ANTIQUITIES.

In order to aid in throwing as much light as possible upon the mystery which surrounds the pre-historic races who once occupied the Mississippi valley, attention has been directed to collecting stone and other relics and to the mapping of tumuli and walled or fortified sites of villages which alone remain, so far as yet known, to mark the progress of their arts and as evidence of their civilization. Only a small portion of the State has, so far, been examined in this respect, yet the results accomplished are in the highest degree gratifying; while uncollated information points to still richer fields before us. Though it may not prove possible by this research and study of archaeological history to fully satisfy ethnologists of an unbroken chronology that connects the mound-builders with the existing races of red men, yet it is to be hoped that much may be done to establish the geological era which marks the first appearance of man upon the earth.

Opinions that are founded upon mere superstition must yield to well authenticated facts, for people who have the independence to think for themselves, can not fail to see by the light already before us, that it will not satisfy the inquiring mind to circumscribe anthropological history within the narrow limits of six thousand years. Indeed, ten times that number of cycles of time will not suffice to account for the changes which have taken place in the physical features of this planet, nor for the extinction of species of animals that were contemporaneous with man; and for
the subsequent introduction of new forms of organic life. It is not at all improbable that the existence of man dates back, at least, to the time when dry land occupied most of the area now covered by the Pacific Ocean and connected China with America. Nor is it difficult to trace a close resemblance both in national and physiological organization between the inhabitants of India, China and Japan and the Toltec and Aztec races of America. Each have the same general features, color of skin, and long, coarse, straight, black hair, with the same habits of seclusion from outside interference in their domestic arrangements.

The walled enclosures of the Aztecs, Toltecs and pre-historic men of this country have their counterpart in the great Chinese Wall which was made to enclose an entire nation and shut off all intercourse with strangers.

In the Indiana Geological Report, 1873, an account is given of a remarkable pre-historic stone wall enclosure, situated on the Ohio river at the mouth of Fourteen-mile creek in Clarke county. Since the publication of that account Mr. W. W. Borden has, while prosecuting the geological survey in that portion of the State, fell in with a number of remarkable antiquities not before noticed, and to which he called my attention. Being favored last fall by a visit from Prof. F. W. Putnam, Editor of the American Naturalist and Director of the Peabody Museum, a scientist who, in connection with other important studies is probably giving more attention, at this time, to archaeology than any one else in America. It was thought advisable to take advantage of the occasion by availing myself of his valuable aid to make an examination of these new discoveries. Prof. Putnam was on his way to join Prof. Shaler's corps in the geological survey of Kentucky and the localities to be examined were not far out of his road.

In the natural advantages of the location and in the execution of the bold plans conceived by the engineers of a primitive people, this fortification surpasses any antiquity of the kind which has yet been found in the State. The
walls which fill up the spaces unprotected by mural escarpments, around this enclosure, are generally ten feet high from the outer base, but at a natural weak point, on the north-west part, the gap was closed by a wall built after the fashion of the others, that from the outer base to the top was seventy-five feet high. After passing around the entire enclosure and taking a look from the summit, 250 feet high, over the beautiful scenery which lay before us for a stretch of eight or ten miles up and down the Ohio river, Prof. Putnam expressed himself as having been highly pleased with the day's work. From Charlestown we went to Lexington in Scott county. From this place we were accompanied by Doctor Jordan, Dr. Hutchinson and Mr. Powell to a locality which has excited the curiosity of the whites from the earliest settlement of the country to the present time. The location of these antiquities is in the northeast corner of Clarke county on section 32, T. 2, R. 10, about one mile below Dean's marble quarry and just south of the Jefferson county line. The land is owned by J. C. Davis, an extensive fruit grower.*

The elevated point or spur of the main ridge, containing the antiquities, was selected, as in all other instances, by the mound-builders, on account of its natural defences against sudden surprises from an enemy and the fine view which it affords of the country for many miles up and down the Ohio river. The approaches, except on the north, are defended by a mural wall of rocks composed in the descending order as shown in the accompanying section, Fig. 3, of

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*Mr. Davis moved from Ohio a few years ago and selected his present farm, on the high ridges, believing it to be one the most favorable locations for never-failing crops of peaches. The fruit grown here is highly colored and of most excellent flavor. This important feature of the fruit he believes is due in a great measure, to the excellence of the soil and peculiar meteorological conditions dependent upon elevation and proximity to the river and its broad bottom lands. His peach orchard contains a total of 35,000 trees, of which 15,000 are in bearing condition. Though the season was not the best, by any means, the yield for 1874 was 3,000 bushels of marketable peaches.
Corniferous, Niagara, Clinton, and Cincinnati beds, having a total thickness of 371 feet.

A plat of the locality is shown in Fig. 4. The antiquities that prompted our visit to the locality are two circular piles of stone with neck-like prolongations that lie in opposite directions. After giving a hasty glance at the confused heap, it must be confessed that we felt a little disappointed, but after a careful survey of the place we were enabled to discern the figures given on the plat. The most prominent parts of the mounds are twenty-two
"Stone Mounds."

On a bluff, 317 ft. above the Ohio river in the eastern edge of Clark Co., Ind.
feet in diameter and forty feet long, measured in the direction of A. B. The sigmoidal passage-way is about six feet wide. In the centre of each mound there is an excavation about three feet deep, probably of modern date and made by parties under the impression that the stones had been piled up to mark the site of buried treasures. We were informed that it is the opinion of some of the old settlers in the neighborhood that the cave, seen a short distance to the west, extends beneath the mounds and that the holes in the centre of each communicates with it. If such is the fact it would furnish a very safe retreat for a small colony and may account for the absence of more extensive works for defence. A look into the excavations made in these mounds shows that the stones were piled up regularly and lapped so as to break joints, but without the use of mortar. The tumbled exterior is the work of desecration and natural decay. That the heaps of stone are the relics of the mound-building race there can not be a doubt. The location is just such as they were in the habit of selecting as a provision against the sudden approach of an enemy. Indeed the location is so well protected by natural walls of stone that it would seem almost useless to add others. These peculiar heaps of stone may have been made as monuments to commemorate some remarkable event, such as a great battle, the death of a noted leader, or the selecting of a chief. That prehistoric races were in the habit of commemorating notable events is made manifest by the numerous carvings of human tracks and the tracks of birds and quadrupeds upon massive blocks of stone which lie at horizons which mark the lowest or highest water of large rivers.

An example of this is seen at the "Foot-print rocks," in Union county, Kentucky, situated at the edge of the bottom land approaching the Shawneetown ferry. On a massive sandstone which here rises above the surface of the ground at an angle of twenty-four degrees there are a great number of carved feet of men, birds and quadrupeds, which occupy the horizon of the highest known water of
the Ohio river. Similar carvings are found at the high-
water mark of the Mississippi river above St. Louis.

A great many stone implements have, from time to time,
been picked up in the vicinity of the stone mounds and
Mr. Davis very obligingly gave to the State cabinet a stone
ax, large stone spear head and a number of arrow points
and fleshers.

A threatening rain which set in soon after leaving the
mounds, and the want of lights prevented us from exploring
the cave in search of relics, fossil bones, etc.

On our way back to Lexington an opportunity was
afforded Professor Putnam to make a hasty examination
of a large circular earth work on Jas. D. Robinson’s farm.

Fig. 5 is a plat of this circle made from measure-
ments given by W. W. Borden. It is on a second bot-
tom of Fourteen-mile creek and about eight miles from
the “Stone fort” and two miles west of the village of New
Washington. The elevation is twenty to thirty feet above
the bed of the creek and four hundred yards distant. It
is six hundred yards in circumference, ten or twelve feet
wide and at present, fifteen to twenty inches above the
general surface. On the northeast part there is a gap or
passage-way six to eight feet wide. At the point marked
by a + at the west side of the entrance there is an oak
tree three to four feet in diameter. Within the enclosure
there are two pit-holes shown in Fig. 5a in section along
the line A. B. A farm road crosses it in an east and west
direction. Prof. Putnam dug into the circular bank in
several places and found it to be made up of aboriginal
kitchen refuse, fragments of bones of various animals,
fresh water shells, and bits of broken pottery. The frag-
ments of pottery are marked with a variety of rude
devices.

The action of the plow in cultivating over this enclosure
during a great many years, for it lies in a cultivated
field, has had much to do in reducing the elevation of the
wall and mixing the earth of which it was constructed,
with the kitchen stuff which had probably been thrown
Circular enclosure on the land of
Jas. D. Robinson, 2 miles west of
New Washington
Clarke Co. Ind.

Fig. 5
on the outer side. The fertilizing effect of the kitchen midden is such as to define its position by a corresponding circle of luxuriant corn.

Mr. Roberts says that a number of stone relics have been plowed up by cultivating the circle, but they have been lost or carried off by collectors. On the outer edge of the circle he found a part of a skeleton of a man lying under a flat stone, that was covered by a few inches of dirt. A skull, thigh bone, part of the bones of the arm and some ribs were taken out. He also says that there are a number of mounds on Fourteen-mile creek, half a mile to the south.

This is a highly interesting antiquity and is well worthy of a more careful study. At Lexington we were joined by Dr. Levette and the next day proceeded by rail to the antiquities on Big creek in Sec. 5, T. 4, R. 8, just in the edge of Jefferson county. See plate 6.

This is a stone enclosure made on the spur of a ridge skirting Big creek and terminating in a broad extent of low, level land. It is one mile north of the village of Deputy on the Louisville branch of the O. & M. R. R. which passes through the narrow part of the spur.

The fort or enclosure is protected on the north and south sides by a natural wall of Niagara and Corniferous limestone, from sixty-five to eighty feet high. Across the narrow neck of the spur, on the east end, there was an artificial stone wall seventy-five feet long and twelve feet wide. The west side was closed by another artificial wall of stone four hundred and twenty-five feet long. The latter was curved so as to protect all points not naturally guarded by the mural walls with which it is connected. The foundation stones are all that now remain to mark the place of these made defences. The superstructure has, at various times been removed and used in the construction of chimneys, foundations to houses, etc., etc. The chimneys to Mr. Wiggins’ dwelling house were built of stone taken from these walls. On the north side of the enclosure in a short, shallow ravine, which pitches off abruptly, there is a cave spring
from which the dwellers within the enclosure could secure an abundant supply of water at all times and would prove invaluable in time of siege.

On the high ground, near the cave spring, are a number of circular depressions which probably mark the place of sinks such as are common to prehistoric works of this class. The enclosure contains about twelve acres. Fig. 2 represents a section of the strata forming the mural walls on the north and south sides. The height of the section, measured from the low water of Big creek, is eighty feet. A capping of black shale is seen in places.

The Corniferous beds are filled with fossils peculiar to this geological era. It is well exposed on the point near the railroad cut, and since it may be easily raised from its bedding, was principally used in the construction of the east and west walls of the enclosure. The Niagara, as shown in the section, forms the base of the cliff along Big creek.

The site of this ancient dwelling place like all others visited, affords an extended view for many miles over the country, north, east and south. Big creek bottoms and the level tract of country on the north side of the town or fort, afforded rich lands for cultivation.

Since our visit to these antiquities I have received a letter from Dr. Jordan in which he gives an account of three stone mounds which lie a short distance to the northeast of
Deputy and between that place and the fortified town above described.

In a letter to me, Dr. Jordan says: "Agreeable to promise I went to Deputy and re-examined the antiquities of which I made mention when in Indianapolis, and send you a rough sketch of the locality. The land on which these antiquities are situated was settled by Middleton Roberts in 1811. The stone mounds were, at that time, about five feet high and the oldest Indians then living in the neighborhood knew nothing of their origin. His son David fell heir to the land and it is now owned by David's son, Philander Roberts. The antiquities consist of three stone mounds built upon level ground a short distance northeast of the depot at Deputy and three hundred feet east of the railroad. The largest of the mounds is egg shape, greatest diameter 135 feet, lesser diameter 60 feet; fifty feet to the northeast of "egg-mound" is a smaller one 15 feet in diameter, and fifteen feet north of this is another, 20 feet in diameter. They are all made of stone, and as Prof. Putnam said of the Ohio bluff antiquities, they seem to be mere piles rudely thrown up. Stone was hauled from these mounds to build the stone house three-quarters of a mile to the south, and for building foundations, fire places and chimneys to nearly all the houses for miles around, so that they have been nearly leveled to the ground. Some years ago parties opened the small mounds and found stone axes, flint arrow points and one pipe. Flints, in abundance, have been found in and around the large mound. On Lewis creek, a few hundred feet to the east, there is a stone quarry and the bluff along the stream is 80 feet high."

The discovery of these stone mounds near Deputy and the testimony of the first white proprietor of the land and that of his regular descendants, in regard to their history and antiquity, and the ignorance of the savages in regard to them, can no longer leave room to doubt that they are genuine relics of the mound-builders and that they are not mere meaningless piles of stone.

The topography of Clarke, Jefferson and Scott counties
consists of high ridges separated by broad arable plains and deep streams bordered by bold bluffs. This seems to have been eminently fitted to the habits and wants of the mound-building race. Here we find some of the most interesting works which are left as monuments of their skill and industry. From the great fortified town at the mouth of Fourteen-mile creek to the fortification at Wiggins' point on Big creek, a distance of about thirty miles, there appears to be a line of antiquities that mark the dwelling places of intermediate colonies, and these, when pushed to extremes by an invading foe, may have sought protection in the strongholds at either end of the line.

Everything connected with the antiquities of the mound-builders gives evidence of a peacibly disposed people whose greatest desire was to be let alone. In this respect we may trace another resemblance to the custom prevailing with the Chinese.

From the earliest pre-historic times to the present, man seems to have been pre-disposed to acquire and cultivate habits that are calculated to disturb the natural secretions of the body for the apparent purpose of bringing on a new and strange sensation, something to dull the sensibilities of the nervous system and induce a semi-conscious state of mind.

The great number of stone and earthen pipes found associated with human remains in the tumuli of this country go to prove that the use of narcotics in the form of smoke originated with the pre-historic races of America.

After the discovery of the New World the habits of smoking tobacco, acquired from the Indians, spread with amazing rapidity all over Europe.

From the following figures of pre-historic pipes taken from mounds, and plowed up in cultivated fields, from different parts of the State, it will be seen that, though differing in form and design, the principal of a bowl in which the tobacco is burned and a communicating hole at the base through which the smoke may be drawn into the mouth, is essentially the same as in pipes of modern construction. Sometimes the pipe and stem of the aboriginal smoker is of
one piece as seen in Fig. 1, Pl. 2, and Fig. 1, Pl. 3, while the other figures show an arrangement for attaching artificial stems of wood. Though some of these ancient pipes are quite plain and unpretentious in their workmanship, others show that no little care and attention was bestowed upon their manufacture.

Plate 7. This pipe is carved out of a hard, course grained, gray colored, trap rock. It is a fair representation of a bull frog and, with the exception of one or two physiological omissions, would do no discredit to many a modern pretender in the art of carving. The figure is full size: Five and a half inches long and four inches high. The bowl which is situated on the back, is one and one eighth inches in diameter; the greatest diameter of the stem hole is one and one quarter inches, and tapers rapidly to its connection with the bowl. It slopes upward at an angle nearly corresponding to that of the back of the frog and forms a slightly obtuse angle with the bowl. In order to smoke such a pipe with ease it should either be held above the level of the mouth or the stem should be crooked to suit the lower position. The excellent finish and high degree of art displayed in carving so perfect an image of a frog from hard stone might at first lead one to question its authenticity as a relic of pre-historic times, but when it is compared with other pipes which belong undoubtedly to the mound-builders or stone age, there is little room to dispute its claim of antiquity. In all the stemless mound builders' pipes which I have seen, the bowl and stem holes are nearly equal in size at their openings; the latter opening tapers rapidly and is small where it connects with the base of the bowl and forms with it a slightly obtuse angle.

The frog is sitting upon his hind legs which are admirably folded, but the artist exhibits carelessness in minor details by only giving four instead of five toes to the hind feet and three instead of four toes to the fore feet.

The attitude is quite natural and the head and body are in good proportion. It was found by Mrs. Margaret Rogers, on her farm in Fountain county, Indiana, one mile
from Covington, and loaned to the State to be figured and described.

Plate 8, Figure 1, is a full sized earthen pipe, found by Colonel Bates near Newburg in Warrick county, Indiana, and presented to the State collection. It is made of material similar to that used by the mound-builders in the construction of pottery, i.e., river mud or soft clay and pounded mussel shells; it did not require to be baked in the fire and is simply an artificial stone.

It is four and a half inches long; the opening of the bowl is one and three-quarter inches in diameter. The stem hole is ovoid, greater diameter one and seven-eighth inches, lesser diameter one and one-quarter inches and tapers rapidly to the bottom of the bowl. The bottom part of the pipe is flat and there is a knob on each side of the bowl, which served both as ornaments and as feet to prevent the pipe from falling over on its side when laid away.

Plate 8, Figure 2. This pipe is made of a fine grained, gray colored limestone, is elegantly polished and the stem and head are all of one piece. The long shank below probably served as a handle to hold it by while smoking. It is represented of natural size. This beautiful specimen of mound-builders carving was presented to the State Collection by George Hasty, M. D. He found it on black, marshy land in Harrison township, Henry county, Indiana, in 1868.

Plate 9, Figure 1. This figure is only one-third of the full size. This pipe is carved out of greenish gray, compact, steatite. It is perfect in itself and does not require an additional mouthpiece. The figure is a very good imitation of a wolf’s head. The bowl is one and a half inches in diameter and three and one-quarter inches deep. From the centre of the bowl to the end of the stem is six inches, and the whole length of the pipe from the end of the stem to the tip of the wolf’s nose is eleven and a half inches. The stem hole is a full half inch in diameter, of uniform size throughout and made as straight as if drilled by machinery.
It appears as if the design for this pipe was intended to utilize all the stone at the disposal of the workman, for while the right side is true and well polished, there is on the left side a slight longitudinal curve and near the middle and below the bowl are some natural indentations which could not be removed without very materially destroying the symmetry of the figure, consequently they were deemed of less detriment than to diminish the size of the bowl which is in harmony with the carved image.

I am indebted to Mr. Jacob T. Wright of Indianapolis, for this beautiful specimen of mound-builders' pipe. He obtained it from a friend in Fleming county, Kentucky.

Plate 9, Fig. 2. This pipe head is made of unbaked clay and powdered mussel shells, similar to the material used in the mound-builders' pottery. It is of rude construction, nearly flat on the bottom. The only effort at ornamentation are two projecting knobs in front. The bowl tapers to a small hole which connects with a very large stem hole. The figure is natural size; it was found at the "Bone Bank" in Posey county, Indiana, and is a part of a number of mound builders' relics presented to the State collection by the Mt. Vernon Lodge of Odd Fellows.

Plate 9, Fig. 3. Sandstone pipe, head handsomely finished, being even and true. In design it resembles an urn. The bowl is deep, regularly tapered and cut as true as if drilled by machinery. The stem hole is large for the size of the pipe which is represented full size, tapers rapidly and slopes upward at an angle of about 40°. This upward slope of the stem hole seen in so many of the pre-historic pipes must have been made for a special object; and that was to enable the ancient man to smoke while taking his ease by lying on his back with his head slightly elevated, in such a position the bowl of the pipe will be vertical.

This pipe was found by Lycurgus Chaffin, associated with a copper axe of a peculiar construction, plummets made of magnetite and a number of stone axes and flint arrow points. They were plowed up in a short ridge elevated just above high water mark on the Cut Off island, one mile from New
Harmony, Posey county, Indiana, and presented to the State Cabinet by Mr. Chaffin.

Plate 9, Fig. 4. Full size representation of a pipe head, made of silicified fossil coral, *Chaetetes lycoerdon* sp.? The shape is ovoid, top and bottom flat, under side is beveled in front, stem hole is large, tapers to a small hole where it joins the bowl, and forms an obtuse angle with it. This arrangement also enabled the happy owner to smoke while lying on his back without danger of spilling the ignited tobacco.

I know nothing by personal experience of the pleasure derived from pipes or cigars and therefore put forth the inquiry; may there not be more real enjoyment derived from the smoke of tobacco if inhaled while lying on the back? And after all, looking to pre-historic man, with whom the habit originated, may it not be the most refined as well as most ancient way to indulge in the habit of smoking.
The figures 1, 2 and 3, Frontispiece, represent different views of a very remarkable stone implement of the mound-builders age.

It was found by Mr. Walter Bennett, of Merom, Ind., three feet beneath the surface, while digging dirt in Crawford county, Ill., to build a levee, on the opposite side of the Wabash river from Merom.

It is formed out of a small trap boulder, and is represented about two-thirds full size. The stone has been ingeniously worked, on the side represented in fig. 1, so as to exactly fit the palm of the hand. It has a raised centre and projecting rim. The opposite side is shown in fig. 2; the indentation on this side is just large enough to enclose the four fingers of the hand, while the projecting rim is high enough to shield the ends of the fingers if the implement was used as a "stone-knucks" for dealing blows to an enemy or in defense.

The front is regularly rounded and slopes slightly from the rim, which rests on the wrist, to that part which protects the ends of the fingers. Fig. 3 is a view showing the broad rounded edge in perspective.

It is evident that this implement may have served a variety of purposes, such as crushing and grinding corn, rubbing skins, and for other domestic pursuits, or as a convenient and effective weapon for dealing deadly blows when occasion demanded such an application.

This form of implement is entirely new to archaeologists, and indicates a high antiquity for artificial "knucks."

I was a little surprised at not finding in either Webster’s or Worcester’s excellent dictionaries the word "knucks."—a word frequently used in police reports to designate a brass instrument that covers the knuckles, and is used by rowdies for striking their adversaries deadly blows.