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MOUND-BUILDERS.

BY

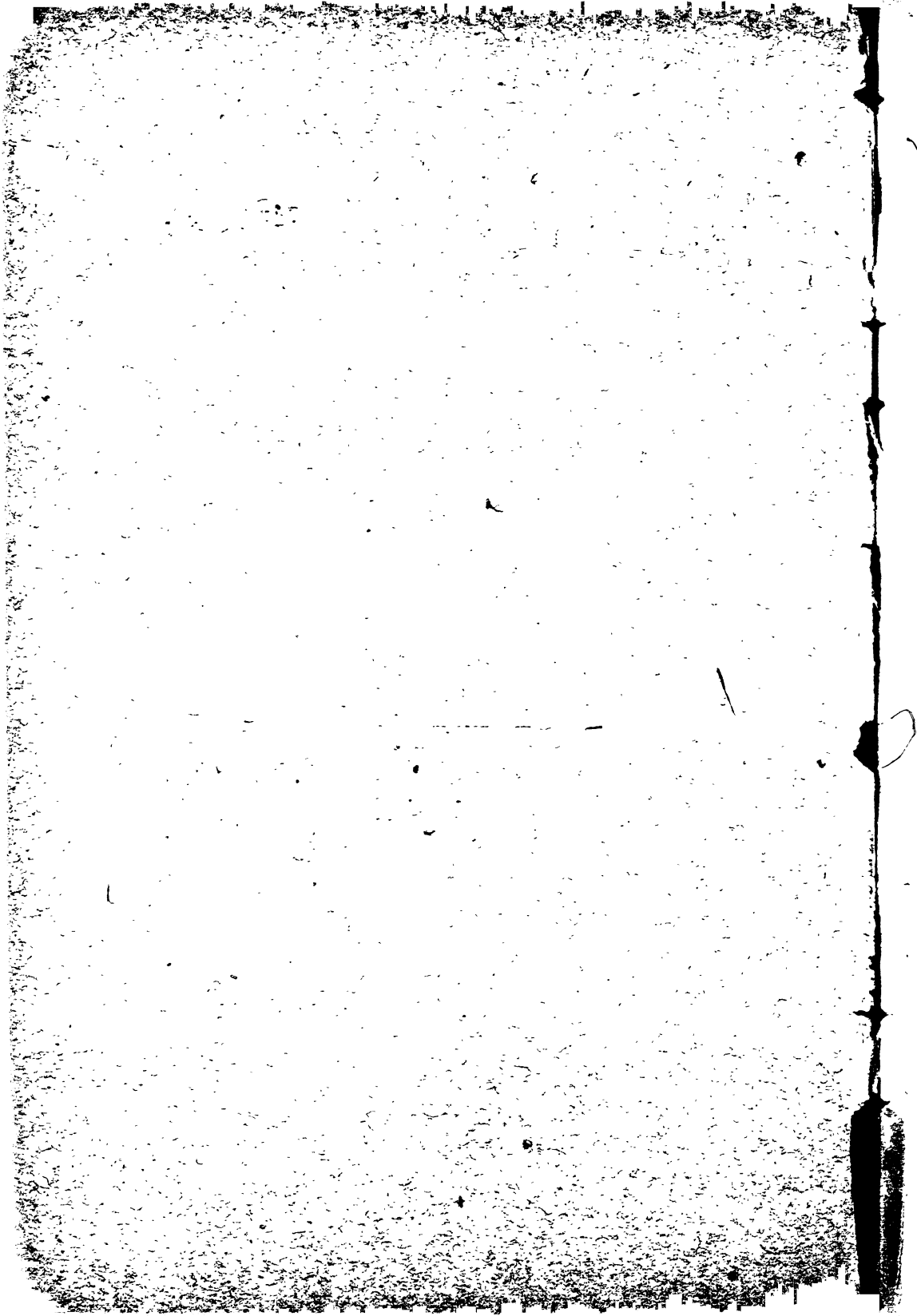
REV. W. J. SMYTH, M.A., B.Sc., Ph.D.,

Pastor of St. Joseph Street Presbyterian Church, Montreal.

PUBLISHED BY REQUEST OF NATURAL HISTORY SOCIETY,
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APRIL, 1886.



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MOUND-BUILDERS.

BY REV. WILLIAM J. SMYTH, M.A., B.Sc., Ph.D.

When the early settlers began to pioneer the unbroken forests of North America, they considered the various Indian tribes to be the true Aborigines of this continent. But long before the red man, even long before the growth of the present forests, there lived an ancient race, whose origin and fate are surrounded with impenetrable darkness. The remains of their habitations, temples and tombs, are the only voices that tell us of their existence. Over broad areas, in the most fertile valleys, and along the numerous tributaries of the great rivers of the central and western portions of the United States, are to be found these wonderful remains, of the existence and origin of which, even the oldest red man could give no history.

Following in the track of these ancient tumuli, which have been raised with some degree of order and sagacity, we are bound to believe that they were constructed by a very intelligent and somewhat civilized race, who during long periods enjoyed the blessings of peace, but like most nations of the earth, at times were plunged in the horrors of war. We cannot tell by what name these strange people were known during their existence. But archæologists, to

keep themselves safe, have given them the name of "Mound-builders," from the nature of the structures left behind them.

Of this wonderful, semi-civilized, prehistoric race, we have no written testimony. Their mysterious enclosures, implements of war, and comparatively impregnable fortifications, together with a few strange tablets, are the only evidence of their character, civilization, and doom. No contemporary race, if such there existed on this continent, has left any record of them.

The mounds they have left are found in the western part of the State of New York, and extend, it is said, as far as Nebraska. And as they have lately been found in the Northwest, they have thus a much more northern limit than was at first thought, while the southern limit is the Gulf of Mexico.

Having seen only a few mounds in Illinois, Indiana and Kentucky, I must confine my paper to those found in the State of Ohio, where, during a residence of seventeen months, I made the closest investigation my time and duties permitted. In Ohio, the number of mounds, including enclosures of different kinds, is estimated at about 13,000, though it requires the greatest care to distinguish between the mounds proper and those subsequently erected by the Indians. In some parts they are very close together, which is strong evidence that these regions were densely populated. In others, a solitary mound, with adjacent burial mounds, gives us the idea of a rural village or town.

ENCLOSURES.—In the State of Ohio, alone, there have been found 1,500 enclosures. Some of these have walls ranging in height from three to thirty feet, enclosing areas of from ten to 400 acres. Those areas, enclosed by strong walls, erected in regions difficult of access, were undoubtedly intended as military enclosures; while those areas enclosed by slight walls, with no mounds to cover the openings, were intended as sacred enclosures. I shall leave the consideration of the sacred enclosures until I describe the temple, or sacrificial mounds, giving a brief outline of some of the famous fortifications built by those strange people.

Within convenient distance of the city of Xenia, on Little Miami River in Warren county, Ohio, can be seen at any time that famous enclosure known as "Fort Ancient." There can be no mistake as to the intention of this wonderful enclosure. It is situated on the east bank of the Miami on a most commanding position. On the east, two ravines originate, running on either side towards the river, leaving the great fortress on an elevation of 230 feet above the river. The whole is surrounded by a wall of five miles in length, but owing to the uneven course of the river, there are only enclosed one hundred acres. The wall has numerous openings, which, however, are well protected by inner walls, or mounds. These openings could be occupied by warriors while the interior would not be exposed to the enemy. Within the enclosure are disposed twenty-four reservoirs, which could be dexterously connected with springs, so that in time of siege, they would be comparatively independent. The strength of this fortress does not depend on the walls alone, which range in height from five to twenty feet, but upon its isolated position and steep sides. Near the fortification are two large mounds from which run two parallel walls for 1,350 feet, and then unite, enclosing another mound. We cannot tell what part these outer walls and mounds played in the defence of this fortification. But we know that all give evidence of an immense garrison occupied by an ancient and somewhat civilized race, whose numerous enemies, doubtless, forced such strong defence. In point of inaccessibility, engineering skill, and strength, this famous enclosure will compare not unfavorably with Edinburgh Castle, the stronghold of Quebec, or the impregnable Gibraltar.

Another stronghold of considerable importance may be seen at Fort Hill, in Highland county, on an elevation of 500 feet, and enclosing an area of forty acres. There is another near Piqua, on a hill 160 feet high; and another near the city of Dayton, on a hill 160 feet high, where a mound is enclosed, which like the ancient watch-towers of Scripture, can command a view of the whole surrounding country. Near Carlisle lies the site of another remarkable

military enclosure, which overlooks the fertile valley, between the Twin and Miami Rivers. Two deep ravines fortify the north and south sides, while an almost perpendicular bluff fortifies the east. The wall which is partly of earth and partly of stone is 3,676 feet in length, and encloses a beautiful area of fifteen acres.

The settlers state that in early times there were two stone mounds and one stone circle, which contained such excellent building stone, that they removed them for building purposes. They had to cut a way and grade it, to remove the stones, which those rude architects of early prehistoric times found no difficulty in taking from a distant quarry to that high elevation. We must therefore agree that their knowledge of the mechanical powers was far superior to anything the Indian race has shown.

About the largest fortification in Ohio may be seen at Bournville. It encloses a magnificent area of fertility, on an elevation of 400 feet. The sides are remarkably steep, and are washed by small creeks, that empty into Paint Creek hard by. Within the fortification are several depressions, where water remains most of the year. The area, of itself, would be a beautiful farm, as it consists of 140 acres. The wall, which was about $2\frac{1}{4}$ miles in length, is very much in ruins, being chiefly built of stone. Some years ago the whole place was covered by the trees, and on the dilapidated stone wall, may still be seen immense trees, whose growth among the stones helped to displace them. The decayed wood beneath some of these trees indicates that successions of forests have flourished since these forts were abandoned by those who made them.

GRADED WAYS.—It is well known that, in most of these valleys, there are several terraces, from the river bottom or flats, up to the high lands in the distance. Near a place called Piketown there is a beautiful graded avenue. The third terrace is seventeen feet above the second and the second about fourteen feet from the river flat. These terraces form, when graded, this avenue, which has walls on either side in height twenty-two feet. These walls run for 1,010 feet to the third terrace, where they continue to run

for 2,580 feet, terminating in a group of mounds one of which is thirty feet high. Some distance from these walls another wall runs 212 feet at right angles, and then turns parallel for 420 feet, when it curves inwardly for 240 feet.

MOUNDS.—I stated at the outset that the mounds in Ohio were very numerous. They are of various sizes, ranging from those which are only a few feet in height and a few yards at their base, to those which are about 90 feet in height, and covering some acres at their base. These mounds are mostly composed of earth, the material often differing greatly from the surrounding soil. When we consider the multitudes of these mounds, and the immense transportation of earth and stones required in their structure, it needs no stretch of imagination to conclude that the Mound-builders were a mighty race. Most of these mounds are located near large rivers or streams, and, consequently, in the valleys, although some few are to be found on high lands, and even on hills very suitable for military purposes. Sometimes they may be seen in clusters, indicating a great business centre and large population, while again only one may be found in a journey of fifty or one hundred miles.

During the last fifty years, these tumuli have been carefully examined, and, from their contents, shape and position, they are now classified as Temple or Sacrificial Mounds, Burial or Sepulchral Mounds, Symbolic Mounds, Signal Mounds and Indefinite Mounds. I shall briefly describe the characteristic of each class and give a few examples.

Temple Mounds.—These mounds are not so numerous in Ohio as in some other States, yet they occur in sufficient numbers to deserve a small share of our attention. The city of Marietta has slowly encroached upon some interesting remains of a sacrificial character, which consist of two irregular squares containing 50 and 27 acres respectively. They are situated on a level plain 100 feet above the level of the Ohio and Muskingum Rivers. The smaller square has ten gateways, which are covered by mounds, while the larger square, being strictly a sacred enclosure, has no mounds to cover the 16 openings, but contains nevertheless four temple mounds of considerable interest. On the top

of these mounds, doubtless there were erected capacious temples, as there are significant avenues of ascent. There may still be seen the remains of the ancient altar, where, without doubt, these people assembled for worship, and where, from the presence of human bones, we may conclude human beings were offered in sacrifice. In all the sacred enclosures, evidences of altars have been found, on which, doubtless, the sacrificial fires blazed for ages. Often are to be found successions of alternate layers of ashes and blue clay, indicating a desire for pure sacrifice.

In the neighborhood of Newark, Ohio, at the forks of Licking River, may be seen most elaborate enclosures, square, circular, and polygonal in their form, covering in all an extent of four square miles. Like the ancient temples of the Druids, most of the enclosures have their openings to the east, or rising sun, so that the first rays shall strike the altar where doubtless a priest, from the early hour of dawn, performed mysterious rites.

On the west, there is erected a mound, 170 feet long and 14 feet in height, which overlooks the whole works, and has been styled "the Observatory". To the east is a true circle 2,880 feet in circumference, the wall being 6 feet in height. To the north of this is an avenue leading from the circle to an octagon of fifty acres, in the wall of which are eight gateways, which, however, are covered by mounds five feet in height. From this strange eight-sided figure run three parallel walls. Those to the south are about two miles in length, and those running towards the east are each about one mile in length.

About a mile east, where the middle line of parallel walls terminates, is a square containing twenty acres, within and around the walls of which are disposed seven mounds. To the north-east of this is an elliptical work of large dimensions. On the south-east is a circle, in the centre of which is the form of a bird with wings expanded. The body is 155 feet, the length of each wing 110 feet, and the head of the bird is towards the opening. When this structure was opened, there was found an altar, proving that, in this circular place, this ancient people must have assembled for worship.

There is a place three miles north of Chillicothe, where an extensive enclosure—now called "Mound City"—contains 26 well formed and regularly disposed mounds, covering an area of 13 acres. Many of those mounds contained altars at their base, but have been subsequently converted into ordinary mounds. One mound, which is 90 feet in diameter at the base and $7\frac{1}{2}$ feet in height, contained an altar, within the basin of which was found a layer of solid ashes three inches thick, in which were numerous pieces of pottery and shell-beads. On the top of the altar was a layer of sand, then gravel for two feet, then a thin layer of sand, then one foot of gravel.

Buried three feet below the apex of the mound, were found two well developed and highly preserved skeletons, which, however, were not those of Mound-builders, but rather of the Indians who were buried there long after the mounds were abandoned. One altar was covered by a layer of opaque mica, which must have been brought from a great distance. In the centre of the basin was found, besides numerous other relics, a large heap of burned human bones, which would indicate it an altar of human sacrifice. From other evidences, we may safely conclude that they were Sun or Fire-worshippers. As to the cause of these altars being afterwards changed into common mounds, it is difficult to determine. Many such mounds are found, which for a long time were used for purposes of sacrifice, and then covered

over by many feet of earth. We may not wonder, however, at this, as even now many old churches are abandoned to the fate of being turned into dwelling houses or barns.

It may be, however, that after the decease of the priest who performed his sacred functions before the altar for many years, the people, to whom he had so long ministered, laid, or burned his remains on the altar which they so much revered, and then, like the ancient builders of the pyramids, erected a monument to departed worth, and during the strange ritual deposited beside the respected remains whatever implements or ornaments they could part with, in honor of the dead.

Burial Mounds.—As in modern days, a place of sepulture is usually selected some distance from the city or town, so the burial mounds may be expected without the enclosures. In our own time we find some cemeteries densely populated with graves, and others have but few. So it was in the days of the Mound-builders; for we find in some places groups of burial mounds, and in other places only a few may be found scattered over the plain.

Burial mounds are of various sizes, I presume, according to the dignity of the individual entombed. Sometimes one large mound is found to possess a skeleton, and some interesting relics, which indicate the position of the departed, while a group of smaller mounds is situated around it. The large one perhaps contained the skeleton of a leader, surrounded by a few of his intimate followers. Or perhaps it was that of a patriarch, surrounded by his numerous progeny, much as, in our own day, burial plots are set apart for families.

Grave Creek burial mound, which stands at the junction of Grave Creek, Virginia, with the Ohio, is one of the largest and most important burial mounds in America. It is 70 feet in height and at its base it is 1,000 feet in circumference. When this mound was opened, two vaults were found, one at the base contained two skeletons, one of them a female. The logs of which this vault was composed were all decayed, and the earth and stones lay upon the skeletons. In the upper vault there was a single skeleton very much decayed. Within these vaults and beside the illustrious dead, were found more than 3,000 shell-beads, ornaments of mica, copper bracelets, and other stone carvings. Around the lower vault were found ten much decayed skeletons, all in a sitting posture.

The skeletons in the vaults, doubtless, were the remains of royalty, or some distinguished chiefs, whose memory these devoted people desired to perpetuate, while the ten skeletons, which surrounded the vault, were perhaps some of their loyal subjects who were sacrificed according to the custom of some of the heathen nations both ancient and modern. Foster, desiring to draw a comparison or rather

identify this mode of burial with those of the Greeks and other nations, directs our attention to Herodotus, Book IV, Chaps. 71 and 190. And for identifying the ceremonial with the funeral of Achilles, our attention is called to the Odyssey, Book XXIV, with the burial of Hector in the Iliad, Book XXIV.

Dr. Wilson identifies the burial of the living with the dead by giving an account of the burial of Black Bird, the great chief of the Omahas more than 60 years ago. He caught the smallpox at Washington, and dying on his way home, he gave instructions to his braves around him how he was to be buried. "His body was clothed with the gayest Indian robes, decorated with scalps and war eagle plumes, and he was carried to one of the loftiest bluffs on the Missouri. He was placed upon his favorite war horse, a beautiful white steed. His bow was placed in his hand. His shield, quiver, pipe, medicine-bag and tobacco-pouch hung by his side, for his comfort on his journey to the happy hunting grounds of the great Manitou. After a significant ceremonial, the Indians placed turf and sod about the legs of the horse; gradually the pile rose, until living horse and dead rider were buried together in this memorial mound, which may be seen from the banks of the Missouri."

But to come back to the mound, I now describe a sandstone disk, $1\frac{1}{2}$ inch in diameter and $\frac{3}{4}$ inch thick, taken up from near the skeleton in the lower part of Grave Creek mound. According to Schoolcraft's analysis, communicated to the American Ethnological Society, "Of the 22 alphabetic characters, 4 correspond with the ancient Greek, 4 with the Etruscan, 5 with the old Northern runes, 6 with the ancient Gaelic, 7 with the old Erse, 10 with the Phœnician, 14 with the old British," and he also adds that equivalents may be found in the old Hebrew. It is, as some writers have described it, an exceedingly accommodating inscription. The following readings have been given:—

By M. Levy Bing: "What thou sayest, thou dost impose it, thou shinest in thy impetuous clan, and rapid chamois."

By M. Maurice Schwab (1857): "The chief of emigration who reached these places, has fixed these statutes forever."

By M. Oppert: "The grave of one who was assassinated here. May God, to revenge him, strike his murderer, cutting off the hand of his existence." We can only say of these readings what a Hebrew Rabbi said to an indolent student, who in reading a verse in the Psalms in the original, gave the translation of the next verse, "Gentlemen, that is a very free translation." Besides this, other readings have been given, all of which have the advantage that few can contradict them.

In the Scioto valley, where there are many very interesting remains of the Mound-builders, there are many burial mounds which have lately been opened. In many of these, the casts of unhewn logs are still visible, showing that the dead were placed in a rude vault, which was afterwards covered by soil. One skeleton was found to have round the neck several hundred beads, made mostly of marine shells, others made of the tusks of animals and a few laminae of mica. In the same mound from which this skeleton was taken, the vault gave strong evidence of its having been set on fire during the burial ceremony,—the large quantity of charcoal proving that it was suddenly quenched by the fresh soil heaped upon it.

If these Mound-builders were Sun-worshippers, as may safely be concluded from tablets and from rock markings, as well as from the fact of their sacred enclosures mostly looking towards the east, where the early rays would fall upon the altar, we may easily account for the fire having a share in the burial ceremony. Some have concluded that the blazing fire signified "life," and that the sudden quenching signified "death."

Let it not be thought, however, that there are no burying places but these few mounds. I believe the mounds of a burial character were only for persons of distinction, while in reality there are thousands of ancient cemeteries of vast extent, where multitudes have received common burial. The spring freshets yearly uncover many of these, exposing not only their bones, but many ornaments and implements that were used by this wonderful people, and which were deposited beside them when consigned to the silent tomb.

Symbolic Mounds.—There can be no mistake in affirming that the strange mounds, so prevalent in Wisconsin, and frequently found in other States, were the result of intention rather than accident. These are sometimes called "Effigy Mounds." In Wisconsin, even implements, as well as animals, are symbolized. The beaver, the tortoise, the elephant, the serpent, the alligator seem to be their favorite animals, whose images they have endeavored to perpetuate in mounds, of course on a large scale. In Adams county, Ohio, on a steep bluff, 150 feet above the level of Brush Creek, may be seen a huge serpent.

It is called the "Serpent Mound." The head of the serpent lies towards the point of the spur, and then like the serpent, its body winds gracefully back for 700 feet, the tail curved into a triple coil. From this and other evidences lately collected, we may assume that the serpent was among the sacred animals. Between the jaws of this serpent there is a stone mound, bearing marks of long use as an altar. The body, which is a mere winding wall, is, on an average, five feet in height, and thirty feet broad at the base near the centre. Doubtless this wall was much higher when first made, and owing to the rains of centuries it has become lower and broader.

Another mound, the shape and proportion of an alligator, may be seen in Licking county, Ohio, about one mile from Granville. This is also on a spur of land near the Licking River. Its length is 250 feet and height about four feet. Its whole outline is strictly conformable to the alligator with which animal they must have been familiar along the Mississippi, where they could easily journey by boat. Rather than transport the animal from the south, they doubtless erected this representation of what they must have held sacred.

In the State of Wisconsin there is one symbolic mound more worthy of notice than any other. It is called "the Elephant Mound," from the fact that it bears the proportion and conformability of the Mastodon. This people must have known something of this animal which in early times roamed over this continent. I think we should not be going

too far if we supposed that the Mound-builders lived contemporaneously with the last of these monsters of the Pre-historic forests.

Signal Mounds.—It seems quite in keeping with what we have already seen of the sagacity of this wonderful race, that they should erect stations of observation in various suitable regions, so that signals could be given to the multitudes who dwelt in the plain, when they were threatened by an approaching enemy. If a fire were lit on a much burnt mound at the ancient fort near Bournville, it could be seen over a large portion of the valleys, where numerous works are found. No doubt, this was a signal mound, where the appointed watchman, like the watchman of Scripture, could give the alarm of the coming foe, enabling the industrious people to reach the fortress in safety.

On a hill 600 feet high, near Chillicothe, Ohio, there is a mound, which in the days of the Mound-builders must have been a signal mound. A light on this can be seen for twenty miles either up or down the valley.

The great mound at Miamisburg, Ohio, which is 68 feet high and 852 feet in circumference at its base, served, no doubt, this important department of warfare, as a fire kindled on it could flash light into Butler county, near Elk Creek, where it would again be taken up by the watchman there, and light flashed in the direction of Xenia, and from one signal mound to another until it would reach the great works at Newark. Thus in the course of an hour the whole southern portion of the State of Ohio could be warned of danger and prepare for combat or shelter.

Such a system has been used by all nations, both civilized and savage. We need not wonder that the Mound-builders with such sagacity and forethought, should establish such a system of alarm by which the inhabitants could be apprised of invasion.

Indefinite Mounds.—Of this class there are many. Thousands of such indefinite mounds and squares and circles are to be seen scattered over the various States of the Union. Their structure, composition and contents, give us no clue by which they may be assigned a place. It is believed that

many of the strange works that abound in Butler county, Ohio, and which cannot be classified, are among the incomplete works, that is, works left unfinished by the builders.

IMPLEMENTS.—The people of Ohio have appropriated the implements of the Mound-builders to a large extent. Almost every homestead in Ohio is ornamented with some of those ancient implements and relics, yet tons have been taken away to grace private and public museums in all parts of this country, and even the museums of Europe and Asia. Among the implements are to be found spear heads, arrow heads; rimmers, knives, axes, hatchets, hammers, chisels, pestles, mortars, pottery, pipes, sculpture, gorgets, tubes, and articles of bone and clothing. Fragments of coarse, but uniformly spun and woven cloth have been found, of course not in preservation, but charred and in folds. One piece, near Middletown, Ohio, was found connected with tassels or ornaments, and may be seen at the Smithsonian Institute at Washington. In Anderson township, Ohio, native gold has been found for the first time. Several small ornaments of copper have been found covered with thin sheets of gold. Earrings also, made of meteoric iron, have been found, and a serpent cut out of mica. Some terra-cotta figures also, which give us an idea of the way the hair was dressed in the days of the Mound-builders. I cannot here name all the implements and ornaments that have been discovered. Though most of them are of hard stone, yet many have been found made of copper.

MINING, ETC.—That these people were miners, is evident from the prevalence of various mineral fragments and implements. At Mound City, near Chillicothe, has been found galena, none of which can be found in Ohio. Obsidian also is found in the shape of instruments, which they must have transported from the Rocky Mountains. Ancient mining shafts are found in Minnesota, where the solid rock had been excavated to the depth of 60 feet. On Isle Royal there are pits 60 feet deep, worked through nine feet of solid rock, at the bottom of which is a rich vein of copper, and in the two miles of excavations in the same straight line

have been found the mining implements in great numbers. Such advancement in mining, sagacity in warfare, industrial pursuits, and geometric skill, as their works display, prove their great superiority of race over the modern Indian. Their implements, some of them most elaborately made, their brick-making and various other ingenious works, enable us to place them high as an industrial people, while their sacred enclosures, and altars, and tablets, together with the numerous evidences of their being an agricultural nation, enable us to place them far above the modern Indian in the scale of civilization.

The people of the United States, though much to be commended because of their prudence and forethought in laying out their modern towns and cities along the various water courses, which serve as the different highways of commerce, have by no means shown a superior sagacity in that respect to the Mound-builders, whose great centres of population are now mostly occupied, or are encroached upon by the modern cities.

We may with safety assert that the population about Newark, and Xenia, and Mound City, was far above what it is now. The country about Dayton, Miamisburg, Oxford, Hamilton and Marietta was, undoubtedly, in the days of the Mound-builders moving with a greater mass of human beings than it can boast of to-day.

And if those peaceable and industrious inhabitants were as numerous as their remains indicate, what must have been the strength of those invading hordes who caused their downfall and perhaps wiped out forever every living representative of that ancient race, who could leave no more lasting memorial of their existence and struggles than those mysterious mounds which have given them their name.

ANTIQUITY OF THE MOUND-BUILDERS.—Upon this point there are many theories, some regarding them as the earliest of the Indian tribes. Others give them a very great age and claim them to belong to preadamite man. By far the greater number of archæologists, however, place their existence at about 2,000 years ago.

In favor of the latter view we may call as evidence the present forest trees, which, though of great age, still flourish on some of the ancient remains. On one of the mounds at Marietta, Ohio, there stood a gigantic tree, which, when cut down, displayed 800 rings of annual growth. In many other places, trees of the age of 750 years have been cut, and underneath them evidences of previous forests found. One tree 750 years old was found to have underneath it, on the walls of one of the forts in Ohio, the cast of another tree of equal size, which would carry us back at least 1,500 years since those trees began to grow on those deserted walls of that ancient fortification.

We have some data in the vegetable accumulations in the ancient mining shafts near Lake Superior, as well as in the vegetable and other matter deposited in the numerous pits and trenches found among the works. Though these evidences cannot give the exact time of their accumulation, yet they give it approximately by comparison with similar recent deposits.

There is another still stronger argument in favor of their antiquity, viz., the decayed condition of the skeletons. The skeletons of the oldest Indian tribes are comparatively sound while those of the Mound-builders are much decayed. If they are sound when brought out, they at once begin to disintegrate in the atmosphere, which is a sure sign of their antiquity. We know that some skeletons in Europe have lately been exhumed, which, though buried more than 1,000 years, are comparatively firm and well-preserved. We are, I think, bound to ascribe a greater antiquity to the Mound-builders' skeletons than to those found in the ancient barrows of Europe. Other considerations, such as stream encroachment, and river-terrace formation, might also be brought in as presumptive arguments in favor of their great antiquity.

ORIGIN OF THE MOUND-BUILDERS.—This is a question not easily answered. It brings me into no discredit before the educated world to acknowledge ignorance on this mysterious point. The study of Craniology and Philology, in con-

nection with Ethnology, shall alone throw light on this subject. Dr. Wilson says, in his "Prehistoric Man" (p. 123), "The ethnical classification of this strange race is still an unsettled question," and he declares without fear of contradiction, "that especially concerning the Scioto Mound skull, the elevation and breadth of the frontal bone, differs essentially from the Indian, and that the cerebral development was more in accordance with the character of that singular people, who without architecture have perpetuated, in mere structures of earth, the evidences of geometric skill, a definite means of determining angles, a fixed standard of measurement, and the capacity as well as the practice of repeating geometrically constructed works of large and uniform dimensions."

Undoubtedly they were skilled in agriculture, from the remains of ancient garden-beds, which were cultivated in a methodical manner. The modern Indians give no such evidence of labor. For wherever they are found they love to roam in undisputed possession of the forest, and lead an indolent life. Of course I do not assign this as a valid reason for their not being identified with the Mound-builders. An ancient race may have a degenerate offspring.

Nor shall I attempt to find in the various inscriptions any clue to their Hebrew origin, or to identify that ancient people with the lost tribes, as some have dared to do. Foster inclines to regard them as emigrating from the tropics, rather than coming from the north.

This would involve us in investigating the antiquity of the Mexican and Peruvian ruins, where vast works of high architecture and more advanced civilization were found than among the Mound-builders. There is little difficulty in concluding that the Aztecs, who occupied Mexico during the Spanish invasion under Cortez, were the conquerors of several races that preceded them. Among these conquered races, no doubt, were the Toltecs, who were afterwards found in such great numbers, and in an amazing state of advanced civilization. The crania of the Mound-builders and the Toltecs correspond. Now, whether they migrated to the north from the tropics, or journeyed south from the

north, I cannot say. I should incline to the latter theory. Industry is sure to advance. The rude mounds of the United States are far surpassed by those immense pyramids in Mexico and Peru, surpassing the Egyptian in size. And those fine architectural palaces and temples, whose history we cannot fully know, far eclipse anything in the northern part of America.

Whoever they were and wherever they came from, they were doubtless driven southward by the invading tribes of the north. They nobly fought their way, contesting every foot, until superior numbers took them by force. Thus these quiet and inoffensive creatures were finally expelled from their home which doubtless their fathers had occupied through centuries. If any escaped they, no doubt, found an asylum southward, where there were other tribes equally civilized, and, forming an union with them or conquered by them, they began a higher and better civilization as seen in Mexico and Peru.