

PREHISTORIC
ILLINOIS

A Thesis for the degree of B.L.

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PREHISTORIC ILLINOIS.

The first travelers and the first settlers in Illinois were so interested in its material aspect, that they gave little attention to the evidences of an earlier aboriginal civilization. Some of the earliest explorers make mention of these remains, it is true, but no careful description nor thorough investigation of them has yet been attempted. Numerous explanations of the mounds, etc., have been made by different men in various localities, but a complete survey of the whole state is still to be made. And if such a survey is ever taken, as it ought and no doubt will be, it will be found that we have not been the first to recognize and appreciate the natural advantages of this fertile region, but that ages ago, a numerous and active population lived within the present limits of our state, subsisting by means of the chase and the cultivation of the willing soil.

Having no complete survey of this kind to guide me in the preparation of this paper, I have no doubt failed to notice many things that are worthy of mention. Where personal observation has been impossible, I have been compelled to rely upon the statements

of others; and it is entirely probable that some really important antiquities have been overlooked. But while I may have omitted some valuable details, I feel confident that I have not erred in the other direction by giving credence to every report of supposedly wonderful discoveries. Almost every locality has its collector of "relics," who has his own theories on all matters connected therewith, or some one who is ready to furnish any amount of information about rare "Indian stones" and unusual "finds;" but I have endeavored to make use of material from only the most reliable sources. Hence in presenting the following pages, I do it with the feeling that, while I have been prevented from treating any part of my subject as extensively as I would desire, I am yet able to give a brief sketch of the archæological aspect of our state, which I believe may be taken as a reliable statement of the principal facts which can at this time be obtained concerning Prehistoric Illinois.

T h e M o u n d s .

The most prominent antiquities of Illinois, and those which would naturally be first to attract the attention of the student of its prehistoric civilization, are the mounds. These are heaps of earth ranging in size from the scarcely perceptible mole-hill to hillocks of more than ninety feet in height. They are of vari-

ous forms, usually round or oval, sometimes square or oblong, rarely polygonal, and, perhaps still more rarely, having the rude form of a bird, reptile, or other animal. In this state they are usually found occupying the higher bluffs and ridges, overlooking lakes or streams. Many notable mounds, however, are to be found on low ground, usually rich bottom land along our larger rivers; as, for example, in Pike County and on the American Bottom. Yet it may be stated as a rule, that elevated sites were selected for these earthworks; and upon almost every bluff or hill which commands an extensive view of the surrounding country, and especially if much water be included in the landscape, may one find a group of mounds.

I am not aware that any mound is to be found alone; that is, at any great distance and entirely disassociated from any others. I do not know of one undoubtedly artificial earthwork that does not have from one to fifty others within a distance of a few hundred yards. Ordinarily, the mounds so grouped together form colonies quite distinct and separate from each other. Thus it may be many miles from one group to the next, or they may be separated by but a few rods of unoccupied ground, and again adjacent groups may be connected by a chain of mounds. Along the watercourses, where one might expect to find the mounds scattered irregularly along

the bluffs, the same grouping is usually, though not always, to be found. Sometimes there are only a few, three or four or a half dozen, in the cluster, and again there may be an area of many acres thickly covered with these ancient monuments.

The individual mounds composing the groups are variously disposed,— sometimes, and perhaps most commonly, having no definite arrangement, as in the New Albany and Hutsonville groups (Plate *II. Fig 1 and 2*), sometimes arranged in lines, straight or curved, as in the groups shown in Plate *V. f. 3*, and again they are placed as if intended to guard the approaches to a camping ground or other retreat, as in Plate *V. Fig. 2*.

The round mounds are by far the most numerous, and are to be found wherever mounds occur at all. In some localities there are hundreds together, and so thickly placed that they almost cover the ground. In height they range from a few inches to twenty or thirty feet, occasionally even higher, and in diameter from ten or fifteen feet to thirty to fifty feet, though mounds of this type with bases of a hundred and more feet in diameter are by no means rare. The most common size is from fifteen to forty feet in diameter, with a height of from two to five feet.

Associated with these, and apparently differing from them only in shape, are the oval mounds. The oval type is certainly next to

the round in point of numbers, though far less common. In nearly every group of mounds there are one or two, and sometimes more, of the oval kind; but there is nothing in their position or contents to indicate that they were erected for any purpose other than that for which the round ones were built. Occasionally groups occur in which the prevailing type is oval, as in a large group situated about two miles southeast of Bishops' Store, Eliza Township, Mercer County, and on the lowlands at the head of the "Suy," in the southwestern part of Adams County. No one, to my knowledge, attaches any significance to this difference in shape of mounds, which are in other respects alike. It was probably owing merely to a caprice of the builders, or was given for the purpose of distinguishing a particular class, family, or tribe. The two types, the round and the oval, are distinctly sepulchral types. It is true, human remains are not infrequently found in rectangular and other mounds, but the round and oval kinds appear to have been built almost exclusively for burial purposes, while for most other types other uses were probably intended.

In excavating these sepulchral mounds, the explorer finds that they are often composed of earth which is unlike that of the surrounding surface. I have in mind several mounds on the bluffs of the Mississippi, which were built up of material evidently taken

from the bed of some creek, and others situated on a high prairie, in which use has been made of the white loess which crops out on the adjacent bluffs some two miles away. While foreign materials were thus frequently employed in building the burial mounds, it was not always, and, indeed, not generally, so. More often the earth appears to have been taken from the surrounding surface, but in no case does any depression remain about the mound, which would indicate that the soil had been excavated to any depth in obtaining material for the structure.

Sometimes no human remains whatever are discovered, even the bones having entirely perished through the lapse of time, but in most cases some bones and teeth are found resting on or near the original surface of the soil, as if the body had been deposited on top of the ground and the mound heaped over it. In most of the smaller mounds but one skeleton is found, but in the larger ones great numbers are often discovered—a fact upon which we might speculate indefinitely. Sometimes the body was first enclosed in a vault of stone, as in some of the Cass and Whiteside County mounds; sometimes in a rude coffin of flags, as in several of our southwestern counties; and sometimes there are traces of bark or cloth wrappings, though there is usually nothing to indicate that the body was covered with anything but the earth which was heaped upon it.

The dead Mound Builder seems most commonly to have been buried in a sitting position, although the skeleton is often found extended; and when so extended, the head may lie indifferently in any direction. The Mound Builders appear to have had no superstition as to what point of the compass their dead should face. Sometimes the skeleton is found compressed within narrower limits than would be possible when clothed with flesh. It is inferred from this that the body was first exposed on top of the ground, on elevated platforms, etc., as is now done by many Indian tribes, and that after the flesh had perished, the bones were collected and buried in the position in which we now find them.

With the remains are often found beads, ear-studs, amulets, gorgets, and other articles of personal adornment, implements of war and the chase, pipes, jars, bowls, celts, knives, pestles, and other domestic utensils. All the articles enumerated are seldom found together in one mound. In the majority of cases, I believe, no relics whatever are discovered; though there will often be a pipe, an earthen bowl, some flint arrow-points, or a shell, and occasionally a vast quantity of utensils and ornaments are unearthed.

The number of these burial mounds in Illinois is very great. They are especially numerous along our western border, covering the bluffs and, in many places, the lowlands. It is estimated that in

Mercer County alone there are not less than one thousand, and others of our river counties no doubt contain as many. And yet it is evident that they would be much more plentiful had the Mound Builders buried all of their dead in tumuli. The population was at some periods, at least, undoubtedly very considerable, for otherwise such extensive works could hardly have been erected. A large population of this sort, during an occupancy of several centuries—and for aught we can tell, many thousands of years—would certainly have more dead to dispose of than these mounds evidence. It would seem, then, that mound burial took place only in certain cases. Some of the dead must have been disposed of in other ways. They may have been burned, and the ashes scattered; they may have been buried in the earth with no mound to mark the place; or they may have been placed in trees, on scaffolds, or left on the surface of the ground for the elements to destroy, as is practiced by some of the modern Indians. Perhaps mounds were erected only over distinguished personages—kings, warriors, those killed in battle, priests, prophets, lunatics, those dying from particular diseases or under peculiar conditions.

The square and oblong mounds are confined almost entirely to the southern part of the state, the American Bottom being especially rich in antiquities of this type. They are usually large struc-

tures (in one case over ninety feet in height and covering some acres of ground), with steeply inclined sides and level tops, thus forming truncated pyramids. Very frequently the top is reached by a graded or winding way, and the larger mounds are often terraced. The most notable structure of this kind is the Great Cahokia, or Monk's Mound, near East St. Louis, and the Emerald Mound, on the edge of Looking Glass Prairie, St. Clair County. In excavating in this class of mounds, human remains are frequently brought to light. However, it is not customary for archæologists to include them under the head of burial mounds, but to call them Temple Mounds or Temple Sites. It is quite generally held that these mounds, having certain analogies to the Teocallis of the ancient Aztecs, were used for similar purposes. It is conjectured that upon their level summits, which are sometimes an acre in extent, the ancient Mound Builder had his altar, or his sacred fire, and performed his religious rites. Others hold that they were reared as foundations for the dwellings of the kings or chiefs; and as early travelers found the Natchez and some of the Florida Indians actually erecting great mounds for such purposes, this theory seems fully as probable as the preceding one. Mr. William Pidgeon, relying upon traditions which he claims to have received in 1840 from De-coo-dah, a very old Indian of the Elk Nation, and the last of a long line of prophets,

asserts that the terraced structures were used as citadels, or strongholds; that when the ancient settlement was threatened by a hostile tribe, the women and children, with such property as could be easily carried, were gathered upon the top of the mound, while the warriors, the clubmen, and spearmen occupying the lower terrace, and the bowmen and slingers throwing arrows and stones from the higher ones, kept off the attacking party. One theory seems about as probable as the other, and for none is there any positive proof.

Another class of earthworks, found only in the northern part of our state, are the so-called "Effigy Mounds." These are curious structures in which the ancient builders have imitated, in a rude way, the form of some animal. They are of considerable extent, some being two hundred, or more, feet in length, but never of any great height, five feet being probably the maximum. These mounds are confined to three or four of our northern counties, and are more fully described where I treat of that region. These singular structures are very common in Wisconsin, and those which are found in Illinois appear to be outlying members of that system. Just what the motives were which prompted the erection of these strange mounds, will probably be forever a mystery. The fact that they sometimes contain human remains, has led some antiquarians to

infer that they were in some way connected with the totem system of the aborigines; that, for example, when a distinguished member of a clan died, his survivors raised over his body a mound in the semblance of the animal used as a symbol to designate the family. Again, it is thought that they were reared as memorials to commemorate some great event which especially concerned the tribe or family whose totem was the animal represented in the mound; and still again, that they were erected merely from a desire to imitate some animal which excited the wonder and admiration of the builders, or to propitiate a deity, recognized in some real or imagined creature.

In a few places in our state are found what are known as "Altar Mounds." These vary somewhat in construction and appearance, but all were evidently built for the same purpose. As they now stand, covered with trees or bushes or the vegetation of the prairies, they appear to the superficial observer little different from the ordinary round or oval mound; but a careful examination reveals their true character, and shows that they belong to an entirely different class. They are usually low, flat mounds, rarely more than three feet high, and are from ten to twenty feet in greatest diameter. On removing the top of the mound, a basin-shaped pavement of stone slabs is found at a depth of one or two feet.

The stones are undressed, but usually fitted together with considerable accuracy. They invariably give evidence of having been subjected to intense heat, and in most cases are covered with a considerable quantity of ashes and charcoal mixed with burnt human bones, broken implements and pottery. Occasionally these altar places are found on, or even below, the present surface of the soil, with no elevation to indicate the spot. It is certain that they were places upon which human bodies, or human bones, at least, were burned; but whether they were used as crematories for the dead or as places of sacrifice, we have at present no means of knowing.

With the exception of some embankments from one to three feet high, ten to twenty feet wide, and thirty to eighty feet long, which are often found in the vicinity of burial mounds and other earthworks, and are usually so situated as to lead us to infer that they were thrown up for defense; and with the exception of a few heaps of shells, broken pottery, and other debris, which appear to be refuse heaps from the culinary department of the aboriginal household, I have now treated, very briefly, of the principal classes of antiquities which occur in this state. Instances may occur in which a work varies somewhat from those which I have chosen as types, but, with a very few exceptions, all, I believe, may

be included in some one of the above-mentioned classes.

As may be seen by reference to the map (Plate I.), all, or nearly all, the remains of Prehistoric Illinois are to be found along our principal watercourses. Few traces of the Mound Builders occur at any considerable distance from a river or lake. It is not difficult to find a reason for this. Laying aside all questions of sentiment,—for it is not likely that the Mound Builder preferred to have his dwelling on the river bank rather than on the inland prairie because of its more romantic situation,—the river and its vicinity were best adapted to supply the needs of the barbarian. Having no beasts of burden, he found the stream, with its branches, a most ready means of travel and communication. It also furnished him with clams and fish; it was the haunt of myriads of waterfowl; in its wooded valleys all game was easier of approach than on the open prairies; its bluffs served him for a watch-tower from which, commanding an extensive view, he might note the presence of game, the approach of an enemy; or could signal to distant friends; while its fertile lowlands gave him the richest returns for his simple husbandry. And so, in surveying the antiquities of the Mound Builders, do we find them most abundant in the vicinity of our largest streams, where the bluffs are highest and the rich bottoms most extensive.

In order to simplify the task of locating the ancient works of Illinois, I have divided the state into three sections: (1) a strip extending the whole length of our western boundary, and including what I might term the Mississippi River system of mounds and earthworks; (2) a strip along our southeastern and eastern border, including the Ohio and Wabash rivers and their tributaries; and (3) the remaining portion of the state, which lies between the sections first mentioned, and in which the remains are for the most part on streams tributary to the Mississippi. It must not be supposed that this division is made on the basis of any essential difference in the antiquities of the three sections. It is a division merely for the sake of convenience in description.

Beginning, now, at the northern end of our first section and moving southward, we shall find Mound Builders' works at almost every step. In and around the city of East Dubuque, Jo Daviess County, are great numbers of burial mounds of the round and oval types. Two members of this group are shown in section in Plate IV. Figs.

3 and 4, and are so unusual as to deserve special notice. Fig.

is located on the side of the bluff just back of the town. In this was found a rude stone vault, some three feet below the original surface, and extending from it, on a nearly horizontal line, to the lower edge of the mound, a roof-shaped flue, or drain, made

by setting flat stones on edge about a foot apart and leaving them together at the top. The skeleton found in the vault had been partially consumed by fire. Fig. stands near the top of the bluff. It is, or was before its demolition, an unusually symmetrical structure, sixty-five feet in diameter, and ten feet high. In it was found a rectangular stone enclosure, thirteen feet long, seven feet wide, and three feet high. At about three feet from each end was a partition wall, thus making three chambers,—a central one seven feet square, and one at each end something more than two feet wide. Over the whole was a covering of small oak logs. The smaller cells were filled with a brown dust which gave out a foul odor, but the exact nature of which was unfortunately not determined. In the larger chamber were the skeletons of eleven persons, arranged in a circle against the walls. In the center of the space around which they were grouped, was a drinking vessel formed from a large sea-shell, Busycon perversum, and many fragments of pottery.

In the southern part of the same county, on and near the banks of Apple River, are between three hundred and four hundred tumuli. There is to be seen here, also, two well-marked chains of embankments, designed, apparently, for fortifications. The locality is one of great natural beauty, and appears to have been a favorite

spot with our ancient inhabitants.

At a point farther up the river, a few miles beyond the town of Hanover, occurs an earthwork which is wholly unlike any other in the state. It is said to consist of a rectangular enclosure, with sides of fifty and sixty feet, surrounded by a circular wall with which it is connected at the corners. All the walls are about two feet high and eight feet thick at the base. Those of the rectangle are composed of common clay, and appear to have been subjected, after their erection, to the action of fire. The outer wall is composed of sandy alluvium, in which are mingled water-washed pebbles and broken shells. The area enclosed is level, and differs in nowise from the surrounding surface. (See Plate VI. Fig.

5.) About two miles still farther to the northeast, there is said to be another enclosure, in the form of an ellipse, and having in its center the remains of what appears to be an animal effigy. (See Plate VI. Fig. 6,) Both of these structures are very much dilapidated, and are now difficult to trace. They are certainly strange forms, and are well calculated to excite the wonder of the antiquarian; but what may have been the purpose for which they were constructed, we have no means of knowing.

About two miles south of Hanover, on the east side of Apple River, is the largest of our Effigy Mounds. (See Plate VI. Fig. 4)

Its total length is two hundred and fifteen feet, width at middle of body seventy feet, average height about five feet. The fore-legs are built across a pre-existing embankment one hundred and seventy feet long and one foot high. It is not clear what animal was taken by the ancient artist for his model. It might have been anything from a megatherium to a buffalo. Grouped about the effigy are twenty-three round mounds and ten embankments, besides four other round mounds, each of which has a graded approach or low embankment extending from it.

Coming now to Carroll County, we find a great variety of most interesting remains. A few miles northwest of the city of Mt. Carroll, at the junction of Straddle Creek and Plum River, is a group of works which are unique in this state. (See Plate II. Fig. 4 .) The excavations made in them seem to show that they were repositories for the ashes of cremated bodies, and were built up by degrees. Some were left unfinished, appearing now as circles or segments of circles, or as low, flat mounds with level or basin-shaped tops; while others, apparently completed works, have the conical or rounded top of the typical burial tumulus. The diameters of the mounds range from twelve to twenty-five feet. It is supposed, and the supposition is supported by a tradition of the Indians, that these works were constructed by a tribe who were ac-

customed to burn their dead; that each family had its own burial-circle, to which, when a member died, the body was conveyed and there burned. A thin layer of earth was then spread over the ashes, and the basin was ready for further use. By successive additions, continued perhaps for generations, the mound was raised to a considerable height, and given its conical form. Farther to the north, on the banks of Straddle Creek, is the round mound with its circular annexes, shown in Plate VI. (Fig. 7.), while about ten miles to the east are three very large oblong mounds standing side by side. These were opened some twenty years ago, and found to cover only some fragments of decayed bones, some ashes, and charcoal.

On the lowlands at the mouth of the Plum River, is a large collection of small burial mounds, many of them arranged in lines, circles, and squares. A small group also occurs at the mouth of Apple River, and on the high ground a mile and a half to the east of this, are the two long mounds shown in Plate IV. (Fig. 1.). About fifteen miles still farther to the east, on the second terrace, on the south side of Apple River, is the group shown in Plate IV. (Fig. 2.). There is evidently some design in the arrangement of the last two groups, but we must seek in vain for its meaning.

Whiteside County is also rich in antiquities. Not only are

earthworks found in the vicinity of the Mississippi and Rock rivers, but also along the smaller streams in every part of the county. The group of round mounds represented in Plate II, Fig. 1. occurs just below the village of New Albany, on the bluffs of the Mississippi. They vary in height from two to twelve feet and in diameter from sixty to seventy feet. Many of them have been opened, but only a few contained anything but bones and broken pottery. In one of the largest of the mounds was found some years ago a chamber about ten feet square and three feet high, built of limestone laid up without mortar or cement, and containing several skeletons. In no other particular did this mound differ from the other members of the group.

In the southeastern part of the county, on the Rock River, three miles west of Spring Hill P. O., is the group represented in Plate II, Fig. 3. They lie in concentric arcs, on the alluvial bottom, about thirty rods from the river. Whether there was any design in the arrangement is uncertain. While most of the mounds are of the round type, and from twelve to fifty feet in diameter, there are eight of the oval class. The latter are quite large, measuring from 25 X 40 to 45 X 125 feet, but all are low, being less than four feet in height.

Similar mounds are found in great numbers at Portland, Proph-

etstown, and in the vicinity of Sterling. Several groups of small round mounds are also found on the Elkhorn.

A most interesting group occurs on the north bank of Rock River, about two miles above Sterling. Here, besides a great number of ordinary burial mounds, have been found two of the so-called altars. One is in the form of an ellipse, four and one half by six feet, on the top of a low flat mound about fifteen feet in diameter. The whole structure is not more than three feet high, one half of which is the stonework of the altar proper. This is composed of four courses of limestone slabs, quite accurately fitted, and so laid as to "break joints." Charred bones, ashes, and charcoal were found upon it, under the covering of vegetable mould and sod. The second altar of this group was found below the present surface of the soil, under a sedimentary deposit of river sand and mud. It was composed of one layer of large flat stones, arranged in the form of a circle about twelve feet in diameter. Under the altar were found the remains of five persons, buried with heads together at the center, and feet toward the circumference. The skull of one of these was found pierced with a small, very sharp, flint arrow-point.

In an oval mound, twenty feet long, twelve feet wide, and about seven feet high, belonging to the same group, was found an enclosure similar to that discovered in the New Albany group. It was

a quadrilateral chamber ten feet long, four and a half feet wide, and four feet high, built without any kind of mortar, and covered with large flat stones. The enclosure had no other floor than the bare ground, which had been scooped out to increase the depth. Its contents were eight skeletons, two teeth of some large animal, two fossils, and a plummet.

Another interesting group, also containing two altars, occurs in the northern part of the county, on the banks of Rock Creek. They were both built of three layers of limestone slabs laid on the natural surface of the soil. Both were circular in form, about six feet in diameter, and had been subjected to intense heat; but upon neither of them were any human remains. Charcoal in abundance was found in the soil about the altars, but upon them there was nothing but a layer of clay which had washed down from the higher ground. A short distance to the west of these structures, which are about four rods apart, is a very large group of the round burial mounds. It might be interesting to add that the two altars first described are also on the east side of a burial group.

Rock Island County contains a great many mounds, but most of them belong to the common burial type. Very large groups, mostly circular forms, occur near Cordova and Port Byron; while on Campbell Island, in the Mississippi, is a collection of nearly three

hundred small mounds. From this point to the city of Moline, these works are very plentiful. One group, lying a short distance east of the latter place, is represented in Plate V, Fig. 1. . As will be seen, this contains both round and long mounds, the former being from twelve to thirty-six feet in diameter, while the latter are from thirty-six to one hundred and eighty-six feet long with a width of from fifteen to twenty-four feet. None of them is over four feet high, and most are less than three. In a great number of those which have been explored, a layer of limestone slabs has been found a foot or so below the surface. In a great many mounds on the north side of Rock River, opposite to the town of Milan, a similar layer of stone is found. This is the only particular in which they appear to differ from the usual burial tumuli.

All around the mouth of the Rock River, and southwestward along the Mississippi, mounds occur in great numbers. Most of these are of the round type. Especially large groups occur in the vicinity of Illinois City, opposite the city of Muscatine, and on Coppers Creek in Buffalo Prairie Township.

It is estimated that in the next county, Mercer, there are not less than one thousand mounds. All are burial forms, and are situated within twenty miles of the river. The major part of them occur on the bluffs and high ground in Eliza Township; but a great

many are found north of the town of New Boston, on the sandy plain which forms the second terrace of the river. A group of rather odd design, located upon the bluffs in Eliza Township, is shown in Pl. V. , Fig. 3. The pipes numbered 3, 4, & 5 Plate IX. , and the portion of cranium represented in Plate ^(Omitted) , were taken from mounds in this group.

Just below the village of New Boston, on the high, sandy river-bank, some forty feet above the water, are a number of shell-heaps. When I saw them, a few years ago, there were about eight or ten scattered over an area of perhaps an acre. At one time a large number were to be seen there, but the river has encroached upon the place so greatly that all but a few have fallen into it and been washed away. Their form is circular, with a diameter of from eight to twelve feet, and a height of from one to three feet. The shells are now so much decayed that they offer little resistance to the spade, and it is difficult to determine to what species they belong. The following, however, have been identified: Unio plicatus, Unio tuberculatus, Unio asperamus, Unio anadontoides, and Unio metanever,— all of which are species still existing in the river. Mingled with the shells, are bits of pottery, broken flints, and burned stones. The ground in the immediate vicinity is strewn with abundant evidences that this was once used a camping place.

A large group of mounds occurs in the northern part of Warren County, on Henderson Creek, and in the southeastern part, on Swan Creek. Great numbers of tumuli are also found all along the bluffs through Henderson, Hancock, and Adams counties. Many of these are very large, and situated on prominent points, so that they form a noticeable feature of the landscape to the voyager on the river.

From the southern part of Adams County to near the mouth of the Ohio, mounds occur not only on the bluffs, but also in great numbers on the bottom-lands. And it is to be observed that while most of those upon the highlands are of the circular burial form, those on lower ground are more often oval, oblong, or square. So numerous are these prehistoric remains in this part of our state, that I cannot within the limits of this paper enumerate them all in detail. They occur in every part of Pike and Calhoun counties, and from the mouth of the Illinois to the mouth of the Ohio there are thousands of them. The most remarkable of these are in Madison and St. Clair counties, on what is known as the American Bottom. This is an alluvial plain, extending from Alton, on the north, to Chester on the south, and having an average width of eight or nine miles. It is a region of wonderful fertility, and the remains of ancient occupation found upon it, abundantly prove that the Mound Builders were not blind to the agricultural value of this remarka-

ble tract. As some one has said, "It was one of their greatest seats of empire." To the observer, the earthworks scattered over this level prairie look not unlike gigantic hay-ricks. Some are round, with bases from ten to sixty yards in circumference, and altitudes of as many feet; some are oval; some oblong; while others are square, with level summits large enough to accommodate a dwelling-house and the necessary outbuildings; and, indeed, many have been appropriated for this very purpose.

A number of groups, containing altogether several hundred mounds, are found upon the plain; but the most noteworthy are those found in the vicinity of East St. Louis. Three principal groups are here recognized: one lying within the city limits; one, a crescent-shaped group of about a mile in length and containing perhaps fifty tumuli, twelve miles to the north; and another, the Cantine group, some eight miles to the northeast, between Indian Lake and Cahokia Creek. Here are upwards of a hundred mounds, scattered irregularly over an area of some miles in circuit. In this group is the Great Cahokia, or Monk's Mound, the most imposing monument left by the Mound Builders in the United States. It is an immense rectangular structure, 560 X 720 feet at the base, and rising by four terraces to a height of 97 feet. A farm-house with outbuildings and gardens occupies its level summit, while its sides

are deeply furrowed by the rains, and overgrown with trees and bushes. Figures 1 and 2, Plate VII. give the side elevation from the west, and the view from above as it is supposed to have appeared when first completed. Figure 3 is a top view of the mound, omitting trees and buildings, as it is to-day. Near each corner of this structure stands a smaller truncated pyramid of from twenty to thirty feet in height, two of them having small conical mounds upon their level tops.

Other works, both round and rectangular, and from thirty to sixty feet in height, are common in the vicinity. Not far away is the group shown in Plate V. Fig. 5 in which some design was evidently intended in the arrangement, and near this the three long mounds represented by Fig. 4. Many of the mounds which have been opened on the American Bottom, have yielded rich returns. Copper artifacts are here found in greater abundance than in any other part of the state; as are also woven fabrics of cane, bark, and the hair of animals. One mound contained a quantity of beautiful sea-shells of the species Busycon perversum, belonging to the Gulf of Mexico.

A remarkable group of earthworks occurs on the edge of Looking Glass Prairie, two miles east of Lebanon, St. Clair Co.; remarkable as much on account of its being far from either water or elevated

ground, as from the form and beauty of its works. The principal member of this group is the "Emerald Mound," a beautiful structure in the form of a truncated pyramid, sixty feet high, three hundred feet square at the base, and with nearly an acre of surface on its level top. Situated about equidistant to the southeast and northeast are smaller level-topped mounds, and a short distance to the west, two oblong mounds.

In many places in this part of the state, are found what are known as stone graves or cists. These, like the mounds, occur in groups, twenty to a hundred being frequently found occupying a comparatively small area. But they are always below the surface, no mound or other mark remaining to indicate the place. Their general construction is coffin-like, and they are formed of flat stones set up on edge, with a floor and roof of the same material. They vary in length from two to seven feet, in width from one to three feet, and in depth from one to one and a half feet. The top of the cist is rarely more than a few inches below the surface, and the majority of them are discovered by being struck with the plow. Their contents differ little, if any, from the common burial tumuli.

In the southeastern part of Jackson County are the remains of an ancient stone wall, built across a ledge of rocks projecting in a rounded point from the northeastern side of the gorge through

which flows a tributary of the Drury. In this way a semicircular area of more than an acre is cut off, which, being defended on one side by a strong wall, and inaccessible on the other sides because of the steepness of the cliffs, was a secure retreat, within which a comparatively small body of warriors might easily resist an attack from a much larger force. The wall, which was of rough sandstone without cement, is now a heap of ruins, 280 feet long, 30 to 35 feet wide, and $2\frac{1}{2}$ or 3 feet high. The stones appear to have been laid with little regularity, and none is so large that a strong man could not easily carry it. A work very similar to the above is to be seen in Pope County, some fifty miles to the east.

To enumerate all the works in this part of the state would be tedious, and perhaps unprofitable. They are of all kinds, from the simple burial tumulus to the imposing temple mound, and occur almost everywhere.

Proceeding now into our second section, we find earthworks far less plentiful along the Ohio, but in great numbers along the Wabash and its principal tributaries. The mounds of this region, however, are less remarkable than those of the Mississippi section, and belong, for the most part, to the round, sepulchral class. The only works which I shall particularly notice are those of the Hutsonville group, in the northeastern part of Crawford County, a plan of

which is given in Plate II, ^{Fig 2.} Here are fifty-nine mounds irregularly disposed over a space of about 1000 by 1500 feet on the second terrace of the river, and ranging in size from fifteen to fifty feet in diameter, and from eighteen inches to five feet in height. Four members of this group are surrounded by rings, or walls, of dirt, which now measure from a few inches to a foot in height. Only one of these enclosed mounds, that near the middle of the group, has the ring entire. The one lying a short distance to the south of this has a gap, or gateway, on its east and west sides, while the two southernmost have each one opening, the two nearly facing each other.

Though to all appearance the mounds of this group are of the common circular type, no human remains have yet been discovered in any of them. This fact has led investigators to believe that they were not erected for sepulchral purposes; but to obtain dry foundations upon which to build habitations for the living. It may be, however, that they are really burial mounds, but so old that all traces of the body which they once covered, have disappeared.

On the south side of the Little Vermilion River, in the southeastern part of Vermilion County, are found the two groups shown in Plate IV, Figs. 5 and 6. Two other groups are said to exist near these, which are almost identical in arrangement with those on the

American Bottom shown in Plate V, Figs. 4 and 5.

On the Kankakee River, in the northwestern part of Kankakee County, is a very large round mound, 100 feet in diameter, and 20 feet high, which tradition says contains the remains of two hundred Indians killed in a great battle between the Illinois and Chipewas, Delawares and Shawnees. Two smaller mounds, one about 150 or 200 feet to the northeast of the larger work, and the other about the same distance to the northwest, are said to contain the remains of the chiefs of the two parties. So far as I know no explorations have ever been made with a view to testing the truth of this tradition.

Mounds, mostly low, and many of them comparatively recent, structures, occur in numbers on the Desplaines River in Will and Cook counties. A group of large tumuli are found near the lake shore in the northeastern part of Lake County.

We now come to the third division which I have made of the state, in which I shall attempt to locate, in outline only, the most noteworthy antiquities of the interior of Illinois. Commencing with Winnebago County, we meet again with those singular works, the Effigy Mounds. Two occur in this county; one supposed to represent a turtle, the other, a bird. Both are shown in Plate VI, Figs. 3 and 1. The "Turtle Mound" belongs to a group of round

and oblong mounds lying within the corporate limits of Rockford, and measures 184 feet in length, with an average height of between three and four feet. Considering the materials of which it is constructed, it is a very fair representation of a side view of a turtle with its neck retracted within its shell until only the head is visible. The second effigy, the "Bird Mound," is situated, with two round mounds and three embankments, on a high bank, about five miles below Rockford. Its total length is forty-six feet, and it measures from tip to tip of wings, following their centers, sixty-eight feet. Its average height is something over two feet. The other effigy mound shown in Plate VI. Fig. 2, is found in Stephenson County, on the north side of Pecatonica River, about two miles east of Freeport. Its greatest length, in a straight line, is 117 feet, its height not more than two feet. This form of earthwork is very common in Wisconsin, and is there known as the turtle mound, though it seems to me a very poor imitation of that animal.

Figure 1, Plate III. is a singular work found in La Salle County, on a high point on the west side of Fox River, near the town of Wedron. The longer embankment is 188 feet in length, the shoulder 142 feet, the principal mound 5 feet in height. On the east side of the river, diagonally across, and just below the above work, is the enclosure represented in Fig. 2. It is 260 feet in length,

and a little over 200 feet wide in the middle. The promontory upon which it stands, rises almost vertically from the river to a height of about forty feet, and is an excellent location for a defensive work, as this undoubtedly was.

Two groups of rather unusual works occurring on Spoon River, in the northwestern part of Peoria County, are shown in Plate III, Figs 3+4. In the first group, the round mounds are about forty feet in diameter, the oval mound measures 64 X 47 feet, and the rectangular structure 19 X 62 feet. All are about three and a half feet in height. Extending southeast from the oval mound, then south, southeast, and east, to a point on the edge of the bluffs 185 feet southeast of the starting point, are the remains of an embankment now only a few inches high. The second group comprises four round and four long mounds, the former from 15 to 40 feet in diameter, the latter measuring from 80 to 141 feet in length, with an average width of about 18 feet, and a height of from 2 to $2\frac{1}{2}$ feet. The cross mound in the southernmost of the long structures, is 33 feet in length and 10 feet wide. All, or nearly all, have been explored and found to contain, besides human remains, the bones of deer and other animals, shells, ashes, and various implements and utensils. Many of the human bones had been partially consumed by fire, as if cremation had been practiced by the builders.

I will mention but one of the many groups of mounds in Sangamon County, and that for the reason that in it the mounds are apparently situated with a view to defense. The high bluff upon which they stand is almost inaccessible, on account of the steepness of its sides, except at the points where the mounds are placed. This coupled with the further fact that none of them has been found to contain any remains either of the builders or their arts, makes it almost certain that they were erected as defensive works.

A large conical mound 100 feet in diameter and over 30 feet high, near Beardstown, Cass County, was leveled a few years ago with interesting results. At a depth of but a few feet were found the remains of several Indians, with articles of both native and European manufacture; and a little below these, the remains of a few white men, one of whom had evidently been a missionary, for in the skeleton hand was a silver cross, and, near by, the Venetian beads belonging to a rosary. At the bottom of the tumulus, on the original surface of the soil, were quite a number of cists, or crypts, made of flat stones; but the bodies deposited therein had entirely perished, only a few handfuls of dust remaining.

A great many of the round mounds on the bluffs of this county, contain stone chambers in which from one to eight persons have been enclosed. With them are found the usual stone implements and rude

pottery; and in one of them was discovered, along with specimens of the afore-mentioned utensils, a rust-eaten iron gun barrel. Substantial evidence, this, that not all mounds are remains of a pre-Columbian age!

There is still another antiquity of this county which is worthy of special mention. This is an "altar," found on the top of one of the highest and most prominent points of the Sangamon bluffs. It is a basin-shaped pavement of flat stones, laid on the original surface of the soil, about eight by twelve feet, and before its exhumation was covered by a low flat mound. Upon the altar was about a foot of ashes, in which were many bits of human bones, broken implements, and pottery. The earth which rested upon this mass of debris, was partially baked, showing that the mound had been heaped over the still glowing fire before the bodies upon it had been entirely consumed.

As may be seen by reference to Plate I., I have by no means touched upon all the localities in which aboriginal remains are found. To undertake such a task would be tedious and, for the present purpose, a useless waste of time and labor. I have attempted to describe and locate only such works as would give a general, but comprehensive, idea of the antiquities which our state affords. Many hundreds of mound groups have been passed over without mention only because they differed in no essential particu-

lar from works already described.

Keeping in mind, then, the location and character of the remains of which I have treated, and remembering further that those mound areas of which I have not spoken are occupied, for the most part, by common burial tumuli, it will be noticed, I believe, that while the antiquities in different parts are quite unlike in many particulars, they yet present wonderful analogies in other respects. All were evidently erected by men of about the same degree of civilization, living and laboring under similar conditions, and actuated by similar motives. Whether built since the discovery of America, as we know some of them to have been, or many centuries before, as seems equally certain of others, or whether belonging to one part of our state or another, they all appear as the work of rude barbarians, who could have differed little, if any, in social or intellectual condition.

Notwithstanding the repeated assertions of many writers to the contrary, I believe that a thorough and unbiased survey of the mounds and other earthworks will convince any one that they give no evidence whatever of the possession by the Mound Builders of even the rudiments of such sciences as astronomy and mathematics. The sides of the square and oblong mounds do not generally face the cardinal points, as we so often read; nor do the long mounds and

embankments lie preferably north and south or east and west, but indifferently in any direction. Indeed, it is rather surprising that more regard is not exhibited for the cardinal points. What would seem more natural than for the savage to distinguish between that point of the heavens in which the sun rises and that in which it sets; between that side which receives the sun's light and that to which the shadows belong; and to come to regard these directions with a sort of superstitious reverence which would manifest itself in the disposition of his architectural lines? A certain knowledge of the points of direction might easily exist without any real connection with the science of astronomy. But that the Mound Builder possessed even this knowledge, is not evident from the arrangement of his works. And the very common opinion that the proportions of the different parts of his earthen structures prove a considerable knowledge of the science of mathematics, seems to me equally without foundation. The leveling action of the elements which has been going on for so long, for centuries, it may be, has certainly so altered the forms and dimensions of these ancient monuments, that all numerical relations at present existing between them must be far different from those which originally characterized such works. For this reason, I believe it quite useless to attach any significance to the fact that the diameter of a mound is sometimes a cer-

tain multiple of its height, or that a certain enclosure bears, in its content, width, or circumference, a particular ratio to a certain other enclosure. Such relations must be regarded as mere coincidences. In short, none of the earthworks is of such a character that its construction would require the use of any knowledge not possessed by most savages. They are examples of engineering entirely within the power of a people no further advanced than the Indian of a century ago.

T h e M o u n d B u i l d e r s ' A r t s .

The manufactures of the Mound Builders were few and simple. Extensive use was made, no doubt, of wood, bones, and other organic materials, but stone, metal, and clay are almost the only substances, the products of which have escaped the ravages of time. Occasional implements of bone, horn, or shell, and a few traces of fabrics woven from the hair of animals or the fibers of plants, have been discovered, but they are rare, and usually so decayed as to be of little value to the investigator. It is mainly, then, to the imperishable artifacts of stone, copper, and clay, that we must look for knowledge of the ingenuity and manual skill of the Mound Builder.

Stone, and especially flint, was one of his most useful mate-

rials. From it he fashioned his knives, his spear- and arrow-heads, hatchets, drills, pestles, pipes, and other articles of use and ornament. In working it he acquired a degree of skill which enabled him to obtain results that astonish us. He produced implements and utensils not only admirably suited to his needs, but also possessing not a little artistic merit.

It is not possible in all cases to state with certainty the purposes for which the articles coming under our observation were designed, but in the following descriptions of typical specimens, I have classified them according to what seems to have been their most probable uses.

The commonest and best-known articles of Mound Builder manufacture are the arrow-heads. These are found everywhere—in the fields, in the beds of ravines and creeks, on the hillsides, and in and around the tumuli and camping sites. They are frequently found at a great distance from any of the mound regions, where they had been lost, doubtless, by war or hunting parties. The material from which they have been chipped is usually flint or chert, but points of jasper, carnelian, and quartz-crystal are occasionally found. They vary in size from three quarters of an inch to three or four inches, and are of almost innumerable forms. Still, while no two specimens are ever exactly alike, there are a number of distinct

patterns, or types, according to which nearly all may be classified. Thus we have the broad, leaf-shaped point with deeply notched base (Figs. 1. and 2. Plate X.), which is usually of coarser workmanship than most other types; the long, narrow point (Fig. 3.); the curious beveled and serrated point (Fig. 8.); barbed points (Fig. 9+10); straight-tailed points of a variety of forms, and so on. Many were given their particular forms, no doubt, that they might best serve specific purposes. That is, some may have been designed for shooting fish, others for birds, different kinds of animals, etc.; and others may have been used exclusively for war; such, for instance, as the points numbered 12+17 Plate X. which if buried in the body, could not be extracted by withdrawing the shaft of the arrow, but, from the nature of the tail, would slip off and remain in the flesh.

Another class of articles chipped from flint, are those represented in Plate XI. These differ from the arrow-heads mainly in point of size, often measuring eight and ten inches in length. The majority of the specimens coming under my notice, however, are from four to six inches long. Their great size, and consequent weight, would clearly prevent their being employed for tipping arrows, but as they were evidently designed to be fastened to some sort of shaft or handle, there can hardly be a doubt that they were used

for spear-heads, unless, indeed, they were made to serve as knives.

Plate XII, shows specimens which were probably designed especially for cutting and skinning. The use of the forms represented in Plate XIII. is uncertain. The broad, flat specimens may have been employed as hoes, scrapers, or as light hatchets or tomahawks, while the thick, pointed objects may have served as spikes in a war club. Figures 4 and 5 Plate XIII. are commonly known as drills, and are of much less frequent occurrence than the aforementioned artifacts. Figures 6 and 7. same plate, were probably used as chisels. They are usually found in the vicinity of camping sites and about the places where flint implements have been manufactured. They are always flat on one side and rounded on the other. From the fact that they are so often found with their edges battered and broken, it is supposed they were used much as we use a cold-chisel.

With the exception of a few unimportant specimens, nearly all the axes of the Illinois Mound Builders are made from granite or sienitic rocks. Some typical forms are shown in Plates XIV. and XV. These are skilfully, and often beautifully, wrought, and must have required an immense amount of time & labor in the making. They weigh from a few ounces to ten or twelve pounds, the average being, perhaps, three. Double-bladed axes, with the groove about the middle, are of occasional, though rare, occurrence.

Celts, or hand axes, Plate XV. are very similar to the common axes, but lack the groove, and are more slender, so as to be easily grasped in the hand. They vary from one to four inches in width at the blade, and are from two and one half to ten inches long. They are always carefully finished, with regular outlines, and a smooth keen edge, sometimes so keen as to suggest that they were designed for cutting or skinning tools. Perhaps they were used in peeling trees for bark from which to make canoes and wigwam covers. They were at least admirably fitted for such a purpose. These, like the axes, are of infrequent occurrence in mounds, but are generally found on the surface of the ground, where their owners had probably lost them.

Plummetts and discoidal stones are represented in Plate XVI. These are almost always made from some hard, close-grained stone, and carefully finished. The plummetts are commonly from two to three inches in length, and approximately one inch in greatest thickness. Various uses have been suggested for them, all of which are problematical. Thus, some suppose them to have been employed as sinkers for fishing-lines, as sling-stones, as weights for keeping taut the threads in the primitive loom, and, again, as an amulet of some sort.

The discoidal stones are from three to five inches in diameter

and rather more than an inch in thickness at the rim. Their probable use was in playing some kind of game. Many early travelers and missionaries among the Indians have described a game called, by several tribes, at least, Chungke or Tchungkee, which was played by rolling a "disk" or "ring" of stone over a smooth piece of ground and throwing after it a light pole, in such a way that when the stone stopped rolling, the pole should rest near it. The disks are described as being "about two fingers broad at the edge, and two spans round." These stones, it is said, were kept with the strictest religious care from one generation to another, and were exempt from burial with the dead. To the best of my knowledge, no discoidal stone has ever been found in a burial mound; so that, putting all evidence together, I believe we may consider these articles to have been designed for Chungke stones, or for a similar purpose.

Pestles are comparatively rare, and are never found in mounds. They are wrought from the harder kinds of stone, sometimes quite elaborately, but more often rather rudely. Plate XVI. shows some typical forms. Their weight is from four to eight pounds. From their scarcity we might suppose that the Mound Builder had either little need of a mill, or, as seems more probable, that he made use of any suitable pebble in reducing his maize or nuts.

A class of articles of quite frequent occurrence is represent-

ed in Plate XVI. Figs. 7 + 8. These are in nearly all cases made from slate, and of a great variety of forms. They vary from two to six inches in length, and from one fourth to one half inch in thickness. Perfect specimens, when found, are almost always in mounds, in close proximity to the bones. Their use is unknown, but it is generally supposed that they were worn as gorgets, or breast ornaments, though some think they may have been used as shuttles in weaving.

The pipes of the Mound Builder are his finest works of art. In carving them he seems to have expended his utmost skill; and considering his limited means, and the intractable character of the material he employed, the results he obtained are often truly astonishing. The typical Mound Builder's pipe is cut from a single piece of slate, porphyry, steatite, or catlinite, and consists of a flat, or half round, curved base of from four to six inches in length, and less than an inch in width. From one end of this base a small hole, perhaps one eighth of an inch in diameter, is drilled until it communicates with the cavity of the bowl, which arises from the middle of the convex side. This end of the base appears to have served as the mouthpiece, while the other was a convenient handle by which to hold the pipe.

It is the bowl upon which the maker exhausted his skill, and

we may regard it as the chef d'oeuvre of aboriginal sculpture. Of the specimens represented in Plate Fig. 1 is a beautifully finished pipe of some very dark brown stone, and was taken from a mound in Mercer County. Figures 2, 3, 4, and 5 were obtained from mounds in Brown County, and are fine specimens of the Mound Builder's art. Figure 2 is an excellent imitation of the raccoon, the peculiar markings on the face and tail, and the characteristic attitude of the animal being very faithfully represented. The turtle pipe, Fig. 3, is unusual in having had small copper beads inserted for eyes. Figures 1 and 2, Plate represent a different type of pipe, which probably belonged to the later Indians. These are made from catlinite, and were used with a wooden stem. From the fact that they are found oftenest in the western part of our state, and especially in Mercer and the adjoining counties, where the Sacs and Foxes were so long in possession, I am inclined to believe that they were made by this strong and enterprising people.

Of the metals, the Mound Builder made little use, copper and silver being the only varieties which he employed in his arts, and these only in limited quantities. A rude copper knife found in Whiteside County, and a few celts, or axes, and some beads and other ornaments from the southern part of the state, are about the on-

ly articles of this material so far as discovered. None of the axes or celts is worn or battered, and all appear to have been little used. This would seem to indicate that they were not implements for common use, but were ceremonial articles, or that they were kept as badges of wealth or distinction. Copper was probably a rare and highly valued metal. It is not likely that the Mound Builders of Illinois ever worked the Lake Superior mines themselves or had any communication with the people who did. It is much more probable that the drift copper, which in some localities in this state is found in considerable quantities, supplied them with all they used of this metal.

The copper was all hammered into shape. No evidence exists of its ever having been melted or cast.

The only silver yet found has been a few very thin sheets which had been wrapped about some copper beads. Lead ore (galena) and iron ore (hematite) are of frequent occurrence in mounds, the latter being sometimes worked into small cutting tools resembling celts; but the Mound Builders appear never to have discovered the art of smelting.

Articles of silver, brass, and iron are often found in burial mounds, but as they are always of European manufacture, they are not to be included under the head of aboriginal handiwork.

The Mound Builders' manufactures of clay are confined to pipes and pots, bowls, cups, and other vessels. The pipes, of which two, taken from a mound in Mercer County, are shown in Plate IX. Fig. 4+5, are rather rare, and, except for material and lack of finish, are strikingly similar to the clay pipe of the modern smoker. The clay vessels exhibit such a variety of forms and ornamentation that they might easily form a volume in themselves. The material used was white or yellow clay mixed with pounded shell, sand, and pulverized quartz or granite. The vessel was shaped without a wheel, and in an immense variety of forms. (See Plates XVII and XVIII.) The workmanship is usually, though not always, coarse, the vessel being thick and heavy, and the ornamentation, when any is used, rude, though often bold and not displeasing. No glazing was used, and the pottery was never burned so hard as to become vitrified. The vessels are therefore quite porous, and on being struck, give forth a dull cracked sound. In size they range from small bowls holding less than half a pint, to large jars and pans of a capacity of several gallons. The colors are various, the greater part, perhaps, being dirty grays, light browns, dingy reds and yellows, faded by time and discolored by use, and an occasional bright brick-red, and black. They were determined most probably by the composition of the clay and the degree of heat used in the burning, and

were not produced by any stain or other coloring material intentionally applied. I have heard of pottery being found which had been coated with paint, but none of several hundred specimens coming under my notice has been so treated.

Nearly all of this ware bears, on its outer side, the impression of what appears to have been a woven fabric of twisted cords. This has led to the very common belief that the ancient potter made his vessels by coating the inside of a woven basket or bag with clay, which having dried, was afterwards burned, and the basket being destroyed in the process, the result was a completed vessel having the impression of the inside of the basket in which it was moulded. This, I can assert positively, was not the method employed. I have yet to see a decorated specimen in which the design was not traced or stamped in the soft clay after it had received the "cord-markings" and before it had been baked; and it is not reasonable to suppose that the plain vessels were made in any different way. How the Mound Builder's pottery came to bear these impressions is a mystery as yet unsolved. The question has now an additional interest from the fact that recent investigations in Japan have brought to light ancient pottery having the same peculiar markings.

Of the specimens shown in Plates XVII. & XVIII. Nos. 1 to 10

are from Mercer County, some being taken from mounds, while others were picked up about old camping sites, principally near New Boston, which was a favorite spot with the Sacs and Foxes and other Indians; Nos. *15 and 16* were taken from mounds in Brown County; No. *11* from a mound in Bureau County; No. *14* from a mound in Whiteside County; and No. *18* was picked up in Adams County. The ornamentation on Nos. *13 + 15* was made with a stamp or die of some sort; the rows of indentations on Nos. *11 + 14* have a regularity which could hardly have been gained except with a roulette or notched wheel; the impressions on Nos. *17* are those of a small three-stranded rope or cord; while the knobs, or bosses, on Nos. *8. 11. 15 + 16* were raised by punching into the soft clay from the inside of the vessel with a small stick. The other designs were traced in the freshly moulded vessel with sharp and blunt-pointed tools, the depth of the lines in most cases equalling about one half the width.

I have now treated of most of the Mound Builders' manufactures that are of any importance. So few remains of shell, horn, or bone artifacts, or of woven fabrics are in existence that we can learn little concerning them; but the articles I have described appear to have been in common use, and because of their imperishable nature now exist in comparative abundance.

M o u n d B u i l d e r s ' C r a n i a , e t c .

If circumstances but allowed me to supplement the foregoing pages with an account of the human remains which the spade has discovered in the burial mounds, I would have touched upon all the sources from which we have any knowledge concerning the Mound Builders. This offers a rich and most interesting field for investigation, and a theme of almost unlimited possibilities. I can say here only that in spite of the frequent assertion that the Mound Builders were a very tall or a very short people, or that their skulls are very large or of peculiar shape, or that their remains present any characteristic by which they may be invariably identified, the facts are that they were both short and tall, with large heads and small heads, wide heads and long heads, high heads and flat heads, etc. There is, in short, no typical Mound Builder. They appear to have differed as much as do the modern races. The same mound not infrequently yields brachycephalic, orthocephalic, and dolichocephalic, or short, medium, and long, skulls, all belonging evidently to contemporaneous burials. But it may be stated as a rule, I believe, that as compared with that of the white race, the average skull of the Mound Builder is lower and of less capacity, with a greater obliquity of the zygomatic arch. Occasional

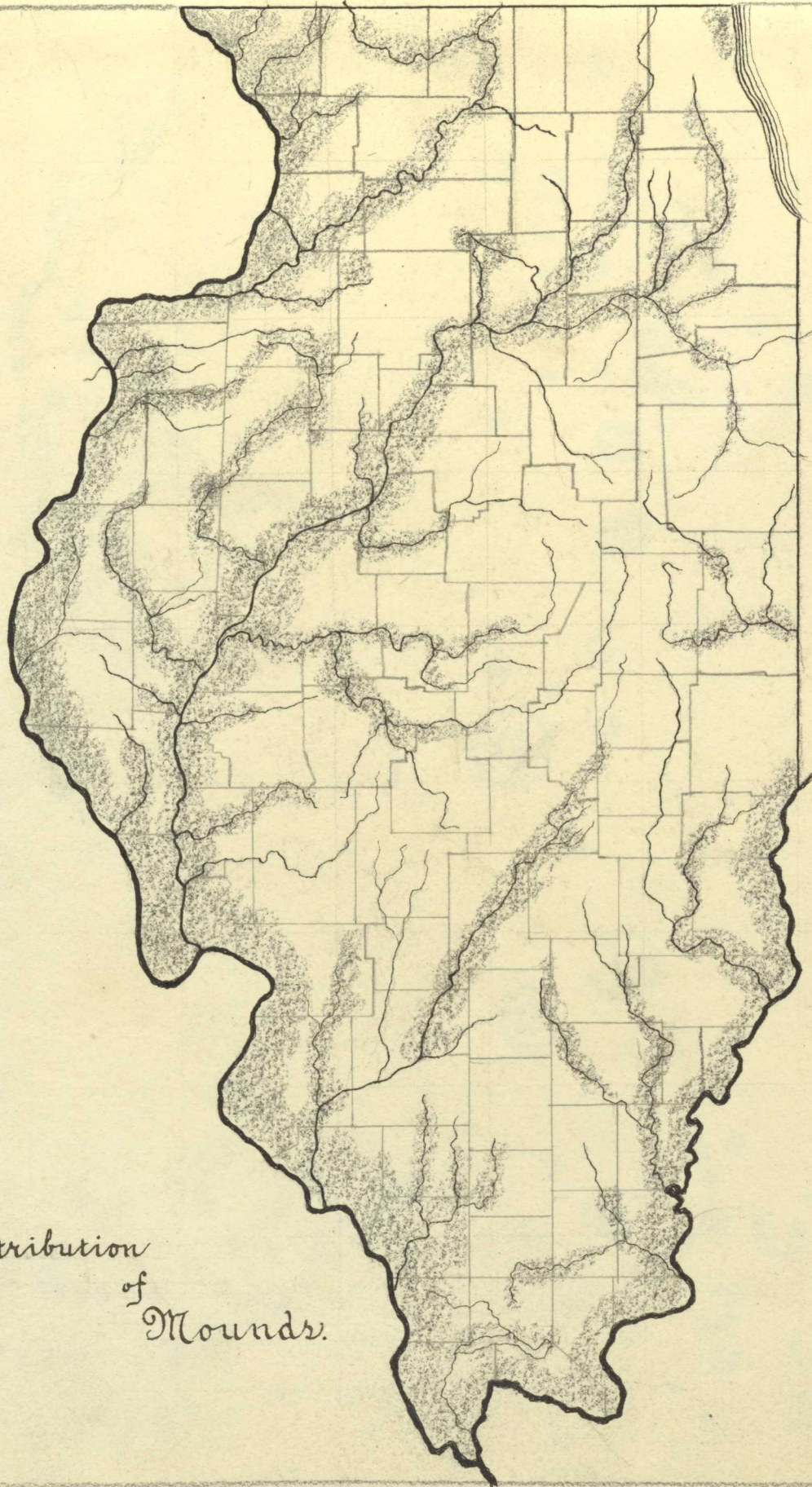
specimens are found which bear traces of artificial flattening, such as is still practiced by some of the western Indians, but they are exceptional.

W h o w e r e t h e
M o u n d B u i l d e r s ?

Having now taken a general survey of the antiquities of our state, I cannot well dismiss the subject without a brief statement concerning the Mound Builders as a race. Many theories have been advanced, and much wild speculation has been indulged in in the attempt to account for their origin and history, and it has been a "common saying," and one generally considered "worthy of all acceptance," that the Mound Builders were a race entirely distinct from and in all respects superior to the common Indian. Ardent archaeologists, studying the antiquities of America while sitting in their libraries, or picturing to themselves the grandeur of its ancient civilization while viewing the exterior of some stupendous earthwork, have arrived at far different conclusions from those of the unbiased student, who, with shovel and note-book, seeks to learn from the works themselves the character of their builders. The one beholds in these ancient earthworks magnificent monuments far beyond the ability of the indolent Indian to erect, forgetting

that the broken-spirited, degraded, vice-weakened Indian of whom he is thinking, is as far different from the red man whom the first explorers found here, as is the lazy, diseased, liquor-soaked loafer on our streets from the hardy, energetic, enterprising pioneer who tamed the wilderness; while to the other they are heaps of earth wonderful, when wonderful at all, mainly because of their immensity, and in all cases entirely within the power of any race of savages with whom the necessaries for subsistence were so easily obtainable as to allow great numbers to engage in unproductive labor. The truth is, that the most important of these works are not structures whose production required the use of any engineering knowledge not possessed by most savages, but rude affairs, mere heaps of earth, such as children might build, were they given sufficient time, numbers, and the proper incentive. Neither is it possible to discover in the products of their arts, any evidences of an advanced degree of civilization, for certainly a race which has not advanced beyond the use of mere stone tools must be a very barbarous people. Nor can we say of any article we may chance to take up that it is the work of the Mound Builder or the Indian. In spite of common opinion to the contrary, I must say that we have nothing to warrant us in making such distinctions. All the articles of aboriginal manufacture with which we are acquainted, are

so nearly alike in material and execution, and belong so evidently to men in about the same condition, that whether they were made two centuries ago by the native Indian, or a thousand years ago by an entirely different people, we have no grounds for saying. And I firmly believe that could men but study the prehistoric remains themselves, and not merely what others have thought of them, they would soon discover that the Mound Builder was not a highly civilized man living in a period far back of the Indian, nor merely the ancestor of the Indian, but the Indian himself. Much more than his race relations we can hardly hope to discover. How he thought, how he loved, what gods he worshipped, what laws he obeyed, what things he feared, we shall never know; for no books, no written documents, no graven tablets, no picture-covered walls and monuments, no traditions, even, have come down to us to tell the story of human life and action in those prehistoric times. There remain only some forest-covered heaps of earth, some human bones half turned to dust, some scattered relics of rude and simple arts to show that people lived and worked and died upon our soil ages before the white man came to claim it; and the story these ancient witnesses tell is short and vague.



*Distribution
of
Mounds.*

Mississippi River

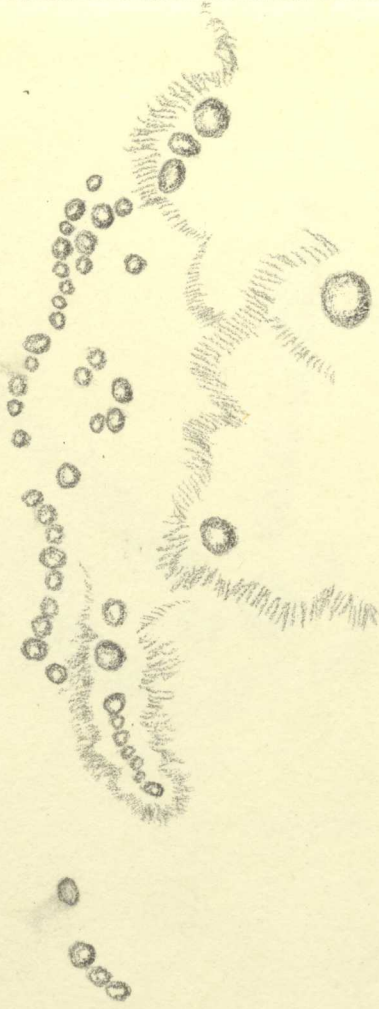


Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.

Plate II

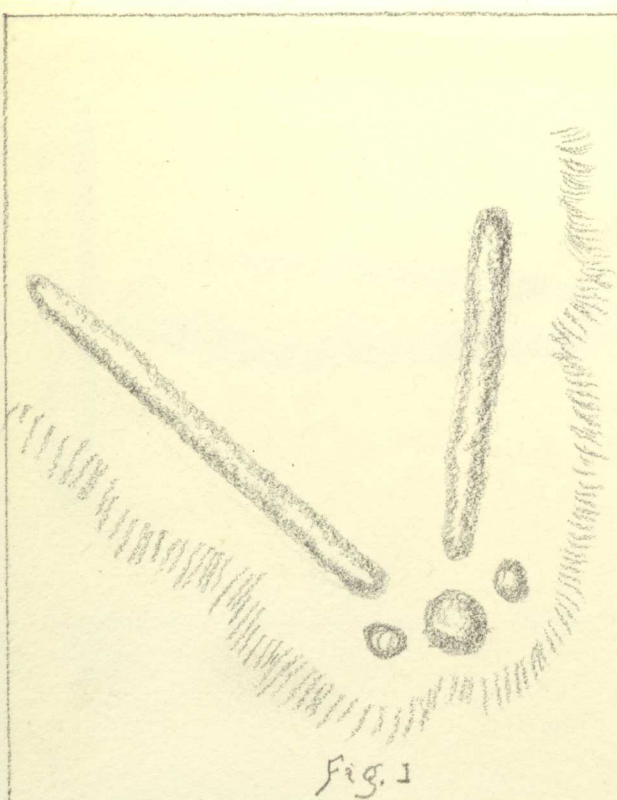


Fig. 1

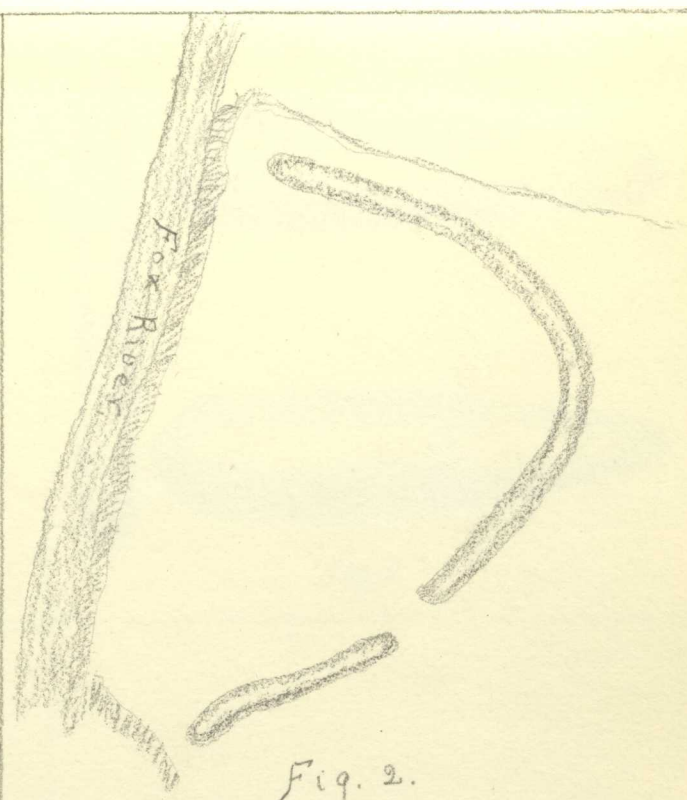


Fig. 2.

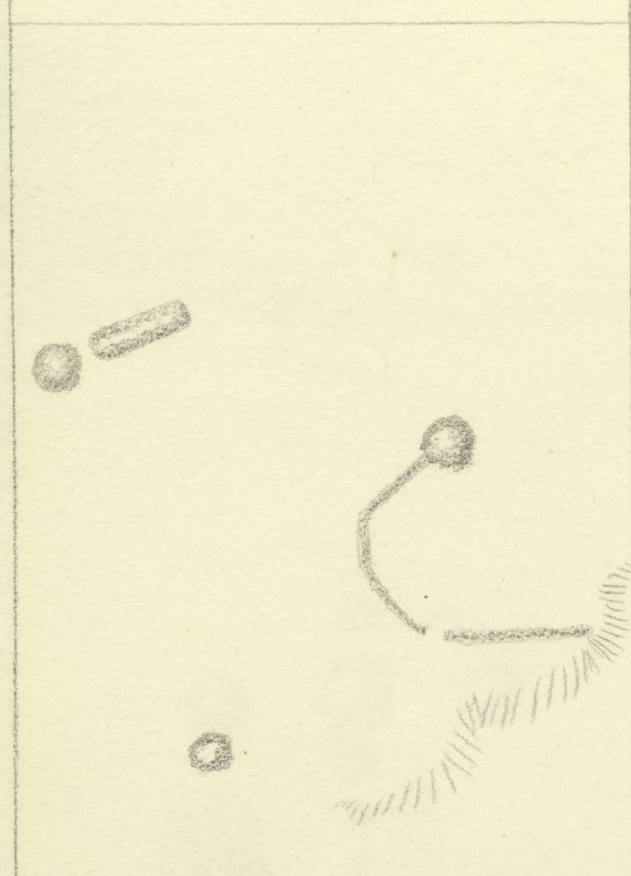


Fig. 3.

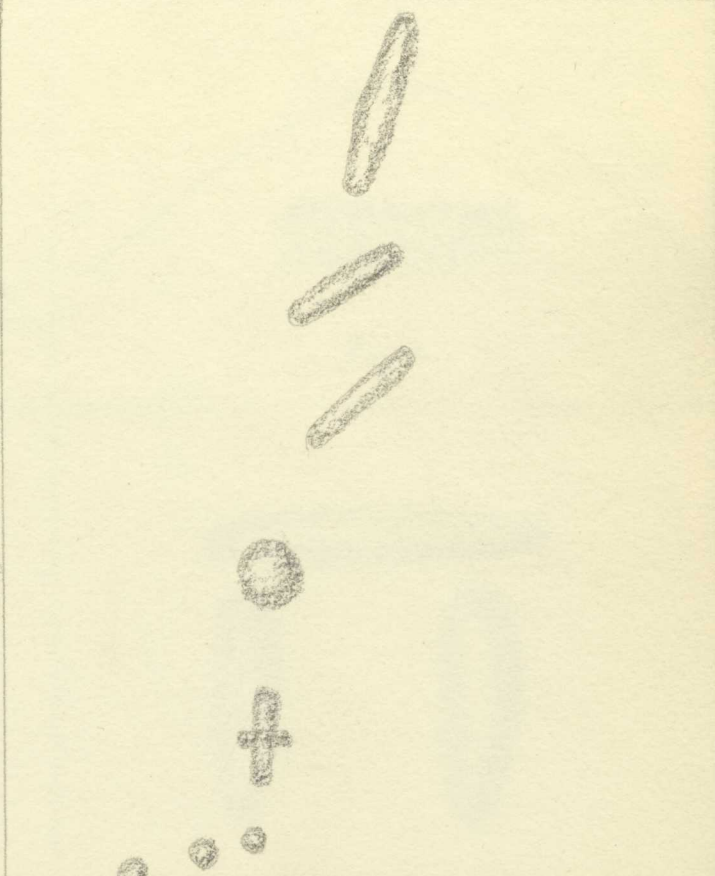


Fig. 4.



Fig. 1.

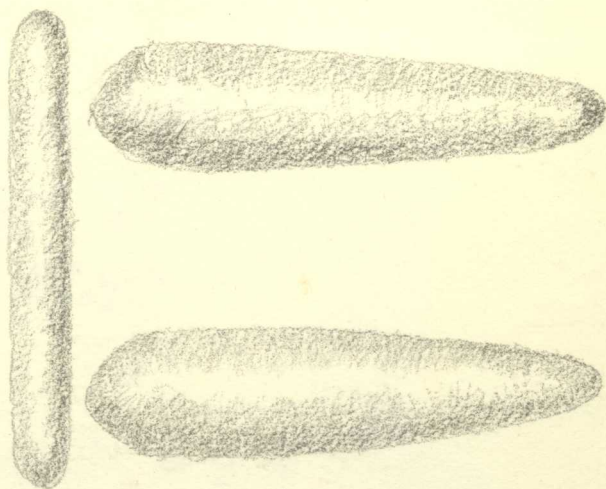


Fig. 2.



Fig. 3.

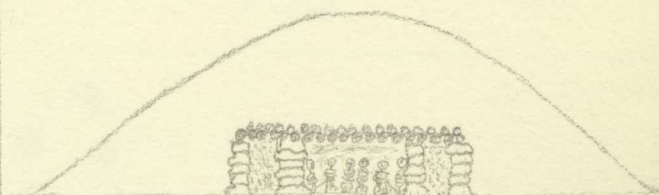


Fig. 4.

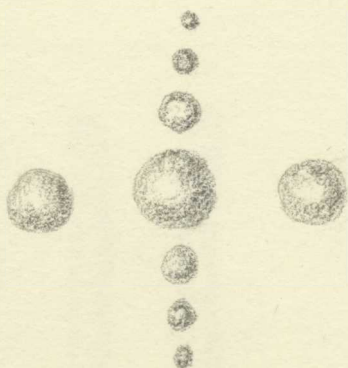


Fig. 5.

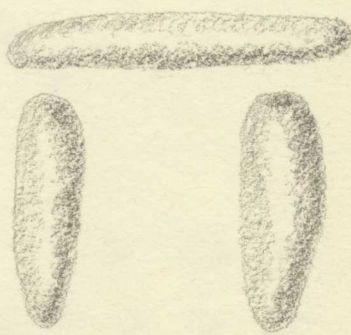


Fig. 6.

Mississippi River.

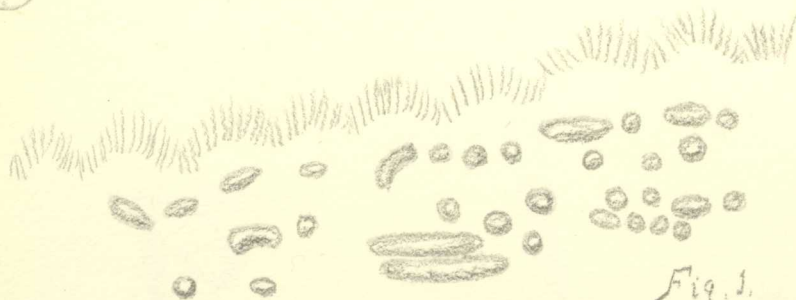


Fig. 1.



Fig. 2.



Fig. 3.

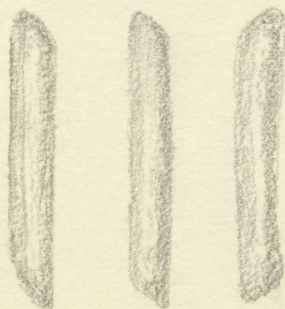


Fig. 4.

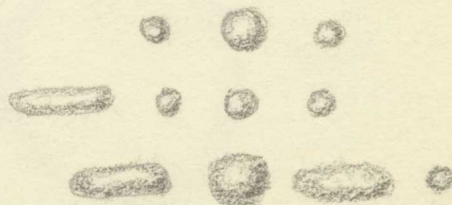


Fig. 5.



Fig. 1.

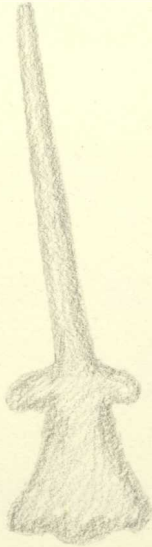


Fig. 2



Fig. 3.

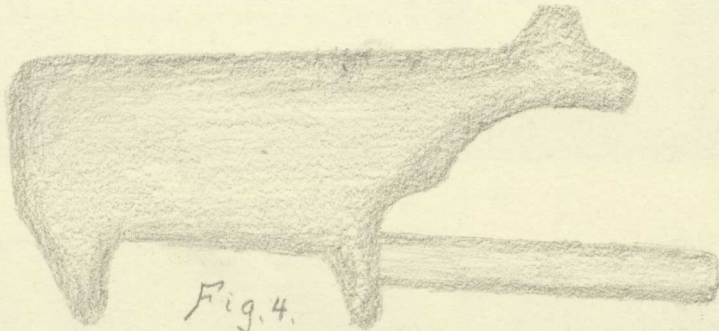


Fig. 4.

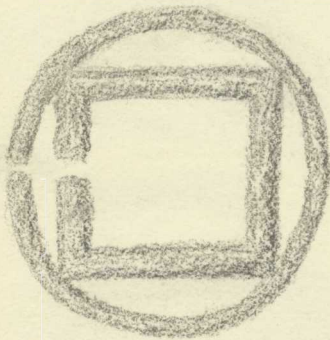


Fig. 5.

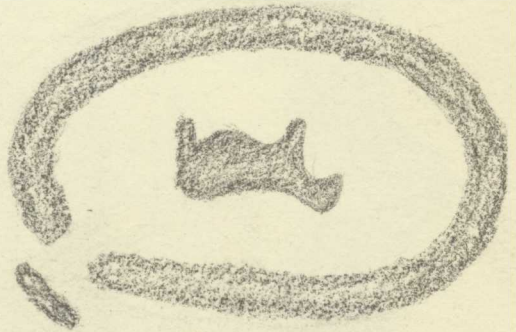


Fig. 6

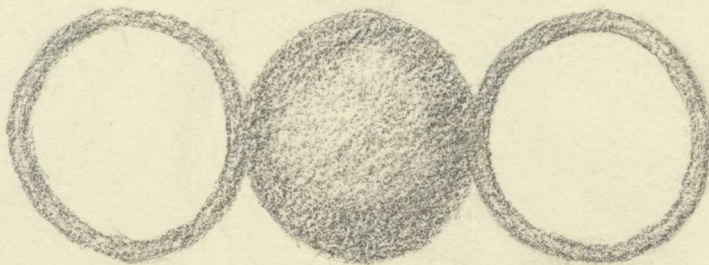


Fig. 7.

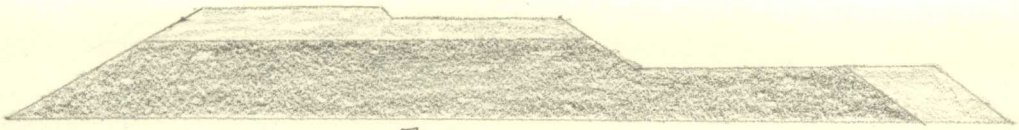


Fig. 1.

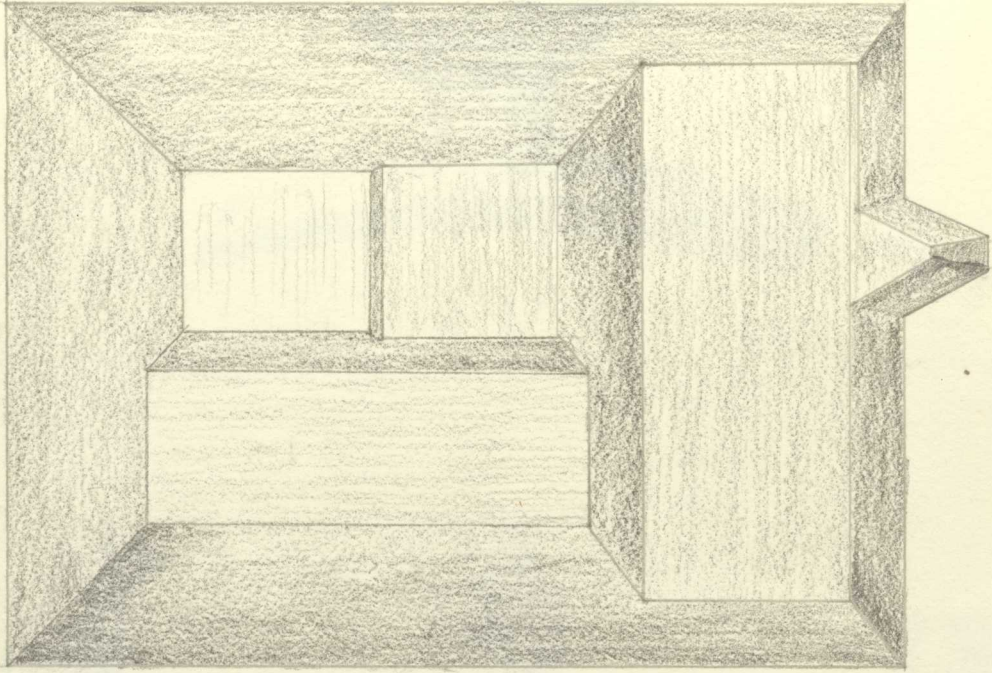


Fig. 2.

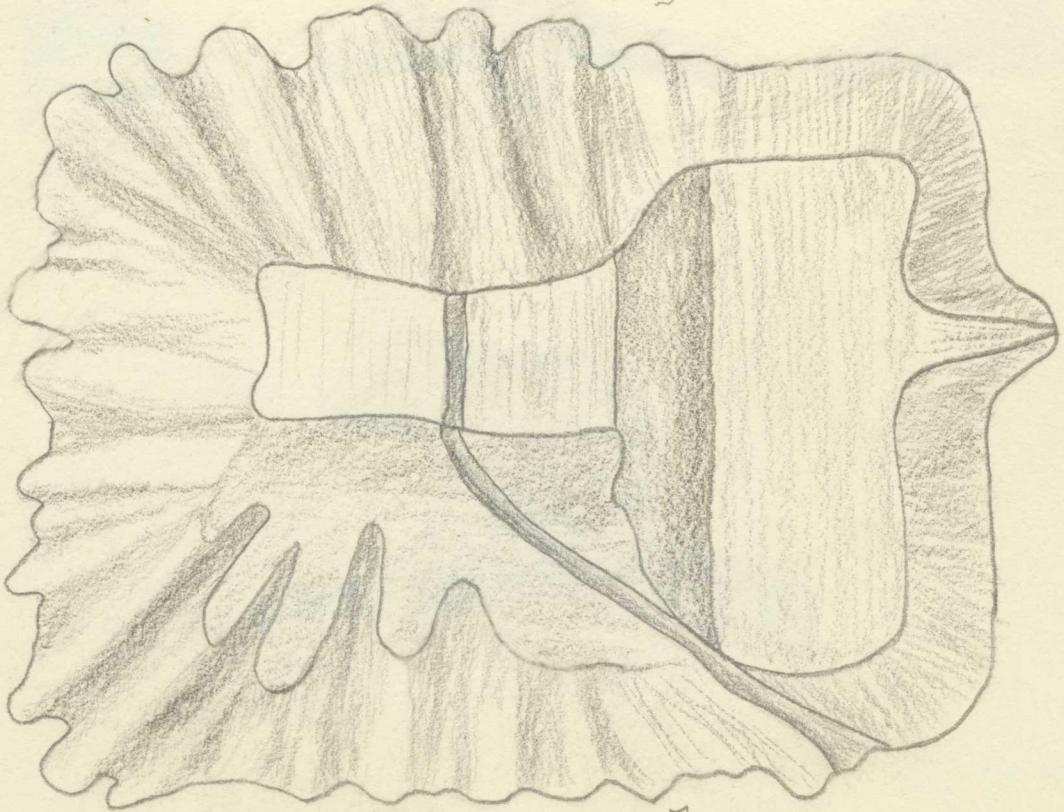


Fig. 3.

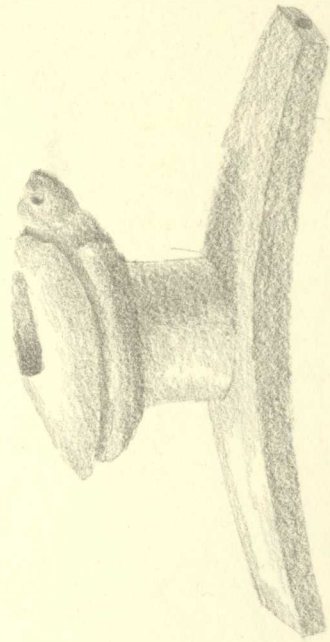


Fig. 1.

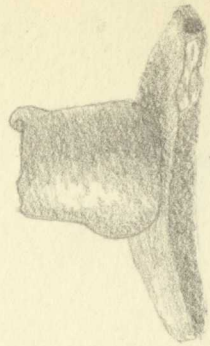


Fig. 3.

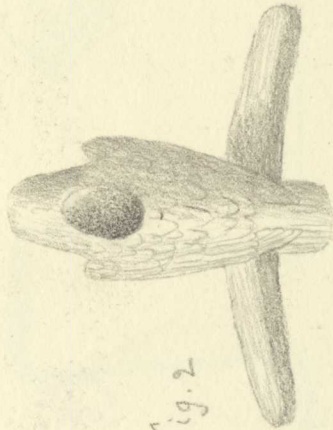


Fig. 2.



Fig

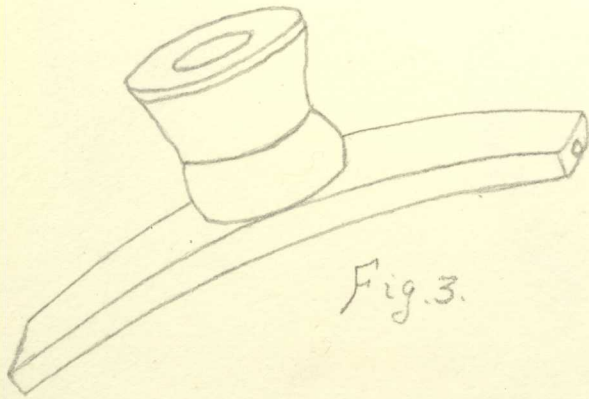


Fig. 3.

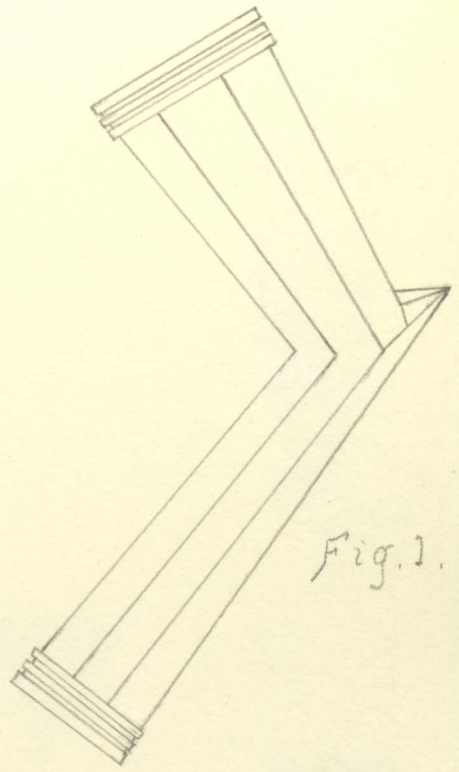


Fig. 1.

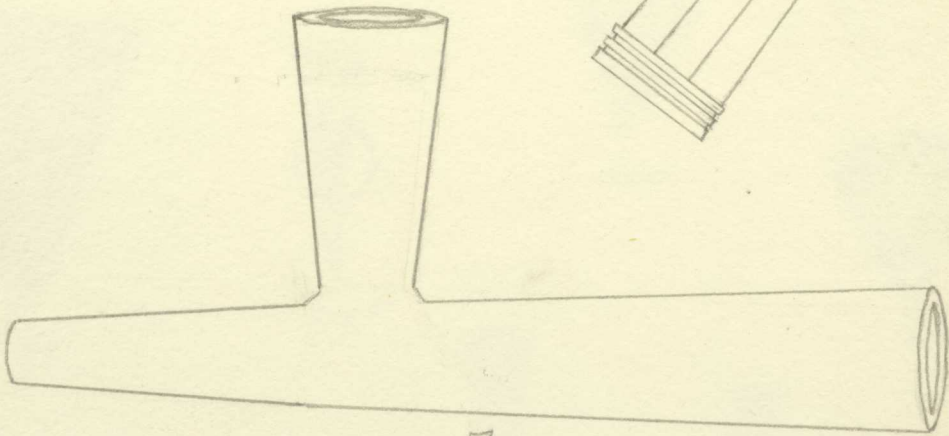


Fig. 2



Fig. 4.

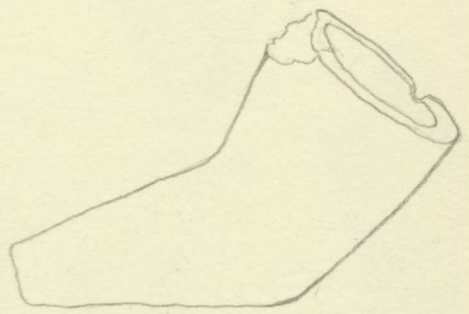


Fig. 5.

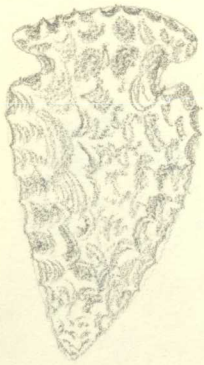


Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.



Fig. 6.



Fig. 7.



Fig. 8.



Fig. 9.

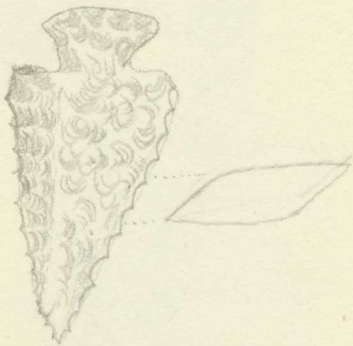


Fig. 10.



Fig. 11.



Fig. 12.



Fig. 13.



Fig. 14.

Fig. 1.



Fig. 2.



Fig. 4.

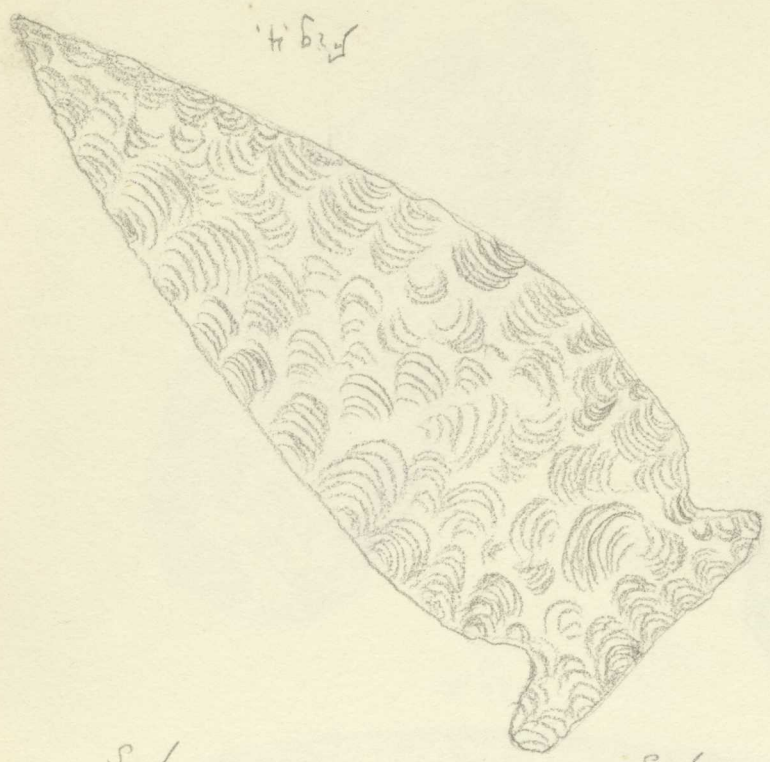


Fig. 3.





Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 1

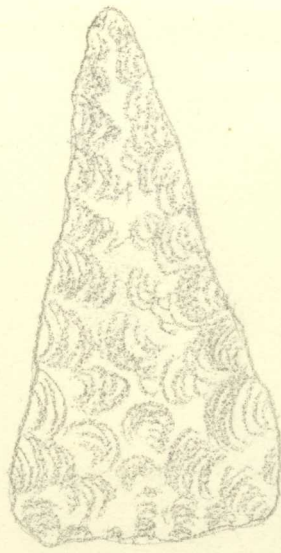


Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5



Fig. 6.



Fig. 7.

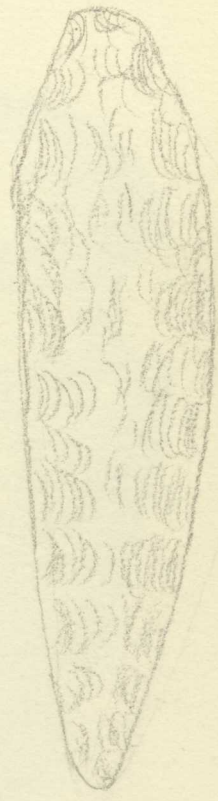


Fig. 8.

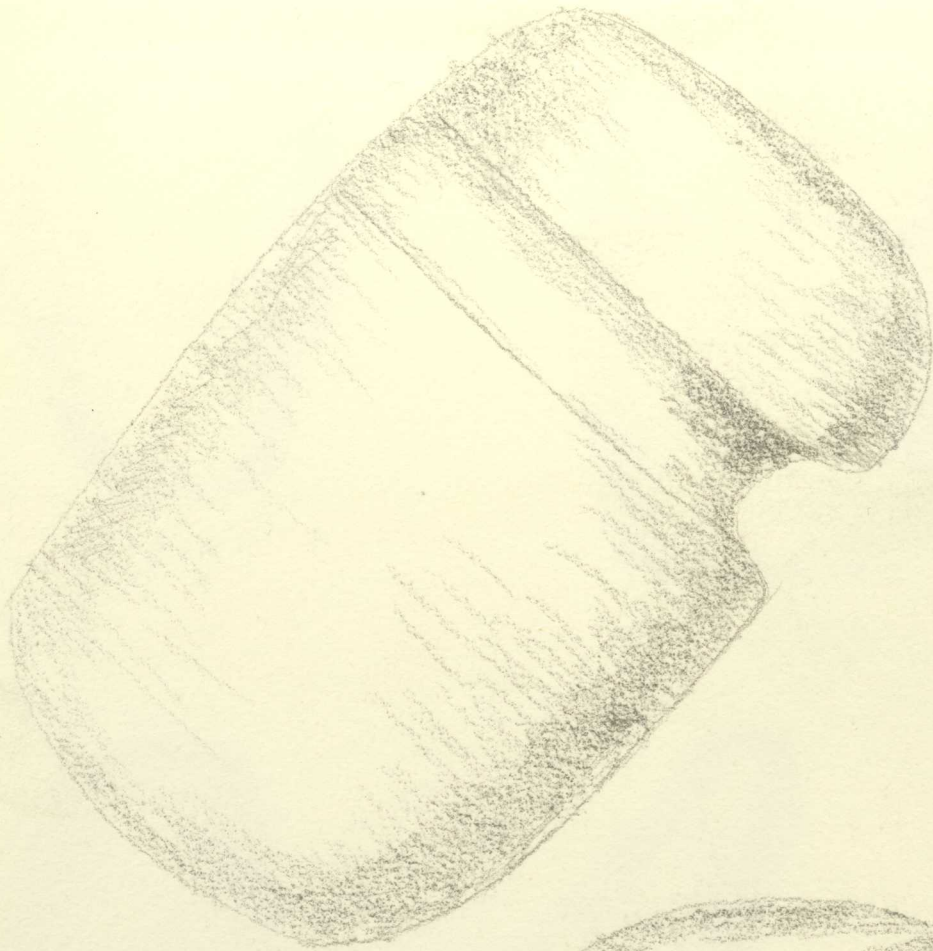


Fig. 1.

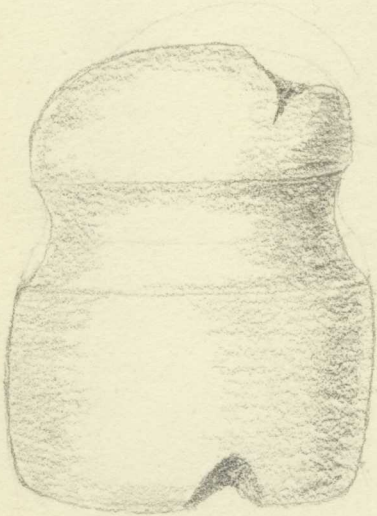


Fig. 2.



Fig. 3.

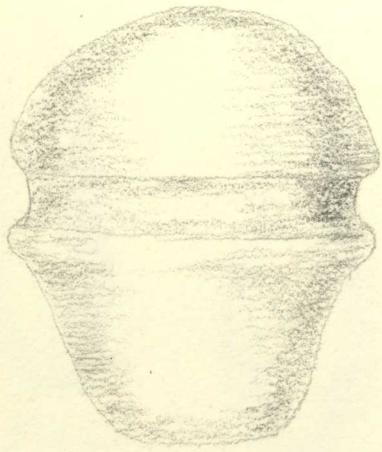


Fig. 1.

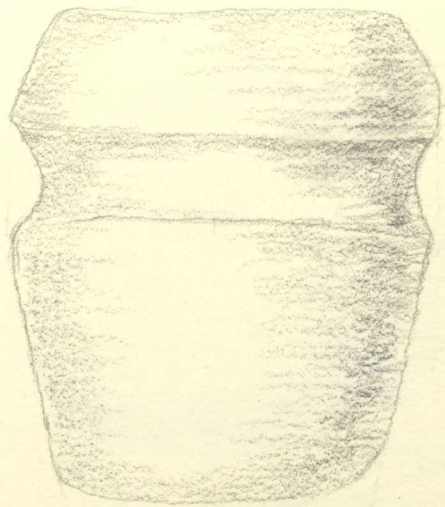


Fig. 2.

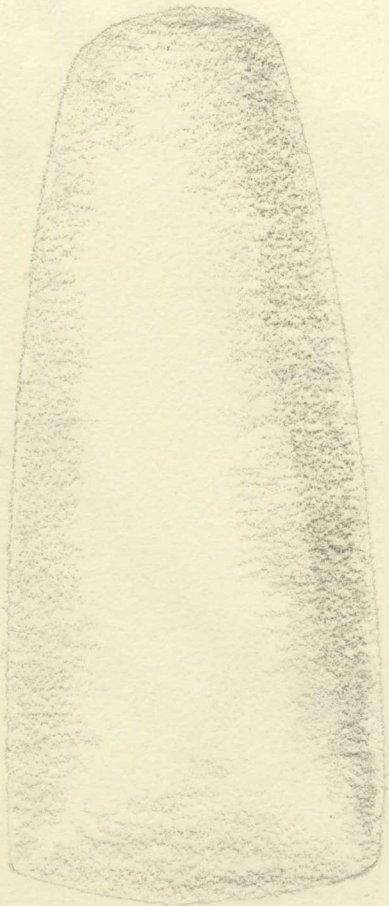


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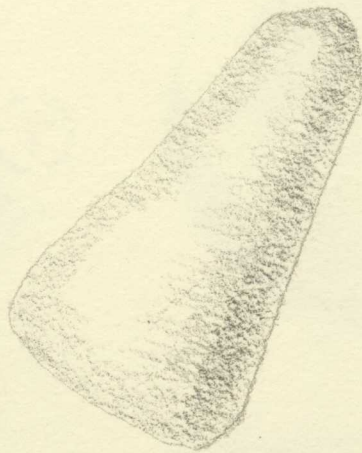


Fig. 3.

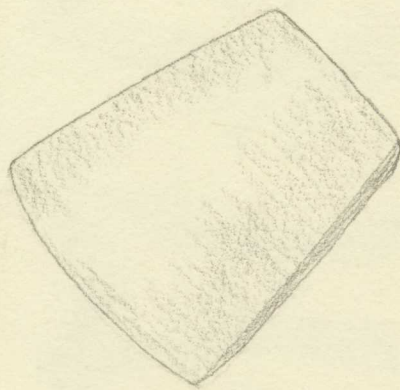


Fig. 5.

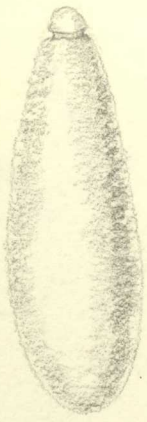


Fig. 1.



Fig. 2.

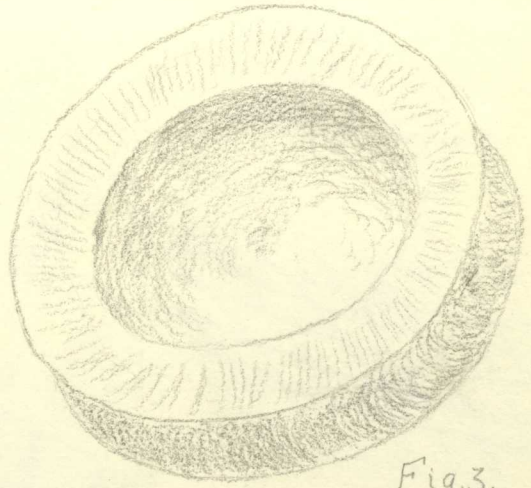


Fig. 3.



Fig. 5.

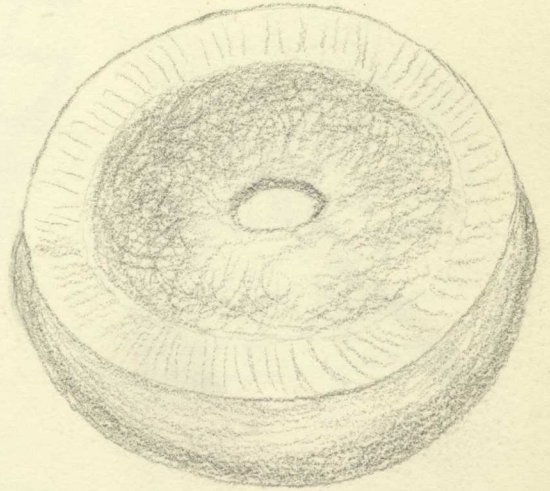


Fig. 4.



Fig. 6.

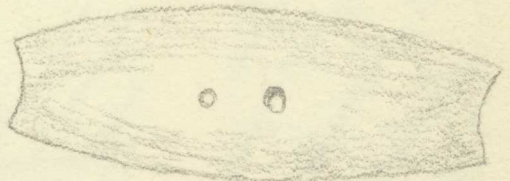


Fig. 7.

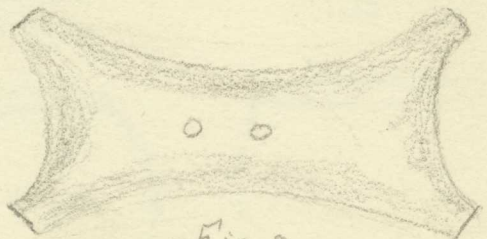
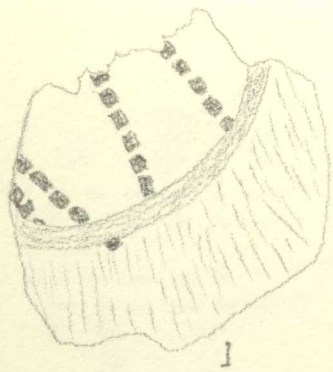
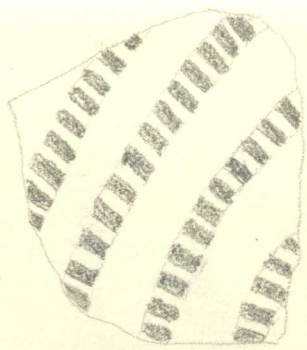


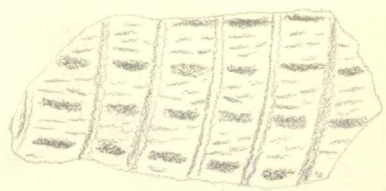
Fig. 8.



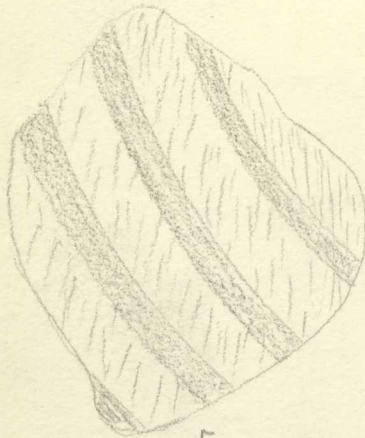
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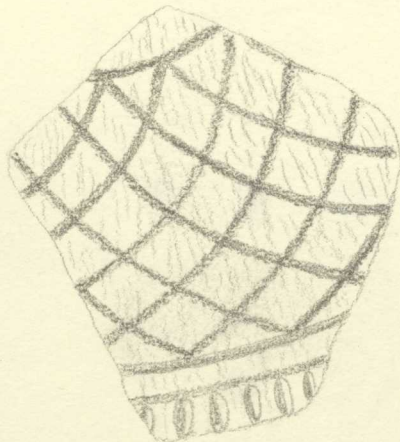
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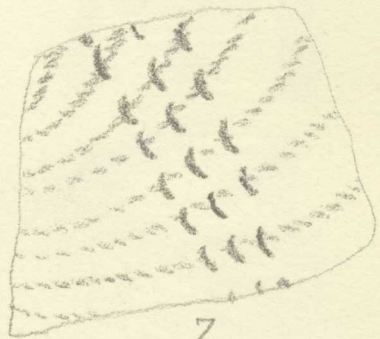
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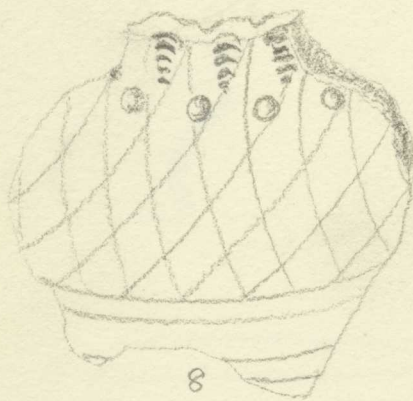
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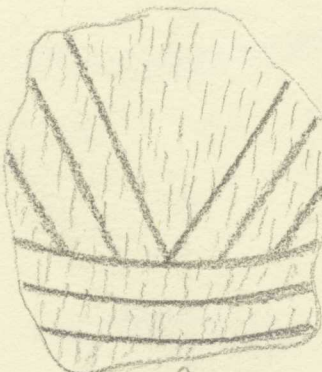
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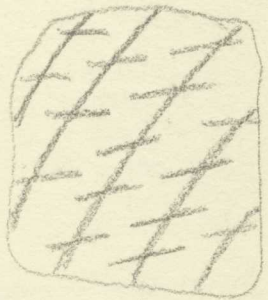
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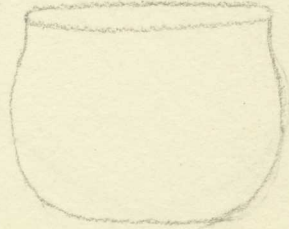
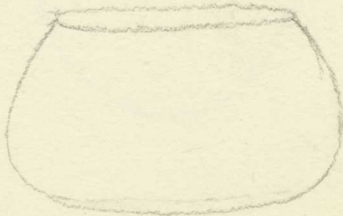
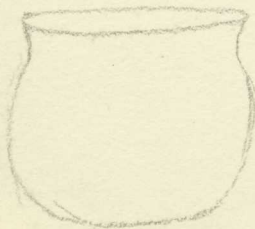
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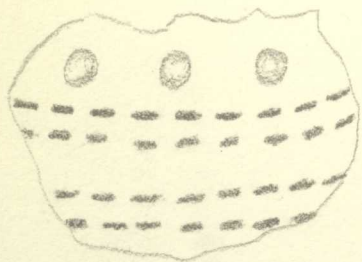


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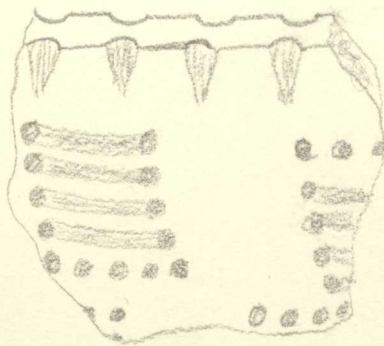


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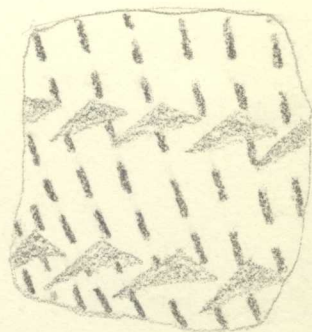




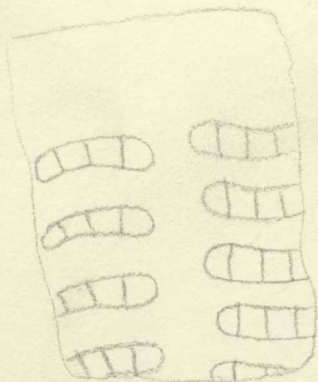
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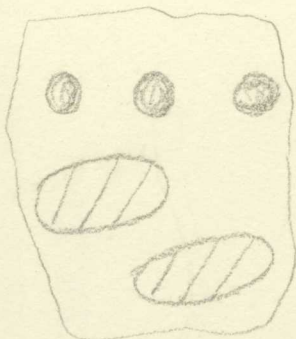
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14



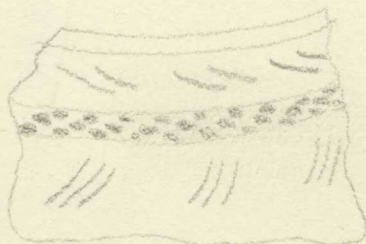
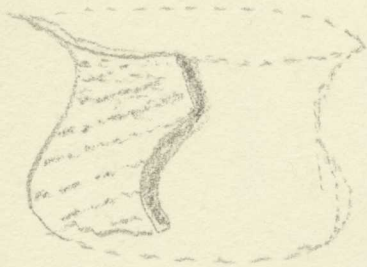
13



15



16



17



18

