned, confining myself chiefly to the explorations made by the Bureau assistants.

[1] It is somewhat strange that Rev. J. P. MacLean, who has long resided in Ohio and has studied the mounds and other works of the southern portion of that State with much care, should follow almost word for word this and the next statement of Squier and Davis (Mound-Builders, p. 50) and adopt them as his own, without modification or protest, when in the appendix containing his exceedingly valuable notes on the "Archæology of Butler County" nearly all the facts given bearing on these points show them to be incorrect.

[2] Ancient Monuments, p. 161.

BURIAL MOUNDS OF THE WISCONSIN DISTRICT.

Following the order of the geographical districts heretofore given, we commence with the Wisconsin section, or region of the effigy mounds.

As a general rule the burial mounds in this area are comparatively small, seldom exceeding 10 feet in height and generally ranging from 3 to 6 feet. In all cases these belong to that class of works usually denominated "simple conical tumuli."

Of the methods of construction and modes of burial there appear to be some two or three types, though not so different as necessarily to indicate different tribes or peoples. One of these is well represented in the following extract from Dr. I. A. Lapham's work describing some mounds opened by Dr. Hoy, near Racine:

> We excavated fourteen of the mounds, some with the greatest possible care. They are all sepulchral, of a uniform construction as represented in Fig. 1 [our Fig. 1.]

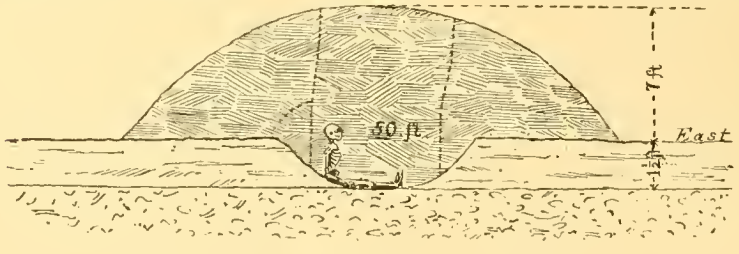


FIG. 1.—Section of mound near Racine, Wisconsin.

> Most of them contained more than one skeleton; in one instance we found no less than seven. We could detect no appearance of stratification, each mound having been built at one time and not by successive additions. During the investigations we obtained sufficient evidence to warrant me in the following conclusions. The bodies were regularly buried in a sitting or partly kneeling posture facing the east, with the legs placed under them. They were covered with a bark or log roofing over which the mound was built.[1]

In these a basin-shaped excavation some 2 or 3 feet deep was first made in the soil in which the bodies were deposited, as shown in Fig. 1.

Mr. Middleton, one of the Bureau assistants, in 1883, opened quite a number of small burial mounds in Crawford and Vernon counties, be-

[1] Antiquities of Wisconsin, p. 9.

longing to the same type as those just described; some with the excavation in the original soil in which the skeletons were deposited, though in others there were no such excavations, the skeletons being deposited on the original surface or at various depths in the mounds. I give here descriptions of a few of them from his notes:

The one numbered 16, of the Courtois group, is about 20 feet in diameter, and at present scarcely more than 1 foot high, the ground having been in cultivation for several years and the mound considerably lowered by the plow. A vertical section is given in Fig. 2, *a a*, indi-

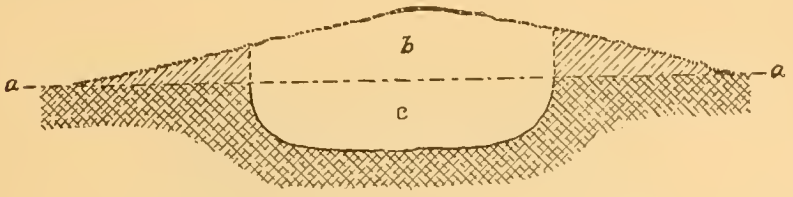


FIG. 2.—Section of burial mound, Vernon County, Wisconsin.

cating the natural surface of the ground, *b* the part of the mound removed, and *c* the original circular excavation in the natural soil to the depth of 2 feet.

Four skeletons were found in this excavation, two side by side near the center, with heads south, faces up, one near the north margin with head west, and the other on the south side with head east, all stretched at full length.

In another mound of the same group with a similar excavation nothing save a single skull was found. In another of exactly the same kind some of the skeletons were folded, while others were extended at full length.

In all these cases, and in a majority of the small burial mounds opened in this western part of the State, there was no stratification; still there were found some exceptions to this rule.

Vestiges of art were comparatively rare in them, yet here and there were found an arrow-point, a chipped flint scraper or celt—in some instances remarkably fine specimens—a few large copper gorgets, evidently hammered from native copper, copper beads, etc. Very few vessels of pottery were obtained from them, but one was discovered, shown in Fig. 3, which I believe is of the finest quality of this ware so far obtained from the mounds of the United States. There were intrusive burials in a few of these mounds, but these have been wholly omitted from consideration in the descriptions given.

In a few instances the mounds seem to have been built solely for the purpose of covering a confused mass of human bones gathered together after the flesh had disappeared or had been removed. Similar mounds

are described by Mr. Thomas Armstrong as found near Ripon, Fond du Lac County. Speaking of these, Mr. Armstrong says:

> As to how these bones came to be placed in these mounds, we can of course only conjecture; but from their want of arrangement, from the lack of ornaments and implements, and from their having been placed on the original surface, we are inclined to believe that the dry bones were gathered together — these in the large mounds first and those in the smaller ones afterwards — and placed in loose piles on the ground and the earth heaped over them until the mounds were formed.[1]

There can be no doubt that the bones in this case were gathered up from other temporary burial places or depositories, as was the custom of several tribes of Indians.

FIG. 3.—Earthen pot from Wisconsin mound.

A number of burial mounds opened by Mr. W. G. Anderson, near Madison, were found to be of the same general type as those mentioned by Mr. Middleton. These he describes as being very low and poorly made. Eight were opened, all having been built in the same way, with only one layer of black earth, so hard as to make the work of excavation exceedingly laborious. These were circular, and about 4 feet high. Skeletons were found as near as 12 or 13 inches to the surface, but badly decayed. There were no sarcophagi or coffins, and in all cases the heads pointed towards the west.[2]

[1] Smithsonian Report 1879, p. 337.
[2] Smithsonian Report 1879, p. 343.

In some instances the mound contained a circular stone wall, within which a pit had been dug to the depth of 2 or 3 feet in the original soil, as, for example, the one near Waukesha, described by Dr. Lapham.[1]

A mound in Crawford County, opened by Colonel Norris, one of the Bureau assistants, in 1882, shows a similar vault or pit, but differs from the preceding in being distinctly stratified and wanting the stone wall. The construction of this tumulus and the mode of burial in it were as follows:

Proceeding from the top downwards, there was first a layer of soil and sand about 1 foot thick; next, nearly 2 feet in depth of calcined human bones, without order, mingled with which were charcoal, ashes, and a reddish-brown mortar-like substance, burned as hard as pavement brick. This layer is numbered 4 in the annexed cut (Fig. 4), which

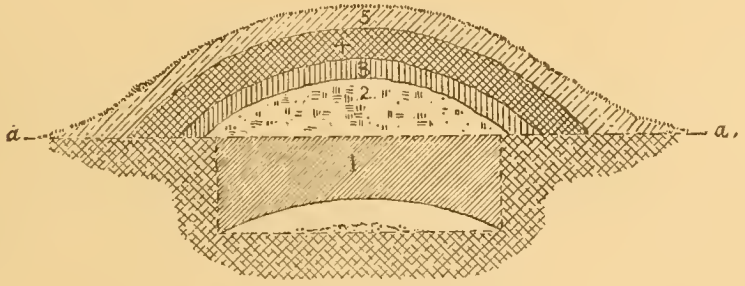


FIG. 4.—Section of burial mound, Crawford County, Wisconsin.

represents a vertical section of the mound. Immediately below this was a layer about 1 foot thick (No. 3) of clay or mortar mixed with sand, burned to a brick-red color. Below this, in the space marked 2 in the cut, were found the bones of fifteen or twenty individuals, in a confused heap, without order or arrangement. Mingled with these were fire-brands, charcoal, and ashes. The bones were charred, some of them to charcoal, and some were glazed with melted sand. The mass appears to have been first covered with soft clay-mortar, which ran into and filled the spaces, and the burning to have been done afterwards by means of brush or wood heaped on the top, as among the bones were lumps of hard burned clay.

The bottom of this layer corresponded with the original surface of the ground, but the excavation being continued, a circular vault or pit, 6 feet in diameter, was found extending downwards, with perpendicular sides, to the depth of nearly 3 feet. The bottom of this pit was covered to the depth of an inch with fine chocolate-colored dust. Although the filling of this pit was chiefly sand, there was a cavity at the bottom a foot high in the center, over which the sand filling was arched as shown in the figure.

[1] Antiquities of Wisconsin, p. 28.

It is evident that the skeletons in this mound were buried after the flesh had been removed, as we can on no other supposition explain the fact that the clay or mortar had filled the interstices between the bones, and that in some cases it had even penetrated into the skulls.

Another mound, opened by Colonel Norris in the same neighborhood, presented some peculiarities worthy of notice, although not sufficient to mark it as belonging to a distinct type.

According to his report, the southern portion had previously been explored by Judge Branson, who found at the base some six or eight skeletons lying stretched out horizontally, and covered by a dry, light-colored mortar which must have been spread over them while in a soft condition, as it had run between the bones and encased them, and in some cases, as in the mound just described, filled the skulls. As only the southern portion had been opened he removed the remainder. The dried mortar-like substance was very hard and difficult to dig through, but the pick soon struck some rough, flat limestone rocks which proved to be parts of a rude wall about 3 feet high and 8 feet long, built on the natural surface of the ground. In the opposite side of the mound, 12 feet distant from and parallel with it, was another similar wall. Between them and on the natural surface of the ground, side by side, were a number of skeletons lying flat and lengthwise and parallel with the walls. A vertical section of this mound is shown in Fig. 5. The lit-

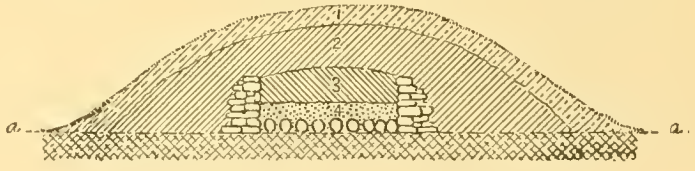


FIG. 5.—Section of burial mound, Crawford County, Wisconsin.

tle circles at the bottom between the walls indicate the heads of the skeletons; No. 4, the layer of mortar over the bones; 3, a layer of hard clay mixed with ashes; 2, a layer of clay; and 1, the top covering of sand and soil about 18 inches thick. Before being disturbed this mound was 35 feet in diameter and 6 feet high.

As it is evident that the burials in this case were made at one time, and as the mortar-like substance had run into the interstices, it is more than probable that the skeletons were deposited after the flesh had been removed.

The following description of a mound with a single original and several intrusive burials is also taken from Colonel Norris' notes of work in Crawford County:

One large mound of this group, 70 feet in diameter and 10 feet high, still unexplored, was opened. It had been considerably defaced, especially on the west side. According to tradition it was a noted burial place with the Indians, which was certainly confirmed by the result.

The surface or top layer was composed of sand and alluvial earth to the depth of some 3 or 4 feet. Scattered through this in almost every part of the mound were human skeletons in various stages of decay and in different positions, but mostly stretched horizontally on the back. Scattered among the remains were numerous fragments of blankets, clothing and human hair, 1 copper kettle of modern pattern, 3 copper bracelets (hammered from native copper), 1 silver locket, 10 silver bracelets (one having the name "Montreal," and another the letters "A B" stamped on it), 2 silver earrings, 6 silver brooches, 1 copper finger-ring, 1 double silver cross, 1 knife-handle, and 1 battered bullet. In fact the top layer to the depth of 3 or 4 feet seemed to be packed as full of skeletons and relics as possible.

Carrying the trench down to the original surface of the ground, he found at the bottom, near the center, a single skeleton of an adult in the last stages of decay. With it were the following articles: 2 stone scrapers, a small stone drill, fragments of river shells, and pieces of a mammoth tusk. The earth below the upper layer was mixed with clay and ashes, evidently different from the surrounding soil.

Several mounds opened by him in Grant County contained charred human bones, and one or two covered confused masses of bones, being similar in this respect to some of those heretofore mentioned.

A mound which he opened in Sheboygan County, containing a single skeleton, is described as about 50 feet in diameter and 5 feet high. After passing through 18 inches of surface soil, the central mass, composed of earth mingled with charcoal, ashes, and loose stones, was reached. Near the center of this mass, and at the bottom of the mound, a large human skeleton was discovered, apparently holding between the hands and knees a large clay vase. Immediately over this skeleton was an irregular layer of flat bowlders.

Another mound of this group, about the same size as the preceding, was found literally filled with skeletons to the depth of 2½ feet, evidently intrusive burials, as they were accompanied with iron implements, silver ornaments, etc. Beneath these was a layer of rounded drift bowlders aggregating several wagon loads. Below these and in a shallow excavation in the natural surface of the ground were some forty or more skeletons in a sitting or squatting posture, disposed in circles around and facing the central space, which was occupied by an unusually large shell (*Busycon perversum*).

It is worthy of notice in this connection that there are no effigy mounds, so far as known, in the immediate section where the two works just mentioned are situated, but there is near by, one small oval enclosure about 50 feet in diameter.

In studying the burial mounds of the district now under consideration, of which the foregoing may be considered as types, there appears to be no marked distinction between the intrusive burials of modern Indians and the original burials for which the mounds were constructed.

In both we observe from one to many skeletons in a place; in both we find them stretched out horizontally and also folded; in both we sometimes notice evidences of fire and partially-consumed bones; in both we find instances where the mortar-like covering has been used, and in both we meet occasionally with those confused masses of bones which seem to have been gathered from graves or other temporary burial places into these mounds as common depositories. Moreover the transition from one to the other is so gradual as to leave us nothing save the position in the mound and the presence of vestiges of civilized art to distinguish the former from the latter.

A large portion of these mounds, as has already been stated, are unstratified, and each was probably thrown up and completed at one time; yet skeletons are found at various depths in some of these, as, for example, one opened by Mr. Middleton, in Vernon County, a vertical section of which is shown in Fig. 6, *a a* indicating the original surface

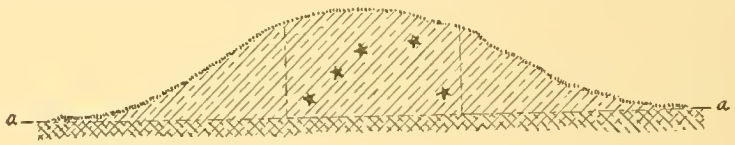


FIG. 6.—Section of burial mound, Vernon County, Wisconsin.

of the ground and the stars the positions of the skeletons, some of which were stretched out at full length while others were folded. The heads were towards different points of the compass and the bones of all were so much decayed that none could be preserved. Several instances of this kind were observed, in some cases those skeletons near the surface or top of the mound indicating burial after contact with the whites.

It is apparent, therefore, that although some of the burial mounds of this district must be attributed to the so-called mound-builders, others were certainly built by the Indians found inhabiting it at the advent of the whites. There can scarcely be a doubt that some of the small unstratified tumuli described are the work of the Indians. If this is conceded there would seem to be no halting place short of attributing all of this class in this district to the same race.

Dr. Hoy's statement that in some cases there was evidence that the bodies had been "covered with a bark or log roofing," is in exact accord with a well-known burial custom of some of the tribes of the Northwest.

According to Mr. M. B. Kent, the Sacs and Foxes, who formerly resided in the region now under consideration, buried the body "in a grave made about 2½ feet deep, which was laid always with the head towards the east, the burial taking place as soon after death as possible. The grave was prepared by putting bark in the bottom of it before the corpse was deposited, a plank covering made and secured some distance above the body."

Another method followed by the same people, according to Mr. J. W. Spencer,[1] was to make a shallow hole in the ground, setting the body in it up to the waist, so that most of the body was above the ground. A trench was then dug about the grave, in which pickets were planted. But the usual method was to place split pieces of wood about three feet long over the body, meeting at the top in the form of a roof, on which dirt was thrown to keep them in place.

According to Potherie,[2] the Iroquois were accustomed to cover the bodies, after being deposited in the "fosse," with bark of trees, on which they cast earth and stones.

According to Schoolcraft,[3] the Mohawks of New York—

> make a large round hole in which the body can be placed upright or upon its haunches: which after the body is placed in it is covered with timber to support the earth which they lay over, and thereby keep the body from being pressed. They then raise the earth in a round hill over it.[4]

The burial customs of northern tribes, known to have occupied portions of the effigy mound district, agree so exactly with what we see in the sepulchral tumuli of this district as to justify the conclusion reached by Dr. Lapham, after a long and careful personal study of them, that they are to be attributed to Indians. Some he was rather inclined to ascribe to tribes which had migrated, had been driven off by other tribes, or been incorporated into them previous to the advent of the white race. But he maintained that the subsequent tribes or those found occupying the country "continued the practice of mound-building so far as to erect a circular or conical tumulus over their dead." And he adds significantly, "This practice appears to be a remnant of ancient customs that connects the mound-builders with the present tribes."[5]

The evidence in regard to these unstratified mounds appears to lead directly to the conclusion that they are all the work of the Indians found occupying the country at the time it was first visited by whites or of their ancestors. If it is conceded that the small unstratified tumuli are in part the work of these aborigines, there would seem to be no escape from the conclusion that all the burial mounds of this district are to be ascribed to them; for, although there are some two or three types of burial and burial mounds, the gradation from one to the other is so complete as to leave no marked line of distinction, and Dr. Lapham is fully justified in asserting that the evidence connects the mound-builders with the modern Indians. The stratified mounds in which the hard clay or mortar covering over the remains is found, and which we shall

[1] Pioneer Life.

[2] Potherie, Histoire de l'Amérique Septentrionale, II, p. 43.

[3] History of Indian Tribes of the United States, Part III, p. 193.

[4] As Dr. Yarrow has described the burial customs of the North American Indians in the first Annual Report of the Bureau, I will omit further quotations and refer the reader to his paper.

[5] Antiquities of Wisconsin, p. 89.

again meet with in the adjoining district, may be the work of different tribes from those which constructed the small unstratified tumuli, but the distinctions between the two classes are not such as to justify the belief that they are to be attributed to a different race or to a people occupying a higher or widely different culture-status.

Having reached this conclusion it is impossible for us to halt here; we are compelled to take one step farther in the same direction and ascribe the singular structures known as "effigy mounds" to the same people. The two classes of work are too intimately connected to admit of the supposition that the effigy mounds were built by one race or people, and the conical tumuli by another. We might as well assume that the enclosures of Ohio were the work of one people, but the mounds accompanying them of another.

That works of different tribes or nations may frequently be found intermingled on areas over which successive waves of population have passed is admitted, but that one part of what is clearly a system is to be attributed to one people and the other part to another people is a hypothesis unworthy of serious consideration. The only possible explanations of the origin, object, or meaning of these singular structures are based, whether confessedly so or not, on the theory that they are of Indian origin. Remove the Indian element from the problem and we are left without even the shadow of an hypothesis.

The fact that the effigy mounds were not used as places of sepulture, and that no cemeteries save the burial mounds are found in connection with them, is almost conclusive proof that the two, as a rule, must be attributed to the same people, that they belong to one system. If this conclusion is considered legitimate, it will lend much aid to the study of these works. It is true it is not new, but it has been generally ignored, and hence could not aid in working out results.

The following extract from Dr. Lapham's "Antiquities of Wisconsin" will not be considered inappropriate at this point:[1]

> The ancient works in Wisconsin are mostly at the very places selected by the present Indians for their abodes, thus indicating that the habits, wants, modes of subsistence, &c., of their builders were essentially the same.
>
> If the present tribes have no traditions running back as far as the time of Allouez and Marquette, or even to the more recent time of Jonathan Carver, it is not strange that none should exist in regard to the mounds, which must be of much earlier date.
>
> It is by considerations of this nature that we are led to the conclusion that the mound-builders of Wisconsin were none others than the ancestors of the present tribes of Indians.
>
> There is some evidence of a greater prevalence than at present of prairie or cultivated land in this State at no very remote age. The largest trees are probably not more than five hundred years old, and large tracts of land are now covered with forests of young trees where there are no traces of an anteeedent growth. Every year the high winds prostrate great numbers of trees and frequent storms pass through the forest, throwing down nearly everything before them. Trees are left with a portion of the roots still in the ground, so as to keep them alive for several years after their

[1] Pp. 90–92.

prostration. These "wind-falls" are of frequent occurrence in the depths of the forests and occasion much difficulty in making the public surveys. The straight lines of the sections frequently encounter them.

The amount of earth adhering to the roots of a tree when prostrated by the wind is, under favorable circumstances, very considerable, and upon their decay forms an oblong mound of greater or less magnitude, and a slight depression is left where the tree stood. These little hillocks are often by the inexperienced mistaken for Indian graves. From the paucity of these little "tree-mounds" we infer that no very great antiquity can be assigned to the dense forests of Wisconsin; for, during a long period of time, with no material change of climate, we would expect to find great numbers of these little monuments of ancient storms scattered everywhere over the ground.

Whether the greater extent of treeless country in former times was owing to natural or artificial causes it is now difficult to determine, but the great extent of ancient works within the depths of the present forests would seem to indicate that the country was at least kept free from trees by the agency of man.

Many of these tree-mounds were observed on and about the ancient works.

Another curious circumstance that may be noticed by inspection of the figures of mounds accompanying this work is the gradual transition, as it were, or change of one form into another. Examples can be found of all forms, from a true circle through the oval and elongated oval to the oblong mounds and long ridges. Again, there is a succession of mounds, from the simple ridge of considerable size at one end and gradually diminishing to a point at the other, through the intermediate forms, having one, two, three, or four projections to the "turtle-form." In this way, also, we may trace a gradual development (so to speak) of nearly all the more complicated forms.

It is not pretended to assert that this was the order in which the mounds were erected; or that the aborigines gradually acquired the art by successive essays or lessons. Indeed, we are led to believe that the more complicated forms are the most ancient.

The relative ages of the different works in Wisconsin, so far as they can be ascertained from the facts now before us, are probably about as follows:

First and oldest. The animal forms, and the great works at Aztalan.

Second. The conical mounds built for sepulchral purposes, which come down to a very recent period.

Third. The indications of garden-beds planted in regular geometrical figures or straight lines.

Fourth. The plantations of the present tribes, who plant without system or regularity.

Thus the taste for regular forms and arrangements, and the habits of construction with earthy materials seems to have been gradually lost, until all traces of them disappear in our modern degenerate red men.

The animal-shaped mounds and accompanying oblongs and ridges, constituting the first of the above series, are composed of whitish clay or of the subsoil of the country.

The mounds of the second series, or burial mounds, are usually composed of black mould or loam, promiscuously intermixed with the lighter-colored subsoil.

BURIAL MOUNDS OF THE ILLINOIS OR UPPER MISSISSIPPI DISTRICT.

This district, as heretofore stated, includes eastern Iowa, northeastern Missouri, and northern and central Illinois as far south as the month of the Illinois River.

Although we are justified in concluding that this area was occupied during the mound-building age by tribes different from those residing in the Wisconsin district, yet the distinguishing characteristics are more apparent in the forms of the works than in the modes of burial and internal construction of the burial mounds. We shall see by the illustrations hereafter given that at least one of the types found in one district is common in the other. But this is to be expected and is readily explained by the supposition that the tribes which have occupied these regions moved back and forth, thus one after another coming upon the same area. The absence of evidence of such movements would indicate that the mound-building period was of comparatively short duration, a theory which I believe has not been adopted by any authority, but to which I shall have occasion again to refer. One class of the burial mounds of this district is well represented in a group, explored by the members of the Davenport Academy of Natural Sciences, on the Cook farm, near Davenport, Iowa. The mounds of this group are situated on the immediate bank of the Mississippi at a height not exceeding 8 to 12 feet above high-water mark; they are conical in form and of comparatively small size, varying in height from 3 to 8 feet. Nine of them were opened, of which we notice the following:

In No. 1 the layers from above down were, first, a foot of earth; then a layer of stones 1½ feet thick; then a layer of shells 2 inches thick;

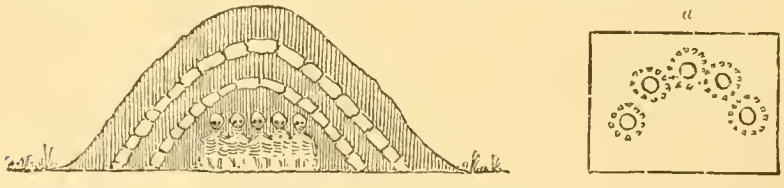


FIG. 7.—Section of burial mound, Davenport, Iowa. [From the Proceedings of the Davenport Academy of Sciences.]

next a foot of earth, and lastly a second layer of shells 4 inches thick. Immediately under this, at the depth of 5 feet, were found five skeletons stretched horizontally on the original surface of the ground, parallel to each other, three with heads toward the east and two with heads west.

With them were found one sea-shell (*Busycon perversum*), two copper axes, to which fragments of cloth were attached, one copper awl, an arrow-head, and two stone pipes, one representing a frog.

Mound No. 2, though similar in form and external appearance to the preceding, presented a quite different arrangement internally, as is evident from the vertical section shown in Fig. 7. Here there were no layers of shells, but two distinct layers of stones. At the depth of 5 feet eight skulls (five only are shown in the figure), with some fragments of bones were unearthed; these were lying in a semicircle of 5 feet diameter, each surrounded by a circle of small stones (shown at *a* in the figure). From the position of the skulls and bones it was evident these bodies had been buried in a sitting posture. The articles found accompanying the skeletons were two copper axes, two small hemispheres of copper and *one of silver*, a bear's tooth, and an arrow-head.

No. 3, though the largest of the group, was apparently unstratified, the original burial consisting of the bones of two adults and one infant, at the original surface of the ground, under a thin layer of ashes, and surrounded by a single circle of small red stones. With these were found copper axes, copper beads, two carved stone pipes (one in the form of a ground-hog), animal teeth, etc. Near the surface of the mound were two well-preserved skeletons, with evidences of an "oak-wood" covering over them and accompanied by glass beads, a fire steel, clay pipe, and silver ear-ring—evidently an intrusive burial.

No. 4 was found similar in construction and in all other respects to No. 3, except that at the feet of the skeletons was a round heap of stones, 3 feet high, neatly laid up, and that in the earth where the skeletons lay could be distinctly seen traces of cloth or some woven material, in which they had probably been enveloped.

No. 5 was similar to No. 2, except in the following respects: The skeletons (probably two) were in a confused heap at the bottom under a 6-inch layer of hard clay (probably similar to what Colonel Norris calls "mortar"). Near these, but outside of the clay layer, was a stone heap similar to that in No. 4. "On this lay two very strong thigh bones and three ribs placed diagonally across each other. There were also a few bones leaning against the heap at one side. The stones were partly burned to lime, and all of them showed more or less marks of fire, while the bones in the mound showed not the slightest trace of it."

Four or five feet south of the stone-heap was a large quantity of human bones in complete confusion. The relics were broken pots, arrow-heads, a stone pipe, etc.

Nos. 7, 8, and 9 were similar to No. 1, varying only in minor details.[1]

My object in noticing the construction of so many mounds in a single group and the modes of burial in them, is to call attention to the differences in detail where there can be no doubt that they were built by one tribe and probably by one clan, as the size of the group indicates a

[1] Proceedings of the Davenport Academy of Sciences, Vol. I, pp. 118–122.

comparatively limited population. In these nine mounds we notice the following differences: some are stratified, others not; in some the skeletons are placed horizontally on the ground, in others they are in a sitting posture, while in others they are dismembered and in confused heaps; in some there are altar-like[1] structures of stone which are wanting in others; in some the skeletons are covered with a hard clay or mortar coating which is wanting in most of them, and lastly, we see in one or two, evidences of the use of fire in the burial ceremonies, though not found in the others.

In some respects these mounds remind us of some of the stratified tumuli of Wisconsin, especially those opened by Colonel Norris in Sheboygan County, to which they bear a strong resemblance.

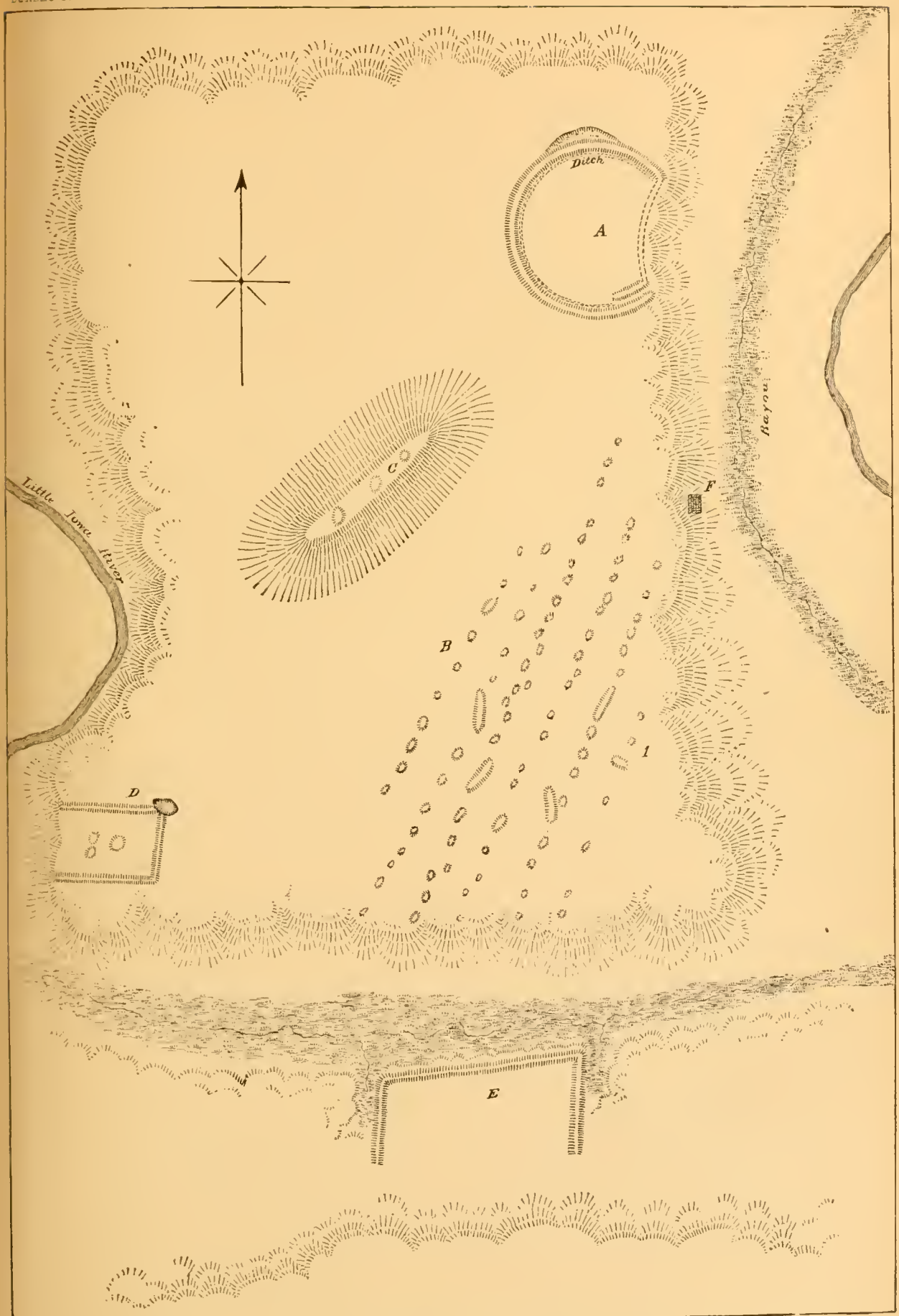
In the latter part of 1882 Colonel Norris examined a group of works in Allamakee County, Iowa, which presents some peculiarities worthy of notice in this connection.

This group, which is represented in Plate I, consisting of enclosures, lines of small mounds, and excavations, is situated on the farm of Mr. H. P. Lane, about 7 miles above New Albin. It is on a bluff in one of the numerous bends of the Little Iowa River, the character of the locality indicating that it was selected as one easily defended. I shall at present only notice those particulars which seem to have some bearing on the character of the burial mounds and mode of interment.

Although there are no effigy mounds in the group, the relative positions and forms of the tumuli, as shown in the figure, and other particulars to be noticed, leave no doubt in my mind that the works, in part, are to be attributed to the people who built the figure mounds of Wisconsin. But, as will be seen from the particulars mentioned, there is conclusive evidence that the locality has been occupied at different times by at least two distinct tribes or peoples, differing widely in habits and customs.

The largest work is an enclosure marked A in Plate I, and shown on an enlarged scale in Plate II. It is situated on the margin of a bluff overlooking the Little Iowa and an intervening bog-bayou, probably the former channel of the river. It is almost exactly circular, the curve being broken on the east side, where it touches the brink of the bluff, being here made to conform to the line of the latter, though probably never thrown up to the same height as the other portion. The ends at the southeast overlap each other for a short distance, leaving at this point an entrance way, the only one to the enclosure. A ditch runs round on the inside from the entrance on the south to where the wall strikes the bluff on the north, but is wanting along the bluff and overlapping portion. The north and south diameter, measuring from outside to outside, is 277 feet; from east to west,

[1] I wish it distinctly understood that I do not, by the use of this term, commit myself to the theory that these mounds or any others contain altars in the true sense of the term, as I very much doubt it.



GROUP OF EARTHWORKS, ALLAMAKEE COUNTY, IOWA

235 feet; the entire outer circumference is 807 feet, the length of the portion along the bluff 100 feet, and of the overlapping portion at the entrance 45 feet. The wall is quite uniform in size, about 4 feet high and from 25 to 27 in width, except along the bluff, where it is scarcely apparent; the entrance is 16 feet wide, and the ditch 5 to 6 feet wide and 3 feet deep. On the north, adjoining the wall on the outside and extending along it for about 100 feet, is an excavation (*e*, Plate II) 35 feet wide at the widest point and 3 feet deep.

As this ground, including the circle, has been under cultivation for fifteen years, it would be supposed the height of the wall is considerably less than it originally was, but this is probably a mistake. On the contrary, it was originally probably but 20 feet wide and not more than 3 feet high, composed mainly of yellowish brown clay obtained, in part at least, from the ditch, but during occupancy the accumulation of countless bones of animals used as food, stone chips, river shells, broken pottery, and dirt, and, since abandonment, the accumulation of sand drifted by the winds from the crumbling sandstone butte (*C*, Plate I) overlooking it, have not only filled the ditch but elevated the wall and whole interior area 2 feet or more. This accumulation of sand is so great and so uniform over the plateau that fifteen years of cultivation have not sufficed to reach the clay of the original surface nor to unearth or even penetrate to the bones, pottery fragments, and other refuse matter covering the original surface in the circle.

Trenches cut across the wall at various points indicate, first, a layer of sand about 1 foot thick; immediately below this an accumulation of refuse matter forming a layer from 1 to 2 feet thick; under which was the original clay embankment 2 feet thick, resting on the natural surface of the ground. A section of the ditch, embankment, and excavation is shown in Plate II. The dotted line *a b* indicates the natural surface; No. 1 the original clay layer of the wall; No. 2 the layer of earth and refuse material with which the ditch is filled; and No. 3 the top layer of sand.

In No. 2 were found charcoal, ashes, fragments of pottery, fractured bones, etc.

A broad belt of the inner area on the east side was explored, and the same conditions were found to exist here as were revealed by the trenches across the wall and ditch, except that here the shells were more abundant in layer No. 2, and there were many burnt stones.

On the southeastern portion of the plateau (*B*, Plate I) are six nearly parallel lines of mounds running northeast and southwest, mostly circular in form, varying from 15 to 40 feet in diameter, and from 2 to 6 feet in height; a few, as indicated in the figure, are oblong, varying in length from 50 to 100 feet. The number in the group exceeds one hundred.

While engaged in excavating these mounds Colonel Norris observed a number of patches of the level area quite destitute of vegetation. The

owner of the land, who was present, could give no explanation of this phenomenon, simply remarking that they had always been so, never having produced a good crop of anything, although there was no apparent difference between the soil of these spots and the surface around them. As some of these extended across the area occupied by the mound group, he concluded to explore them, and was surprised to find them to be burying places, and scattered here and there among the graves, if such they could be called, were stone chips, shells, charcoal, and ashes. He was surprised at this, as he supposed the mounds alone were used as depositories of the dead, and was at first disposed to attribute these burials to a people who had occupied the ground long subsequent to the authors of the works. Possibly this may be the correct solution, but if so, they were certainly the same as those who buried in the mounds of this group, as no difference in the contents and internal arrangement could be observed. In both cases there was a compact layer of hard, light-colored earth, having the appearance of lime-mortar, possibly clay and ashes mixed together, which had been subject to the action of fire. As the burials in these sterile spots were seldom more than 18 inches deep, the only layer above them consisted of sand from the butte, while the mounds were uniformly covered with a layer of richer soil, although below this and covering the skeletons was a layer of hard, light-colored earth. Skeletons and bones were found in great abundance in the mounds and under the surface of the plateau, though none were discovered in the circle or nearer than 200 yards of it. They were sometimes mingled promiscuously with charcoal and ashes, but were usually in whole skeletons lying horizontally, though some were in a sitting posture; they were within from 1 to 3 feet of the surface, without any apparent system, except that they were always covered with a layer of hard earth.

A trench cut through the long mound of this group, No. 1, revealed near the center an oblong pile of sandstones, beneath which was found a rude stone coffin, formed by first placing flat sandstone slabs on the natural surface of the ground, then other slabs at the sides and ends, and a covering of similar stones, thus forming a cist or coffin about 6 feet long and 18 inches wide. Within this, extended at full length, with the head west, was the skeleton of an adult, but too much decayed for preservation. With it were some stone chips, rude stone scrapers, a *Unio* shell, and some fragments of pottery similar to those dug up in the circular enclosure.

The mounds on the sand butte marked *C*, Plate I, which is something over 100 feet high, were opened and found to be in every respect similar to those already mentioned, showing them to be the work of the same people who built the others.

The three mounds in the square enclosures marked *D*, (Plate I), were also opened, with the following results: The largest, oval in form, 30 feet long, about 20 feet broad and 4 feet high, was found to

consist of a top layer of loose sand 1 foot thick, the remainder of hard yellowish clay. In the latter were found several flat sandstone fragments, and beneath them, on the original surface of the ground, a much decayed skeleton, with which were a few stone chips, *Unio* shells, and fragments of pottery.

The second in size, 18 feet in diameter and 3 feet high, although covered with a layer of sand, was mainly a loose cairn of sandstones, covering traces of human bones, charcoal, and ashes. The third was found to be similar to the second, but in this case the pile of stones was heaped over a mass of charred human bones, mingled with which were charcoal, ashes, and fragments of pottery.

Fragments of pottery were found in abundance in the circle, in the mounds, in the washouts, and in fact at almost every point in the area covered by the group. Judging by the fragments, for not a single entire vessel was obtained, the prevailing forms were the ordinary earthen pot with ears, and a flask or gourd-shaped vase with a rather broad and short neck, often furnished with a lid. The paste with which this pottery was made had evidently been mixed with pounded shells. The only ornamentation observed consisted in the varied forms given the handles or ears and indentations and scratched lines.

Nearly all the implements found were of stone, exceedingly rude, being little else than stone flakes with one sharp edge; many of them having been resharpened and used as knives, scrapers, and skinners. Some had been worked into moderately fair perforators or drills for making holes in horn, bone, and shell—specimens of all these, with such holes, having been found here.

The immense quantity of charred and fractured bones, not only of fish, birds, and the smaller quadrupeds, such as the rabbit and the fox, but also of the bear, wolf, elk, deer, and buffalo, shows that the occupants of this place lived chiefly by the chase, and hence must have used the bow and arrow and spear; yet, strange to say, although careful search was made for them, less than a dozen arrow and spear heads were found, and these so rude as scarcely to deserve the name. A single true chipped celt, three sandstones with mortar-shaped cavities, and a few mullers or stones used for grinding were obtained; also, some fragments of deer-horn, evidently cut round by some rude implement and then broken off, and several horn and bone punches and awls, one barbed and another with a hole through the larger end.

The object in view in presenting these details is to give the reader an opportunity of judging for himself in reference to some inferences drawn from them.

The form of the circular enclosure reminds us at the first glance of the palisade enclosures figured by De Bry,[1] which, according to Lafitau,[2] was the form usually adopted by the Indian tribes who were accustomed

[1] Brevis Narratio, Plate XXX. Admiranda Narratio, Plate XIX

[2] Mœurs des Sauvages, II, p. 4.

to erect such structures. We have here the almost exact circle, save where interrupted by the margin of the bluff, the overlapping of the ends, and the narrow entrance-way. We have here also the clay with which it was the custom, at least in the southern section, to plaster the palisades or which was cast against their bases as a means of supporting or bracing them at the bottom, a custom not entirely unknown among the northern tribes in former times.

The indications are therefore very strong that this enclosing wall was originally a palisade which had been in part plastered with clay, or against which clay had been heaped to assist in rendering it firm and secure, and, if so, then it is probable it was built by Indians.

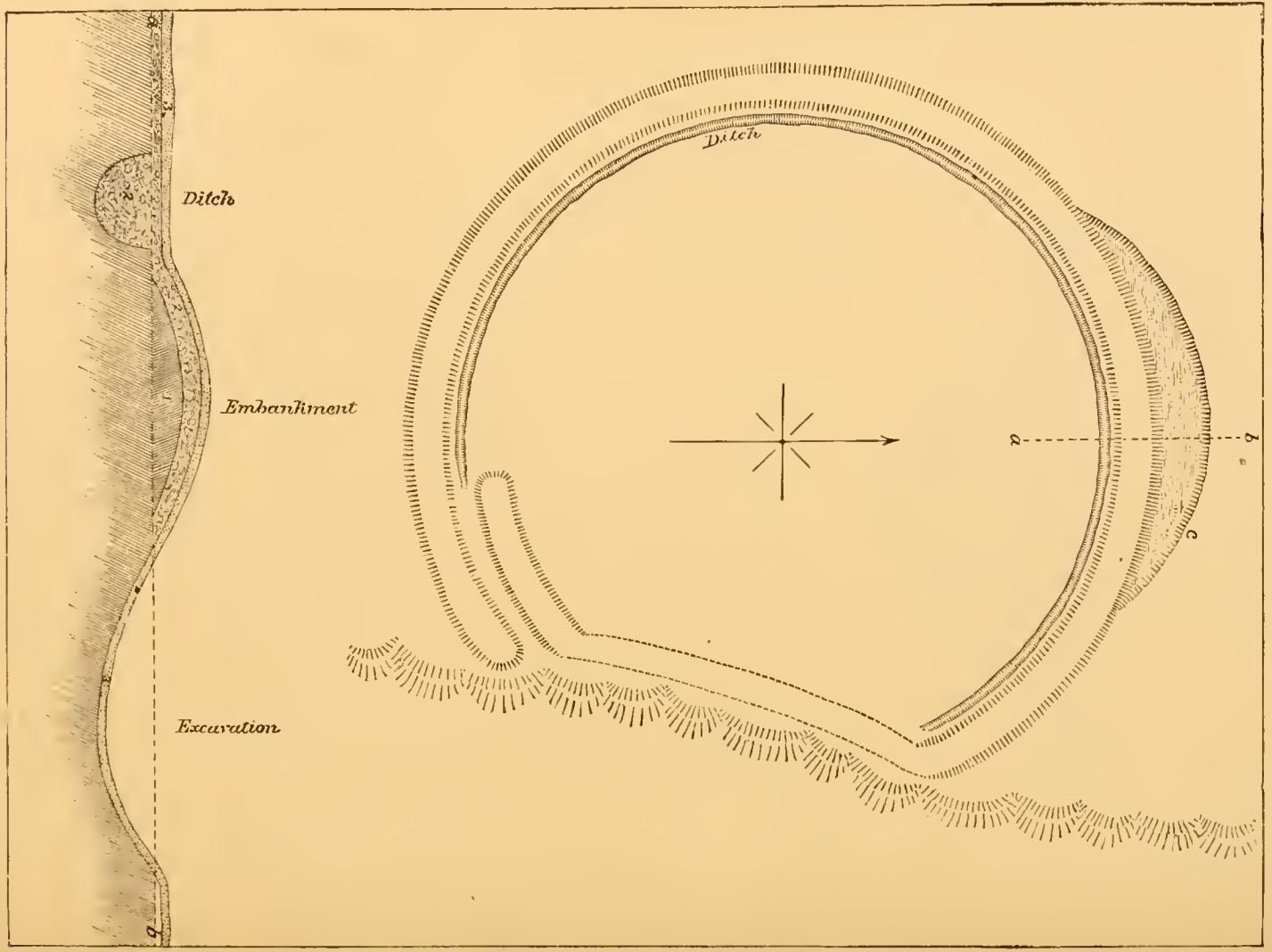
Be this supposition right or wrong the evidence is conclusive that the area on which this group is situated has been the abode of at least two tribes or peoples: first, it was occupied by the authors of the enclosures, whose stay was probably not very protracted, and after they had abandoned the locality or been driven from it by a second tribe, evidently comparatively numerous, that made it for a long time a dwelling place; a tribe differing in customs from its predecessor, and one that did not rely upon enclosures for protection. By no other supposition can we account for the fact that the refuse layer which covers the interior of the circle also spreads in equal depth over the ditch and clay remains of the enclosing wall, as those who left this refuse layer could have made no possible use of the wall as a defensive work, for which the position chosen and other particulars show it was designed.

The form of this enclosure, as we have before intimated, seems to connect it with some one of the Indian tribes; its age is uncertain but the accumulation of refuse matter and sand since the abandonment by the first occupants indicates considerable antiquity.

Although we cannot say positively that the second occupants were the builders of the mounds, as the investigation was not as thorough as it should have been, still I think we may assume, with almost absolute certainty, that such was the fact. The mounds in the square work marked D, in Plate I, present considerable differences from those in the group, and are probably the work of those who built the enclosures.

The stone grave in the oblong mound indicates the presence of individuals of a more southern tribe[1] at this place, during its second occupancy. The position of the cist in the mound would seem to forbid the idea of an intrusive burial, otherwise I should certainly suppose such to be the fact. I cannot, in the present paper, enter into a discussion of the question "to what tribe or people are the box-form stone graves to be attributed," but will state my conviction to be, after a somewhat careful study of the question, that they are to be ascribed to the Shawnees, Delawares, and Kickapoos.

[1] See "Early Notices of the Indians of Ohio" by M. F. Force, pp. 18–20.



ELEVATED FIGURE AND SECTION OF EARTHWORK A, PL. I.

Without further discussion of this group, which, as before intimated, presents, so far as the mounds are concerned, some features which appear to ally the latter to one class of burial mounds found in Wisconsin, we will now refer to some other works of this district explored by the Bureau assistants.

On the land owned by Mr. Fish, in Iowa, near the Mississippi River, a short distance below where the Little Iowa joins it, is a group of mounds placed on the crest of a ridge running parallel with the former stream about one-fourth of a mile therefrom. There are in all about thirty of these mounds, circular in form, and varying from 20 to 40 feet in diameter. These are all burial mounds, but one singular feature observed is that those on the higher sandy ground, although about the same size and having cores of clay similar to those on the firm clay portion of the ridge, have a layer of sand, some two feet or more added to them, yet when opened the contents and mode of construction of the two classes were found to be the same, to wit, a layer of hard clay covering decaying human bones, fragments of pottery, and rude stone implements. There were generally two or more skeletons in a mound, which were placed horizontally side by side on the natural surface of the ground.

Upon the terrace below the group were found the remnants of a row of comparatively large burial mounds. A railroad line having been carried along here, the larger portion of these works were destroyed; still, enough remained to show that the height varied from 6 to 15 feet, that they were composed chiefly of sandy loam similar to that around them, and that each had a hard central core of clay mixed with ashes, usually covering but a single skeleton. The relics found in them when opened consisted chiefly of stone axes, arrow and spear heads, and a few copper celts. In one, which was 32 feet in diameter and 8 feet high and less injured than the others, was a circular vault, walled as represented in Fig. 8. This was built of flat, unworked stones, laid up

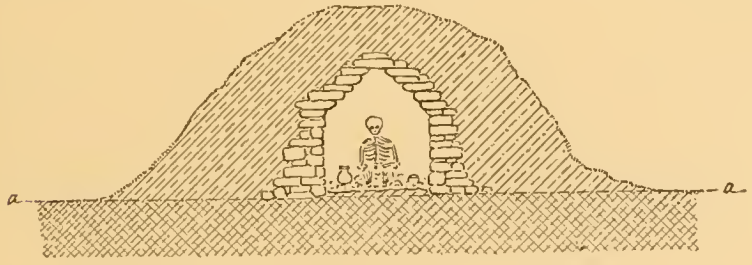


FIG. 8.—Section of mound showing stone vault (Iowa).

without mortar, gradually lessening as it ascended, and covered at the top by a single flat stone. In it was a single skeleton in a squatting posture, with which was a small earthen vase of globular form.

A singular fact was observed in a group near the town of Peru, Dubuque County. This group is situated on a dry, sandy bench or

terrace some 20 feet or more above a bayou which makes out from the Mississippi. It consists chiefly of small circular tumuli, but at the north end are four oblong mounds varying in length from 40 to 110 feet and in height from 1½ to 4 feet; there is also an excavation about 30 feet in diameter and 6 feet deep, and scattered throughout the group are a number of circular earthen rings varying in diameter from 12 to 30 feet and from 1 to 2 feet in height.

Quite a number of the circular mounds were opened, but only detached portions of a skeleton were found in any one, as a skull in one, and a leg, arm, or other part in another, four or five adjacent ones apparently together containing the equivalents of an entire skeleton. Some of these bones were charred, and all were much decayed, indicating by their appearance great age. The inner portion of the mounds consisted of hard, compact earth, chiefly clay, resembling in this respect most of the burial mounds of this region.

Unfortunately the examination of this group was too partial and too hastily made to enable us to form any theory as to the meaning of this singular mode of burial, or even to be satisfied that the idea of our assistant in this regard is correct.

As possibly having some bearing upon the question, the following facts relating to another similar group at Eagle Point, three miles above Dubuque, are given.

This group, which is situated on a bluff about 50 feet above high-water mark, consists of about seventy mounds, all of which, except two oblong ones, are small and conical in form. Eleven of these circular tumuli were thoroughly explored, but nothing was found in them except some charcoal, stone chips, and fragments of pottery. But in an excavation made in the center of a long mound just west of the group were found two decayed skeletons. Near the breast of one of them were a blue stone gorget and five rude stone scrapers; with the other, thirty-one fresh-water pearls, perforated and used as beads. Excavations were made in an oblong and circular mound near the extreme point of the bluffs. Each was found to have a central core of very hard clay mixed with ashes, so hard in fact that it could only be broken up with the pick, when it crumbled like dry lime mortar, and was found to be traversed throughout with flattened horizontal cavities. These cavities were lined with a peculiar felt-like substance, which Colonel Norris, who opened the mounds, was satisfied from all the indications pertained to bodies which had been buried here, but from lapse of time had entirely crumbled to earth save these little fragments. We are therefore perhaps justified in concluding that a more thorough and careful examination of the mounds of the other group would have shown that the skeletons had so far decayed as to leave but a small part in a mound. Nevertheless it is proper to state that Colonel Norris does not coincide with this conclusion, but thinks that the dismembered skeletons were buried as found. Possibly he is correct.

In this connection, and before referring to the mounds of this district on the Illinois side of the Mississippi, I desire to call attention to some modern Indian burials in this region. As the statements here made are from one claiming to be an eye-witness, I give them as related to the Bureau assistant.

The locality is a level plat in a bend of the Des Moines River between Eldon and Iowaville, Wapello County. The plat of this area and the sites of the burial places, as shown in Fig. 9, are based upon the state-

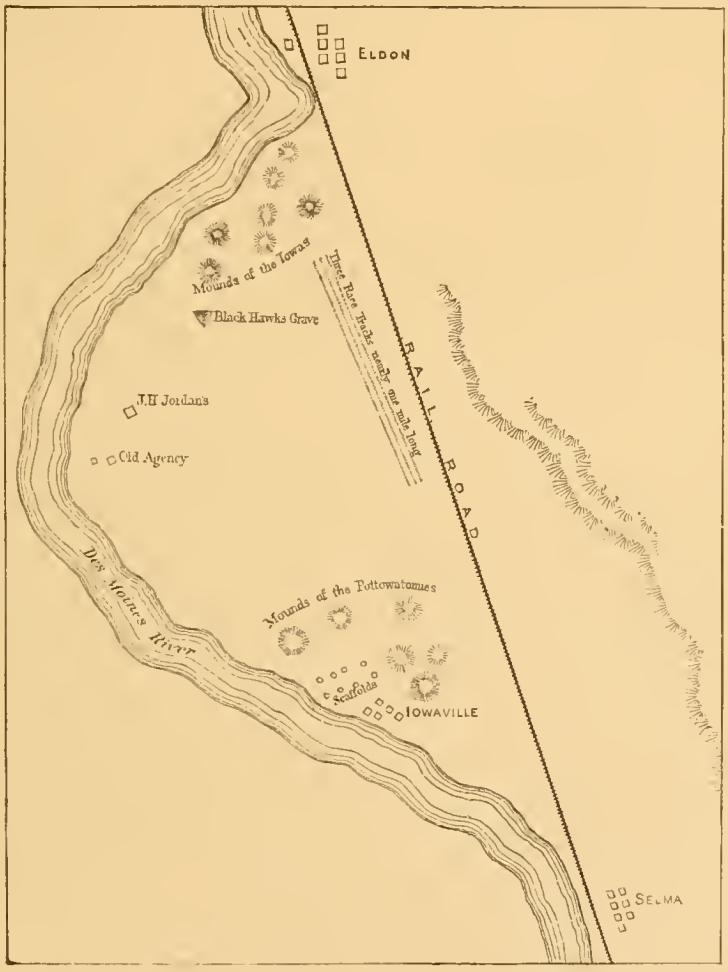


FIG. 9.—Plat of Indian burying-ground, Wapello County, Iowa.

ments of Mr. J. H. Jordan (the person referred to), who has resided here since the close of the Black Hawk war, and was the agent of the Sacs and Foxes from their removal hither after the war until Black Hawk's death, September 15, 1838.[1]

[1] According to Drake, "Indians of North America," he died October 3, 1838.

The extreme width of the area represented is about 2 miles. Close to the point of the bend formerly stood the agency building, near which is the present residence of Mr. Jordan. The triangle marks the position of Black Hawk's grave; the parallel lines, the race-tracks; the rings in the upper corner, the mounds of the Iowas; those in the lower corner, near Iowaville, the mounds of the Pottawattamies; and the open dots, near the same point, the place where the scaffolds for their dead stood.

Mr. Jordan says:

"This valley had long been a famous haunt for the warring Indians, but was, at the time of my first personal acquaintance with it, in possession of the Iowas, whose main village was around the point where my present residence now stands. The race-course consisted of three hard beaten parallel tracks nearly a mile in length, where the greater portion of the Iowa warriors were engaged in sport when Black Hawk surprised and slaughtered a great portion of them in 1830. After Black Hawk and his warriors had departed with their plunder, the remaining Iowas returned and buried their dead in little mounds of sod and earth, from 2 to 4 feet high, at the point indicated on the diagram.

"After the Black Hawk war was over, the remnant of the Iowas, by treaty, formally ceded their rights in this valley to the Sacs and Foxes. At this place this noted chief was buried, in accordance with his dying request, in a full military suit given him by President Jackson, together with the various memorials received by him from the whites and the trophies won from the Indians. He was placed on his back on a 'puncheon' [split slab of wood], slanting at a low angle to the ground, where his feet were sustained by another, and then covered with several inches of sod. Over this was placed a roof-shaped covering of slabs or 'puncheons,' one end being higher than the other; over this was thrown a covering of earth and sod to the depth of a foot or more, and the whole surrounded by a line of pickets some 8 or 10 feet high."

Here we have evidence that some at least of the Indians of this region were accustomed to bury their dead in mounds down to a recent date.

One of the most important burial mounds opened in this district by the employés of the Bureau is situated on the bluff which overhangs East Dubuque (formerly Dunleith), Jo Daviess County, Illinois. As I shall have occasion to refer to others than the one mentioned, I give in Fig. 15, Plate III, a plan of the group, and in Fig. 16, same plate, a vertical section of the bluff along the line of mounds numbered 13, 14, 15, 16, and 17, in which is seen the general slope of the upper area.

The mounds of this group are conical in form, varying from 12 to 70 feet in diameter and from 3 to 12 in height. All appear to have been built for burial purposes.

In No. 5, the largest of the group, measuring 70 feet in diameter and 12 feet in height, a skeleton, apparently an intrusive burial, was found

at the depth of 2 feet immediately below the apex. Near the original surface of the ground, several feet north of the center, were the much-decayed skeletons of some six or eight individuals of every size from the infant to the adult. They were placed horizontally at full length with the heads toward the south. A few perforated *Unio* shells and some rude stone skinners and scrapers were found with them. Near the original surface, some 10 or 12 feet from the center, on the lower side, was discovered, lying at full length on its back, an unusually large skeleton, the length being something over 7 feet. It was all distinctly traceable though it crumbled to pieces immediately after removal from the hard earth in which it was encased. With it were three thin, crescent-shaped pieces of roughly-hammered native copper, respectively 6, 8, and 10 inches in length, with some small holes along the convex margin; also a number of elongate copper beads, made by rolling together thin sheets, and a chert lance-head 11 inches long; the latter was placed near the left thigh. Around the neck were the remains of a necklace of bears' teeth. Lying across the thighs were dozens of small copper beads, evidently formed by rolling slender wire-like strips into small rings. The assistant who opened this mound, and who is personally well acquainted with Indian habits and customs, suggests that these beads once formed the ornamentation of the fringe of a hunting shirt.

As No. 4 of this group presents some peculiarities, I take the description from Colonel Norris's notes:

During a visit to this locality in 1857, he partially opened this mound, finding masses of burned earth and charred human bones mingled with charcoal and ashes. At his visit in 1882, on behalf of the Bureau, a further examination revealed, on the lower side, the end of a double line of flat stones set on edge, about a foot apart at the bottom and leaned so as to meet at the top and form a roof-shaped flue or drain. Following this up, he found that it extended inward nearly on a level, almost to the center of the mound, at which point it was nearly 3 feet below the original surface of the ground. Here a skeleton was discovered stretched horizontally in a vault or grave which had been dug in the ground before the mound was cast up. Over that portion below the waist (including the right arm) were placed flat stones so arranged as to support one another and prevent pressure on the body, but no traces of fire were on them; yet, when the upper portions of the body were reached, they were found so burned and charred as to be scarcely traceable amid the charcoal and ashes that surrounded them.

It was apparent that a grave had first been dug, then the right arm had been dislocated and placed by the side of the skeleton below the waist, and this part covered with stones as described, and then the remainder burned by a fire kindled over it.

A section of the mound showing the grave and stone drain is given

in Fig. 10, in which 1 is the outline of the mound on the hill slope; 2, the pit; and 3, the stones of the drain.

No. 13 was found to contain a circle or enclosure, 10 feet in diameter, of stone slabs set on edge at the natural surface of the ground. Within this circle, but some 2 feet below the surface, were five skeletons: two adults, two children, and one infant. They were all lying horizontally, side by side, with heads south, the adults at the outside and the children between them.

We are reminded by the mode of burial in this case of that in the mound opened by Dr. Lapham at Waukesha, Wisconsin, before referred to. In that the remains of a single individual were discovered, but in this it would seem that the skeletons of an entire family, gathered from their temporary resting places, had been carefully buried side by side, a silent testimonial to parental love and affection of friends among the mound-builders.

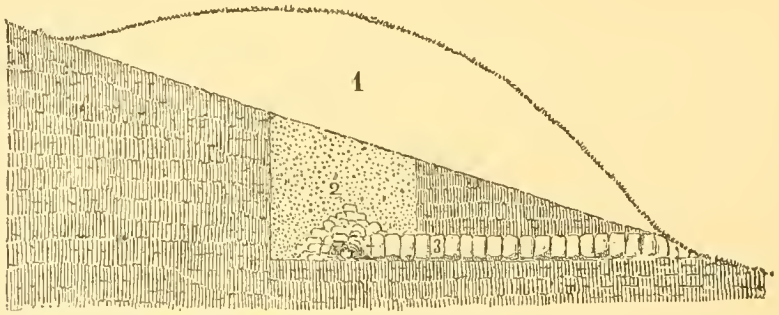


FIG. 10.—Section of mound 4, East Dubuque, Illinois.

No. 1, 6 feet high and 45 feet in diameter, was found to be an ossuary. Beneath the top layer was an arched stratum of clay and ashes mixed, so firm and hard as to retain its form unsupported over a space of several feet. This covered a confused heap of human bones, many of which were badly decayed.

The marked feature of the group was found in No. 16, a remarkably symmetrical mound 65 feet in diameter and 10 feet high. After passing downward 6 feet, mostly through a hard gray layer, a vault partly of timber and partly of stone was reached. A vertical section of the mound and vault is shown in Fig. 11, and the ground plan of the vault in Fig. 12.

This vault or crypt was found to be rectangular in form, inside measurements showing it to be 13 feet long and 7 feet wide, surrounded by a sandstone wall 3 feet high. Three feet from each end was a cross-wall or partition of like character, thus forming a main central chamber 7 feet square, and a narrow chamber or cell at each end something over 2 feet wide and 7 feet long. The whole had been completely covered with a layer of logs from 6 to 12 inches in diameter, their ends reaching slightly beyond the side walls in the manner shown in Fig. 12.

Fig 15.

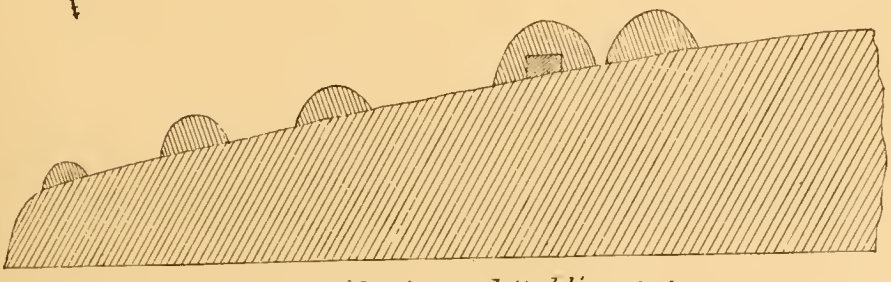


Fig 16

Vertical Section on dotted line a-a.

GROUP OF MOUNDS AND VERTICAL SECTION OF BLUFF EAST DUBUQUE, ILL.

In the center chamber were found eleven skeletons: six adults and five children of different ages, including one infant, the latter evidently buried in the arms of one of the adults, possibly its mother. Apparently they had all been buried at one time, arranged in a circle, in a squatting or sitting posture, against the walls. In the center of the space around which they were grouped was a fine specimen of *Busycon perversum*, which had been converted into a drinking-cup by removing the columella. Here were also numerous fragments of pottery.

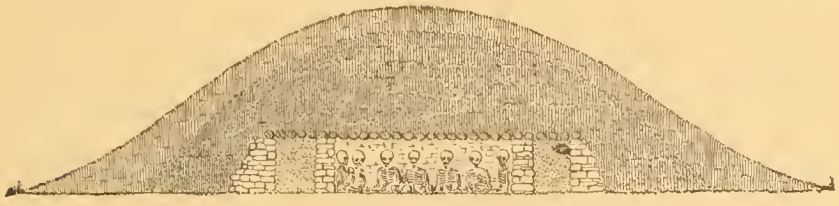


FIG. 11.—Section of mound 16 (Pl. III) showing vault.

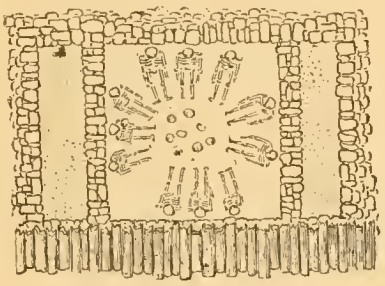


FIG. 12.—Plan of vault, mound 16 (Pl. III).

The end cells, walled off from the main portion, as heretofore stated, were found nearly filled with a very fine chocolate-colored dust, which gave out such a sickening odor that the workmen were compelled to stop operations for the day in order to allow it to escape.

The covering of the vault was of oak logs, most of which had been peeled and some of the larger ones somewhat squared by slabbing off the sides; and the slabs and bark thus removed, together with reeds or large grass stems, had been laid over them. Over the whole was spread layer after layer of mortar containing lime, each succeeding layer harder and thicker than that which preceded it, a foot or so of ordinary soil completing the mound.

As there can be scarcely a doubt that the mounds of this group were built by one tribe, we have here additional evidence that the same people were accustomed to bury their dead in various ways. Some of the skeletons are found lying horizontally side by side, others are placed in a circle in a sitting or squatting posture, while in another mound we find the dismembered bones heaped in a confused mass. In one place is a single huge frame decked with the ornaments of savage

life, while in other places we see the members of a family lying side by side, and in others the bones, possibly of the ordinary people, heaped together in a common ossuary.

The timber-covered vault in mound No. 16 calls to mind very vividly the similar vaults mentioned by Squier and Davis,[1] found in the valley of the Scioto in Ohio. In the latter the walls as well as the covering were of logs, instead of stone, but the adaptation to circumstances may, perhaps, form a sufficient explanation of this difference. While there are several very marked distinctions between the Ohio works and those of the district now under consideration, there are also some resemblances, as we shall see as we proceed, which cannot be overlooked, and which seem to indicate relationship, contact, or intercourse between the people who were the authors of these different structures.

In additional support of this view, I call attention to the carved pipes found by members of the Davenport Academy of Natural Sciences,

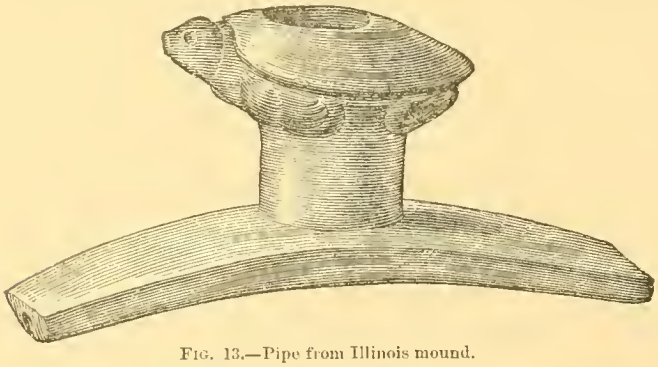


FIG. 13.—Pipe from Illinois mound.
(After Smithsonian Report.)

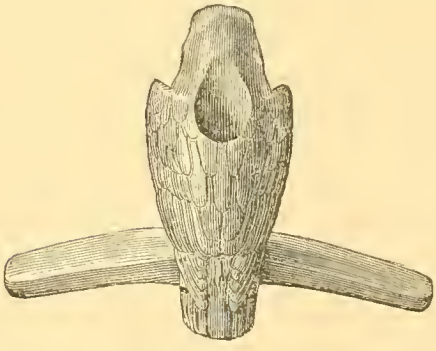


FIG. 14.—Pipe from Illinois mound, ½.
(After Smithsonian Report.)

FIG. 15.—Pipe from Illinois mound, ½.
(After Smithsonian Report.)

in the mounds near Davenport, Iowa, already referred to, which are represented on Plates IV and XXXIV of Vol. I of the Proceedings of that society, and to others obtained by Judge J. G. Henderson

[1] Ancient Monuments, p. 162.

from some mounds near Naples, Illinois, and described in the Smithsonian Report for 1882. The latter are shown in Figs. 13, 14, and 15. The relation of these to the pipes found in the Ohio works by Squier and Davis is too apparent to be attributed to accident, and forces us to the conclusion that there was intercourse of some kind between the two peoples, and hence that the works of the two localities are relatively of the same age.

The mode of burial in one of the mounds near Naples is so suggestive in this connection that I quote here Judge Henderson's description:

> The oval mound No. 1 was explored in April, 1881, by beginning a trench at the north end and carrying it to the original surface and through to the south end. Lateral trenches were opened at intervals, and from these and the main one a complete exploration was made by tunneling.
>
> Near the center of the mound a single skeleton was found in a sitting position, and no objects were about it except a single sea-shell resting on the earth *just over the head*, and a number of the bone awls, already described, *sticking in the sand around the skeleton*. The individual had been seated upon the sand, these awls stuck around him in a circle 4 or 5 inches in the sand, and the work of carrying dirt begun.
>
> When the mound had been elevated about 6 inches above the head the shell was laid on and the work continued.

The shell alluded to is a fine specimen of *Busycon perversum*, with the columella removed in order to form a drinking cup.

The particular point to which I call attention is this: In Plate XI, Part II of De Bry,[1] which is reprodnced in the annexed Plate IV, is represented a very small mound, on the top of which is a large shell, and about the base a circle of arrows sticking in the ground. The artist, Le Moyne de Morgues, remarks, in reference to it, "Sometimes the deceased king of this province is buried with great solemnity, and his great cup from which he was accustomed to drink is placed on a tumulus with many arrows set about it." The tumulus in this case is evidently very small, and, as remarked by Dr. Brinton,[2] "scarcely rises to the dignity of a mound." Yet it will correspond in size with what the Naples mound was when the shell was placed upon it; nevertheless the latter, when completed, formed an oval tumulus 132 feet long, 98 feet wide, and 10 feet high.

It is therefore quite probable that Le Moyne figures the mound at the time it reached the point where the shell cup was to be deposited, when, in all likelihood, certain ceremonies were to be observed and a pause in the work occurred. Whether this suggestion be correct or not, the cut and the statement of Judge Henderson furnish some evidence in regard to the presence of these articles in the mounds, and point to the people by whom they were placed there.

Colonel Norris opened a number of the ordinary small burial mounds found on the bluffs and higher grounds of Pike and Brown Counties,

[1] Brevis Narratio, Tab. XI.

[2] American Antiquarian, October, 1881, p. 14.

Illinois, which were found to be constructed in the usual method of this district; that is, with a layer of hard, mortar-like substance, or clay and ashes mixed, covering the skeletons. The positions of the skeletons varied, as we have seen is the case in other localities. The num-

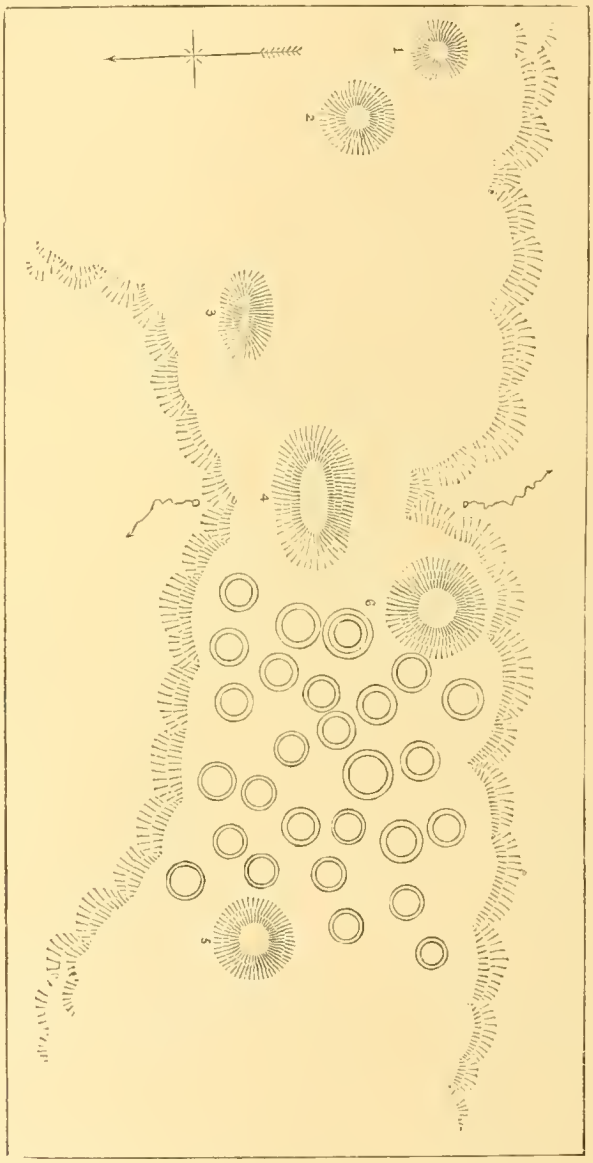


FIG. 16.—Group of mounds and hut-rings, Brown County, Illinois.

ber of intrusive burials was unusually large here. In a number of cases where there were intrusive burials near the surface, no bones, or but the slightest fragments of the bones of the original burial, could be found, although there were sure indications that the mounds were built

A MOUND FROM DE BRY.

and had apparently been used for this purpose. These mounds also present evidence of the intrusion of an element from one people into the country of another. On the farm of Mr. Edward Welch, Brown County, Illinois, is the group of mounds shown in Fig. 16. This consists of conical and pyramidal mounds, and the small earthen rings designated house sites. The form of the larger mounds is shown in Fig. 17. Although standing on a bluff some 200 feet above the river bottom, it is evident at the first glance that these works belong to the southern type and were built by the people who erected those of the Cahokia group or farther south. No opportunity was allowed to investigate the burial mounds or house sites, but slight explorations made in the larger mounds sufficed to reveal the fire-beds so common in southern mounds, thus confirming the impression given by their form. It is probable that these mark the point of the extreme northern extension of the southern mound-building tribes. A colony, probably from the numerous and strong tribe located on Cahokia Creek around the giant Monk's mound, pushed its way thus far and formed a settlement, but, after contending for a time with the hostile tribes which pressed upon it from the north, was compelled to return towards the south.

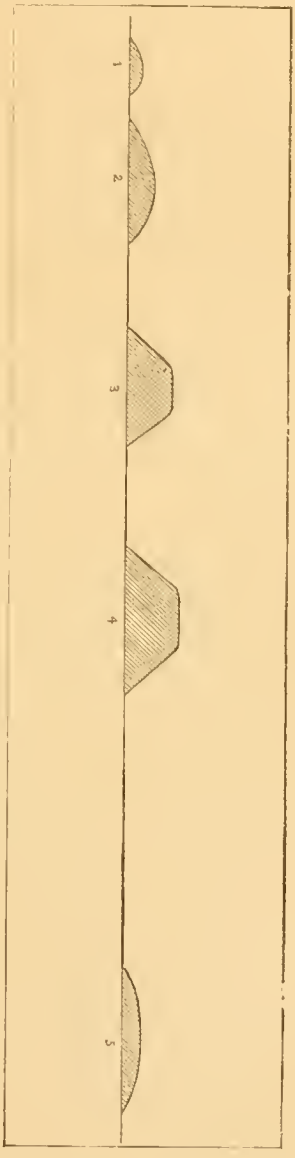


FIG. 17.—Forms of larger mounds of the group shown in Fig. 16.

Passing to the northeastern portion of Missouri, which, as heretofore stated, we include in the North Mississippi or Illinois district, we find a material change in the character of the burial mounds, so marked, in fact, that it is very doubtful whether they should be embraced in the district named. Although differing in minor particulars, the custom of inclosing the remains of the dead in some kind of a receptacle of stone, over which was heaped the earth forming the mound, appears to have prevailed very generally.

The region has been but partially explored, yet it is probable the following examples will furnish illustrations of most of the types to be found in it.

From an article by Messrs. Hardy and Scheetz in the Smithsonian Report for 1881,[1] we learn the following particulars regarding the burial mounds of Ralls County:

Occasionally an isolated one is found, but almost invariably they are in groups of three to ten or more. They are usually placed along the crest of a ridge, but when in the bottoms or on a level bluff they are in direct lines or gentle curves. They are very numerous, being found in almost every bottom and on nearly every bluff. They are usually circular and from 2 to 12 feet high, and are composed wholly of earth, wholly of stone, or of the two combined. Where stone was used the plan seems to have been first to pave the natural surface with flat stones, in one or two thicknesses, for a foundation. In one case the stones were thrown together indiscriminately. Human remains are almost invariably found in them. The bones are generally very much decayed, though each bone is found almost entire except those of the head. This seems to have always rested on a stone, and to have been covered by one or more stones, so that it is always found in a crushed condition. In rare instances stone implements, pipes, etc., are found in the mounds. The remains found in tumuli wholly of stone are much more decayed than in those of mixed material.

One opened by the writers of the article is described by them as follows:

> On the south side of it the bed stone had been formed into a shallow trough. On removing the flat stones which covered this, and which showed no action of fire, we found a bed of charcoal several inches thick, both animal and vegetable, and the limestone which composed it was burned completely through. Some fragments of a human femur were found in a calcined state. There were no indications of fire elsewhere in the mound, but there were the partial remains of several skeletons, lying in two layers, with stone and earth between them.

In another, examined by them, fragments of human bones were found so near the surface as to be reached by the plow; but deeper, on the north sides, were single skeletons laid at length east and west, and between them a mass of bones confused as though thrown in indiscriminately. The diameter of this mound was about 30 feet, height 2½ feet.

In section 24, township 55, range 7, is a small hill, known as "Wilson's Knob." Its crest, which is about 120 feet long, is completely covered with stone to the depth of several feet, the pile being about 20 feet wide. Examination brought to light the fact that this was originally a row of stone mounds or burial vaults, nine in number, circular in form, each from eight to nine feet in diameter (inner measure), and contiguous to one another. Judging from appearances it would seem that each had been of a conical or dome-like form. They were composed wholly of stone, and the remains found in them were almost wholly decomposed.

On another ridge the same parties found another row with four stone mounds similar to those described, except that the cists were square

[1] Pages 533–6.

instead of circular, the sides of the latter being equal to the diameter of the former. In these only small fragments of bone could be found.

Although Messrs. Hardy and Scheetz evidently considered these stone structures as receptacles for the dead, and as erected for this purpose, yet it is possible they may have been intended for some other use.

The mounds of Pike County are chiefly of mixed material similar to those mentioned,[1] though some of them contain rectangular stone vaults. One of these vaults, measuring 4 by 5 feet, was found to contain the remains of eight skeletons. Another, a regular box-shaped cist of stone slabs, contained nothing save a few cranial bones very much decayed. Another of large size contained human remains with which were some arrow-heads, a vessel of clay, and a carved steatite pipe, having upon its front a figure-head.

Fig. 18.—Group of mounds, Clarke County, Missouri.

I have given these particulars in order to show how closely they agree with the discoveries made by the Bureau assistant in this region, from whose notes I take the following description:

Between Fox River and Sugar Creek, in Clarke County, a sharp dividing ridge about 100 feet high extends in a northerly direction for nearly two miles from where these streams enter upon the open bottom of the Mississippi. Scattered irregularly along the crest of this ridge is a line of circular mounds shown in Fig. 18. These range in size from 15 to 50 feet in diameter and from 2 to 6 feet high, and are circular in

[1] Smithsonian Report 1881, p. 537.

form. In No. 3,[1] diameter 35 feet and height 5 feet, situated in the central portion, was found a stone coffin or cist 7 feet long and 2 feet wide, formed of slabs of sandstone in the usual manner. This was covered first with similar slabs and then the whole incased in a layer of rougher stones. Over this was a layer of hard earth, which was evidently in a plastic state when placed there, as it had run into and filled up the interstices. Above this was a foot or more of yellowish earth, similar to that forming the ridge. In the coffin was the skeleton of an adult, lying horizontally on the back, but too far gone to decay to admit of removal. No specimens of art of any kind were found with it.

No. 4, a trifle smaller than No. 3, was opened by running a trench from the eastern margin. For a distance of 15 or 16 feet nothing was encountered except the earth, with which it appeared to be covered to the depth of 2 feet. Here was found a layer of rough stones covering a mass of charcoal and ashes with bones intermixed. In fact the indications leave the impression that one or more persons (or their bones) had been burned in a fire on the natural surface of the earth near the center of the mound, the coals and brands of which were then covered with rough stones thrown in, without any system, to the depth of 3 feet, over a space 10 or 12 feet in diameter, and then covered with earth. Only fragments of charred human bones, pieces of rude pottery, and stone chips were found commingled with the charcoal and ashes.

Another group on the farm of Mr. J. N. Boulware, near the line between Clarke and Lewis counties, was examined by the same party. This group, which is situated on a bench or terrace from 20 to 40 feet above the Mississippi bottoms, consists of some 55 or 60 ordinary circular mounds of comparatively small size.

In one of these, 45 feet in diameter and 5 feet high, were found, near the top, the fragments of a human skeleton much decayed, and broken pottery, encircled by a row of flat stones set up edgewise and covered with others of a similar character. Below these was a layer of very hard light-colored earth, mixed throughout with fragments of charred human bones and pottery, charcoal and stone chips.

Another, about 60 feet in diameter, was found to consist (except the top layer of soil, about 1 foot thick) of hard, dried "mortar" (apparently clay and ashes mixed), in which fragments of charred human bones, small rounded pieces of pottery, and stone scrapers were mingled with charcoal and ashes.

"As all the mounds opened here," remarks the assistant, "presented this somewhat singular feature, I made a very careful examination of this mortar-like substance. I found that there were differences between different portions of the same mound sufficiently marked to trace the separate masses. This would indicate that the mounds were built by successive deposits of mortar thus mixed with charred bones, and not in strata but in masses."

[1] Counting from the southern end of the line.

THE OHIO DISTRICT.

This, as before stated, includes Ohio, a portion of eastern Indiana, and the western part of West Virginia.

As only very limited explorations have been made in the Ohio portion of this district by the Bureau of Ethnology, I will content myself with a brief allusion to the observations of others.

The descriptions given by Squier and Davis of the few burial mounds they explored are too well known to require repeating here. Their conclusion in regard to them, which has already been alluded to, is stated in general terms as follows:

> Mounds of this class are very numerous. They are generally of considerable size, varying from 6 to 80 feet in height, but having an average altitude of from 15 to 20 or 25 feet. They stand without the walls of enclosures at a distance more or less remote from them.
>
> Many are isolated, with no other monuments near them; but they frequently occur in groups, sometimes in close connection with each other, and exhibiting a dependence which was not without its meaning. They are destitute of altars, nor do they possess the regularity which characterizes the "temple mounds." The usual form is that of a simple cone; sometimes they are elliptical or pear-shaped. These mounds invariably cover a skeleton (in very rare instances more than one, as in the case of the Grave Creek mound), which at the time of interment was enveloped in bark or coarse matting, or inclosed in a rude sarcophagus of timber, the traces and in some instances the very casts of which remain. Occasionally the chamber of the dead is built of stone, rudely laid up, without cement of any kind. Burial by fire seems to have been frequently practiced by the mound-builders. Urn burial also appears to have prevailed to a considerable extent in the Southern States. With the skeletons in these mounds are found various remains of art, comprising ornaments, utensils, and weapons.[1]

For the purpose of conveying to the mind a clear idea of the character of these mounds, I give here a copy of their figure of one of them (Fig. 19), and also of the wooden vault found in it (Fig. 20). This mound, as was the case with most of the burial mounds opened by them, although comparatively large, is without any distinct stratification.

In some cases (see Ancient Monuments, Figs. 52 and 53, p. 164) a layer of bark was first spread on the natural surface of the ground after it had been cleared, leveled, and packed; on this the body was laid at full length. It was then covered with another layer of bark and the mound was heaped over this.

[1] Ancient Monuments, p. 161. It may be remarked here that the statement that "urn burial appears to have prevailed to a considerable extent in the Southern States" cannot be sustained by facts.

Although no mounds containing stone sepulchers fell under their notice during their explorations, they obtained satisfactory evidence that one within the limits of Chillicothe had been removed, in which a stone coffin, "corresponding very nearly with the *kistvaen* of English antiquarians" was discovered.

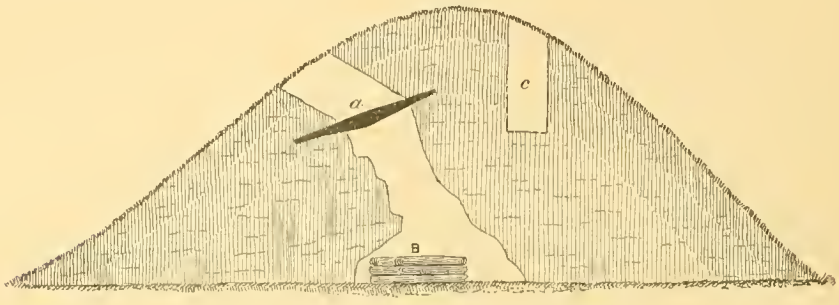


FIG. 19.—Ohio burial mound (after Squier and Davis).

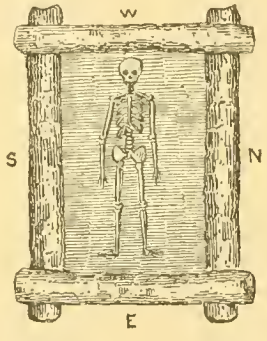


FIG. 20.—Wooden vault (after Squier and Davis).

Some rather singular burial mounds have been described as found in different parts of this State, but unfortunately the descriptions are based largely on memory and second-hand statements and hence do not have that stamp of accuracy and authenticity that is desirable. For example, a large stone mound, which formerly stood a short distance from Newark, is described [1] as conical in form, 189 feet in diameter, and from 40 to 50 feet high, composed of stones in their natural shape. This, upon removal, was found to cover some fifteen or sixteen small earth mounds. In one of these were found human bones and river shells. In another was encountered a layer of hard white fire-clay. Two or three feet below this was a wooden trough. This was overlaid by small logs of wood to serve as a cover, and in it was found a skeleton, around which appeared the impression of a coarse cloth. With it were fifteen copper rings and a "breastplate" of the same metal. The wood of the trough and covering was in a good state of preservation. The clay which covered it was impervious both to air and water. The logs

[1] Smithsonian Report 1866, p. 359.

which overlaid the wooden sarcophagus "were so well preserved that the ends showed the axe marks, and the steepness of the kerf seemed to indicate that some instrument sharper than the stone axe found throughout the West had been employed to cut them."

"In another of these mounds a large number of human bones, but no other relics worthy of note, were found."[1]

In a mound situated in Clear Creek Township, Ashland County, a stone coffin or cist was discovered, constructed of flat stones set up edgewise. It contained six or eight skeletons, "neatly cleaned and packed, in a good state of preservation."[2]

A statement worthy of notice in this connection is made by Mr. H. B. Case in the Smithsonian Report for 1881.[3] The Delaware Indians formerly had a village in the northern part of Green Township, Ashland County, which was still occupied by them when the white settlers reached there in 1809. An examination of their graves in 1876 brought to light the fact that in some cases the dead were buried in stone cists; in others small, round, drift bowlders were placed around the skeletons.

One of the most satisfactory and most important accounts of Ohio burial mounds will be found in a "Report of Explorations of Mounds in Southern Ohio," by Prof. E. B. Andrews, published in the Tenth Annual Report of the Peabody Museum. Speaking of the George Connet mound, in Athens County, he says:

> This is a low mound about 6 feet high with a broad base perhaps 40 feet in diameter. It has for years been plowed over and its original height has been considerably reduced. My attention was drawn to this mound by the burnt clay on its top. A trench 5 feet wide was dug through the center. On the east side much burnt yellow clay was found, while on the west end of the trench considerable black earth appeared, which I took to be kitchen refuse.
>
> About 5 feet below the top we came upon large quantities of charcoal, especially on the western side. Underneath the charcoal was found a skeleton with the head to the east. The body had evidently been enclosed in some wooden structure. First there was a platform of wood placed upon the ground, on the original level of the plain. On this wooden floor timbers or logs were placed longitudinally and over these timbers there were laid other pieces of wood, forming an enclosed box or coffin. A part of this wood was only charred, the rest was burnt to ashes. The middle part of the body was in the hottest fire and many of the vertebræ, ribs, and other bones were burnt to a black cinder, and at this point the enclosing timbers were burnt to ashes. The timbers enclosing the lower extremities were only charred.
>
> I am led to think that before any fire was kindled a layer of dirt was thrown over the wooden structure, making a sort of burial. On this dirt a fire was built, but by some misplacement of the dirt the fire reached the timbers below, and at such points as the air could penetrate there was an active combustion, but at others, where the dirt still remained, there was only a smothered fire, like that in a charcoal pit. It is difficult to explain the existence of the charred timbers in any other way. There must have been other fires than that immediately around and above the body, and many of them, because on one side of the mound the clay is burned even to the top of the mound. In one place, 3 feet above the body, the clay is vitrified.

[1] See, also, Smithsonian Report 1881, p. 596.

[2] Smithonian Report 1877, p. 264.

[3] Page 598.

It is possible that fires were built at different levels, open fires, and that most of the ashes were blown away by the winds which often sweep over the plain. I have stated that there was first laid down a sort of floor of wood, on which the body was placed. On the same floor were placed about 500 copper beads, forming a line almost around the body.

In addition to these copper beads a number of shell beads, and also a hollow copper implement in the shape of a caulker's chisel, were found. The copper implement and beads were made of thin sheet-copper which, Professor Andrews says, had been "hammered out into so smooth and even a sheet that no traces of the hammer were visible. It would be taken indeed for rolled sheet copper." Some of the bones were pretty well preserved.

The professor closes his description with the remark: "The skeleton undoubtedly belonged to a veritable mound-builder." In this he is certainly correct, as the mode of burial in this case agrees so exactly with that observed by Squier and Davis in the larger mounds opened by them as to leave no doubt that both are to be attributed to one people, although the mound described by Professor Andrews is probably of much more recent date than those mentioned by Squier and Davis.

What explanation shall we give of the presence in this work of thin sheet-copper "hammered out into so smooth and even a sheet that no traces of the hammer were visible," and that "would be taken for rolled copper"?

The simple and most natural explanation would be that it was derived from European traders and early adventurers; and such, I am disposed to believe, is the correct one. The distinction between the sheets and ornaments hammered from native copper with the rude implements of the aborigines, and many specimens made of this smooth sheet copper found in mounds, is too apparent to be overlooked. But of this more hereafter, as I shall have occasion again to refer to the subject.

In another mound, 8 or 9 feet high, in the same county, he found near the top a considerable bed of kitchen refuse; at the bottom, on the original surface, ashes and burnt human bones. "These bones," he remarks, "had evidently been burned before burial, and had been gathered in miscellaneous confusion and placed in a narrow space 5 or 6 inches wide and from 2 to 3 feet long. The ashes were doubtless brought with them, at least there appeared to be no evidences of a local fire in the reddening or hardening of the clay or in remnants of charcoal."

As bearing upon a suggestion made by Colonel Norris, and previously referred to,[1] in regard to the probable use of copper beads found across the limbs of a skeleton, I call attention to another statement of Professor Andrews. Speaking of the School-house mound he says:

At a point near the northwestern corner of the school-house and perhaps 15 feet from the center of the mound, there was plowed up, in extremely hard and dry dirt,

[1] Page 35.

a large piece of what I suppose to have been an ornamented dress. It was covered with copper beads, which were strung on a buckskin string and placed on four layers of the same skin. It was found 8 feet below the original surface of the mound and in extremely hard, dry dirt which had never been disturbed.

From the figure and the description we can have but little doubt that this was a buckskin hunting-shirt, which gives support to Colonel Norris's suggestion.

Recently some interesting burial mounds near Madisonville have been carefully explored by Dr. C. L. Metz in the interest of the Peabody Museum. Only partial notices of these explorations, which are not yet completed, have been published, but we deem these of sufficient importance in this connection to quote freely from them,[1] so far as they serve to illustrate the modes of burial and construction of burial mounds of this region.

Speaking of one of the mounds of a group situated in Anderson Township, Professor Putnam remarks:

Mound 21 of Group C was about 4 feet high and 50 in diameter. It proved to be made entirely of the sandy loam of the immediate vicinity. The remains of five skeletons were discovered at different points in the lower portion of the mound. The bones were nearly all reduced to dust, and only a fragment here and there could be saved. There was not a single relic found with the skeletons, and a few flint chips and a broken arrow-head were the only artificial objects found in the earth composing the mound. The condition of the bones showed considerable antiquity, but their advanced decay and friability were probably largely due to the character of the soil in which they were enclosed. The position of the skeletons rather goes to show that the several bodies were buried at different times, and that the mound was gradually constructed as the burials took place. For the present we are inclined to consider this mound, with some others in the valley, as a place of sepulcher by tribes of a more recent time than the builders of the earthworks of the Turner group.

Mound No. 22 proved to be of a more interesting character than the last. This mound was 14 feet high and about 100 in diameter. It was composed of pure clay, except in the central portion. Five feet from the top there was found a hard mass of burnt earth and ashes, 7 feet deep and a little over 9 feet in width and length. Resting on top of this, about in the center, and covered in part by the overlying clay, lay a large stone celt. A foot below this, in the burnt material, was a stone implement perforated at its upper end. Below this, at points several feet apart, in the burnt mass, were three holes or pockets, each of which contained the remains of portions of human skeletons, surrounded by a thin layer of clay. Near the bones in the lowest pocket were three spear-heads or chipped points. A few potsherds and several flint chips were found throughout the burnt mass. Under it was a circular bed of black soil and ashes, 13 inches thick in the center and 14 feet in diameter, beneath which was a layer of fine sand and gravel, 3 inches thick, which covered another circular bed of black soil and ashes, 14 inches thick in the center and 15 feet in diameter. Directly under the center of this lower layer was a pit 4 feet deep and 10 feet 4 inches long, 4 feet wide at the ends and 3 feet 5 inches wide at the center. This pit probably had contained a wooden structure, as its sides showed rough striations, as if large logs had once rested against them. The pit had been dug in the drift gravel upon which the mound was built, and was nearly filled with soft, spongy ashes mixed with a reddish substance. Extended at full length at the bottom of the pit was a human skeleton, with the head to the west. Among the bones of the neck a single shell bead

[1] See 17th Report Peabody Museum, pp. 339–347.

was found; at the feet were ten stones or small bowlders, such as are common in the drift gravel. It is evident that this interesting tumulus was erected over the grave which was dug in the underlying gravel, and that the human bones placed in the burnt mass above the grave, with the few stone implements found in or on the mass, had some connection with the funeral ceremonies which took place in connection with the burial of the body in the pit below. The regularity of the deposits over the pit, which was under the center of the mound, seems to be sufficient proof of this.

Another mound, nearer the river, situated on an elevated portion of bottom land, was found to differ in construction from any of the others explored in this vicinity. This is described as follows:[1]

According to Mr. William Edwards, sixty years ago it was about 9 feet high, and covered by a heavy forest growth, which also extended over the region about. Over fifty years ago the land was cleared and the mound scraped down by Mr. Edwards, who, after removing about 4 feet of earth from its summit, came to a large quantity of stones, with which were many human bones. Since that time the mound has been plowed over and stones have been taken from it until it has been so nearly leveled as hardly to be noticed. Thus only the base of the mound could be explored; but that has proved of great interest in connection with the other works of the valley. On removing the earth around the base it was found that stones, many of considerable size, had been so arranged as to form a mound about 5 feet high in the center and 90 feet in diameter, over which the earth had been placed to the height of about 4 feet, as stated by Mr. Edwards. In height about one-half of the stone portion of the mound was undisturbed. On removing the outer covering of stones it was found that many burials, probably at least one hundred, had been made in the mound. The remains of seventy-one skeletons were obtained. These skeletons were all more or less crushed by the stones which surrounded them, as, in addition to the outer stones of the mound, each body had been surrounded with stones at the time of its burial. In many instances large slabs of limestone had been used, and in a few cases they were set on edge around the body. In other cases small stones had been piled around and over the bodies, which had been placed in various positions, some extended and others flexed in various ways. With many of the skeletons were stone implements and ornaments, among which were several of the flat stones with two or more perforations, generally known as gorgets. There were also many bone implements, shell and bone ornaments, and cut teeth of bears. Several small copper awls in bone handles, and the shells of box-turtles, were also found with the skeletons. Many fragments of pottery and broken bones of animals were scattered through the mass of stones and human bones. At the feet of the skeleton, in the center of the mound, there was an upright slab of limestone 2 feet long by 20 inches wide, and with this skeleton were the following objects: Resting on the chest was a large ornament made from the apex of a conch shell, with a hole at one edge for suspension; below this, on the ribs, was a spear-shaped gorget, with one hole, and by its side were several shell ornaments, also perforated. Lying near the right femur and parallel with it was a carved bone, grooved on the under side and having two holes; between this and the leg bone were four small pieces of carved bone about an inch in length. In the bones of the right hand was a small awl made of native copper and inserted in a little round handle made of bone, similar to others found with other skeletons in the mound. At the south side of the mound, on the original surface, was a burnt space, on which was a large quantity, several bushels, of broken bones of animals, clam shells, and fragments of pottery mixed with ashes. This mass seems to have existed before the mound was made, or at all events completed, as five of the burials had taken place above it. On the plain about the mound are evidences of the site of a former village, and the annual plowing brings to light many animal remains, fragments of pottery, and stone imple-

[1] 17th Report Peabody Museum, pp. 342–343.

ments of the same character as those from the mound. From this fact, and from the character of the burials in the mound, as well as that of the objects found with the skeletons, and from the absence of the characteristic ornaments found with so many of the human remains in the Turner group and other ancient mounds of the Ohio Valley, we are led to look upon this stone mound as the burial place of a tribe of Indians living in the region subsequent to the builders of the Turner mounds. The remains found in this stone mound, as a whole, indicate that the people here buried were closely connected with those who made the singular ash-pits in the ancient cemetery near Madisonville.[1]

Passing into West Virginia we notice first the celebrated Grave Creek mound. This has been described and figured so often that it is unnecessary for me to do more than call attention to certain particulars in regard to it to which I may desire hereafter to refer by way of comparison. It is in the form of a regular cone, about 70 feet high and nearly 300 feet in diameter at the base. A shaft sunk from the apex to the base disclosed two wooden vaults, the first about half way down and the other at the bottom. In the first or upper one was a single skeleton, decorated with a profusion of shell beads, copper bracelets, and plates of mica. The lower vault, which was partly in an excavation made in the natural ground, was found to be rectangular, 12 by 8 feet and 7 feet high. Along each side and across the ends upright timbers had been placed, which supported other timbers thrown across the vault as a covering. These were covered with a layer of rough stones. In this vault were two human skeletons, one of which had no ornaments, while the other was surrounded with hundreds of shell beads. In attempting to enlarge this vault the workmen discovered around it ten other skeletons. While carrying the horizontal tunnel, several masses of charcoal and burnt bones were encountered after a distance of 12 or 15 feet had been reached.

Before making any comments on the construction of this noted work and the mode of burial in it, I will present some facts recently brought to light in regard to the burial mounds of the Kanawha Valley by the assistants of the Bureau.

A large mound situated on the farm of Col. B. H. Smith, near Charleston, is conical in form, about 175 feet in diameter at the base and 35 feet high. It appears to be double; that is to say, it consists of two mounds, one built on the other, the lower or original one 20 feet and the upper 15 feet high.

The exploration was made by sinking a shaft, 12 feet square at the top and narrowing gradually to 6 feet square at the bottom, down through the center of the structure to the original surface of the ground and a short distance below it. After removing a slight covering of earth, an irregular mass of large, rough, flat sandstones, evidently brought from the bluffs half a mile distant, was encountered. Some of these sandstones were a good load for two ordinary men.

The removal of a wagon load or so of these stones brought to light a

[1] 17th Report Peabody Museum, p. 344.

stone vault 7 feet long and 4 feet deep, in the bottom of which was found a large and much decayed human skeleton, but wanting the head, which the most careful examination failed to discover. A single rough spear head was the only accompanying article found in this vault. At the depth of 6 feet, in earth similar to that around the base of the mound, was found a second skeleton, also much decayed, of an adult of ordinary size. At 9 feet a third skeleton was encountered, in a mass of loose, dry earth, surrounded by the remains of a bark coffin. This was in a much better state of preservation than the other two. The skull, which was preserved, is of the compressed or "flat-head" type.

For some 3 or 4 feet below this the earth was found to be mixed with ashes. At this depth in his downward progress Colonel Norris began to encounter the remains of what further excavation showed to have been a timber vault, about 12 feet square and 7 or 8 feet high. From the condition in which the remains of the cover were found, he concludes that this must have been roof-shaped, and, having become decayed, was crushed in by the weight of the addition made to the mound. Some of the walnut timbers of this vault were as much as 12 inches in diameter.

In this vault were found five skeletons, one lying prostrate on the floor at the depth of 19 feet from the top of the mound, and four others, which, from the positions in which they were found, were supposed to have been placed standing in the four corners. The first of these was discovered at the depth of 14 feet, amid a commingled mass of earth and decaying bark and timbers, nearly erect, leaning against the wall, and surrounded by the remains of a bark coffin. All the bones except those of the left forearm were too far decayed to be saved; these were preserved by two heavy copper bracelets which yet surrounded them.

The skeleton found lying in the middle of the floor of the vault was of unusually large size, "measuring 7 feet 6 inches in length and 19

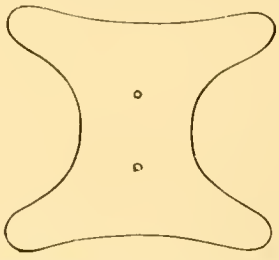


FIG. 21.—Copper gorget from mound, Kanawha County, West Virginia.

inches between the shoulder sockets." It had also been inclosed in a wrapping or coffin of bark, remains of which were still distinctly visible. It lay upon the back, head east, legs together, and arms by the sides. There were *six* heavy bracelets on each wrist; four others were found under the head, which, together with a spear-point of black flint, were incased in a mass of mortar-like substance, which had evidently been wrapped in some textile fabric. On the breast was a copper gorget (Fig.

21). In each hand were three spear-heads of black flint, and others were about the head, knees, and feet. Near the right hand were two hematite celts, and on the shoulder were three large and thick plates of mica. About the shoulders, waist, and thighs were numerous minute perforated shells and shell beads.

While filling in the excavation, the pipe represented in Fig. 22 was

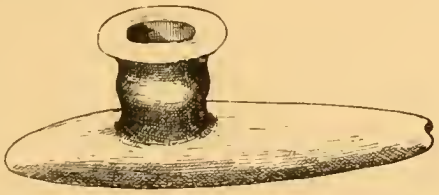


FIG. 22.— Pipe from mound, Kanawha County, West Virginia.

found in the dirt which had been removed from it. This pipe has been carved out of gray steatite and highly polished. It is worthy of note that it is precisely of the form described by Adair as made by the Cherokees, and also that it approaches very near to an Ohio type (Fig. 23).

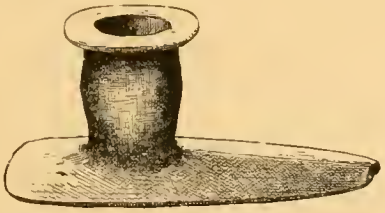


FIG. 23.—Pipe from mound, Butler County, Ohio.

Another mound of rather large size, in the same locality, was opened by the Bureau assistant.

In order that all the facts bearing on its uses may be understood it is necessary to notice its immediate surroundings.

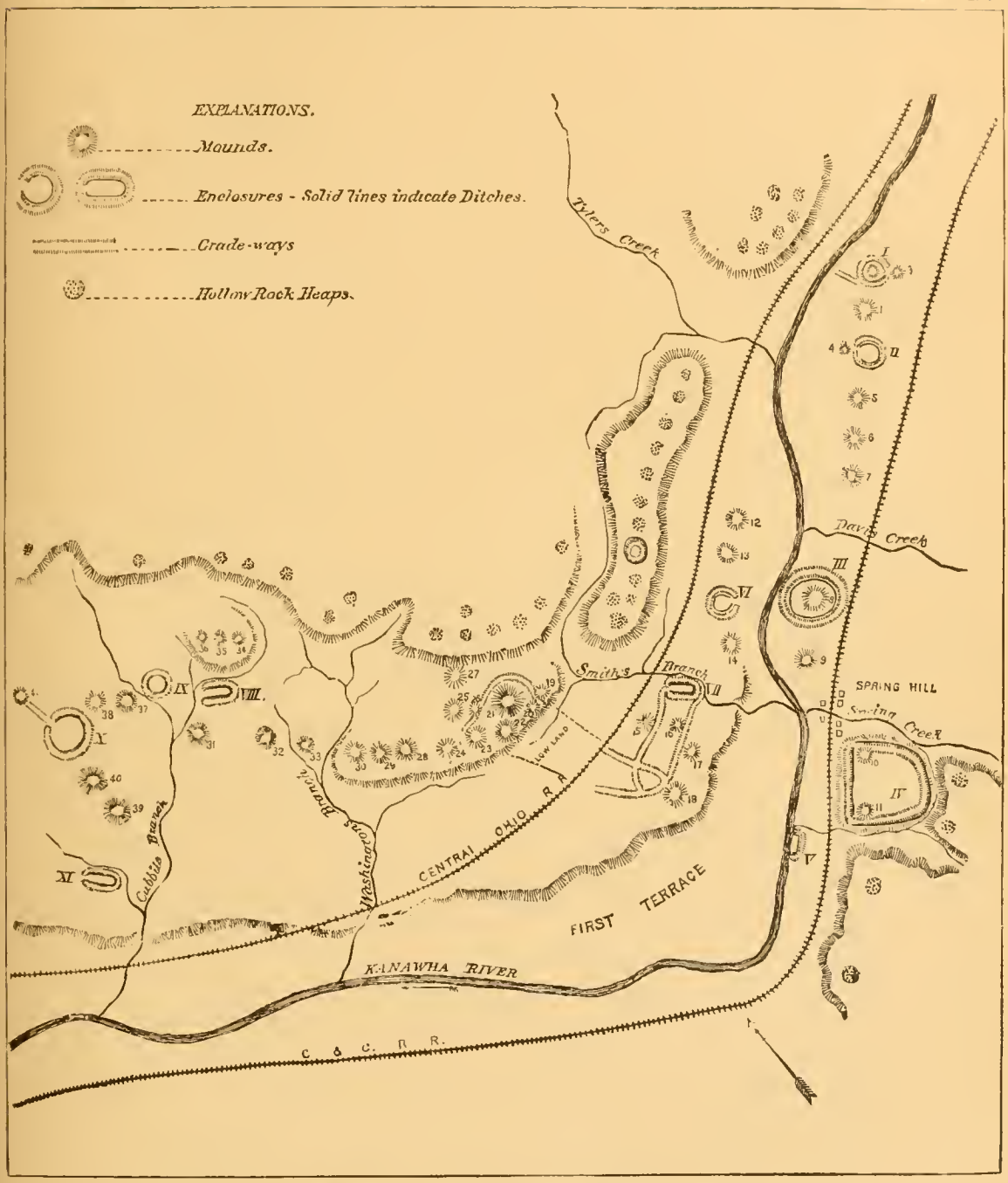
Plate V is a map showing the ancient works in the valley of the Kanawha, from 3 to 5 miles below Charleston, and Plate VI is an enlarged plat of the area embracing those numbered I, II and 1, 3, and 4 on the map. As will be seen by an inspection of the latter plate, the works included are two circular enclosures, 1 and 2; one excavation; one included mound, 2; three mounds, 3, 1, and 4, outside of the enclosures; and a graded way. As our attention at present is directed only to the large mound, 1, it is unnecessary to notice the other works further than to add that each enclosure is about 220 feet in diameter, and consists of a circular wall and an inside ditch. The excavation is nearly circular and about 140 feet in diameter. The large mound is conical in form, 173 feet in diameter, and 33 feet high. It is slightly truncated, the top having been leveled off some forty years ago for the purpose

of building a judge's stand in connection with a race-course that was laid out around the mound.

A shaft 12 feet square at the top and narrowing downward was sunk to the base. At the depth of 4 feet, in a very hard bed of earth and ashes mixed, were found two much decayed human skeletons, both stretched horizontally on their backs, heads south, and near their heads several stone implements. From this point until a depth of 24 feet was reached the shaft passed through very hard earth of a light-gray color, apparently clay and ashes mixed, in which nothing of consequence was found. When a depth of 24 feet was reached the material suddenly changed to a much softer and darker earth, disclosing the casts and some decayed fragments of timbers from 6 to 12 inches in diameter. Here were found fragments of bark, ashes, and also numerous fragments of animal bones, some of which had been split lengthwise. At the depth of 31 feet was a human skeleton, lying prostrate, head north, which had evidently been enclosed in a coffin or wrapping of elm bark. In contact with the head was a thin sheet of hammered native copper. By enlarging the base of the shaft until a space some 16 feet in diameter was opened, the character and the contents of the base of the mound were more fully ascertained. This brought to light the fact that the builders, after having first smoothed, leveled, and packed the natural surface, carefully spread upon the floor a layer of bark (chiefly elm), the inner side up, and upon this a layer of fine white ashes, clear of charcoal, to the depth, probably, of 5 or 6 inches, though pressed now to little more than 1 inch. On this the bodies were laid and presumably covered with bark.

The enlargement of the shaft also brought to view ten other skeletons, all apparently adults, five on one side and five on the other side of the central skeleton, and, like it, extended horizontally, with their feet pointing toward the central one but not quite touching it. Like the first, they had all been buried in bark coffins or wrappings. With each skeleton on the east side was a fine, apparently unused lance-head about 3 inches long, and by the right side of the northern one a fish-dart, three arrowheads, and some fragments of *Unio* shells and pottery. No implements or ornaments were found with either of the five skeletons on the west side, although careful search was made therefor. In addition to the copper plate, a few shell beads and a large lance-head were found with the central skeleton. As there were a number of holes resembling post-holes, about the base, which were filled with rotten bark and decayed vegetable matter, I am inclined to believe there was a vault here similar to the lower vault in the Grave Creek mound, in which the walls were of timbers set up endwise in the ground. But it is proper to state that the assistant who opened the mound is rather disposed to doubt the correctness of this explanation.

In order to show the character of the smaller burial mounds of this region, I give descriptions of a few opened by Colonel Norris.



PLAT OF ANCIENT WORKS ON THE KANAWHA JUNCTION, W. VA.

One 20 feet in diameter and 7 feet high, with a beech tree 30 inches in diameter growing on it, was opened by running a broad trench through it. The material of which it was composed was yellow clay, evidently from an excavation in the hillside near it. Stretched horizontally on the natural surface of the ground, faces up and heads south, were seven skeletons, six adults and one child, all charred. They were covered several inches thick with ashes, charcoal, and fire-brands, evidently the remains of a very heavy fire which must have been smothered before it was fully burned out. Three coarse lance-heads were found among the bones of the adults, and around the neck of the child three copper beads, apparently of hammered native copper.

Another mound, 50 feet in diameter and 5 feet high, standing guard, as it were, at the entrance of an inclosure, was opened, revealing the following particulars: The top was strewn with fragments of flat rocks, most of which were marked with one or more small, artificial, cup-shaped depressions. Below these, to the depth of 2 or 3 feet, the hard yellow clay was mixed throughout with similar stones, charcoal, ashes, stone chips, and fragments of rude pottery. Near the center and 3 feet from the top of the mound were the much decayed remains of a human skeleton, lying on its back, in a very rude stone-slab coffin. Beneath this were other flat stones, and under them charcoal, ashes, and baked earth, covering the decayed bones of some three or four skeletons which lay upon the original surface of the ground. So far as could be ascertained, the skeletons in this mound lay with their heads toward the east. No relics of any kind worthy of notice were found with them.

Another mound of similar size, upon a dry terrace, was found to consist chiefly of very hard clay, scattered through which were stone chips and fragments of rude pottery. Near the natural surface of the ground a layer of ashes and charcoal was encountered, in which were found the remains of at least two skeletons.

A mound some 200 yards south of the inclosure, situated on a slope and measuring 50 feet in diameter and 6 feet in height, gave a somewhat different result. It consisted wholly of very hard clay down to the natural surface of the hill-slope. But further excavation revealed a vault or pit in the original earth 8 feet long, 3 feet wide, and 3 feet deep at the upper end. In this was found a decayed skeleton, with the head up hill or toward the north. Upon the breast was a sandstone gorget, and upon it a leaf-shaped knife of black flint and a neatly polished hematite celt. The bones of the right arm were found stretched out at right angles to the body, along a line of ashes. Upon the bones of the open hand were three piles (five in each) of small leaf-shaped flint knives.

As the four small mounds just mentioned pertain to the Clifton groups, in the Elk River Valley, we will call attention to one or two of the Charleston group, for the purpose of affording the reader the means of comparison.

Below the center of No. 7 (see Plate), sunk into the original earth, was a vault about 8 feet long, 3 feet wide, and 3 feet deep. Lying ex-

tended on the back in the bottom of this, amid the rotten fragments of a bark coffin, was a decayed human skeleton, fully 7 feet long, with head west. No evidence of fire was to be seen, nor were any stone implements discovered, but lying in a circle just above the hips were fifty circular pieces of white perforated shell, each about 1 inch in diameter and an eighth of an inch thick. The bones of the left arm lay by the side of the body, but those of the right arm, as in one of the mounds heretofore mentioned, were stretched at right angles to the body, reaching out to a small oven-shaped vault, the mortar or cement roof of which was still unbroken. The capacity of this small circular vault was probably two bushels, and the peculiar appearance of the dark-colored deposit therein, and other indications, led to the belief that it had been filled with corn (maize) in the ear. The absence of weapons would indicate that the individual buried here was not a warrior, though a person of some importance.

Mound No. 23 of this group presents some peculiarities worthy of notice. It is 312 feet in circumference at the base and 25 feet high, covered with a second growth of timber, some of the stumps of the former growth yet remaining. It is unusually sharp and symmetrical. From the top down the material was found to be a light-gray and apparently mixed earth, so hard as to require the vigorous use of the pick to penetrate it. At the depth of 15 feet the explorers began to find the casts and fragments of poles or round timbers less than a foot in diameter. These casts and rotten remains of wood and bark increased in abundance from this point until the original surface of the ground was reached. By enlarging the lower end of the shaft to 14 feet in diameter it was ascertained that this rotten wood and bark were the remains of what had once been a circular or polygonal, timber-sided, and conical-roofed vault. Many of the timbers of the sides and roof, being considerably longer than necessary, had been allowed to extend beyond the points of support often 8 or 10 feet, those on the sides beyond the crossing and those of the roof downward beyond the wall. Upon the floor and amid the remains of the timber were numerous human bones and also two whole skeletons, the latter but slightly decayed, though badly crushed by the weight pressing on them, but unaccompanied by an ornament or an implement of any kind. A further excavation of about 4 feet below the floor, or what was supposed to be the floor, of this vault, and below the original surface of the ground, brought to light six circular, oven-shaped vaults, each about 3 feet in diameter and the same in depth. As these six were so placed as to form a semicircle, it is presumed there are others under that portion of the mound not reached by the excavation. All were filled with dry, dark dust or decayed substances, supposed to be the remains of Indian corn in the ear, as it was similar to that heretofore mentioned. In the center of the circle indicated by the positions of these minor vaults, and the supposed center of the base of the mound (the shaft not being exactly central), and but 2 feet below the floor of the main vault, and in a fine mortar or cement, were

found two cavities resembling in form the bottle or gourd shaped vessel so frequently met with in the mounds of southeastern Missouri and northeastern Arkansas. Unfortunately the further investigation of this work was stopped at this stage of progress by cold weather.

In another mound of this group the burial was in a box-shaped stone vault, not of slabs in the usual method, but built up of rough, angular stones.

Mound 31 of this group seems to furnish a connecting link between the West Virginia and the Ohio mounds. It is sharp in outline, has a steep slope, and is flattened on the top; is 318 feet in circumference at the base and about 25 feet high. It was opened by digging a shaft 10 feet in diameter from the center of the top to the base. After passing through the top layer of surface soil, some 2 feet thick, a layer of clay and ashes 1 foot thick was encountered. Here, near the center of the shaft, were two skeletons, lying horizontally, one immediately over the other, the upper and larger one with the face down and the lower with the face up. There were no indications of fire about them. Immediately over the heads were one celt and three lance-heads. At the depth of 13 feet and a little north of the center of the mound were two very large skeletons, in a sitting posture, with their extended legs interlocked to the knees. Their arms were extended and their hands slightly elevated, as if together holding up a sandstone mortar which was between their faces. This stone is somewhat hemispherical, about 2 feet in diameter across the top, which is hollowed in the shape of a shallow basin or mortar. It had been subjected to the action of fire until burned to a bright red. The cavity was filled with white ashes, containing small fragments of bones burned to cinders. Immediately over this, and of sufficient size to cover it, was a slab of bluish-gray limestone about 3 inches thick, which had small cup-shaped excavations on the under side. This bore no marks of fire. Near the hands of the eastern skeleton were a small hematite celt and a lance-head, and upon the left wrist of the other two copper bracelets. At the depth of 25 feet, and on the natural surface, was found what in an Ohio mound would have been designated an "altar." This was not thoroughly traced throughout, but was about 12 feet long and over 8 feet wide, of the form shown in Fig. 24.

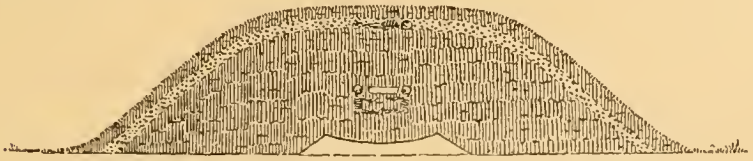


FIG. 24.—Mound with so-called "altar," Kanawha County, West Virginia.

It consisted of a layer of well-prepared mortar, apparently clay, slightly mixed with ashes. This was not more than 6 or 8 inches thick in the center of the basin-shaped depression, where it was about 1 foot

lower than at the other margin. It was burned to a brick-red and covered with a compact layer of very fine white ashes, scattered thickly, through which were small water-worn bowlders, bearing evidences of having undergone an intense heat. Mingled with this mass were a few thoroughly charred human bones. The material of the shaft, after the first 3 feet at the top, consisted almost wholly of finely packed ashes, which appeared to have been deposited at intervals of considerable length and not at one time.

It is evident from this description, which is abridged from the report of the assistant, that we have here a true representation of the so-called "altars" of the Ohio mounds. But, contrary to the usual custom, as shown by an examination of the Ohio works, this mound appears to have been used by the people who erected it as a burial place, for the mode of construction and the material used for the body of it forbid the supposition that the lower burial was by a different people from those who formed the clay structure at the base.

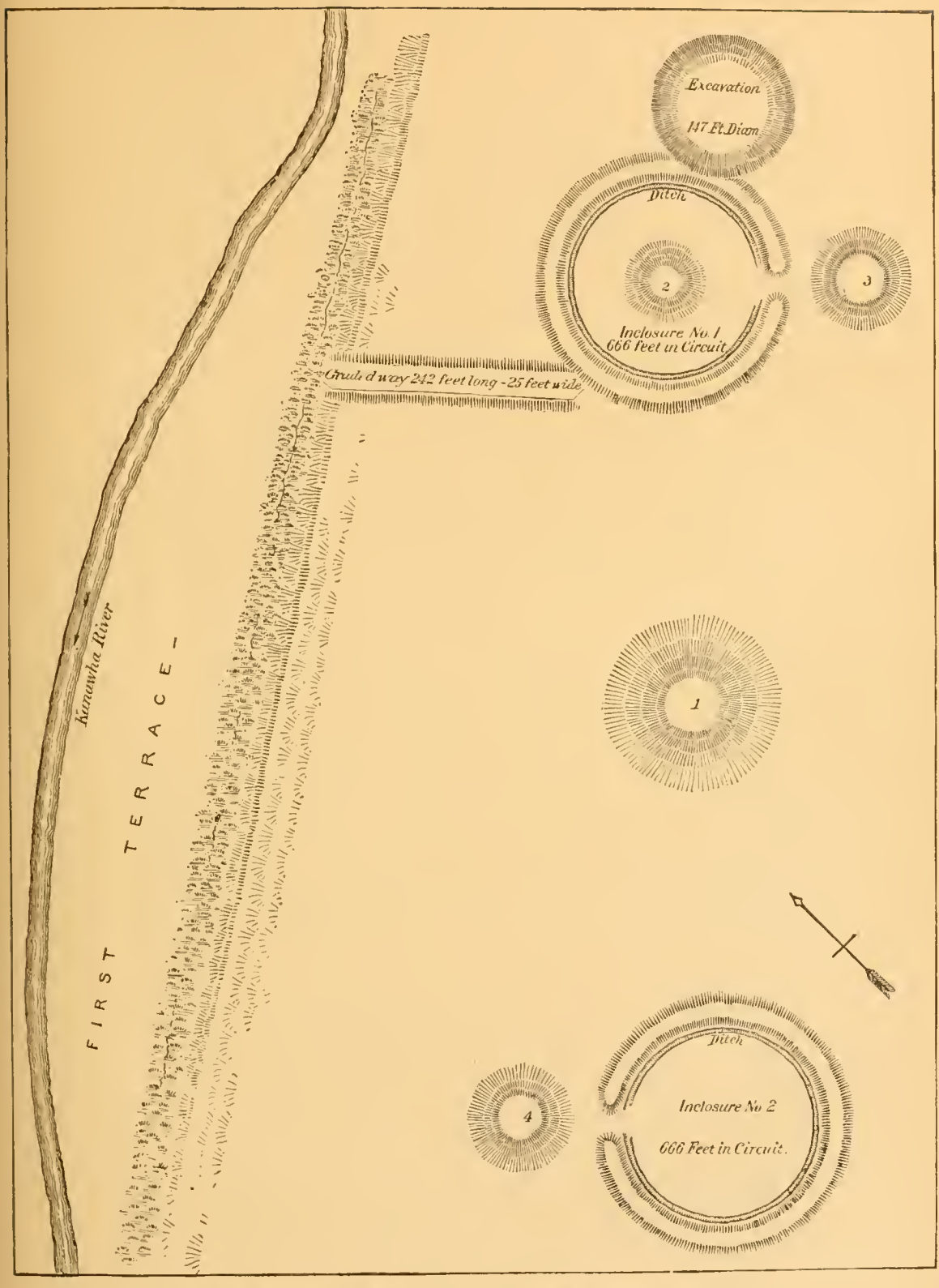
It is proper to state that around and near the inclosure (No. 7 of Plate V) were a number of stone graves of the ordinary box shape, constructed in the usual way, of stone slabs.

At this place was also discovered a pit or cache resembling those found at Madisonville, Ohio. A more thorough examination will probably bring to light others.

The descriptions of other burial mounds of this region, differing slightly in minor details from those mentioned, might be presented, but the foregoing will suffice to give the types and show the character of the structures of this kind in this section. The details given will, I think, satisfy any one that the authors of these structures were also the authors of the Ohio works, or that they belonged to tribes so closely related that we may justly consider them as one people.

I have been and am still disposed to connect the mound-builders of the Kanawha valley with those of western North Carolina, but our explorations in the two sections have convinced me of their close relation to the people whose mysterious monuments dot the hills and valleys of Ohio. That they were related in some way to the mound-builders of North Carolina and East Tennessee is more than probable, but the key to unlock this mystery, if it exists anywhere, is most likely to be found in the history, traditions, and works of the Cherokees, and the traditions relating to the Tallegwi.

As a result of my examination and discussion of the burial mounds of Wisconsin, I reached the conclusion that they were built by the Indian tribes found inhabiting that section at the advent of the whites, or by their ancestors. The data, of which but a comparatively small portion is given, seem to justify this conclusion. But the case is somewhat different in reference to the works of the Ohio district. Although the data obtained here point with satisfactory certainty to the conclusion that Indians were the authors of these works, it cannot be claimed that



SKETCH PLAN OF PART OF THE WORKS [illegible]

all or even the larger portion of them were built by Indians inhabiting the district when first visited by the whites, or by their ancestors.

Hence the mystery which enshrouds them is deeper and much more difficult to penetrate than that which hangs about the antiquities of some of the other districts; in fact, they present probably the most difficult problem for solution in this respect of any ancient works of our country. That some of the burial mounds, graves, and other works are to be attributed to Indians who entered this district after the Europeans had planted colonies in Canada and along the Atlantic coast is probably true, but that much the greater portion of the typical works belong to a more distant period must be conceded. It is a singular fact that in the latter half of the seventeenth century, when European explorers began to penetrate into this region, what is now the State of Ohio was uninhabited.

The Miami confederacy, inhabiting the southern shore of Lake Michigan, extended southeasterly to the Wabash. The Illinois confederacy extended down the eastern shore of the Mississippi to about where Memphis now stands. The Cherokees occupied the slopes and valleys of the mountains about the borders of what is now East Tennessee, North Carolina, and Georgia. The great basin bounded north by Lake Erie, the Miamis, and the Illinois, west by the Mississippi, east by the Alleghanies, and south by the headwaters of the streams that flow into the Gulf of Mexico, seems to have been uninhabited except by bands of Shawnees, and scarcely visited except by war parties of the Five Nations.[1]

With the exception of some slight notices of the Erie or Cat Nation dwelling south of Lake Erie, the mere mention of the Tongarias (possibly but another name for the Eries, with whom Colden identifies them), located somewhere on the Ohio, and the tradition regarding the Tallegwi, the only history which remains to us regarding this region previous to the close of the seventeenth century, is to be gathered from the ancient monuments which dot its surface. Even conjecture can find but few pointers on this desert field to give direction to its flight. But it does not necessarily follow, because we are unable to determine the direction in which the goal we are seeking lies, that we cannot tell some of the directions in which it does not lie, and thus narrow the field of our investigation. I will therefore venture to offer the following suggestions:

As the evidence in regard to the antiquities of the northwestern, the southern, and the Appalachian districts points so decidedly to the Indians as the authors, I think we may assume that the works of Ohio are attributable to the same race. As they bear a strong resemblance in several respects to the West Virginia and North Carolina works, and as the geographical positions of the defensive works indicate pressure from the north and north-west, we are perhaps justified in excluding from consideration all tribes known to have had their principal seats north of the Ohio in historic times, except the Eries, which form an uncertain and so far indeterminable factor in the problem.

[1] Early Notices of the Indians of Ohio, by M. F. Force, 1879, p. 3.

The data so far obtained seem to me to indicate the following as the most promising lines of research: The possible identity or relation of the Tallegwi and the Cherokees; the possibility of this region having been the ancient home of the Shawnees or their ancestors (though I believe the testimony of the mounds is most decidedly against this and the following supposition); and the theory that the builders of these works were driven southward and were merged into the Chahta-Muscogee family.

Be our conclusion on this question what it may, one important result of the explorations in this northern section of the United States is the conviction that there was during the mound-building age a powerful tribe or association of closely allied tribes occupying the valley of the Ohio, whose chief seats were in the Kanawha, Scioto, and Little Miami Valleys. We might suppose that one strong tribe had occupied successively these various points, yet the slight though persistent differences in methods and customs indicated by the works seem to favor the other view. Moreover, the data furnished by the burial mounds lead to the conclusion that all the works of these localities are relatively contemporaneous. Not that those of either section are all of the same age, perhaps by some two or three or possibly more centuries, but that those of one section, as a whole, are relatively of the same age as those of the other sections. Nevertheless a somewhat careful study of all the data bearing on this subject leads me to the conclusion that the Cherokees are the modern representatives of the Tallegwi, and that most of the typical works of Ohio and West Virginia owe their origin to this people.

In each section there are some indications that the authors of these works followed the custom of erecting burial mounds down to the time the Europeans appeared on the continent. These evidences have not been given here, as it is not my intention to discuss them in this paper.

In Ohio there are undoubted evidences of one, if not two, waves of population subsequent to the occupancy of that region by the builders of the chief works. But these were of comparatively short duration, and were evidently Indian hordes pressed westward and southward by the Iroquois tribes and the advance of the whites.

THE APPALACHIAN DISTRICT.

This district, as already defined, includes East Tennessee, western North Carolina, southwestern Virginia, and the southeastern part of Kentucky. It is probable that northeastern Georgia and the northwestern part of South Carolina should be included, but the investigations in most of the sections named have not been sufficiently thorough to enable us to fix with any degree of certainty the boundaries of the district.

Although there is uncertainty in reference to the area occupied by the people who left behind them the antiquities found in this region, there can be no doubt that here we find a class of burial mounds differing in several important respects from any we have so far noticed.

Some of the most important mounds of this class found in this district were discovered in Caldwell County, North Carolina, and opened in 1882 by Mr. J. P. Rogan, one of the Bureau assistants, aided by Dr. J. M. Spainhour, a resident of the county.

As Mr. Rogan's descriptions are somewhat full, I give them substantially as found in his report:

The T. F. Nelson mound.—This mound, so insignificant in appearance as scarcely to attract any notice, was located on the farm of Rev. T. F. Nelson, in Caldwell County, North Carolina, on the bottom land of the Yadkin, about 100 yards from the river-bank. It was almost a true circle in outline, 38 feet in diameter, but not exceeding at any point 18 inches in height. The thorough excavation made revealed the fact that the builders of the mound had first dug a circular pit, with perpendicular margin, to the depth of 3 feet, and 38 feet in diameter, then deposited their dead in the manner hereafter shown, and afterwards covered them over, raising a slight mound above the pit.

A plan of the pit, drawn at the time (after the removal of the dirt), showing the stone graves and skeletons, is given in Fig. 25.

The walled graves or vaults and altar-shaped mass were built of water worn bowlders and clay or earth merely sufficient to hold them in place.

No. 1, a stone grave or vault standing exactly in the center of the pit. In this case a small circular hole, a little over 3 feet in diameter and extending down 3 feet below the bottom of the large pit, had been dug, the body or skeleton placed perpendicularly upon its feet, and the wall built up around it from the bottom of the hole, converging, after a height of 4 feet was reached, so as to be covered at the top by a single soapstone rock of moderate size. On the top of the head of the skeleton and immediately under the capstone of the vault were found several

plates of silver mica, which had evidently been cut with some rude implement. Although the bones were much decayed, yet they were retained in position by the dirt which filled the vault, an indication that the flesh had been removed before burial and the vault filled with dirt as it was built up.

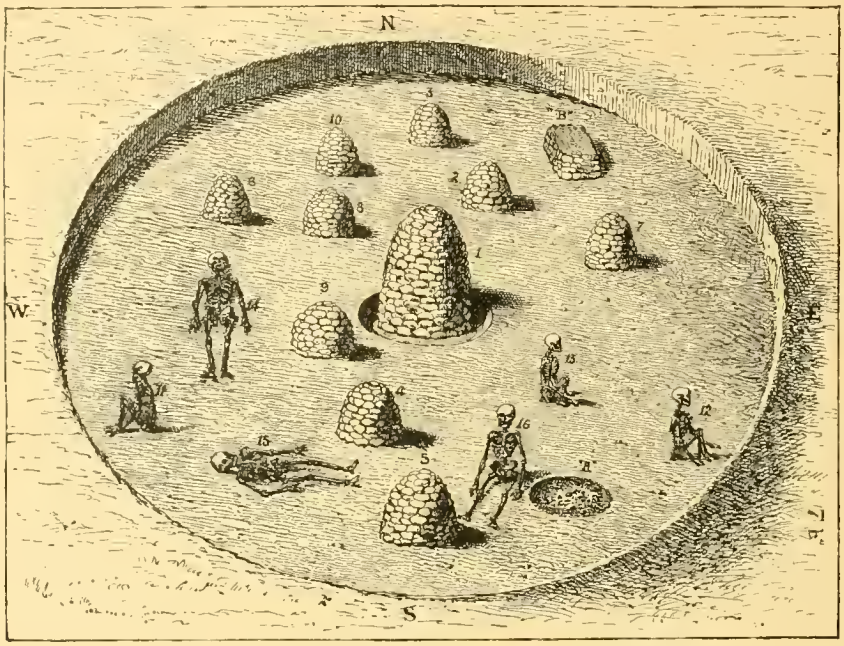


FIG. 25.—Appearance of T. F. Nelson mound after excavation.

Nos. 2, 3, 4, 5, 6, 7, 8, 9, and 10, although walled around in a similar manner, were in a sitting posture on the bottom of the pit. In the grave of No. 2 was found a polished celt, in that of No. 3 a single discoidal stone, in that of No. 6 two polished celts, and immediately over No. 9 a pitted stone.

Nos. 11, 12, and 13 are three skeletons in a squatting posture, with no wall around them and unaccompanied by relics of any kind.

Nos. 14 and 15 are two uninclosed skeletons, lying horizontally at full length. With the former some pieces of broken soapstone pipes were found, and with the latter one polished celt.

No. 16, an uninclosed "squatter," of unusually large size, not less than 7 feet high when living. Near the mouth was an uninjured soapstone pipe. The legs were extended in a southwest direction, upon a bed of burnt earth.

The faces of all the squatting skeletons were turned away from the standing central one.

At A was found a considerable quantity of black paint in little lumps, which appear to have been molded in the hull of some nut. At B was

a cubical mass of water-worn bowlders, built up solidly and symmetrically, 24 inches long, 18 inches wide, and 18 inches high, but with no bones, specimens of art, coal, ashes, or indications of fire on or around it. Many of the stones of the vaults and the earth immediately around them, on the contrary, bore unmistakable evidences of fire; in fact, the heat in some cases left its mark on the bones of the inclosed skeletons, another indication that the flesh had been removed before burial here, either by previous burial or otherwise.

Scattered through the dirt which filled the pit were small pieces of pottery and charcoal. The bottom and sides of the pit were so distinctly marked that they could be traced without difficulty.

This mound stood about 75 yards south of the triangular burial pit described below.

The T. F. Nelson triangle.—This is the name applied by Mr. Rogan to an ancient triangular burying ground found on the same farm as the mound just described and about 75 yards north of it.

It is not a mound, but simply a burial pit in the form of a triangle, the two longest sides each 48 feet and the (southern) base 32 feet, in

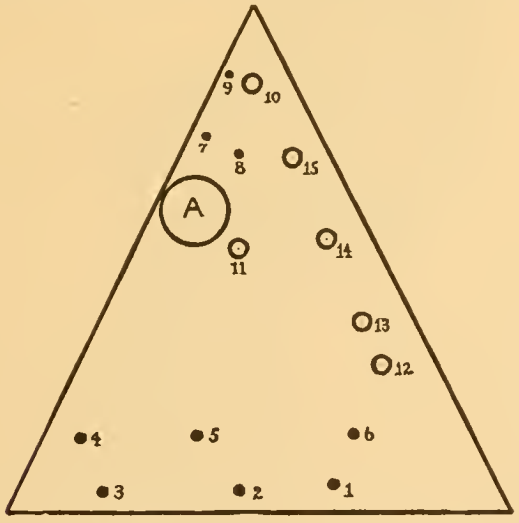


FIG. 26.—Burials in the T. F. Nelson triangle, Caldwell County, North Carolina.

which the bodies and accompanying articles were deposited and then covered over, but not heaped up into a mound; or, if so, it had subsequently settled until on a level with the natural surface of the ground. The apex, which points directly north, was found to extend within 3 feet of the break of the bank of the Yadkin River, the height above the usual water-level being about 12 feet. The depth of the original excavation, the lines of which could be distinctly traced, varied from 2½ to 3 feet. A rude sketch of this triangle, showing the relative positions of the skeletons, is given in Fig. 26.

Nos. 1, 2, 3, 4, 5, 6, 7, 8, and 9 indicate the positions of single skeletons found lying horizontally, on their backs, heads east and northeast. With No. 2 was found a broken soapstone pipe, and with Nos. 5 and 9 one small polished celt each.

Nos. 10, 11, 12, 13, 14, and 15 indicate the positions of skeletons inclosed in rude stone vaults built of cobblestones and similar to those in the preceding mound. (See Fig. 25.) Nos. 10, 12, 13, and 15 were in a sitting posture, without any accompanying articles.

Graves 11 and 14 contained each two bodies, extended horizontally, the lower ones, which were of smaller stature than the upper ones, face up and with heavy flat stones on the extended arms and legs. The upper ones, with face down, were resting on those below. No implements or ornaments were found with them.

Near No. 12 about a peck of singular, pinkish-colored earth was found.

FIG. 27.—Engraved shell gorget from mound, Caldwell County, North Carolina.

In the northwest part of the triangle (at A in Fig. 26) ten or more skeletons were found in one grave or group, which from the arrangement the explorers concluded must have been buried at one time; the "old chief" (?), or principal personage of the group, resting horizontally on his face, with his head northeast and feet southwest. Under his head was a large engraved shell gorget (Fig. 27); around his neck were a number of large sized shell beads, evidently the remains of a necklace; at the sides of the head, near the ears, were five elongate copper beads, or rather small cylinders, varying in length from one and a quarter to four and a half inches, part of the leather thong on which the smaller were strung yet remaining in them. These are made of thin pieces of copper cut into strips and then rolled together so that the edges meet in a straight joint on one side. (See Fig. 28.) The plate out of which they were made was as smooth and even in thickness as though it had been rolled.

A piece of copper was also under his breast. His arms were partially extended, his hands resting about a foot from his head. Around

FIG. 28.—Cylindrical copper bead from mound, Caldwell County, North Carolina.

each wrist were the remains of a bracelet composed of copper and shell beads, alternating, thus (Fig. 29):

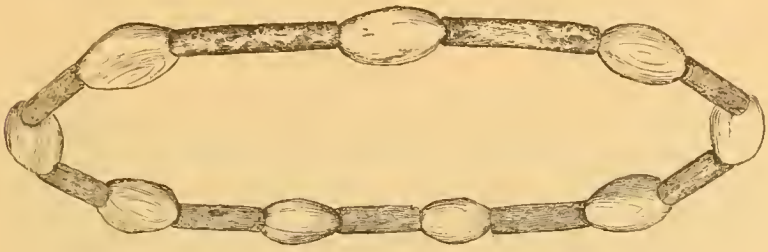


FIG. 29.—Bracelet of copper and shell beads, Caldwell County, North Carolina.

At his right hand were four iron specimens, much corroded but still showing the form. Two of them were of uniform thickness, one not sharpened at the ends or edges, the other slightly sharpened at one end, 3 to 3½ inches long, 1 to 1½ inches broad, and about a quarter of an inch thick. The form is shown in Fig. 30. Another is 5 inches long,

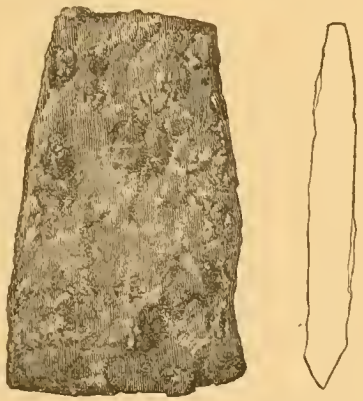


FIG. 30.—Iron celt from mound, Caldwell County, North Carolina.

slightly tapering in width from one and an eighth to seven-eighths of an inch, both edges sharp; it is apparently part of the blade of a long, slender, cutting or thrusting weapon of some kind, as a sword, dagger, or knife. (Shown in Fig. 31.) The other specimen is part of a

round, awl-shaped implement, a small part of the bone handle in which it was fixed yet remaining attached to it.

Under his left hand was another engraved shell, the concave surface upward and filled with shell beads of all sizes.

Around and over the skeleton of this chief personage, with their heads near his, were nine other skeletons. Under the heads of two of these were two engraved shells. Scattered over and between the ten skeletons of the group were numerous polished celts, discoidal stones, copper arrow-points, plates of mica, lumps of paint, black lead, etc.

FIG. 31.—Iron implement from mound, Caldwell County, North Carolina.

The W. D. Jones mound.—Two miles east of Patterson, same county, and near the north bank of the Yadkin River, running out from a low ridge to the river bank, is a natural terrace about 12 feet high, with a level area on top of about an acre, the sides steep and abrupt. According to tradition this terrace was formerly occupied by an Indian village.

About 200 yards east of this, on the second river bottom or terrace, was located a low, circular mound 33 feet in diameter and not more than 1 foot high, on the land of Mr. W. D. Jones.

This mound was found on investigation to cover a circular pit 32 feet in diameter and 3 feet deep, the margin and bottom being so well defined as to leave no doubt as to the limits of the pit; in fact, the bottom, which was of clay, had been baked hard by fire to the depth of 2 or 3 inches. The mound and the filling of the pit consisted of earth and loose yellow clay, similar to that around it. In this mound were found twenty-five skeletons and one stone heap, the relative positions of which are shown in Fig. 32.

1. A "squatter," walled in with water-worn stones, the face turned toward the west; no relics.

2. Sitting with the face toward the center; two polished celts at the feet, and immediately in front of the face a cylinder of hard gray mortar (not burned) about 5 inches long and 2 inches in diameter, with a hole through one end.

3. Sitting with the face toward the center; several polished celts at the feet.

4. Horizontal, head southeast; several celts at the feet.

5. Horizontal, head toward the center: several celts at the feet.

6. Facing the center, sitting; shell beads around the neck, a *Unio* shell on top of the head, with the concave surface down, a conch shell (*Busycon perversum*) in front of the face, and celts at the feet.

7. Sitting, facing the center; celts at the feet.

8. Very large, lying on the left side, legs partially drawn up, walled in with bowlders; no implements.

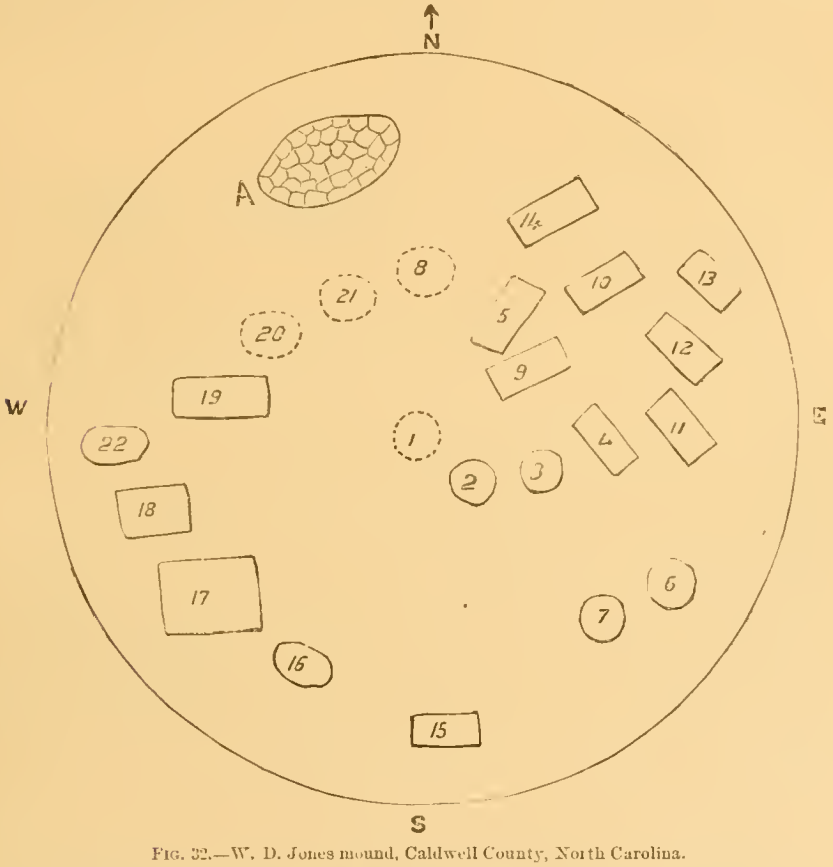


FIG. 32.—W. D. Jones mound, Caldwell County, North Carolina.

9. Horizontal, face down, head toward the center; celts and discoidal stones at the feet, and a pot resting, mouth down, upon the head.

10. Horizontal, face up, feet toward the center; pot resting on the face, stone implements at the feet.

11. Horizontal, head southeast, arms extended, and a bracelet of copper and shell beads around each wrist; shell beads around the neck; face up and food-cup (without handle) at the right side of the head.

12. Horizontal, face up, head southeast; shell beads around the neck, a hook or crescent shaped piece of copper on the breast, and a soapstone

pipe near the face; one hand near each side of the head, each grasping small, conical copper ornaments (ear-drops) and a bunch of hair. Was this individual, apparently a female, buried alive?

13. Horizontal, lying on the back, head southeast; copper and shell beads around the neck and wrists, a hook or crescent shaped piece of copper on the breast, a food-cup (with handle) lying on its side with mouth close to the face, a pipe near the mouth, and two celts over the head.

14. Horizontal, lying on the back, head northeast, arms extended; each hand resting on a shell which had evidently been engraved, though the figures are almost totally obliterated.

15. Horizontal, on the back, head west, knees drawn up; stone implements at the feet.

16. Too much decayed to determine the position.

17. Four skeletons in one grave, horizontal, heads toward the east, and large rocks lying on the legs below the knees; no implements.

18. Two skeletons in one grave, heads west, faces down, knees drawn up; no implements.

19. On the back, horizontal, head east; no implements.

20. Sitting, with face toward the east, walled in, a large rock lying on the feet (though this may have fallen from the wall); no implements.

21. Sitting, walled in; over the head, but under the capstone of the vault, a handful of flint arrow-heads.

22. Doubled up, with the head between the feet.

A. A solid oval-shaped mass of bowlders, 33 inches long, 22 inches wide, and 24 inches high, resting on the bottom of the pit. No ashes or other indications of fire about it.

Fragments of pottery, mica, galena, charcoal, red and black paint, and stone chips were found scattered in small quantities through the earth which filled the pit. All the celts were more or less polished.

R. T. Lenoir burial pit.—This is a circular burial pit, similar to those already described, but without any rounding up of the surface. It is located on the farm of Mr. Rufus T. Lenoir, about 9 miles northeast of Lenoir and nearly a mile west of Fort Defiance.

A diagram showing the relative positions of the graves or burials is given in Fig. 33.

It is on the first river terrace or bottom of Buffalo Creek and some 200 yards from the stream, which empties into the Yadkin about half a mile southwest of this point. This bottom is subject to overflow in time of high water.

The pit, which is 27 feet in diameter and about 3½ feet deep, is almost a perfect circle, and well marked, the margin, which is nearly perpendicular, and the bottom being easily traced. The dirt in this case, as in the others, was all thrown out.

No. 1. A bed of charred or rather burnt bones, occupying a space 3 feet long, 2 feet wide, and about 1 foot deep. The bones were so thoroughly

burned that it was impossible to determine whether they were human or animal. Beneath this bed the yellow sand was baked to the depth of 2 or 3 inches. Under the bones was an uncharred shell gorget.

No. 2. A skeleton in a sitting posture, facing northeast; a pipe near the mouth and a polished celt over the head.

No. 3. Sitting, facing east, with shell beads around the neck and also around the arms just below the shoulders.

No. 4. Horizontal, on the back, head east and resting on the concave surface of an engraved shell; a conch shell (*Busycon perversum*) at the side of the head, and copper and shell beads around the neck.

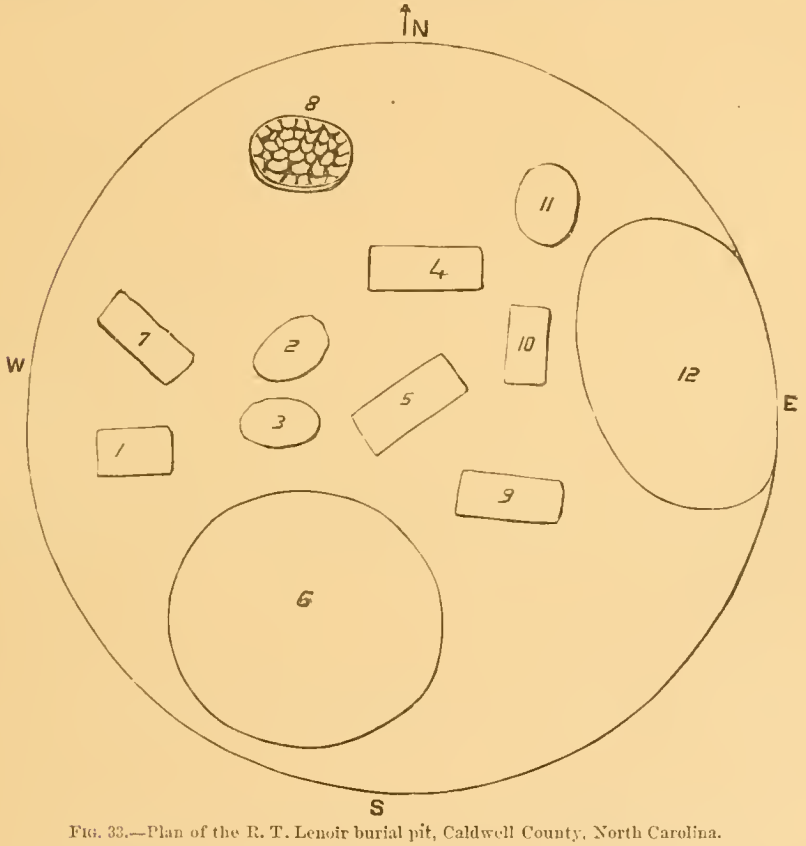


FIG. 33.—Plan of the R. T. Lenoir burial pit, Caldwell County, North Carolina.

No. 5. Horizontal, head northeast; shell beads around the neck and two discoidal stones and one celt at the feet.

No. 6. A communal grave, containing at least twenty-five skeletons, in two tiers, buried without any apparent regularity as to direction or relative position. Thirteen of the twenty-five were "flat-heads;" that is, "the heads running back and compressed in front."

Scattered through this grave, between and above the skeletons, were polished celts, discoidal stones, shells, mica, galena, fragments of pot-

tery, and one whole pot. Around the neck and wrists of some of the skeletons were also shell beads. There may have been more than twenty-five individuals buried here, this, however, being the number of skulls observed.

No. 7. Horizontal, on the left side, head northwest; no implements.

No. 8. An irregular layer of water-worn stones, about 4 feet square. On top was a bed of charcoal 3 or 4 inches thick, on and partially imbedded in which were three skeletons, but showing no indications of having been in the fire. Scattered over these were discoidal stones, one small, saucer-shaped dish, shells (of which one is engraved), pipes, shell beads, and pieces of pottery.

No. 9. A grave containing three skeletons, lying horizontally on their backs and side by side, the outer ones with their heads east and the middle one with the head west; no implements.

No. 10. Horizontal, on the right side, head north, with stone implements in front of the face.

No. 11. Doubled up, top of the head south; shell beads around the neck and celts at the feet.

No. 12. A grave containing seventeen skeletons, seven of which had flat heads, two of the number children. Two of the adult heads were resting on engraved shells.

In this grave were found four pots and two food-cups, the handle of one representing an owl's head and that of the other an eagle's head. One of the small pots was inside a larger one. Scattered among the skeletons were shell beads, polished celts, discoidal stones, paint, etc. None of the skeletons were inclosed in stone graves.[1]

In order to convey an idea of the number of articles deposited with the dead in some of these burial places, I give here a list of those obtained from the pit last described:

One stone ax.
Forty-three polished celts.
Nine vessels of clay.
Thirty-two arrow-heads.
Twenty soapstone pipes, mostly uninjured.
Twelve discoidal stones.
Ten rubbing stones.
Two hammer stones.
One broken soapstone vessel.
Six engraved shells.
Four shell gorgets.
One *Busycon perversum* entire, and two or three broken ones.
Five very large copper beads.
One lot of fragments of shells, some of them engraved.
A few rude shell pins.

[1] The circles and parallelograms in Figs. 32 and 33 have no other significance than to indicate the relative positions of the graves and the positions of the skeletons.

Shell beads.

A few small copper beads.

Specimens of paint and plumbago.

Three skulls.

It is evident from the foregoing descriptions that the mode of burial and the depositories of the dead of the mound-building tribes of this part of North Carolina differed in several marked and important respects from the mode of burial and burial mounds of the sections previously alluded to, and in fact from those of any other district.

Here the pit seems to have been the important part of the depository and the mound a mere adjunct. In some cases the bodies appear to have been buried soon after death, while in others—as, for example, the groups in the triangle and Lenoir burial pit—the skeletons were probably deposited after the flesh was removed.

We are reminded by these pits of the mode of burial practiced by some of the Indian tribes, as mentioned by Lafitau,[1] Brebeuf,[2] etc.; but, before attempting to draw conclusions, we will give other illustrations of the burial mounds of this district, which are far from being uniform in character.

Comparatively few mounds have as yet been opened in North Carolina; hence the data relating to this region is somewhat meager. As bearing upon the subject, and probably relating to a period immediately following the close of the mound-building era, I give from Mr. Rogan's notes the description of a burial place explored by him on the farm of Mr. Charles Hunt, in the central part of Wilkes County:

This is not a "burial place," in the usual sense of that term, but is probably the site of a camp or temporary village. It is about three miles and a half east of Wilkesborough, on the second bottom or terrace of the Yadkin River. It differs from the burial places just described in having no large pit, the graves being separate and independent of each other. A diagram showing the relative positions of the graves and small pits accompanies Mr. Rogan's report but is omitted here, although the numbering of the graves is retained in the description.

No. 1 is a grave or oval-shaped pit 2 feet long and 18 inches wide, the top within 8 inches of the surface of the ground, while the bottom is $2\frac{1}{2}$ feet below it. This contained the remains of two skeletons, which were surrounded by charcoal; some of the bones were considerably charred. In the pit were some fragments of pottery, a few flint chips, and a decayed tortoise shell.

No. 2. A grave 2 feet wide, 6 feet long, and 5 feet deep. It contained quite a quantity of animal bones, some of them evidently those of a bear; also charcoal, mussel shells, and one bone implement.

[1] Mœurs des Sauvages Amériquains, II, pp. 447–445.

[2] Jesuit Relations for 1636, pp. 128–139. For a translation of the lively description of the burial ceremonies of the Hurons by Father Brebeuf, see "Supplemental Note," at the end of this paper.

No. 3. A grave of the same size and depth as No. 2, containing animal bones, broken pottery, and some charcoal.

No. 4. Grave; the size, depth, and contents same as the preceding.

No. 5. A circular pit 2 feet in diameter and 2 feet deep. This contained a very large pot, in which were some animal bones; it was on its side and crushed.

No. 6. A pit 2½ feet deep and 2 feet square, with a bed of charcoal in the bottom 6 inches deep. On this bed was a layer of flint chips, and on the chips a quantity of broken pottery, animal bones, a discoidal stone, and a bone implement.

No. 7. A grave similar to those described.

No. 8. A large grave, containing three skeletons, lying at full length upon the right side, with the heads a little east of north. Between the front and the middle one was a mass of mussel shells. At the head and back of the front one were a number of animal bones, and between it and the middle one, opposite the pelvis, was a large broken pot. The right arm of the third or back one was extended forward and upward, the left arm resting across the head, a white flint chip grasped in the hand. The head of this skeleton was resting on a piece of a broken pot, and in front of the face, at the distance of a foot, was also part of a pot, containing a stone fragment and some animal bones. Under the legs of the three skeletons, the head extending in front of the legs of the third or back one, was the skeleton of a bear, and in front of the latter were three broken pots, containing animal bones.

No. 9. A basin-shaped fire-bed, or bed of burnt clay, 8 inches thick. A section of this bed is shown in Fig. 34—*b*, *b*, *b*, the bed of burnt

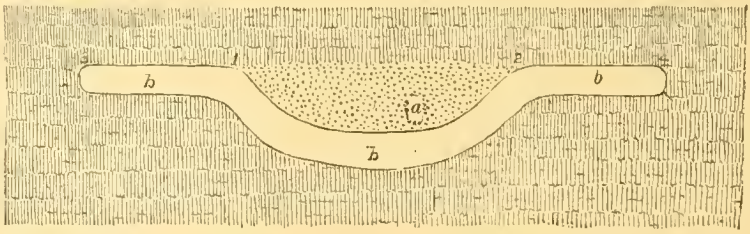


Fig. 34.—Fire-bed, Wilkes County, North Carolina.

clay, 8 inches thick, the material evidently placed here and not a part of the original soil. The basin *a* was filled with ashes, to the depth of 12 inches; the diameter, from 1 to 2, 2 feet 3 inches, from 1 to 3 and from 2 to 4, 1 foot 6 inches.

No. 10. A bed of mussel shells, 3 inches thick and 3 feet in diameter, lying on a flat bed of burnt earth 3 inches thick.

No. 11. A pit 5 feet deep and 3 feet in diameter, filled with animal bones, mussel shells, and broken pottery.

There was no mounding over any of these graves or pits.

The basin-shaped fire-bed, No. 9, reminds us very strongly of the so-called altars of the Ohio mounds, and may possibly assist us in arriving at a correct conclusion concerning these puzzling structures.

A mound opened by Dr. J. M. Spainhour in Burke County, some years ago, presents some variations, though, so far as the posture and relative positions of the skeletons are concerned, reminding us of those in Caldwell County. The following extract is from the article containing the description:[1]

Digging down I struck a stone about 18 inches below the surface, which was found to be 18 inches long and 16 inches wide and from 2 to 3 inches in thickness, the corners rounded. It rested on solid earth and had been smoothed on top.

I then made an excavation in the south of the mound, and soon struck another stone, which upon examination proved to be in front of the remains of a human skeleton in a sitting posture; the bones of the fingers of the right hand had been resting on the stone. Near the hand was a small stone about 5 inches long, resembling a tomahawk or Indian hatchet. Upon a further examination many of the bones were found, though in a very decomposed condition, and upon exposure to the air they soon crumbled to pieces. The heads of the bones, a considerable portion of the skull, jaw-bones, teeth, neck-bones, and the vertebræ were in their proper places. Though the weight of the earth above them had driven them down, yet the frame was perfect, and the bones of the head were slightly inclined toward the east. Around the neck were found coarse beads that seemed to be of some substance resembling chalk.

A small lump of red paint, about the size of an egg, was found near the right side of this skeleton. From my knowledge of anatomy, the sutures of the skull would indicate the subject to have been twenty-five or twenty-eight years of age. The top of the skull was about 12 inches below the mark of the plow.

I made a further excavation in the west part of this mound and found another skeleton similar to the first, in a sitting posture, facing the last. A stone was on the right, on which the right hand had been resting, and on this was a tomahawk which had been about 7 inches in length, broken into two pieces, and much better finished than the first. Beads were also on the neck of this one, but were much smaller and of finer quality than those on the neck of the first; the material, however, seemed to be the same. A much larger amount of paint was found by the side of this than the first. The bones indicated a person of larger frame and I think of about fifty years of age. Everything about this one had the appearance of superiority over the first. The top of the skull was about 6 inches below the mark of the plow.

I continued the examination, and after diligent search found nothing at the north part of the mound, but on reaching the east side found another skeleton, in the same posture as the others, facing the west. On the right side of this was a stone on which the right hand had been resting, and on the stone was also a tomahawk about 8 inches in length, broken into three pieces, much smoother and of finer material than the others. Beads were also found on the neck of this, but much smaller and finer than on those of the others, as well as a large amount of paint. The bones would indicate a person of forty years of age. The top of the skull had been moved by the plow.

There was no appearance of hair discovered; besides, the principal bones were almost entirely decomposed, and crumbled when handled.

A complete exploration of this mound, the dimensions of which are not given, would possibly have shown that the skeletons were arranged

[1] Smithsonian Report, 1871, pp. 404, 405.

somewhat in a circle. The doctor does not state whether there was a pit.

Some mounds in Henderson County, opened in 1884 by Mr. J. W. Emmert, who was temporarily employed by the Bureau, present some peculiarities worthy of notice. One of these, situated on the farm of Mrs. Rebecca Conner, and perfectly circular, was found to be 44 feet in diameter and 6 feet high; a number of small trees were growing on it. The annexed cut (Fig. 35) shows a vertical section of it, the dark cen-

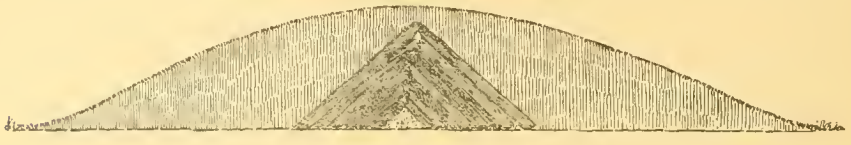


FIG. 35.—Section of mound, Henderson County, North Carolina.

tral triangle representing a conical mass of charcoal and ashes. The conical mass measured 16 feet in diameter at the base and 5 feet high, the top reaching within 1 foot of the top of the mound. The outer portion consisted of charcoal, evidently the remains of pine poles, which had been placed in several layers, sloping toward the apex. The inner portion consisted of ashes and coals mixed with earth, in which were found some burnt human (?) bones, and some accompanying articles, among which were two stones with holes drilled through them. The fragments of bones and the specimens were at the base, in the center.

A mound on the farm of Mr. J. B Alexander, 2 miles above the one just described, was examined by Mr. Emmert, and found to cover a pit similar to those explored in Caldwell County.

This mound was situated on an elevated level, about a quarter of a mile from the creek, in an old field which had been plowed over for sixty years. It was 2 feet high when he explored it, but the old people stated to him that it was formerly 10 feet high, and had a "tail" or ridge running away from it 200 feet long; but the only indication of this that Mr. Emmert could see was a strip of clay running off where it was stated to have been. It runs in the direction of the creek bottom, where any quantity of broken pottery may be picked up. The mound, which was 30 feet in diameter and composed wholly of red clay, was entirely removed to the original surface of the ground Nothing was found in it, but after reaching the surface he discovered a circular pit 12 feet in diameter, which had been dug to the depth of 4 feet in the solid red clay. This he found to be filled full of ashes and charcoal, but failed to find any bones or specimens in it.

Although Mr. Emmert failed to find any evidence that this was a burial mound, its similarity with those of Caldwell County will, I think, justify us in concluding it was constructed for this purpose.

Another mound on the same farm as the one last mentioned, a cross-section of which is shown in Fig. 36, is of the common type, examples of which are found in most of the districts: diameter 52 feet and height 9 feet; the upper layer, No. 1, red clay, about 4 feet thick, No. 2, a thin layer of charcoal, about 3 inches thick; the lower stratum or central core, No. 3, dark-colored earth. In this lower layer were found five skeletons, on the natural surface and at the points indicated by the dots, which crumbled to pieces as soon as exposed to the air. With one were sixteen large, rudely made, white flint arrow-heads, so nearly

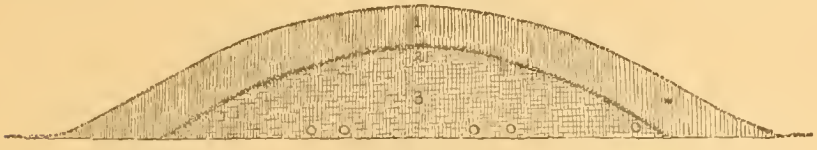


FIG. 36.—Section of mound, Henderson County, North Carolina

alike as to make it apparent they were the work of one individual, and with another a small pipe and some arrow-heads.

Passing westward over the mountains into East Tennessee, we find some variations in the modes of burial, but not so widely different from those east of the range as to justify the belief that the authors of the works of the two localities were different peoples or belonged to different tribes.

A burial mound opened by Mr. Emmert in the valley of the Holston, Sullivan County, described by him as mound No. 1, on the north side of the river, was found to be 22 feet in diameter and 4 feet high. It was composed of red clay and sand. Digging down to the level of the surrounding ground, there was found a pile of rock in the center, which proved to be a burial vault built of water-worn bowlders, over a sitting skeleton. It was 3½ feet in diameter at the base and 3 feet high. On the head of the skeleton was a slender, square copper spindle about 11 inches long and a quarter of an inch thick in the middle. It has evidently been hammered out with a stone hammer. Under the lower jaw were two small copper drills or awls, with portions of the deer-horn handles still attached. About the shoulders, one on each side, were two polished stones, with holes in them. Near the head was a small pile of flint chips, and at the knees a flint scalping knife. The bones were so badly decayed that but few of them could be secured.

Mound No. 2 was on the south side of the river, opposite No. 1 and about the same distance from the river. It was 38 feet in diameter and 5 feet high, and on the top was a pine stump 14 inches in diameter.

Mr. Emmert, in opening it, commenced at the edge to cut a ditch 4 feet wide through it, but soon reached a wall 3 feet high, built of "river rock." He then worked around this, finding it to be an almost perfect circle, 14 feet in diameter, inside of which were found, on throwing out

the dirt, twelve stone graves or vaults, built of the same kind of stones, each containing a sitting skeleton, as shown in Fig. 37. One of these graves or vaults was exactly in the center, the other eleven being placed in a circle around it, and about equally spaced, as shown in the diagram.

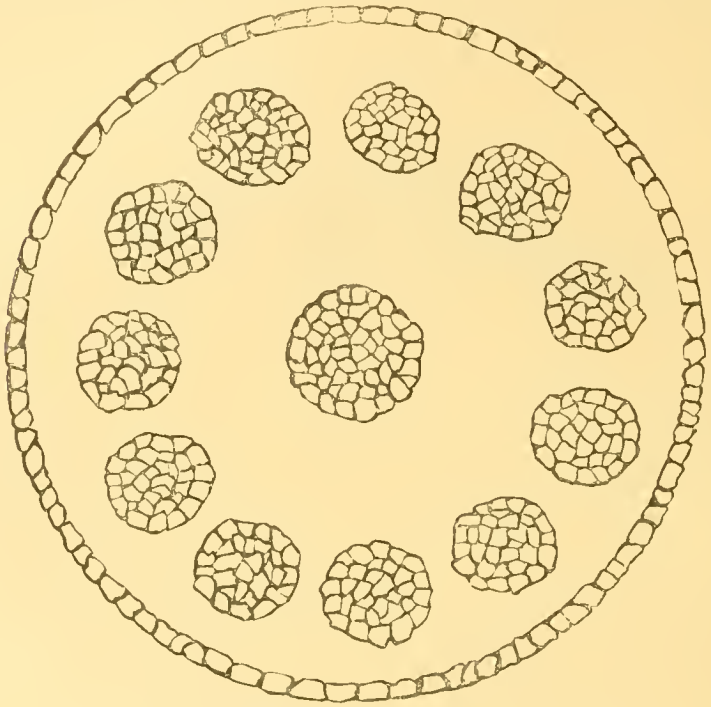


FIG. 37.—Mound on Holston River, Sullivan County, Tennessee.

In the center grave he found shell beads around the neck of the skeleton, and near the mouth the pipe shown in Fig. 38.

FIG. 38.—Pipe from mound, Sullivan County, Tennessee.

The bottom of the area within the circular wall was covered to the depth of about 3 inches with charcoal, and the graves were built on this layer. Both of these mounds were on the bench or upper bottom, and about three-fourths of a mile from the river.

Mr. Emmert says he learned that there was a tradition of the neighborhood that the Indians once fought a great battle at this place, and that one party buried some of their dead in mound No. 2, and the other party buried their dead on the opposite side of the river, where there is a large pile or mound of "river rock."

He opened one of the rock mounds occurring in this region half a mile from the river and near the foot of the mountain. A large tree had grown up through it, the stump of which was yet standing, or the mound had been built around it. After removing the rock and digging up the stump, he found, at the depth of 4 feet and directly under the stump, two stone axes, a large number of arrow-heads, two polished celts, and some pieces of mica.

Another mound on the Holston River, 2 miles above the two heretofore described, was examined. This was 60 feet in diameter and 4½ feet high. The original surface of the earth had been first covered over about 3 inches thick with charcoal, then the bodies or skeletons laid on it, and each walled up separately with river rock. These were then covered with black earth, over which was cast a layer of sand about the same thickness, the remainder being top soil.

Mr. Emmert, who opened this, commenced cutting a ditch 4 feet wide, proceeding until he struck the bed of charcoal; then followed around the outer edge of it, finally removing all the dirt inside the circle. One side of the circle had six skeletons in it, all walled up, as before stated, separately, but so thoroughly decayed that only one skull could be saved.

The other side of the mound had nothing in it except a fine pipe which he found on the bed of coals, some 10 or 12 feet from the nearest skeleton: some beautiful arrow-heads, shell beads, a polished celt, and two small stones with holes in them were also discovered.

In addition to the foregoing descriptions from the reports of my assistants, I present the following, from accounts of earlier explorations in this region:

A burial mound situated on the left bank of the Tennessee River, about 1 mile from Chattanooga, was opened by Mr. M. O. Read in 1865. This was oval in form and flat on top, the diameters of the base 158 and 120 feet, and those of the top 82 and 44 feet: height, 19 feet. Mr. Read says:[1]

For the purpose of examination, a tunnel was excavated into the mound from the east, a little one side of the center and on a level with the natural surface of the ground. When the point directly under the outer edge of the top of the mound was reached, holes were found containing fragments of rotted wood showing that stakes or palisades had been erected here when the mound was commenced. The sound of the pick indicating a cavity or different material below, the excavation was carried downward about 2 feet, when two skeletons were uncovered, fragments of which preserved are marked No. 1. The bones were packed in a small space, as though the bodies were crowded down, without much regard to position of hands,

[1] Smithsonian Report 1867, p. 401.

into a pit not exceeding 3 feet in length. One of the skulls is of especial interest, as possibly indicating that the remains are those of victims immolated in some sacrificial or burial rites. The side was crushed in, as if with a club. I have connected together the pieces of the upper jaw so that they retain the position in which they were found, a position which cannot with probability be supposed to be the result of the settling of the earth around it, if unbroken when buried. The bones of the bodies, although so friable that they could not be preserved, were entire, in positions indicating that the bodies had not been dismembered and forbidding the supposition that they were the remains of a cannibal feast.

The excavation was carried forward as indicated on the plat and on a level with the location of the skeletons first found. It became evident at once that the material of which the mound was constructed was taken from the immediate neighborhood, it being composed of the same alluvial soil, full of the shells found on the surface, but in a much better state of preservation; but no arrow-heads, chippings of flints, or fragments of pottery now covering the surface were found. These would have been abundant if the mound had been erected subsequent to the manufacture of the pottery and arrow-heads at that place. Single fragments of pottery were found, but these were painted and of much better quality than those found on the surface.

The mound was composed of alternate layers of earth and ashes, showing that a surface of the size of the top, when finished, was kept substantially level, and raised only 2 to 3 feet at a time, when fires were kindled, which must have been large or continued for a long time, as the amount of the ashes and charcoal abundantly indicates.

Near the center of the mound rows of stake-holes were found, as far as followed, marking two sides of a rectangular parallelogram, which continued would have formed an enclosure around the center. In some of these were the remains of the wood and bark, not enough to show the marks of tools, if any had been used. They penetrated the natural surface of the ground to the depth of about 2 feet.

Here and at about the same level as at No. 1 were found the skeletons of which the skull bones and other parts are marked No. 2. They were apparently the remains of a youngish woman and two children, all so far decomposed that only the parts sent could be preserved. The larger skeleton was in such a position as a person would take on kneeling down, then sitting upon the feet; the hands were brought to the head and the body doubled down upon the knees. The head was toward the south. The remains of the children were found at the right side of this body, the bones mingled together.

About 2 feet directly under these the skeleton of which the skull is marked No. 3 was found, in a similar position, it is said (I was not present when it was taken out), with the one above it.

I attempt no description and indulge in no speculations in regard to these remains, as I have decided to forward them to you for the examination of those who can compare them with other skulls and are better qualified to make a proper use of them. They are unquestionably of the age of the mound-builders.

We are reminded, by the remains of upright timbers found here, of the wooden vaults of the Grave Creek and other mounds of West Virginia, but in the form of the mound we have an indication that it belongs to the southern class of ancient works.

Rev. E. O. Dunning mentions[1] a stone-grave mound which he examined in the valley of the Little Tennessee. Speaking of this mound he remarks:

I did not expect to find rock graves in a mound of earth, but after clearing away rubbish and penetrating 6 feet below the top, near the center the workman struck a slab of slate, which proved to be part of the covering of a stone tomb. It was much like

[1] Smithsonian Report 1870, p. 378.

those scattered over the "river bottom"—more nicely constructed, however, and fitted with more care, being arched over the top, at an acute angle, with pieces of slate 3 inches thick. Owing to its situation, raised above the level of the river and covered with sand to the depth of 6 feet, its contents were better preserved than those of the graves just mentioned. At the head of it I took out a vessel of fine red clay and pulverized mussel shells a foot in diameter, gourd-shaped, and having a handle and spout 6 inches long, and holding about a quart. It was preserved nearly whole. Artificial fire had been kindled in the tomb, but it had been smothered by the throwing in of sand before all the contents were consumed. Besides some entire bones of the human skeleton, flint arrow-heads and a large number of flint and stone beads were removed. The beads could be traced along the lines of the legs and arms, as if they had been attached to the garment in which the dead was buried. Further excavations disclosed two more of these stone sepulchers, the first 3 feet below the one described, the other 2 feet from it, in the same plane. They contained only fragments of bones, charcoal, and ashes.

The mound, which was conical in shape, must have been 15 feet high and 50 feet in diameter. Successive floods had impaired its original dimensions. The last carried away a section on the west side, exposing a tomb and some valuable relics, which have not been preserved. Among them were large shells, pyrulas, probably, judging from the description, from the Gulf of Mexico. In connection with marine shells, images in stone were found in this tomb. The mound was composed of sand-loam taken from the bank of the river, and raised upon a foundation of water-washed rocks 4 feet high, from the bed of the stream hard by. There had been extensive burnings throughout this mound, at various depths, indicated by layers of charcoal, ashes, and burned clay, simply in honor of the dead, or to consume their effects or mortal parts, or for human sacrifices to their manes.

Speaking of stone graves in the immediate vicinity as explanatory of those in the mound, he says:

They are built of slabs of slate, nicely fitted together, about 3 inches thick, 4 feet long, and 2 broad, enclosing receptacles not of uniform space, generally 5 feet long, 4 feet high, and 2 broad, covered with flat pieces, resting upon the upright slabs and conforming to the rounded corners of the tomb.

As one of the principal objects in view in exploring and studying the mounds of our country is to ascertain, if possible, by what people or tribes they were built, a brief discussion of the question so far as it relates to the district now under consideration will be in place. My reasons for touching upon the topic in this connection, and limiting the discussion to the antiquities of the one district, are as follows:

First. The characteristics of the works of this section are so well marked as to leave little, if any, doubt on the mind of any one who will study them carefully that they are work of one people, probably of a single tribe.

Second. Because in this instance I think the evidence points with at least reasonable certainty to the particular tribe by which they were erected.

Third. Whether our second reason prove to be correct or not, we find data here which appear to form connecting links between the prehistoric and the historic times, and hence call for some discussion in regard to the authors.

Fourth. The statement of the result of our explorations of these works (especially the burial mounds) will, as I conceive, be incomplete without some intimation of the bearing they have had on my own mind in reference to their authorship. This it is true will apply with equal force to the works of other districts. I have already briefly stated my conclusions in this respect regarding the antiquities of Wisconsin, but have refrained from entering at length upon the question as to the Ohio and West Virginia works, as I confess and have already intimated that these present more difficulties in the way of explanation than most of the other sections.

It may be thought premature to speculate in this direction, and some of our ablest scientific journals appear to deprecate any such attempts until more data have been obtained and the materials already collected are more thoroughly digested. I admit that, as a very general and almost universal rule, such a course is the proper one in respect to scientific investigations, but must dissent from its application in this instance, for the following reasons:

The thought that a mighty nation once occupied the great valley of the Mississippi, with its frontier settlements resting on the lake shores and Gulf coasts, nestling in the valleys of the Appalachian Range and skirting the broad plains of the West, a nation with its systems of government and religion, its chief ruler, its great central city, and all the necessary accompaniments, but which has disappeared before the inroads of savage hordes, leaving behind it no evidences of its existence, its glory, power, and extent save these silent forest-covered remains, has something so fascinating and attractive in it, that when once it has taken possession of the mind, it warps and biases all its conclusions.[1]

So strong, in fact, is the hold which this theory (in the broad sense, including also the Toltec and Aztec theories) has taken of the minds of both American and European archæologists, that it not only biases their conclusions, but also molds and modifies their nomenclature, and is thrust into their speculations and even into their descriptions as though no longer a simple theory but a conceded fact. Hence it is necessary, before a fair and unbiased discussion of the data can be had, to call attention to the fact that there is another side to the question.

Unless some protest is presented or some expression of opinion is made on this point in my paper, the facts I give will be viewed through the medium of this "lost race" theory. This I desire, if possible, to prevent, and whether the "Indian theory" proves to be correct or not, I wish to obtain for it at least a fair consideration. I believe the latter theory to be the correct one, as the facts so far ascertained appear to point in that direction, but I am not wedded to it; on the contrary, I am willing to follow the facts wherever they lead.

[1] See, for example, Foster's "Prehistoric Races," p. 97; Squier and Davis's, "Ancient Monuments," p. 30; Baldwin's "Ancient America," p. 57; Bancroft's "Native Races," IV, p. 785; Conant's "Foot-Prints of Vanished Races," p. 38; Marquis de Nadaillac's "L'Amérique Préhistorique," p. 185, etc.

Although additional data will hereafter be obtained and many new and important facts be brought to light, yet, as I believe, sufficient evidence has been collected (though much of it remains unpublished) to indicate what will be the final result so far as this general question is concerned.

We see that already the theory that these remains scattered over the face of our country from Dakota to Florida and from New York to Louisiana were the work of one people, one great nation, is fast breaking down before the evidence that is being produced.

The following quotation from the last report of the Peabody Museum, which is repeated in substance in Science, June 27, 1884, p. 775, will serve not only to indicate the conflict which is going on in the minds of some of our most active and progressive archæologists on this subject, but also to show the difficulty of finding applicable and well-defined terms, and of clearly stating the real question at issue:

> The different periods to which the various mounds and burial places belong can only be made out by such a series of explorations as the museum is now conducting in the Little Miami Valley, and when they are completed we shall be better able to answer the question, "Who were the mound-builders?" than we are now. That more than one of the several American stocks or nations or groups of tribes built mounds seems to me to be established. What their connections were is not yet by any means made clear, and to say that they all must have been one and the same people seems to be making a statement directly contrary to the facts, which are yearly increasing as the spade and pick in careful hands bring them to light. That many Indian tribes built mounds and earthworks is beyond doubt, but that all the mounds and earthworks of North America were made by these same tribes or their immediate ancestors is not thereby proved.
>
> Mr. Carr, in his recent paper published by the Kentucky Geological Survey, has taken up the historical side of the question, but it must not be received for more than he intended. He only shows from historical data what the spade and pick have disclosed to the archæologist. It is simply one side of the shield; the other is still waiting to be turned to the light; and as history will not help us to read the reverse, only patient and careful exploration will bring out its meaning.[1]

This, it is true, is but an incidental paragraph thrown into a report of the work of the museum, but I have selected it as the latest expression on this subject by one of our most active and practical American archæologists, and because it will furnish a basis for the remarks I desire to make on this subject.

In order that the reader may clearly understand the particular points to which I shall call attention, I will introduce here a brief review of the leading opinions so far presented regarding the authorship of these ancient works.

It was not until about the close of the eighteenth century that the scientific men of the Eastern States became fully impressed with the fact that remarkable antiquities were to be found in our country.

About this time President Stiles, of New Haven, Dr. Franklin, Dr.

[1] Sixteenth and Seventeenth Report Peabody Museum, p. 346.

Barton, and a few other leading minds of that day, becoming thoroughly convinced of the existence of these antiquities, and having received descriptions of a number of them, began to advance theories as to their origin. William Bartram had come to the conclusion, from personal observation and from the statement of the Indians that "they knew nothing of their origin," that they belonged to the most distant antiquity.

Dr. Franklin, in reply to the inquiry of President Stiles, suggested that the works in Ohio might have been constructed by De Soto in his wanderings. This suggestion was followed up by Noah Webster with an attempt to sustain it,[1] but he afterwards abandoned this position and attributed these works to Indians.

Captain Heart, in reply to the inquiries addressed to him by Dr. Barton, gives his opinion that the works could not have been constructed by De Soto and his followers, but belonged to an age preceding the discovery of America by Columbus; that they were not due to the Indians or their predecessors, but to a people not altogether in an uncultivated state, as they must have been under the subordination of law and a well-governed police.[2]

This is probably the first clear and distinct expression of a view which has subsequently obtained the assent of so many of the leading writers on American archæology.

About the commencement of the nineteenth century two new and important characters appear on the stage of American archæology. These are Bishop Madison, of Virginia, and Rev. Thaddeus M. Harris, of Massachusetts.

Dr. Haven, to whose work we are indebted for reference to several of the facts above stated, remarks:

> These two gentlemen are among the first who, uniting opportunities of personal observation to the advantages of scientific culture, imparted to the public their impressions of western antiquities. They represent the two classes of observers whose opposite views still divide the sentiment of the country; one class seeing no evidence of art beyond what might be expected of existing tribes, with the simple difference of a more numerous population, and consequently better defined and more permanent habitations; the other finding proofs of skill and refinement, to be explained, as they believe, only on the supposition that a superior race, or more probably a people of foreign and higher civilization, once occupied the soil.[3]

Bishop Madison was the representative of the first class. Dr. Harris represented that section of the second class maintaining the opinion that the mound-builders were Toltecs, who after leaving this region moved south into Mexico.

As we find the principal theories which are held at the present day on this subject substantially set forth in these authorities, it is unnecessary to follow up the history of the controversy except so far as is required to notice the various modifications of the two leading opinions.

[1] Referred to by Dr. Haven, Smithsonian Contributions, VIII, p. 25.

[2] Transactions of the American Philological Society, Vol. III.

[3] Archæology of the United States, Smithsonian Contributions, Vol. VIII, p. 31.

Those holding the opinion that the Indians were not the authors of these works, although agreeing as to this point and hence included in one class, differ widely among themselves as to the people to whom they are to be ascribed, one section, of which, as we have seen, Dr. Harris may be considered the pioneer, holding that they were built by the Toltecs, who, as they supposed, occupied the Mississippi Valley previous to their appearance in the vale of Anahuac.

Among the more recent advocates of this theory are Mr. John T. Short, author of "The North Americans of Antiquity;"[1] Dr. Dawson, in his "Fossil Man," who accepts the tradition respecting the Tallegwi, but identifies them with the Toltecs; Rev. J. P. MacLean, author of the "Mound Builders" and Dr. Joseph Jones, in his "Antiquities of Tennessee."

Wilson, in his "Prehistoric Man,"[2] modifies this view somewhat, looking to the region south of Mexico for the original home of the Toltecs, and deriving the Aztecs from the mound-builders.

Another section of this class includes those who, although rejecting the idea of an Indian origin, are satisfied with simply designating the authors of these works a "lost race," without following the inquiry into the more uncertain field of racial, national, or ethnical relations. To this type belong a large portion of the recent authors of short articles and brief reports on American archæology, and quite a number of diligent workers in this field whose names are not before the world as authors.

Baldwin believes that the mound-builders were Toltecs, but thinks they came originally from Mexico or farther south, and, occupying the Ohio Valley and the Gulf States, probably for centuries, were at the last driven southward by an influx of barbarous hordes from the more northern regions, and appeared again in Mexico.[3] Bradford, thirty years previous to this, had suggested Mexico as their original home.[4] Lewis H. Morgan, on the other hand, supposes that the authors of these remains came from the Pueblo tribes of New Mexico. Dr. Foster[5] agrees substantially with Baldwin. We might include in this class a number of extravagant hypotheses, such as those held by Haywood, Rafinesque, and others among the older, as well as by a few of the more recent authors.

The opposite class, holding that the mound-builders were the ancestors of some one or more of the modern tribes of Indians, or of those found inhabiting the country at the time of its discovery, numbers comparatively few leading authorities among its advocates; in other words, the followers of Bishop Madison are far less numerous than the followers of Dr. Harris. The differences between the advocates of this view are of minor importance, and only appear when the investigation is carried one step further back and the attempt is made to designate

[1] Page 253.
[2] Vol. I, p. 353, 3d edition.
[3] Ancient America, pp. 70–75.
[4] American Antiquities, p. 71.
[5] Prehistoric Races, p. 339.

the particular tribe, nation, people, or ethnic family to which they appertained.

The traditions of the Delawares, as given by Heckewelder, in his "History of the Indian Nations," having brought upon the stage the Tallegwi, they are made to play a most important part in the speculations of those inclined to the theory of an Indian origin. As this tradition agrees very well with a number of facts brought to light by antiquarian and philological researches, it has had considerable influence in shaping the conclusions even of those who are not professed believers in it.

One of the ablest early advocates of the Indian origin of these works was Dr. McCulloch; and his conclusions, based as they were on the comparatively slender data then obtainable, are remarkable not only for the clearness with which they are stated and the distinctness with which they are defined, but as being more in accordance with all the facts ascertained than perhaps those of any contemporary.

Samuel G. Drake, Schoolcraft, and Sir John Lubbock were also disposed to ascribe these ancient works to the Indians. But the most recent advocate of this view is Prof. Lucien Carr, of Cambridge, Massachusetts, who has presented, in a recent paper entitled "The Mounds of the Mississippi Valley historically considered" (contained in the Memoirs of the Kentucky Geological Survey), a very strong array of historical evidence going to show not only that the Indian tribes at the time of the discovery were capable of producing these works, but also that several of the tribes were in the habit of erecting mounds.

But it is proper that we should mention an article by Dr. D. G. Brinton in the October number, 1881, of the American Antiquarian, bearing upon the same subject, in which considerable historical evidence tending to the same conclusion is given. These two papers may justly be considered the commencement of a rediscussion of this question, in which the Indians, after a long exclusion, will be readmitted as a possible factor in the problem.

The reader will observe from the foregoing brief review that the opinions regarding the authors of the mounds — or, as Dr. Brinton expresses it, "the nationality of the mound-builders" — as heretofore given to the world, may be divided into two classes — those holding that the builders were "Indians," and those holding that they were not "Indians." But the paragraph we have quoted from the Report of the Peabody Museum introduces other considerations, which render it necessary not only to define the terms used but to restate the question at issue in a more exact and definite form.

What mounds? What earthworks? The authority quoted remarks, "That many Indian tribes built mounds and earthworks is beyond doubt, but that *all the mounds and earthworks of North America* were made by *these same tribes* or their immediate ancestors is not thereby proved."

That the term "mound-builders" is as applicable to the people who constructed the mounds of Siberia, Japan, or elsewhere as those who

built the tumuli of the Mississippi Valley must be admitted, but the term, when used in this country with reference to the mounds of this country, has, as is well known, been generally understood to include only those found in that part of the United States east of the Rocky Mountains unless otherwise stated; and Mr. Carr's paper, to which allusion is made in the next sentence of the quotation, is expressly limited to the "mounds of the Mississippi Valley." North America is therefore a broader field than is generally understood by those who enter upon the discussion, and I may add that "these same tribes," unless with explicit definition, is a limitation claimed by no one.

The term "Indian" is so indefinite and so variously applied that more or less uncertainty must ensue unless the writer discussing this question makes clear the sense in which he uses it. It was probably an appreciation of this fact that caused the author of the report referred to to make use of the terms "American stocks," "nations," and "groups of tribes." We can fully appreciate the difficulty he and all others writing upon this subject experience from the want of an adequate and definite nomenclature that is applicable. But his expansions in one direction and limitations in another, in the paragraph quoted, as it seems to me, have left the statement of the question in worse confusion than it was before.

In what sense does he use the terms "Indians," "Indian tribes," "American stocks," and "groups of tribes"? Are the cultured Central American and Mexican nations and the Pueblo tribes to be included or excluded? Professor Carr evidently proceeds upon the idea that they are to be excluded, and that the mounds and other ancient works of the Mississippi Valley are to be attributed to one or more of the American stocks found in possession of this region at the time of its discovery by Europeans.

This I believe to be the correct view, except in this: Professor Carr fails to clear his work of the idea of one people, one stock, when the evidence is conclusive that the mound-builders were divided into tribes and stocks, as were the Indians when first encountered by the whites. Hence when I use the terms "Indians," "Indian tribes," and "American stocks" in this connection, they are to be understood as thus limited.

I do not claim that this use of these terms is correct, but it is not my intention at present to discuss the question "What is the proper use of the indefinite term *Indian?*" My only object in referring to it and the other equivalent terms is to explain the sense in which I use them in this connection, because I can find no better ones.

As thus limited the question for discussion may be stated as follows:

Were all the mounds and other ancient works found in that part of the United States east of the Rocky Mountains (except such as are manifestly the work of Europeans of post-Columbian times) built by the Indians found in possession of this region at the time of its discovery and their ancestors, or are they in part to be attributed to other

more civilized races or peoples, as the Aztecs, Toltecs, Pueblo tribes, or some lost race of which we possess no historical mention? I say in part, as it has long been conceded, that some of these works are to be attributed to the Indians.

If it can be shown that some of the mounds and other works of all the different types and classes found in the Mississippi Valley and Gulf States were built by Indians, or even that they were built by people in the same stage of culture and art and having the same customs and habits as the Indians of this region in the fifteenth and sixteenth centuries, we shall be justified in concluding that the rest are the work of the same race and of the same tribes, or those closely allied in habits, customs, art, and culture. That here and there a single mound-building tribe may have become extinct or absorbed into other tribes in pre-Columbian times, as has been the fate of some since the discovery of the continent, does not alter the case, unless it be claimed that such tribes belonged to different "American stocks" and had reached a higher degree of culture than those found in this part of the continent at the time of the arrival of the Europeans.

No one believes that we will ever be able to ascertain the history of the construction of each mound and earthwork; the utmost to be hoped is that we may be able to determine with satisfactory certainty that such and such works were built by such and such tribes.

But one step in the investigation is to reach the general conclusion as to whether all classes of these remains in the region designated may justly be attributed to the Indians, or whether there are some types which must be ascribed to a different race, to a people that had attained a higher position in the scale of civilization than the Indians. This it is possible to accomplish without being able to determine conclusively what tribe erected any particular work.

Nevertheless the conclusion will be strengthened by every proof that the works of certain sections are to be ascribed to certain tribes or stocks. It is for this reason that I propose to discuss somewhat briefly the question of the probable authorship of the works in the Appalachian district.

THE CHEROKEES PROBABLY MOUND-BUILDERS.

In 1876, Prof. Lucien Carr, assistant curator of the Peabody Museum, opened a mound in Lee County, Virginia, in which he made certain discoveries which, with the form of the mound and the historical data, led him to the conclusion that it was the work of the Cherokees.

This monument, as he informs us, was a truncated oval, the level space on the top measuring 40 feet in length by 15 in width.

At the distance of 8 feet from the brow of the mound, on the slope, there were found buried in the earth the decaying stumps of a series of cedar posts, which I was informed by Mr. Ely [the owner] at one time completely encircled it. He also told me that at every plowing he struck more or less of these posts, and, on digging for them, some six or seven were found at different places, and in such order as showed that they had been placed in the earth at regular intervals and according to a definite plan. On the top, in the line of the greatest diameter and near the center of the mound, another and a larger post or column, also of cedar, was found.[1]

Quoting Bartram's description (given below) of the council house of the Cherokees in the town of Cowe, he concludes, and I think correctly, that this mound was the site of a similar building.

Bartram's description is as follows:[2]

The Council or Town House is a large rotunda, capable of accommodating several hundred people. It stands on the top of an ancient artificial mount of earth of about 20 feet perpendicular and the rotunda on the top of it, being above 30 feet more, gives the whole fabric an elevation of about 60 feet from the common surface of the ground. But it may be proper to observe that this mount on which the rotunda stands is of a much ancienter date than the building, and perhaps was raised for another purpose. The Cherokees themselves are as ignorant as we are by what people or for what purpose these artificial hills were raised. * * *

The rotunda is constructed after the following manner: They first fix in the ground a circular range of posts or trunks of trees, about 6 feet high, at equal distances, which are notched at top to receive into them, from one to another, a range of beams or wall plates. Within this is another circular order of very large and strong pillars, above 12 feet high, notched in like manner at top to receive another range of wall-plates, and within this is yet another or third range of stronger and higher pillars, but fewer in number, and standing at a greater distance from each other; and, lastly, in the center stands a very strong pillar, which forms the pinnacle of the building, and to which the rafters center at top; these rafters are strengthened and bound together by cross-beams and laths, which sustain the roof or covering, which is a layer of bark neatly placed and tight enough to exclude the rain, and sometimes they cast a thin superficies of earth over all.

There is but one large door, which serves at the same time to admit light from without and the smoke to escape when a fire is kindled; but as there is but a small fire kept, sufficient to give light at night, and that fed with dry, small, sound wood, divested of its bark, there is but little smoke; all around the inside of the building,

[1] Tenth Report Peabody Museum, p. 75.

[2] Travels, p. 365.

betwixt the second range of pillars and the wall, is a range of cabins or sophas consisting of two or three steps, one above or behind the other, in theatrical order, where the assembly sit or lean down; these sophas are covered with mats or carpets very curiously made with thin splits of ash or oak woven or platted together; near the great pillar in the center the fire is kindled for light, near which the musicians seat themselves, and around about this the performers exhibit their dances and other shows at public festivals, which happen almost every night throughot the year.

From indications, not necessary to be mentioned here, Professor Carr argues that the mound could not have been intended for burial purposes, but was evidently erected for the foundation of a building of some kind.

In a subsequent paper,[1] "Mounds of the Mississippi Valley," he not only adheres to the theory advanced in the tenth report of the Peabody Museum, but gives additional reasons for believing it to be true.

Although guided by very dim and feeble rays of light I am nevertheless inclined to believe that Professor Carr has succeeded in entering the pathway that is to lead to a correct solution of the problem in this case. As is apparent from what has been given in this paper regarding the burial mounds of this district, much additional data bearing on the point have been obtained since Professor Carr's explorations were made, on which he bases his conclusions.

The Cherokee tribe has long been a puzzling factor to students of ethnology and North American languages. Whether to be considered an abnormal offshoot from one of the well-known Indian stocks or families of North America, or the remnant of some undetermined or almost extinct family which has merged into another, appear to be questions yet unsettled; but they are questions which do not trouble us in the present inquiry; on the contrary, their ethnic isolation and tribal characteristics are aids in the investigation.

That the internal arrangement of the mounds, modes of burial, and vestiges of art of this district present sufficient peculiarities to distinguish them from the mounds, modes of burial, and vestiges of art of all the other districts, as I have already stated, will be conceded by any one who will carefully study them and make the comparison. If, therefore, it be admitted, as stated, that the Cherokees are a somewhat peculiar people, an abnormal tribe, we have in this a coincidence worthy of note, if strengthened by corroborating testimony.

As the mounds and other remains to be referred to are located in the northwest part of North Carolina and the northern part of East Tennessee, the first point to be established is that the Cherokees did actually, at some time, occupy this region.

In the first place, it is well known that they claimed all that portion of the country east of Clinch River to and including the northwest part of North Carolina, at least to the Yadkin, a claim which was conceded by the whites and acted on officially by State and national authority and denied by no Indian tribe.

[1] Memoirs of the Kentucky Geological Survey, Vol. II.

Haywood expressly states that[1]—

> the Cherokees were firmly established on the Tennessee River or Hogohega [the Holston] before the year 1650, and had dominion over all the country on the east side of the Alleghany Mountains, which includes the headwaters of the Yadkin, Catawba, Broad River, and the headwaters of the Savannah—

a statement borne out by the fact that, as late as 1756, when the English built Fort Dobbs on the Yadkin, not far from Salisbury, they first obtained the privilege of doing so by treaty with Attacullaculla, the Cherokee chief.[2]

Haywood asserts,[3] upon what authority is not known, that—

> before the year 1690 the Cherokees, who were once settled on the Appomattox River, in the neighborhood of Monticello, left their former abodes and came to the west. The Powhatans are said by their descendants to have been once a part of this nation. The probability is that migration took place about, or soon after, the year 1632, when the Virginians suddenly and unexpectedly fell upon the Indians, killing all they could find, cutting up and destroying their crops, and causing great numbers to perish by famine. They came to New River and made a temporary settlement, and also on the head of the Holston.

That they formerly had settlements on New River (Upper Kanawha) and on the Holston is, as I believe, true, but that they came from the vicinity of Monticello and the Appomattox River, were connected with the Powhatans, or first appeared in Tennessee in 1632, cannot be believed. First, because Jefferson makes no mention of their occupancy of this part of Virginia; on the contrary, he locates them in the "western part of North Carolina." Secondly, because John Lederer, who visited this region in 1669–'70, speaking of the Indians of the "Apalatean Mountains," doubtless the Cherokees, as he was at that time somewhere in western North Carolina, says: "The Indians of these parts are none of those which the English removed from Virginia; these were far more rude and barbarous, feeding only upon raw flesh and fish, until these taught them to sow corn and showed them the use of it."[4] Thirdly, because it is evident that they were located in substantially the same territory when De Soto passed through the northern part of Georgia, as it is now admitted that the "Chelaques" or "Achalaques" mentioned by the chroniclers of his ill-starred expedition were the Cherokees. That they extended their territory a considerable distance farther southward after the time of the Adelantado's visit can be easily demonstrated, but it is unnecessary for me to present the proof of this assertion at this time, as I presume it will be admitted.

Their traditions in regard to their migrations are uncertain and somewhat conflicting, still there are a few items to be gleaned from them, which, I think, may be relied upon as pointing in the proper direction. The first is, the positive statement that they formerly had a

[1] Natural and Aboriginal History of Tennessee, p. 225.
[2] Ramsey. Annals of Tennessee, p. 51.
[3] Natural and Aboriginal History of Tennessee, p. 223.
[4] Discoveries, etc., p. 3, London edition, 1672.

settlement, or were settled on or near the Nolichucky; the second is, that they were driven from some more northern section by their enemies: and third, their constant and persistent claim that, of right, the country about the headwaters of the Holston and eastward into North Carolina belonged to them.

From all the light, therefore, that I can obtain on this subject, I am satisfied the Cherokees had at some time in the past moved southward from a more northern location than that which they were found occupying when first encountered by the whites. This corresponds with one of their traditions given by Haywood, that they formerly dwelt on the Ohio and built the mounds there. That they did at one time actually occupy the section in which the mounds we allude to are situated cannot be doubted.

Turning now to the mounds of East Tennessee and North Carolina, to which allusion has been made, let us see what testimony they furnish on the point now under discussion.

The particular works to which we refer are those located in Caldwell County, North Carolina, and Sullivan County, East Tennessee, descriptions of which have been given.

Although we cannot say positively that no other tribe occupied this particular section between 1540 and 1690, still the evidence and indications leading to that conclusion are so strong as to justify us in assuming it. We find their frontiers on the borders of Georgia in 1540; we can trace back their settlements on the Hiawassee to a period preceding 1652. We have evidence that the settlements on the Little Tennessee were still older, and that even these were made subsequent to those on the Nolichucky. We have their own tradition, as given by Lederer, that they migrated to this region about the close of the thirteenth century from a more northern section; and, finally, their uniform and persistent statement, from the time first encountered by Europeans, that when they came to this region they found it uninhabited, with the exception of a Creek settlement on the lower Hiawassee. This clearly indicates a movement southward, a fact of much importance in the study of this somewhat abnormal tribe.

If, therefore, we can show that these mounds, or any of the typical ones, were constructed since the discovery of America, we have good reason to believe that they are to be attributed to the Cherokees, notwithstanding their statement to Bartram that they did not build the one at Cowe.

At the bottom of one of the largest mounds found in this region, the T. F. Nelson triangle heretofore described, and by the side of the skeleton of the principal personage interred in it, as shown by the arrangement of the bodies of those buried with him, and by the ornaments and implements found with him, were discovered three pieces of iron. That one of the pieces, at least, is part of an implement of European manufacture, I think no one who examines it will doubt (see Fig. 31). It ap-

pears to be part of a sword blade or the blade of a large knife. Another of the pieces is apparently a large awl or punch, a part of the deer-horn handle yet remaining attached to it. A chemical examination made by Professor Clarke, chemist of the United States Geological Survey, shows that these were not made of meteoric iron.

That these cannot be attributed to an intrusive burial is evident from the following facts: *First*, they were found at the very bottom of the pit, which had been dug before depositing the bodies; *second*, they were found with engraved shells, celts, and other relics of this character; and *third*, they were deposited with the principal personage who had been buried in the mound.

In the same mound and under the same circumstances some large copper beads or cylinders were also found. A careful examination of these specimens shows, as I think very clearly, that the copper plate of which they were made was not manufactured by any means at the command of the Indians or the more civilized races of Mexico or Central America, as it is as smooth and even as any rolled copper; moreover, the beads appear to have been cut into the proper shape by some metallic instrument. If this supposition be correct (and I believe an inspection of the specimens will satisfy any one that it is), it certainly indicates contact with civilized people. If so, then we have positive proof that this mound was made subsequent to the discovery of America by Columbus and in all probability after the date of De Soto's expedition in 1540.

As I have shown that the Cherokees alone inhabited this particular section from the time of De Soto's expedition until it was settled by the whites, it follows that if the mound was built subsequent to that date it must have been by the Cherokees. The nearest neighbors of this tribe on the east, at the time the whites came in contact with them, were the Tuscaroras. We learn from John Lederer, who visited them in 1670, on his return from the Cherokee country, that they were in the habit of "decking themselves very fine with pieces of bright copper in their hair and ears and about their neck, which, upon festival occasions, they use as an extraordinary bravery."[1] While it is well known that these two tribes were brought into contact with each other through being constantly at war, until the latter removed to the north and joined the Five Nations, it is more likely that these articles of European workmanship were obtained chiefly from the Spaniards, who, as is now known, worked the gold mines in northern Georgia at an early date. We learn from Barcia's "Ensayo Cronologico"[2] that Tristan de Luna, who, in 1559, went in search of the mines of "Coza" (the name by which the region of northern Georgia was then known), succeeded in reaching the region sought, and even heard, while there, of the negro Robles, who was left behind by De Soto. When John Lederer reached the borders of Georgia the Spaniards were then at work at these mines,

[1] Discoveries, London edition, p. 20. [2] Pages 33–39.

which fact, as he informs us, checked his further advance, as he feared he might be made a captive by them. As further and conclusive evidence of this, we have only to state that the remains of their cabins in the vicinity of the mines were found in 1834 with trees from 2 to 3 feet in diameter growing over them. The old shafts were discovered in which they worked, as also some of the machinery they used.[1] Be this supposition correct or not, if the articles we have mentioned were of European workmanship, or if the material was obtained of civilized people, we must take for granted, until evidence to the contrary is produced, that the mound in which they were found was built after the commencement of the sixteenth century, hence by Indians, and in all probability by the Cherokees.

Our next argument is the discovery in the ancient works of this region of evidences that the habits and customs of the builders were similar to those of the Cherokees and some of the immediately surrounding tribes.

I have already alluded to the evidence found in the mound opened by Professor Carr, that it had once supported a building similar to the council house observed by Bartram on a mound at the old Cherokee town, Cowe. Both were on mounds, both were circular, both were built on posts set in the ground at equal distances from each other, and each had a central pillar.

As confirming this statement of Bartram, we are informed in Ramsey's Annals of Tennessee[2] that when Colonel Christian marched against the Cherokee towns, in 1776, he found in the center of each "a circular tower rudely built and covered with dirt, 30 feet in diameter, and about 20 feet high. This tower was used as a council house and as a place for celebrating the green-corn dance and other national ceremonials." Lawson, who traveled through North Carolina in 1700, says:[3] "They [the Indians] oftentimes make of this shell [alluding to a certain large sea shell] a sort of gorge, which they wear about their neck in a string, so it hangs on their collar, whereon is sometimes engraven a cross or some odd sort of figure which comes next in their fancy." Beverly, speaking of the Indians of Virginia, says:[4] "Of this shell they also make round tablets of about 4 inches in diameter, which they polish as smooth as the other, and sometimes they etch or grave thereon circles, stars, a half-moon, or any other figure, suitable to their fancy."

Now it so happens that, in the same mound in which the iron specimens before alluded to were found, and in other mounds in the same section, the Bureau assistants discovered shell ornaments precisely of the character described by these old writers. Some of them were smooth and without any devices engraved on them, but with holes for insert-

[1] Jones, Southern Indians, p. 18.

[2] Page 169.

[3] History of Carolina, Raleigh, reprint, 1850, p. 315.

[4] History of Virginia, London, 1705, p. 58.

ing the strings by which they were to be held in position; others were engraved with figures which would readily be taken for stars and half-moons, and one among the number had a cross engraved on it. The testimony in this case that these relics were the work of the Indians found in possession of the country at the time of the discovery is, therefore, too strong to be put aside by mere conjectures or inferences. If the work of the Indians, then they must have been used by the Cherokees and buried with their dead. The engraved figures are strangely uniform, indicating some common origin, but the attempt to trace this is foreign to our present purpose. In these mounds were found a large number of nicely carved soapstone pipes, usually with the stem made in connection with the bowl, though some were without this addition, consisting only of the bowl, with a hole for the insertion of a cane or wooden stem.

By turning to Adair's "History of the North American Indians,"[1] we find the following statement:

> They [the Indians] make beautiful stone pipes, and the Cherokees the best of any of the Indians, for their mountainous country contains many different sorts and colors of soils proper for such uses. They easily form them with their tomahawks, and afterwards finish them in any desired form with their knives, the pipes being of a very soft quality till they are smoked with and used with the fire, when they become quite hard. They are often a full span long, and the bowls are about half as long again as those of our English pipes. The fore part of each commonly runs out, with a sharp peak two or three fingers broad and a quarter of an inch thick.

Not only were pipes made of soapstone found in these mounds, but two or three were obtained precisely of the form mentioned by Adair, with the fore part running out in front of the bowl; and another of the same form has been found in a mound on the Kanawha, which is at least suggestive. Jones says:[2]

> It has been more than hinted by at least one person whose statement is entitled to every belief, that among the Cherokees dwelling in the mountains there existed certain artists whose professed occupation was the manufacture of stone pipes, which were by them transported to the coast and there bartered away for articles of use and ornament foreign to and highly esteemed among the members of their own tribe.

This not only strengthens our conclusion, drawn from the presence of such pipes in the mounds alluded to, but may also assist in explaining the presence of the copper ornaments in them. The writer last quoted says:[3]

> Copper implements are rarely found in Georgia. The present [a copper ax] is the finest specimen which, after no mean search, has rewarded our investigations. Native copper exists in portions of Cherokee Georgia, Tennessee, North Carolina, and Alabama, but it is generally found in combination with sulphur and not in malleable form. We are not aware of any locality among those enumerated whence the Indians could have secured that metal either in quantity or purity sufficient to have enabled them to manufacture this implement.

[1] Page 423. [2] Antiquities of the Southern Indians, p. 400. [3] Page 228.

Adair says:[1]

> From the time we supplied them with our European ornaments they have used brass and silver ear-rings and finger-rings; the young warriors now frequently fasten bell-buttons or pieces of tinkling brass to their moccasins.

From these facts I am inclined to believe that most of the copper used by them was obtained directly or indirectly from the whites, and hence subsequent to the discovery of America. But should this supposition be erroneous, the fact still remains that the Cherokees were in the habit of using just such ornaments as we find in these mounds.

As showing that the Europeans began to trade copper to the Indians at a very early day, I call attention to a statement made by Beverly in his "History of Virginia."[2] Speaking of a settlement made at Powhatan, six miles below the falls of James River, in 1609, he says it was "bought of Powhatan for a certain quantity of copper."

By reference to Smith's History and the narratives of the early explorers we find that the amount of sheet copper traded to the Indians and taken by them from wrecks was quite large.

But we are not yet through with the items under this class of testimony.

Haywood, in his "Natural and Aboriginal History of Tennessee,"[3] says:

> Mr. Brown, a Scotchman, came into the Cherokee Nation in the year 1761 and settled on the Hiawassee River or near it. He saw on the Hiawassee and Tennessee the remains of old forts, about which were axes, guns, hoes, and other metallic utensils. The Indians at that time told him that the French had formerly been there and built these forts.

I am fully aware that this author indulges in some extravagant speculations; still, so far as I have tested his original statements I have generally found them correct. During the year 1883 one of the assistants of the Bureau was sent to this particular region, which is too limited to allow the question of locality to be raised. An overflow and a change in the channel of the river brought to light the remains of old habitations and numerous relics of the people who formerly dwelt there. Moreover, this was in the precise locality where tradition located a Cherokee town. Digging was resorted to in order to complete what the water had begun.

Now let me mention some of the things obtained here:

Ten discoidal stones, precisely like those from the mounds of Caldwell County, North Carolina.

Nine strings of glass beads.

A large number of shell beads exactly like those from the mounds.

A number of flint arrow-points.

One soapstone pipe.

Some pieces of smooth sheet-copper.

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[1] History of North America. [2] Page 19. [3] Page 324.

Three conical copper ear-pendants.
Three buttons of modern type.
One small brass gouge.
Fragments of iron articles belonging to a bridle.
One bronze sleigh-bell.
One stone awl or drill.
Fragment of a soapstone pot.
One soapstone gorget.
Several polished stone celts of the same pattern as those found in the North Carolina mounds.
Grooved stone axes.
A piece of sheet lead.

This admixture of articles of civilized and savage life confirms the statement made by Haywood, at least so far as regards the early presence of white people in this section. It follows from what has been presented that the Indians must have been Cherokees, and the fact that the implements and ornaments of aboriginal manufacture found here are throughout precisely like those found in the mounds before mentioned affords a very strong proof that they were built by the Cherokees.

It is worthy of notice that close by the side of this washout stands a mound. Permission to open it has not yet been obtained.

Returning to our mounds, we note that a large number of stones, evidently used for cracking nuts, were found in and about them; some charred acorns, or nuts of some kind, were also found in them. We have only to refer to Adair and other early writers to see how well the indications agree with the customs of the Cherokees.

According to the Cherokee tradition, they found a settlement of Creeks on the Lower Hiawassee, when they reached that region, and drove them away. Ramsay expresses the opinion in his Annals of Tennessee, on what authority is not known, that this was a Uchee settlement. Hence the southern boundary of their possessions, at this early date, which must have been before the time of De Soto's expedition, was about the present northern boundary of Georgia. That their borders, at the time of De Soto's march, extended into northeastern Georgia is proved by the chroniclers of his expedition, but that they did not reach as far south as Bartow County can be shown from one somewhat singular circumstance, which, at the same time, will furnish strong reasons for believing that the authors of the works immediately south of this boundary could not have built the mounds we have been considering.

It will be admitted, I presume, by every one, that the people over whom the famous cacique of Cutifachiqui reigned could not have been Cherokees; yet her territory included Xuala, probably in Nacoochee valley, and extended westward well toward Guaxule on the headwaters of the Coosa, but that the latter was not within the territory of her tribe is expressly stated by Garcilasso de la Vega. I think it may be safely assumed that her people were Creeks; and, if so, that the people of

Guaxule, who, as we judge from the chroniclers of De Soto's expedition, were mound-builders, belonged to another distinct tribe.

Garcilasso, who is our authority in reference to the first point now to be considered, says:

La casa estava en un cerro alto, como de otras semejantes hemos dicho. Tenia toda ella al derredor un paseadero que podian pasearse por el seis hombres juntos.[1] The house was on a high hill (mound) similar to others we have already mentioned. It had all round about it a roadway on which six men could walk abreast.

This language is peculiar, and, so far as I am aware, can apply to no other mound in Georgia than the large one near Cartersville. The words "similar to others we have mentioned," are evidently intended to signify that it was artificial, and this is conceded by all who have noted the passage. The word "alto" (high), in the mouth of the explorers, indicates something more elevated than the ordinary mounds. The roadway or passageway (paseadero) "round about it" is peculiar, and is the only mention of the kind by either of the three chroniclers. How is it to be explained?

As Garcilasso wrote from information and not from personal observation he often failed to catch from his informants a correct notion of the things described to him; this is frequently apparent in his work where there is no reason to attribute it to his vivid imagination. In this case it is clear he understood there was a terrace running entirely around the mound, or possibly a roadway around the top outside of a rampart or stockade.

But as neither conclusion could have been correct, as no such terrace has been found in any part of this region, and a walk around the summit would have thwarted the very design they had in view in building the mound, what was it Garcilasso's informants saw? C. C. Jones says "a terrace," but it is scarcely possible that any terrace at the end or side of a southern mound, forming an apron-like extension (which is the only form found there), could have been so described as to convey the idea of a roadway, as the mode of estimating the width shows clearly was intended.

The broad way winding around and up the side of the Etowah mound (Fig. 39) appears to answer the description better than any other in

FIG. 39.—Large mound of Etowah group, Bartow County, Georgia.

Georgia. It is a large mound, high, and one that would doubtless attract the attention of the Spanish soldiers; its dimensions indicate that

[1] History of Florida, edition 1723, Lib. III, Cap. XX, p. 139, and edition of 1605.

so tough and hard that it was difficult to penetrate it even with a pick; and the uppermost (No. 3) of sand and surface soil between 1 and 2 feet thick. A trench was dug from opposite sides to the central core: and when the arrangement was ascertained, this central portion was carefully explored to the original surface of the ground.

Nothing was found in the layer of clay (No. 2) except a rude clay pipe, some small shell beads, a piece of mica, and a chunkee stone. The burials were all in the lower layer (No. 1), of dark rich loam, and chiefly in stone cists or coffins of the usual box-shape, formed of stone slabs, and distributed horizontally, as shown in Fig. 41, which is a plan of this lower bed.

According to Mr. Rogan's field-notes, the form and contents of these graves and the mode of burial in them were as follows:

Grave *a*, Fig. 41.—A stone sepulcher, 2½ feet wide, 8 feet long, and 2 feet deep, formed by placing steatite slabs on edge at the sides and

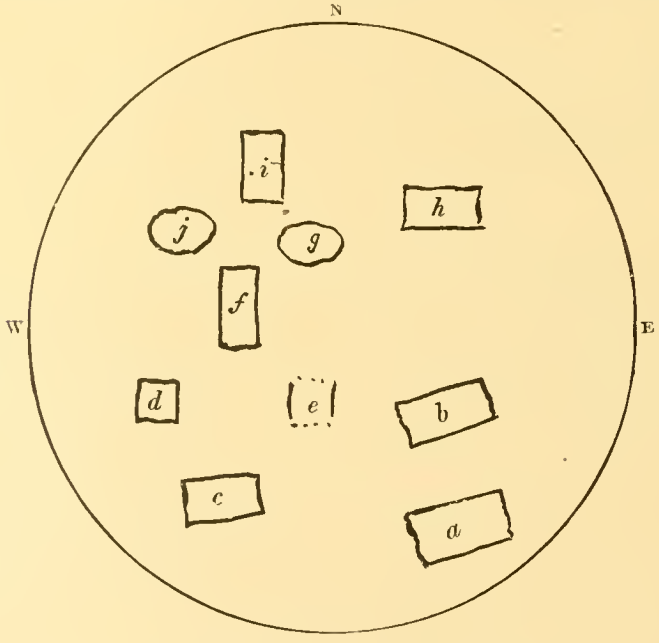

FIG. 41.—Plan of burials in small mound.

ends, and others across the top. The bottom consisted simply of earth hardened by fire. It contained the remains of a single skeleton, lying on its back, with the head east. The frame was heavy and about 7 feet long. The head was resting on a thin copper plate, ornamented with stamped figures; but the skull was crushed and the plate injured by fallen slabs. Under the copper were the remains of a skin of some kind; and under this, coarse matting, probably of split cane. The skin and matting were both so rotten that they could be secured only in frag-

ments. At the left of the feet were two clay vessels, one a water-bottle, and the other a very small vase. On the right of the feet were some mussel and sea-shells; and immediately under the feet two conch-shells (*Busycon perversum*), partially filled with small shell beads. Around each ankle was a strand of similar beads. The bones and most of the shells were so far decomposed that they could not be saved.

Grave *b*.—A stone sepulcher, 4¼ feet long, 2 feet wide, and 1½ feet deep, differing from *a* only in size and the fact that the bottom was covered with stone slabs. The skeleton was extended on the back, head east. On the forehead was a thin plate of copper, the only article found.

Grave *c*.—A stone sepulcher, 3½ feet long, 1½ feet wide, and 1½ deep; the bottom being formed of burnt earth. Although extending east and west, as shown in the figure, the bones had probably been interred without regard to order and disconnected, the head being found in the northeast corner with face to the wall and the remaining portion of the skeleton in a promiscuous heap. Yet there was no indication of disturbance after burial as the coffin was intact. Between some of the bones was found a thin plate of copper that had been formed by uniting and riveting together smaller sections. Some of the bones found in this grave were saved.

Grave *d*.—A small sepulcher, 1½ feet square by 1 foot deep, contained the remains of an infant, also a few small shell beads. The slabs forming the sides and bottom of this grave bore very distinct marks of fire.

Grave *e*.—Simply a headstone and footstone, with the skeleton of a very small child between them; head east. On the wrists were some very small shell beads. The earth on the north and south sides had been hardened in order to form the walls.

Grave *f*.—Stone sepulcher, 6 feet long, 3 feet wide, and 1½ feet deep, with stone in the bottom; skeleton with the head north. There was a lot of copper about the head, which, together with the skeleton, was wrapped in a skin. The head rested on a large conch-shell (*Busycon perversum*), and this on the remains of a coarse mat. Shell beads were found around the neck, each wrist, and ankle. On the right was a small cup, and on the breast an engraved shell. The copper had preserved a portion of the hair, which was saved; portions of the skin and matting were also secured.

Immediately under *b* was another stone grave or coffin, 3 feet long, 1½ feet wide, and as deep, extending north and south. The head of the skeleton was toward the north, but the feet were doubled back under the frame in order to get it in the allotted space. The only things found with this skeleton were some beads around the neck.

At *g* the remains of a child were found without any stones about them. Some shell beads were around the neck and wrists and an engraved shell on the breast.

Grave *h*.—A stone sepulcher, 1½ feet square and 1 foot deep, stone slabs on the four sides and top; the bottom consisted simply of earth hardened by fire. This contained only a trace of bones and presented indications of at least partial cremation, as all around the slabs, outside and inside, was a solid mass of charcoal and the earth was burned to the depth of a foot.

FIG. 42.—Copper plate from Etowah mound, Georgia.

Grave *i*.—A stone sepulcher, 4½ feet long, 1½ feet wide, and as deep, the bottom earth; contained the remains of a skeleton resting on the back, head north, and feet doubled back so as to come within the coffin. On the breast was a thin plate of copper, five inches square, with a hole through the center. Around the wrists were beads, and about the neck rather more than a quart of the same.

At *j* were the remains of a small child, without stone surroundings;

under the head was a piece of copper, and about the neck and wrists were shell beads.

These graves were not all on the same level; the top of some being but two feet below the clay bed (No. 2), while others were from two to three feet lower.

All the articles obtained in this mound were forwarded at once to the Bureau of Ethnology and are now in the National Museum. Examining them somewhat carefully since their reception, I find there are

FIG. 43.—Copper plate from Etowah mound, Georgia.

really more copper plates among them than Mr. Rogan supposed, the number and description being as follows:

1. A human figure with wings, represented in Fig. 42. This is 13 inches long and 9 inches wide. A portion of the lower part, as shown by the figure, is wanting, probably some 3 or 4 inches. There is a break across the middle, but not sufficient to interfere with tracing out the design. A crown piece to the head ornament is also wanting.

2. Also a human figure, shown in Fig. 43. Length, 16 inches; width, 7½ inches.

3. Figure of a bird; this is imperfect, as part of the head and the outer margin of the wings are wanting. Length, 13½ inches; width 7½ inches. This plate shows indubitable evidence of having been formed of smaller pieces welded together, as the overlapping portions can be easily traced. It has also undergone repairs: a fracture commencing on the left margin and running irregularly half-way across the body has been mended by placing a strip of copper along it on the under side and riveting it to the main plate; a small piece has also been riveted to the head and the head to the body; several other pieces are attached in the same way. The rivets are small and the work is neatly done.

4. An ornament or badge of some kind, shown in Fig. 44. The two crescent-shaped pieces are entirely plain, except some slightly impressed lines on the portion connecting them with the central stem. This central stem, throughout its entire length and to the width of six-tenths of

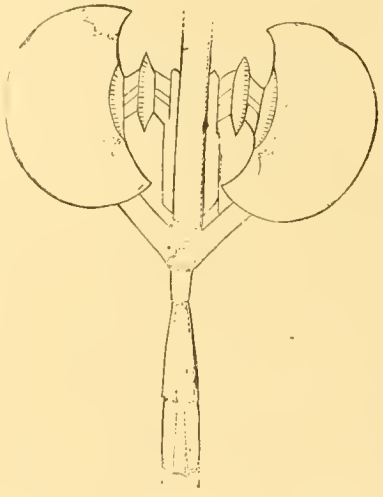

FIG. 44.—Copper badge, from Etowah mound, Georgia.

an inch, is raised, and cross strips are placed at various points along the under side for the purpose of inserting a slip of bone, a part of which yet remains in it, and is seen in the figure at the break immediately below the point where the oblique strips meet. This specimen presents, as I believe, indubitable evidence that the workmen who formed it made use of metallic tools, as the cutting in this case could not possibly have been done with anything except a metallic implement. A single glance at it is sufficient to satisfy any one of the truth of this assertion. Length of the stem, 9 inches; width across the crescents, 7½ inches.

5. Part of an ornament similar to No. 4. These plates, especially No. 4, appear to be enlarged patterns of that seen behind the head of Fig. 43.

6. An ornament or badge, shown in Fig. 45, which Mr. Rogan, when he found it under the head of the skeleton in grave *a*, was inclined to consider a crown. It is imperfect, a narrow strip across the middle and a portion of the tip being missing. As shown in the figure, it measures

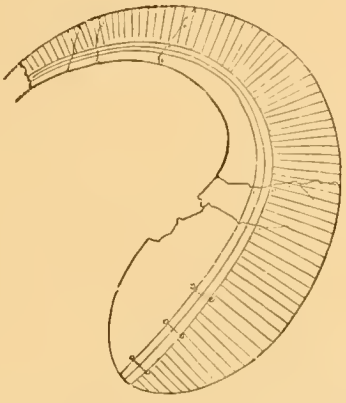

FIG. 45.—Copper badge, from Etowah mound, Georgia.

around the outer border 19 inches and across the broad end 3½ inches. The six holes at the larger end, in which the remains of strings can be detected, indicate that when in use it was attached to some portion of the dress or fastened on a staff.

FIG. 46.—Engraved shell from Etowah mound, Georgia.

7. A fragment from the larger end of a piece similar to the preceding. Attached to this is a piece of cloth.

In addition to the foregoing, there are a number of small fragments probably broken from these plates, but, so far, I have been unable to fit them to their proper places.

These plates and the ones mentioned below are very thin, and as even and smooth (except as interrupted by the figures) as tin plate. The figures are all stamped, the lines and indentations being very sharp and regular.

An examination of what Mr. Rogan calls a skin shows beyond question that it is animal matter. The matting he speaks of appears to be made of split canes.

The shell represented in Fig. 46 is the one obtained in grave *g*. The one shown in Fig. 47 is that found in grave *f*.

FIG. 47.—Engraved shell from Etowah mound, Georgia.

I shall at present simply call attention to one or two facts which appear to bear upon the age and distribution of these singular specimens of art.

First. We notice the fact alluded to by Mr. Holmes,[1] which is apparent to every one who inspects his accurately drawn figures, that in all their leading features the designs themselves are suggestive of Mexican or Central American work. Yet a close inspection brings

[1] Science, April 11, 1884.

to light one or two features which are anomalies in Mexican or Central American designs; as, for example, in Figs. 42 and 43, where the wings are represented as *rising from the back of the shoulders*, a fact alluded to by Mr. Holmes.[1] Although we can find numerous figures of winged individuals in Mexican designs (they are unknown in Central American), they always carry with them the idea that the individual is partly or completely clothed in the skin of the bird. This is partially carried out in our copper plate, as we see by the bird-bill over the head, the eye being that of the bird and not of the man. But when we come to the wings we at once see that the artist had in mind the *angel figure*, with wings arising from the *back of the shoulders*, an idea wholly foreign to Mexican art. It is further worthy of note in regard to these two plates that there is a combination of Central American and Mexican designs: the graceful limbs, and the ornaments of the arms, legs, waist, and top of the head are Central American, and the rest, with the exception possibly of what is carried in the right hand, are Mexican.

That these plates are not the work of the Indians found inhabiting the southern sections of the United States, or of their direct ancestors, I freely concede. That they were not made by an aboriginal artisan of Central America or Mexico of ante-Columbian times, I think is evident, if not from the designs themselves, certainly from the indisputable evidence that the work was done with hard metallic tools.

Second. Plates like those of this collection have only been found, so far as I can ascertain, in northern Georgia and northern and southern Illinois. The bird figure represented in Fig. 48 was obtained by Major

FIG. 48.—Copper plate from Illinois mound.

Powell, the director of the United States Geological Survey, from a mound near Peoria, Illinois. Another was obtained in Jackson County, Illinois, by Mr. Thing, from an ordinary stone grave. From another sim-

[1] Science, April, 1884.

ilar grave, at the same place, he also obtained the plate represented in Fig. 49. Fragments of a similar plate were obtained by Mr. Earle from a stone grave in a mound in Alexander County, Illinois. All these spec-

FIG. 49.—Copper plate from Indian grave, Illinois.

imens were received by the Bureau of Ethnology and deposited in the National Museum.

The box-form stone cists and the figures on the copper plates and engraved shells differ so widely from the stone vaults and vestiges of art found in the North Carolina and East Tennessee mounds as to forbid the belief that the works of the two regions were constructed by one and the same people. The stone cists and to some extent the construction of the mound appear to connect the authors with the mound-builders and authors of the stone graves of the Cumberland Valley and Southern Illinois, and several other facts, which we cannot now stop to present, seem to strengthen this suggestion.

The presence of these stone cists in this mound of northern Georgia, when coupled with the fact that similar stone graves are found in Habersham County, indicate a Shawnee or closely allied element where we should expect to find only Creeks or some branch of the Chahta-Muscogee family. This is a puzzle by no means easy of solution, but one which the scope of our paper does not require us to discuss. Still, we may add, that if our conclusions in regard to this group be correct, we must believe that the large mound was built before De Soto reached that region while the one explored was built afterwards. Some facts brought to light by the recent discovery of a cemetery within the area inclosed by the ditch, which I have for some years believed would be found, and for which I caused search to be made, appear to sustain these conclusions, and to indicate that two different peoples have occupied this site and have had a hand in constructing or adding to these works.

Whatever may be our conclusion in reference to these questions, I think it will be conceded that the builders of these Etowah mounds be-

longed to different tribes from those who erected the East Tennessee and North Carolina works, and hence, if we are right in regard to the latter, the Etowah mounds were not built by the Cherokees. The important bearing which this conclusion has upon the question under discussion, as the reader will see, is that the mounds immediately outside of the territory occupied by the Cherokees were built by a different people from those who erected the works in that territory. Thus we see that, judging by the mounds alone, immediately upon passing outside the Cherokee country we encounter a different type of works. This fact, therefore, when taken in connection with the other evidence adduced, becomes strongly corroborative of the view that the Cherokees were the authors of the works in their territory.

CONCLUDING REMARKS.

The results of our examination of the burial mounds of the northern districts may be briefly summed up as follows:

First. That different sections were occupied by different mound-building tribes, which, though belonging to much the same stage in the scale of civilization, differed in most instances in habits and customs to a sufficient extent to mark, by their modes of burial, construction of their mounds, and their works of art, the boundaries of the respective areas occupied.

Second. That each tribe adopted several different modes of burial depending, in all probability, to some extent upon the social condition, position, and occupation of the deceased.

Third. That the custom of removing the flesh before the final burial prevailed very extensively among the mound-builders of the northern sections. The bones of the common people being often gathered together and cast in promiscuous heaps, over which mounds were built.

Fourth. That usually some kind of religious or superstitious ceremony was performed at the burial, in which fire played a prominent part. That, notwithstanding the very common belief to the contrary, there is no evidence whatever that human sacrifice was practiced.

Fifth. That there is nothing found in the mode of constructing these mounds, nor in the vestiges of art they contain, to indicate that their builders had reached a higher culture-status than that attained by some of the Indian tribes found occupying the country at the time of the first arrival of Europeans.

Sixth. That the custom of erecting mounds over the dead continued to be practiced in several localities in post-Columbian times.

Seventh. That the character and condition of the ancient monuments, and the relative uniformity in the culture status of the different tribes shown by the works and the remains of art found in them, indicate that the mound-building age could not have continued in this part of the continent longer than a thousand years, and hence that its commencement probably does not antedate the fifth or sixth century.

Nothing has been found connected with them to sustain or justify the opinion, so frequently advanced, of their great antiquity. The calculations based upon the supposed age of trees found growing on some of them is fast giving way before recent investigations made in regard to the growth of forests, as it has been ascertained that the rings of trees are not a sure indication of age.

Quatrefages may not be correct in fixing the date of the appearance of the "Red skins" in the "basin of the Missouri" in the eighth or ninth century,[1] but nothing has been found in connection with the ancient works of this country, supposing the Indians to have been their authors, to prove that he has greatly erred in his calculation. Other races or peoples may have preceded the mound-builders in this region, but better proof of this is required than that based on the differences between the supposed palæolithic and neolithic implements of New Jersey and other sections, as every type discovered can be duplicated a hundred times in the surface finds from different parts of the country.

Eighth. That all the mounds which have been examined and carefully studied are to be attributed to the indigenous tribes found inhabiting this region and their ancestors.

[1] The Human Species, English translation, p. 307.

SUPPLEMENTAL NOTE.[1]

BURIAL CEREMONIES OF THE HURONS.[2]

Our savages are not savages as regards the duties which nature herself requires us to render to the dead. They do not yield in this respect to several nations much more civilized. You would say that all their labor and efforts were for scarcely anything but to amass means of honoring the dead. They have nothing too valuable for this purpose: they devote to this use the robes, the hatchets, and the shell beads in such quantities, that you would think to see them, on these occasions, that they were considered of no great value, and yet they are all the riches of the country; you may often see them in midwinter almost entirely naked, while they have good and fine robes in their chests, which they are keeping in reserve for the dead; this is, indeed, their point of honor. It is on this occasion especially that they wish to appear magnificent. But I speak here only of their peculiar funerals.

These good people are not like many Christians, who cannot suffer death to be spoken of, and who, in a mortal sickness, hesitate to break the news to the sick one for fear of hastening his death. Here, when the recovery of any one is despaired of, not only do they not hesitate to tell him that his end is near, but they even prepare in his presence all that is necessary for the burial; they often show him the shroud, the hose, the shoes, and the girdle which he is to wear; frequently they are enshrouded, after their custom, before they have expired, and they hold a feast of farewell to their friends, during which they sing, sometimes without showing any apprehension of death, which they regard very indifferently, considering it only as a change to a life very little different from this. As soon as the dying man has drawn his last breath, they arrange the body in the same position that is to be preserved in the tomb; they do not lay it out horizontally, as is our custom, but crouched, like a ball (en peloton), "quasi en la mesme posture que les enfants sont au ventre de la mere." Until this time they restrain their mourning. After having performed these duties, all in the cabin begin to utter sighs, groans, and lamentations; the children cry *Aistan*, if it is their father, and the mother *Aien*, *Aien*, "My son, my son." No one seeing them thus weeping and mourning would think that they were only ceremonial lamentations; they blend their voices all in one accord and in a lugubrious tone, until some one in authority calls for peace; at once they cease and the captain hastens to announce through all the cabins that such a one is dead. Upon the arrival of the friends they resume their mourning. Frequently some one of more importance will begin to speak and will console the mother and the children, now extolling the deceased, praising his patience, his kindness, his liberality, his magnificence, and, if he was a warrior, his great courage; now saying, "What do you wish? there is no longer any remedy; it was necessary for him to die; we are all subject to death;" and then, "He lingered a very long time," &c. It is true that on this occasion they do not lack for conversation; I am sometimes surprised to see them discourse a long time on this subject, and bring up, with much discretion, all considerations that may afford any consolation to the friends of the deceased.

[1] Referred to on p. 71.

[2] Translated from Relations des Jésuites, 1636, pp. 128–139, by Miss Nora Thomas.

Notice is also given of this death to the friends who live in other villages, and as each family employs another who has the care of their dead, they come as soon as possible to give orders about everything and to fix the day of the funeral. They usually inter the dead on the third day; in the morning the captain gives an order that kettles shall be boiled for the deceased throughout the village. No one spares his best efforts. They do this, in my opinion, for three reasons: First, to console each other, for they exchange dishes among themselves, and scarcely any one eats out of the kettle that he has prepared; secondly, on account of the arrival of those of other villages, who often come in large numbers, lastly and principally, to gratify the soul of the deceased, who, they think, takes pleasure in eating his share. All the kettles being emptied, or at least distributed, the captain informs all the village that the body is to be carried to the cemetery. All the people assemble in the cabin; the mourning is renewed, and those who have charge of the funeral prepare a litter upon which the body is placed, laid upon a mat and wrapped in a robe of beaver skin; they then raise it and carry it by the four corners. All the people follow in silence to the cemetery.

There is in the cemetery a tomb made of bark and raised on four stakes of from 8 to 10 feet in height. While the body is placed in this and the bark is trimmed, the captain makes known the presents that have been given by the friends. In this country, as well as in others, the most agreeable consolations for the loss of relations are always accompanied by presents, which consist of kettles, hatchets, beaver skins, and necklaces of shell beads. If the deceased was of some importance in the country, not only the friends and neighbors but even the captains of other villages will come in person to bring their presents. Now, all these presents do not follow the body into the tomb; a necklace of beads is sometimes placed on its neck and near it a comb, a gourd-full of oil, and two or three small loaves of bread; that is all. A large part of them goes to the relatives to dry their tears; the rest is given to those who have had charge of the funeral, to pay them for their trouble. They also keep in reserve some robes or hatchets to make presents (largesse) to the young men. The captain places in the hand of one of them a stick about a foot long, offering a prize to any one who will take it from him. They throw themselves headlong upon him and remain engaged in the contest sometimes for an hour. After this each one returns peaceably to his cabin.

I forgot to say that generally throughout the ceremony the mother or wife stands at the foot of the sepulcher, calling the deceased, singing, or rather lamenting, in mournful tones.

These ceremonies are not always all observed; those who die in war they place in the ground, and the relatives make presents to their patrons, if they have any, which is generally the case in this country, to encourage them to raise soldiers and avenge the death of the warrior. Those who are drowned are also buried, after the most fleshy parts of the body have been taken away in pieces, as I have explained more particularly in speaking of their superstitions. The presents are doubled on this occasion, and all the people of the country are often there, contributing from their store; all this, they say, is to appease the Heaven or the Lake.

There are even special ceremonies for small children deceased under one or two months; they are not placed as others, in sepulchers of bark raised on stakes, but buried in the road, in order, they say, "que quelque femme passant par là, ils entrent secrètement en son ventre, et que derechef elle leur donne la vie et les enfante." I doubt that the good Nicodemus would have found much difficulty there, although he doubted only for old men, "*Quomodo potest homo nasci cum sit senex.*"

This beautiful ceremony took place this winter in the person of one of our little Christians, who had been named Joseph in baptism. I learned it on this occasion from the lips of the father of the child himself.

When the funeral is over the mourning does not cease: the wife continues it all the year for her husband, the husband for the wife; but the grand mourning itself

lasts only ten days. During this time they remain lying on their mats wrapped in their robes, with their faces against the earth, without speaking or replying to anything, save *Csay*, to those who come to visit them. They do not warm themselves in winter or eat warm things; they do not go to the feasts nor go out, save at night, for what they need; they cut a lock of hair from the back of the head and declare that it is not without deep sorrow, especially when the husband performs this ceremony on the death of his wife, or the wife on the death of her husband. Such is the great mourning.

The lesser mourning lasts all the year. When they wish to visit any one, they do not salute them nor say *Csay*, neither do they grease their hair. The women do this, however, when commanded to do so by their mothers, who have at their disposal their hair, and even their persons. It is also their privilege to send their daughters to the feasts, without which several will not go. What I think strange is that during the whole year neither the wife nor the husband marries again, else they would cause themselves to be talked about in the country.

The sepulchers are not perpetual, as their villages are only permanent for some years, as long as the wood lasts. The bodies remain in the cemeteries only until the feast of the dead, which usually takes place every twelve years. During this time they do not neglect to honor the dead often. From time to time kettles are boiled for their souls throughout the village, as on the day of the funeral, and their names are revived as often as possible. For this purpose presents are given to the captains to be given to him who will consent to take the name of the deceased; and if the latter was of consideration and had been esteemed in the country during his life, he who represents him, after giving a grand feast to all the people of the country, to introduce himself under this name, raises a body of free young men and goes to war to accomplish some brave feat which will show to the nation that he has not only inherited the name but also the bravery and courage of the deceased.

THE SOLEMN FEAST OF THE DEAD.

The feast of the dead is the most celebrated ceremony that takes place among the Hurons. They give it the name of festival for the reason, as I should say now, that when the bodies are taken from the cemeteries each captain makes a "feast to the souls" in his village. The most important and magnificent is that of the master of the feast, who is for this reason called, par excellence, the "Maistre du Festin."

This feast is full of ceremonies, but the chief one is evidently that of "boiling the kettle." This outdoes all the others, and the festival of the dead is spoken of, even in the most serious councils, only under the name Chaudiere (the kettle). They appropriate to it all the terms of cookery, so that when they speak of hastening or retarding the feast they say "rake out" or "stir up the fire under the kettle;" and when any one says "the kettle is overturned," that means there will be no feast.

There is generally only one festival in each nation. All the bodies are placed in the same grave. I say generally, for this year when the fête des Morts took place the kettle-boiling was divided and five villages at this point where we are stationed made a separate band and placed their dead in a separate grave. He who had been captain of the preceding feast, and who is like the chief at this point, made the excuse that his kettle and his feast had been spoiled and that he was obliged to make another. But, in fact, this was only a pretext. The real reason of this separation is that the great heads of the village have complained for a long time that the others took everything to themselves, that they did not share as they wished the knowledge of the affairs of the country, and that they were not called to the most secret and important councils and to the division of the presents.

This separation has been followed by distrust on both sides. God grant that it cause no hindrance to the spreading of the sacred Gospel. But I must touch briefly upon the order and the events of the feast.

The twelve years or more having expired, the old people and great men of the na-

tion assemble to decide upon the time when the feast shall be held, so as to satisfy all the people of the country and the outside nations who are to be invited.

When the decision is made, as all the bodies are to be transported to the village where the common grave is made, each family takes charge of its dead with a care and affection that cannot be described. If they have relatives buried in any part of the country whatever they spare no trouble to go and bring them. They take them from the cemeteries, carry them on their own shoulders, and cover them with the finest robes they have in their possession. In each village a good day is chosen, and they repair to the cemetery, where those called *Aiheonde*, who have had the care of the sepulcher, take the bodies from the tomb in the presence of the relatives, who renew their tears and repeat the mourning of the day of the funeral.

I was present at this ceremony, and willingly invited all our servants, for I do not think that there can be seen in this world a livelier image or more perfect representation of the condition of man.

It is true that in France our cemeteries speak forcibly, and that all these bones heaped upon one another without distinction, the poor with the rich or the small with the great, are so many voices continually reminding us of death, the vanity of worldly things, and the insignificance of this present life. But it seems to me that the custom of our savages on this occasion shows us still more sensibly our wretchedness, for after the graves are opened all the bodies are laid out on the ground and left thus uncovered for some time, giving the spectators an opportunity for once to see what will be their condition some day. Some of the bodies are entirely devoid of flesh and have only a dry skin on the bones; others appear as if they had been smoked and dried and show scarcely any signs of decay. Others still are covered with worms.

The friends, being satisfied with this sight, cover them with handsome robes of beaver-skin, entirely new. Finally, after a while, they strip off the flesh and the skin, which they throw into the fire, together with the robes and mats in which the bodies have been buried. The complete bodies of those newly buried are left in the same condition and the friends content themselves with simply covering them with new robes. They touched only one old man, of whom I have spoken heretofore, who died this autumn on the return from fishing. This large body had only begun to decay a month ago, at the time of the first heat of spring; the worms were swarming all over it, and the pus which came from it caused an odor almost intolerable; nevertheless they had the courage to take the body from the robe in which it was enveloped, cleansed it as much as possible, took it up carefully and placed it in a new mat and robe, and all this was accomplished without exposing any of this corruption. Is here not a good example to animate the hearts of Christians, who should have more noble ideas to deeds of charity and works of pity towards their brethren? After this who will look with horror upon the misery of a hospital? And who will not feel a peculiar pleasure in serving a sick man covered with wounds, in whose person he serves the Son of God?

As they were stripping the bodies they found in two of them a species of charm. The one that I saw with my own eyes was a turtle's egg with a leather strap (courroye); the other, which was examined by our fathers, was a small turtle the size of a nut. This leads to the belief that there were sorcerers in our village, on account of which some resolved to leave it as soon as possible. Indeed, two or three days after one of the richest men, fearing that some misfortune would befall him, transported his cabin two miles from us to the village of Arontaen.

Now, when these bones are well cleaned, part of them are placed in sacks, part in blankets, and they carry them on their shoulders, covering these bundles with other beautiful hanging robes. Entire bodies are put on a sort of litter and carried with all the others, each one taking his bundle into his cabin, where every family makes a feast to its dead.

Returning from this festival with a captain, who has considerable intelligence and who will be some day of high standing in the affairs of the country, I asked him why

they called the bones of the dead *Atisken*. He explained as clearly as he could, and I learned from what he said that many believe that we have two souls, both divisible and material and yet both rational; one leaves the body at death, but remains, however, in the cemetery until the feast of the dead, after which it either is changed into a turtle-dove, or according to the more general belief, it goes immediately to the village of souls.

The other soul is attached to the body; it marks the corpse, as it were, and remains in the grave after the feast, never to leave it, "si ce n'est que quelqu'vn l'enfante de rechef." He mentioned to me, as a proof of this metempsychosis, the perfect resemblance which some persons bear to others who are deceased. Here is a grand philosophy. This is why they call the bones of the dead *Atisken*, "the souls."

A day or two before departing for the feast they carried all these bodies into one of the largest cabins of the village, where some of them were attached to the poles of the cabin, and others laid around it, and the captain entertained and made a grand feast in the name of the deceased captain, whose name he bore. I was present at this "feast of spirits," and observed four things in particular: First, that the offerings which were given for the feast by the friends, and which consisted of robes, necklaces of shell beads, and kettles, were hung on poles extending the whole length of the cabin from one side to the other. Second, the captain sang the song of the dead captain, according to the desire he had expressed before his death, that it should be sung on this occasion. Third, all the guests had the privilege of dividing among themselves all the good things they had brought, and even of carrying them home, contrary to the custom at ordinary feasts. Lastly, at the close of the feast, as a compliment to him who had entertained them, they imitated as they sang the cry of the spirits, and left the cabin crying *haé hé haé*.

The master of the feast, and even *Anenkhiondie*, captain-general of all the country, sent to invite us several times with much solicitation. You would have thought that the feast could not be a success without us. I sent two of our fathers several days beforehand to see the preparations and to learn exactly the day of the feast. *Anenkhiondie* received them very kindly, and on their departure conducted them himself a quarter of a league from there to where the grave was dug, and showed them with much display of emotion all the arrangements, &c., of the feast.

This feast was to have taken place on the Saturday of Pentecost, but some affairs which came up unexpectedly, and the uncertainty of the weather, caused it to be put off until Monday.

The seven or eight days before the feast were passed in collecting the bodies (les âmes) as well as assembling the strangers who were invited; meanwhile from morning till night gifts were distributed by the living to the young men in honor of the dead. On one side women were drawing the bow to see who should have the prize, which was sometimes a girdle of porcupine quills or a necklace of beads; on the other hand, in several parts of the village the young men were drawing clubs upon any who would try to capture them. The prize of this victory was a hatchet, some knives, or even a beaver robe. Every day the remains were arriving. There is some pleasure in seeing these funeral processions which number sometimes from two to three hundred persons. Each one carries the remains of his friends, that is the bones, packed upon his back after the manner that I have described, under a beautiful robe. Some arranged their packets in the shape of a man, decorated with strings of beads, with a fine crown of red hair. On leaving their village the whole company cried *haé hé haé* and repeated this "cry of the spirits" all along the way. This cry, they say, comforts them greatly, otherwise their burdens, although souls, would weigh very heavily and cause a weakness of the side (costé) for the rest of their lives. They travel by short stages; the people of our village were three days in going four leagues and in reaching *Ossossané*, which we call Rochelle, where all the ceremonies were to be held. As soon as they arrive near any village they shout again the haé hé haé. The whole village comes out to meet them; many presents are again distributed on this

occasion. Each one repairs to some one of the cabins; all find a place to put their bundles; this is done without confusion. At the same time the captains hold a council to decide upon the time that the company shall spend in this village. All the bodies of the dead of eight or nine villages were taken to Rochelle on Saturday of Pentecost; but the fear of bad weather obliged them, as I have said, to postpone the ceremony till Monday. We were lodged a quarter of a league from there, at the old village, in a cabin where there were at least a hundred skeletons hung up to the poles, some of which smelled stronger than musk.

Monday at midday, word was sent that they were ready and that the ceremony would begin. The bundles of skeletons were at once taken down and the friends unfolded the wrappings to say their last farewells. Their tears flowed anew. I admired the tenderness of one woman towards the remains of her father and children. She is the daughter of a captain who died at a great age and who formerly occupied a high position in the country. She combed his hair; she touched the bones one after another with as much affection as if she would have given them life; she placed near him his *Atsatonesai*, that is, his packet of rods (bûchettes) of the council, which are all the books and papers of the country. As for her children, she put upon their arms bracelets of shells and glass beads and bathed their bones with her tears. She could hardly be separated from them, but they were in haste, and it was necessary to start at once. The one who carried the body of this old captain walked at the head, the men following and then the women. They marched in this order until they arrived at the grave.

The following is the arrangement of this place: There was a space about as large as the Place Royale at Paris. In the center was a large grave about 10 feet (pieds) deep and 5 fathoms (brasses) in diameter, round it a scaffolding and a sort of stage nicely made, from 9 to 10 fathoms (brasses) in diameter and 9 or 10 feet high; above the stage there were several poles raised and well arranged, and others laid across them on which to hang all the bundles of skeletons. The entire bodies, as these were to be placed at the bottom of the grave, were laid under the scaffolding the day before, resting on bark, or mats raised on stones to the height of a man around the grave. The whole company arrived with the bodies about an hour after midday, and divided into parties according to the families and villages, and laid their bundles upon the ground, almost as the pots of earth were made at the village fairs; they also unfolded their robes and all the offerings they had brought and hung them upon the poles which extended for from 500 to 600 fathoms (toises); there were nearly twelve hundred gifts which remained thus on exhibition for two whole hours, to give strangers an opportunity to see the riches and magnificence of the country. I did not find the company as great as I had expected; there were not more than two thousand persons. About 3 o'clock each one fastened up his bundles and folded his robes. Meanwhile each captain, in order, gave a signal, and all immediately took up their bundles of bones, ran as if at the assault of a city, mounted upon this stage by means of ladders which were placed all around, and hung them (the bundles) to the poles; each village had its department. This done, all the ladders were taken away. Some of the captains remained upon the platform and spent the rest of the afternoon, until 7 o'clock, in announcing the lists of presents which were given in the name of the deceased to some particular persons. For instance, they would say, here is what such a one, deceased, gives to a certain relative.

About 5 or 6 o'clock they lined (pauerent) the bottom of the grave and bordered it with large new robes, the skins of ten beavers, in such a way that these extend more than a foot out of it. As they were preparing the robes which were to be used for this purpose, some of them descended into the grave, and came from it with their hands full of sand. I inquired what this ceremony meant, and learned that they believed that this sand will render them happy at their games (au ieu).

Of the twelve hundred offerings that had been exhibited on the platform, forty-

eight robes were to line and trim the grave, and each complete body had, besides the robe in which it was wrapped, another one, and some even two others, to cover it. This is all: so that I do not think [? but] that each body had one to itself, taking one with another, which is the least that it could have for its burial; for these robes of beaver skin are what the clothes and shrouds are in France. But what becomes then of the rest? We will see presently.

At 7 o'clock the bodies were lowered into the grave. We had great difficulty in approaching it. Nothing ever pictured better to me the confusion among the damned. You could see unloaded on all sides bodies half decayed, and everywhere was heard a terrible uproar of confused voices of persons who were speaking without hearing one another; ten or twelve men were in the grave and were arranging the bodies all around it, one after the other. They placed, exactly in the center, three large kettles, which were of no use save for the spirits; one was pierced with holes, another had no handle, and the third was worth little more. I saw a few necklaces of shell beads there; it is true, many of them were put on the body. This was all that was done on this day.

The whole company passed the night on the spot, having lit a great many fires and boiled kettles. We retired to the old village with the intention of returning the next day at daylight when they were to cast the bones into the grave; but we barely arrived in time, notwithstanding all the diligence we employed, on account of an accident which happened. One of the skeletons, which was not well fastened, or perhaps was too heavy for the cord which held it, fell of itself into the grave. The noise it made awoke the whole troupe, who ran and immediately mounted, in a crowd, to the platform and emptied, without order, all the bundles into the grave, reserving, however, the robes in which they had been wrapped. We were just leaving the village at that time, but the noise was so great that it seemed almost as though we were there. Approaching we saw suddenly an image of the infernal regions. This great space was filled with fire and smoke and the air resounded on all sides with the mingled voices of the savages. This noise, nevertheless, ceased for a while, and was changed to singing, but in a tone so doleful and weird that it represented to us the terrible sadness and the depth of despair in which condemned souls are forever plunged.

Nearly all the bones had been cast in when we arrived, for it was done almost in a moment, each one being in haste for fear that there was not room for all these skeletons; nevertheless we saw enough of it to judge of the rest. There were five or six men in the grave, with poles, to arrange the bones. It was filled up within 2 feet of the top with bones, after which they turned over upon them the robes that bordered the grave all around, and covered the whole with mats and bark. The pit was then filled up with sand, rods, and stakes of wood which were thrown in promiscuously. Some of the women brought dishes of corn, and on the same day and the following days several cabins of the village furnished basketfuls of it, which were cast into the pit.

We have fifteen or twenty Christians buried with these infidels. We say a *De profundis* for their souls, with the firm hope that if the Divine goodness does not cease His blessings on His people this feast will be made no more, or will be only for Christians, and will be celebrated with rites as holy as these are foolish and useless. They also begin to be a burden upon the people for the excess and superfluous expenses that are caused by them.

All the morning was spent in distributing gifts (largesses), and most of the robes that had been wrapped around the bodies were cut in pieces and thrown from the top of the platform into the midst of the crowd for whoever could seize them first. There was great sport when two or three contested the possession of one beaver skin. In order to settle it peaceably it was necessary to cut it into so many pieces, and thus they came out nearly empty-handed, for these tatters were hardly worth the picking up. I admired here the industry of one savage. He did not hurry himself to run

after these flying pieces; but, as there is nothing so valuable this year in the country as tobacco (petun), he held some pieces of it in his hand, which he presented at once to those who were disputing over the skin, and thus acquired it for himself.

Before leaving the place we learned that, on the evening when presents had been given to the foreign nations, on the part of the master of the feast, we also had been named; and, in fact, as we were going, *Anenkhiondic* came and presented a new robe composed of ten beaver skins, in return for the necklace which I had given them in the midst of the council to show them the heavenly way. They were so much obliged for this present that they wished to show some acknowledgment of it in so good an assembly. I would not accept it, however, saying to him that, as we had made them this present only to persuade them to embrace our faith, they could not oblige us more than in listening to us willingly and believing in Him who rules over all. He asked what I desired that he should do with the robe. I replied that he could dispose of it in whatever way he deemed best, with which he remained perfectly satisfied. Of the rest of the twelve hundred presents forty-eight robes were used to adorn the grave. Each body wore its robe and some of them two or three. Twenty were given to the master of the feast, to reward the nations who had assisted at it. A number were distributed on the part of the dead, through the captains, to their living friends. A part of them were only used for show, and were returned to those who had exhibited them. The old people (anciens), and great leaders of the country, who had the administration and management of it, privately took a great deal, and the rest were cut in pieces, as I have said, and scattered through the assembly. However, it was only the rich who lost nothing, or very little, at this feast. The mendicants and poor people brought and left there all they possessed of any value, and suffered much by striving to appear as well as others in this celebration. Every one stood upon this point of honor.

Indeed, it was only by a chance that we were not also participants of the feast. During this winter the Captain Aenons, of whom I have spoken before, came to make us a proposal on the part of all the anciens of the country. At that time the boiling of the kettle (chaudiere) was not yet divided. They proposed to us then that we should consent to exhume the remains of the two Frenchmen who had died in this country, to wit, Guillaume Chaudron and Estienne Bruslé, who was killed four years ago, and that their bones might be placed in the common grave of their dead. We replied at first that this could not be done; that it was forbidden; that as they had been baptized, and were, as we hoped, in heaven, we respected their bones too highly to allow them to be mixed with the bones of those who had not been baptized. Besides, it was not our custom to exhume the bodies of those who had been buried.

We decided, however, after all, that as they were interred in the wood and since the people desired it so much, we would consent to take up their bones on the condition that they allowed us to put them in a particular grave, with the bones of all that we had baptized in the country.

Four reasons especially persuaded us to give them this final answer. First, as it is the greatest expression of friendship and good-will that can be shown in this country, we yielded to them readily in this point that which they wished, and thus showed that we desired to love them as brothers and to live and die with them. Second, we hoped that God would be glorified in it, especially, in that separating by consent of all the nation the bodies of the Christians from those of the unbelievers, it would not be difficult afterwards to obtain special permission that their Christians should be interred in a separate cemetery, which we would bless for that purpose. Third, we claimed to bury them with all the rites of the Church. Fourth, the old men, of their own accord, desired us to raise there a beautiful and magnificent cross, as they showed us afterwards more particularly. Thus the cross would have been established by the authority of the whole country and honored in the midst of this heathenism, and they would have been careful not to impute to it afterwards, as they have done in the past, all the misfortunes that befell them.

This captain thought our proposition very reasonable and the old men (anciens) of the country remained very well contented with it. Some time after, the chaudiere was divided, and, as I have said, five villages of our part of the country resolved to hold their feast apart.

In the spring a general assembly of all the principal men was held, to consult about the feast and to endeavor to prevent this schism and reunite the cooking of the kettle. These dissatisfied ones were there and I also was invited. They made me the same proposition as before. I replied that we were very well satisfied, provided that this was done under the conditions that we had demanded. I was reminded of the division, and they asked me, since there were two feasts (chaudieres), that is, two graves, on which side I desired to have our special grave. To this I answered, in order to offend no one, that I would leave it to their judgment; that they were just and wise and they could decide between themselves. The master of the feast of Rochelle said, thereupon, with condescension, that he did not claim anything and that he was willing that the other, who is the chief at this place, should have on his side the remains of our two Frenchmen. The latter replied that he laid no claim to the one that had been buried at Rochelle, but that as for the body of Estienne Brulé it belonged to him, as it was he that had engaged with him and led him into this country. So here the bodies were separated, one on one side, the other on the other side. At this some one said privately that indeed he (the chief) had the right to demand the body of Estienne Brulé, and that it was reasonable that he should render some honor to his bones, since they had killed him. This could not be said so discreetly but that the captain had a hint of it; he concealed his feelings, however, at the time. After the council, as we had already gone, he raised this reproach and began to talk with the captain of Rochelle, and finally gave over entirely the body of Brulé, in order not to embitter and make bloody this sore, of which the people of this point have not yet cleared themselves. This caused us to resolve, that we might keep in favor with those of Rochelle, not to meddle with either the one or the other.

Truly there is reason to admire the secret judgments of God, for this infamous man certainly did not merit that honor; and to tell the truth we had hesitated much in resolving to make on this occasion a particular cemetery, and to transport to holy ground a body that had led so wicked a life in the country and given the savages such a wrong impression of the manners of the French. At first some thought hard of it that we should have this opinion and were offended, alleging that this being so they could not boast as they hoped among strange nations of being related to the French, otherwise it would be said to them that they did not have much appearance of it, since we had not wished to put the bones of our people with theirs. Afterwards, however, having heard all our reasons, they decided that we had acted prudently and that it was the best means of maintaining our friendship with each other.

Shall I finish for the present with this funeral? Yes; since it is a mark sufficiently clear of the hope of a future life which nature seems to furnish us in the minds of these people, as a good means of making them understand the promises of Jesus Christ. Is there not reason to hope that they will do this, and that as soon as possible? Certainly I dare to assert that with this prospect we have reason to fortify our courage and to say of our Hurons what St. Paul wrote to the Philippians: "*Confidens hoc ipsum, quia qui cœpit in vobis opus bonum, perficiet vsque in diem Christi Iesu.*" These poor people open their ears to what we tell them of the kingdom of heaven; they think it very reasonable, and do not dare to contradict it. They are learning the judgments of God in the other life; they are beginning to have recourse with us to His goodness in their necessities, and our Lord seems to favor them sometimes with some particular assistance. They procure baptism for those who they think are about to die; they give us their children to be instructed, even permitting them to come three hundred leagues for this purpose, notwithstanding the tender affection they have for them; they promise to follow them one day and show us that they would not give us such precious pledges if they did not desire to keep faith with us. You would say that they were waiting

only to see some one among them to be the first to take this bold step and dare to go contrary to the custom of the country. They are, finally, a people who have a permanent home (demeure arrestée), are judicious, capable of reason, and well multiplied.

I made mention, the past year, of twelve nations entirely sedentary and harmonious, who understand the language of our Hurons; and the Hurons make in, twenty villages, about 30,000 souls; if the rest is in proportion, there are more than 300,000 who speak only the Huron language. God gives us influence among them; they esteem us, and we are in such favor with them, that we know not whom to listen to, so much does each one aspire to have us. In truth we would be very ungrateful for the goodness of God if we should lose courage in the midst of all this, and did not wait for Him to bring forth the fruit in his own time.

It is true that I have some little apprehension for the time when it will be necessary to speak to them in a new way of their manners and to teach them "à clouër leur chairs" and restrain themselves in the honesty of marriage, breaking off their excesses for fear of the judgment of God upon their vices. Then it will be a question of telling them openly, "*Quoniam qui talia agunt regnum Dei non possidebunt.*" I fear that they will prove stubborn, when we speak to them of assuming Jesus Christ, wearing his colors, and distinguishing themselves in the quality of Christians from what they have been formerly, by a virtue of which they scarcely know the name; when we cry unto them with the Apostle: "For this is the will of God, your sanctification: that you should abstain from fornication, that every one of you should know how to possess his vessel in sanctification and honor: not in the passion of lust, like the gentiles that know not God." There is, I repeat, reason to fear that they may be frightened with the subject of purity and chastity, and that they will be disheartened with the doctrine of the Son of God, saying with those of Capernaum, on another subject, "*Durus est hic sermo et quis potest eum audire?*" Nevertheless, since with the grace of God we have already persuaded them, by the open profession we have made of this virtue, neither to do or say in our presence anything which may be averse to it—even to threaten strangers when they forget themselves before us, warning them that the French and especially the "black robes," detest these intimacies—is it not credible that if the Holy Spirit touches them once, it will so impress upon them henceforth, in every place and at all times, the reverence which they should give to His divine presence and immensity, that they will be glad to be chaste in order to be Christians, and will desire earnestly to be Christians in order to be chaste? I believe that it is for this very purpose that our Lord has inspired us to put them under the charge of St. Joseph. This great saint, who was formerly given for a husband to the glorious Virgin, to conceal from the world and the devil a virginity which God honored with His incarnation, has so much influence over the "Sainte Dame," in whose hands His Son has placed, as in deposit, all the graces which co-operate with this celestial virtue, that there is almost nothing to fear in the contrary vice, for those who are devoted to Him, as we desire our Hurons to be, as well as ourselves. It is for this purpose, and for the entire conversion of all these peoples, that we commend ourselves heartily to the prayers of all those who love or wish to love God and especially of all our fathers and brothers.

Your very humble and obedient servant in our Lord,

JEAN DE BREBEUF.

From the residence of St. Joseph, among the Hurons, at the village called Ihonatiria, this 16th of July, 1636.