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Prehistoric America.

The Mound Builders.
Animal Effigies.
The Cliff Dwellers.
The Ruined Cities of America.
Myths and Symbols.

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ANCIENT EARTHWORKS AT MARIETTA.

THE
MOUND BUILDERS:

THEIR
WORKS AND RELICS.

BY
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INTRODUCTION.

THE first edition of this book was issued just before the 400th anniversary of the discovery of America, at a time when especial interest was awakened in the history of the country. The present edition is issued at a time when the 100th anniversary of the "Louisiana purchase" is to be celebrated, and it is to be hoped that a new interest will be taken in the prehistoric works of the Mississippi Valley.

It will be understood that the mounds and monuments are more numerous in this valley than anywhere else on the globe. The majority of these have, to be sure, disappeared, and yet through the interest which has been taken by individuals, a knowledge of their existence, character, location, and contents has been secured, and the public is not without information in reference to them. The Mound-Builder problem is not as difficult to solve as it once was. Fifty years or more ago it was held that the Mississippi Valley must have been settled by a civilized people, who had migrated from some historic country, as it was reported that silver scabbards, Hebrew inscriptions, and "triune vases" had been discovered in the mounds, but this was owing to a lack of real information and the misinterpretation of facts. At the present time, the belief is common and wide spread that the Mound-Builders were the ancestors of the Indians who occupied the great valley at the time of the Discovery, and were the contemporaries of the Cliff-Dwellers and the Pueblos, whose home was in the Great Plateau of the West. They were the contemporaries of the partially civilized tribes who occupied the regions of the Southwest,—Mexico and Central America,—to whom the many ruined cities, which have been so recently discovered, have been ascribed.

The author of this book, who has also prepared a work on these "ruined cities," believes that there was in America during prehistoric times a stage of society, and a type of architecture and art, which has nearly passed away, and which would be impossible to restore, for the races and tribes that formerly existed here, have been so subjugated and overshadowed by the people who have taken posses-

sion that they have given up their efforts to perpetuate their old systems, and many have even lost the memory of them.

It remains, therefore, for the specialists to so rehabilitate the scene, that the present and future generations may become informed as to the things which once existed, and be able to carry back the record into prehistoric times. The day of controversy over the Mound-Builder problem has passed. About the only question that arises is whether there are any evidences of contact with other countries in prehistoric times, and whether the curious things found in the mounds shall be ascribed to this or some other cause. The author touches upon this point several times, but does not undertake to decide the question.

The picture which is presented by the mounds and the relics is a very interesting one. There were, undoubtedly, great contests between the tribes and races before the Discovery. Many changes had occurred in their location. The more cultivated tribes, who had come north as far as the Ohio River, and built their works and left their relics, had retired. Some of the Northern tribes had gone southward, and were dwelling in the mountains of Tennessee and along the rivers that flow into the Atlantic; but there were many villages scattered along the watercourses, both in the North and in the South, which showed that the people were really more advanced than they were after the time of the Discovery, for the presence of the white man put an end to the condition of society which was purely aboriginal, and introduced a style of art and architecture and a form of society which was more European than native American.

It is certainly very interesting to open the door and get a view of a condition of things which once existed, but will never be seen again. It was not such a civilization as has been recently disclosed by the discoveries in the far East; nor was it such a civilization as formerly existed in the central provinces of Mexico and Central America; but it was a stage of society so unique and so purely aboriginal, that it would seem that every American citizen should know about it.

TABLE OF CONTENTS.

	PAGE.
CHAPTER I.	
THE DISTRIBUTION OF MOUNDS.....	1
CHAPTER II.	
THE MOUND-BUILDERS AND THEIR WORKS.....	15
CHAPTER III.	
THE MOUND-BUILDERS AND THE MASTODON.....	31
CHAPTER IV.	
THE MOUND-BUILDERS AND THE INDIANS.....	49
CHAPTER V.	
BURIAL MOUNDS VIEWED AS MONUMENTS.....	59
CHAPTER VI.	
THE SACRED ENCLOSURES OF OHIO.....	81
CHAPTER VII.	
THE GREAT CAHOKIA MOUND.....	97
CHAPTER VIII.	
THE MIGRATION OF THE MOUND BUILDERS.....	113
CHAPTER IX.	
VILLAGE LIFE AND THE MOUND BUILDERS' CULTUS.....	133
CHAPTER X.	
THE RACE QUESTION.....	157
CHAPTER XI.	
DEFENSIVE WORKS OF THE MOUND-BUILDERS.....	185
CHAPTER XII.	
RELIGIOUS WORKS OF THE MOUND-BUILDERS.....	221
CHAPTER XIII.	
THE WATER CULT AND THE SOLAR CULT.....	245
CHAPTER XIV.	
THE RELICS OF THE MISSISSIPPI VALLEY.....	273
CHAPTER XV.	
SYMBOLIC CARVING AMONG THE MOUNDS.....	293
CHAPTER XVI.	
THE SOUTHERN MOUND-BUILDERS; THEIR WORKS AND THEIR RELICS.....	309

ILLUSTRATIONS.

CHAPTER I.

	PAGE.
Figure 1—Mound at Marathon, Greece.....	3
2—Burial Mound of Protesilaus, Thessaly.....	5
3—Burial Mounds in China.....	11
4—Burial Mound of a Norse Sea King.....	14
5—Burial Mound of an Ancient Briton.....	15

CHAPTER II.

Figure 14—Animal Effigies.....	22
15—Burial Mounds in Illinois.....	23
16—Fort at Conneaut, Ohio.....	24
17—Fort at Weymouth, Ohio.....	25
18—Village Enclosure in Ohio.....	26
19—Village of the Stone Grave People.....	28
20—Chunky Yard in Georgia.....	29

CHAPTER III.

Figure 1—Elephant Effigy in Wisconsin.....	32
2 and 3—Obsidian Arrows from Idaho.....	33
4, 5, 6 and 7—Shell Beads from Mounds.....	33
8—Bone Needles.....	33
9—Pottery Vase from Michigan.....	34
10—Hoes from Tennessee.....	35
11—Sickles from Tennessee.....	36
12—Banner Stone from Florida.....	37
13—Gold (not Silver) Ornament from Florida.....	38
14—Gold (not Silver) Ornament from Florida.....	38
15—Nondescript Animal from Davenport Mound.....	39
16—Copper Ax Covered with Cloth.....	40
17—Elephant Pipe found in Corn-field in Iowa.....	41
18—Section of Mound on Cook Farm in Iowa.....	42
19—Plan of Mound on Cook Farm.....	43
20—Hieroglyphics on Davenport Tablet.....	44
21—Hieroglyphics on Stone Tablet.....	45
22—Map of the Mounds on Cook Farm in Iowa.....	47
23—Altar Containing Sandstone Tablet.....	47
24—Davenport Tablet.....	48

CHAPTER IV.

Figure 1—Buffalo and Bear near Prairie-du-Chien.....	49
2—Earthworks at Hopeton, Ohio.....	51
3—Stratified Mounds near Davenport.....	53
4—Circle and Square near Chillicothe, Ohio.....	54
5—Circle and Square on Paint Creek, Ohio.....	55

CHAPTER V.

	PAGE.
Figure 1—Burial Mounds near Gideon's Bay, Minnesota.....	66
2—Mound near Moline, Illinois.....	68
3—Mound and Shell Heap, Tohead Island.....	68
4—Group of Mounds on a High Ridge.....	69
5—Burial Mounds near Moline, Illinois.....	69
6—Burial Mounds near Wyalusing, Wisconsin.....	70
7—Effigies near Beloit, Wisconsin.....	71
8—Effigies and Mounds near Koshkonong, Wisconsin.....	71
9—Mounds at Waukesha, Wisconsin.....	72
10—Mounds at Indian Ford, Wisconsin.....	72
11—Mounds on Rock River.....	72
12—Mounds at Newton, Wisconsin.....	72
13—Burial Mounds near Aztlan.....	73
14—Stone Graves in Ohio.....	75
15—Altar Burial in Hopewell Mound.....	76
16—Body Showing Copper Mask and Copper Horns.....	77

CHAPTER VI.

Figure 1—Platform Mound near Marietta, Ohio.....	83
2—Platform and Circle at Highbank, Ohio.....	84
3—Circular Mound at Portsmouth, Ohio.....	85
4—Circle and Square at Circleville, Ohio.....	86
5—Octagon and Circle at Newark, Ohio.....	87
6—Works at Portsmouth, Ohio.....	94

CHAPTER VII.

Figure 1—Cahokia Mound.....	98
2—Big Mound at St. Louis.....	104
3—Map of Works at St. Louis.....	106
4—Pyramids and Effigies at Aztlan, Wisconsin.....	110

CHAPTER VIII.

Figure 1—Grave Creek Mound.....	114
2—Map of Works on Paint Creek, Ohio.....	115
3—Fort at Hardinsburg, on the Miami River, Ohio.....	116
4—Great Mound at Vincennes, Indiana.....	117
5—Typical Fort of the Stone Grave People.....	118
6—Burial Mounds on the Scioto River, Ohio.....	119
7—Serpent Mound in Ohio.....	122
8—Serpent Mound in Illinois.....	123
9—Altar Mound on the Kenawha River.....	124
10—Village Enclosure on the Scioto River, Ohio.....	126
11—Stratified Mound in Wisconsin.....	130

CHAPTER IX.

Figure 1—Village with Water Supply.....	134
2—Village with Sacrificial Mound.....	135
3—Stockade Village near Granville, Ohio.....	136
4—Stockade Village in Ohio.....	137
5—Stockade Village Four Mile Creek, Ohio.....	138

	PAGE.
Figure 6—Sacred Enclosures in Kentucky.....	139
o—Mound-Builders' Village and Covered Way.....	140
o—Stockade Fort in Tennessee.....	141
o—Stockade Fort in Ohio.....	141
o—Mound Builders' Fort.....	147
7—Observatory Mound at Newark.....	153
8—Graded Way at Piketon, Ohio.....	154

CHAPTER X.

Figure 1—Mound No. 2, Mound City.....	163
2—Mound No. 3, Mound City.....	163
3—Mound No. 18, Mound City.....	164
4—Mound No. 6, Mound City.....	164
5—Mound No. 10, Mound City.....	165
6—Paved Altar at Mound City.....	165
7—Sculptured Pipe from Altar Mound No. 8.....	166
8—Enclosure on Paint Creek.....	167
9—Sculptured Bird from Altar Mound No. 8.....	168
10—Spool Ornaments from Tennessee.....	170
11—Double Mound near Chillicothe.....	173
12—Succession of Burials in the Adena Mound.....	174
14—Cahokia Mound Restored.....	176
15—Boat-Shaped Gorget and Amulets.....	178
16—Copper Bracelet from the Adena Mound.....	179
17—Piece of Cloth from the Adena Mound.....	180
18—Raccoon Amulet from the Adena Mound.....	180
19—Stone Mace from the Stone Graves ..	181
20—Sculptured Head from the Ohio Mounds.....	182
21—Pottery Portrait from the Stone Graves ..	182
22—Pottery Pipe from the Gulf States.....	182
23—Inscribed Tablet from an Ohio Mound.....	183

CHAPTER XI.

Figure 1—Hill Fort near Chillicothe, Ohio.....	188
2—Map of Forts on Miami River	189
3—Stockade Fort at Newburgh, Ohio.....	193
4—Fort at Colerain, Ohio.....	198
5—Fort near Hamilton, Ohio.....	199
6—Fort Ancient.....	203
7—Farmersville Fort, on Big Twin River.....	207
8—Carlisle Fort, Ohio.....	209
9—Stone Fort on Massie's Creek.....	211
10—Mandan Fort on the Missouri River.....	215
11—Walled Town on Big Harpeth, Tennessee.....	216
12—Stone Fort.....	217
13—Swamp Village With Defences and Lodge Circles.....	219

CHAPTER XII.

Figure 1—Chambered Mound on Iowa River.....	223
2—Chambered Mound near East Dubuque.....	224
3—Chambered Mound in Crawford County, Wisconsin.....	225

	PAGE.
Figure 4—Circle of Skeletons at East Dubuque.....	226
5—Chambered Mound in Missouri.....	226
6—Animal Totems in Wisconsin.....	227
7—Turtle Totems in Wisconsin.....	228
8—Myth Bearer of the Dakotas.....	229
9—Myth Bearer of a Cave in Wisconsin.....	229
10—Alligator Mound and Altar in Ohio.....	230
11—Copper Axes and Pottery Vessels from Toolsboro, Iowa..	234
12—Skeletons in Mound near Davenport.....	235
13—Crescent and Circle.....	236
14—Copper Mace from Etowah Mound.....	237
15—Fire Bed in the Shape of a Crescent and Circle.....	239

CHAPTER XIII.

Figure 1—Horseshoe Enclosures at Portsmouth, Ohio.....	249
2—Effigy of Elephant in a Circle, on the Scioto River, Ohio.	250
3—Concentric Sun Circles and Terraced Mound.....	251
4—Terraced Mound opposite Portsmouth, Ohio.....	252
5—Enclosure and Covered Way, Portsmouth, Ohio.....	253
6—Circle and Square on Paint Creek.....	256
7—Sacred Enclosure near Anderson, Indiana.....	257
8—Sun Circle on White River, Indiana.....	258
9—Circle and Ellipse near Anderson, Indiana.....	258
10—Sun Circle and Graded Way in West Virginia.....	259
11—Plan of Altar Mound.....	260
12—Altar in Shape of Circle.....	2 0
13—Altar Mound.....	271
14—Altar in Relief.....	261
15—Crescent Pavement.....	262
16—Works at Alexandersville, Ohio.....	264
17—Works at Worthington, Ohio.....	265
18—Spool Ornament and Cross from Stone Grave.....	266
19—Pipe from Etowah Mound.....	267
20—Circle and Crescent Pavement at Circleville, Ohio.....	269

CHAPTER XIV.

Figure 1—Maces and Badges from Ohio.....	275
2—Arrow-Heads from Wisconsin.....	283
3—Chunky Stones from Tennessee.....	286
4—Pottery Bowl from Tennessee.....	287

CHAPTER XV.

Figure 1—Symbols found in Copper Relics from Hopewell Mound..	296
2—Symbols found in the Effigy Mounds.....	297

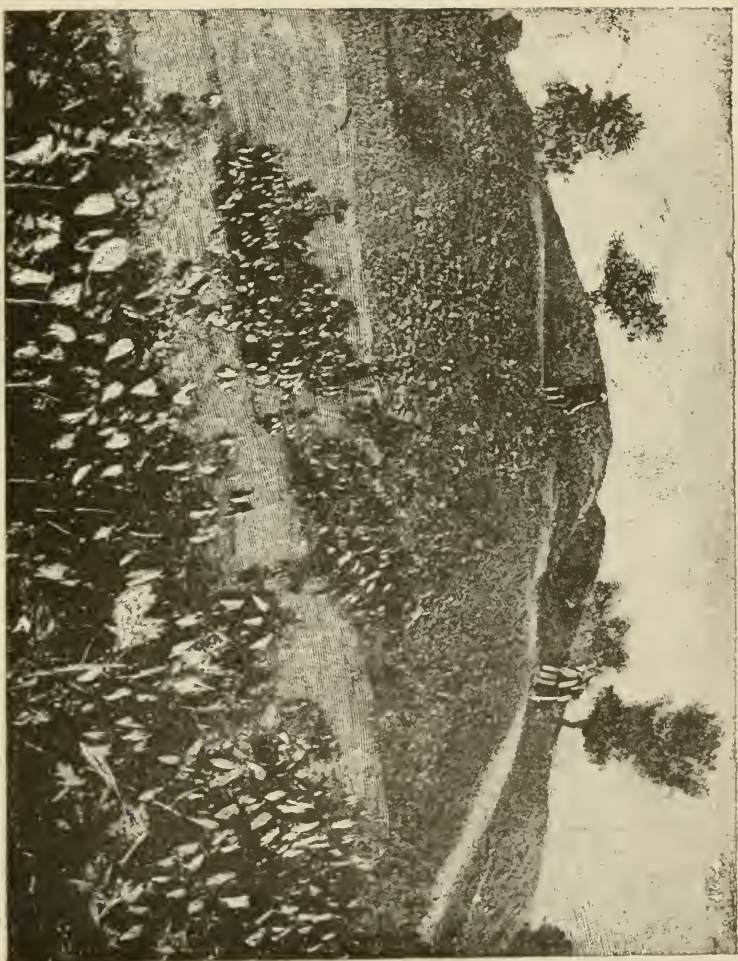
CHAPTER XVI.

Figure 1—Works at St. Louis.....	310
2—Pyramids at Walnut Bayou.....	311
3—Pyramid Mounds at Prairie Jefferson.....	312
4—Village on Ocmulgee River.....	313.

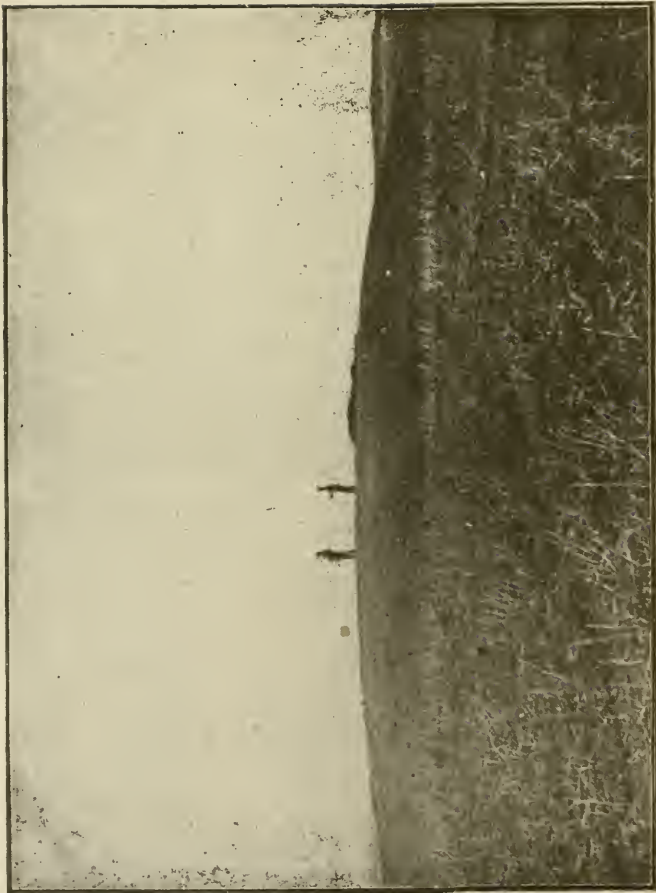
	PAGE.
Figure 5—The Etowah Mound.....	314
6—Stone Cist in the Shape of a Hut.....	317
7—Mound-Builders' House Wall.....	317
8—Head Vase from Tennessee.....	318
9—Pottery from Ash-Pits in Ohio.....	319
10—Pottery from Ash-Pits in Ohio.....	319
11—Pottery from the Stone Graves.....	320
12—Vase With Three Heads.....	324
13—Florida Pottery.....	325
14—Copper Relics from Iowa Mound.....	326
15—Copper Plate from Mound in Wisconsin.....	327
16—Shell Gorget from Etowah Mound.....	328
17—Copper Relics from Florida.....	329
19—Sun Symbol on Shell Gorget.....	331
20—Birds' Heads and Looped Square.....	332
21—Spider Gorget from Missouri.....	332
22—Fighting Figures from Stone Graves.....	333
23—Fighting Figures from Mexico.....	333
24—Suastika on Shell Gorget.....	334
25—Idol from Knox County, Tennessee.....	336
26—Idol from Tennessee.....	339
27—Idol from Georgia.....	339

LIST OF PLATES AND MAPS.

- Frontispiece—Ancient Earthworks at Marietta.
 Earthworks at Marietta, page 1.
 Conical Mound at Marietta, p. 2.
 Map of Burial Mounds near Muscatine, page 17.
 Map of Works on the Scioto River, page 18.
 Village Enclosure on the Scioto, page 48.
 Indian Encampment at Detroit, page 49.
 Map of Burial Mounds in Minnesota, page 58.
 Burial Mounds at Detroit, page 59.
 Burial Mounds in Ohio, page 74.
 Burial Mound at Chillicothe, p. 74.
 The Adena Mound, near Chillicothe, page 75.
 Mound Containing Stone Graves, page 79.
 Stone Mound Containing Succession of Burials, page 80.
 Circles and Squares in Ohio, p. 88.
 Crescents and Circles in Oblong Enclosure, page 89.
 Map of Village in Marietta, p. 132.
 Village Enclosures at Newark, 133.
 Village Enclosures and Dance Circles, page 144.
 Village Enclosures and Covered Way, page 145.
 Pyramid Mounds in Illinois, p. 158.
 Pyramid Mounds in Mississippi, page 159.
 Pyramid Mound at Etowah, p. 160.
 Copper Eagle from Etowah Mound, page 171.
 Eagle Man from Etowah Mound, page 172.
 Pyramid at Pine Bluff, Arkansas, page 176.
 The Knapp Mound, page 177.
 Map of the Works of the Mound-Builders, page 182.
 Map of the Indian Tribes, p. 183.
 Earth Fort in Highland County, Ohio, page 200.
 Stone Fort in Ross County, Ohio, page 201.
 Stockade and Stone Forts in Ohio, page 216.
 Stockade Forts in Northern Ohio, page 217.
 Stockade Forts in Southern Ohio, page 218.
 Fort and Village Sites in North Carolina, page 219.
 Fort and Bastion in Tennessee, 220.
 Works in Portsmouth, page 262.
 Works in Newark, page 263.
 Temple Platform at Cedar Bank, page 264.
 Shell Gorgets, page 265.
 Relics from Tennessee, page 284.
 Implements and Ornaments from Tennessee, page 301.
 Inscribed Shells from Tennessee, page 301.
 Inscribed Shells and Suastikas from Tennessee, page 301.
 Cahokia Tablet, page 303.
 Inscribed Shells from Tennessee, page 304.
 Pottery Kettles and Bowls from Tennessee, page 315.
 Pottery Bowls from Stone Graves, page 316.
 Pottery Portraits from the Stone Graves, page 321.
 Pottery Bottles from Arkansas, 322.
 Wooden Tablets from the Florida Keyes, page 338.
 Idol Pipe from the Adena Mound, page 338.



MOUND IN INDIA SUPPOSED TO BE BUDDHA'S TOMB.



BURIAL MOUND IN CALIFORNIA.

THE MOUND BUILDERS.

CHAPTER I.

THE DISTRIBUTION OF MOUNDS.

The world is full of monuments. Some of them are made of earth; others of stone, and others of bronze. Each in their turn indicate a new age and the progress of civilization. The history of the past is made known by these mute witnesses. There is scarcely any land which has not its records kept by these monuments in one form or another, but the earliest of all is that contained in the mounds.

The first striking event in the history of any community, is the first birth or first death, and so it is with the history of the human race. We go back to the earliest record and find the story of the first pair, and soon after the story of the first death. It is conceded that the earliest monuments were placed over the bodies of some distinguished dead. So the earth mounds of every land may be regarded as mementos of tribes and peoples that have passed away. Nothing is more sacred to the human heart than the memory of the dead. It is a sentiment which is as strong among wild Indians as among civilized people.

The earth mound was to them a memento of the past. To us the dearest associations are those which unite the visible with the invisible, the past with the present. And so it has been with others. As generation after generation was gathered to its fathers, the growing mound would increase the sacredness of the spot.

It is thus that we arrive at a motive sufficient for the great pyramidal structures. Human nature, true to its original instincts, thus hallowed its inmost feelings by the great mound. Such is the reason for supposing the pyramids to precede every form of religious edifice. The highest thought of immortality is aided by these monuments of the departed. History and architecture agree in this: that the pyramids are the oldest monuments, but there are tumuli found everywhere in the habitable globe which are much older.

The universality of mounds throughout a large portion of the world, only shows that man everywhere possesses the same religious instincts and uses the same method for honor-

ing the divinities, and shows regard for ancestors in about the same way. It is by following the course of architectural development in the Old World that we find the law which prevailed in the New. The remote period in which the great number of monuments were erected, leads us to pay a regard to the monuments of our own land. It may be that if we better appreciated the feelings which exist in all hearts and homes, we would look upon the mounds that surround us, with a greater sense of their sacredness. The record contained in them is not so important as that contained in the monuments of the East, yet the consecutiveness of architecture in both hemispheres, and the singular parallelism seen in both worlds, makes the study of mounds and monuments very important.

In every land we meet with tokens of respect for the dead. We cannot expect to find in the mounds of this country any such record as is contained in those mounds in which many of the ancient cities lie buried; but we may at least ascertain what kind of structures were erected in prehistoric times, and by this means gain a view of the beginnings of architecture even better than in the Old World. The same is true of the beginnings of art, for while certain tokens of the Stone Age have been discovered in the historic lands, yet if we are to learn about the art of the Stone Age we need to examine the relics which are hidden beneath the mounds of the Mississippi valley.

The work of mound exploration has fallen into discredit, because of the motives which have ruled with many; yet there are lessons to be learned even here. It will be remembered that these silent mounds were the result of religious ceremonies, which followed one another through many centuries, and were practiced by many tribes. The many generations have left their record in them, which makes them like the leaves of a book which may well be compared to the "Book of the Dead."

Among the people situated as we suppose the early inhabitants of this country to have been, these contain the only records. The continuity of the same race in the same country, and uninfluenced by any foreign element, continued until the time of the Discovery. There may have been many tribes, but they were all aboriginal. What length of time was required for these successive manifestations we cannot say. We know there were many ages through which architecture struggled in the Old World, and we may expect to find traces of many generations in the New. From the pyramid to the temple, in Egypt, was a far cry which extended through 1,500 years, and it may be that the same length of time elapsed between the beginning and ending of the mound-building period.

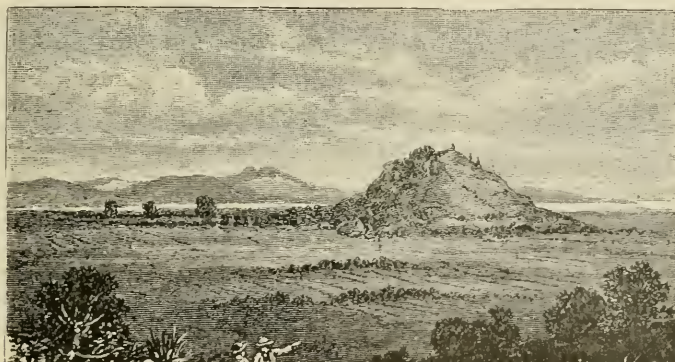
The interval between the earliest grave in Egypt and the building of the pyramid at Ghizeh may have been very long, but it is unknown how long a time elapsed between the first ap-

pearance of man here on this continent and the beginning of the mound-building period.

There were various and succeeding phases of society in the Eastern World before history began to be written. In the Western World no history was really written until the advent of the white man; and yet there are many evidences that a rude civilization had prevailed here long before that time. It is from the careful study of archæology that we are to carry the records back, and learn about the changes and events which occurred.

These massive monuments are before us as the memorials of the past, and we are not to destroy them until we have found the record. The history of mound-building will, then, be appropriate here.

There is a description in Homer of the process of mound-building, which was common in his day, for it was over the



MOUND AT MARATHON, GREECE.

grave of Patroclus that a sacrifice or hecatomb of oxen was made, and that a mound was erected. Xenophon also has made a record of the manner in which those slain in battle were buried, so that we know that the habit of mound-building was common then and had probably survived from the pre-historic into the historic period. It is by this means that we have been able to identify and to know that the site of the battle of Marathon, which was one of the most memorable events in the history of Greece, is the monument of those who fell in that battle.

There is also a mound on the coast of Asia Minor, which is a monument of the Siege of Troy, described by Homer. Schliemann discovered it, and identified it as the one in which was buried the hero, Protesilaus, who led the warriors of Thessaly against Troy, and was the first Greek who jumped on shore. The tradition of antiquity attributed it to him. This tumulus and the gardens around are strewn with fragments of thick black pottery, which are very ancient, and similar to that

found in the first city at Troy. There are other mounds scattered over the globe, which are monuments of events of nearly equal importance, but are not so well known because no Homer or Schliemann has arisen to make known the event, or identify the mound with it.

The large majority of mounds and monuments of the East were erected as places where the remains of the deceased could be buried, and where the personal possessions, especially those which were the most treasured, could be deposited. It is very singular how wide-spread was this custom of depositing the treasures of the deceased along with the body. We speak of the habit of the North American Indian, of depositing the relics with the body of the dead, the most of which were made of stone or copper or shell, and have been preserved, so that through them we can learn about the art of the Stone Age. But the same custom prevailed among the nations of the East, long after the Stone Age had passed away, so that one of the means by which we may learn about the art and social condition which prevailed in the Bronze Age up to the beginning of the Iron Age, is to enter the tombs and draw from them the treasures which they contain.

This practice of burying treasures with the dead prevailed in Egypt as well as Greece. The view of immortality led the Egyptians to make the tomb in the shape of a house and to place a statue in the tomb, but to bury the body below the tomb, and treasures with the body. Even pyramids were built in this way. There was a chamber in the pyramid, but the body was below it. The mound-building habit of the Egyptians reached its highest point in the pyramids.

With the Babylonians the case was different. Many houses and palaces, temples, libraries, and statues have been found buried in the great mounds; no such burials as have been presented by the tomb of Mycenæ, nor such mummies, as are numerous in Egypt.

The tombs are built in the form of houses; many of which were conical in shape, and resembled the early houses, rather than those which were occupied by kings; so that there is a double advantage in opening the tombs. We learn about the ancient architecture as well as the early art, and find a record which is as useful as if there had been a written account of the scenes and circumstance of the times. It was on this account that the explorations by Schliemann in Greece are so valuable. It was his acquaintance with the Greek language and his admiration for Homer that led him to dig into the great hill at Hisarlik, and as a result he was able to identify, not only the site of ancient Troy, but to discover the traces of sixteen cities which had arisen upon the spot and gone to ruin, making successive layers, by which the age of the cities could be identified. The relics which were discovered show the progress of civilization, as well as of art and architecture. It was also his

familiarity with classic writers that led him to undertake his expeditions at Tiryns, Mycenæ, and Athens, which resulted in such wonderful discoveries.

The tombs of the ancient kings contained treasures of great value; but a benefit came to the world from his discovery, which cannot be measured in dollars and cents, for the relics of art which were exhumed, have thrown light upon the period which has not ceased to astonish even the best of scholars. They have not only become familiar with the magnificence which prevailed in the palaces of the kings, but have learned much concerning the common things in use among the people. We may say then, that mound exploration in America has received a new dignity, and the relics which are exhumed from them have an additional value from the fact that they can be compared with the treasures taken from the tombs of the East, and so the different stages of progress may be learned.



No. 133.—Tumulus of Protesilaus on the Thracian Chersonesus opposite the Plain of Troy.

BURIAL MOUND OF PROTESILAUS, THESSALY.

Nor does the value of mound exploration cease with the knowledge of classic history, for the Bible itself has received a new light as a result of mound explorations.

There are very few burial mounds in the Holy Lands, and the relics of extreme antiquity are lacking; but there are mounds and monuments even there, which carry us back to the days of Abraham, or even earlier.

In fact, the Stone Age antedated the Bronze Age and the Iron Age in all parts of the world, and we have a much clearer idea as to the social conditions which prevailed in Egypt, Syria, Babylonia and other parts of the world, after studying the relics and remains of the prehistoric peoples buried in these mounds, than we would have without them.

They belonged to a race totally unlike those whose monuments are discovered in the East, yet the supposition is that they originated in the Old World, and represent the races which once existed there.

Great efforts are being made to learn about the relics of the Stone Age in the Old World, for from them we learn the beginnings of art and architecture, and even of religious symbols, and the efforts which have been so successful here in bringing out the peculiarities of that age, may be of great assistance to the archæologists elsewhere.

The scarcity of the relics of the Stone Age in Greece and Babylonia and Egypt seems to be lamented, yet enough have been discovered to show that that age did really exist in those lands. Perrot and Chipiez say :

When we attempted to draw up the balance sheet of the Grecian Stone Age, we are not beset with an embracing mass of material, such as is seen in Mexico, Scandinavia and other lands. The paucity of objects of this nature stand out all the more clearly from the contrasts. We cannot demand of this country megalithic monuments, menhirs, cromlechs, or dolmens, for the simple reason that none are found in Greece or on the coast of Asia Minor. The pile villages that were brought to light in Thessaly and Macedonia, have turned out to be quite modern, and have no connection whatever with the palæfittes mentioned by Herodotus. In them, moreover, no objects dating back to antiquity have been discovered. There is little reason for seriously examining the stone or flint yard in Accadia or Orchomenus, or the kitchen middens which have been pointed out in Salamis. Still, on the other hand, researches are encouraged by the knowledge that towns that played so brilliant a part in history were often built on much older settlements, so that when sub-structures or foundations were laid bare, instead of the looked-for classical buildings, they frequently present remains of villages in which had lived the earliest inhabitants of the country. Of the different pieces representing the Stone Age, fragments of obsidian and flint cut to a point are numerous and widely distributed. Schliemann's excavations alone have yielded thousands. The largest crop comes from His-sarlik, but Mycenæ and Tiryns furnish fine specimens also. Pieces of obsidian fall under two different heads: slender cones fitted to wood, or bone handled, to be used as a javelin; or thin triangular blades, intended to go through the air and hit the mark at a distance (arrow-heads). Long fine blades, whether as knives or saws are not common here.

There is yet another class of instruments which a wide spread superstition has done much to popularize. The Greeks designated them "Astral Stones." The French and Turks call them "Thunder Stones." We allude to polished stone axes, which are so largely represented in our collections. They represent the *first efforts of a primitive people to emerge from barbarism*, a status which was not so apparent in the several populated centres, as in the clans that were scattered about. Still the employment of stone implements did not cease when metal tubes made their first appearance, for stone was discarded slowly and by degrees. The finest specimens of stone relics have come from Troy, Tiryns, and Mycenæ, towns where metal was applied to all the usages of life.

The passage from a semi-savage state to a settled condition among the Greeks, was effected in their countless migrations to and fro, finally establishing themselves in positions in which they became the Greek nation. Their efforts are visible in scenes far apart from one another, and yet not too distant to preclude their entering into relations of intimacy with each other, and to have bestowed upon their handiwork a general family resemblance. The Hellenic tribes were separated by mountain or sea from one another, and did not owe allegiance to a supreme head. Each obeyed its own chief and lived its own individual and independent life, but the State that had Mycenæ for its capital, appears to have been the most influential among all. It constituted continental Greece, during the four or five centuries that preceded the Doric invasion.

The discoveries made during the last thirty years have disclosed to us at Greece totally forgotten, and older than Homeric Greece, but none

created so deep an impression as those in the Mycenæan metropolis. These far better than any other, show us the means of defining the civilization which was the earliest.

The thought expressed above in reference to the isolated tribes having developed in the course of time into a nation, is important, for it shows that it always takes time for any people to grow into the condition of a nation; and, unless the tribes are surrounded by physical barriers, and protected from incursions, they may never reach this position. This point is important in connection with the Mound-Builder's history.

Schliemann thought he recognized seven periods at Troy, but these were reduced to four superimposed cities. Resting on the rock itself, was the first settlement. In the second period the gate was furnished with a lintel and wooden jambs, and opened into a narrow sloping corridor. Percy Gardener says:

It is supposed by many archæologists that the graves which were dug in the rocks, just within the lion's gate at Mycenæ, were earlier or older than the beehive tombs, the rich spoil of which dazzled Europe a few years ago. It is not unusual to recognize in the graves of prehistoric Greece, two periods, the older marked by rock cut tombs, and the later by beehive tombs.

This would indicate that tomb building began in the Stone Age, though this has been obscured by the accumulations of more recent times. The same fact is true of the Holy Land. There was a mound situated in the south of Palestine, which was supposed to mark the site of the ancient Lachish, but it was a silent heap of earth. No one had undertaken to draw out its secrets until Mr. F. J. Bliss, the son of a missionary, was induced by Prof Petrie to enter into the work of exploration. He found that it contained the records of many ages, and it is now called the "Mound of Many Cities." Its history does not go back to the Stone Age, but leads us to an acquaintance with a condition of the country while the Egyptians were in power, and when a correspondence was carried on between Ramses, the great king of Egypt, and an officer who was stationed at this very city; and a series of letters were discovered, both in Egypt and in Syria, which carries back the history of writing to a much earlier period than had before been known.

The exploration by Mr. Arthur J. Evans has also shown that prehistoric civilization appeared not only in Greece and Asia Minor and Egypt, but extended from Cyprus and Palestine to Sicily and Southern Italy and the coasts of Spain. The colonial and industrial enterprises of the Phœnicians have left their mark throughout the Mediterranean Basin. In all these excavations and researches, the land to which ancient tradition pointed as the cradle of Greek civilization, had been left out of account. Crete was the central island, a half-way house between three continents. Prof. Flinders J. Petrie says;

Here in his royal city, Knossos, Minos ruled and founded the first sea empire of Greece, extending his dominion far over the Ægean isles and coastlands. It was as the first law-giver of Greece that he achieved his greatest renown. He was the Cretan Moses, who every nine years repaired to the cave of Zeus and received from the god of the mountain the laws for his people. Like Abraham, he is described as the friend of the gods. His symbol was the double axe; his animal figure totem was the bull. The great cave of Mount Ida, whose inmost shrine was adorned with natural pillars of gleaming stalactite, leads deep down to the waters of an unnavigated pool. On the conical height immediately above the site and surrounded by a cyclopean enclosure, his tomb was pointed out.

The palace had a long antecedent history, and there are frequent traces of its remodelling. Its earliest elements may go back a thousand years before its final overthrow, approximately to 2,000 B. C., but below the foundations of the later building and covering the whole hill, are the remains of a primitive settlement of still greater antiquity, belonging to the Stone Age. In parts this Neolithic deposit was over 24 feet thick, and everywhere full of stone axes, knives of volcanic glass, dark-polished and incised pottery, and primitive images, such as those found by Schliemann in the lowest strata of Troy.

The wonderful construction of the tombs which have been built in Greece, shows how sacred was the memory of the dead, and how valuable the knowledge of the Stone Age is, and how numerous were the survivals of that age in the specimens of art and architecture of the East, for the very tombs in which the royal treasures were buried, bore the shape of the conical huts which had prevailed in that age. The same is true in Egypt, Babylonia and other cities of the East. It is well known that the mastabah in which the mummies of royal persons were preserved, represented the huts which had prevailed in the Stone Age, and as a proof of it, the piece of pottery which represents a primeval house may be cited. The same is true of Rome, for here the beginning was a hut, for a piece of pottery representing the hut in which the shepherd gave shelter to the two brothers, Romulus and Remus, has been found. It is a hut-urn which resembles that belonging to the Lake-Dwellers of Switzerland during the Stone Age.

The evidences of the Stone Age in Babylonia are lacking, but the explorers are approaching that age. The mounds in the plaza of Babylonia remind us of the Stone Age.

It was in a mound at Nippur that a party of American explorers began their work, and which has not ceased to throw light upon the records of the past. Through their perseverance the date of history has been carried back at least 5,000 years, and it has been discovered that writing was known 2,500 years before the days of Abraham.

Great libraries have been disclosed filled with tablets written in the cuneiform language, from which we have learned about kings and empires which had remained unknown for thousands of years. The Bible student who has not become familiar with the result of these explorations, which have continued up to the present time, is certainly deficient in many things, for these have given new settings for all the characters whose portraits are portrayed, and they assume far more importance than they

ever did before. It was not in the infancy of the world that the Patriarchs lived, nor was it among a rude and barbarous people that the migrations took place, for there have been found beneath the great heaps of earth that stand by the Euphrates and Tigris, the remains of palaces which astonish us in their magnificence and size.

Still, the fact that the stone knife was used in the rite of circumcision, and even human sacrifices had survived in Abraham's day, proves that the influence of the Stone Age was felt even by the Patriarchs as well as by the kings of Moab.

The writing dates back to 5000 B. C. By means of inscriptions we have been able to trace history back to this time, but the first construction of which we have evidence, is that of Ur Gur, about 2800 B. C. It was one of the most renowned and revered seats throughout the whole Babylonian and Assyrian period. Dr. Peters says:

There were mounds which covered the site of an ancient city called Sirpurla, a tributary of Ur. An immense deposit of inscribed clay tablets has been found here. Several low mounds at Tello have also yielded a large number of relics which are important. These differ from those of the Stone Age, in that they show that writing was common, and architecture was in a fair state of advancement. The court of columns discovered at Nippur, also shows that the architecture had passed beyond the Stone Age. Doorsockets were also discovered here, and the oldest temple in the world, the arch made out of crude bricks, designed to protect or cover a drain; also pavements and buttresses, causeways, gateways, towers, a ziggurat of several stages, and brick walls of three different periods, pottery of various kinds, clay tablets, brick stamps, tablets that show a series of astrological records, shrines, a mysterious dwelling of the unseen god, emblem of the tabernacle above the clouds, a Babylonian palace of great extent and some architectural pretensions.

Ur was not only the seat of the first temple, but was a great city of the first political importance, dominating Southern Babylonia about 4000 B. C. Eridu, which was at least as old as Ur, is represented by the ruined mounds of Nowawis on the edge of the Arabian Plateau. South of Eridu may be mentioned but one city—Sippara, the ship city, where the records were buried during the flood. Both Ur and Eridu seem to have been at one time located near the sea, but they are at the present time 120 miles from it. From the later deposit we find that the cities would have stood on the shores of the sea about 7,000 B. C., but back of this we must conclude there was the Stone Age, the date of whose beginning is unknown.

All of these discoveries convince us that civilization had existed here many thousands of years before history began to be written elsewhere, showing that in this particular locality there was a progress which was equal to the Bronze Age and, perhaps, the Iron Age, as it first began to be known in other parts of the world, though the use of iron had not been discovered.

The mounds of Babylonia were, as everybody knows, very different from those of America, for they contained the "ruins of lost empires," and were formed by the gradual accumulations of ruins, and were not made intentionally to cover up the remains of those who had died, or to preserve the relics of those who have lived; but the result is about the same.

The distribution of the mounds and monuments brings us into other parts of the world. It is a remarkable fact that in China we find that the forms of the tents which constituted the

homes of the Chinese while they were in their nomadic state, are still preserved in the shapes of their temples and towers. This has been spoken of by many travellers and scholars. It is even maintained that the method of building the houses is, at the present day, the same as that which prevailed when tents were the only houses.

There are mounds in China which reveal to us the earliest form of civilization which prevailed there. There are, to be sure, other signs which show that the Chinese came up from the Stone Age, and that they resembled the wandering tribes which formerly existed on this continent, and dwelt in tents or huts as they did.

There are mounds in China which remind us of those on our own continent. These mounds preserve the remains of the dead, and are very sacred because of the love of ancestors which is so strong. Confucius, the great philosopher and founder of the Chinese Empire, was buried in a mound, which still stands.

It is probable that mound-building in China began when the people lived in tents, and that the mound in which Confucius was buried was a survival of the custom which had prevailed for many thousands of years, at least there are many mounds in Mongolia which resemble those which are common in America. This does not prove that the Mound-Builders, so called, came from China, though they may have sprung from the Mongolian race; yet it renders it probable that the races of America were descendents from the Mongolians.

There are also mounds in Russia. They are called "Kurgans," but they are filled with the relics of the Stone Age. They show that the mound-building custom prevailed not only among the Slavonic tribes, but also among the Manchurians. Arctic regions seem to have been possessed by a Mongolian race. Dr. Pickering includes the American Indians among the Mongolians. By most writers, however, the American Indians are held to be a distinct race, which from recent discoveries is supposed to have dwelt on either side of Behring Sea, and is called the "Behring Race"; while the Mongolians are restricted to the Tartar tribes, and the Mantchoos, Koreans, Chinese, Thibetans, Siamese, Finns, Laplanders, and Samoyedes; all these tribes nations are supposed once to have been nomads, and many of them were mound-builders.

The Japanese were accustomed to erect mounds over their dead, and these still remain as the monuments of the past, and are very instructive in reference to the history of that people. It appears that there were three different periods in Japan, the first of which was marked by cave-dwelling savages, who have been called "earth-spiders" or "earth-hiders." Ancient records contain many allusion to them. Mr. Romyn Hitchcock has compared them to the pit-dwellers, who were older than the Ainu, as the pottery found in the Pit-dwellings was

not made by the Japanese. It is older even than the tradition of the Japanese, and may be older than the Ainu occupancy. These "earth-dwellers" or "earth-spiders" were migratory, and may have been the same people who left the kitchen-middens in Japan, or they may have belonged to the so-called "ground race," which has been identified as distinct from the Mongolians, but similar to a race which occupied the north-west coast of America, who here built their houses over the excavations in the earth, and covered them with a pile of sods, making them resemble earth-mounds.

Mr. W. H. Gowland, of the Imperial Mint at Osaka, has spent several years in the study of the Japanese mounds. He has divided the burial into three or four classes: First, in under-



BURIAL MOUNDS IN CHINA.

ground burrows; second, simple mounds of earth; third, mounds with rock chambers, or dolmens; fourth, double mounds, or imperial tumuli. The common mounds, or circular heaps, are frequently found among cultivated fields and covered with trees. Those which contained rock chambers are usually built of rough unhewn stones, some of them of immense size. Long entrance passages are seen, through which one may walk upright for thirty or forty feet or more, sometimes lead to the chambers, in which there may or may not be one, rarely two, stone coffins.

When the covering of earth is removed from the burial chambers, it is found that they open through the passages, usually to the south; a fact which conveys the idea that the tomb was built in the form of a house, and that the houses especially those of the early inhabitants, opened to the south

The introduction of stone coffins occurred, according to Von Siebold, as early as 85 B. C., and continued until a late date. One stone coffin seems to be in the shape of a house. The upper part is in the form of a sloping roof, of the mansard style.

The mounds which were the imperial burial places, are interesting because of their history. The plate represents a double mound at Osaka. The length is 485 feet along the top, the width is 78 feet. In the year 646, the size of the tombs which persons of different ranks might build, was specifically stated. A prince might be buried in a vault 9 feet long, 5 feet wide, covered with a mound 75 feet square and 40 feet high. A common functionary could have a mound only 56 feet square and 22 feet high.

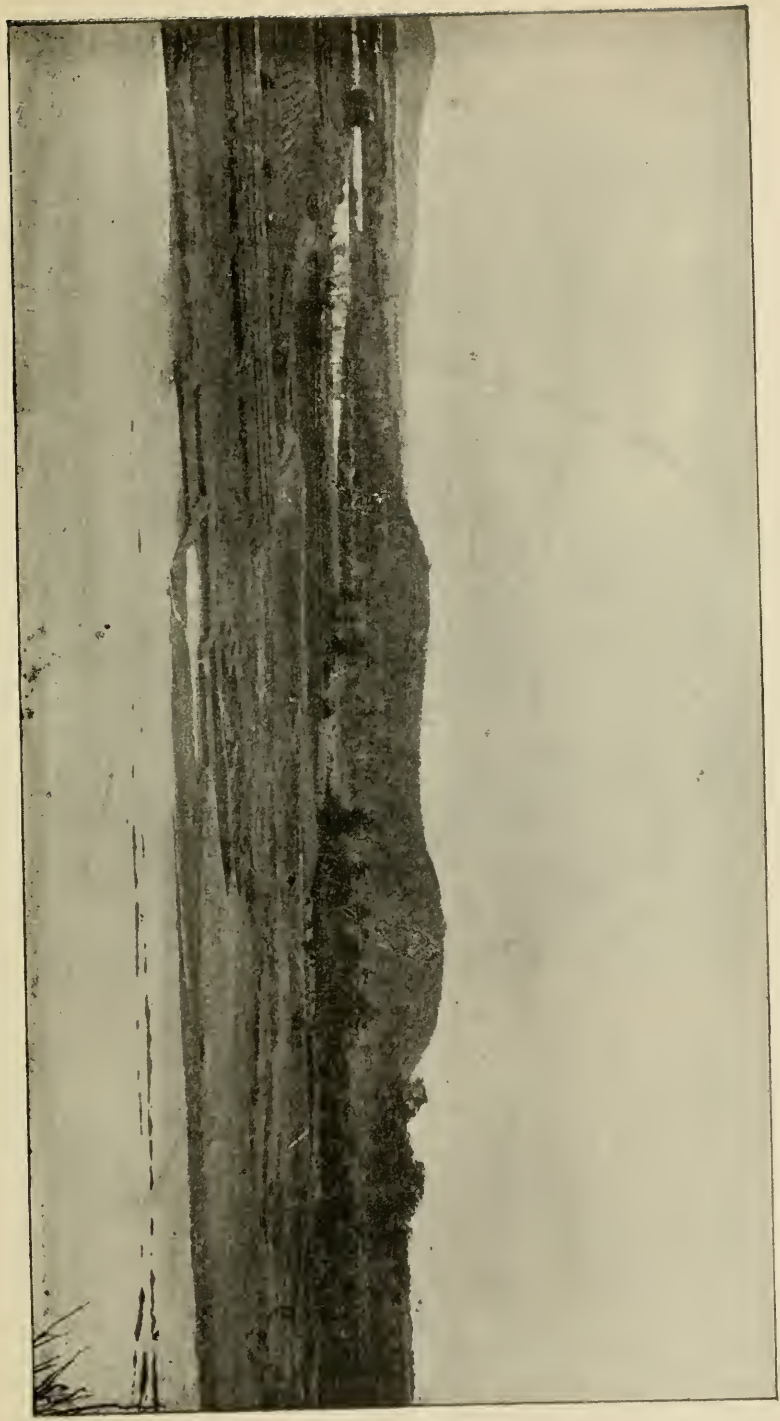
The custom of erecting a terraced mound began about the seventh century. These mounds are built up in three terraces. On the top of each was a fence formed of terra cotta pipes about two feet high, connected by wooden poles, which pass through holes about half way from the base. The cylinders were introduced to prevent washing down of the terraces. They were in use till the year 940 A. D., at which time clay coffins became common, which were afterwards changed to stone coffins.

The mounds have yielded a great variety of articles which were buried with the dead, such as iron arrow-heads, iron rings covered with bronze, silver swords, chains, glass beads, mirrors, and other relics. It was an ancient custom among the Japanese to bury the retainers and members of the family of a prince around his grave, a custom which was introduced from China. In the time of an Emperor of Japan, in 30 B. C., his brother died, and they buried all who had been in his immediate service, around his grave alive; but for many days they wept and cried aloud. The Emperor then said: "It is not good to bury living men standing at the sepulchre of a prince," and he proposed making clay figures of men and horses as substitutes.

Mounds are very common in Europe, but are found mainly in the northern parts, along the coast of Brittany, in various parts of Great Britain, and in Denmark and Sweden. These exhibit to us the customs which prevailed in prehistoric times. We find from them that there was a Stone Age in Europe as well as in America, but it gave place to the Bronze Age, which was brought in by immigrants from the Old World, from Eastern Asia, and from the provinces about the Mediterranean. The mounds of Europe exhibit not only the change which occurred when the Bronze Age was introduced, but they show also the different stages of progress which appeared in the Stone Age.

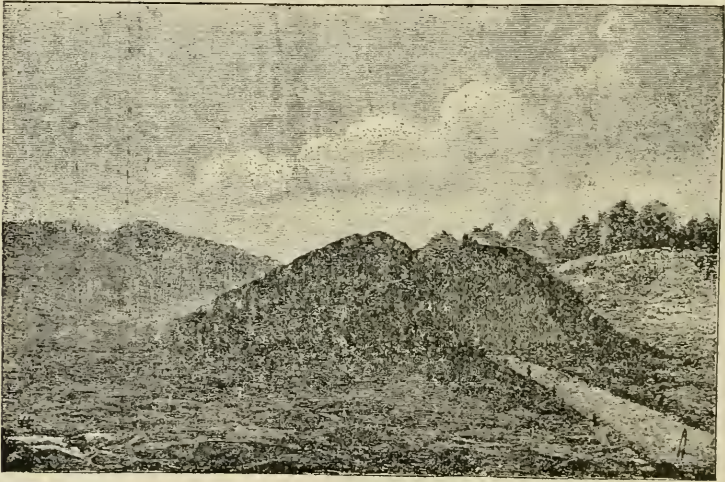
The people who dwelt in Brittany, in Great Britain, in Denmark, in Norway and Sweden were also reached by immigrants from the south of Europe, and the Stone Age in all those

DOUBLE IMPERIAL BURIAL MOUND NEAR NAKA-KONABA, JAPAN.



countries gave place to the Bronze Age. Still, there was a survival of the relics and structures of prehistoric times even into historic times. The standing stones of Carnac in France, are near ancient mounds, underneath which are dolmens. There are barrows in Denmark which contain funeral chambers. These were designed mainly to preserve the bodies of the dead.

The progressive steps appear to be as follows: 1. To cover the body with earth and heap stones over the top, to prevent its being devoured by wild beasts. 2. To enclose the body within slabs of stone. 3. To set up over the body a pillar of unhewn stone, or a table of rock on two or more uprights. 4. To build a stone chamber in the shape of a house and cover the body with this. 5. To make the mound in the shape of a boat, to represent the sea-faring habits of the people. 6. To



BURIAL MOUND OF A NORSE SEA KING.

bury the boat with its equipments, with the body of the commander or seafarer in the boat. 7. To make the house itself into a tomb, and cover the tomb with a great mound; the possessions or furnishings of the house being buried with the owner.

By this means we learn the different habits and employments of the people, as well as the different stages through which they passed.

It is worthy of notice that in Scandanavia mounds have been discovered that belong to the Iron Age, some of which were the burial places of the Norse Sea Kings.

One such mound was found in the parish of Tune over a century ago. It was (1865) about 13 feet high with a circumference of from 450 to 550 feet. In the mound was a vessel

which stood on a level with the surrounding surface. Its position relative to the sea suggested that it was ready to be launched upon the element which had been its home, and was still under the command of its master. The articles found near the vessel showed that it was a ship tomb which belonged to the early Iron Age. The ship was carefully drawn out of the river to a place which could be seen at a great distance, and commanded a fine view of the country, as well as the sea. After the space under the ship had been filled with earth, the body of the deceased was placed in the stern where, as captain he had sat when alive. The beads and pieces of cloth indicate that the body was buried with the clothes on. By its side a horse and saddle and harness and snow skates were laid. Thus he had ship, horse saddle, and snow skates with him in the sepulchral tomb, so that he might chose whether he would ride or drive to Valhalla.

Mounds have been discovered on the Northwest Coast, in



BURIAL MOUND OF AN ANCIENT BRITON.

California, and various localities on the western part of the continent, which greatly resemble those found in China, giving the idea that the custom may have been introduced from that direction. No other line has been traced along the Atlantic Coast further north than the St. Lawrence River, though the mounds of the Mississippi Valley greatly resemble those found in Great Britain, as can be seen from examining the cut which represents a burial mound in the Parish of Herefordshire, England.

Now, this review of the mounds and their distsibution throughout the Old World is not intended to furnish a clue to the origin or age of the Mound-Builders of the New World; still, there are some useful hints which are worth considering before the subject is closed:

1. It has been shown that the mounds of many cities are full of layers which have been caused by the destruction of different cities, and this conveys the idea that the stratified mounds of this country furnish the evidence of greater age than some have been inclined to grant to them.

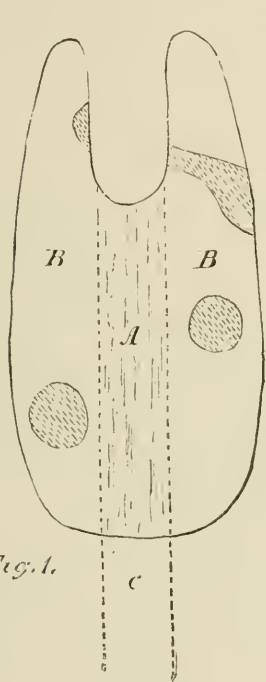
There is, to be sure, a great difference between them, for in the mounds of Asia we count by thousands of years, while in this country we count by hundreds; yet if the beginning of the civilization and the historic period dates back to 10,000 years, this method of computing time would bring the Mound-Building Age back at least a thousand years, and furnish a hint of much greater antiquity.

2. The fact that many of the burial mounds of the Old World were erected as mounments to the dead, proves the high regard for the departed, and reflects honor upon the Mound-Builders of this country, for it makes it evident that they were govered by the same sentiment, and took pains to place their best treasures alongside the bodies which were buried beneath the silent heaps.

3. The fact that the mounds of Europe and Asia were built by races who were widely scattered, and whose history and race connection are involved in great obscurity, makes it very difficult to identify the Mound-Builders of this country with any particular race, though it opens a wide field which we may study in our effort to learn about the races who first peopled the continent.

4. The fact that the earth mounds both in Europe and in Asia preceded the mounds which contained stone cists and chambers, and belonged to an earlier stage of progress, allies the Mound-Buitders of this country with the earlier or, at least, a ruder people, rather than with the later and more civilized. The peopling of America is a problem which has not been solved, and until it has been, we cannot expect to decide about the race connection and history, or wanderings of the Mound-Builders; yet the recent discovery of the new race called the "Behring Race," may encourage our investigations.

5. The valley of the Mississippi is, however, the great home of the mound builders, and the stage of culture which was reached by them was that of the Stone Age. It matters not, then, what their origin was, for this valley is the place where their culture and social condition are to be studied, and where one phase of the Stone Age begins to be learned.



Mound
— at —
PAPYS BAYOU

Note. The Shaded portions indicate explorations.

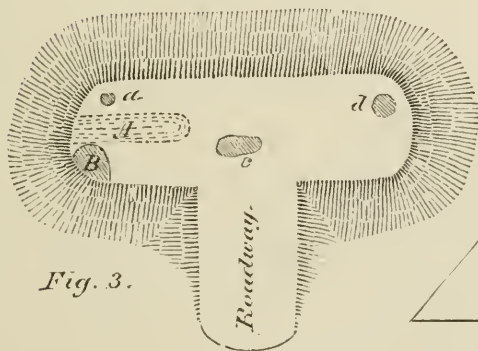
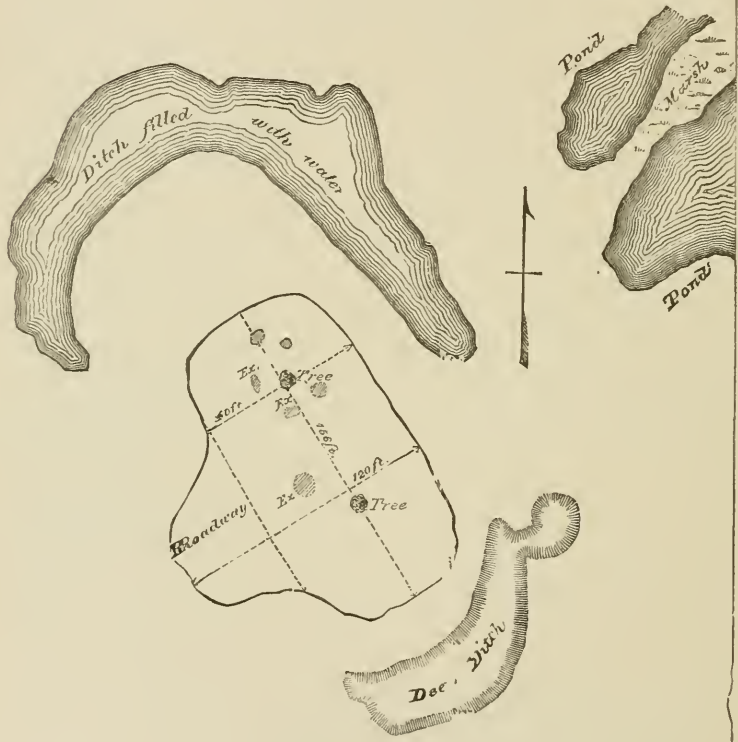


FIG. 1.



PLAN OF
Mound at
DUNEDIN
Hillsboro Co.,
FLA.

FIG. 2.

CHAPTER II.

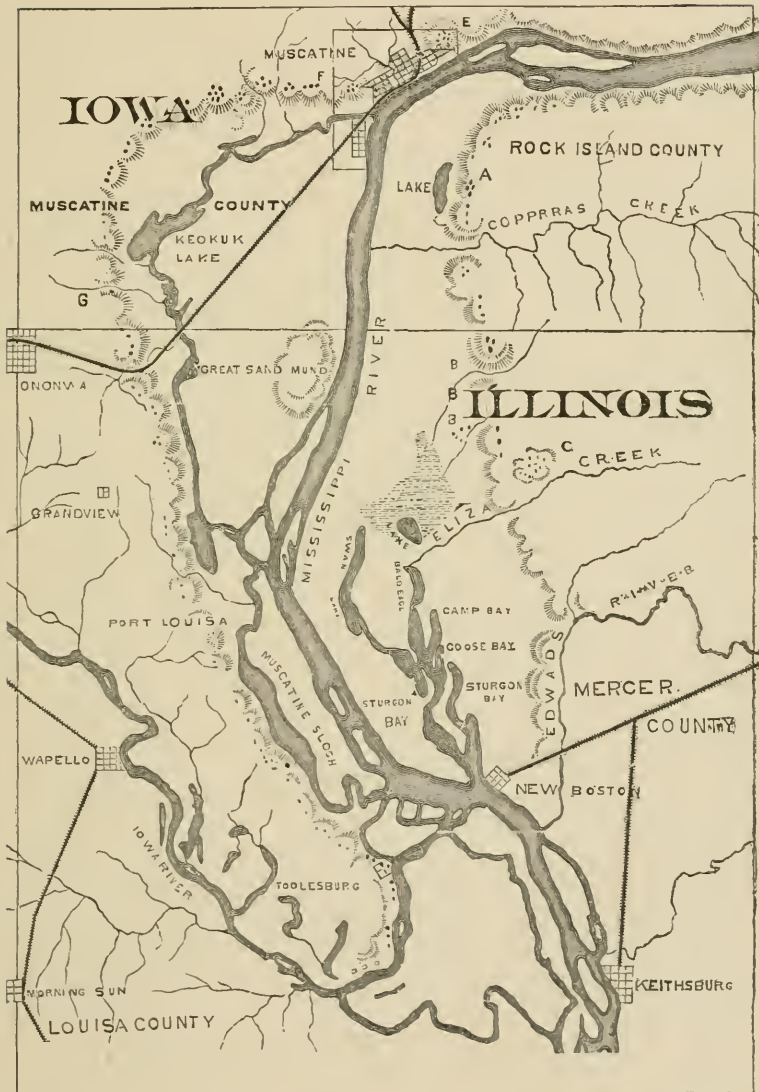
THE MOUND-BUILDERS AND THEIR WORKS.

We now come to the Mound-builders. It is well known that a people called Mound-builders once inhabited the interior of North America. Who this people were, whence they came, whither they went, are among the unsolved problems. An impenetrable mystery hangs over their history. All that we know of them is learned from their structures, works and relics. To these mute witnesses we must resort if we are to learn anything of the character of this people. The first inquiry is, Who were the Mound-builders? This question will probably be answered in different ways, but before answering it we shall refer to the points involved and leave it for our readers to draw their own conclusions.

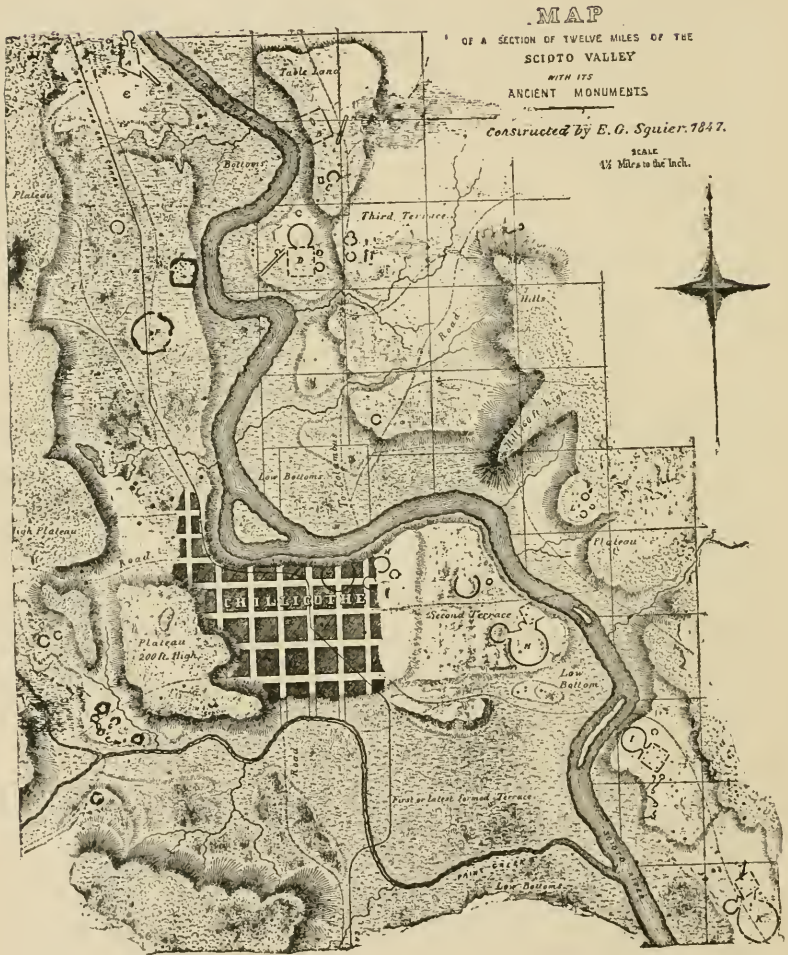
We take up the division of the Mound-builders as the especial subject of this chapter. Let us first consider the name, however. The name "mound-builder" is a general one, indicating that there was once a people who were accustomed to build mounds. In this general sense there is much significance to the name, in that it suggests one characteristic or custom of the people. There is, however, a sense in which the word is used, which makes it very expressive, for it furnishes to us not only a picture of the mounds and earth-works, but also indicates much in reference to the people. We may say in this connection that there are several such words in the archæological vocabulary which have proved equally significant. To illustrate: We use the words "cave-dweller," "cliff-dweller," "lake-dweller," signifying by these terms not merely the fact that those people once lived in caves or cliffs or above lakes, but implying also that they had a mode of life, style of abode, stages of progress, which were peculiar and distinct. We infer from this, that the prehistoric age was divided into different epochs, and that each epoch was distinguished by a different class of structures. This interpretation may need to be modified, for there are certain indications that several representatives of the stone age may have been con-

temporaneous. Still, the modes of life, occupations and habitations were the result of location and of physical surroundings rather than of "age" or stages of progress. While the stone age may be recognized among the Mound-builders, yet a subdivision of that age into epochs may be a safeguard against premature conclusions and unsafe theories, keeping us from extreme opinions. Our readers are aware that the Mound-builders were once supposed to have been a remarkable people, and allied with the historic and civilized races, but that latterly the opinion has gone to the other extreme, the low grade and rude civilization of the wild hunter Indians being frequently ascribed to the entire people, no distinction or limitation being drawn between them. We maintain, however, that the Mound-builders' problem has not been fully solved, and that, therefore, it is premature to take any decided position as to the actual character and condition of this mysterious people. All that we can do is to set forth the points which we suppose have been established and leave other conclusions for the future.

1. The place where the works of the Mound-builders are most numerous is the Mississippi Valley. In a general way their habitat may be bounded by the great geographical features of this valley; the chain of great lakes to the north, the Alleghany mountains on the east, the Gulf of Mexico on the south, and the Great Desert on the west. Within these bounds, mainly, do we find the structures which have given name to this strange people; and we may describe them as the ancient inhabitants of the Mississippi Valley who built mounds. There are barrows or mounds in Europe and in Asia. There are mounds or earthworks in Honduras, Yucatan and Central America, as well as in Oregon and on the northwest coast, but the structures in this region are distinctive, and peculiar to the inhabitants who dwelt here. Nowhere else on the continent are they found in such great numbers. Nowhere else are they found so exclusively free from the presence of other structures. Nowhere else is such a variety of earthworks. To the eastward, along the coast of the Atlantic, there are earth-works, such as stockades, fortifications and village enclosures. To the westward, beyond the Rocky mountains, there are pueblos, rock fortresses and stone structures. To the northward, beyond the lakes, there are occasionally found walls and earth-works; but in the valley of the Mississippi those structures are discovered which may be regarded as distinctive. The peculiarities which distinguish these from others, aside from their being exclusively earthworks, are, first, their solidity; second, their massiveness, and, third, their peculiar forms. By these means the works of the Mound-builders are identified, and in their own territory, wherever a structure may have been erected by a later race, it may be known by the absence of these qualities. There are occasionally earth-works in the valley of the



MAP OF BURIAL MOUNDS NEAR MUSCATINE.



MAP OF THE WORKS OF THE SCIOTO VALLEY.

Mississippi, especially through the northern part, bordering on the lakes, which were evidently built by the later Indians. Their resemblance, however, to the fortifications east of the Alleghanies, and the evident design for which they were erected, as defensive or village enclosures, the unfailing spring attending them, the absence of any religious significance, and their want of solidity and massiveness, help to distinguish them from the works of the Mound-builders.

We take the picture presented by this valley and find it strikingly adapted to the use of a class of people who were partially civilized. On either side are the high mountains, constituting barriers to their great domain. At the foot of the western mountains are the plateaus or table-lands, which have formed from time immemorial the feeding places for the great herds of buffaloes. In the northern portion of the valley, bordering upon the chain of the great lakes, are great forests abounding with wild animals of all kinds, which must have been the hunting-grounds of this obscure people. The center was traversed by the Appalachian range, which was the fit abode for a military class of people. Along the lines of the great streams were the many terraces, forming sites upon which the people could build their villages, and yet have access to the waters which flowed at their base. Many of these terraces were formed by the gravel beds left by the great glacial sea which once rested upon the northern portion of the valley. Below the terraces, and all along the borders of the rivers, were the rich alluvial bottom lands which so favored the cultivation of maize and yielded rich return to a slight amount of labor. Broad prairies interspersed with forests and groves, and traversed by numberless streams gave variety to the scene. It was a region built on a grand scale and was capable of supporting a numerous and industrious population. We may suppose that the Mound-builders, when they entered it, were influenced by their surroundings, and that they soon learned its resources. We can not look upon them as merely hunters or wild savages, but a people who were capable of filling this broad domain with a life peculiar to themselves, and yet were correlated to the scene in which they were placed.

Here, with a diversity of climate an abundance of products, the people led a varied life. They were to gain their subsistence from the great forests and from the wide prairies, and were to fill them with their activities. A river system which, for thousands of miles, drained the interior, furnished the channels for communication, and was evidently well understood by this people. A vast sedimentary basin, through which the rivers have worn deep channels, leaving table-lands, cut by a thousand ravines, and presenting bluffs, head-lands, high hills, narrow isthmuses, detached island-like cliffs, in some cases precipitous and difficult of access, furnished many places on which this peo-

ple could build their defenses, covering them with complicated works resembling the citadels of the Old World, beneath which they could place their villages and dwell in safety.

The number of these ancient villages is well calculated to excite surprise. Ten thousand burial mounds or tombs were found in the single State of Ohio, and also a thousand or fifteen hundred enclosures in the same state. Nor is their magnitude less a matter of surprise than their number. Twenty miles of embankment constitute one series of works. Walls sometimes thirty feet in height, and enclosing from fifty to four hundred acres, surround their fortifications. Pyramids one hundred feet in height, covering sixteen acres of ground, divided into wide terraces, three hundred feet long and fifty feet wide, vying with the pyramids of Egypt, formed the foundations for their great houses. Mounds formed their lookout stations, sixty and ninety feet in height. The variety of their works was great, and their distribution widespread. In one part of this wide domain there were game-drives, in which the animals hunted were erected in effigy. In another part were garden beds, covering hundreds of acres, and presenting many curious patterns; in another, large groups and lines of burial mounds; in another, many circles and fort-rings; in another, lodge circles and hut-rings; in another, village circles and dance-rings, interspersed with temple platforms; in another, extensive enclosures, with domiciliary platforms; in another, groups of pyramids, interspersed with fish ponds, surrounded by earth-walls. Everywhere was manifest a wonderful adaptation of the works to the soil and scenery and physical surroundings. Different grades of advancement were exhibited, but at the same time great activity and great skill in gaining subsistence. Every spot was well chosen and the works placed upon it were best adapted to the locality.

II. A distinction between the races of the Mississippi Valley according to geographical lines is to be noticed, those north of the great lakes being generally identified with later tribes of wild hunter Indians; those which adjoin the lakes, and which extend from New York State through Northern Ohio to Michigan, also being ascribed to a military people resembling the Iroquois; those on the Ohio to a class of villagers who were more advanced than any ordinary Indians, and those of the Southern States to a class of pyramid-builders, who were the most advanced of all. The distinction is, however, not only geographical, but chronological, for there are relics which are as strictly military among the villages or sacred enclosures as among those in the homes of the warlike Indians, and there are tokens in the midst of the pyramids which indicate that modern hunters have roamed among the agricultural works, and that sun-worshippers and animal-worshippers have traversed the same regions.

A simple earth-wall, running around the brow of some gentle declivity, or the top of some precipice, or on the edge of some isolated island, presents a very different aspect from those structures which are found oftentimes in the midst of large and fertile valleys, or upon many of the plats of ground where now stand some of the largest cities of modern days, and which, for massiveness and extent, surprise even those who behold them in the midst of the works of civilized man. These earth-walls, or so-called stockades, we maintain, were the works of the later Indians, and can be easily distinguished from the earlier Mound-builders by certain unmistakable evidences. The same may be said also of the relics and other tokens. They may be found in the Mound-builders' territory, but were, many of them, of a later date and of a ruder character, and should be ascribed to a different people and not be confined to one date or race, much less to the so-called modern Indians known to history.

In reference to this point we may say that the evidences are numerous that the people who built the mounds in the Mississippi Valley belonged to different races and occupied the country at different periods and may have come from different sources.

(1.) The traditions of the Indians prove that the lands have been inhabited by different races and at different periods. These traditions prevail not only among the northern Indians, such as the Delawares, the Iroquois and the Algonkins, but also among the southern tribes, such as the Cherokees, the Creeks, Choc-taws and Muskogees, all of them indicating that there were later migrations and that other races were in the valley before these tribes reached it. The traditions of some of the Indians, especially those of the south, point back to a period when their ancestors began the process of mound-building; with others the traditions point to a time when they began to occupy the mounds which had been built by another and a preceding people. Nowhere, however, is it claimed that the Indians were the first people who occupied the country or that their ancestors were the first race who built mounds. The evidence is clear that among the various tribes some of them, in the course of their migrations, had been led to abandon their particular mode of building mounds and had adopted the mode of the people whose territory they invaded, and thus the same class of structures continued under the successive races; but the beginning of the mound-building period is always carried back indefinitely, and is generally ascribed to some preceding people.

(2.) The relics and remains prove also a succession of races. This is an important point. A discussion has arisen among archæologists as to who the Mound-builders were, and the idea has been conveyed by some that the Mound-builders were to be identified with this or that tribe which occupied the region at the opening of history. This, however, is misleading. It limits us

to a very modern period and serves to cut off investigation into the more remote ages of the mound-building period.

Our position is that many of the mounds contain a record of successive periods of occupation, some of the burial mounds having been built by several different and successive tribes, and the layers in the mounds being really the work of different tribes. The prehistoric record is plain. The skulls and skeletons found near the surface we may regard as the latest tokens, some of them being quite modern, and the rude relics found in the gravel beds being regarded as the earliest tokens; but the mound-building tokens extended through a long period of time. On these points we give the testimony of the various gentlemen who have explored these mounds. Prof. Putnam says: "In the great Ohio Valley we have found places of contact and mixture of two

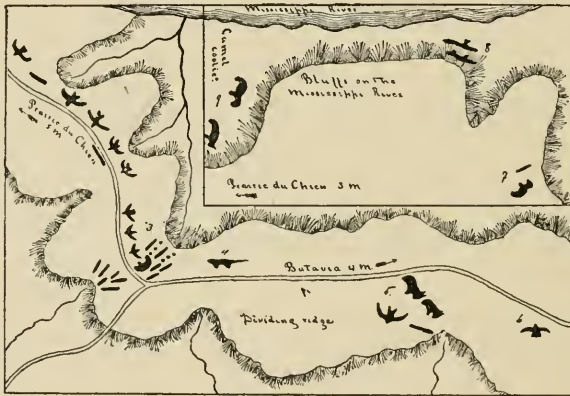


Fig. 11.—Animal Effigies.

races and have made out much of interest, telling of conflict and defeat, of the conquered and the conquerors. The long, narrow-headed people from the north, who can be traced from the Pacific to the Atlantic, extending down both coasts, and extending their branches towards the interior, meeting the short-headed and southern race, here and there. Our explorations have brought to light considerable evidence to show that after the rivers cut their way through the glacial gravels and formed their present channels, leaving great alluvial plains upon their borders, a race of men, with short, broad heads, reached the valley from the southwest. Here they cultivated the land, raised crops of corn and vegetables, and became skilled artisans in stone and their native metals, in shell and terra-cotta, making weapons and ornaments and utensils of various kinds. Here were their places of worship. Here were their towns, often surrounded by earth embankments, their fixed places for burning their dead, their altars of clay, where cremation offerings, ornaments, by thousands were thrown upon the fire. Upon the hills near by were

their places of refuge or fortified towns. Preceding these were the people of the glacial gravels. The implements which had been lost by preglacial men have been found in the Miami Valley, as in the Delaware Valley. This would seem to give a minimum antiquity of man's existence in the Ohio Valley from eight to ten thousand years. From the time when man was the contemporary of the mastodon and mammoth to the settlement of the region by our own race, successive peoples have inhabited this valley."*

III. We turn to the division of the Mound-builders' territory. This illustrates several things. It proves that the Mound-builders were, as we have said, greatly influenced by their environments and that their works were correlated to the geographical district. It proves also that there was, in a general way, a correspondence between the Mound-builder and the Indian, as different classes of earth-works and different tribes of Indians have been found in locations or in districts whose boundaries were

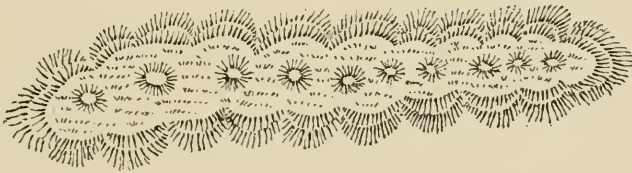


Fig. 15.—Burial Mounds.

remarkably similar. This, to some minds, would prove that the Mound-builders and Indians were the same people; but if we take into account that there was a succession of races, and that each race was equally influenced by its environment, we may conclude that the effort to identify the later with the earlier people will require something more than mere geographical division.

Let us now examine the earth-works of the different districts. (I.) The first system which we shall mention is that found in the State of Wisconsin, a State abounding with emblematic mounds. These mounds are confined almost exclusively to the small territory west of Lake Michigan, east of the Mississippi, south of the Fox River and north of the mouth of the Rock River, though a few have been found in Eastern Iowa and Southern Minnesota, on the land immediately adjoining the Mississippi River. The peculiarity of the mounds is that they so strangely resemble the forms of the wild animals formerly abounding in the territory. Very few, if any, extralimital animals are represented in them. The position of these effigies is also noticeable. They are generally located on hill-tops overlooking the beautiful streams and lakes so numerous here. The attitudes of the animals

*Twenty-second Report Peabody Museum, page 53.

are represented by the effigies and the habits are portrayed by the shapes and associations of these earth-works. See Fig. 14. We enter this district and find a remarkable picture of animal life as it existed in the mound-building period. Elk and moose and the large grazing animals are portrayed as feeding; panthers and wolves are represented as fighting; wild geese, wild duck, eagles, swallows and hawks and pigeons as flying; squirrels, foxes, coons, as playing and running; lizards, tadpoles, snakes and eels as crawling; fish and turtles as swimming, and yet all seem to have an indescribable charm about them, as if they had been portrayed by the hand of a superstitious people.

The effigies may have been used as totems by the people, and thus show to us the animal divinities which were worshiped and the animal names given to the clans; but the clans and the animals are remarkably correlated, the names of the very animals which prevailed here having been borne by the clans. More than this, the use of the effigies as protectors to villages, as aids to the hunters, and as guardians to graves, furnish an additional picture of the real life of the people. The attitudes of the animals are always natural, portraying habits and even motions, but a condition is recognized beyond mere animal condition.

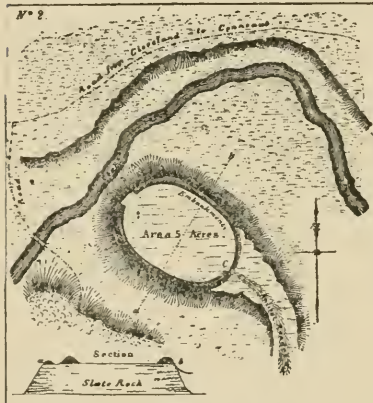


Fig. 16—Fort at Conneaut.

In this same State we find the copper mines, which have been worked, and the tools which were used, by the ancient miners. They were rude contrivances, and yet show the skill of the natives in overcoming obstacles. Without knowledge of the mechanical inventions of the wheel and pulley, without the art of smelting, or even of molding the precious metals, the Mound-builders of this region succeeded in manufacturing all the metal tools which were necessary for their purpose, being mostly tools used by hunters, such as knives, spear-heads, axes, chisels, awls, needles and a few ornamental pieces. It is a remarkable fact that imitative art was expended upon the effigies, which elsewhere embodied itself in stone relics or in metal ornaments.

(2.) The second district is the one characterized by burial mounds or ordinary tumuli. See Fig. 15. This is an interesting class of earth-works and may be designated as "prairie mounds." They are situated, to be sure, on the banks of streams, rivers, lakes, marshes, but they are in the midst of the broad prairie region stretching across the north half of the States of Indiana, Illinois, all of Iowa, Minnesota, Dakota, part of Kansas and

Missouri. This broad expanse of territory seemed to have been occupied by tribes of Mound-builders who merely erected burial mounds, but who, owing to their unsettled, migratory habits, did not even stop to build walled defenses for themselves; their works consist mainly in tumuli, vast numbers of which are found scattered over this entire region. We do not say that they were entirely destitute of defense, for there are occasional earth walls which show that there were permanent villages, but, in the main, defense must have been secured by stockades rather than by earth walls. Occasionally there are ridges or converging walls which resemble the game-drives of Wisconsin, and these furnish additional proof that the people were hunters.* The mounds occasionally present relics reminding us of the hunting habits of the people who erected them.

Pipes in the shape of raccoons, prairie-dogs, beavers, turtles, lizards, eagles, hawks, otters, wild cats, panthers, prairie-chickens, ducks, and frogs, show that they were familiar with wild animals. The relics which are most numerous are spear-heads, arrow-heads, knives, axes and such other implements as would be used by wild hunters, with a very considerable number of copper implements—axes or celts, awls, knives, needles, and occasionally specimens of woven fiber, which

might have formed the clothing for a rude people, and a few specimens of the higher works of art, but there is an entire absence of the symbols found in the mounds of the south.

(3.) The third district is the one belonging to the military class of Mound-builders. This district formerly abounded in forests, and was especially adapted to warlike races. It embraces the region situated in the hill country of New York,† Pennsylvania and West Virginia, and extends along the banks of Lake Erie into the State of Michigan. See Figs. 16 and 17.

The mode of life in these regions was military. It was a necessity of their very situation. Here was the effect of nature upon the state of society which was inevitable. These works were military and defensive, as from the nature of their surroundings they must be. The forests gave too much opportunity for

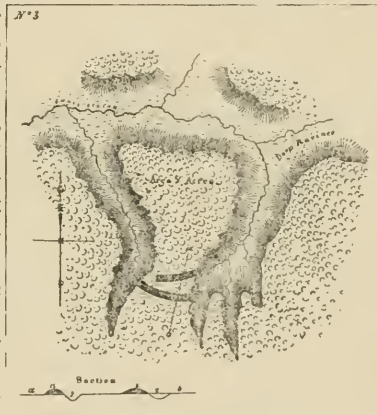


Fig. 17.—Fort at Weymouth, O.

*They are generally built at leading points along the shore of the lakes or on the banks of the principal streams, and are found as far apart as Manitoba Lake and the Illinois River. We call them buffalo game-drives, and conclude that the Mound-builders of this district were buffalo hunters. See *Archæological Journal* for 1887, page 72; *Smithsonian Report* for 1870; also our book on *Emblematic Mounds*.

†See *Aboriginal Monuments of Western New York*, by E. G. Squier; also Cheney and Whittlesey's pamphlets.

treachery to avoid it. Human nature, when dwelling in such circumstances, would develop in this way. It made no difference what tribe dwelt there, there was a necessity for military habits. We can picture to ourselves exactly the condition of society. Whether the same or different tribes of people inhabited these regions, their mode of life was certainly dictated by circumstances. There were no means by which the people could overrule the forces of nature and gain control of her elements. It was one of the peculiarities of prehistoric society that it was conformed altogether to nature. Civilization alone overrides the difficulties and makes the forces of nature obedient to her wants. We call these military structures comparatively modern, but we do not know how long they continued as a class.

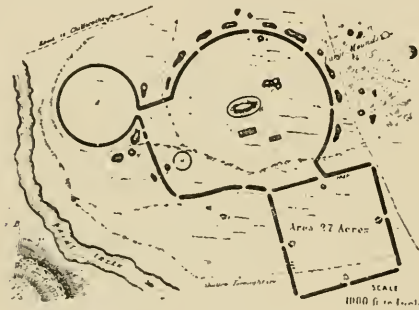


Fig. 18.—Village Enclosure of Ohio.

who led a different life they were probably located in the valleys or on the borders of the streams, just where we find a few agricultural works. But the vast majority of works, whether very ancient or more modern, are of the same class, military and defensive. Over 300 military structures are found in the single State of New York; and scattered over the mountains of Virginia and Eastern Tennessee and Kentucky, and everywhere where the hunting life and the warlike and predatory state would be most likely to prevail, there these military and defensive structures are found.

The Iroquois, the Wyandots and the Eries were warlike people. The Cherokees were also warriors, and may be regarded as the mountain tribes of the east; while the Delawares and some of the tribes of the Algonkins inhabiting New England and the northeastern States led a mingled life, partly agricultural and partly hunting. Thus we have in these localities, at least, a correspondence between the state of the population and the physical surroundings.

(4.) The fourth district is the one most worthy of notice. It is situated in the valley of the Ohio, and is characterized by what have been called "sacred enclosures." We have given them the name of "village enclosures." The characteristic works of the district are composed of the square and two circles adjoined. See Fig. 18. These were evidently the village sites of the people who dwelt here and who practiced agriculture. The locations of the works show this. Most of them are situated on the sec-

ond terrace, overlooking the rich bottom lands, but often surrounded by wide, level areas, on which forests trees grew to a great height. On the hills adjoining these village sites the conical mounds are numerous. These are regarded as lookout stations. There are also in the same region many ancient forts. Some of them are so situated as to give the idea that they were places of refuge for the villages.

There are, in the same region, certain enclosures, which contain groups of burial mounds, and in these mounds altars have been discovered, on which have been deposited large quantities of costly relics, in the shape of pearl relics, carved pipes, mica plates, copper spoons, arrow-heads and many personal ornaments. These are the "sacred enclosures" which have given name to the district. In this district there are several truncated pyramids or platforms, with graded ways to the summits. These platforms have been called "temple mounds". The idea of some is, that the enclosures were places of religious assembly, resembling in a rude way the ancient Egyptian temples. At Marietta the enclosures are double. Within one are three platforms, and from it to the water's edge, or to the bottom land, is an inclined or graded roadway, guarded by high banks or earth-works on either side. At the other end of the group is the high lookout mound, surrounded by a circle, and a ditch within the circle. The group may have been the site of an ancient village, or it may be called a sacred enclosure. See Frontispiece.

(5.) The fifth district is situated along the Atlantic coast, and extends from the coast to the Appalachian range. It is the district through which various Indian tribes have migrated and left their varied tokens beneath the soil. Among these tribes may be mentioned the Powhattans, the Cherokees, the Catawbans, the Tuscaroras, and a stray tribe of the Dakotas. It is marked by no particular class of works which can be called distinctive. There are in it, however, various circular enclosures containing conical mounds, resembling those in the fourth district. These are found in the Kenawha Valley. Besides these are the remarkable circular grave pits, containing bee-hive shaped cists made of stone found in North Carolina. There are conical mounds in the district which are supposed to have been the foundations of rotundas, as posts for the support of rotundas have been found on the summit. The southern portion of the district is filled with shell mounds and earth pyramids. Considerable discussion has been had as to whether the inhabitants of this region were the Mound-builders of the Ohio district, and a comparison has been drawn between the altar mounds and earth circles in this district and those in Ohio, both having been ascribed to the Cherokees. This is a point, however, which remains to be proved. The works of the district must be ascribed to the different races.

(6.) We now come to the sixth district. This is situated south of the Ohio River, between this and the Cumberland and Tennessee. It is a mountainous and woody territory, and the people who formerly dwelt there may be called the mountain Mound-builders. The peculiarity of the works of this region is that they are mainly fortified villages. They are to be distinguished, however, from the fortifications of the third district, and from the villages of the fourth district, by the fact that they combine the provisions for defense and for permanent residence in the same enclosure. The village enclosures in Ohio are double or triple, but those found in this district are always single. Their locations show that they were chosen for defense, but their contents show that they were used for places of permanent abode. They consist largely of earth-walls surrounding enclosures, within

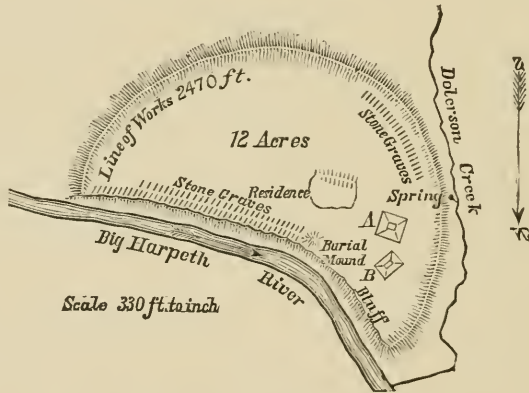


Fig. 19.—Village of the Stone Grave People.

which are pyramidal, domiciliary and burial mounds, all of which furnish proofs of long residence. The custom of building stone graves and depositing relics with the dead was common here. Stone graves prevailed in many localities—in Illinois, Southern Indiana, Ohio and Northern Georgia—but were especially characteristic of this region. See Fig. 19.

(7.) There is a district adjoining the one just described, which contains mounds and earth-works somewhat similar. The region is generally swampy, as the rivers here often overflow their banks and cover the whole country with floods. The Mound-builders dwelt here in great numbers, and built their villages on the sand ridges interspersed between the overflowed lands, and made their way out as best they could. Their villages, however, were large and numerous and showed permanent residence. The peculiarity of the earth-works was that the walls surrounded enclosures, within which were pyramids, conical mounds and many lodge circles. We may call it the district of lodge circles. In some of the conical mounds there have been found large

quantities of pottery, and so the name of pottery-makers might be ascribed to the people. This pottery resembles that found in the stone graves and near the Cahokia mound, but is regarded as distinctive of this region. We may say that the district has been occupied by the Arkansas, the Kansas and Pani Indians, branches of the Dakotas, but it is unknown to what class the pottery-makers belonged.

(8.) Intervening between these two district, and extending through the Gulf States, we find a series of large pyramidal mounds, of which Cahokia mound, near St. Louis, is a specimen. This region may have been occupied by the Natchez, a remarkable people who were known to have been sun-worshippers and pyramid-builders. Some of the largest groups of pyramids are located near the City of Natchez, the place which derived its name from the tribe. It is a region, however, where the Chickasaws and Choctaws, branches of the Muscogeans, formerly dwelt. This leaves the question as to who the builders of these pyramids were, still in uncertainty.

The pyramids are supposed to have been occupied by the chiefs, and furnished foundations for the great houses or official residences. They are situated, however, in the midst of land subject to overflow, and have been explained by some as being places of refuge for the people in time of high water.

In the eastern part of this district there is a class of works which differs from those in the western. Here we see the elevated platform, and along with it the circular mound for the temples, and between them oftentimes the chunky yard and public square, the usual accompaniments of a native village. See Fig. 20. The race distinction is manifest in this form of structure, and nowhere else do we find it. The tribes who dwelt in this region were the Creeks, a branch of the Muscogeans. These works have been ascribed to the Cherokees, who were located in the mountains. The Cherokees, however, maintain that they migrated to the region and took possession of the works which the Creeks and Muscogeans had erected. They also maintain that their ancestors were Cave-dwellers, and describe the caves from which they issued. Dr. Cyrus Thomas holds that the Shawnees were in this region in pre-Columbian times, and refers to the evidence furnished by

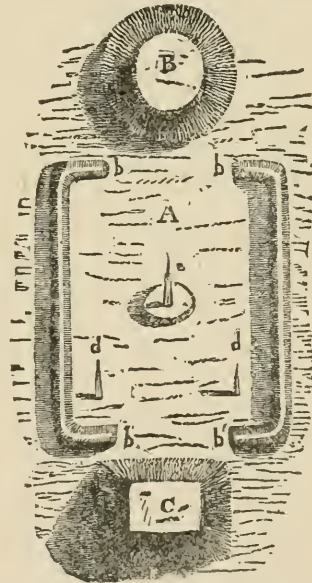


Fig. 20.—Chunky Yard.

the relics found in the stone graves, and especially those found in the Etowah mound in Georgia, as proof. The Shawnees were, however, late-comers, belonging to the Algonkin stock, a stock marked by narrow skulls. They were preceded by the Muscogee stock—a people with broad skulls. It was a tradition among the Muscogees that they migrated from the west and found the country occupied before them, while their ancestors issued from a sloping hill at the command of their divinity, who stamped upon its summit, and erected the pole, which led them through their wanderings. In reference to the Gulf States Col. C. C. Jones, who has written a book upon the antiquity of the Southern Indians, says that the tribes were only occupying works which had been erected by a preceding and different class of people. "Even upon a cursory examination of the groups of mounds with their attendant ditches, earth walls, fish preserves, it is difficult to resist the impression that they are the remains of a people more patient of labor, and in some respects superior to the nomadic tribes who, within the memory of the whites, cling around and devote to secondary uses these long-deserted monuments." This remark was made after diligent study of the writings left by the historian of De Soto's expedition and of Adair and Bartram and comparing them with the evidence given by the monuments themselves.

CHAPTER III.

THE MOUND-BUILDERS AND THE MASTODON.

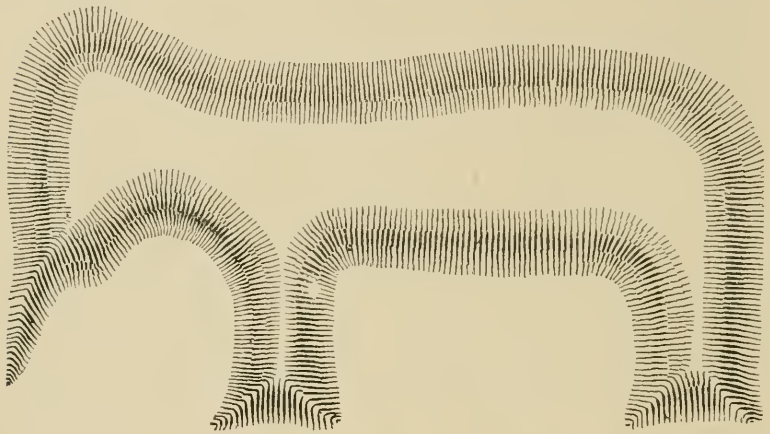
One of the first questions asked of the archæologists concerning the Mound-builders is, What was their probable age? The question is a very natural one, but, in the form generally given, exhibits a misunderstanding of the general subject. It implies that the Mound-builders were all one people, and that they spread over the continent at a particular and definite time. We have already shown that there were many classes of Mound-builders, and that there were different periods of time—a succession of population being one of the plainest facts brought out by archæological investigation. The answer to the question is to be secured by the study of the Mound-builders as they appeared at different dates in the mound-building period. The age of the Mound-builders includes not one specific date, but covers many epochs.

'We maintain that there was a Mound-builders' age in this country, and that it is as distinctive as was the neolithic age in Europe. The neolithic age was founded on the discovery of a certain class of relics, relics which had a certain degree of polish and finish about them; the material of the relics making the age distinctive. The bronze age was founded on the discovery of bronze relics in the midst of neolithic relics, the material and finish of the relics making them distinctive. So the Mound-builders' age is based on the prevalence of the earth heaps which contain within them the relics of a prehistoric race. The character of the relics as well as the material of which the works were composed, makes the Mound-builders' age distinctive.

I. As to the naming of these periods there is some uncertainty, but the following facts may help us to appreciate it. In Europe the paleolithic age continued after the close of the glacial period. It began with the gravel beds, and embraced all the relics found in those beds, extended through the period of the cave-dwelling, embraced nearly all the cave contents; it reached up to the time of the kitchen middens, and embraced the relics found in the lower layers. It is divided into various epochs, which are named differently. The English named them after the animals associated with the relics, into the epochs of the cave-bear, mammoth and reindeer. The French named them after the caves in which they were found, making the name of the caves descriptive of the relics.

The Chellean relics are more easily distinguished than others, and are recognized by some as belonging to a distinct period, a period when the mammoth, rhinoceros and cave-bear prevailed in Europe. These stand alone and belong to an earlier geological period than the rest of the Cave-dwellers' relics. A number of objects discovered at Moustier, at Solutre and at La Madeleine mark a second and a third period of the paleolithic age.

In America the paleolithic age preceded the neolithic, as in Europe. It may be divided into three epochs: 1. The pre-glacial, the epoch in which the relics were deposited in loess. 2. The



0 5 1 20 30 40 50 60 70 80 Feet

Scale 34 feet to the inch.

Fig. 1.—Elephant *Ejjiy*.

glacial, an epoch in which the relics were deposited in gravel. 3. The Champlain, an epoch in which the relics were deposited upon the summit of the hills and above the glacial gravels.

The American archæologists name them after the character of the gravels in which they are found, as well as the character of the relics. It may be said that the subdivision of the paleolithic age in America has not been fully established. There seems to be some uncertainty as to the French and English divisions.

*Evidence is increasing to show that the paleolithic people continued after the glacial period, as flint relics which are chipped so as to make tools of various kinds, have been found in the beds of the water courses in Iowa and elsewhere. These perhaps should be assigned to the Champlain epoch. They were followed by the Cave-dwellers, who left their relics and remains in the shelter caves of Ohio, Kentucky and Tennessee, and other localities. Bone implements were common among this people, but not many metal relics. The shell heaps of Florida and Maine may have belonged to the people who followed the Cave-dwellers. The people who left the fire beds in the bottom lands of Ohio at various depths; below the surface followed the Cave-dwellers. The Mound-builders came in about this time. They were a neolithic people, and were probably immigrants from some other country. Four lines of migration have been recognized among the Mound-builders: One from the northeast to the southwest; another from the northwest to the southeast; a third from the southwest to the northeast; a fourth from the southeast, north and west.

Naming the periods after the animals is suitable to America, though the animals would be different from those in Europe.

In Europe the cave-bear, mastodon and the reindeer made three epochs. In America the megatherium found in Brazil, the mastodon found in the gravel beds and peat-bogs, and the buffalo, now almost extinct, mark three different epochs. In Europe, the paleolithic age was contained within the quaternary period,

and came to an end before the beginning of the present geologic period. It was followed by the neolithic age. The characteristic of this age was that polished stone relics, such as hatchets,



Figs. 2 and 3.—Obsidian Arrows from Idaho.*



Figs. 4, 5, 6 and 7.—Shell Beads from Mounds.

celts and finely-chipped arrows, spear-heads and a fine class of pottery abounded. Another characteristic was that mounds were common. Shell heaps marked its beginning, chambered mounds its end. The bronze age followed the stone age. This began with the lake-dwellings and continued through the time of the rude stone monuments, and up to the historic age. Bronze was the material which characterized the age, a material which was not made in Europe, but was brought from Asia and was re-cast. No less than fifty-seven foundries of bronze have been discovered in France and a large number in Italy; one at Bologna having no less than 14,000 pieces broken and ready for casting. The hatchets were cast in molds, with wings for holding the handle, and many of them with sockets and eyes by which they could be lashed to

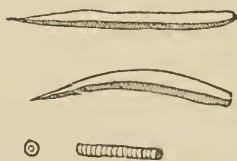


Fig. 8.—Bone Needles.

*Prof. E. L. Berthoud discovered a number of obsidian relics on the Upper Madison Fork in Idaho. He says: "I have gathered some very characteristic obsidian implements on Lake Henry and Snake River, which I transmit. I have always understood that the presence of obsidian relics in Kansas, Colorado, Nebraska, Wyoming and Utah was due to the probable intercourse of the Aztec races with the more northern tribes. I am now satisfied that they were derived from the Yellowstone and Snake Rivers, rather than from New and Old Mexico. In the National Park Prof. Hayden found a gorge in the mountains which was almost entirely formed of volcanic glass; they have aptly named it 'Obsidian Canon'."—*Proceedings of Davenport Academy, Vol. III, Part II.*

the handle. The neolithic age in America began with the close of the paleolithic and ended with the historic period. The polished stone relics found in the auriferous gravels of California, such as steatite ollas, mortars and pestles, and those found under the lava beds, belong to this age. They constitute one class of neolithic relics, and may be assigned to one epoch of the neolithic age.

We maintain that the Mound-builders in America represented one epoch, perhaps the earliest of the neolithic age. This age began some time after the glacial period and ended about the time of the advent of the white man, but embraced about all the time which the neolithic age occupied in Europe. Nearly

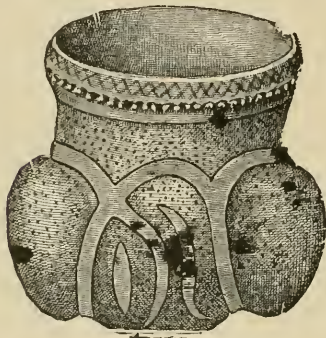


Fig. 9.—Pottery Vase.

all the relics found in the Mississippi Valley, such as arrow-heads, spear-heads, knives, polished stone axes, celts, carved stone pipes, many specimens of pottery, the shell gorgets and the drinking vessels, the pieces of copper, ornamented and unornamented, the mica plates, many of the bone implements, the needles and awls, the silver ornaments, and the few specimens of gold* and meteoric iron, belong to the Mound-builders. Neolithic relics

are found in the mounds; though some of them, of the ruder class, are found in the fire beds and shelter-caves. Specimens of the neolithic age are picked up indiscriminately upon the surface. The aborigines of America were in this age. The cliff-dwellings and pueblos must be assigned to this age. They constitute a second division, the Mound-builders being assigned to the first. The relics of the Cliff-dwellers are not much in advance of those of the Mound-builders, but their houses show an advanced stage of architecture. A third division of the neolithic age may be recognized among the civilized races of Mexico and Central America, though these are by some archæologists ascribed to the bronze age. It appears that the division of the neolithic age in America corresponded to that in Europe; the Mound-builders, Cliff-dwellers and the civilized races constitute the three parts of that age, as the barrows, the lake-dwellings and the rude stone monuments did in Europe. It may be that two preceding periods should be assigned to the caves and fire beds, which corresponded to the caves and kitchen middens.†

*Dr. Charles Rau describes a gold ornament found in a mound in Florida, representing the bill of an ivory billed woodpecker, the material of which was made during the second period of Spanish supremacy. It was taken from the center of the mound, and furnishes evidence that Mound-building was continued after the occupation by Europeans. Prof. Jeffries Wyman has, however, spoken of the remains of the great auk in the shell mounds of Maine and the absence of any article which was derived from the white man. See *American Naturalist*, Vol. I.

†Some of the shelter caves and the terraces of Ohio seem to have been occupied by

II. The part which the Mound-builders performed in connection with the neolithic age. The Mound-builders, in a technical sense, are to be confined to the Mississippi Valley. There are, to be sure, many mounds and earth-works on the northwest coast, others in Utah, and still others scattered among the civilized races in Mexico, but the Mound-builders as such were the inhabitants of this valley. We shall see the extent of their territory if we take the mounds of the Red River Valley as one stream and follow the line across the different districts until we reach the mounds of Florida. This is the length of their territory north and south; the breadth could be indicated by the Allegheny mountains upon the east and the foot-hills of the Rocky mountains upon the west, for all this range of territory



Fig. 10.—Hoes from Tennessee.

belonged to the Mound-builders. Within this territory we have the copper mines of Lake Superior,¹ the salt mines of Illinois and Kentucky,² the garden beds of Michigan,³ the pipe-stone quarries of Minnesota,⁴ the extensive potteries of Missouri,⁵ the stone graves of Illinois,⁶ the work-shops, the stone cairns, the stone walls, the ancient roadways, and the old walled towns of Georgia,⁷ the hut rings of Arkansas,⁸ the shelter-caves of Tennessee and Ohio,⁹ the mica mines in South Carolina,¹⁰ the quarries in Flint Ridge in Ohio,¹¹ the ancient hearths of Ohio,¹² the bone beds¹³ and alabaster caves in Indiana,¹⁴ the shell-heaps of Florida,¹⁵ oil wells and ancient mines, and the rock inscriptions¹⁶ which are scattered over the territory everywhere.

We ascribe all of these to the Mound-builders and conclude that they were worked by this people, for the relics from the

a rude people, whose remains are buried in the debris, for layers of ashes have been found having great depths. The fire beds and stone graves have been found at various depths beneath the river bottoms.—*Miami Gazette*, Jan. 20, 1892. See Smithsonian Report, 1874, R. S. Robinson; Peabody Museum, 8th Report, F. W. Putnam. The Mammoth cave and other deep caves have yielded mummies and other remains which may have belonged to this antecedent period.—*Collins' History of Kentucky*.

The great auk, Prof. Wyman says, survived until after the arrival of the Europeans. Pottery is poorly represented; ornamentation is of the rudest kind; the shell heaps yielded few articles of stone; implements of stone are common in Florida. A domesticated animal was found with eatables.

1 See Foster's Prehistoric Races, p. 265. 2 *Ibid.*, p. 249. 3 See American Antiquarian, Vols I and VII. 4 Geol. Rep. of Minnesota, Vol. I, pp. 151 and 555. 5 See Prof. Swallow's article, Peabody Museum, 8th rep., and Arch. of Mo., 1880. 6 See Sm. Rep. 1866. 7 See C. C. Jones and James Mooney's 9th An. Rep. of Eth. Bu., also Am. Anthro., Vol. II, p. 241. See Am. Ant., Vol. XIII No. 6., H. S. Halbert. 8 See Palmer in Eth. Bu., 9th An. Rep. of A. A., Vol. III, p. 271, in Iowa. 9 See Robinsin's article, Sm. Rep., 1874, p. 367; A. A., Vol. II, p. 203. 10 See Report by James Mooney, 9th An. Eth. Bu. Rep.; 12th Rep. Pea. Museum. 11 See American Antiquarian, Vol. II, p. 95. 12 *Ibid.*, Vol. VI, p. 101. 13 *Ibid.*, Vol. VIII, p. 65. 14 *Ibid.*, Vol. III. 15 *Ibid.*, Vol. II, p. 257. 16 *Ibid.*, Vol. XI, J. S. Newberry, p. 165.

mines and quarries are found in the mounds. Besides these relics we find others which were received by aboriginal trade; obsidian knives and arrows (see Figs. 2 and 3) from Idaho; jade axes from an unknown source, carved specimens which seem to have come from Mexico; shells* and wampum (Figs. 4 to 7) from the gulf of Mexico; specimens of art which show connection with the northwest coast and carved pipes which show familiarity with animals and birds from the central provinces. The Mound-builders were the chief representatives of the neolithic age, vying with the Cliff-dwellers in a grade of civilization, but having a much more varied culture than they. Their territory extended over more land than any other class of people known to the pre-historic age, and their art presents more variety than any other class.

The cuts represent the character of the relics taken from the mounds. The pottery vase (Fig. 9) is from a mound in Michigan and shows the high stage of art reached there. The hoes

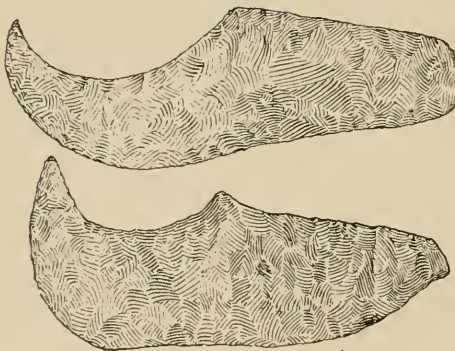


Fig. 11.—Sickles from Tennessee.

and sickles (Figs. 10 and 11) are from mounds in Tennessee and show the agricultural character of the people. The banner stone and silver ornament (Figs. 12, 13 and 14) are from mounds in Florida. A. E. Douglass thinks the silver ornament was modern. We place these cuts alongside of the elephant pipes and other relics to show the length of the age

of the Mound-builders. Some of them were evidently quite ancient and others were very modern.

III. As to the antiquity of the Mound-builders, we may say that dates are always difficult to fix. We can not give them definitely. We imagine that the Mound-builders were the first people who occupied the territory after the close of the glacial period, that they followed hard on to the paleolithic people, that no other race intervened. This is, however, a matter of conjecture. Our reasons for holding this are as follows: 1. The appearance of the mastodon and mammoth. We contend that

*W. H. Pratt has described worked shells from Calhoun County, Illinois, also shell beads from mounds at Albany (Figs. 4, 5 and 6), and wampum from mounds in Florida (Fig. 7), which he thinks were used as currency, giving the idea that wampum existed in the Mound-builders' time; others think wampum was introduced by the white man. The value of the beads was owing more to the work placed upon them than to the rarity of the shells. Copper beads found in the mounds at Davenport contained the cord upon which they were strung. This would indicate that the beads were somewhat recent.

these animals and the Mound-builders were contemporaneous. The only age which intervened between the glacial period and the Mound-builder's period is to be called the mastodon's age. We are ready to acknowledge that a long time must have elapsed between the glacial age and the Mound-builders, but in the absence of proof that any other inhabitants occupied the territory we ascribe the time or period to the mastodon and mammoth. The paleolithic people may indeed have survived the glacial period and been also contemporaneous with the mastodon, the real age of the mammoth and mastodon covering the whole of the paleolithic age and overlapping the Mound-builders, the first being the age in which the mastodon was numerous. Certain writers have denied this, and have argued that so long an interval of time elapsed between the Mound-builders and the close of the glacial age that the mastodon disappeared altogether, that the buffalo was the animal which was distinctive of the Mound-builder's age, and the mastodon was the animal distinctive of the paleolithic age. Their arguments are as follows: The forests which have spread over the northern half of the Mound-builders' territory are in places very dense. During the glacial period this region was covered by a sea of ice, the ground must needs settle and be covered with alluvial before the forests would grow. The forests could only gradually appear, the distribution of seeds and the springing up of the saplings being a slow process. Another argument is taken from analogy. In Europe the period of the gravel beds was supposed to be the same as the glacial period and marked the beginning of the paleolithic age. There were, however, between the gravel beds and the age of the barrows three or four different epochs—the cave-dwellers, the people of the kitchen middens and the lake-dwellers—the progress having been gradual between the periods.* In

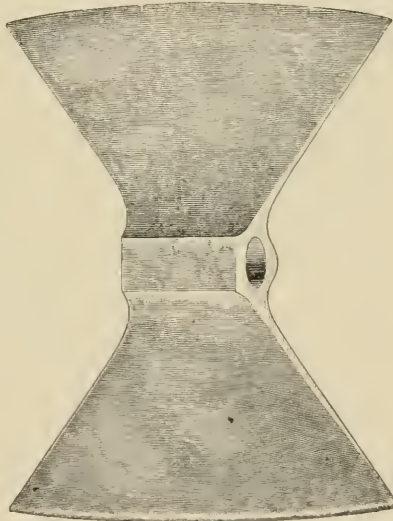


Fig. 12.—Banner Stone from Florida.

*Col. Whittlesey speak of three periods: The early drift period which belonged to primitive man; the period of the Mound-builders, whose antiquity is from four to five thousand years, with slight evidence of an intervening race between the Mound-builders and primitive man; and the period of the red man. The evidence of man more ancient than the Mound-builders he finds in the fluvial deposits, which were above the fire beds on the Ohio river, to the depth of twelve or fifteen feet. The same evidence is given by Prof. Putnam.—Article read before the American Association in Chicago, 1868.

America the change was more sudden, for the tokens which are found in the auriferous gravels are much more advanced than any found in the gravel beds of Europe.

They correspond to the relics of the lake-dwellers and the barrows. The Mound-builders' relics are also much more advanced than those of the gravel beds in the same territory, and the supposition is that there must have been either an intervening period in which mound-building was not practiced, or that there was an immigration of the Mound-builders into this territory from some other part. We acknowledge that there are some facts which favor this supposition or idea that there were inhabitants intervening between the rude paleolithic people and advanced Mound-builders who corresponded to the people of the kitchen middens and to the early lake-dwellers.

Possibly we shall find that the fire beds of the interior and the kitchen middens of the sea coast were deposited during this period, and the divisions of time may be identified by these tokens. We maintain that the close of the glacial period was not so sudden as some imagine. There may have been a littoral class of fishermen who were the occupants before the close of this period. They followed after the ice as it disappeared, leaving their shell heaps on the coast and their fire beds in the interior. In favor of this we may mention the fact that the tooth of a polar bear and the bones of the auk, both of which are animals that occupy the arctic regions and inhabit the ice fields, have been found in a shell heap on the coast of Maine, thus proving that there were inhabitants when the ice reached as far south as that point. The mastodon evidently inhabited the country long before the glacial period. It survived that period and may have existed during the time the land was becoming settled

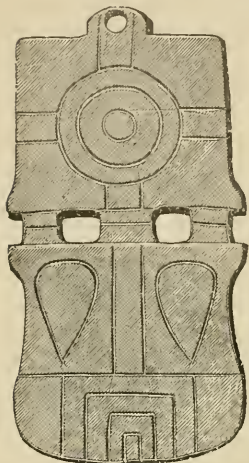


Fig. 13.—Silver Ornament.*

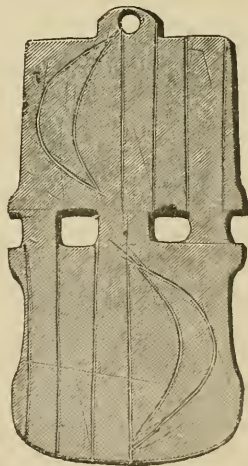


Fig. 14.—Silver Ornament.

*Mr. Geo. F. Kunz has described a gold object resembling a shield, taken from a mound in Florida, an ear disc of silver, a triangular silver ornament, a flat bar of silver, all taken from mounds in Florida, Mr. Douglas has spoken of circular plates from Halifax river; Col. C. C. Jones of silver beads, not European, from Etowah valley. Mr. Douglas thinks that the silver specimens were taken from wrecked vessels after the discovery, and refers to a specimen found on an island near Florida, which has the marks of modern wormanship upon it. The etchings of the cross orbis mundi and the heart may be attributed to the Spanish priests, though the moons on the opposite side were native symbols. He says that the four ornaments described by Mr. Kunz were associated with European manufacture. See American Antiquarian, Vol. IX, page 219.

and until it was covered with forests and became inhabited by wild tribes. During this time the peat beds and the swamps were their favorite resorts; many of them became mired in the swamps and were attacked by the natives. These natives were acquainted with fire, and used rude stone implements—arrows and spear heads. As the mastodon retreated northward the hunters also migrated and became the denizens of the forests of the northern districts. This accounts for the scarcity of images of the elephant and mastodon among the southern Mound-builders, and for the images of the same animals among the northern Mound-builders.

We have mentioned the find of Dr. Koch of the mastodon in the Gasconade swamp of Missouri. This was an important find. Dr. Koch says there were remains of fire-stones and arrow-heads near the bones, showing that the animal had been hunted by the

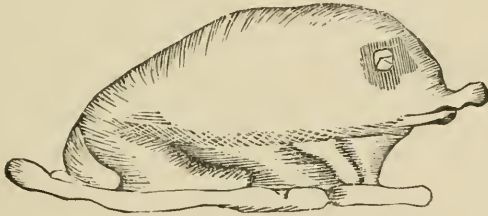


Fig. 15.—Nondescript Animal from the Mounds *

people then living. Dr. Koch made the statement that this animal was capable of feeding itself with its fore-feet, after the manner of the beaver or otter. This statement was doubted at the time, and seemed to cast discredit upon the entire find. It now proves very important. In a late number of the *Scientific American* is a description of the Newberg mastodon, in which this very peculiarity is noticed.† The writer says: "The most important comparison is in the aspect of the fore-limbs. In the elephant the fore-limbs are columnar, as are the hind-limbs. In the mastodon there is a decided aspect, more or less, of prehensile capacity (as it were), that is, the latter have the fore-feet approaching the plantigrade in aspect, and were correspondingly adapted for pronation. Of course this is slight, but it shows the difference in probable habits. The fore-limbs of the mastodon with such development, we should expect, would be able to be thrown over the low foliage or brush-wood, and a crushing effected by the somewhat expanded manus. No such movement could be effected by *elephas*. As much as we naturally compare

*The animal contained in the cut, with a bill resembling a duck, was found by a farmer while plowing over Mound No 3. It is a natural sandstone concretion fastened upon a thin piece of light-brown flint. The eyes are of quartz, fastened on with some kind of cement. They give a fierce look to the creature.

†See *Scientific American*, January, 1892, article by Dr. J. B. Holden.

the two great creatures, and especially as both have similar nasal development, a near view of both together shows many differences in form."

2. The survival of the mastodon. J. B. Holden says: "In nearly every State west of New England portions of this creature have been disinterred. And every year there are several found, more or less in a state of complete preservation. The circumstance of several skeletons having about them evidence of man's work is extremely interesting.* On one account, it brings the date,

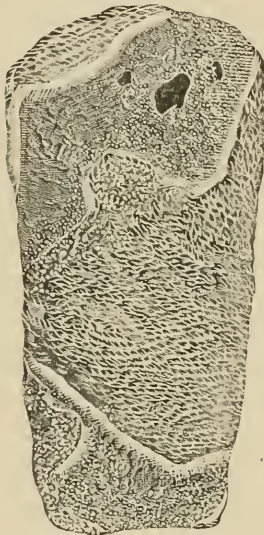


Fig. 16.—Copper Axe.

though greatly indefinite, to man's existence. We are therefore able to say man and mastodon are contemporaneous. We have not determined what sort of man made those stone arrow-heads which struck the life out from the great carcasses and lie among their remains. We have not a knowledge of what sort of man made the charcoal which was found lying among the partly burned bones of a mastodon, but we do know that some man made the arrow-heads. And we know also that no other than man is capable of making charcoal, or even to make fire by which it is formed."

Prof. Barton, of the University of Pennsylvania, discovered the bones of a mastodon at a depth of six feet, and in the stomach of the animal he found a mass of vegetable matter, composed of leaves and branches, among which was a rush, now common in Virginia. Winchell says: "The ancient lakelets of Michigan enclose numerous remains of the mastodon and mammoth, but they are sometimes so near the surface that one could believe them to have been buried within 500 years. The mastodon found near Tecumseh lay but two feet and a half beneath the surface. The Adrian mastodon was buried about three feet. The Newberg (New York) mastodon just beneath the soil in a small pool of water."

Prof. Samuel Lockwood, of Freehold, New Jersey, has spoken of the life range of the mastodon. He has shown that this animal was living at a period well up into the recent geologic time. It came in with the great extinct fossil-beaver, which it outlived, and became contemporary with the modern beaver. It lived to be contemporary with the American aboriginal men and probably melted away before the presence of man. Prof. Lockwood dis-

*The two pipes which have been found and which are now in the Davenport Academy, may represent the two classes of animals; the one Mastodon Giganteus, the *Elephas Primigenius*, if so, they are all valuable finds.

covered a mastodon in a beat bog, near by a fossil-beaver dam, in such circumstances as led him to suspect that the mastodon had been actually buried by the beavers.*

Prof. Shaler says: "Almost any swampy bit of ground in Ohio or Kentucky contains traces of the mammoth or mastodon. The fragments of wood which one finds beneath their bones seem to be of the common species of existing trees, and the reeds and other swamp-plants which are embedded with their remains are apparently the same as those which now spring in the soil. They fed upon a vegetation not materially different from that now existing in the region.† Prof. Hall says: "Of the very recent existence of this animal there seems to be no doubt. The marl beds and muck swamps, where these remains occur, are the most recent of all superficial accumulations.

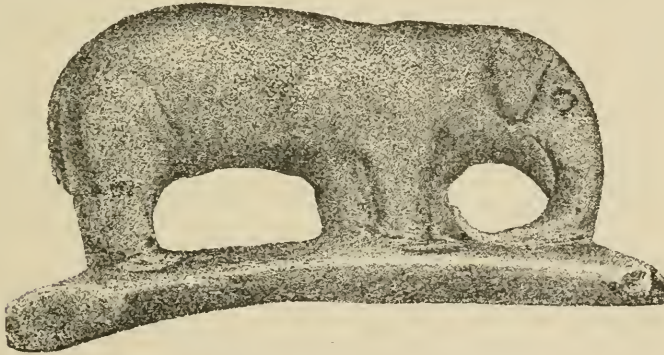


Fig. 17.—Elephant Pipe, found in a Corn-field.

Dr. John Collet says that in the summer of 1880 an almost complete skeleton of a mastodon was found in Iroquois County, Illinois, which goes far to settle definitely that it was a recent animal and fed upon the vegetation which prevails to-day. The tusks were nine feet long, twenty-two inches in circumference, and weighed 175 pounds; the lower jaw was nearly fifteen feet long; the teeth weighed four or five pounds; each of the leg bones measured five feet and a half, indicating that the animal was eleven feet high. On inspecting the remains closely, a mass of fibrous matter was found filling the place of the animal's stomach, which proved to be a crushed mass of herbs and grasses similar to those which still grow in the vicinity. A skeleton was found by excavating the canal, embedded in the peat, near Covington, Fountain County, Indiana. When the larger bones were split open the marrow was utilized by the bog-cutters to grease their boots. Chunks of sperm-like substance occupied the place of the kidney fat of the monster.‡

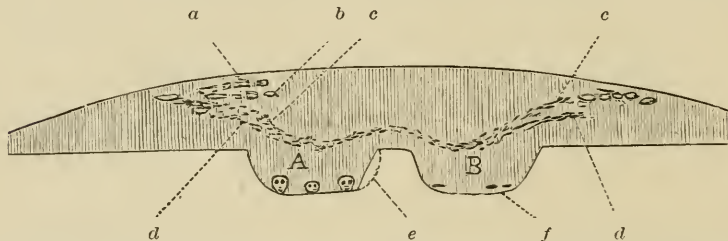
*See Proceedings A. A. A. A., 31st meeting, Montreal, 1882, Part 11, p. 265.

†See Amer. Nat., pp. 605-7. Also, Epoch of the Mammoth, by J. C. Southall, p. 103

‡See Geological Report of Indiana, 1880, p. 384.

These discoveries convince us that the mastodon survived the glacial period, and may have been contemporaneous with the Mound-builders.

IV. Were the Mound-builders contemporaneous with the mastodon? This is a disputed point, and considerable feeling has been raised in the contention. There have been reports of the images of the mastodon and mammoth; but the genuineness of the finds has been disputed, and is still with some a matter of doubt. Were we to discriminate between these, however, accepting some as genuine, others as doubtful, we might reach a safe conclusion. The history of these discoveries is about as follows: In 1874, Mr. Jared Warner found upon the bottom-land of the Mississippi, near Wyalusing, an effigy which was called an elephant. He, in company with a number of gentlemen, measured and platted it, and sent a drawing of it to the Smithsonian Institute.* Mr. Warner says: "It has been known here for the last



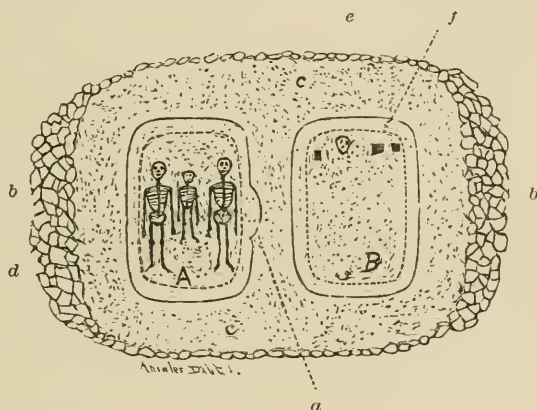
SECTION OF MOUND.—A, first grave; B, second grave; *a*, limestone one foot below the surface; *b*, human remains, probably Indians; *c*, upper shell bed; *d*, lower shell bed; *e*, cavity on north side of grave A; *f*, position of tablets.

Fig. 18.—Section of Mound.

twenty-five years as the elephant mound." "The head is large, and the proportion of the whole so symmetrical that the mound well deserves the name. The mound was in a shallow valley between two sandy ridges, and was only about eight feet above high water." There are many mounds in this section of country in the shape of birds, bears, deer and foxes. We would say that the effigy of the bear, which is very common here, and which was the totem of the clan formerly dwelling here, has exactly the same shape as the so-called elephant, but is not so large and lacks the proboscis. The projection at the nose called the proboscis is not really one, but is the result of the washing of the soil. It was a mere prolongation of the head, had no curve, did not even reach so far as the feet, and can be called a proboscis only by a stretch of imagination. There is no evidence whatever that it was intended to represent a proboscis. The size of this mastodon is as follows: length 135 feet, from hind-feet to back sixty feet, from fore-feet to back sixty-six feet, from end of snout

*The report was published in 1875. The gentlemen who accompanied Mr. Warner were Mr. J. C. Orr and Mr. J. C. Scott.

to neck or throat thirty-one feet, from end of snout to fore-legs thirty-nine feet, between fore-legs and hind-legs fifty-one feet, across the body thirty-six feet. These measurements make the proboscis and snout combined about the same length as the fore-legs; the proboscis alone about half the length of the fore-legs; whereas, had it been a genuine imitation it should have been nearly double the length. The writer has visited the effigy two or three times, but found it more and more obliterated. No other effigy of the elephant could be discovered in the vicinity, and no other has since been discovered. Compare Figs. 1 and 17.



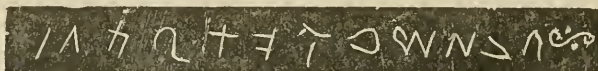
PLAN OF MOUND.—A, first grave; B, second grave; a, cavity on north side of grave A; b, layer of stones at edge of shell bed; c, loam between the graves; d, skeletons in first grave; e, skeletons in second grave; f, position of tablet.

Fig. 19—Plan of Mound.

The history of the second discovery is about as follows. In the year 1874, the Rev. Mr. Gass was engaged in exploring mounds. He came upon a group of mounds situated about a mile below the city of Davenport (see map), on the bank of the Mississippi river, about 250 feet from it and from eight to twelve feet above low water mark, which consisted of ten or twelve mounds. Several of these were excavated, and found to contain a large number of relics, such as sea shells, copper axes, pipes, hemispheres of copper, arrow heads, pieces of galena, pieces of pottery, pieces of mica, stone knives, copper implements shaped like a spool, rondells, showing that trepaning had been practiced. Many of the axes had been wrapped with coarse cloth, which had been preserved by the copper Fig. 16. The pipes were all of Mound-builders' pattern; some of them were carved with effigies of birds and animals. One bird has eyes of copper, another has eyes of pearl, showing much delicacy of manipulation and skill in carving. These relics excited much interest and were put on exhibition before the American Association for the Advancement of Science, at Detroit, in 1875. About

twenty copper pipes were reported at that time, and eleven copper awls and a large number of bones. They were said to have been found at various depths, some of them near skeletons, some near altars, some in ashes, though they were all from the same group on the Cook farm. The mounds on the Cook farm were the most of them stratified. All of them contained bodies and ashes; two or three of them contained altars or round heaps of stone, but with no relics upon the altars. Mound No. 3 was the one in which the tablets were discovered. This was a low mound, about three feet high and sixty feet in diameter. It was a double mound and contained two graves parallel to each other, three or four feet apart, six feet wide and nine or ten feet long.

In making the excavation of the first grave the party found, near the surface, two human skeletons, which were modern Indians, and with them modern relics; such as fire steel, a common clay pipe, a number of glass beads, a silver earring. Below these was a layer of river shells and a large quantity of ashes, which



*Fig. 20.—Hieroglyphics on Tablets.**

extended two feet below the surface, but which rested upon a stratum of earth twelve inches in depth, under which was a second bed of shells. At the depth of two feet below the second shell bed, $5\frac{1}{2}$ feet below the summit, three skeletons were discovered, lying in a horizontal position at the bottom. With the skeletons were five copper axes, all of which had been wrapped in cloth, a number of small red stones, arranged in the form of a star, two carved stone pipes, several bear's teeth, two pieces of galena, one large broken pot, a lump of yellow ochre, one arrow-head. A child's skeleton was discovered between the two large ones, near which was a large number of copper beads.

The second grave was not opened until the year 1877, about two years after the first. Mr. Gass was attended by a party of seven men, two of whom were students. They found, near the surface, modern relics—a few glass beads and fragments of a brass ring; also a layer of shells twelve or fifteen inches thick; beneath this a second layer five or six inches thick; beneath the second layer a stratum of loose black soil or vegetable mould, eighteen or twenty inches thick, and in the mould fragments of human bones. At the bottom they discovered the two inscribed tablets, lying close together on the hard clay, five and one-half

*The word T O W N will be recognized in the cut, which represents the characters on the left side of the upper arch in their regular order. The first to call attention to this word was Dr. Farquharson, the President of this Association, though at the time he thought that the finding the letters was a pure fancy. The word has often been noticed in the tablet, and has always worked against its genuineness. It has been intimated that the Mormons planted these tablets. The recent find at Mendon, Illinois, of a brass plate or sounding board of a musical instrument, with similar characters, near a house once occupied by Mormons confirms this conjecture.

feet below the surface of the mound; both were encircled by a single row of lime stones. About two and one-half feet east were a copper axe, a few copper beads, fragments of pottery, a piece of mica and a number of bones. These were found at a subsequent exploration, not at the same time as the tablets.

The large tablet is twelve inches long, from eight to ten inches wide, and was made of dark coal slate. Fig. 22. The smaller tablet was about square, seven inches in length, and had holes bored in the upper corners, and is called the calendar stone, as it contained twelve signs with three concentric circles, though the signs do not in the least resemble the Mexican or Maya calendars. The larger tablet contained a picture on either side, one representing a cremation scene, the other a hunting scene. The cremation scene "suggests human sacrifices." A number of bodies are represented as lying upon the back, and the fire is burning upon the summit of the mound, while the so-called Mound-builders are gathered in a ring around the mound. Above



Fig. 21.—Characters Duplicated on the Sandstone Tablet.

the cremation scene is an arch formed by three crescent lines, representing the horizon, and in the crescent and above it are hieroglyphics, some of which resemble the common figures and numbers, and the various letters of the alphabet; there are ninety-eight figures, twenty-four in one, twenty in the other, and fifty-four above the lines. The peculiar features of this picture are these: A rude class of Mound-builders are practicing human sacrifice, while the images of the sun and moon are both in the sky, one containing a face, the other circles and rays. Above these is the arch of the heavens, with Roman numerals and Arabic figures scattered through and above it. The figure eight is repeated three times, the letter O repeated seven times. With these familiar characters are others which resemble letters of ancient alphabets, either Phœnician or Hebrew, and only a few characters such as the natives generally used.

The hunting scene is the one which is supposed to contain the mastodon. In this picture there is a large tree which occupies the foreground, beneath the tree are animals, human beings and fishes scattered indiscriminately about, a few skeletons of trees in the back ground. One of the human figures has a hat on, which resembles a modern hat, for it has a rim. "Of the animal kingdom thirty individuals are represented, divided as follows, viz: Man, eight; bison, four; deer, four; birds, three; hares,

three; big horn or Rocky Mountain goat, one; fish, one; prairie wolf, one; nondescript animals, three. Of these latter one defies recognition, but the other two, apparently of the same species, are the most interesting figures of the whole group. These animals are supposed by different critics to represent the moose, tapers or mastodons." The trunk and tusks are omitted from this animal, and even the shape hardly resembles the elephant, certainly not enough to prove that the Mound-builders were contemporaneous with the mastodon.*

The third discovery is the one the most relied upon. This discovery was also made by the Rev. Mr. Gass, in the spring of 1880, several years after the discovery of the tablets. Mr. Gass was accompanied by Rev. Mr. Bloomer. A group of ten mounds, arranged in irregular rows, was situated along the bluffs overlooking the Mississippi bottoms west of Muscatine Slough. The first mound opened proved to be a sacrificial or cremation mound, situated on the extreme edge of a prominent bluff, having ravines on both sides. It was a flat cone, thirty feet in diameter, elevation three feet. Near the surface was a layer of hard clay, eighteen inches thick; below this a layer of burned red clay, as hard as brick, one foot thick; under this a bed of ashes, thirteen inches deep. In the ashes were found a portion of a carved stone pipe, bird form, by Mr. H. Haas; a very small copper axe by Mr. Gass; a carved stone pipe, entire, representing an elephant, which, Mr. Bloomer says, "was first discovered by myself." The other mounds of the group were explored, and contained ashes and bones, but no relics. Mr. Gass makes no report of finding the elephant pipe, but leaves that to Mr. Bloomer. During the same year he discovered, in the mounds in Mercer County, Illinois, several Mound-builders' pipes—one representing a lizard, one a turtle, another a snake coiled around an upright cylinder and covered with some very thin metallic coating. Mounds on the Illinois side, near Moline, and Copper Creek and Pine Creek, had previously yielded to Mr. Gass carved stone pipes, one of them representing a porcupine, another a howling wolf. The pipes were composed of some dark-colored slate or variety of talc, thus showing that the Mound-builders of the region were in the habit of imitating the animals which they saw, making effigies of them on their pipes. The account of finding this elephant is written in a very straightforward manner; nothing about it shows any intention to deceive.

*Another tablet was found by Mr. Charles Harrison in 1878, who is president of the society, in mound No. 11 of the same group. In the mound was a pile of stones two and one-half by three feet in size, which might be called an altar, about three feet below the surface; the slab fourteen inches square, and beneath the slab was a vault, and in the vault was the tablet, with four flint arrows on the tablet; a shell and a quartz crystal. The figures on this tablet were a circle which represented the sun, a crescent representing the moon, and a human figure astride the circle, colored bright ochre red, all of them very rudely drawn. The figure is supposed to represent the sun god. The figure eight and other hieroglyphics are upon this tablet. Above the hieroglyphics was a bird and an animal, and between them a copper axe. This tablet is as curious as the one discovered by Mr. Gass.

The fourth discovery consisted of a carved stone pipe, also in the shape of an elephant or mastodon. This pipe was picked up in a cornfield by a German farmer named Mare, who gave it away and afterwards moved to Kansas. The pipe came into the hands of the Rev. Mr. Gass, was purchased by the Davenport Academy and is now in their museum. Both pipes have the general

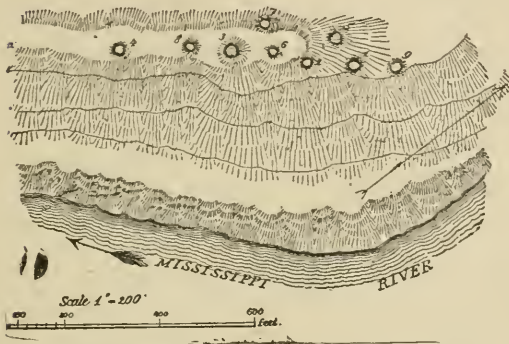


Fig. 22.—Map of the Mounds on the Cook Farm.

Mound-builder shape,—a curved base. Both pipes are alike in that they represent the animal with a proboscis, but with no tusks. The reason for this may have been that it was difficult to carve the tusks out of stone; if they had been so carved they were liable to break. They are alike also in representing the eye and ear, mouth, tail, legs and feet of the animal in a very natural way. The main difference between them is that one has the trunk stretched out in front, and the back curved upward, and a heavy body. The other represents the proboscis curved inward, toward the legs; the back is straight and the body slim. Both have the bowl of the pipe between the fore-legs, which are brought out in relief from the cylinder on the sides of the bowl; the hole for smoking is at the rear of the animal. The pipes show much more familiarity with the mastodon than do the effigies. They represent the trunk as nearly twice as long as the fore-legs. These pipes have been discredited by certain writers, especially by Mr. W. H. Henshaw, of the Ethnological Bureau, but they have been defended by Mr. Charles Putnam, the president of the Davenport Academy, and are endorsed by the members of the Academy at the present time.* In favor of the genuineness of the pipes, we



Fig. 23.—Altar Containing Sandstone Tablet.

*The evidence in their favor is certainly as reliable as that which has reference to the rude stone relics which have been described in Wright's Ice Age. Several persons were engaged in exploring and giving testimony in reference to the find. In the case of the stone relics taken from the railroad cut, we have the testimony of only one man who was exploring. Mr. H. T. Cresson's testimony is taken, while in this case the testimony of several men seems to be doubted. See "Ice Age," by F. G. Wright. See Discussion of H. T. Cresson's Pile-dwellings, American Antiquarian, Vol. XII, page 184. Discussion over elephant pipes by Mr. W. H. Henshaw. Report of Ethnological Bureau, second annual report, 1880-81. Davenport Academy report Vol. IV, page 256, article by Chas. E. Putnam.

may say that during the same year of the discovery of the elephant pipe, the bones and tusks of an elephant were found in Washington County, Ia., and were reported in the Proceedings of the Davenport Academy. These bones were about six feet below the surface, in the black mud sediment and vegetable

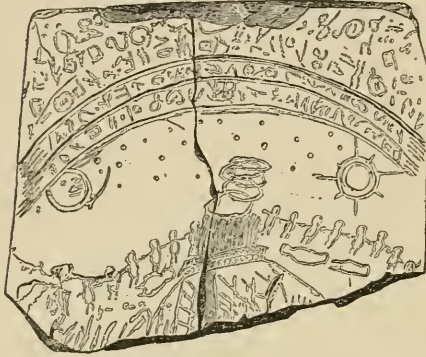
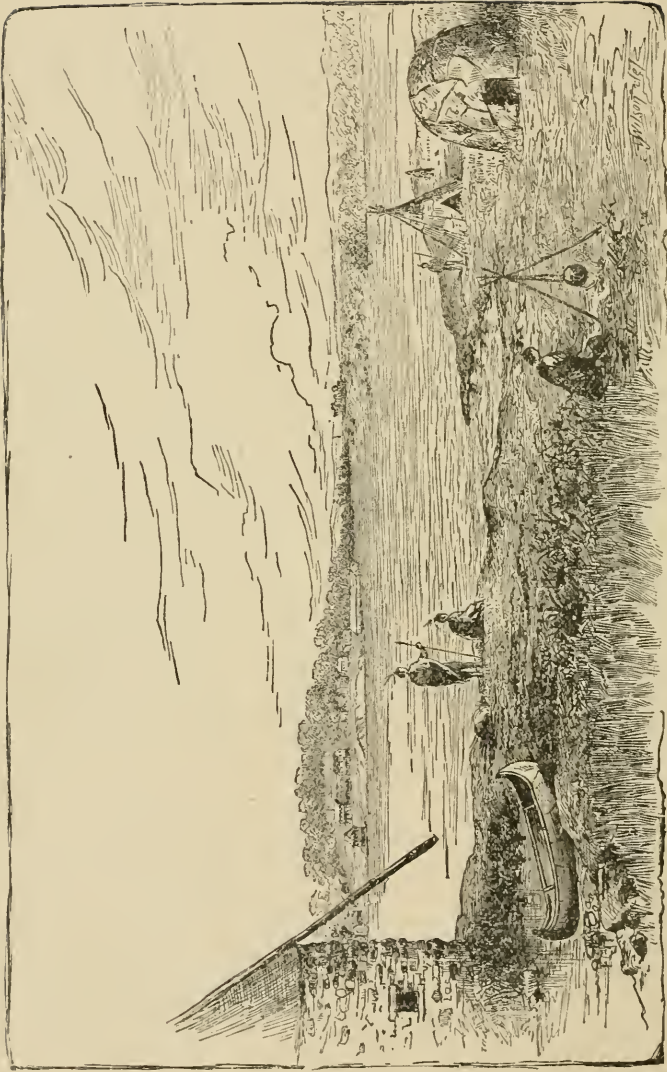


Fig. 24.—Davenport Tablet.

mould. They seem to have been quite a recent deposit, and the elephant or mastodon which was buried here may have been the very one which was represented in the pipe.

In this connection we would speak of the location of the mounds which contain the pipes and the tablets. It is the general opinion that those mounds which were erected on the

upper terraces were the older, that those upon the lowland were the later. Some writers have maintained that the first class were erected when the water filled the entire valleys and covered the first terrace. If that were the case, then the earlier Mound-builders must have been acquainted with the mastodon and other animals of that class. The mound which contained the elephant pipe was situated upon the bluffs far above the plain. This is significant. It may be that the elephant pipe was deposited in this mound on the bluff at a time when Muscatine Slough and Meredosia Slough were lakes, whose waters flowed near the bluffs—a time when the mastodon was common.



INDIAN ENCAMPMENTS AT DETROIT.

CHAPTER IV.

THE MOUND-BUILDERS AND THE INDIANS.

We now come to the question of the relation of the Mound-builders to the modern Indians. There has been a great difference of opinion on this subject, but it would seem as if archæologists were coming nearer to one another and agreeing that the Indians at one time built mounds, but most of them acknowledging that there was a difference between the two classes.

I. The appearance of the buffalo within the bounds of the Mound-builders' territory is the first point which we are to consider. The buffalo seems to have extended its range beyond the Mississippi River. The nomadic savages had a habit of setting fire to the prairies. The flame swept into the eastern forests, bringing the open prairie into the midst of the Mound-builders' works, and reaching almost to the Ohio and the Allegheny Rivers. The hunters followed the buffalo to the eastern ranges. This will account for the disappearance of the Mound-builders. Still, we are to bear in mind that the earlier Mound-builders, those who dwelt in the fortified villages and who were the sun worshippers, were not acquainted with the buffalo; at least they had no buffalo pipes. There was, however, a race of mound-building Indians subsequent to them, who were hunters and effigy-builders, and were acquainted with the buffalo. Our proof of this is as follows:

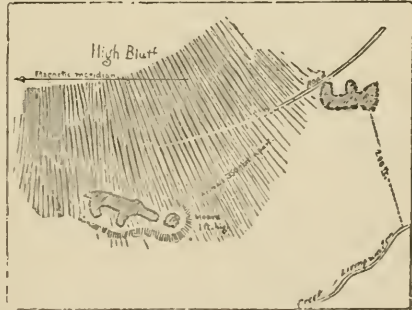


Fig. 1—Buffalo and Bear near Prairie du Chien.

1. The effigies of the buffalo are found in Wisconsin. This will be seen from reference to the cut See Fig. 1. The effigy of the buffalo has been seen in many places—at Beloit, Madison, and at Green Lake. Inscriptions of the buffalo are found in the picture cave at West Salem.
2. Shoulder bones of the buffalo, according to Squier and Davis, were found in Ohio, but at the summit of the mound and associated with modern Indian relics.
3. The bones of the buffalo, according to Mr. McAdanis, were found in the depths of the pyramid mounds not far from Alton, Illinois.
4. The bones of the buffalo were found among the ash

heaps near Madisonville, Ohio. 5. Effigies of the buffalo, according to T. H. Lewis, have been recognized in the standing stones of Dakota.* 6. Traditions of the buffalo were prevalent among the Chickasaws and the Choctaws of the Gulf States. Traditions of an animal with an arm extending from the fore-shoulder, according to Charlevoix, were prevalent among the Indians of Canada. These discoveries and traditions are important, for they show that the mastodon and buffalo were contemporaneous with the Mound-builders, though the mastodon may have been known to one class and the buffalo to another. It is very uncertain just how early these Mound-builders lived. There are some indications that they were quite ancient. 7. When Ferdinand De Soto and his party landed in Florida they were surprised by the sight of the horns and head of a buffalo, an animal they had never seen before. This was in the hands of the Florida Indians. They afterwards became familiar with the buffalo robes or skins used by the Southern Indians. It appears, then, that at least 350 years ago the buffalo was known as far east as Florida. 8. According to Marquette, the buffalo roamed as far east as the prairies of Illinois in the year 1680, but we can not fix upon the date when the buffalo effigies were erected. Buffalo bones were found at the bottom of the mounds on the Great American bottom, south of the locality where the mastodon pipes were discovered. This would indicate that the buffalo and mastodon were contemporaneous and that the Mound-builders were acquainted with both animals, and that the Mound-builders' age extended from the time of the mastodon to that of the buffalo.

II. We would next refer to the evidence as to the succession of races. The works on the North Fork of Paint Creek, on the Hopewell farm, illustrate this. Here is a group of mounds, which has been explored by Warren K. Moorehead, under the auspices of the World's Fair. Some remarkable relics have been taken out. One mound was very large, 500 feet long, 190 feet broad, 24 feet high. Near the *top* of this mound were *stone effigies*, resembling those in Dakota. At the bottom of the mound were a number of skeletons, lying upon the base line. The ground had been burned hard, and the earth above this was interstratified with sand and gravel. The skeletons were found in dome-shaped cavities, four or five feet in height. One skeleton was called the king; there were wooden horns at his head, in imitation of antlers; thin sheets of copper covered the wood.

*The standing stones and the bone paths may have been the work of the Dakota Indians. Mr. McAdams has placed a plaster cast of a buffalo pipe in the museum at Springfield, Ill. It is uncertain whether the cast is of a genuine pipe. If so, it would prove that the pipe-makers with both animals, the mastodon and the buffalo. See *Discovery of Mastodon Bones, American Antiquarian*, Vol. I, p. 51. *First Discovery of Pipe*, *Ibid.*, Vol. II, p. 68. *Inscriptions in Cave*, *Ibid.*, Vol. VI, p. 16 and 122. *Bone Paths*, *Ibid.*, Vol. VIII, p. 153. *Animals Known*, *Ibid.*, Vol. IX, pp. 153 and 57. See *Emblematic Mounds*, pp. 274, 9, 163, 217. The following are the localities: Beloit, Rock County; Blue Mounds, Grant County; Butler's Quarries, Green Lake County; Buffalo Lake, Adams County; Prairie du Chien, Crawford County; Madison, Dane Co.

The horns were attached to a helmet-shaped head-dress or mask, which reached from the upper jaw to the occiput of the skull. Pearl beads, shell beads, bear teeth, bear and eagle claws, copper spoons, copper discs, covered the chest and abdomen. A large platform pipe, an agate spear-head, four copper plates, canes from the south covered with copper were at the sides and back.

In the same mound were several skeletons, covered with a large quantity of copper, and adorned with most intricate and beautiful designs. These are classified into anklets, bracelets and wristlets, and ornaments for various parts of the body. The bracelets were solid throughout, and formed by bending a tapering bar of copper into a circle. There were four circular

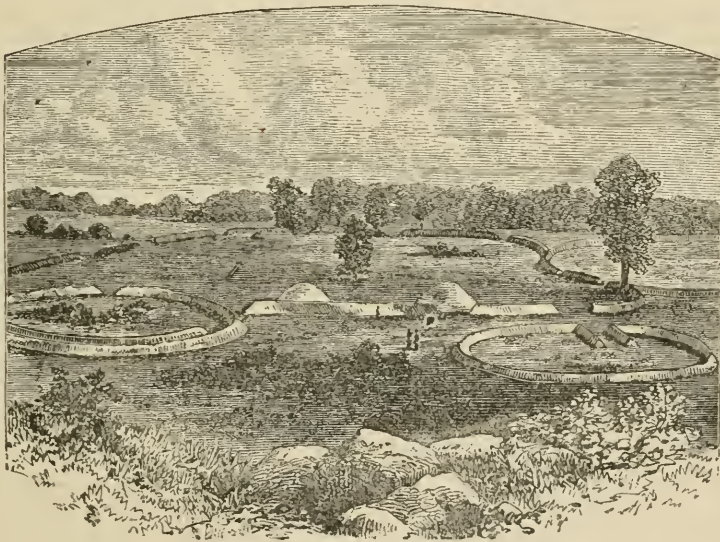


Fig. 2.—Works at Hopeton.

discs, joined in pairs by a thick stem of copper, and four other discs, joined by pivots, and richly ornamented with repousse work. There were thin plates, cut in the form of fishes; others into diamond forms, with geometrical figures inside the rings. Most curious of the whole collection are two pieces of copper representing the *Suastika*,—the only one that has been found north of the Ohio River. Beside these, was a flat piece of copper that had thin pieces of cane inside, evidently intended to be worn on the wrist as a protection from the bow. Many of the pieces have attached to them a curious texture, resembling matting, made out of wood fibre; while several were plated with silver, gold and meteoric iron. One piece was evidently a cap for the crown of the head, and had an aperture through which the scalp-lock could protrude, or to which feathers could be attached. There were also with them pieces representing birds and animals, and

others, curiously pronged, which were evidently used for combs. The five skeletons were also found lying side by side,—two of which were covered with a layer of copper, six by eight feet. The copper had been worked into many forms. There were sixty-six copper belts, ranging in size from one and one half inches to twenty-two and one half inches in length. A large thick copper ax weighed forty-one pounds. This exceeds any specimen ever found in the United States. There were traces of gold on it. The cutting edge is seven inches broad and is very sharp. A number of smaller copper axes attended this. Thirty copper plates, with Mound-builders' cloth on them, overlapped the axes. The average size of the plates was ten by six inches. A great copper eagle, twenty inches in diameter, wings outspread, beak open, tail and wing feathers neatly stamped upon the copper surface, etc., covered the knees of one of the skeletons. This is one of the most artistic designs ever found in copper. Remains of a copper stool, about a foot in length and several inches in height, lay near one of the skeletons. The stool was made out of wood, and had been covered with sheet copper.

Here, then, we have the late tribes in their rudeness, but preceding these tribes we find a certain barbaric magnificence that might be compared to that of the early in habitants of Great Britain,—the symbols of sun-worship wrought into copper and placed upon the bodies. We have no doubt that the persons who were buried here, and who carried such massive axes and wore such heavy helmets and elaborate coats of mail, were ancient sun-worshippers, differing entirely from the later Indians.

The evidence of a succession of races⁸ is given elsewhere. The writer has explored the mounds scattered along the Mississippi River from the state line on the north to Alton on the south, and has found several classes of works in this district. They are as follows: 1. In the north, the effigies of Wisconsin passed over the borders, making one class. 2. Below these are the burial mounds at Albany, Moline and Rock Island, which were explored by the members of the Davenport Academy. These were mainly unstratified, some of which contained relics, such as carved pipes, red ochre, lumps of galena, sheets of mica and fragments of pottery. 3. Farther south, near Quincy, the Mound-builders buried their dead without depositing relics. The mounds are not stratified; neither do they contain relics. 4. The fourth class is that which has been very frequently described, consisting of the pyramids, of which Cahokia is a good specimen. 5. The fifth class is that marked by the stone graves. These extend from the mouth of the Illinois River to the state line at Cairo. What is remarkable about the Illinois mounds is that in every locality there seems to have been a large number of tribes, some of which were earlier and some later.

The relics which are in the Davenport Academy are for the

most part from the Iowa side, and are unlike the majority of those from the Illinois side, though there are localities in Illinois where similar relics are discovered. The contrast between the mounds at Davenport and others is seen in the cut Fig. 3. The lower part represents a mound in Illinois, the upper a mound in Iowa. These mounds are stratified, have layers of stones at intervals, the altars are pillars or piles of stones and have the bodies by the side. No such altars are found in any other mounds. The symbolism, however, is similar to that found in Ohio. It was the symbolism of the sun-worshippers, and it contained the crescent and circle. Fig. 3, No. 9. This shows that the Davenport Mound-builders should be classed with the sun-worshippers of Ohio, that the pipe-makers of this region were the same people as the pipe-makers of that State, and were older than the other Mound-builders.

III. The difference apparent in the antiquity of the mounds is the chief evidence. It was noticed by Messrs. Squier and Davis that many of the earth-works when first discovered were dilapidated, especially those upon the summits of the hills and the banks of the rivers. The streams had encroached upon the terraces and had broken down the walls of the villages. In one case, at the crossings of Paint Creek, the stream had overflowed the terrace and had made a passage-way for itself through a village enclosure, leaving part of the wall upon one side and part on the other. In another case the large circle had been encroached upon, and the terrace near which, at one time, was the bed of Paint Creek was broken down, leaving the wall of the enclosure; but the creek now runs more than a mile away. See Fig. 4. The same is true of the circle upon the North Fork. See Fig. 5. The enclosure near Dayton also illustrates this. This was situated in the valley of the Miami on land which is even now at times overflowed. It was overlooked by the great mound at Miamisburg and had evidently been occupied. Some maintain that the works had never been finished, but their condition is owing to

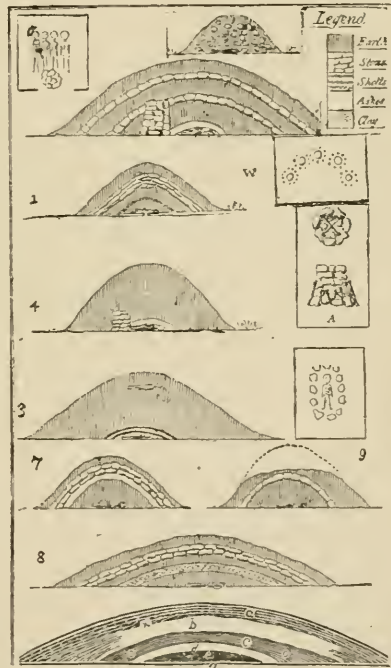


Fig. 3.—Stratified Mounds near Davenport.

the wear of the stream. The works at Portsmouth had suffered the same destruction. The Scioto had changed its channel, had encroached upon the eastern terrace and had destroyed a portion of the covered way. At Piketon the stream had withdrawn from the terrace and had left an old channel, with ponds full of water, near the foot of the covered way, but is now flowing in a new channel half a mile from the covered way. The graded way which ended with the terrace was 1050 feet long and 215 feet wide. It may, at one time, have been used as a canoe landing or levee, for the village was on the summit of the terrace; but the village is gone and many of the works have disappeared.

The enclosures at Hopeton are better preserved, but the walls of the covered way, which are nearly half a mile in length, terminate at the edge of the terrace, at the foot of which it is evident the river once had its course,

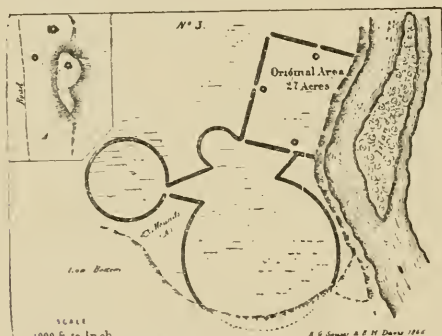


Fig. 4.—Circle and Square near Chillicothe.*

but between which and the present bed of the stream a broad and fertile bottom now intervenes. This covered way may have been designed as a passage-way to Monnd City, on the opposite side of the river. See map. The

graded way at Marietta ends with the terrace, but there is now an interval of 700 feet between the end of the way and the river bank. These changes indicate great antiquity in the works of Southern Ohio. The same is true of the southern works. There are old river beds near the pyramids of Georgia, according to Professor Eugene Smith. This is true also of the mounds at Mason's plantation. The Savannah River has encroached upon the largest tumulus and "performed what it would have taken long days to accomplish." The layer of charcoal, ashes, shells, fragments of pottery and bones, can be traced along the water front of the mounds, showing its construction. These are two feet below the surface; the superincumbent mass seems to have been heaped up to the height of thirty-seven feet above the plain and forty-seven feet above the water line.

The age of the trees growing upon the earth-works is to be noticed here. The forts of Southern Ohio when discovered were generally covered with forests, and trees of large size were found upon the very summits of the walls. Some of them when cut

*This is situated on the Scioto River, one mile south of Chillicothe. A portion of the square has been spoiled by the invasion of the river. The large circle has also been encroached upon. The low bottom at the base of the terrace was evidently at one time the bed of Paint Creek, but has since changed its channel.

down showed four or five hundred rings, thus indicating that at least five hundred years had elapsed since the fort had been abandoned. Such was the case with the old fort at Newark. Mr. Isaac Smucker says the trees were growing upon its banks all around the circle, some of them ten feet in circumference. In 1815 a tree was cut down which showed that it had attained the age of 550 years. Squier and Davis speak of the fort in Highland County. They say that "the area was covered with a heavy primitive forest of gigantic trees. An oak stood on the wall, now fallen and much decayed, which measured twenty-three feet in circumference. All around are scattered the trunks of immense trees in every stage of decay. The entire fort presented the appearance of the greatest antiquity."

IV. The contents of the mounds are instructive. It is remarkable that no buffalo pipes have so far been found in the mounds, though elephant pipes have been. We imagine the pipe-makers were earlier than the effigy-builders, for the pipes are found in the lowest strata of the mounds and are seldom found upon the surface; while the buffalo bones are often found near the summits of the mounds, and were very common upon the surface. Paths were made of the shoulder bones of buffalos in Dakota. Agricultural tools made from the bones of the buffalo were found in Ohio. These facts show that the range of the buffalo was formerly farther east. The indications are that the mastodon was known to the earlier Mound-builders and the buffalo to the later, and that the Mound-builders' age extended from the time of the mastodon to the time of the buffalo, and was prolonged through many centuries.

The mounds of habitation are found in the north and south-east part of Vincennes. The north mound has a height of 36 feet, a circumference of 847 feet, and is attended by another 25

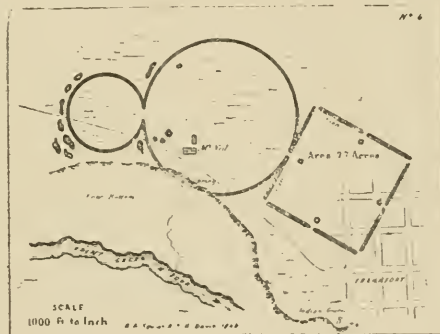


Fig. 5—Circle and Square near Chillicothe.*

*This work is situated on the left bank of the north fork of Paint Creek, 10 miles from Chillicothe. A portion of the large circle has been encroached upon and destroyed by the creek, which has since receded something over a fifth of a mile. There was formerly a Shawnee town near this work. Indian graves are marked on the plan. From these relics have been taken—gun-barrels, copper kettles, silver cross and brooches, and many other ornaments which the Indians were accustomed to bury with the dead. The ancient works at Piketon, at Cedar Banks, and at High Banks have also been encroached upon by the river. See section map of twelve miles of the Scioto Valley. The works at Piketon illustrates the same fact. The works are destroyed by the wasting of the bank. The river now runs at a distance. Its ancient bed is distinctly to be seen at the base of the terrace. See maps on pp. 17, 18, 115 and 189; also cuts on pp. 94, 154, 240 and 264.

feet high and 40 feet in circumference. Prof. Collett speaks of one mound which he calls a temple mound, and says that the temple had two stories. In other words, it was a terraced mound. We have elsewhere expressed the opinion that this group at Vincennes, as well as that near Evansville, belongs to the same class with the Cahokia mounds and may well be called terraced pyramids or terraced platform mounds. They constitute temple mounds of a peculiar type. They are generally grouped in such a way that the terraced mound is in the center. These pyramid mounds were evidently devoted to sun worship, though it is uncertain whether their summits were occupied by temples or by houses of the chiefs. If we take the descriptions given by the early explorers, we should say that the terraced pyramids were perhaps the residences of the chiefs and that they were guarded by warriors who were stationed upon the terraces, the conical mounds in the vicinity being the place where the temple was located. This, however, takes us into a new field. A description of the pyramids has been given elsewhere. We only refer to them here as exhibiting a race of sun worshipers, who were followed by a race of hunters.

The mounds in the State of Illinois were built by a different class of people; many of them contained in the stratification the records of different periods. This was especially the case with the burial mounds. There are many burial mounds which have bodies at different depths; some of the bodies having been deposited by later tribes and some by earlier. Those at the bottom of the mounds are generally badly decayed and show signs of age. We find an illustration among the burial mounds. The pyramid at Beardstown, Illinois, is to be noticed. This seems to have been a very old structure, but was occupied at recent date. It was 30 feet high, 150 feet in diameter, and stood immediately upon the bank of the river on land which was surrounded by a slough and which was in reality an island. This island, on account of its favorable position, had been for centuries a camping ground of the aborigines. It was excavated by the city authorities and found to contain upon its summit shallow graves with skeletons of recent Indians, buried with implements of iron and stone and ornaments of glass and brass. A little deeper remains of Europeans, perhaps followers of La Salle and Tonty; a silver cross was grasped by the skeleton hand and Venetian beads encircled the skeleton waist of a former missionary, a disciple of Loyola, who had probably made his grave in this distant wilderness. These were intrusive burials. At the bottom of this mound, on the original sand surface, there was found a series of stone graves or crypts, formed by planting flat stones in the sand and covering them with other flat stones. These tombs or rude cists were empty. So great was the lapse of time that the bodies had entirely decayed, not a vestige remained. The mound when fin-

ished formed an elevated platform, from whose summit was an uninterrupted view of the distant bluffs on both sides of the river for two or three miles above and below. A nest of broad horn stone discs was discovered buried in the sand a short distance above this mound. The nest was composed of five layers of flints, about 1000 in all. They were embedded in the bank of the river, but above the reach of the highest water, four feet below the surface. They had been placed in an ovoid heap or altar, overlapped each other as shingles on a roof. The length of the ovoid was six feet and the width four feet. The relics had an average length of six inches, width four inches; their shape was also ovoid. They were discolored with a concretion which showed undisturbed repose in the clay, enveloped for a great period of time. It is supposed that they were originally brought from Flint Ridge. They resembled the flint discs found in the Clark's works of Ohio; similar nests have been found near St. Louis, Cassville, on the Illinois river; several places on the Scioto river. The most rational theory in reference to the discs, is that they were deposited in obedience to a superstition or religious idea, which was perhaps related to a water cult. Dr. Snyder mentions a deposit of 3500, near Fredericksville, in Schuyler County, also on the Illinois river. Dr. Charles Rau described a deposit of horn stone discs, circular in shape, near Kaskaskia river, and another deposit of agricultural flint implements near East St. Louis. W. K. Morehead mentions a deposit of 7300 discs discovered in a mound near Clark's works in Ohio. These discs seem to connect the Mound-builders of the Illinois river with those of the Scioto, and convey the idea that the pyramids and the sacred enclosures were built at the same time.

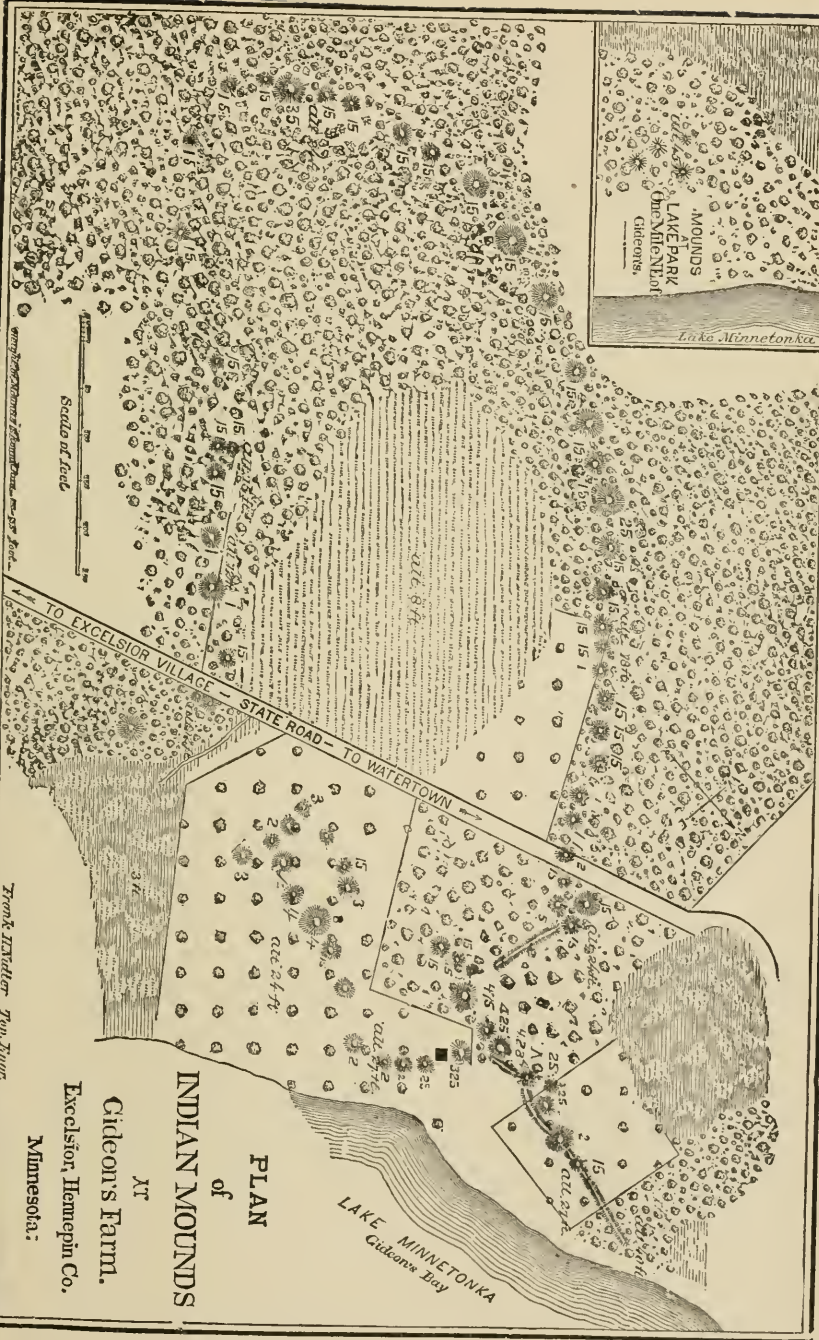
Another mound of this class was found at Mitchell's Station, on the Chicago and Alton Railroad. The mound was 300 feet long and 30 or 40 feet high, and contained near the base of it a skeleton in a wrapping of matting, a large number of copper implements and ornaments, and a portion of the head of a buffalo.

It is to be noticed here that the pottery of this region resembles that found in West Tennessee and in Southeastern Missouri—a pottery made of very fine material and very highly glazed. The animals imitated by the pottery are very much the same, but the pottery pipes and portrait vases are lacking. There are many human skeletons lying underneath the soil in the vicinity of these platform mounds. In some places layers of them to the depth of eight or nine feet are found. Relic-hunters also find many burials along the sides of the bluffs. Large quantities of agricultural tools are taken out from these burial places. These cemeteries on the bottom lands and on the bluffs indicate that there was an extensive population for a long period of time. We classify the works and relics with those of the Southern Mound-

builders, and imagine that they were older than the Northern Mound-builders.

We here refer to the mounds of Kentucky. Sidney Lyons, in speaking of the mounds opposite the mouth of the Wabash, says that they contain three different kinds of burials: 1. Those without works of art near the summit. 2. Those with works of art, the bodies having been laid on the surface. 3. Deep excavations containing badly preserved bones. One mound contained different burials, the urn burial in the middle. With the urns were deposited parcels of paint and iron ore. Another mound contained several copper awls and iron ore; another mound contained the following relics: several copper awls, five inches long, a disc of copper covered with woven fabric, three circular stones with the margin grooved like a pulley, with five small perforations in the margin; in another mound was a layer of clay, beneath the clay a pavement of limestone. The burials above the clay were peculiar: the bodies were placed in circles, lying on the left side, heads inward; the burials below the pavement six feet below the clay; but no relics or works of art were connected with the deep burials. Some of the bodies were covered with slabs of stone, set slanting like a roof, but those below the pavement were merely covered with sandy soil. Another was to dig a deep vault in the form of a circle, placing the bodies against the side of the wall, in a sitting posture, faces inward. These different burials show that there was a succession of races in this region, some of them quite modern, others very early.

Mr. Lyons seems to have come upon burial mounds in which there were successions of races buried, three or four different periods of time being represented. The relics and bones in the deep burials were generally decayed. The relics in the middle series were of a primitive kind and seem to have been made by an unwarlike people. There were extensive cemeteries in Tennessee and Missouri, and grand depositories of bones in the caves of Kentucky and Ohio. These cemeteries and ossuaries may have been earlier or later than the regular Mound-builders; they at least show that there was a succession of races and that all parts of the country were occupied for a long time.



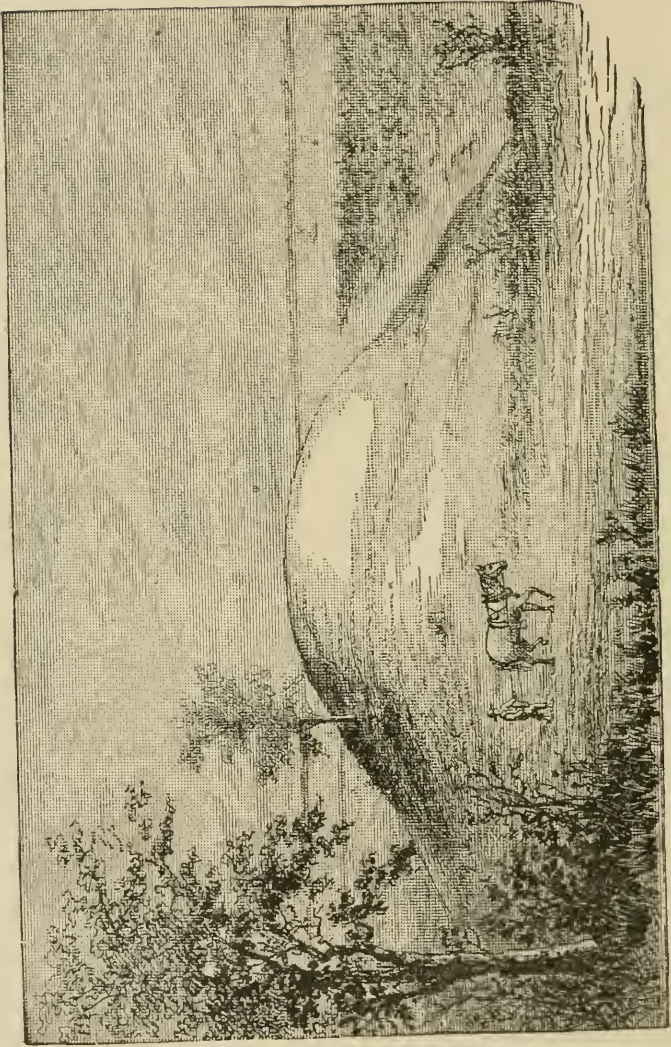
PLAN
of
INDIAN MOUNDS

of
Gideon's Farm,
Excelsior, Hennepin Co.,
Minnesota.

Scale of feet

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GRAND



BURIAL MOUND AT DETROIT.

CHAPTER V.

BURIAL MOUNDS VIEWED AS MONUMENTS.

DIFFERENT MODES OF BURIAL ASCRIBED TO DIFFERENT TRIBES
OR RACES.

We propose in this chapter to take up the burial mounds in the United States and study them as monuments. The term is very appropriate, since they, in common with all other funeral structures, were evidently erected as monuments, which were sacred to the memory of the dead. Whatever we may say about them as works of architecture, they are certainly monumental in design. It is a singular fact that mounds have everywhere been erected for this purpose. We read in Homer that a mound was built over the grave of Patroclus, and that the memorial of this friend of Æneas was only a heap of earth. The name of Buddha, the great Egyptian divinity, has also been perpetuated in the same way. There are great topes, conical structures, in various parts of Asia, which contain nothing more than a fabled tooth of the great incarnate divinity of the East, but the outer surface of these topes is very imposing. The pyramids of Egypt were erected for the same purpose. Some of them contain the mummies of the kings by whose orders they were erected. Some of them have empty tombs, and yet they are all monuments to the dead. It was a universal custom among the primitive races to erect such memorials to the dead. The custom continued, even when the races had passed out from their primitive condition, but was modified. The earth heaps gave place to stone structures, either menhirs or standing stones, cairns, cromlechs, dolmens, triliths, stone circles, and various other rude stone monuments, though all of these may have been more the tokens of the bronze age than of the stone age. We make this distinction between the ages: during the palcolithic age there were no burial heaps; the bodies were placed in graves, or perished without burial. During the neolithic age the custom of burying in earth heaps was the most common, though it varied according to circumstances. During the bronze age stone monuments were the most numerous. When the iron age was introduced the modern custom of erecting definite architectural structures appeared. The prevalence of the earthworks in the United States as burial places shows that the races were here in the stone age, but the difference between these will illustrate the different conditions through which the people passed during that age.

There is one point to be considered here. It has been maintained that the stone age has existed in all parts of the globe. The prevalence of burial mounds proves this. It is wonderful that they are so widely distributed. Sir John Lubbock says:

"In our own island the smaller tumuli may be seen in almost every down; in the Orkeys alone it is estimated that more than two thousand still remain, and in Denmark they are even more abundant; they are found all over Europe from the shores of the Atlantic to the Ural mountains; in Asia they are scattered over the great steppes, from the borders of Russia to the Pacific ocean, and from the plains of Siberia to those of Hindostan; the entire plain of Jellabad, says Masson, is literally covered with tumuli and mounds. In America they are to be numbered by thousands and tens of thousands; nor are they wanting in Africa, where the pyramids exhibit the most magnificent development of the same idea; indeed, the whole world is studded with the burial places of the dead. Many of them, indeed, are small, but some are very large. The mound on Silbury hill is the highest in Great Britain; it has a height of 187 feet. Though it is evidently artificial, there is some doubt whether it is sepulchral."*

Another fact is to be noticed. The custom of erecting tumuli, or earth heaps, has survived late into history. This is the point which Dr. Cyrus Thomas has sought to establish. It will be readily granted, for the intelligent reader will notice that there are such tumuli not only in America, but also in various parts of Europe. The tumuli in Russia will serve as an example. These are called "kurgans," and are said to have belonged to historic times, some of them having been erected as late as the eleventh century, A. D. Two kinds of graves are found in them, one kind belonging to the bronze age, the other to the iron age, the burning of the dead having been practiced in the bronze age, but the extended corpse being characteristic of the iron age. Another remarkable proof of this is furnished by the discovery of the burial place of one of the Norse sea-kings. It was on the shores of Norway, near Gokstad, and contained a Viking ship, with oars, shields, benches, and other equipments. In the ship was a sepulchral chamber which contained the body of a Viking chief, and about it were the remains of horses which were buried with him. Here, then, we have a case similar to those found in Russia, burial mounds having been erected as late as the tenth century. Great changes had taken place in the surroundings since that time, for the mound was some distance from the shore, showing that the sea had receded from the land since the burial.

The most important point is that there is the perpetuity of the custom of mound building through all the "ages". Here

*Lubbock's Prehistoric Times, pp. 111 and 112.

we have the Viking sea-king, with a boat fastened together with iron nails. In the same region we have kitchen middens with the remains of extinct animals in them. Between the two we have the whole history of the stone age, the different monuments showing the succession of races. If this is the case in Scandinavia, it is also the case in America. The burial mounds are not all, by any means, of modern date. Perhaps none of them can be traced back to as early a date as the kitchen middens and the cave contents of Europe indicate, yet many of them are, we believe, quite ancient; in fact, so ancient that everything that was perishable has passed away, and only the imperishable has been preserved. The mounds are valuable as records, since they show a succession of races. There may be, even in the same group, different mounds which have been erected in different ages, so that the records may go over several hundred years, even when the appearance externally is the same.

With these remarks we propose to consider the burial mounds of the United States, especially those found in the Mississippi valley. We would say, however, before beginning, that there are mounds outside this valley, in fact many of them. They have been discovered on the northwest coast, in British Columbia, in Washington Territory, and in Oregon. Mr. James Deans claims that he has discovered a certain embankment near Victoria, B. C., with a ditch six feet deep; also low mounds, the remnants of ancient dwellings, and burial caves of the usual type. Mr. Forbes maintains that the works of this region resemble the stone circles which are found in Devonshire, England. The dimensions of the mounds are from three to eighteen feet in diameter, and they are found in groups of from three to fifty. It is probable that these earthworks are fortifications, and that the stone circles within them are the remains of huts, which have fallen and been destroyed. The burial mounds of this region have not been explored. There are graves near Santa Barbara, and on Santa Rosa island, in Southern California, which have yielded large quantities of stone relics. These have been described by Rev. Stephen Bowers, Drs. C. C. Abbott, H. W. Henshaw, Lucien Carr, and others.*

There are also shell heaps or kitchen middens in the same region. These, however, differ from the burial mounds, which are really rare along the Pacific coast. Dr. Hudson has discovered a tumulus of the regular type, and has described it in THE AMERICAN ANTIQUARIAN.† It is situated near Oakland, Cal. "It is imposing in form, interesting in feature, locality and composition." It measures three hundred feet in diameter at the base, and twenty-five feet in height. It is circular in form, with a flat summit, is one hundred and fifty feet across the truncated

*See Wheeler's Geographical Survey, Vol. VII, Smithsonian Report, 1877.

†See American Antiquarian, Vol. VII, No. 3.

top. A relic exhumed from a mound in the vicinity is also described by Dr. Hudson. It is a crescent carved in stone, two inches wide and eight inches from point to point, and is supposed to indicate the prevalence of sun worship in the vicinity.

We now come to the burial mounds of the Mississippi valley. These are to be Classified and described. We shall describe them, both according to their architectural character and their geographical location, as well as their contents, since this is the light in which we are to study them. The architectural character embraces, 1, the question of size and shape; 2, the material of which they are composed; 3, the method of construction, whether stratified or solid; 4, the character of interior, whether a chamber, an altar, a fire-bed or other structure.

The study of geographical location will embrace two or three points: 1, The question whether some of them were not used as signal stations; 2, whether some of them were not built in connection with villages; 3, whether their contents do not reveal the social status, the relics of one district being very different from those of another district, but the burial mounds being quite similar in character throughout the same districts; 4, whether their association with other earth works would indicate that all were built by the same clan or tribe.

In treating of the burial mounds of the Mississippi valley, we shall keep the division which we have adopted with reference to the other earth-works, but shall modify it to suit the circumstances. The division is as follows: I. The Upper Mississippi district, including the mounds in Minnesota and Dakota, and extending north as far as Lake Winnipeg, south as far as the Des Moines river. II. The Wisconsin district, the area of the emblematic or effigy mounds. III. The district about the Great Lakes, including Michigan and New York. IV. The Middle Mississippi district, including Illinois, Iowa and Missouri. V. The district on the Ohio river. VI. The Appalachian district, including Western North Carolina and Eastern Tennessee. VII. The Lower Mississippi district, and Texas. VIII. The Gulf district, including the Gulf States east of the Mississippi. Here we find large, flat-topped, pyramidal mounds, enclosed by walls and surrounded by ditches and canals.

This division is the one given by Dr. Cyrus Thomas, though it is based upon a division previously laid down by the writer, but with two districts added, the middle district having been divided into two, and another on the eastern coast, in North Carolina, having been discovered by Dr. Thomas himself. The division is based upon the characteristics of the relics which are found in the districts, rather than upon the burial customs, and therefore indicate nothing concerning these customs. Still it is well to state that there is a correlation between the

burial customs and the districts, so that we may recognize the social status of the mounds, as well as of the general structures.

I. We take first the district which is embraced within the Upper Mississippi valley, which may be called the Northern district. There are many burial mounds in this district. There are, to be sure, a few other earth-works, such as fortifications, lodge circles, lookout mounds, and domiciliary mounds, but the large majority were evidently erected for burial purposes. These are found in Minnesota, Iowa, Kansas, Missouri, Illinois, and Indiana, all of which may be called prairie States. The district might also be said to embrace the valley of the Red river and the States of Dakota, for the mounds found in these regions are mainly burial mounds. It is a very extensive district, and yet one that is homogeneous in character. It is uncertain whether the mounds were the work of Indians known to history, but they were evidently built by people of the hunter class, all of whom were nomadic in their habits. It is one of the peculiarities of nomads that they rarely provide for permanent habitations, but they do provide for the burial of the dead. It is strange that throughout the region which we have mentioned there are so few fortifications but so many burial mounds. It is probable that the people who dwelt on the prairies had from time immemorial been in the habit of placing their villages near the water courses, and then building signal mounds at various points on either side of the villages. By this means they could become aware of the approach of an enemy, and then find safety by taking flight, leaving their villages to be destroyed by the enemy.

It is noticeable that most of the signal stations were burial mounds, or, in other words, burial mounds were used as signal stations, the location of these mounds on the high points being not only favorable for burials, but also useful for the purposes of defense, as they furnish fine views of the surrounding country. It is possible that there was a religious sentiment embodied in them—the spirits of the dead watching over the abodes of the living, but the living taking the abodes of the dead as their watch towers, and so the living and the dead were combined together to secure safety.

They may have been used also by hunters as lookout stations, from which the presence of game could be discovered, as many of them command views of the prairie upon one side and the bottom lands upon the other, being so placed that large animals might be seen grazing on one side and birds and water fowl feeding upon the other, the lakes, streams and open country being brought to view by the elevated position, and at the same time signals in the shape of fires or clouds of smoke could be sent to more distant points. It is a region which favored this method of defense and this kind of hunting, since it was a prairie region through which large streams and rivers flowed, the rivers furnishing an abundance of

fish and water fowl, but the prairies game of a larger sort. It is very interesting to pass over the country and study the location of the burial mounds with these points in view, for there is scarcely a mound whose location is not significant. The burial mounds form cordons of lookout stations, and taken together they make a net-work which covers the whole map. The writer has discovered three lines of lookout stations along the Mississippi river, one of them on the bottom lands near the bank of the river, another on the bluffs which overlook the river, another several miles back overlooking the prairies, which are situated on either side of the river valley. It was also noticed that within the lines of lookout stations the villages were built, some of them being on the bottom land, others on the bluffs, others on the edge of the prairies, the burial mounds being placed near the villages, but lookout mounds at a distance. Others have also noticed the same system of signal stations on the Missouri river.*

As to the character of the mounds within the district, we would say that they are ordinary conical or hemispherical tumuli, built solidly throughout, very few of them having cists within them, though some of them contain layers of stone, which alternate with the layers of earth, the bodies being below the strata. Perhaps the district may be subdivided according to the relics contained in the mounds, but not according to the modes of burial, though different modes of burial were practiced by the different tribes which traversed the district.

Some of the bodies are recumbent, others in sitting posture, others lying upon the side, perhaps buried in the attitude in which they died; others present promiscuous heaps of bones—"bone burials"; others have the bodies arranged in a circle, feet out and heads toward the center; others have the bodies arranged in lines placed parallel with one another. A few have bodies in tiers, as if piled upon one another. All, however, are buried in a compact manner, chambers being exceptions.

The solid type of burial mound we ascribe to the hunter races. This may seem conjectural, and yet we think the conclusion is proven by the facts. If we take the range of this class of tumuli and compare it with the habitat of the hunter tribes known to history, we shall find a very close correspondence. In this district we find the Algonquins and Dacotahs, who were strictly hunters, and the Chippewas, who were both hunters and fishermen. They occupied all of the region between the great lakes and the Ohio river, extending west as far as the Missouri river. They would be called savages, though according to Mr. Morgan's classification, they would occupy the upper status of savagery and the lower status of barbarism. They were partially village

*S. V. Proudfit, in *American Antiquarian*, Vol. VI, No. 5.

Indians, were acquainted with pottery, they used the bow and arrow, occasionally used metals such as copper, galena, brown hematite and mica. They subsisted upon wild animals, but also gathered wild rice, and some of them cultivated maize and had patches of squashes, melons and other garden products. The chief tokens of this class of people are found in the burial mounds. They consist of arrows and spears, axes and hammers, shell beads, copper needles, knives, pipes, badges or maces, spool ornaments, and occasionally specimens of cloth. Modern relics are frequently found in the mounds, showing that the hunter races of this district did not abandon the mound building until after the advent of the white man. The relics, however, prove that in the prehistoric times the people of this entire district were in a much lower condition than those in the Southern States. There are no burial urns, no painted pottery, no elaborate symbols, very few idols or human images, and but few inscribed tablets. There are traces of extensive aboriginal trade, copper from Lake Superior, shells from the sea coast and the gulf of Mexico, obsidian cores from the Rocky mountains, mica from North Carolina, flint from Ohio, and galena from Wisconsin. This variety of relics proves not only that there was an aboriginal trade, but that the tribes were wanderers and had not reached the sedentary condition which is peculiar to agricultural races. This confirms what we have said, There may have been a great variety of races, and it is very likely that there were many periods of occupation, a succession of races. Still, the region was so favorable to hunting that it seemed that it seemed to have been occupied by hunters from time immemorial. We have discovered signs of different periods of occupation in many of the burial mounds of this region. In one group we found three mounds. One of them contained the body of a medicine man, with a modern looking-glass in one hand and a bridle-bit in the other, with fragments of cotton cloth, pieces of tin, coils of brass wire and other relics about his person, showing that he was buried after the advent of white men, probably within fifty years. Another mound contained several bodies, but with no relics except a single chipped flint arrow-head, though a child seemed to have had a wristlet of bone beads around its hand, and a pottery vase filled with sweatmeats which had been placed near its head. This mound had trees growing upon its summit which were at least three hundred years old. The third mound contained three bodies lying upon the side, with face in the hand.* We discovered also in the same region mounds built with stone walls in the form of a circle, filled with bodies laid in tiers, but with stone slabs lying between the tiers, the whole solid throughout, and a quasi

*There are evidences that this mode of burial was practiced by one of the later tribes, possibly Sacs and Foxes, but the other burials were by the earlier tribes, some of them by Shawnees, and some of them by tribes preceding even the Illinois.

roof of slabs covering the whole structure. The evidence was that a number of tribes had occupied the region. Each tribe had practiced a different mode of burial, but that, with all their changes, no tribe passed beyond the hunter state. We give a series of cuts* to illustrate the character of the mounds of this region. One of these represents a group near Excelsior, Minn. See Plate I. It is in a forest which borders on Lake Minnetonka. It will be noticed that there is a circle of mounds surrounding a low place or natural meadow, and a wall extending along the lake shore. The group contains sixty-nine mounds, most of them burial mounds. One of the mounds was opened, and thirty-five skulls were found within it, arranged in a circle, covered with

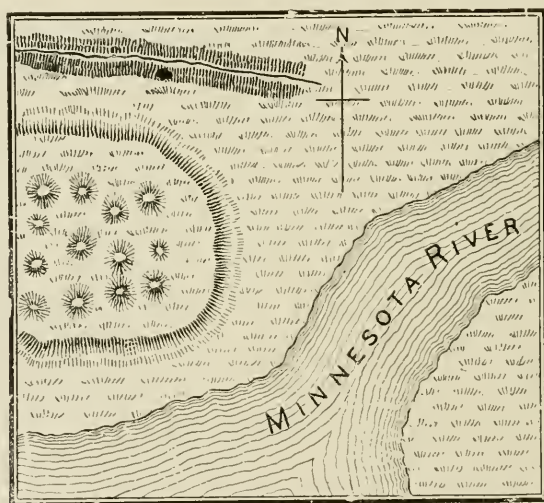


Fig. 1—Group of Mounds Twelve Miles from Gideon's Bay.

sand. The location of the group and the arrangement of the mounds would indicate that it was the site of an ancient village. The writer has discovered other village sites with the same or similar arrangements of burial mounds—one of them on the Crawfish, near Mud Lake, in Wisconsin, and another at the Colliss Bayou, near Prairie du Chien. The placing of the burial mounds around the edge of a village site may have been owing to superstition, the same superstition as that which led to the use of a burial mound as a signal station, the spirits of the dead being regarded as a protection to the village, since they were supposed to remain near the place where the body was laid. It may, however, have been owing to the custom, which prevailed in certain tribes, of burying the dead in the very spot where the

*See Smithsonian Report, 1879, p. 422.

lodge stood, and then moving the lodge to another place. A group of mounds one mile northeast of this is shown on the upper left-hand corner of the cut. Plate I. They are on a spot of ground four hundred and fifty feet above the level of the lake, and were probably used as signal stations. A group twelve miles southeast is represented in the next cut. Fig. 1. Here are thirteen mounds situated on a high bluff, showing that these were used as signal stations as well as burial mounds. There is another group, two miles southwest, which contains forty or fifty mounds, and still another, seven miles northwest, which is called Mound City. Here the writer has discovered a game drive. Taking the region together, we should say that the burial mounds were closely connected with the village life, but such a kind of life as hunters would follow, the very position of the tumuli being such as would be favorite spots with hunters.

There are not many large mounds in the northern district. The only one which has been discovered is the one called the haystack mound. It is situated in Lincoln County, Dakota, eighty-five miles northwest of Sioux City. It is on a fine bottom, and is three hundred and twenty-seven feet in length at the base at the northwest side and two hundred and ninety feet on the southeast side, and one hundred and twenty feet wide. Its sides slope at an angle of about fifty degrees; it is from thirty-four to forty-one feet in height, the northeast end being the higher.

The most interesting mounds of this district are the lookout mounds, to which we have already referred. Some of these are quite large, being situated upon slightly places, they are prominent landmarks, and are now becoming interesting objects for tourists to visit. One such lookout mound is situated near St. Paul; others at Winona, at Red Wing, at Dubuque, at Dunleith, at Rock Island and Davenport, at New Albany, Keokuk, Quincy, and other places. One of the mounds south of Quincy was used by the coast survey as a place to erect a tower upon, thus showing that it occupied a very prominent position.

We give here a map of the mounds situated along the banks of the Mississippi river, near Muscatine. The map will show the number and location of the tumuli. They are perhaps more numerous in this vicinity than elsewhere, but they are generally placed on the highest points or bluffs, as they are here. This particular region has been explored by gentlemen from Muscatine and from Davenport. The letters will indicate the points. It has been found that they were nearly all burial mounds, though they did not all contain relics, other than the bones of the dead. See map.

There are shell heaps in this vicinity, located in the neighborhood of these mounds, "which extend for miles without interruption." They are composed of recent shells and contain few implements. The mounds occupy the most beautiful prospect

in the country. One large mound five miles east of Moline was opened and disclosed the following structure: Three feet of soil (a), twenty-two inches of ashes and bones (b), and twelve inches of charcoal and bones (c). See Fig. 2. In seven mounds the bodies were found lying upon the side, the knees drawn up to the chin.* Two other groups in this vicinity are represented in the cuts. Figs. 3 and 4. One of them, the one on Tohead Island, has a shell heap near it, and the other containing ten mounds, is located on an isolated hill or ridge. In the vicinity is found a cemetery containing two or three hundred graves. The graves are upon low ground, and the mounds upon high ground.

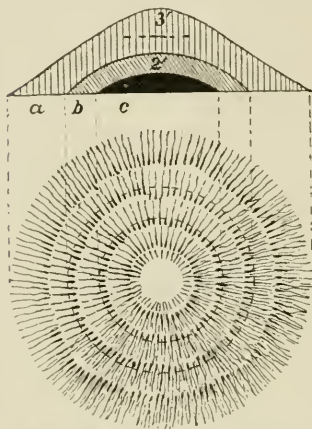


Fig. 2—Mound near Moline.

some interesting relics have been taken from them, Moline being but a few miles east of Davenport. The group contains thirty-three mounds, some of them made of lime-stone slabs.

The burial mounds of this vicinity—Muscatine, Rock Island, Moline and Davenport—show how extensive the population was. They contain many relics which show that the people were quite advanced in some of the arts, the sculptured pipes which have been taken out from the mounds being very remarkable. There is not a better collection of the pipes of the Mound-builders' in the United States than the one contained in the museum of the Davenport Academy of Science. These pipes were taken from the mounds in the vicinity, those from the Cooke farm, three miles south of Davenport, being the most interesting. From this same group

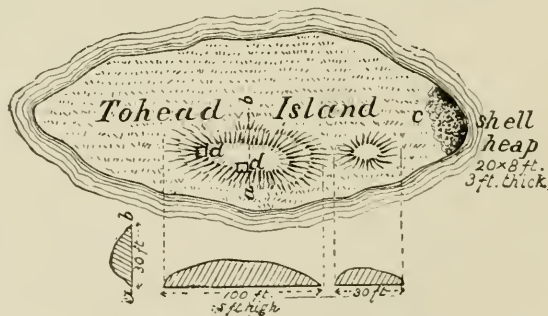


Fig. 3—Mound on Tohead Island.

*See description of same mode of burial in mounds near Quincy, Ill.

†See Am. Antiquarian, Vol. 11, No. 2. Taken from Smithsonian Report, 1879, p. 365

on the Cooke farm the so-called Davenport tablets were taken. These are anomalous in character, totally unlike the other specimens in the cabinet. Members of the Academy maintain that they are genuine, but one may recognize upon them so many Roman and Arabic numerals, and so many alphabetic letters, as to conclude at once that they were made by some one acquainted with these modern characters. The relics contained in the cab-

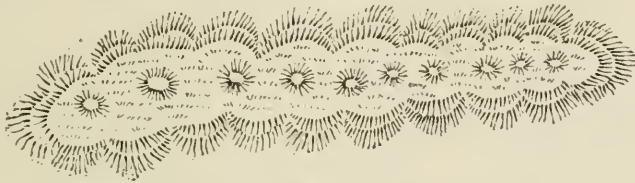


Fig. 4.—Group of Ten Mounds on a High Ridge.

inet, aside from these tablets, are very valuable. We find here many interesting specimens of copper axes and pieces of cloth, as well as pipes and pottery. There are also relics in the cabinet from the districts farther south, from Missouri and Arkansas, and these being placed side by side, show the differences between the districts in grade of culture and art products.

II. We come now to the second district. This is the district occupied by the effigy mounds. It is a very interesting region.

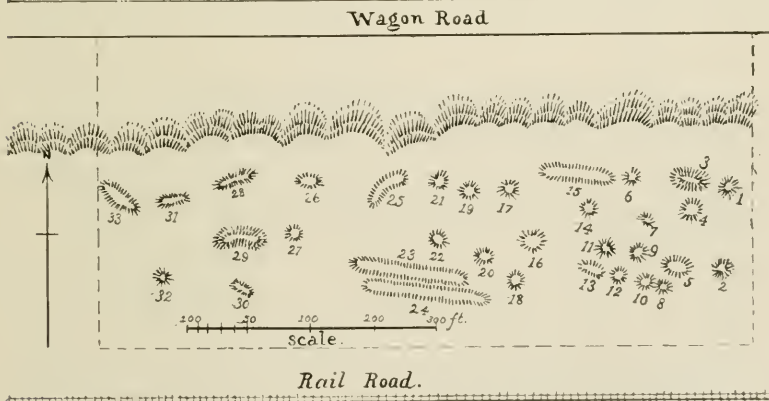
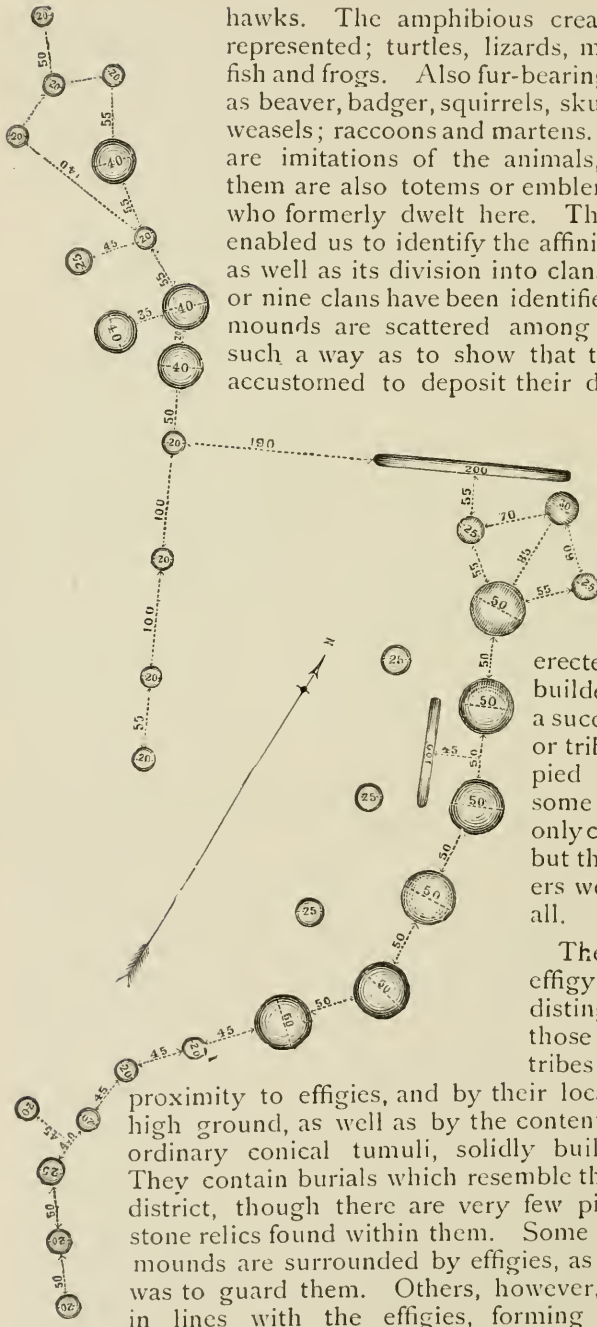


Fig. 5.—Burial Mounds near Moine, Ill.

Here the effigies are numerous and have a great variety of shapes. We have in them complete imitations of the animals which once abounded, but which have become for the most part extinct. There are many effigies of panthers, wolves, foxes, bear, wild cat and other beasts of prey. Besides them we have moose, elk, deer, buffalo, antelope and other grazing animals. There are also many birds; eagles, hawks, wild geese, pigeons, swans, cranes, herons, ducks of various sorts, swallows, night



hawks. The amphibious creatures are also represented; turtles, lizards, muskrats, otter, fish and frogs. Also fur-bearing animals, such as beaver, badger, squirrels, skunks, mink and weasels; raccoons and martens. Many of these are imitations of the animals, but many of them are also totems or emblems of the tribe who formerly dwelt here. The effigies have enabled us to identify the affinity of the tribe as well as its division into clans. Some eight or nine clans have been identified. The burial mounds are scattered among the effigies in such a way as to show that the clans were accustomed to deposit their dead in conical

tumuli, though they occasionally erected an effigy over the prominent members of the tribe. Not all of the conical tumuli were erected by the effigy builders. There was a succession of races or tribes which occupied this region, some of which built only conical mounds, but the effigy builders were the first of all.

The tumuli of the effigy builders can be distinguished from those of the later tribes both by the

proximity to effigies, and by their location upon the high ground, as well as by the contents. They are ordinary conical tumuli, solidly built throughout. They contain burials which resemble those of the first district, though there are very few pipes or carved stone relics found within them. Some of these burial mounds are surrounded by effigies, as if the purpose was to guard them. Others, however, are arranged in lines with the effigies, forming parts of the groups. Still others are placed on the summits of hills, with

effigies arranged in line in front of them, others in clusters with effigies at various distances from them.* In one case a row of burial mounds was found located on a ridge or high cliff; the

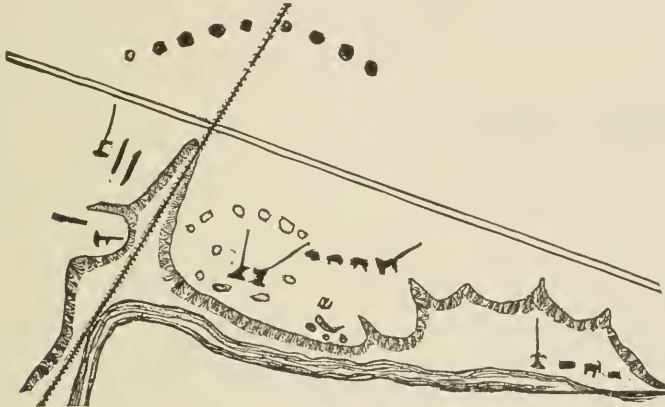


Fig. 7.—Effigies and Burial Mounds near Beloit.

ridge having the shape of an immense serpent, and the mounds being arranged so as to show the form of the serpent, the summit of the ridge and the line of the mounds both conveying the same idea. This was near Cassville, in Grant County, Wisconsin.

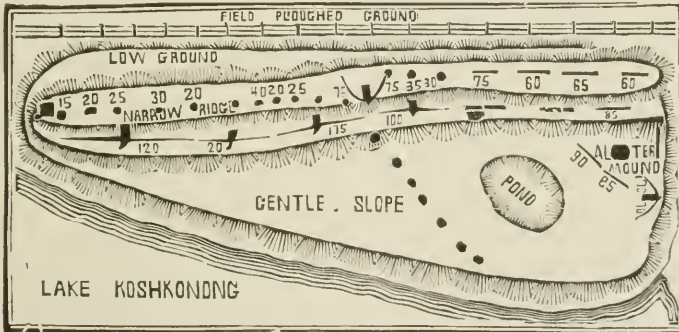


Fig. 8.—Mounds on the East Side of Lake Koshkonong.

We give a series of cuts to illustrate the burial mounds of this district. The first group is situated in the vicinity of the so-called elephant effigy, on the same bottom land, but about a mile to the north. See Fig. 6. It was described by Mr. Moses Strong.†

*See book on "Emblematic Mounds," by the author. †Smithsonian Report, 1875.

The group was excavated and found to contain intruded burials, skeletons very fresh in appearance, but no other relics. This group may have been erected by a tribe which followed the effigy builders. Another cut, however, represents a group near Aztlan (see Fig. 13), the celebrated ancient city, which may have been the capital of the effigy builders.



Fig. 9—Mound at Waukesha

guarded by eagles. Koshkonong represents burial mounds guarded by tortoises. Burial mounds have been explored by various parties, Dr. I. A. Lapham, Dr. J. E. Hoy, R. B. Armstrong, W. H. Anderson, Wm. F. Clarke, Dr. Cyrus Thomas, Col. J. G. Heg and others.

The next represents a group near Beloit. See Fig. 8. Here effigies and tumuli are associated. Another cut (see Fig. 9) represents a group on the east side of Lake Koshkonong. Here burial mounds are guarded by eagles. Another group on the west side of Lake

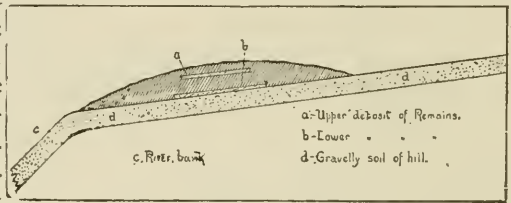


Fig. 10—Mound at Indian Ford.

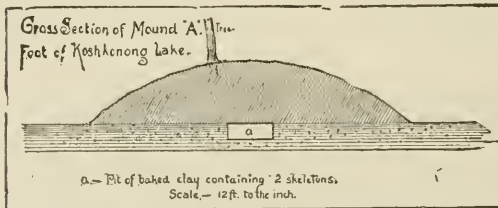


Fig. 11—Mounds on Rock River.

The mound explored by Dr. Lapham was at Waukesha. This group was found on the college campus. A circular wall about nine feet in diameter was discovered. This extended about two feet above the original surface. An excavation within this wall was filled with black earth to the depth of about two feet. At the bottom of this was a skeleton lying on its back. It was surrounded by a circular heap of stone, the stone also being placed over the body so as to form a sort of rude stone coffin. See Fig. 9. In the left hand of the skeleton was a pottery bowl, in the right hand a small pipe. At the head were fragments of two pottery vessels. The mound opened by Dr. J. E. Hoy was at Racine. This contained a body

The mound explored by Dr. Lapham was at Waukesha. This group was found on the college campus. A circular wall about nine feet in diameter was discovered. This extended about two

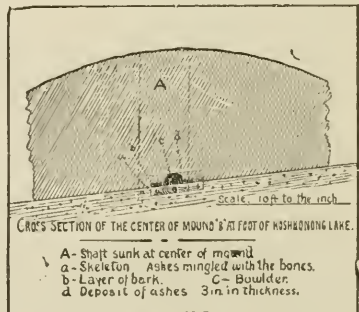


Fig. 12—Mound at Newton.

in a sitting posture, but there were no cist or wall or relics near it. The mounds explored by Mr. Clarke were near Indian Ford, on Rock river. One of these contained two burials (see Fig. 10); with three skeletons at the top and seven skeletons at the bottom. Another large mound (see Fig. 12), 75 feet in diameter, 13 feet high, contained ashes three inches thick (d); below the ashes a flat stone (c); below the stone decayed wood and bark (b), and below these a human skeleton (a).

Thus we see that there was no uniformity in the structure of the burial mounds of the district. Some of them seem to have been solid, others stratified. The bodies in some were found in sitting posture, in others recumbent; some of them contained rude stone walls; others contained altars; there is also evidence of cremation in some of them; in others, evidence of bone burial. The probability is that there was a succession of races here, and that some of the races or tribes continued to bury in mounds until after the settlement of the country by the whites, as modern relics are sometimes found in them. The state abounds with copper relics, but it is uncertain whether these were left by effigy builders, or by subsequent tribes, probably, however, by the later tribes, since most of them are surface finds.

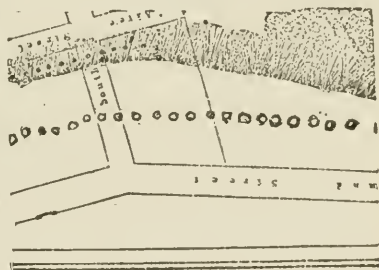


Fig. 13—Mounds near Aztlan.

The effigies do not often contain burials. One group, however, has been explored near Beloit. Two of the effigies in the group contained bodies which had been laid in rows, side by side, eight in number, on the surface of the ground, and then the effigy mound was erected over them. It is supposed that the effigy indicates the clan to which the persons belonged, but it is probable that the honor was bestowed upon some chief, and his family, or upon some band of warriors, but that it was not common to bury in this way. Dr. Cyrus Thomas has described several burial mounds which were excavated by his assistants near Prairie du Chien, in Crawford and Vernon Counties, Wis. One of these was stratified, first a layer of sand, next calcined bones, charcoal and ashes, burned hard, next clay burned to a brick, next a heap of bones, with charcoal and ashes. At the bottom was a pit, filled with chocolate colored dust. Another contained two rude walls, three feet high and eight feet long, between them a number of skeletons, lying flat, the skeleton being covered with a layer of mortar, this by a layer of clay and ashes, this again by a layer of clay, and then the top covering of sand and soil. Dr. J. E. Hoy has described a mound at Racine which contained a single skeleton in sitting posture. Dr. J. N. De-

Harte* describes one at Madison as containing several bodies, one above the other, all of them in sitting posture, and still another containing an altar at the base, but with no bodies.

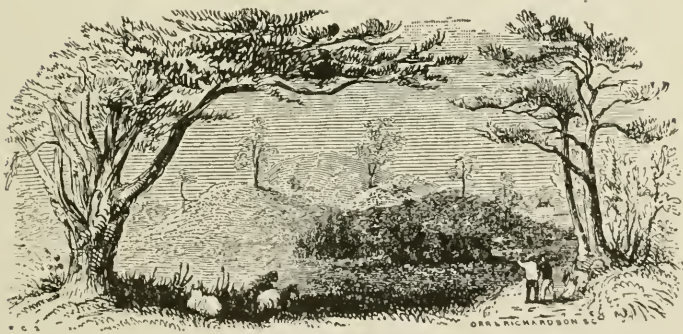
III. The third district embraces the region about the great lakes, from Detroit on through Northern Ohio into New York State. This district was occupied by the military or warlike races, and the mounds have been called military works. The distinguishing peculiarity of the district is that there are so many remains of old stockades in it. These stockades are found in great numbers in the State of New York, but they are also seen on the south shore of Lake Erie, as at Conneaut, at Ashtabula, at Painesville, at Weymouth, south of Cleveland, at Detroit and many other points. The burial mounds of the district are for the most part simple conical tumuli, some of which may have been used as lookout stations as well as for burials. There are, however, a few large mounds, and these we shall speak of especially. There is at Detroit a massive burial mound, seven hundred feet long, four hundred feet wide, and not less than forty feet high. It is situated near the river Rouge, three miles below the city. Mr. Bela Hubbard says of it: "From the immense number of skeletons found in it and the mode of their occurrence, there can be but little doubt that it is one of those national sepulchres of the Huron and Algonquin tribes, where were deposited the remains of their dead. It affords certain evidence that cremation was practiced. Much charcoal and ashes were found, mingled with burned bones. With these were many pieces of large pots, but all broken. The mound contained so-called 'cellars' or 'altars'."

Here were also the celebrated perforated skulls, which have been so fully described by Mr. Henry Gillman, skulls which evidently belonged to a rude hunter or military race. The situation is such as would be chosen by the mound builders over all others. For a monument to their dead it is most picturesque. It was visible from a great distance in every direction and at the same time commanded a view of both the water and the land for many miles.†

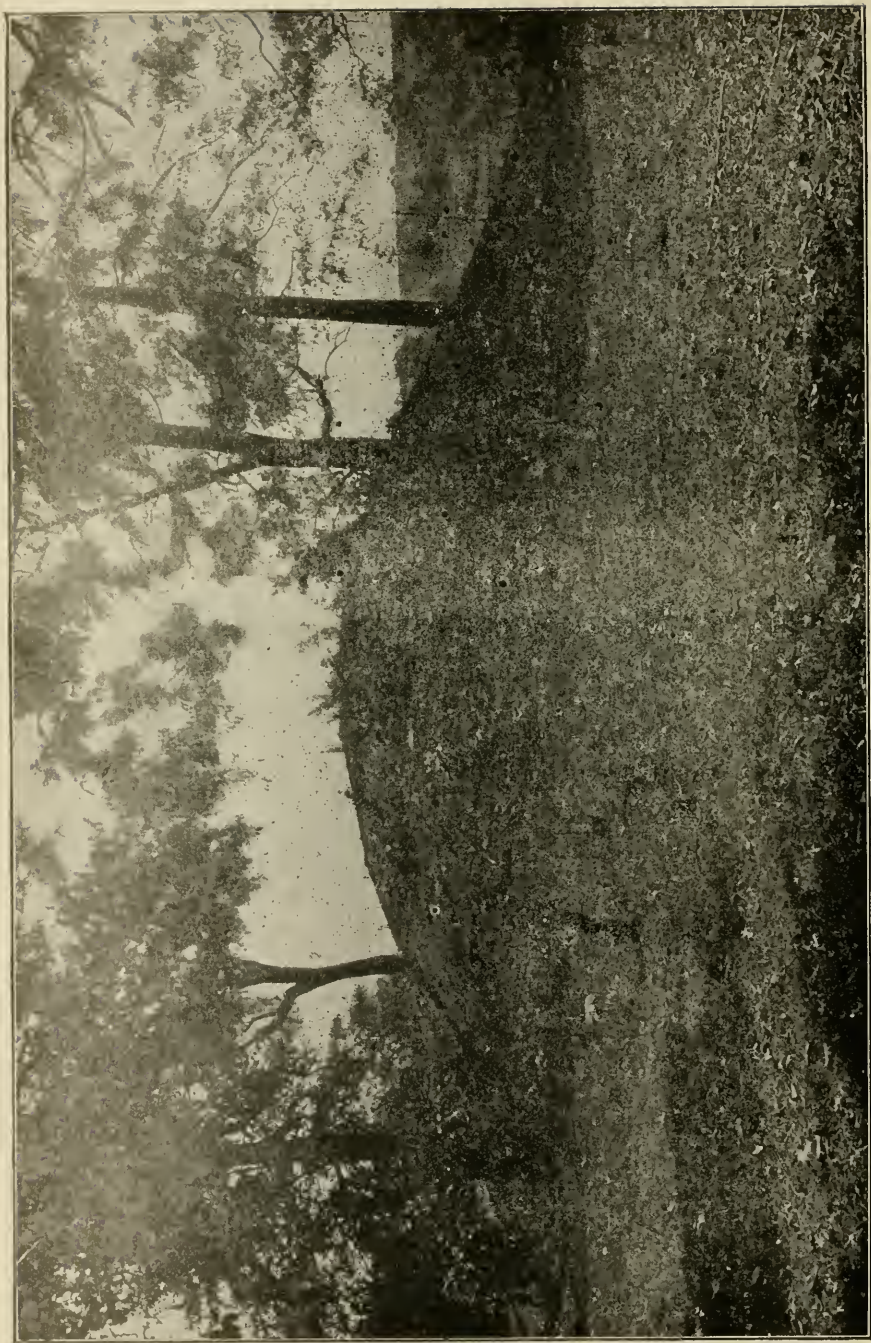
The burial mounds in this region have a general resemblance. They are terrace-like embankments twenty or twenty-five feet in height, which run parallel with the river or lake shore. They are partly natural and partly artificial. They contain relics, the debris of camps, as well as burials. The bones taken from them are marked with platyc nemism, showing that the people who dwelt here were hunters, since narrow, sharp shin bones are characteristic of hunters. The burial mounds of New York State differ from those of Michigan, in that they are conical tumuli, and are wholly artificial. Some of them contain modern

* American Antiquarian, Vol. I, Page 200.

† Memorials of Half a Century, by Bela Hubbard, p. 220.



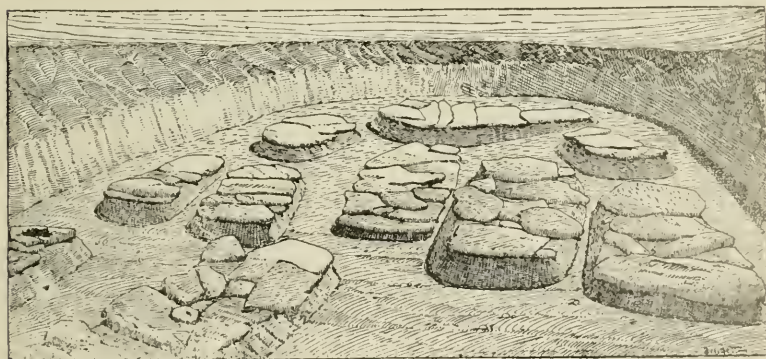
BURIAL MOUNDS IN OHIO.



BURIAL MOUND AT CHILLICOTHE, OHIO.

relics, but the majority of the relics are those which belong to the Iroquois, and consist of spear-heads, arrow-heads, stone pestles of varying length, clay pipes having a great variety of patterns, also a few copper relics; but no tablets, no shell gorgets, and nothing that suggests either picture-writing or symbolism. There are burial mounds in Northern Ohio, associated with old stockade forts, which were probably erected by the Eries, who belong to the same stock as the Iroquois. Confirmatory of this, is the fact that many pipes and other relics, resembling those used by the Eries and the Iroquois, have recently been found at Willoughby, west of Cleveland.

IV The district embraced by Southern Ohio and adjoining states presents the greatest number of burial mounds, and furnishes the best field for the study of the Mound-Builders' habits and customs. The burial mounds here, are frequently



Stone Graves in Ohio.

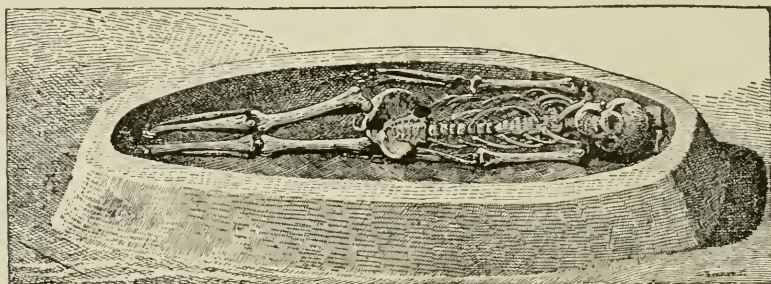
arranged in groups, some of them very large. They have been described by different authors, though Squier and Davis are still the best authorities on the subject.

These mounds are generally situated upon the hill tops, from which extensive views may be gained. The majority of them, however, are situated not far from the village enclosures, and were evidently erected by the people, who dwelt in the villages. Many of these mounds are stratified, and contain a succession of burials. The most interesting of these have altars at the base, which present evidence that many of the bodies were cremated.

There are a few mounds which contain stone graves, or graves made by a cist of flat limestone slabs, set on edge and overlapping each other, making a rectangular cist resembling a flat box in shape, but with the bodies in recumbent attitudes. Many conical stone heaps, resembling huts, are found in West Virginia, but they belong to a people who

practised different modes of burial and lived in a very different way from the Mound-Builders of Ohio.

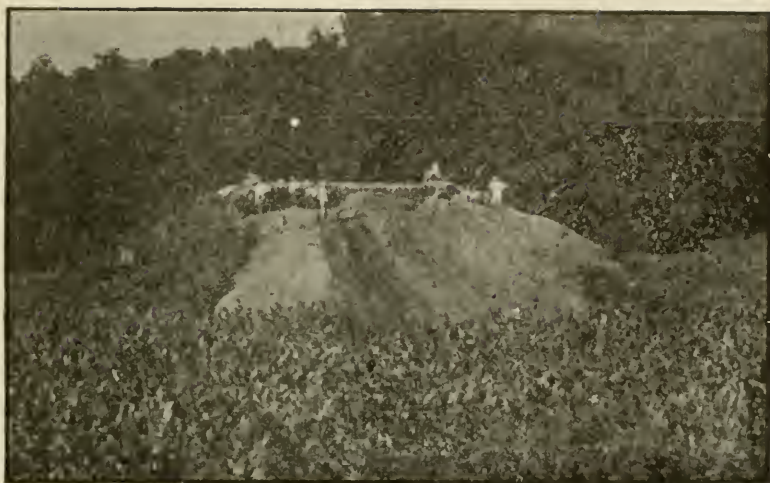
The burial mounds were frequently used as signal stations, and whole lines of them have been traced from valley to valley, giving the idea that there was here a confederacy of tribes, and that the same people built the hill forts, village enclosures, signal stations and look-out mounds, as well as the burial mounds. They were given to agriculture and dwelt in permanent villages, but were surrounded by warlike tribes, against whom they needed to protect themselves. There is no part of the country where burial mounds are more numerous and more symmetrical in shape. The contents of these mounds have been studied with great interest. Some of them contain skeletons, with spool ornaments and tablets and copper relics; others contain altars on which relics have been offered and burned. A few contain deposits of copper and other relics. In one case, viz.: in the Hopewell Mound, were 235 pieces of



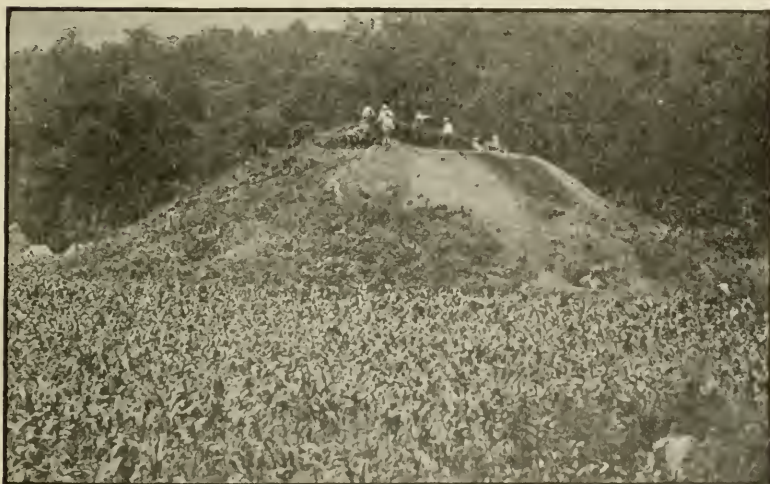
Altar Burial in Hopewell Mound.

copper, carved into squares and semi-circles, suastikas, and birds and fishes. A copper celt, which weighed thirty-eight pounds; anklets, bracelets, combs and pendants, carved bones covered with tracteries, which show a high degree of manual skill, were found in this mound. A copper mask, eighteen inches long and five wide, covered the forehead of a skeleton, from which were branching horns, made out of copper. These mounds were contained in what is called the Hopewell Group, on the north fork of Paint Creek.

Occasionally mounds are found in Ohio, which are covered with stone slabs, as if the design was to protect the bodies from the attack of wild animals. Others are made altogether of loose stones. Still others are built so high, as to give the idea that they were mainly designed for "look-out stations." One such mound is found on the Miami River, and commands a view not only of the valley of the river, with its forks, but also of the valley of the river to the west of it, and at the same time was connected, by a cordon of mounds, with Fort Ancient on the Miami to the east. There are also large burial



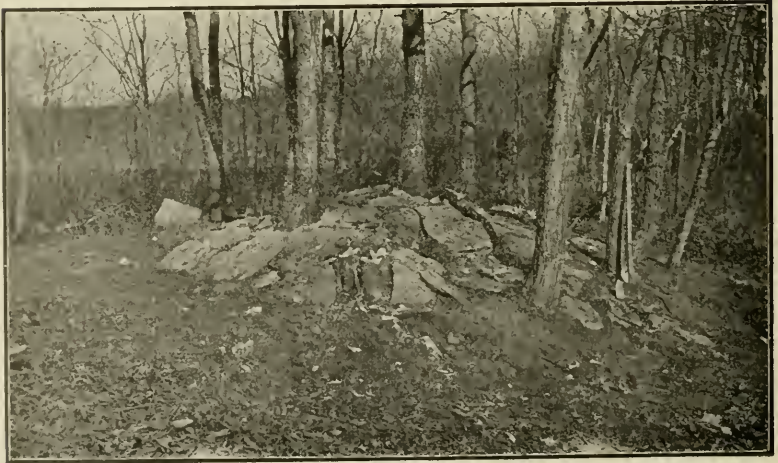
THE ADENA MOUND NEAR CHILLICOTHE, OHIO.



THE ADENA MOUND—PARTLY EXCAVATED.



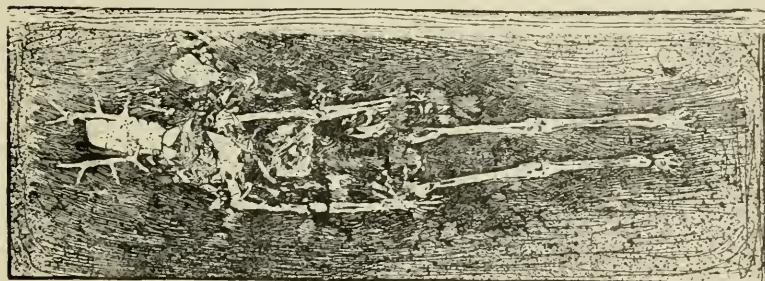
MOUND CONTAINING STONE GRAVES.



STONE MOUNDS CONTAINING A SUCCESSION OF BURIALS.

mounds at Vincennes, on the Wabash River, which resemble those in Ohio, both in size and appearance, and other mounds at Grave Creek in West Virginia.

The fair supposition is that these groups of mounds in the two states adjoining, formed a part of the same general system which prevailed in Southern Ohio, and that they belonged to a confederacy, which had its chief seat in Ohio. The elaborate system of works at Portsmouth forming a central group in which religious ceremonies were observed. In favor of this supposition, is the fact that the burial mounds, forts and village sites, are found scattered along the valleys of the different rivers, giving the idea that the tribes belonging to the confederacy dwelling on the rivers, were divided into clans, each clan having its own village and, perhaps, its own burial place; but all the tribes being connected with one another by the signal stations, which consisted of mounds placed along the summit of the hills. The burial mounds were attractive



Body Showing Copper Mask and Copper Horns.

externally, as they were gathered in groups and were beautifully rounded, and still formed attractive objects in the landscape; but internally they often presented a ghastly appearance.

There are a few stone mounds in Ohio, some of which are covered with earth and can hardly be distinguished from the earth mounds. The plates will show their character. Squier and Davis were the first to describe them. But Mr. Girard Fowke has discovered others, two of which are shown in the plate. These are quite different from the stone graves in Tennessee, and are called cairns. The shingle-like arrangement of the limestone distinguishes them from the stone graves.

There are double mounds found in Ohio, which are worthy of notice, since they show the succession of the Mound-Building people. One of these has been described by Mr. W. C. Mills and is illustrated by a cut. It is called the Adena Mound; it is within sight of the mound city near Chillicothe, and near an artificial lake, from which the earth composing it was taken.

It was in two parts, the relics being the same in both, but the lower part had chambers, or wooded rooms, which were probably the houses and were on the death of the occupants made use of as a burying place and covered with the mound.

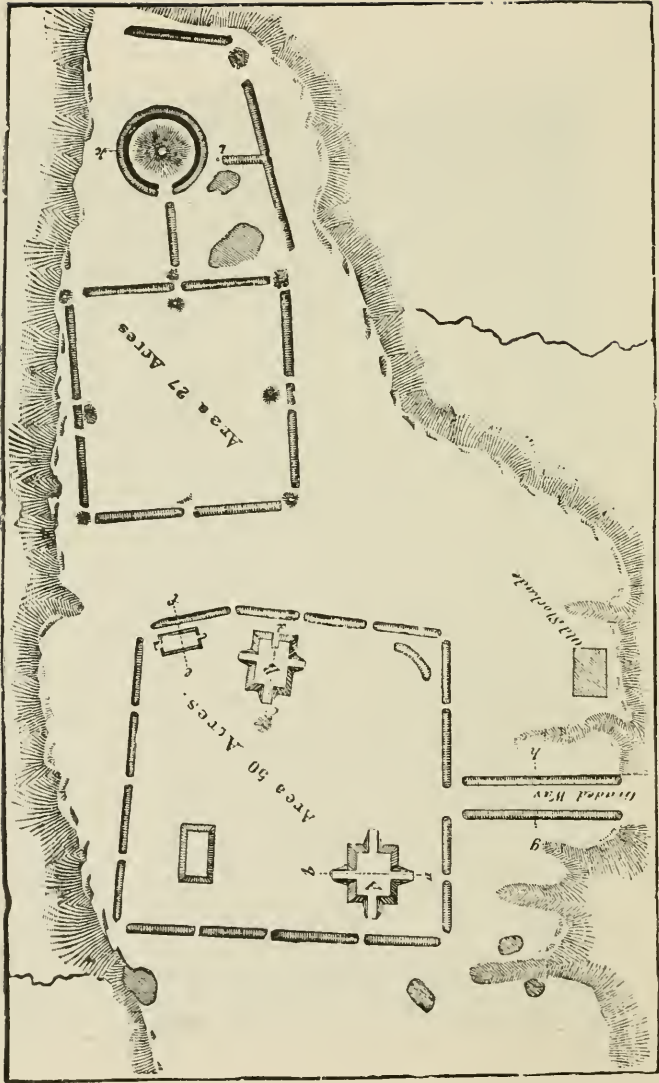
V. The burial mounds which have been discovered in North Carolina, West Virginia and Tennessee are worthy of notice. They are not so much burial mounds, as they are burial pits. They have no attractiveness in themselves, and the chief interest in them is found in the relics which they contain. First, let us consider the Beehive Tombs in North Carolina. These have been described by Prof. Cyrus Thomas. They contained what are called tombs, made in a conical shape, just large enough to contain a single body; ten or twelve such tombs in a single pit. These tombs did not contain many relics, as there were a number of iron celts among them, but along with them were discoidal stones, copper arrow points, copper arrows, pieces of mica, lumps of paint, black lead, and stone pipes. Under the heads of two of the skeletons were engraved shells, which resembled those found in the stone graves of Tennessee, as they had a coiled serpent engraved upon them, showing that these shell gorgets were regarded by the Indian tribes as very sacred, and were kept from generation to generation.

The resemblance between the burial mounds in Southern Ohio and those in the north of China will be seen by examination of the cuts. The mounds are arranged in groups and are generally beside the streams. An explanation of this clustering of mounds, especially in America, is found in the clan system formerly prevailing.

There is this difference between the Chinese burial mounds and the American, viz.: that they contain megalithic structures, but the American contained burial stone cists made of stone slabs. The only structures which contain chambers, are those made of wood, though occasionally conical cists are found with a single skeleton enclosed, though stone mounds are somewhat common in Ohio, as can be seen from the cuts contained in the plate.

ANCIENT WORKS AT MARIETTA, OHIO.





ENCLOSURES AT MARIETTA.

CHAPTER VI.

THE "SACRED ENCLOSURES" OF OHIO.

SUN WORSHIP AND SEPRENT WORSHIP EMBODIED IN THEM.

In treating of the Mound-builders' works heretofore we have divided them into several classes, and have stated that the different classes were found in different districts, the effigy mounds in one, the burial mounds in another, the stockades in another, the so-called "sacred enclosures" in another, and the pyramid mounds in still another, the whole habitat being filled with works which were distinctive and peculiar, but which were always correlated to their surroundings.

It may seem singular to some that we should thus divide the earth-works into these different classes, and should confine each class to a limited district, making them so distinct from one another, but this only proves that the people who once inhabited the Mississippi valley, and whom we call Mound-builders, were far from being one people, but were very diverse in their character, and that their diversity expressed itself in their works, their religious belief, their tribal organization, their social customs, their domestic habits, their ethnic tastes, their modes of life, all having been embodied in the tokens which we are now studying. We are to bear this thought in mind while we proceed to consider the works which are said to belong to the fourth class, and which we have named "sacred enclosures". The region where these enclosures are most numerous is that which is situated on the Ohio River and more specifically in the southern part of the State of Ohio. We shall therefore confine ourselves to this district, but would at the same time have it understood that it is because the works are here so typical that we treat them so exclusively.

We propose in this chapter to consider the works of this district with the especial view of enquiring about their character and their uses.

I. Let us first enquire about the symbolism which is represented in them. The works of Southern Ohio have been regarded by many as symbolic, and the symbolism in them is said by some to be that expressive of sun worship. What is more, the sun worship which appeared here seems to have embodied itself in those works which were most common and which were also very useful, the enclosures which are so numerous here having been symbolic.

1. This, then, is our first enquiry, Is there anything in the shape

of the enclosures which should lead us to think that they were distinctive.¹ There are many kinds of earth-works in Southern Ohio, many of which are of the same character as those found elsewhere, but the most of them are works which might be called enclosures. These enclosures have a great variety of shapes, and were undoubtedly used for different purposes, though the purposes are now somewhat difficult to determine. The typical shape is perhaps that of the square and circle, though there are many circles without squares and squares without circles, the variation passing from one figure to the other. Many of the enclosures are irregular, with no definite shape; others, however, have shapes which are so definite and regular as to give the idea that they were symbolic—the crescent, the circle, the horse-shoe, the ellipse, the cross, and many other symbols being embodied in them. Some of the enclosures are very large, the walls about them being several miles in length, giving the idea that they were used for defensive purposes; others are very small, the distance across them being only a few feet, giving the idea that they were lodge circles. Some of the enclosures are full of burial mounds; others contain no mounds whatever, but are mere open areas, areas which may have been used for village residences. Some of the enclosures are made up by single walls, walls on which possible stockades may have been erected; others have double walls, a ditch being between them. Some of them are isolated circles, enclosures separated from all others; others present circles in clusters, the clusters arranged in circles, so making an enclosure within an enclosure. It is remarkable that there should have been so many different shapes to the earth-works in this region. These shapes vary from the circle to the ellipse, from the ellipse to the oblong, from the oblong to the square, from the square to the large, irregular enclosure. A map of the region looks like a chart which contains all the geometric figures, and astonishes one when he thinks that these are earth-works containing areas, all of which were once used for practical purposes, and embodied the life of the people. See map of works in the Scioto valley. The uses to which these enclosures were subject are unknown; it is supposed that some of them were for defenses; others for villages; some of them were undoubtedly used for burial places; others for sacrificial purposes; some of them were the sites of houses, mere lodge circles; others were enclosures in which temples were undoubtedly erected; some of them were used as places of amusement, dance circles and race courses, others were probably used as places of religious assembly, estufas or sacred houses; some of them contain effigies, the effigies giving to them a religious significance.

2. The symbolic character of the enclosures is the next point of enquiry. This has impressed many writers; for this reason they have been called sacred enclosures. The term has been criticised

and rejected by some, but it seems to us appropriate, and we shall use it as being expressive of the real character of the works of the region. We take up the enclosures of this district with the idea that many of them were used for sacred purposes, and that a peculiar superstition was embodied in the most of them. What that superstition was we are not quite prepared to say, but the conjecture is that sun worship here obtained in great force. It sometimes seems as if the sun worship was joined with serpent worship, and that the phallic symbol was given by some of the earth-works. Whether these works were all used by one people, a people who were acquainted with all of the symbols spoken of, or were erected by successive races, one using one symbol and the other another, is a question. Be that as it may, we conclude that the district is full of earth-works which were symbolic in their character, and which are properly called sacred enclosures.

We give a series of cuts to illustrate these points. These are actual earth-works. One is the temple platform, found at Marietta (Fig. 1); the second is a platform with the adjoining circular enclosure, found at Highbank (Fig. 2); the third is the small circle with the small enclosure within it, found opposite Portsmouth (Fig. 3). These earth-works are all small, ranging from 50 to 150 feet in diameter. The fourth is the large double enclosure consisting of the square and circle, found at Circleville (Fig. 4); the fifth is the large octagon and circle, found at Newark (Fig. 5). The last two enclosures might be measured by rods, as there are about as many rods in them as there are feet in the former works. The map of the works at Portsmouth (Fig. 6) contains many other figures, viz: Four concentric circles at one end, two horse-shoe enclosures and circles in the center, a large square enclosure at the west end, the whole making a very elaborate and complicated system of symbolic works, the religious element being everywhere manifest in the locality.

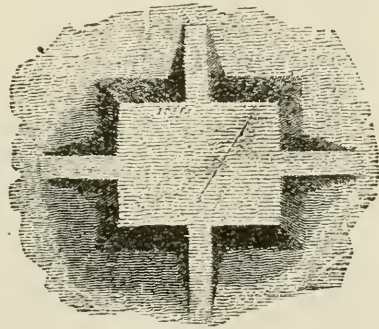


Fig. 1.—Platform at Marietta.

3. Let us next consider the symbols which we may regard as typical and peculiar to the district. We have said that there are different kinds of enclosures in this region, but the enclosure which is the most striking is the one composed of two figures—the circle and the square and combination. This is not only common in the district, but is peculiar to it, as it is very seldom seen elsewhere. The reasons for this particular type of earth-work being found in Southern Ohio are unknown. It would

seem, however, as if the people which formerly dwelt here had reached a particular stage of progress, had adopted a particular social organization, had practiced a particular set of customs, and had made these earth-works to be expressive of them. It sometimes seems also as if a peculiar religious cult had been adopted and that this was embodied and symbolized in the earth-works. The figures of the square and circle were probably symbolic, and the religion which was embodied in them was probably sun worship. How sun worship came to be adopted by the people is a mystery. It may have arisen in connection with serpent worship, the two having been the outgrowth of the natural superstition, and so might be pronounced to be indigenous in this region, or they may have been introduced from other and distant localities, either from Great Britain, by way of the Atlantic Ocean, or from the Asiatic continent, by way of the Pacific—Mexico and Central America having been the original starting point on this continent, and the cult having spread from the

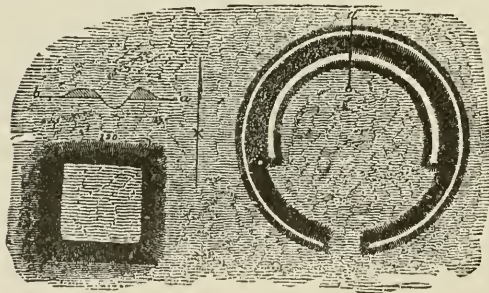


Fig. 2.—Platform and Circle at Highbank.

central place over the continent eastward. Prof. F. W. Putnam in his article on the great serpent takes the latter position, and says, "To this southwestern region, with its many Asiatic features of art and faith, we are constantly forced by our investigations as we look for the source of the builders of the older works of the Ohio Valley." He refers, however, to the combination of natural features with artificial forms contained in the great serpent, and says this probably could not be found again in any part of the great route along which the people must have journeyed. He refers to the remarkable discovery by Dr. Phene of an interesting mound in Argyleshire, in Scotland, as containing the same elements, the natural hill and the artificial shape giving evidence of serpent worship in the serpent form, the altar or burial place at one end forming the head, and the standing stones along the ridge marking the serpent's spine. These facts would indicate that serpent worship in Ohio had come from Great Britain and had been first introduced by the mound-builders here. Possibly the serpent worship in Mexico may have been introduced from the other side by way of Polynesia.

4. The inquiry which we are to institute next is whether serpent worship and sun worship in Ohio were not practiced by two classes of people, the one the successors to the other. This inquiry will be borne in mind as we proceed to the

description of the enclosures. The Natchez were sun worshippers. There is a tradition that the Natchez once inhabited Southern Ohio. The Dakotas had the serpent symbol among them. There is a tradition that the Dakotas once dwelt in Ohio. This would show that the two cults were successive rather than contemporaneous. It must be remembered that the symbolism of the early races of mound-builders was frequently combined with practical uses. The religion or superstition of the people required that defensive enclosures, as well as village sites, should embody the symbols as thoroughly as did the places of sacrifice or the burial places. The earth-works of Southern Ohio have been called sacred enclosures. If our supposition is true the term is a correct one. They were village enclosures, but were at the same time sacred to the sun. We shall take the enclosures which are typical and ask the question whether these were not the villages of sun worshippers.

5. Let us examine the district, and compare it with other districts where sun worship has existed. We learn about the district and its limits from the character of the earth-works. This particular class of earth-works which we are describing is only found in a limited district. We begin at the mouth of the Muskingum River, where are the interesting works of Marietta. This river has a number of enclosures upon it. We pass next to the Hocking Creek, where the enclosures are not so numerous, and yet the same class of works abound here. Next comes the Scioto River, with its very interesting series of earth works, those at Portsmouth, Chillicothe and Circleville being the most prominent. Paint Creek and Brush Creek flow into the Scioto. On these there are some very interesting earth works, the majority of them being village enclosures. Next to this is Adams County, the County in which the great serpent is situated, the Brush Creek in this county being different from that which flows into the Scioto. We then pass over two or three counties until we reach the Little Miami River. Here we find the remarkable fort called Fort Ancient, and at the mouth of the river, at Cincinnati, village enclosures. These enclosures are, to be sure, now destroyed, but descriptions of them have been preserved, and from these we find that they were very similar to those situated on Paint Creek and on the Scioto River. Passing still

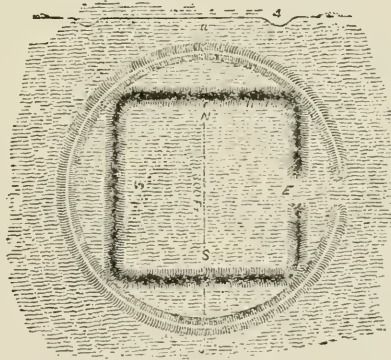


Fig. 3.—Circle at Portsmouth.

further to the west, we come to the Great Miami. The works on this river are mainly fortifications and large lookout mounds; the fortifications at Hamilton, Colerain and Piqua, and the lookout at Miamisburg, being most prominent. There are, however, at Alexandria and several other places village enclosures of exactly the same type as those found at Chillicothe. This takes us across the State of Ohio. The White River is a branch of the Great Miami. It rises in the central part of the State of Indiana and flows southeast. The White River seems to have marked the boundary of this particular class of works. There are no village enclosures of the type found in Ohio west of the White River. If there are, we are not aware of their existence. There are, to be sure, many large forts or defensive enclosures scattered along the Ohio River on both sides, but they are not works which we would call village enclosures. These forts have been described by various writers, the most prominent of them

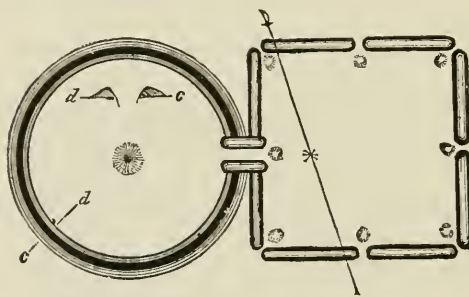


Fig. 4.—Circle and Square at Circleville.

being the one in Clark County, near Charlestown, Ind., which has been described by Prof. E. T. Cox.* As to the northern boundary of the district, we find it on the watershed, where the rivers flow both ways, to the north and to the south. Here a line of earth-works is found extending across the State, about the same distance from the Ohio River. It makes a cordon of village enclosures, some of them being as important as any found in the State. Among these are the works at Circleville, Newark, Alexandersville, near Dayton, and the works on the White River, at Cambridge and New Garden, in Wayne County,† all of them being near the head of canoe navigation.

We have thus given the map of the district. It is a map which thus includes all the earth-works—military, sacred, village enclosures, effigies, lookouts and all. We do not ascribe them all to one period nor to one race, but we speak of them as found in the district. The typical work is the enclosure, the village enclosures being more numerous than the defensive. We have thought best to call it by the name of the district of the village enclosures, though the term sacred enclosures is appropriate. We see in this map the locality which was occupied by sun worshipers. It is also a locality in which serpent worship appeared to be prevalent.

* See Geological Survey of Indiana, 1873, p. 122.

† See Geological Report of Indiana, 1878, description, Mr. J. C. McPherson.

6. Let us consider the symbolism in the shapes and sizes of the enclosures. We have said that the shape was that of the square and circle. This shape is everywhere present within the district, though with variations. It is remarkable that there should be such a uniformity. It does not seem likely that the uniformity would rise from accident, but it is more likely that there was a significance to it. The uniformity has impressed many authors. The early explorers all mention it as a very striking element in the earth-works of the region. There has been a degree of skepticism in reference to this point, but the recent survey by the Ethnological Bureau confirms the old impression. The statements of the early explorers are confirmed by the last survey.

We give here a few fragmentary quotations to show that this is the case. The old authors claimed that the squares were perfect squares, the circles perfect circles. The new exploration seems to confirm this rather than to refute it. We take the enclosures in the Scioto Valley to illustrate. There are perhaps more typical works in this valley than anywhere else in the State. The following is the testimony of Dr. Thomas in reference to these. "The circle at Highbank is a perfect one." "The old survey agrees closely with the new survey." "The circles at Paint Creek have geometrical regularity." "The figures of the works which

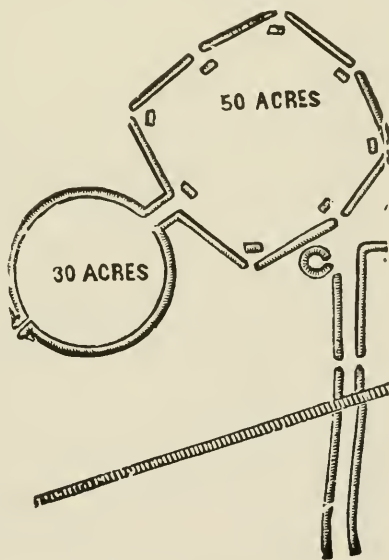
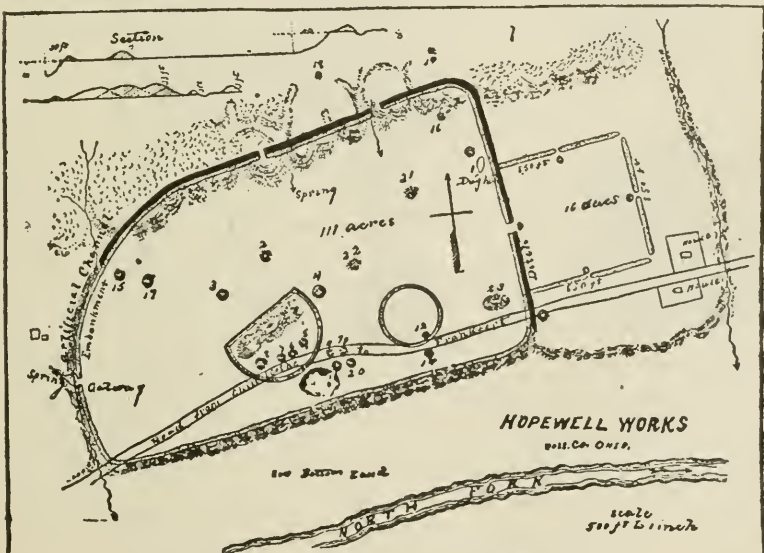
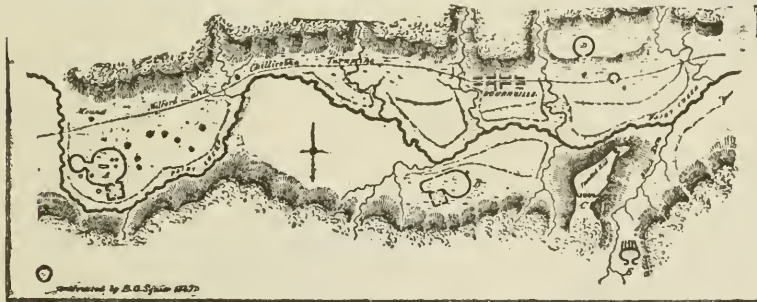
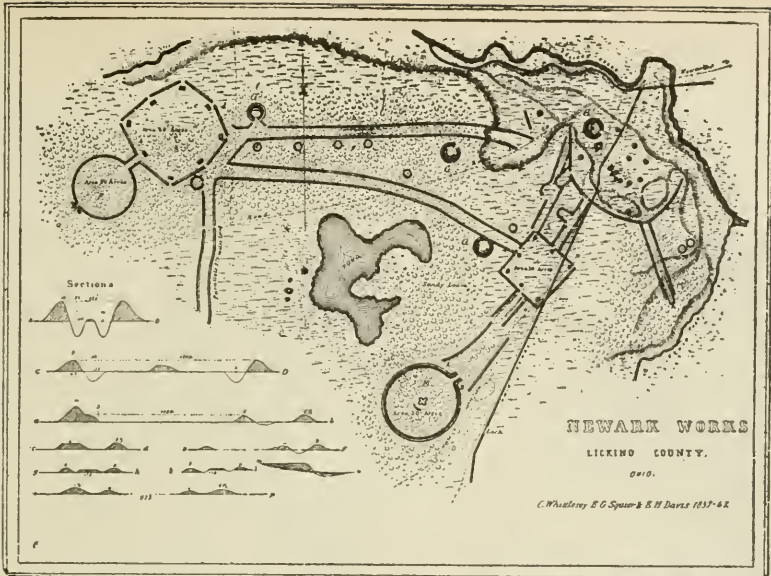


Fig. 5—Octagon and Circle at Newark.

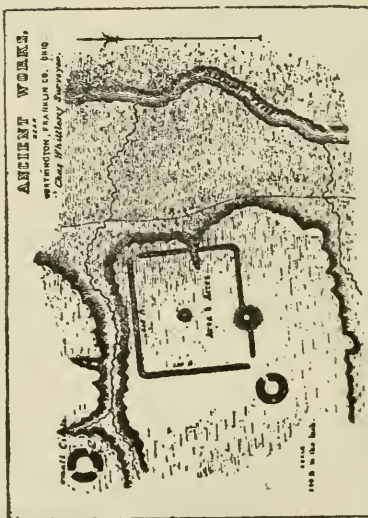
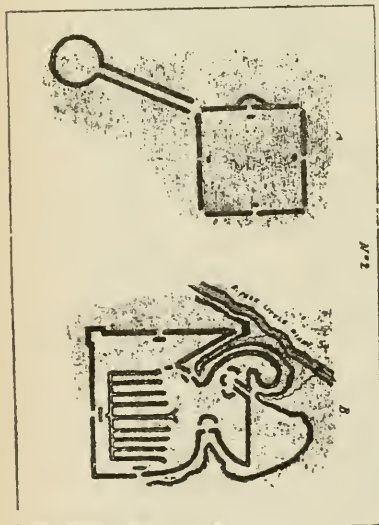
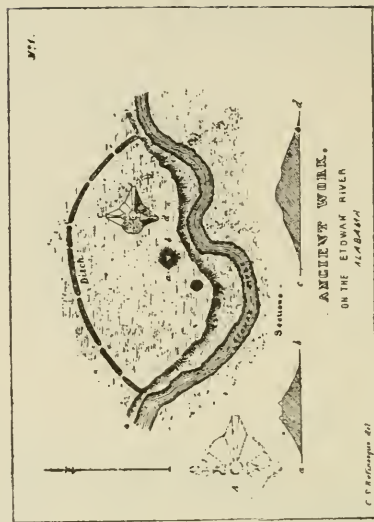
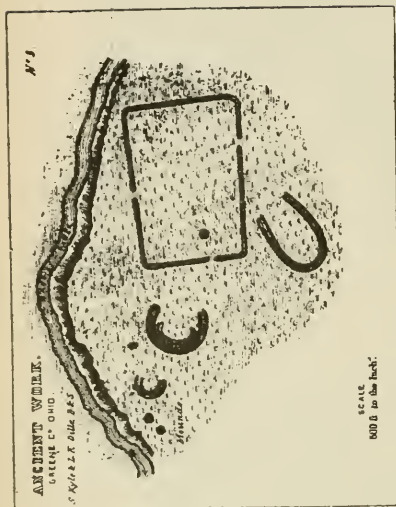
were personally examined by Squier and Davis are generally correct." "The circle at Highbank is similar in size and other respects to the observatory circle at Newark, and, like that, is connected with an octagon." "We see in this group the tendency to combine circles, octagons and parallels as at Newark, making it probable that the works at both points are due to one people. According to Messrs. Squier and Davis the circle is a perfect one. The diameter, which, as will be seen by what follows, agrees very closely with the results of the re-survey." "The somewhat unexpected results in this and the observatory circle are, first, that the figure is so nearly a true circle, and, second, that the radius is an almost exact multiple of the surveyor's chain." These remarkable admissions are made by one who denies their Euro-

pean origin and who makes them the work of Indians similar to the modern tribes, and who says there is nothing in the form or arrangement that is inconsistent with the Indian usages and ideas, and nothing in their form or construction consistent with the idea that their conception is due to European influence. With these admissions we are warranted in going back to the first descriptions which were given by the early explorers, and to speak of these works as perfect squares and perfect circles, and to draw our conclusions that they were symbolic as well as practical or useful structures. Mr. Atwater speaks of the circle in the village enclosures at Paint Creek, and says "the area of the squares was just twenty-seven acres." Squier and Davis also speak of this area of twenty-seven acres being a common one. The comparison is drawn by Squier and Davis between the works at Newark and those at Hopeton and Paint Creek. Extraordinary coincidences are exhibited between the details, though the works are seventy miles apart. He says the square has the same area with the rectangle belonging to the Hopeton works and with the octagon belonging to Highbank. The octagon has the same area with the large irregular square at Marietta, a place which is still further away from Newark. The conviction is forced upon us, notwithstanding all the skepticism that has existed, that there was a common measurement, and that the square and circle were symbolic, though we do not say whether they were erected by Indians or by some other people.

7. Another argument is found in the fact that walls in the shape of crescents are very common. These crescent-shaped walls are generally found inside of the smaller circle and constitute a double wall around a portion of the circle. There are also many works where there are concentric circles, containing a mound in the center, whose shape would indicate that it was devoted to sun worship and whose contents would prove that they were used for religious purposes. A notable specimen of this is found at Portsmouth, where there are four concentric circles and a mound in the center, the situation and height of the mound giving the impression to the early explorers that it was used for religious purposes and was a sun symbol. Concentric circles and circles containing crescents and mounds are also spoken of by Mr. Caleb Atwater as having been found at Paint Creek and at Circleville. The large irregular enclosure at one of these works contained seventy-seven acres, and had eight gateways, another had eighty-four acres and six gateways; but outside of one of these enclosures was a third circle sixty rods in diameter, in the center of which was a similar circle about six rods in diameter, or about one tenth of the larger circle. Here we have the large enclosures which were undoubtedly used for village sites, but at the same time we have small circles that were probably used for religious purposes.



FORTIFIED ENCLOSURES IN SOUTHERN OHIO.



SYMBOLIC WORKS IN SOUTHERN OHIO.

Mr. Atwater thinks that the large circles were used for religious as well as for practical purposes. He speaks of the circle at Circleville. This was sixty-nine rods in diameter, the walls were twenty feet high, measuring from the bottom of the ditch, there being two walls, one inside of the other, with a ditch between. Within the circle there was a round mound, ten feet high, thirty feet in diameter at the top, and around the mound a crescent-shaped pavement made of pebbles, about sixty feet in diameter. This mound contained two bodies and a number of relics. A large burial mound ninety feet high stood outside of the circle. The contrast between the circle and the square attracted the attention of Mr. Atwater. The circle had two high walls, the square only one. The circle had a ditch between the walls, the square had no ditch. The circle had only one gateway, the square had eight gateways. The circle was picketed, "half way up the inner walls was a place where a row of pickets stood, pickets which were used for the defense of the circle." These facts are significant. They seem to indicate that the villages were surrounded by walls which secured them from attack; but that there was a symbolism in the shape of the walls as well as in the shape of the mounds and pavements and contents of the mounds. In these respects the villages would be called sacred enclosures.

8. Still another argument is derived from the variation in the typical form. At Marietta we have two squares and no circle except as a circle surrounds the conical mound or lookout station. At Highbank and Hopeton we have the circle and the square, and several other small circles adjoining. At Liberty Township we have the square, three circles and a crescent. At Cedarbank we have a square with a platform inside of it, but no circle. At Newark we have the octagon instead of the square. At Clark's Works we have the square, a large irregular inclosure and the circle inside. At Seal Township we have the square and circle and several elliptical works. At Dunlap's Works we have the rhomboidal figure and a small circle adjoining. Still, the typical shape is the same throughout the entire region.

II. We now turn to a new point. The inquiry is whether the enclosures which we have seen to be so symbolic were not the village sites of a class of sun worshipers. This inquiry will be conducted in an entirely different way from the former. We are now to look not so much for the symbolic shapes as for the practical uses. We maintain that whether they were symbolic or not the majority of the enclosures were used for villages. We shall first consider the characteristics of village enclosures generally, show what a village was supposed to contain, and then compare these in Ohio with others to show that they were also village enclosures.

1. We turn to the Ohio villages, and are to ask what their

characteristics are. These were composed of the following elements: First, the circumvallation, including the gateways; second, the contents, including the platform mounds, burial mounds, excavations and other works: third, the lodge circles adjoining the village enclosures, some of them constituting a third part of the village, scarcely separated from the larger enclosures, some of them being quite remote from the village; fourth, the parallel walls or covered ways. These were a very important element in connection with the village life. Fifth, the so-called embankments, which Atwater says were enclosures for diversion or for games, many of which were found at an early day in the valley of the Scioto, but which had disappeared before the survey of the works took place; sixth, the circles which are gathered in clusters at certain points, remote from the villages, which we call the dance circles; seventh, the look-out mounds and observatories. These works were all associated and all served different parts in connection with village life. We see in them, 1st, provisions for defense, the circumvallation giving defense to the villages, the covered ways also protecting the people as they went to and from the villages to the water's edge; the lookouts on the summits of the hills furnishing defense for not only one village, but for many. We see, 2d, provisions for religion. The character of the earth-works is suggestive of religious practices. They are, many of them, enclosures, symbolical in shape, elliptical, circular, pyramidal. Some of them were probably temples, the truncated pyramids being the foundation platforms. The same office was filled by some of the smaller circles, for these were undoubtedly used for estufas, sweat houses, or assembly places, and many of them were convenient of access to the village enclosure. 3d. The provisions made for amusement, feasts, dances can be recognized in the oblong embankments and the groups of small circles. 4th. The provision made for water is found in numerous wells spoken of by the early explorers, and in the walls which surround them, and in certain ponds near the enclosures. 5th. Provision was made for safe cultivation of fields in covered ways which passed out from the enclosure to the open country, and in the watch towers which were placed at the ends of these. There were many openings in the covered way, which gave egress from the villages to the fields in every direction. 6th. Provision was made for navigation and the safety of the canoes by running the covered ways down to the water's edge, and there making a grade, which should be like a levee, for the landing of the canoes. All these peculiarities indicate plainly that village life was the factor which ruled. Everything was subservient to this.

If we take the number and sizes of the enclosures, and then look at their situation and all their surroundings, and consider the fertility of the plains in which they were located, we will

have a remarkable picture of village life. It seems almost like an Arcadia. The people seem to have been prosperous, and to have dwelt in peace and security. The population was dense. The organization was complete. Religion had its strong hold upon the people; the people lived and died and were buried with the sacred religious rites observed on all occasions. They filled their altars with offerings to the great sun divinity. The most costly sacrifices were made; pipes and beads, carved stone, pearls, many precious works of art were thus consecrated with great ceremonials. But the scene changed. The invasion of an enemy drove them from their seats. Their villages became the seats of bloody warfare. They were obliged to leave their abodes; other tribes came in and occupied their villages.

2. We now turn to the specific locations and give descriptions of the works. We first commence with the works at Marietta and quote the language of the Rev. Dr. Harris, who with Rev. Dr. Cutler, examined them and furnished a full description of it. The following is their account: The situation of these works is on an elevated plain on the east side of the Muskingum, about half a mile from its junction with the Ohio. The largest square fort, by some called the town, contains forty acres, encompassed by a wall of earth from six to ten feet high, and from twenty-five to thirty-six feet in breadth. In each side are three openings, resembling twelve gateways. A covered way formed of two parallel walls of earth 231 feet distant from each other, measuring from center to center. The walls at the most elevated part inside are twenty-one feet in height; the outside only average five feet in height. This formed a passage about 680 feet in length, leading by gradual descent to the low ground, where, at the time of its construction, it probably reached the river. The bottom is crowned in the center, in the manner of a well-founded turnpike road. Within the walls of the fort at the northwest corner is an elevated square 188 feet long, 132 broad, 9 high, level on the summit. At the center of each of the sides are gradual ascents sixty feet in length. Near the south wall is another elevated square, 150 by 120 feet, 8 feet high; but instead of an ascent to go up on the side next the wall, there is a hollow way, ten feet wide, leading twenty feet toward the center, with a gradual slope to the top. At the other end is a third elevated square, 108x54 feet, with ascents at the end. At the southwest corner is a semi-circular parapet crowned with a mound, which guards the opening in the wall. The smaller fort, contains twenty acres, with a gateway in the center of each corner. These gateways are defended by circular mounds. On the outside of the smaller fort is a mound in the form of a sugar loaf, of a magnitude and height which strike the beholder with astonishment. Its base is a regular circle, 115 feet in diameter; its altitude is 30 feet. It is surrounded by a ditch 4 feet deep and 15 wide, and defended by a parapet 4 feet

high, through which is a gateway towards the fort 20 feet in width.* See Plate.

The description of this one village will indicate the elements which were common in all the villages, the square enclosures, the graded ways, lookout mounds, protecting walls, wells, etc., being found in nearly every village.

It shows also the religious ideas which were embodied in many of the village enclosures, the platform mounds and the circle about the lookout mounds having probably been used as symbols as well as defenses. This same combination of symbols with defenses is seen more fully in the elaborate system of works found at Portsmouth. These works seem to have been erected for purely religious purposes, and we recognize many symbols in them, the square at one end, the concentric circle at the other end, and the horse-shoe, the crescent and several other symbols in the central group, the whole connected by a wall seven or eight miles long.

III. We now turn to the enclosures of Ohio, but are to consider them in their defensive capacity. There are three peculiarities to earth-works of this region, namely: the large majority of them are enclosures; second, many of the enclosures are symbolic in shape, the circle and square being the most prevalent symbol; third, the majority of the symbolic works are very strongly fortified, nearly every place which the sun worshipers occupied having been furnished with a strong and heavy earth wall, which served as a protection to them. The classification of the works of the sun worshipers reveals to us a great variety of uses, the most of them, however, being such uses as would be connected with village life. But with the uses we discover that defense was as much sought for as was convenience. It is remarkable that there were so many walled enclosures in this region, but the fact that there was danger always threatening the people from a lurking foe will account for these. They needed to defend themselves on all occasions, and so they never resorted to a place of worship or amusement, they never went to a sacrificial place, they never even went to the fields or to the water's edge, but that they must have a wall to protect them. We have dwelt upon the symbolism which was embodied in their works, but we might dwell even longer upon the view of the defense provided by them. It will suffice, however, to say that symbolism and defense were often united, the superstition about the symbol giving them a sense of security as much as the earth-works gave them actual safety. We have only to look at the different works found in any one locality to see the wonderful combination.

I. Let us ask what works there are and what uses we may dis-

*See Harris's Tour, p. 169.

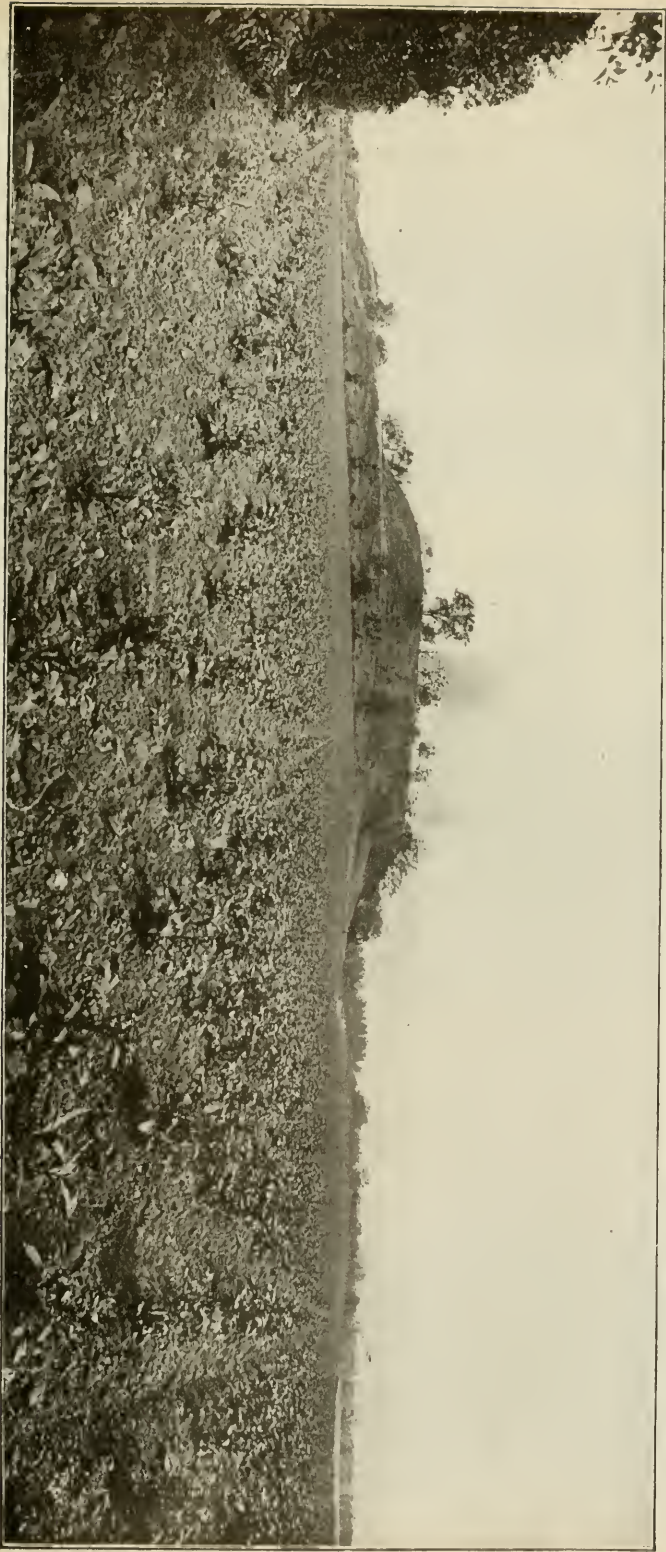
cover in them. We have first the village defenses. This we see was always protected by a circumvallation. This circumvallation was generally in the shape of a square and a circle, but the circle was always protected by a high wall and sometimes by two such walls, and the openings in the wall of the square were always protected by a watch tower or additional platform guard on the inside. Second, there were near the villages many fortified hill-tops, places to which the villagers could resort in times of attack. These fortified hills were generally located in the midst of several villages, so that they could be easily reached by all. Third, the sacrificial places and the places of religious assembly were always provided with circumvallations or long covered ways. Nothing of a religious nature was ever undertaken unless the people could be protected by a wall. Fourth, we find that the sweat-houses, so-called, were always close by the village enclosure, but if, by any means, it was remote, there was always a covered way provided, so that it could be reached in safety from the village enclosure. Fifth, the same is true of the dance circles and places of amusement. These were sometimes remote from the village, but in all such cases there was a covered way between the village and the dance ground. Sixth, the fields were cultivated, but the fields were reached by passing through the parallels or covered ways, and lookout mounds or observatories were always provided to protect those at work and to sound the alarm to them. Seventh, there were landing places for canoes and places at which the villagers could reach the water's edge. These, however, were always protected by covered ways. Every village had its landing place, but nearly every landing place was furnished with a graded and a protected or covered way, the canoes being kept from the water and from the enemy by the same contrivance. Eighth, we find a few isolated enclosures. These are the parallels, supposed to have been used for races and other games. They, too, present the peculiarity of having a wall to protect them. The sacrificial or burial places were also isolated, but even the burial grounds were furnished with heavy earth-walls or circumvallations. The lookouts were also at times isolated from the villages, but even the lookout mounds were surrounded with circles to protect them, and some of them were connected with the village sites by covered ways. It would seem as if the people were not willing even to trust their sentinels or watchmen to the open fields or to risk the chance of his reaching an enclosure by rapid flight, but even he must be protected by a wall or covered way.

This presents a new view of the earth-works of the region. It shows that the people realized their danger; that while they were peaceable themselves and were given to agriculture and to a peculiar religious cult, yet they were in the midst of a savage foe which was always lurking near. They remind us in this

stockade builders. Each class had its own peculiar way of erecting fortifications. The fortifications are more distinctive in reality than village enclosures. The enclosures may have been occupied by two or three successive populations, the one erecting the walls and giving to the enclosures the peculiar symbolic form of the square and circle, the other occupying the circles but placing within them, as signs of their presence, some particular effigy. The great serpent probably belongs to this race, the third race, who erected the stockade forts, but put no symbolism into their works. The distinction between the first two is that one was a race of sun worshipers and the other of serpent worshipers, the sun symbol being frequently embodied in the earth works which are connected with the village enclosures, but the serpent symbols being embedded in the walls which surrounded the fortifications built by the other race. We have the two classes represented in a single fort, that at Fort Ancient. The upper fort, which is called the new fort, but which in reality may have been the older of the two, has all the characteristics of the village enclosures. Its walls are high and angular, well defined and furnished with massive gateways, all showing a high degree of architectural skill, the crescent being the only symbol contained within it. The lower or southern fort, which is called the old fort, differs from this in all respects. The walls are ruder, the gateways smaller, the scene wilder, and the symbolism stranger and more mysterious. This part, the writer maintains, embodied the symbol of the serpent in its walls, the superstition of the people being that the form of the serpent in some way gave protection to the people. We ascribe to the first class, that is, to the village people, the forts at Bourneville, at Hamilton, at Massey's Creek, and on the north fork of Paint Creek, called Clark's Works; to the second class, we ascribe the Colerain Works and the fort north of Hamilton, leaving the Fort Hill, in Highland County, doubtful; to the third class—the stockade builders—we ascribe the fort near Granville, those at Four-mile Creek and Seven-mile Creek and Big Run, and several of the works near Hamilton, in Butler County. The peculiarity of the forts of the village people is that there were very elaborate gateways, the walls being very sharply defined, and having re-entering angles, some of them being provided with double and triple earth works as guards for the entrances. Two of the entrances are furnished with what is called the Tlascalcan gateway, and the other furnished with a most elaborate system of embankments, six different semi-circular walls being arranged around a single opening, to protect it from the entrance of an enemy. The gateways of the race of serpent-worshipers were provided with walls in the shape of serpents, and serpents' heads, but with no other contrivances except this symbol to guard them.

This brief review of the forts as related to the symbolism

will give to us an idea as to the great variety of earth works found in Southern Ohio. They are all of them enclosures, some of them having been used for defenses, others for villages, others for burial places, others as council houses, and as dance circles, and a few perhaps merely as symbols. The peculiarity of all is that they have earth walls which enclose areas, though there are conical mounds or solid structures either in the areas or on high land overlooking the areas. These enclosures bring before us a picture of the native society as it once existed. It is evident that the population at one time was very dense, probably much denser in the time of the early mound-builders than at any time since. The people were then in a peaceful and sedentary condition. They were agriculturists. They placed their villages in the midst of the rich agricultural country and surrounded them with walls, and in some cases built walls which would, in a measure, surround their fields, or at least protect the people in going to and from them. The forts were placed in the midst of their villages on high ground, where there would be a natural defense, the cliffs being precipitous. In case of a sudden incursion the people might leave their villages and resort to the forts. Their villages were situated upon the rivers and were connected with the river's bank by covered ways. They navigated the rivers by canoes and had landing places for them near their villages. Their villages were sometimes close together, giving the idea that the clans inhabiting them were friendly to one another. At other times the villages are isolated and wide apart, giving the idea that the people sought room for hunting as well as fertile spots for agriculture. The villages, however, were all walled and the most of them had walled approaches, giving the idea that they were liable to be attacked by a lurking foe, and that they continued their pursuits with this constant sense of danger in their minds. Everything impresses us with the thought that the Indians were foes to the mound-builders, and that the mound-builders were well acquainted with Indian ways, the two classes—Indians and mound-builders—being very similar in their ways and modes of life, though their symbolism was different.



THE CAHOKIA MOUND AND ITS SURROUNDINGS.

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MOUNDS NEAR THE CAHOKIA MOUND.

CHAPTER VII.

THE GREAT CAHOKIA MOUND.

One of the most interesting localities for the study of the prehistoric monuments of this country is the one which is found on the banks of Cahokia Creek, some twelve miles from the City of St. Louis. Here the largest pyramid mound in the United States is to be seen, and with it many other mound structures, which are as curious and interesting as the great mound itself. It should be said that this is the northernmost point at which any genuine pyramid mounds of the southern type have been recognized, but it is a locality in which all the peculiarities of that class of earth-works are exhibited. There is certainly a great contrast between these works and those situated in the northern districts; but the fact that this large group has been introduced into the midst of the northern class, and in close proximity to many specimens of that class, makes the contrast all the more striking and instructive.

It has been the privilege of the writer to visit the various groups scattered along the Mississippi River from its head waters to this point, and to study the characteristics of each group as they were gradually brought before the eye. The contrasts between the effigy mounds of Wisconsin and the burial mounds of Northern Illinois are certainly very striking. The works of serpent-worshippers are, to be sure, intermingled with them, but the change from the pyramidal mounds to the burial mounds, makes the contrasts all the more impressive.

The conditions of life in the different parts of the Mississippi Valley seemed to have varied according to the climate, soil and scenery, but they are so concentrated into a narrow compass that one may, by the aid of steam and the railroad train, pass in one day from the midst of the wild savage hunters of the north into the very midst of the works of the semi-civilized agricultural people of the south, and may find the whole panorama of the prehistoric races unrolled and the whole condition of society in prehistoric times rapidly brought before the eyes. Cahokia mound is at first disappointing (see Fig. 1), for it is not as imposing as some have represented it to be, and yet the consciousness that a great population once swarmed here and filled the valley with a teeming life made the spot a very interesting one. There was also a double presence which was forced upon

the mind—the presence of those who since the beginning of historic times have visited the region and gazed upon this very monument and written descriptions of it, one after the other, until a volume of literature has accumulated; and the presence of those who in prehistoric times filled the valley with their works, but were unable to make any record of themselves except such as is contained in these silent witnesses. There is, perhaps, no spot in the Mississippi Valley which has been oftener visited by distinguished persons and no monument which has oftener gone into history. Descriptions of it began as early as the time of Marquette and the French missionaries; they appear again in the time of Gen. Rogers Clark and the conquest of the country from the Indians; they come out again in the time of the early explorers and travelers, Brackenridge, Latrobe and others, and continue to the present day,—missionaries, early

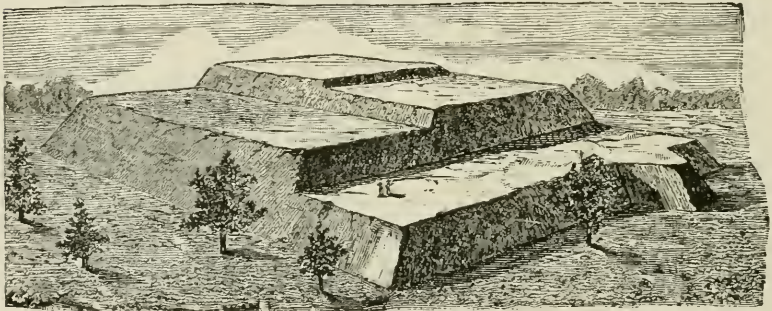


Fig. 1—Cahokia Mound.

travelers, military generals, historians and modern archæologists vying with one another in describing the scene. We shall offer no minute description of our own, but shall quote from different travelers who have visited the spot and who have seen the earthworks before they were so sadly despoiled by the aggressions of modern days. Probably not one fifth of the mounds and earthworks which formerly covered this broad valley, and which also surmounted the bluffs adjoining, can now be seen. The growth of the great City of St. Louis has destroyed the last vestige of the large group which could once be seen there, and all of the pyramids, cones, "falling gardens," terraces and platforms, which once attracted attention, have disappeared. Twenty-seven large mounds once stood on the bluff, making it memorable as the location of a large village, which was similar in many respects to the one where the great mound now stands, but they have been destroyed and can not now be studied.

We shall go back for our descriptions to the author who has given the earliest and fullest account—J. M. Brackenridge. He says: "There is no spot in the western country capable of being

more highly cultivated or of giving support to a numerous population than this valley. If any vestige of ancient population could be found, this would be the place to search for it; accordingly this tract, as also the tract on the western side (Mound City, now St. Louis), exhibits proof of an immense population. The great number of mounds and the astonishing quantity of human bones dug up everywhere or found on the surface of the ground, with a thousand other appearances, announce that this valley was at one time filled with inhabitants and villages. The whole face of the bluff or hill which bounds it on the east appears to have been a continued burying ground. But the most remarkable appearances are the two groups of mounds or pyramids—the one about ten miles above Cahokia (a village nearly extinct), the other nearly the same distance below it—which in all exceed in number one hundred and fifty mounds of various sizes. (See map.) The western side (St. Louis) also contains a considerable number. A more minute description of those above Cahokia, which I visited in 1811, will give a tolerable idea of them all. I crossed the Mississippi at St. Louis. After passing through the wood which borders the river, about half a mile in width, I entered on an extensive plain and found myself in the midst of a group of mounds, at a distance resembling enormous hay-stacks scattered through a meadow. One of the largest, which I ascended, was about two hundred paces in circumference at the bottom. The form was nearly square, though it had evidently undergone some alterations by the washings of the rains. The top was level, with an area sufficient to contain several hundred men. The prospect from the mound was very beautiful. Looking toward the bluffs, which are dimly seen at a distance of six or eight miles, the bottoms at this place being very wide, I had a level plain before me, bounded by islets of wood and a few solitary trees; to the right (the south) the prairie is bounded by the horizon; to the left the course of the Cahokia River may be distinguished by the margin of wood upon its banks. Around me I counted forty-five mounds or pyramids, beside a great number of small artificial elevations. These mounds form something more than a semi-circle a mile in extent, to the open space on the river. Pursuing my walk along the bank of the Cahokia I passed eight others in a distance of three miles before I arrived at the largest assemblage. When I reached the foot of the principal mound, I was struck with a degree of astonishment not unlike that which is experienced in contemplating the Egyptian pyramids. What a stupendous pile of earth! To heap up such a mass must have required years and the labor of thousands. Were it not for the regularity and design manifest, the circumstance of its being alluvial ground, and the other mounds scattered around it, we would scarcely believe it to be the work of human hands." Brackenridge also says: "The shape

is a parallelogram, standing north and south. On the south side there is a broad apron or step, and from this another projection into the plain which was probably intended as an ascent to the mound. The step or terrace has been used for a kitchen garden by some monks of LaTrappe settled near this, and the top of the structure is sown in wheat. Nearly west was another of smaller size, and forty others were scattered about on the plain. Two were seen on the bluff at a distance of three miles. I every where observed a great number of smaller elevations at regular distances from each other, and which appeared to observe some order. I concluded that a populous city had once existed here, similar to those of Mexico described by the first conqueror. The mounds were sites of temples or monuments of great size."

We have given the quotation for the sake of showing the impressions which were formed by the works when they were first visited and when the country was in its native wildness, with no work of modern civilization to mar the scene. It will be learned from the description that there were at the time several large groups of mounds—one situated on the bluffs where St. Louis now stands; another on the bank of the Mississippi River, not far from the present site of East St. Louis; a third on the bottom lands, about ten miles below the old village of Cahokia; the fourth about ten miles above the old village, which is the group in which we are especially interested.* We speak of this because there has been a general impression that the celebrated "Cahokia" mound, or more properly "Monk's" mound, is a solitary pyramid, and that it has no connection with any of the works in the vicinity. Mr. Brackenridge unconsciously corrects this impression, for according to his description the works of the entire region were all of them of the same class, the majority of them having been truncated pyramids. It should be said that there are lookout mounds at various points on the bluffs, which command extensive views across the country into the interior, and which must also have served as beacons or signal stations for the villages which were scattered throughout the bottom lands. Two of these are mentioned by Mr. Brackenridge as in plain sight from Monk's mound. One of these is now called "Sugar Loaf." It forms a prominent mark in the landscape, as its towering height can be seen at a great distance. So favorable was the mound as an observatory that the Coast Survey took advantage of it and made it a station for triangulating. Our conclusion is that the whole system of works on the great American bottoms was connected together, and that here at the mouth of the Missouri, a colony resembling the race of southern

*Mr. McAdams says there is a group at Mitchell Station, half way between St. Louis and Alton, which contains several large platforms, one of them measuring 300 feet on the side, 30 feet high. This mound was excavated for four railroad tracks and many relics taken out—copper spoons, awls, needles and an ornament resembling the shell of a turtle, and most important, the teeth of a buffalo.

mound-builders had long made their home, but were driven off at some time preceding the date of history by the hunter tribes, who came down upon them from the north.*

We here make a record of an observation which amounts to a new discovery. It was noticed by the writer as he ascended the great mound that it was in the midst of a large group of similar mounds; that the mounds surrounding it were arranged in pairs—a conical mound and a pyramid constituting a pair—and that each one of these separate pairs was placed on lines which are parallel to the sides of the great pyramid, and that they were all orientated, the sides always facing the points of the compass. It was noticed also that in some cases the ground was raised between the truncated pyramid and the conical mound, giving the idea that there may have been here a chunky yard or play-ground, the same as there was between the public squares and the rotundas, which have been described by Adair and Bartram as common in the villages of the southern Indians. In one case, about half a mile to the east of the great pyramid, there was a high platform or pyramidal mound, and immediately adjoining it on the north was a large platform, but at a lower level and on the northeast corner of this platform, was a large conical mound, the three parts being in close proximity, the arrangement of the three reminding one of the relative location of some of the so-called sacred enclosures of Ohio, where a large circle intervenes between a small circle and a large square enclosure, the three being joined together by protecting walls. This discovery of the peculiar grouping of the surrounding mounds was made while looking down upon the scene. A very beautiful pair of earth-works stands immediately south of the great pyramid, each one presenting its sides covered with varied foliage, the golden autumnal tints being set-off against the silvery radiance of the little artificial lake which lay in the background. The size of the pyramids adjoining the great pyramid can be learned from the circumstance that nearly all of the large farm-houses in the region are built upon the summits, the pyramids being large enough to accommodate the houses, with their out-houses, barns, lawns and other conveniences of residence. One of these, the one at the west had been graded down about eight feet, but others were left at their natural height. The houses are arranged along the sides of the common highway, which here constitutes the line between two counties, the distance from one end of the group to the other being about three miles from east to west, and two miles from north to south. The arrangement of the group

*See *Antiquities of Monk's Mound*, published by W. R. Brink, Edwardsville, Ill., 1883; Foster's *Prehistoric Races*, p. 107; *Ancient Monuments*, p. 171; Twelfth Report Peabody Museum, p. 472. It should be said that the mound which Dr. J. H. Foster describes as having been removed was situated at Cahokia, and in that vicinity still goes by the name of the great Cahokia mound. We judge that this mound had a tower or conical mound on its summit 10 feet high, which, on exploration, yielded human bones, funeral vases and various implements.

is peculiar. There are pyramids and conical mounds close by the side of the great pyramid; beyond these are similar works, making several pairs east and west and several pairs north and south of the great pyramid, all of them arranged with their sides facing the sides of the central pyramid, and all of them overlooked by its towering height. There are also many artificial ponds, whose waters glisten beneath the dark shadows of the many earth-works, making a varied scene.

2. As to the size and shape of the great mound, we shall give the descriptions of others, for the reason that many of them have had better opportunities for observing and measuring them than we have. It may be said, however, that the descriptions which have been written so vary in their details that we are uncertain which account to believe.

Squier and Davis speak of the mound, but seem to have given the wrong dimensions. They say: "It covers not far from eight acres; its summit has an area of about five acres; its solid contents may be roughly estimated at 20,000,000 cubic feet. It is nearly ninety feet high, is built in terraces, and is reached by a graded way which passes up at the south end,"

Mr. William McAdams says: "We have surveyed the group, and found that the great pyramid is surrounded by seventy-two others of considerable size within a distance of two miles. The largest axis of the pyramid is 998 feet, the shortest is 721 feet, and it covers sixteen acres, two rods and three perches of ground. He says: "After many days of exploration and study, we believe the evidence to prove this to be a group of the greatest mounds on this continent and perhaps in the world, and possibly this was the Mecca or great central shrine of the mound-builders' empire. Upon the flat summit of the pyramid, one hundred feet above the plain, were their sanctuaries, glittering with barbaric splendor, and where could be seen from afar the smoke and flames of the eternal fire, their emblem of the sun."

Prof. Putnam says: "Situated in the midst of a group of about sixty mounds of more than ordinary size, several in the vicinity being from thirty to sixty feet in height, and of various forms, Cahokia mound, rising by four platforms or terraces to a height of about one hundred feet, and covering an area of about twelve acres, holds a relation to the other tumuli of the Mississippi Valley similar to that of the great pyramid of Egypt to the other monuments of the valley of the Nile." Dr. J. J. R. Patrick, residing in the vicinity, has made a survey of the group and prepared two accurate models of the mound itself—one of them representing the mound as it now exists.

Featherstonaugh visited the mound in 1844, and says that the settlement of the monks was on a smaller mound to the west, but at the time of his visit the building in which they had lived had been leveled with the ground. He also states that a Mr.

Hill was living in a house he had erected on the top of the great mound; that upon digging for the foundation, "he found large human bones, with Indian pottery, stone axes and tomahawks." We judge from Brackenridge's account that there was no roadway to the summit in his time, but that the one which now appears must have been made by Mr. Hill, the owner, and that the well which is now in ruins was dug by him.*

In reference to the present condition of the mound, we have to say that an air of waste and ruin surrounds it; deep gullies are worn into its sides, and it seems to be wrinkled and ridged with the marks of its great age. See Plate I. Though surrounded by many other structures, on which there are signs of modern life, this seems to be deserted. The very house which was found upon its summit has been leveled to the ground, and the home of the present owner, situated a little to the rear of it, seems to hide itself in the shadows of the great monster. It stands like a solemn monarch, lonely in its grandeur, but imposing in its presence. Though the smoke of the great city may be seen in the distance, and many trains go rumbling across the valley and through the great bridge which spans the river, yet this monster mound stands as a mute witness of a people which has passed away. It is a silent statue, a sphinx, which still keeps within its depths the mystery which no one has as yet fathomed. It perpetuates the riddle of the sphinx.

3. As to archæological relics. It is remarkable that the spot continues to yield such an amount of them after so many years of exploration and curiosity hunting. In the field adjoining one may find beautiful fragments of pottery, some of which bear the glaze and red color which formerly characterized the pottery of the Natchez Indians. There are also vast quantities of bones hidden beneath the surface, and one can scarcely strike a spade through the soil without unearthing some token of the prehistoric races. Mr. Ramey, the owner of the mound, speaks about digging in one part of the field and finding heaps of bones eight feet deep, and says that the bones are everywhere present. The workmen who were engaged in digging ditches for underdraining had a few days before come upon large quantities of pottery and skeletons of large size, but had carelessly broken them instead of preserving them. As to the character of the pottery and the patterns contained in them, we notice some remarkable resemblances between the pieces exhumed here and those which are found in the stone graves of Tennessee. One specimen was

*A well was dug by Mr. Hill. This well was eighty feet deep. At sixty feet they found fragments of pottery and corn carbonized and bones. The water from the well was never used, as it always had a peculiar taste, and the supposition was that human bodies were buried in the mound. The cellar dug by Mr. Hill showed the mound to be stratified. An excavation by Mr. Ramey, on the north side, revealed the same. A piece of lead or galena was found at the end of the tunnel, which extended about fifteen feet in towards the center of the mound. McAdams says the area on the top is an acre and a half.

especially interesting. It represented a squirrel holding in its paws a stick, the teeth placed around the stick as if gnawing it, the whole making a handle to the vessel. We noticed also a frog-shaped pipe made from sand-stone, and many other animal-shaped and bird-shaped figures. The object which impressed us most was a sand-stone tablet, which contained figures very much like those found upon the inscribed tablets taken from one of the mounds of the Etowah group in Georgia. It was evident that this tablet was covered with a mysterious symbolism, and suggested the thought that the same people who erected the southern pyramids, and who embodied in them the various symbols of sun-worship, also erected here these great mounds under the influence of the same powerful religious cult. What that cult was, we shall not undertake to describe, but it was undoubt-

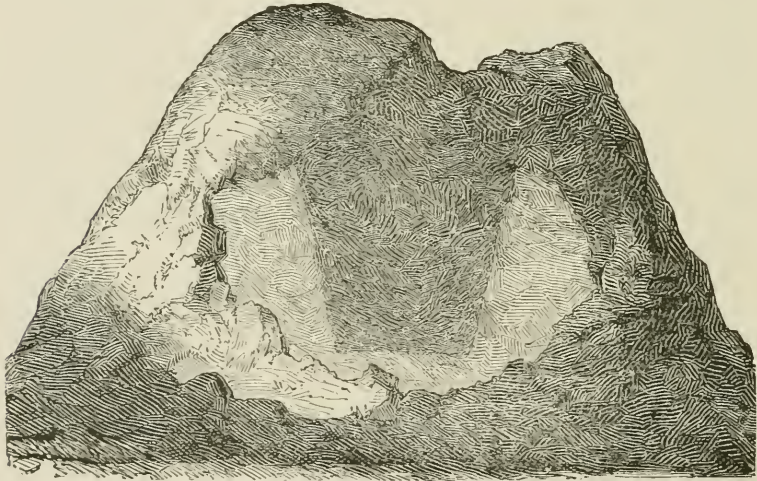


Fig. 2.—Big Mound at St. Louis.

edly a superstition which held under its control the entire people and led them to erect these great monuments even at the expense of long and protracted labor.

4. In reference to the symbolism which was embodied in this great work, we may say that the terraces are four in number, the first, second and third being about thirty feet in height, the fourth being at present but about four feet, though it has been reduced from its original height. The terraces seem to cut across the whole face of the great pyramid on the south and west sides, but the north and east sides are steep and inaccessible. There is a striking analogy between this pyramid and the one at Copan in Central America. See Fig. 1. There is also the same method of orientating the pyramids here and in Central America that is found in ancient Chaldea and Assyria, though here the sides are

toward the points of the compass rather than the angles. The pyramids are built in stages, though there are here only four platforms; in Chaldea there are seven. Our conviction is that a race of sun-worshippers occupied this region, but it was a race which differed materially from the serpent-worshippers which dwelt immediately north of them and whose effigies we have recently discovered. We are aware that Mr. McAdams believes that the dragon was symbolized in some of the molded pottery and that the famous image of the Piassa, which formerly was to be seen on the face of the rocks near Alton, belonged to the same people who erected these pyramids. He also says: "As he looked down from the conical mound south of the great pyramid upon the pond which lies below, he seemed to be looking into the ever-present eye of the Manitou that had glared at him from the bluffs and caverns, and which is so common on ancient pottery, the oldest symbol in the world." We are free to say that the pond does have a remarkable resemblance in its general contour to the symbol which is composed of eyes and nose, and and which is supposed to have been significant of the face of the sun and at the same time contained the phallic symbol.

It will be noticed that the pyramid mounds were built for a people who differed very materially from the wild Indians who roamed over the northern districts, as their tribal organizations and wild condition did not admit of the social grades which are apparent here. Still it is worthy of mention that a Kaskaskia chief told Gen. George Rogers Clarke that it was the palace of his forefathers, that "the little mountain we saw there flung up with a basin on top was a tower that contained a part of the guard belonging to the prince, as from the top of that height they can defend the king's house with their arrows."

When the Indian tribes were visited by Ferdinand De Soto, he found the whole territory filled with walled towns. Sometimes they contained a population of several thousand inhabitants, and they were surrounded by palisades and protected by gateways. The house of the chief or sachem of the tribe was often built upon an artificial mound, and so-called temples or altars of worship were built upon raised foundations of earth. Some writers describe these mounds as the places of burial for their dead chieftans; but others as the residences of the chief or brother of the sun; and by others it is stated that the house of the great sun stood upon one mound and the temple of the priest was on another mound—both of the same height. Here, however, we have not only the residences of the chiefs and priests, which were undoubtedly erected on the summit of the mounds, but we have in the center of them all the great temple. It is probable that this was the assembly place of the tribe, and that there was a building which corresponded to the "long house" of the Indians and the capitol of the white man, and that the different pyramids

were built for the accommodation of the chiefs and ruling men of the clans which may have lived here. The whole structure was significant of the grades of society which probably existed among the people.

II. We now turn to the mounds formerly at St. Louis. These mounds were in some respects fully as interesting as those at Cahokia Creek. The peculiarities of the group were as follows: 1. They were arranged in a line along the second terrace parallel with the river and in full sight of the stream itself. 2. There was in the center of the line a group which was in the form of an amphitheater, the back part of the group forming a graceful curve, but the front part being flanked by a pyramid on one side and the falling gardens on the other. 3. Several of the mounds were terraced, the terraces all being on the east and

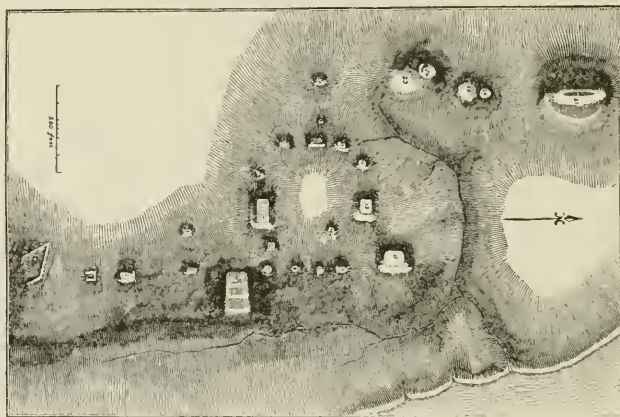


Fig. 3.—Map of Works at St. Louis.

so situated as to give a good view of the river. 4. The big mound, concerning which so much has been said, was located at the extreme north of the line. This seems to have been attended by a series of irregular pyramids, all of them of large size and on high ground, so making the entire series to resemble the great terraced villages of the west, the pyramids being arranged in banks or steps along the entire bluff.

The arrangement of the pyramids deserves attention. This seems to have varied according to the situation. Those in the vicinity of the Monk's mound extend nearly three miles in one direction and two in another, but the great mound occupies the center and overlooks the whole series. Cahokia Creek flows just north of the great mound and divides the group, several mounds being north of the creek. The group on the bank of the river near East St. Louis, according to the descriptions given of it by Brackenridge, was in the shape of a crescent,

which opened upon the river. This group was formerly situated where the business part of St. Louis now stands. It was arranged along the edge of the terrace for the space of about three quarters of a mile. In the center of the line was a group containing several pyramids, arranged about an open area, a pyramid at either side, the falling garden being situated at an angle of the area. The whole group was so arranged that a view of the river could be obtained from the summit of each pyramid. The group was in a slightly place, and commanded a view in all directions. See Fig. 3.

Brackenridge describes this group as follows: "It is situated on the second bank and disposed in a singular manner. They are nine in all, and form three sides of a parallelogram, the open side toward the country being protected by three smaller mounds placed in a circular manner. The space enclosed is about 300 yards in length and 200 in breadth. About 600 yards above this is a single mound, with a broad stage on the river side. It is 30 feet in height, 150 in length; the top is a mere ridge 5 or 6 feet wide. Below the first mound is a curious work called the 'falling garden.' Advantage is taken of the second bank, nearly 50 feet in height at this place, and three regular stages or steps are found. This work is much admired. It suggests the idea of a place of assembly for the purpose of counseling on public occasions." Mr. A. C. Conant says that the "big mound" which once stood at the corner of Mound street and Broadway is the terraced mound represented by Mr. Brackenridge as located 600 yards north of the main group. He says there were formerly many other mounds in the vicinity of St. Louis, rivalling in magnitude and interest those just described. The second terrace of the Mississippi, upon almost every landing point, was furnished with them. The "big mound" was destroyed in 1869. It was found to contain a sepulchral chamber, which was about 72 feet in length, 8 to 12 feet wide, and 8 to 10 feet in height; the walls sloping and plastered, as the marks of the plastering tool could be plainly seen. Twenty-four bodies were placed upon the floor of the vault, a few feet apart, with their feet toward the west, the bodies arranged in a line with the longest axis; a number of bone beads and shells, sea shells, drilled with small holes, near the head, in quantities "sufficient to cover each body from the thighs to the head."

We call attention to the arrangement of the terraces in this group. They seem to be directed toward the east or the river side, and commanded a view of the river and of the mounds upon the opposite side of the river.

Mr. Say says: "Tumuli and other remains are remarkably numerous about St. Louis. Those immediately northward of the town are twenty-seven in number, arranged nearly in a line from north to south. The common form is an oblong square,

and they all stand on the second bank of the river. It seems probable that these piles of earth were raised as cemeteries, or they may have supported altars for religious ceremonies. We can not conceive any useful purpose to which they could have been applicable in war, unless as elevated stations from which to observe the motions of an approaching enemy. Nothing like a ditch or an embankment is to be seen about any part of these works." This remark about the "elevated stations" is a suggestive one. It may be that the people assembled upon these terraces to observe the scene spread out before them, a scene which abounded with peaceable pursuits. The valley was covered with a teeming population, large canoes were passing to and fro upon the river, villages were scattered over the rich bottom land in every direction, the pyramids on which the chiefs had built their houses loomed up in the midst of the ordinary houses in the villages, the lofty towers or lookouts on the bluffs, surmounted by sentinels or watchmen, were covered with beacon fires by night or with smoking signals by day, while in the midst of the scene the great mound stood as a gigantic temple, with its terraces covered with the troops of superstitious people, who assembled there to protect the shrine on the summit. Above this the smoke from the sacred fires arose in a spiral into the face of the sun. It was a scene suggestive of busy life, but there was a strange superstition which pervaded everything, filling the air with its awe-inspiring effect, the sun being the great divinity worshiped by the entire people—its rising being met by adoration from morning to morning, and its course watched by those who regarded it as a divinity.

It will be remembered that the celebrated picture rocks which Marquette describes as having been seen by his party, of which the natives seemed to be in mortal fear, were situated not far from this spot. These pictures have given rise to many strange stories. It is said that they were in the shape of huge animals, with human faces, horns issuing from the head, wings surmounting the body, all parts of the animal kingdom being mingled into one hideous-looking creature. It is said also that there are caves in various localities, hidden away among the rocks. The bluffs surrounding the valley are strangely contorted. The lakes and ponds in the midst of the valley had formerly a wild, strange air about them. Agriculture was followed here, for agricultural tools have been taken from the ground in great numbers, but it was agriculture carried on in the midst of wild scenes. There must have been a dense population, for it is said that the plow everywhere turns up bones in great numbers, and the sides of the bluffs are filled with graves, in which many prehistoric relics have been found. There is no place in the Mississippi Valley where so many evidences of the strange life and strange superstitions which prevailed in prehistoric times are found.

III. We take up the comparison between the pyramids. It will be noticed that there is a general resemblance, both in the shape of the individual pyramids and in the arrangement of the pyramids in the groups. Here at St. Louis one group has a great mound in the center with the other mounds around it; the other group has an open area in the center and the pyramids placed at the sides of the area, as if to guard it and make it a place of assembly.*

We first turn to the comparison of the northern mounds with the pyramidal mounds in the Southern States, and are to notice the resemblances. The number and location of these pyramids are at present somewhat uncertain, but they seem to have been distributed throughout the entire region covered by the Gulf States. They are numerous in Louisiana, Mississippi, Georgia and Alabama. A modified form of pyramid, not so large nor so well made, is found also among the stone graves of Middle Tennessee, as well as among the lodge circles of Arkansas. Truncated pyramids, or rather platform mounds, are common also throughout the southern part of Ohio, though they are not pyramids in any proper sense of the word. Still, if we take the shape as a standard, and consider the platform mounds having graded ways as one type of pyramid, we should find that the distribution of the pyramidal mounds was very extensive. There was formerly an elevated square or platform mound at Martin's Ferry, near Wheeling, and in connection with it a conical mound, the two reminding us of the rotunda and public square of the Cherokees. This is the easternmost point where such works have been seen. The westernmost limit of mounds of this pyramidal type cannot be determined, yet it seems that there are specimens of the kind at points on the Missouri as far north as Dakota and even farther. The pyramids found inside of the celebrated enclosure called Aztlan, in Wisconsin (see Fig. 4), have been compared to those which are common in Middle Tennessee, and the walls with bastions surrounding the enclosure have been compared to those at Savannah, Tennessee, and to those at Evansville, Ind., and it has even been suggested that this ancient city was built by a colony from the south. It is, at least, the northernmost point at which pyramids have been recognized, the so-called haystack mound in Dakota being considered a specimen. The pyramids at Atzalan are on high ground, near the bastioned wall, and overlook the entire enclosure. There is a graded way to one of them and an elevated causeway connecting it with the lodge circles on the flat below. The effigies are just below the bluff or natural terrace pyramids. On the bank of the river are two rows of lodge circles, with a level street between them. A low platform may be seen near the lodge circles and a pond near

*The group at Madison Parish, La., resembles those at St. Louis, the great mound at Seltzertown those at Prairie Jefferson, and those near Washington resemble these on Cahokia Creek.

the platform. There are ponds near all the platforms and pyramids, water seeming to have been an essential to the religious assembly places, as in all parts of the country. There are effigies within a mile of this enclosure, and it is supposed that the long irregular mounds inside of the enclosure were effigies.

These pyramids in the ancient city of Wisconsin are interesting because they show that the effigy-builders were also pyramid-builders and perhaps sun-worshippers. The assump-

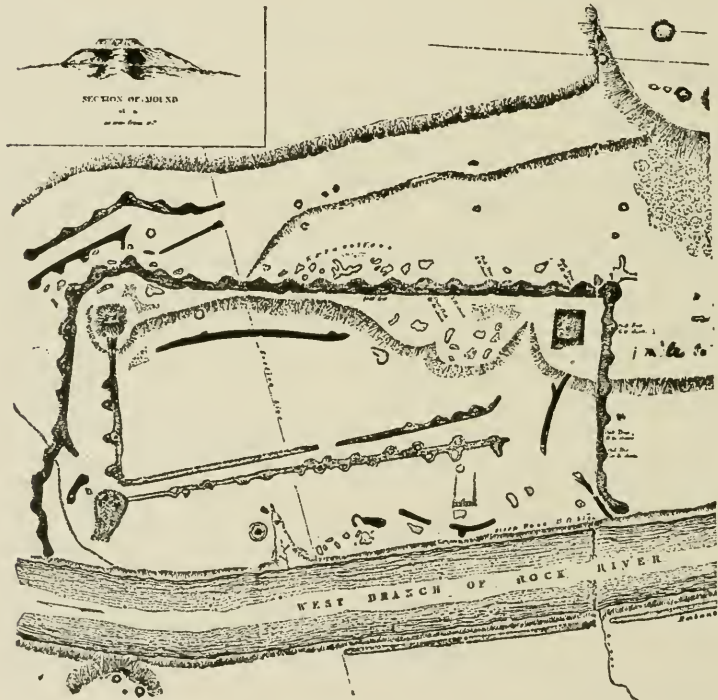


Fig. 4.—Pyramids and Effigies at Aztlan, Wisconsin.

tion has been that marks of architectural progression were observable in the distribution of the ancient works. Prof. J. T. Short says:

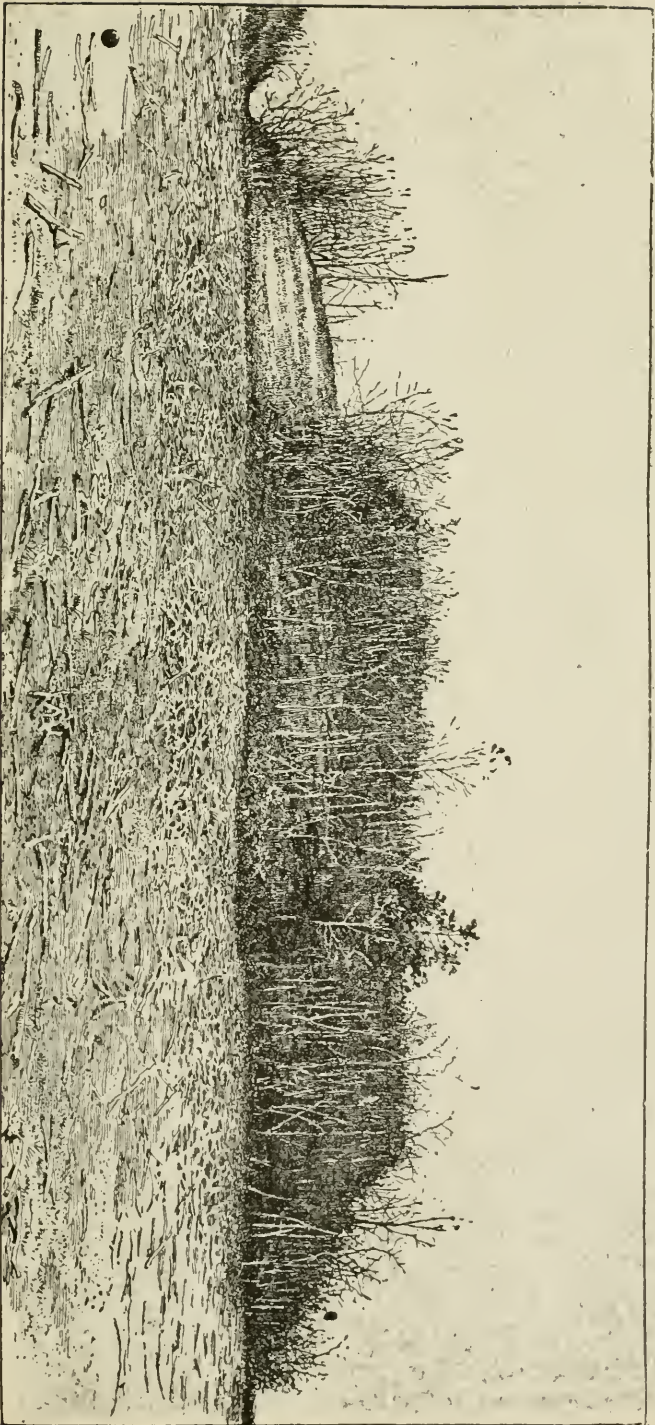
“Men all around the world have been pyramid-builders. The religious idea in man has always associated a place of sanctuary with the condition of elevation and separateness. The simple mound, so common in the northern region of the United States, represents the first step in providing a place of worship, the construction of an artificial hillock upon the summit of some bluff or hill. The next step would be the construction of some religious effigy representing animals sacred to the mound-

builders. The enclosures with the truncated pyramids, which are found in Ohio, would be the third step. The highest artistic form is found in the truncated pyramid, with its complicated system of graded ways and its nice geometrical proportions." As a theory, this seems very plausible, but as a matter of fact pyramids are found among the effigies as well as enclosures. The superstition which required the erection of earth-works as the embodiment of their idea of sacredness is an element which is very poorly understood. Sun-worship and animal-worship may have existed together in Wisconsin, as serpent-worship and sun-worship did in Ohio. Fire-worship and serpent-worship seemed to prevail in certain parts of Illinois. The only district where sun-worship prevailed without any mixture of animal or serpent worship was in the Southern States. Here it seems to have been mingled with idol-worship, the progress of thought being as perceptible in the works of art and archæological relics as in the earth-works, the pyramid and idol having been associated in these southern districts.

We base no theory on these facts, merely mention the localities where works of the pyramidal type have been discovered. To some minds they would prove a migration from the north or northwest to the south and southeast, and would show that the mound-builders gradually developed from the low stage of animal-worship up through serpent worship to the higher grade of sun-worship, the different types of earth-works marking the different stages through which they passed. To other minds, however, they would prove the spread of a secret order, or the wanderings of a class of priests or medicine men, who introduced their occult system into the different tribes, making the pyramid the foundation for the houses in which they celebrated their mysterious rites. Another explanation is that tribes migrated from the south to the north, and that as they migrated they took the various religious systems which prevailed among them in their former condition, but in other respects they yielded to the new surroundings and became wilder and ruder in their mode of life, the pyramid being about the only sign of their former state that is left. These are, however, merely conjectural theories. The home of the pyramid-builders as such was not in northern territory, for it is understood that the pyramids are mainly found in the Gulf States, and that in that region they were devoted to sun-worship, which is the cult to which the pyramids are sacred in all parts of the globe.

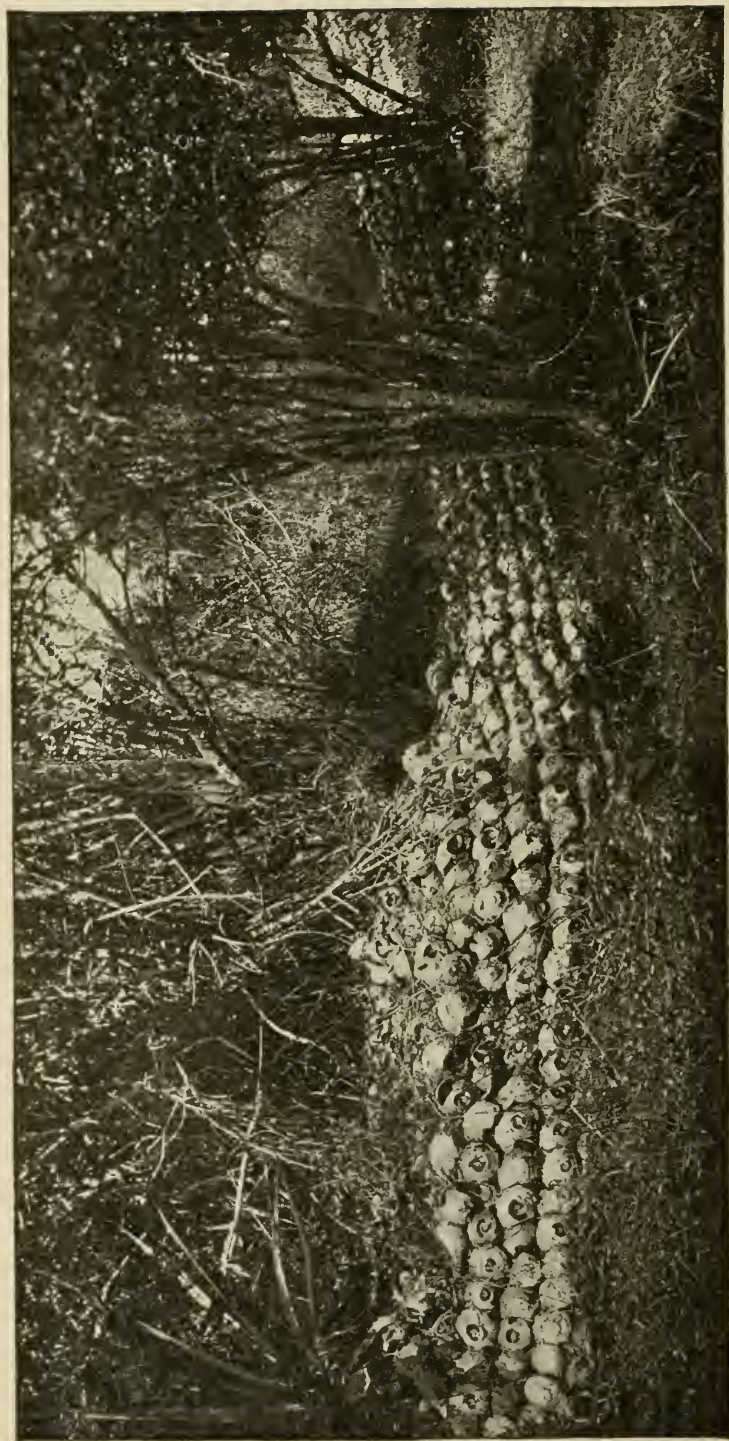
As to the use of the pyramids, it has been generally supposed that the pyramids were all built on the banks of streams or on low ground which was liable to be submerged. The object of building them was to make them a place of refuge or retreat in time of high water. Such may have been the case with these works near Cahokia, on Cahokia Creek, and yet the pyra-

mids upon the west side of the river were upon high ground, on the third terrace, which is never reached by the water. The same contrast may be recognized in other places. Many of the pyramids on the Mississippi River are on low ground, and near the banks of the river, or near some bayou which is connected with the river. There are, however, certain pyramids remote from any stream, and situated on high land and in such positions as to preclude the idea that they were built for retreats. The Messier mound is a specimen of this kind. It is not one of a group, but stands apart, prominent in its size, marked in its peculiarities and attended with a single conical mound. This pyramid reminds us of the truncated platform at Martin's Ferry, West Virginia, though that is in the region where squares and circles are the typical shape. The Etowah mound, in Georgia, is on low ground which is liable to be flooded, but there are pyramids on the left bank of the Ocmulgee River, opposite the City of Macon, which are situated upon the summit of a natural hill, and occupy a commanding position. This, we think, disposes of the idea that the pyramids were built only for refuges for the people in times of high water. They were evidently typical structures, which were erected under the power of some religious sentiments and were the results not only of the religious system but are significant of the tribal organization. The custom among these tribes was to place the houses of the chiefs and priests upon a higher level than those of the common people. There is a great contrast between the works of the northern districts and those found in the southern or Gulf States in this particular. In the northern districts the hunters' life prevailed, and the people were on an equality with the chiefs and priests or medicine men. In the southern districts the people were agriculturists, but there existed among them a superior class—clan elders, chiefs, and priests or medicine men, having great power; but the people were contented with their exercise of power. This was the case among the tribes after the beginning of history. We call them all Indian, but a great difference existed between the Indians who were mere hunters of the forests in the north and those who were the agriculturists in the south.



LARGEST MOUND OF THE ETOWAH GROUP.

This pyramid is 67 feet high, and covers three acres. It ranks next to the Cahokia Mound, which is 90 feet high, and covers over twelve acres of land. It was a village site, situated in the valley of a river, and was in the middle of a tract of 50 acres, bounded on one side by the river and on the other by an artificial moat. It was a



SHELL BANK AND PYRAMID MOUNDS AT MANCOS KEY.

This is supposed to have been an ancient village of the Mound-Builders of Florida. There is a lagoon or water court within the shell banks, and pyramid mounds with graded ways rising out of the water.

CHAPTER VIII.

THE MIGRATIONS OF THE MOUND-BUILDERS.

One of the most striking peculiarities about the Mound-builders was that they avoided the coast and concentrated their forces thoroughly in the interior, making the rivers their special places of resort. We have already spoken of this in connection with the Mississippi River, and have shown that it was the great thoroughfare for the prehistoric races, the migrations of the races having been along its channels in both directions. Some of the races—such as the Dakotas—are known to have passed up from the south to the north, Perhaps the Mound-builders passed down from the north to the south at an earlier date. The Missouri River was another great artery which supplied life to the Mound-builders' territory. It is said that there are various mounds of the pyramidal type on the Missouri River, and that these have been traced at intervals along the channels, giving evidence that this was the route which the pyramid-builders took before they reached the stopping place. At its mouth was the capital of the pyramid-builders. The Ohio River was also an artery of the Mound-builders' territory. It was the channel through which the various Mound-builders poured. The Ohio River was the dividing line between the northern class of mound-builders, who were probably hunters, and the southern class, who were agriculturists. It was itself occupied by a people who were in a mingled agricultural and hunter state. They were, however, so surrounded by war-like tribes as to be obliged to dwell in fortified villages; and so it was the home of the "village" mound-builders.

There is no more interesting region in all the mound-builders' territory than this one through which the Ohio River ran. It was the favorite resort for the Mound-builders throughout all the prehistoric times. There were prairies to the west, which were occupied by a class of people whose works and relics are still prevalent, whom we call nomadics. There was to the east and northeast another class of Mound-builders—a class whose works show that they were military in their character, possibly the same race which recently dwelt in New York State, and who also left their tokens all along the shores of the great lakes and extended into the State of Michigan. To the south and southeast were the remarkable works which have been ascribed to the Cherokees, some of which belonged to an unknown class of Mound-builders who preceded them. To the southwest were the many different tribes of mound-builders—the stone grave people, the lodge dwellers and the pyramid-builders

The pyramid-builders were situated farther to the south, in the Gulf States, though a portion of them were located at the mouth of the river, in Illinois. There are also pyramids scattered along the Missouri River as far north as Dakota. Some have thought that this proves that they came originally from the northwest and that their route was down this river. This theory is not carried out, however, by tradition, for one of these make the pyramid-builders to have originated in Mexico and their route to have been from the west to the east. Another makes their origin to have been somewhere west, but their route, owing to enemies which they met, was up the river on one side and down on the other, and so across the Ohio into Tennessee and the region east, into the neighborhood of the Atlantic coast.

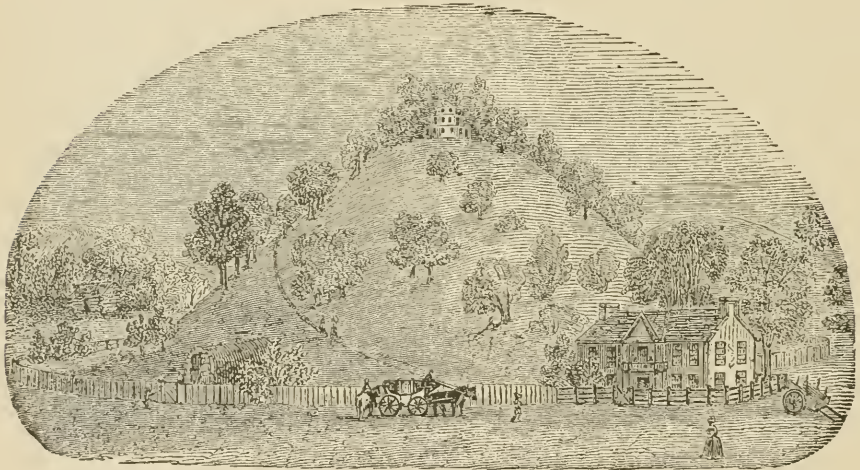


Fig. 1.—Grave Creek Mound.

These, however, were all on rivers connected with the Ohio, so that one could pass from the region of the Ohio Mound-builders to nearly all the other districts where mounds have been discovered and not leave the boat or canoe in which he started, as the rivers were all navigable. We see, then, that the Ohio River was very central, that it not only traversed the mound-builders' territory, but, with the Mississippi and the Missouri, may be said to have drained the entire upper half of it, and by its branches—the Cumberland, the Tennessee and the Kenawha—it also drained much of the lower half.

Now we propose to enter this district and make a special study of it. We shall study it, however, mainly as a thoroughfare, through which the Mound-builders passed, or as a center from which they scattered, and shall seek evidences of their migrations, and, if possible, learn the direction they took, and the dates or periods, or at least the order of each. It should be

noticed at the outset that the Mound-builders of the Ohio River were divided into different classes, some of them being earlier and some later in the district. Several may be recognized. It still further may be stated that along this river a division has been recognized in the works of the district, one class being situated at the head-waters of the Alleghany River, another on the Muskingum and Scioto, a third on the Miami, and from the Miami to the Wabash, a fourth on the Wabash, from the Wabash to the Missouri, a fifth class on the Cumberland and the Tennessee, a sixth class on the St. Francis in Arkansas, a little beyond the mouth of the Ohio, and a seventh class on the Kentucky and the Kenawha. All of these are, however, closely connected with the Ohio, as the great artery through which the life of the mound-builders flowed.

We find a great variety of races in these localities, as each sub-district had a class of earth-works peculiar to itself—the



Fig. 2.—Map of Works on Paint Creek.

chambered tomb on the Alleghany, of which the Grave Creek mound is a type (see Fig. 1); the sacred circles and village enclosures on the Scioto (see Fig. 2) and Muskingum; the ancient forts on the Little and Big Miami (see Fig. 3); the conical mounds on the Wabash River (see Fig. 4); the lodge circles and walled villages on the St. Francis River; the stone graves on the Cumberland River (see Fig. 5), and the bee-hive tomb on the Kenawha River. The strangest feature of all is that in this region we find the representatives of all the mound-builders' works—the great serpent representing the effigy-builders, the altar mounds and fire-beds apparently representing the hunters of Iowa; the pyramids near Evansville representing the pyramid-builders; the bee-hive tombs representing the mountaineers in North Carolina; the circular enclosures, representing the sun worshipers; some of the fortifications representing the military people of New York; the stone forts representing the stone grave people of Kentucky and Tennessee, and the ash pits representing the later race of hunters which traversed the region at a late date.

We may say, then, that it is a peculiarly favorable place to study the migrations of the Mound-builders, as well as of the later Indians. Now in reference to this subject of migration, we are aware that various writers have treated of it, and it may be regarded as a test case, having great bearing on the mound-builders' problem. It may be well, then, to refer to these opinions before we go further. We shall speak first of the theory which Dr. Thomas has advanced. It is that the Mound-builders of the Alleghany River, those of Southern Ohio, of the Kenawha Valley and of Eastern Tennessee, were all the same people and were the ancestors of the Cherokees. Opposite to this theory is that of Sir Wm. Dawson, who holds that the Mound-builders

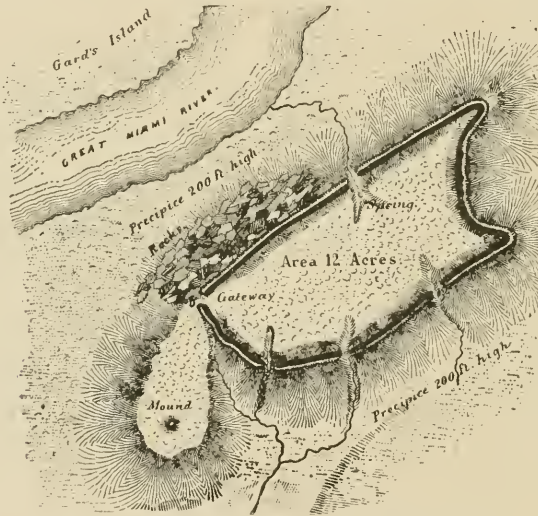


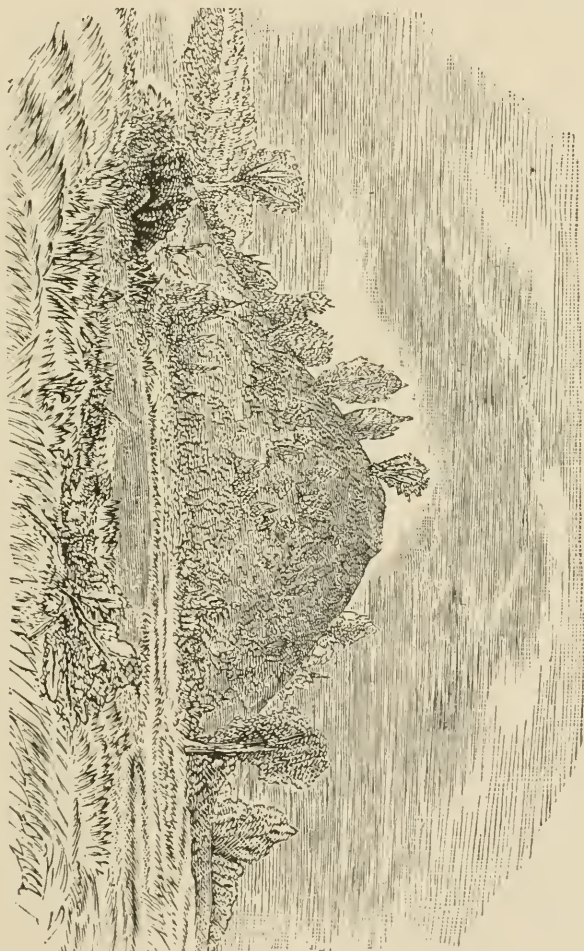
Fig. 5.—Fort at Hardinsburgh, on the Miami River.

were a people similar to the Toltecan race. Their features resemble the softer features of the Polynesians. Dr. Dawson thinks, however, that the Algonkins were a later people and that they came from the southeast, or, as he says, from the "equatorial Atlantic"—a theory perfectly untenable. Dr. Horatio Hale holds that the Algonkins came from the northwest, but that they found the Mound-builders before them. He locates them at first north of the Ohio, making their course to be south and across this river. Dr. Daniel Wilson, however, holds that the Mound-builders were made up of a number of races; some of them were allied to the Toltecan, or, possibly, to the Malays; some to the Algonkins and the Mongolian stock; and some to the ancient Hochelagans, of which the Eries and the Alleghans were the fragments. The opinion we advance is similar to that of Dr. Wilson, but in addition we would suggest that some of them were

allied to the Iberians, and that the sun-worshippers and serpent-worshippers of the Ohio River were similar to the class who left their symbols in Great Britain and in Western Europe.

Here, then, we have the different theories, and are to take our choice out of them all. Our work, however, is not to advance

Fig. 1.—Great Mound of Vincennes, on the Wabash.



and prove a theory, but to study the tokens and ascertain what their testimony is. We enter the field, which is very rich in prehistoric works, but these require the closest study for us to separate the tokens and assign them to the proper dates and order and races, and learn from them the order and the direction which those races observed in their migrations.

The question is, How are we to do this? We answer that there are three ways. First, we may take the location and the

traditions of the Indians; second, we may take the works of this district and compare them with other earth-works, noticing the resemblances and studying the similarity of customs and habits; and, third, we may take the relics of the Mound builders and see what relics are found in this district, and how they compare with those found elsewhere. We take the Ohio as connected with other rivers and as a center as connected with other centers, and see that it was a great thoroughfare for the prehistoric races.

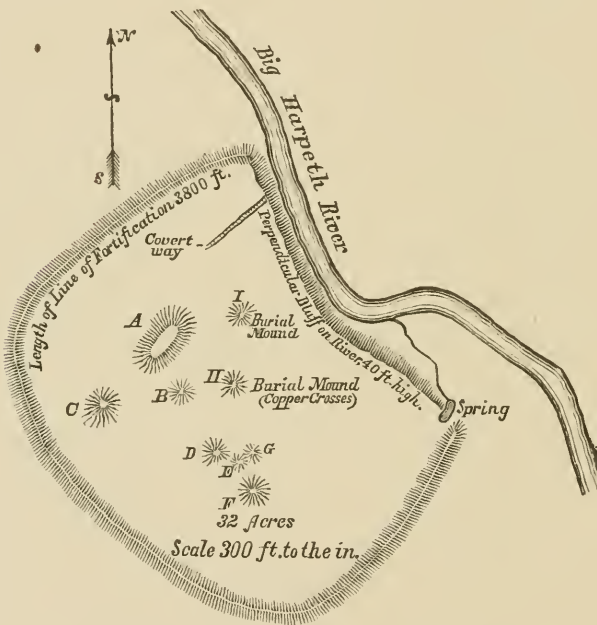


Fig. 5.—Typical Fort of the Stone Grave People.

I. First, let us consider the traditions of the Indian tribes as to their migrations: 1. The Cherokees were a tribe situated, at the opening of history, among the mountains of East Tennessee and perhaps as far east as North Carolina. There is a common tradition that the Cherokees were at one time in the Ohio Valley. 2. The Dakotas; this tribe or stock was, at the opening of history, located west of the Mississippi River, in the State which bears their name. The Dakotas have a tradition that they were once on the Ohio River, and that they migrated from there to the west. 3. The Natchez were a tribe formerly situated near the City of Natchez. They were sun-worshippers. It is supposed by some that the Natchez built the sun symbols in Ohio, but that they changed their methods and adopted the pyramid as their typical work afterward. 4. The Tetons, a

branch of the Dakotas, were probably once in this region, though their home was afterward in the northern part of Georgia. 5. The Eries have been spoken of as possibly the ancestors of the Mound-builders and as belonging to the same stock as the Alleghewis of tradition. 6. The Shawnees, a tribe of the Algonkin stock. They were great wanderers, and left their tokens in many localities. The district is full of graves of the Shawnees, which are interspersed among the works of the preceding mound-builders, but which are easily distinguishable from them by their modern appearance and by certain characteristics which are indefinable, but which are nevertheless easily recognizable. 7. The Iroquois have reached as far south as the Ohio River. We should undoubtedly find various relics left by this tribe in the periods preceding history.



Fig. 6.—Burial Mounds on the Scioto River, Ohio.

Now the point we make is that possibly we may find in the traditions of one or all of these tribes something which will help us to identify the mounds and relics of the region with the people who built them. We must, however, consider one thing before we undertake this. While there are traditions among the Indians as to their former struggles and conquests about this region, there are also evidences of preceding migrations, and this evidence comes to us as a confirmation that the Mound-builders here were not one people but many. In fact, it was a swarming place for several tribes or stocks. With this point in mind we may safely take up tradition as one source of evidence. The great rivers are supposed to have a record of migrations written upon their banks, the works and the various traditions of the Indians being by some identified with each river and the prominent mounds on each having been identified as the seat of some great event known in history or tradition.

It is well known that the tradition, which has been repeated so many times by the natives and gathered by the missionaries and by Schoolcraft, Heckwelder and others, in relation to the very migration we are now considering, has been located in many different places—first on the Mississippi, next on the St. Lawrence,

next on the St. Clair. It seems to have found its last resting place in this very district, at the head-waters of the Ohio. The celebrated Grave Creek mound is said to be the very spot where the event is commemorated. Now we would not depreciate the value of the tradition as one of the connecting links between the history of the Mound-builders and the modern Indians, but refer to the point as an evidence of the importance of discrimination in the matter of migrations.

Haywood says the Cherokees had a tradition in which was contained the history of their migrations. It was that they came from the upper part of the Ohio, where they erected earth-works. But there is a map contained in Catlin's book on the Indians which represents the route taken by the Mandans, a branch of the Dakotas. This map makes Ohio the starting point of that people, and the head-waters of the Missouri the termination of their wanderings. We regard this tradition as important as that of the Delawares or of the Iroquois, but it is a tradition which gives just the opposite direction for the route of the Mound-builders of the district. How shall we reconcile the two accounts? Our method of reconciling is one which we take from the study of the mounds. The Dakota tradition refers to a migration which probably preceded all the records of either the Telegewi, the Cherokees, the Delawares and the Iroquois, the migration of the strange serpent worshipers originally occupying this district. Our position is that all of the traditions are important, but they prove a succession of populations in this region. If Dr. Thomas is to locate the Cherokees here, we also locate the ancestors of the Dakotas, and leave the way open for others to locate other tribes, so making the Mound-builders not one, but diverse and long continued. This is our point.

We may well take up the study of locality as connected with the traditions. Heckwelder says the Lenni Lenape resided, many hundred years ago, in a distant country in the west. They migrated eastward, and came to a fort and large town of the Namaesippi, as they called the country occupied by the Telleghewi, who had many large towns and regular fortifications. One of these towns was near the mouth of the Huron, and here are the mounds containing the bodies of the slain Telleghewi. Heckwelder also says the Mengwe and the Lenni Lenape united their forces, and great battles were fought. The enemy fortified their large towns and erected fortifications on the rivers and lakes. The war lasted many years. In the end the invaders conquered and divided the country between them. The Mengwe made choice of the lands in the vicinity of the great lakes, and the Lenape took possession of the country to the south. The Alleghewi, finding destruction inevitable, abandoned the country and fled down the Mississippi, from whence they never returned. Here, then, we have the Algonkin account, and we

seem to be looking at a picture of the Mound-builders who had occupied the territory. There is a discrepancy, however, in the tradition, or rather the interpretation of it. The scene is located on the Namaesippi, which Heckwelder calls the Mississippi, and the flight is down that river; but Heckwelder, in another place, locates one great battle nearly west of the St. Clair and another just south of Lake Erie, where hundreds of the Tellegewi were buried in the mounds. This tradition accords with the passages in Cusick's narrative, a narrative which comes from the Iroquois rather than from the Delawares or Lenapes. It also may accord with the poetical account contained in the *Walum Olum*, or the red score of the Delawares, translated by Dr. D. G. Brinton. Mr. Hale, in *THE AMERICAN ANTIQUARIAN*, has said that the country from which the Leni Lenape migrated was "Shinake, the land of fir trees," the woody region north of Lake Superior, and thinks that the River St. Lawrence is meant by the word great river Namaesippi. He, however, locates the battle mounds at St. Clair and the Detroit River and makes the Hurons the allies of the Lenape. All the accounts agree in this, that the Tellegewi were east of a great river and that they were defeated and driven south. Dr. Thomas thinks that the tradition assists him in carrying out the full identification of the Tellegewi with the mound-builders of this middle district, whom he regards as the ancestors of the Cherokees. He says that the Tellegewi or Tsalake was the name the Cherokees gave themselves. The tradition of the Cherokees refers to the region of the Upper Ohio as their former home. The testimony of the mounds and of the *Walum Olum* are in accord with the Grave Creek mound and those found in the Kenawha Valley, and when compared with the Ohio mounds prove that this was their home and the retreat was by way of the Kenawha River. Now this is very plausible, and, so far as it goes, it may prove satisfactory. Still we may say that there are traditions which locate other tribes in the same region, tribes which are of entirely different stock from the Alleghewi. On this point we would refer to the map contained in Catlin's *Indians* and to the one prepared by Mr. J. O. Dorsey. These show that the traditional route of the Dakotas was in the opposite direction from that of the Cherokees.

II. We now turn to the earth-works. We have said that there are many earth-works in this district, and that they can be divided both according to their geographical location and their chronological horizon. We have also said that the representatives of the works of other districts are found in this, and that these representatives may help us to identify the people who once passed through this great channel. We are now to take up the different districts and see what similarities there are. Let us first notice the centers of population. It is very remarkable

that these centers very closely correspond in the historic and the prehistoric times. To illustrate: The effigies are near the cities of Madison and Milwaukee, Wisconsin; the burial mounds of one class are not far from St. Paul, another class not far from Davenport, Iowa; the serpent mound (see Fig. 8) not far from



Fig. 7.—Serpent Mound in Ohio.

Quincy, Illinois; a pyramid mound just opposite St. Louis, others near the City of Natchez, Mississippi; the stone grave people near the City Nashville, Tennessee; the bee-hive tombs near the City Knoxville, Tennessee; the Grave Creek mound not far from Pittsburg; the sacred enclosures near Chillicothe, Newark and Cincinnati, and the very large conical mounds near Detroit, Vincennes (see Fig. 4), Dayton and Hamilton.

Here, then, we have a map of the country, with the centers marked. The rivers also unite these centers—the Alleghany, Muskingum, the Miami, the Wabash, the Cumberland, the Tennessee, the Illinois, the Wisconsin, the Iowa, the DesMoines, the

Missouri, the St. Francis, the Red, the Arkansas, the Yazoo, the Ocmulgee, the Tombigbee, the Kenawha and the Kentucky, and they all contain mounds on their banks.

III. The question is about the resemblances between the works in these different centers and those on the Ohio. There may be resemblances where there were no migrations, but the probabilities are that they were caused by the adherence of the migrating tribes to their former customs, the people retaining the signs

and burial customs wherever they went. This is seen in many districts. The sun-worshippers built the circles and squares, the serpent-worshippers built serpent effigies, the pyramid-builders built platforms, the hunters built lookout mounds and game drives, the military people built forts; but they went elsewhere, for we find serpent effigies, circular enclosures, lookout mounds, fortifications, burial chambers, altar mounds and pyramids in other localities as well as here.

We give here cuts of the serpent in Ohio and of the serpent effigy near Quincy, Illinois. These effigies are respectively 1250 and 1400 feet in length. They are both conformed to the shape of the bluffs on which they were erected, and have other features which are similar.

This, then, is the point we make in connection with the middle district. We enter this district and find that different races

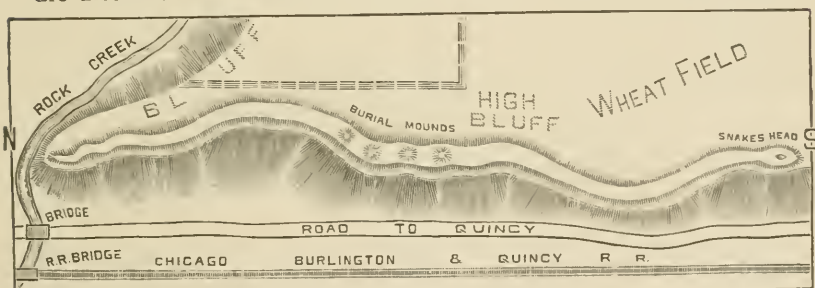


Fig. 8.—Serpent Mound in Illinois.

passed through it. Some were early and some late. We also find that the tribes went in different directions, some going to the south and along the sea coast, and became the sea coast people; some to the southwest, across the mountains, and became mountaineers; some to the west, to the prairie region, and became hunters; some to the Gulf States, and became agriculturists. All the works in these different districts show that the people were once in the middle district and had made the Ohio River, or at least a part of it, their stopping place. There is, however, one thing to be noticed. While the representatives of all the districts are contained in the Ohio Valley, yet the different parts of that valley are to be considered, for the pyramid-builders never appeared on the eastern waters, the sun-worshippers never in the western part, the fort-builders erected their works in the middle part, and the serpent-worshippers merely passed through or crossed over the central part, and ultimately built their works in distant regions. This is the way we reconcile the different theories, as to the modern migrations which are recorded in history and in tradition. The Cherokees may have migrated through the eastern part of this valley. If they did, it was at a comparatively recent date, for all their works

and relics show this. The Shawnees may also have passed up and down the same valley, but this was at a recent date. We have reason to believe that a race of sun-worshippers preceded these and that this race built the sun circles on the Kenawha River, in West Virginia, and on the Wateree River, in South Carolina, although it is very uncertain which direction they took in their migrations.

There is another fact which should be noticed. The mounds were built at different times, and by different races. They contain layers which are like the strata of geology. These give different chronological horizons and represent different periods. An illustration of this is given. See Fig. 9; also Fig. 11. Here we have a mound which contains a horizontal burial, two bodies in a sitting posture, and an altar at the base. These were not intruded burials, but were the work of successive races or tribes which passed through this valley, each one of which added to the height of the mound. The same thought is conveyed also

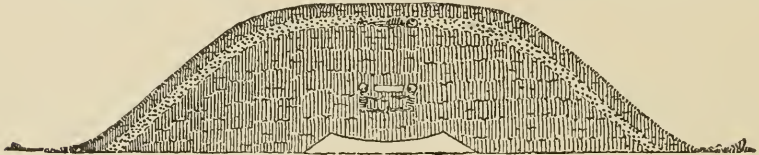


Fig. 9.—Altar Mound on the Kenawha.

by the different kinds of mounds found in one locality. Some tribes built chambered tombs, others stratified mounds and others altar mounds.

We take up the chambered mounds first, the class of which the Grave Creek mound is the representative. We say that this class of mounds is somewhat exceptional in Ohio, but they seem to be later than the sacred enclosures, or at least they are to be assigned to a different race. We notice from the description given by Squier and Davis that they are rarely if ever found inside of enclosures, but are generally isolated on hilltops. We find also that they contain an entirely different class of relics, and are constructed after a different pattern.

It seems to be the opinion of certain archæologists that the Grave Creek mound is the one which figures conspicuously in tradition, and that this is the monument of the Alleghewies or Cherokees. It may be said of it that it differs from most of the mounds in Ohio in that it is isolated, having no earth-works in the neighborhood. It is a chambered mound. In fact, it contained two chambers, one above the other. Each chamber was square and contained a number of bodies. The manner of building the chamber was as follows: A series of timbers or posts were placed on end, forming the wall of the chamber. Other timbers were placed across these upright posts, so as to

form a roof. This roof had decayed and fallen in, so that when the mound was first visited it contained a hollow place at its summit. At the time of the exploration the two chambers became mingled together, the dirt falling from the upper into the lower. There is no doubt that the same race erected both chambers. The mound was a very high one, was situated so as to give a view of the Ohio River, and may have been used as a lookout station as well as a burial place. The Grave Creek mound also contained one skeleton in the upper chamber, and two in the lower chamber, and it may be conjectured that they were sepulchral chambers, which contained the bones of the family of the chieftan or distinguished individuals among the tribe of the builders. With these skeletons were found three or four thousand shell beads, several bracelets of copper and various articles carved in stone. It is said, however, that on reaching the lower vault it was determined to enlarge it for the accommodation of visitors, and in so doing ten more skeletons were discovered, all in a sitting posture, but in so fragile a state as to defy all attempts at preservation. We might say in connection with this Grave Creek mound and the theory that it was built by the Cherokees, that the tablet about which so much discussion has arisen, was said to be found in the lower chamber, though it may have dropped from the upper one. It is now over twenty years since the tablet was thrown out of court, its evidence having been impeached so many times that it has no weight in solving the problem. Still, inasmuch as the Cherokees have an alphabet, which was said to have been introduced or invented by the Cherokee Sequoia, and as other stones have been discovered with alphabetic characters on them, perhaps the case should be reconsidered.

There are very few mounds in Ohio which contain chambers like these. While there were various mounds which contained single chambers made from logs, they were generally comparatively small mounds, and the chambers within them were much smaller. Squier and Davis have spoken of a sepulchral mound on the east bank of the Scioto River, one of a group, which was twenty-two feet high by ninety feet base. At ten feet below the surface occurred a layer of charcoal; at the depth of twenty-two feet was a frame-work of timber, nine feet long, seven feet wide and twenty inches wide, which had been covered with unhewn logs. The bottom had been covered with bark matting, and upon the matting was a single skeleton. Around the neck of the skeleton was a triple row of beads made of marine shells, several hundred in number, and the tusks of some animal. This is the mound, however, to which we have referred already. It was a mound which, in its location, showed that it was not one which belonged to the sun-worshippers. It was situated six miles from Chillicothe, on a hill, a mile and a half from any enclosure,

though surrounded by other burial mounds of the same shape. See Fig. 6. This mound we ascribe to a different race from those who built the altar mounds and the enclosures.

Dr. Thomas speaks of two mounds in the Kenawha Valley, one called the Smith mound and the other No. 23, one being 35 feet high and 175 feet in circumference, the other 25 feet high and 312 feet in circumference. Both contained chambers made from logs, one of them 13 feet long and 12 wide, the other 12 feet across and some 10 feet high. Both were in the form of a pen. It appears that the great Smith mound contained five skeletons, one very large, over seven feet long. Each wrist was

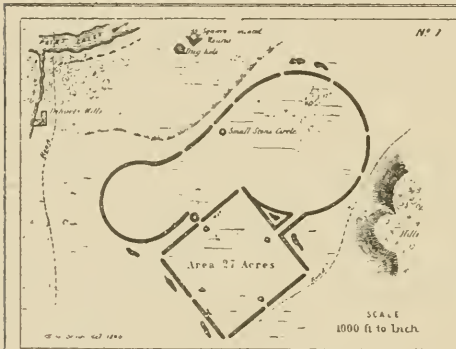


Fig. 10—Village Enclosure on the Scioto River.

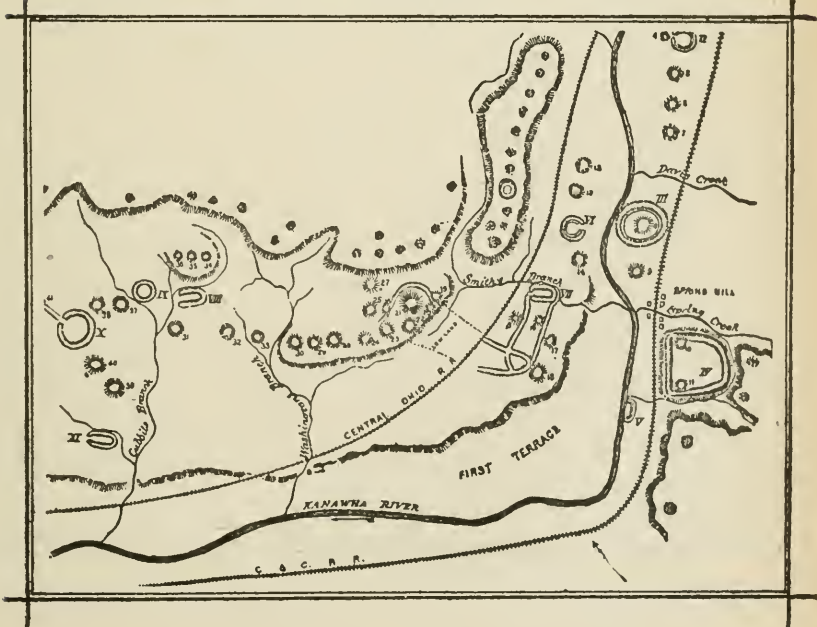
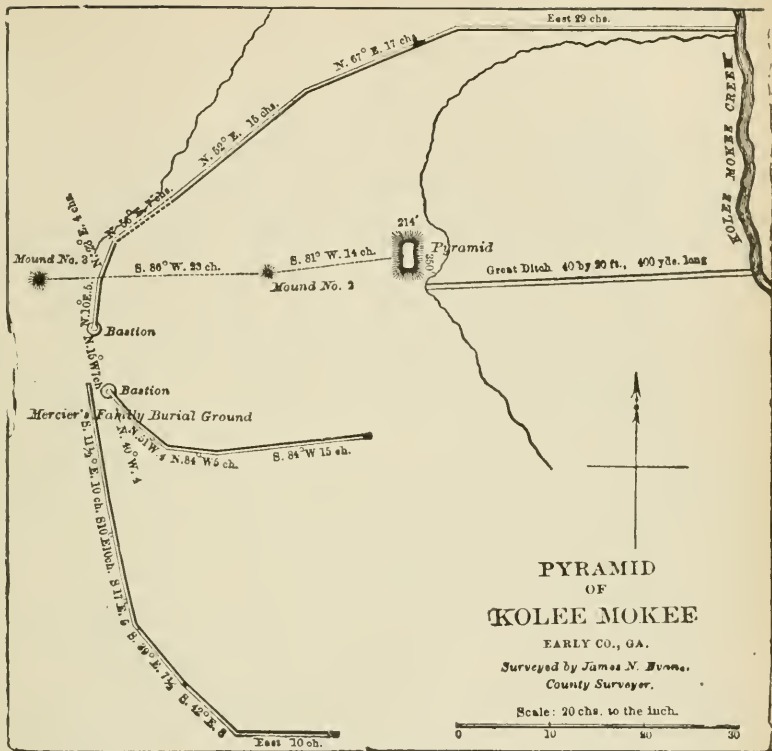
encircled by copper bracelets; upon the breast was a copper gorget; in each hand were three flint lance-heads; near the right hand a small hematite celt and a stone axe; upon the shoulder three sheets of mica and a fragment of dressed skin, which had been preserved by the copper. Another mound situated in the valley of the Scioto River, on the very lowest terrace (see Fig. 10), where the water frequently overflowed, was excavated and found to contain chambers, or vaults, one above the other. These vaults were larger, and of different shapes, being 36 feet in diameter, and circular in shape. They were built by posts placed upright, 11 inches apart, the upper vault having two circular rows of posts, but the lower only one. On the floor of each vault were several skeletons. There were also logs or timbers in the lower vault, giving the idea that this one was also built in the same way. Dr. Thomas says there were some indications that the burial was comparatively recent, as a bone showing the cuts of a steel knife was found in the vault. The fact that the mound was on the low ground overflowed by the river also shows that it was recent, as all the old mounds were on the terraces above the flood plain, and were evidently built when the water covered the flood plain, while this one was built after the flood plain had been drained. The large vaults with the modern relic, Dr. Thomas thinks, were used as council houses and that they resemble those used by the Cherokees after the time of history. The discovery of a similar vault by Mr. Lucien Carr is referred to in evidence. This vault, so called, was on the top of a truncated oval mound in Lee County, West Virginia. It was evidently a rotunda, such as the Chero-

kees used as their places of assembly, as there was a row of posts arranged in a circle, showing this. The argument which Dr. Thomas dwells upon is that the proximity to the circle and square called the Baum Works proves it to have been built by the same people. This, however, is the very point we make on the other side. It proves the succession of races, and shows that the Cherokees were among the last in the region, but were not the village sun-worshippers, as is suggested. The vaulted mounds have not been found in the circles or squares, nor in connection with the covered ways or double circles, nor do they contain any such finely carved relics as belonged to the earlier class of sun-worshippers. These are very rude and the mounds are differently situated.

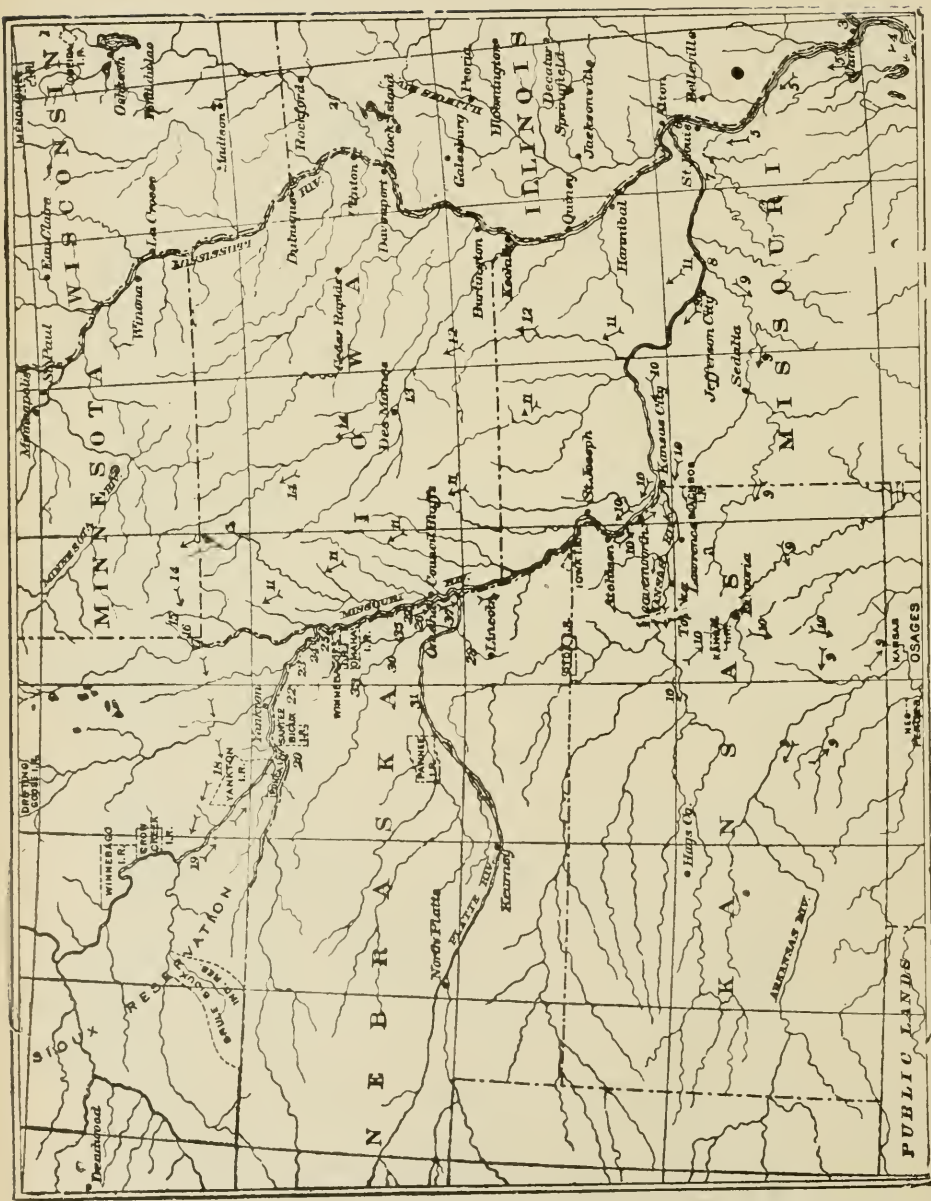
IV. The mode of burial practiced by the Mound-builders is next to be considered. Dr. Thomas, in his work, has shown one mode of burial which was quite remarkable. It seems to have consisted in the digging of a circular pit, and then placing bodies in the pit and building stone cones or chambers over the bodies. This pit with stone vaults and skeletons was explored by the agent of the Bureau of Ethnology. It is a true circle, 38 feet in diameter, not more than a foot and a half in height. The bee-hive shaped vaults were built of water-worn boulders. The skeleton was placed upon its feet and a wall built up around it. On the top of the head of one skeleton, under the capstone, were several plates of silvery mica. Many of the stones of the little vaults bore unmistakable evidences of fire. The only relic found was a pipe, found near the mouth of one. This pit was covered with a very low mound. Near the mound was a triangle, which proved to be a communal grave. It was a burial pit. The two long sides of the triangle were 48 feet each, and the other side 32 feet. The depth varied from two and a half to three feet. Here was a bee-hive shaped vault of cobble stones. In the pit a skeleton, and a large engraved gorget were with it; a number of large-sized shell beads; at the sides of the head, near the ears, five copper beads or small cylinders; under the breast, a piece of copper; about each wrist a bracelet, composed of alternate beads of copper and shell; at his right hand were four iron specimens, one of them in the form of a thin celt; another apparently a part of the blade of a long slender knife or dagger; another a part of a round awl-shaped instrument. Scattered over and between the skeletons of this group were numerous polished celts, discoidal stones, copper arrow-points, plates of mica, lumps of paint. About 200 yards east of the triangle was another low mound, covering a circular pit similar to the one described, in which were twenty-six skeletons. In a different part of the same county another similar pit, containing a kind of communal grave, in which were the following articles: One stone axe, 43 polished celts, 9 pottery vessels, the handle of one

representing an owl's head and another an eagle's head, 32 arrow heads, 20 soapstone pipes, 12 discoidal stones, 10 rubbing stones, 6 engraved shells, 4 shell gorgets, 1 sea shell, 5 large copper beads, a few rude shell pins. Among the shell gorgets was one containing four birds' heads with the looped square figure, a symbol of the sun, and a figure of the cross enclosed in a circle. The soapstone pipes were of peculiar shape. One of them had a bowl in the shape of a tube, but with a flat stem or mouth-piece. A number of pipes similar to this have been found in a mound in Sullivan County, East Tennessee. Others have been found in West Virginia. A very modern-looking pipe is also presented by Dr. Thomas, though he does not state exactly where it was found. This group of mounds or burial pits was situated on the borders of the white settlement, a locality where we would expect to find the traces of contact with the whites. The Cherokees long resided on the mountains of East Tennessee. They took the patterns for their pipes from the whites, but they retained many other relics. The symbolism they held in common with other tribes was perpetuated intact.

One fact is to be noticed. In one of the mounds in North Carolina, the one which contained the circular pit, some eight or ten skeletons with heads which had been elongated by artificial pressure were discovered. The Catawbas are said to have practiced this head flattening, as did many of the Muskogee stock. The explorations on the Little Tennessee River among the overhill towns, yielded a number of relics which resembled those found in North Carolina. The mounds here contained a peculiar style of clay beds, saucer-shaped, varying in diameter from six to fifteen feet, built in layers, one above another, three to five beds, with a layer of coal and ashes between them. In one mound were found a number of skeletons, and by the side of nearly every skeleton were shell masks, shell pins, shell beads, perforated shells, engraved shells, discoidal stones, polished celts, arrow-heads, spear-heads, stone gorgets, bone implements, clay vessels and copper hawk bells. The hawk bells were with the skeleton of a child, at a depth of three feet and a half. They were in the form of sleigh bells, but with pebbles and shell beads for rattles. In another mound on the Little Tennessee, two miles from Morgantown, were found nine skeletons, and with one were two copper bracelets, copper beads, a small drilled stone, an engraved stone which had some of the characters of the Cherokee alphabet on it. The argument which Dr. Thomas makes in connection with these finds is that the mound-builders were Indians, and the particular tribe who built these mounds were Cherokees. The argument is, however, misleading. It may be forcible as proving the migration and the modern character of the Cherokees, but it begs the question as to the other tribes of mound-builders. The tribes which were formerly lo-



EARTHWORKS ON THE KENAWHA RIVER.



MAP SHOWING THE MIGRATION ROUTE OF THE DAKOTAS AND OTHER TRIBES.

cated along the Atlantic coast and on the Alleghany mountains have never been recognized as belonging to the Mound-builders. Many of these works are to be connected with the historic Indians, such as the Powhattans of the Algonkin stock and the Tuscaroras of the Iroquois stock. The value of the finds consists in the fact that the record of the Cherokees is carried back into prehistoric times and the record of mound-building brought up to modern times; but to make the Cherokees the mound-builders of the Mississippi Valley is absurd. The Cherokees may have passed over a portion of the Mound-builders' territory, precisely as the Dakotas are supposed to have done at an early time and as we know other tribes—such as the Shawnees, Delawares, Iroquois and Wyandottes—did after the time of the discovery; but the probability is that their route was over the eastern part and not the western.

That there was a succession of races is seen from the study of the burial mounds. Fig. 11 illustrates this. In this mound we find at the bottom a circular vault three feet deep and 6 feet in diameter, filled with chocolate dust, No. 1. Next to this was a layer, marked 2, containing the bones of fifteen or twenty persons. Above them a layer of burned clay. Above this, in No. 4, was a mass of calcined bones, mingled with ashes and a reddish brown mortar burned as hard as brick.

The bee-hive vault has been dwelt upon as proof, but the bee-hive vault resembles the bee-hive huts, which are common in Scotland, as much as it does any structure found in Southern Ohio. Shall we say that these bee-hive vaults prove the Cherokees to have come from Scotland? The Cherokees are said to have been very white, and might almost be called white Indians. Shall we trace the Cherokees back to a white race, which, according to some, was allied to the Aryan? Their language is said to be related to the Dakotas. The earliest known migrations of the Dakotas were from the east. Shall we, then, trace both the Dakotas and Cherokees back to the island of Great Britain, making the route of their migration to be by way of Iceland and the coast of Labrador, and take the coincidence between the bee-hive huts and bee-hive vaults and make out a case in that way?

The effigy mounds of Southern Ohio, especially the great serpent, the bird mounds of Northern Georgia, the effigies of Wisconsin and the stone effigies of Dakota are assigned by some to the different branches of the Dakotas—the Tuteloes having once been located in Northern Georgia, not far from where the bird effigy is; other tribes—such as the Iowas and Mandans—having, according to tradition, carried these symbols to Dakota; the Winnebagos, another branch, had their last abode in Wisconsin, where the effigies are so numerous.

Our argument is for the migration of the Dakotas as preceding that of the Cherokees. According to Thomas there are, in the

mounds of the Kenawha Valley, several different kinds of burials, some of them resembling those found among the Cherokees; but the trouble is that these have all been mingled together as if they all belonged to one tribe, whereas they prove that several tribes passed through this region. Let us enumerate the different forms of burial mounds which Dr. Thomas has assigned to this tribe. 1. We find the bee-hive tombs in North Carolina. These were found in a circular pit. 2. The triangle containing graves and modern relics. 3. The mounds with burials between bark coverings in East Tennessee. 4. The square chambered tombs in the Grave Creek mound, in the Kenawha mound, and those on the Scioto. 5. The round chambers, lined with upright posts, contained within the pyramid mound on the flood plain in the valley of the Scioto. 6. The altar found at the bottom of one of the mounds in the Kenawha

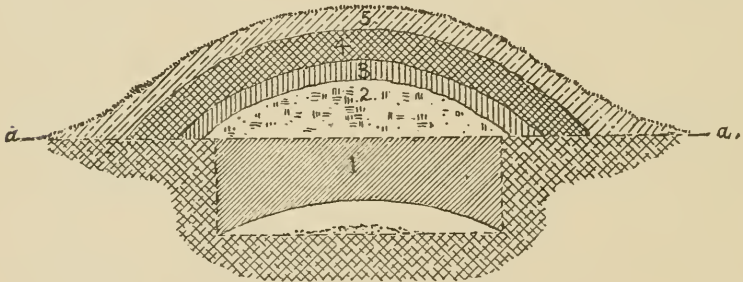


Fig. 11.—Stratified Mound in Wisconsin.

Valley (see Fig. 9), resembling those found in Ohio. 7. Altars made from cubical piles of stones, found in Eastern Iowa, resembling those found in Tennessee. 8. The altar beds in Calhoun County, Illinois, resembling others in Tennessee. 9. The square piles of stones in Franklin County, Indiana, resembling those found in Tennessee. Besides these there were the stone graves found in the Kenawha Valley, those in Illinois, and those found in the bottom of the pyramid mound at Etowah, Georgia, the stratified mounds found in the neighborhood of Davenport, the chambered tomb found in Wisconsin, the stone vaults found on the Mississippi and the Missouri Rivers.

The important point we make is this: The burials referred to above are so varied that it is absurd to ascribe them to any one Indian tribe, either Cherokee, Shawnee or Dakota.* True the analysis and comparison might enable us to assign those northwest to one general class; those on the Missouri River to another; those on the Upper Mississippi to a third; those on the Middle Mississippi to a fourth; those on the Southern Mississippi to a fifth; those on the Cumberland to a sixth; those on

*The reader will find a description of the different burials in the chapter on burial mounds. See *American Antiquarian*, Vol. XI, No. 6.

the Upper Ohio to a seventh; and those on the Wateree River and in East Tennessee to the eighth class. This is, however, only repeating what has been said before the Mound-builders were divided into several distinct classes, and differed according to location,—each tribe having its own peculiar earth-works and burial mounds and relics. So far as the classes and districts are concerned, there is no great difficulty in tracing the tribes which occupied these subsequent to the time of history, back to the Mound-building period and in identifying them in some of the burials which have been preserved; but to say that these historic tribes were the builders of all the mounds in the district is going contrary to the facts, for there is too much variety in the mounds of each district to admit of this.

We are ready to acknowledge the resemblance between these circles in the Kenawha Valley and those on the Wateree River in South Carolina, and especially the similar significance of the circle with the mound in its center, which seems always to be a sign of sun-worship. Squier and Davis have called attention to the general similarity between the southern mounds and the Ohio mounds, especially to the fact that there were spiral paths around the outside of them. They speak of the council or oblong mound in the circle on the Wateree River, with a circumference of 550 feet at the base and 225 feet at the top, and 30 feet high. They say, however, that while this region was occupied by the Cherokees at one time and by the Ocmulgees at another, still that the country was, many ages preceding the Cherokees, inhabited by one nation, who were ruled by the same system of laws, customs and language, but so ancient that the Cherokees or the Creeks could give no account of them or the purposes for which they erected the monuments. High pyramidal mounds, with spacious avenues leading to artificial lakes, and cubical yards, with sunken areas and rotundas, are the characteristic works of the south—works which the Cherokees adopted and used, but which, it is said, they did not build. The contrast between the two classes is marked, as the water cultus is plain in one and sun-worship in the other, and yet the connecting link may be found in the circles we are describing.

This thing we can rely upon, however: The mounds, earth-worths and relics are so arranged in districts, and so correlated to those districts, that we may safely give names to the people of the district; but they must be names which are taken from the ancient works, rather than from the modern tribes. This is the case even when we think that we have traced the migration of the ancient races, for, after all that we may do, it is still an open question whether the ancient races and the modern works can be fully identified.

Modern races followed the ancient in all the districts; but the ancient relics were transmitted, and modern relics intruded in

such strange, unaccountable ways and out-of-the-way places, as to make us pause before we give a certainty to our speculations in regard to this subject. The monitor pipes, the duck pipes, the shell gorgets, the inscribed shells, the copper relics, the gold ornaments, and various other relics, may be scattered through the mounds of each separate district, and at the same time be found in the hands of the later Indians occupying these districts; but the traditions, the relics and the earth-works in these same districts, often compel us to go back of these people and to assign a long succession of tribes to the district, so that we may say it is actually easier for us to trace the migrations of the Mound-builders from one district to another than it is to trace the history of the district, back through its different periods of occupation.

Here, then, we have the evidence. The migrations of the pyramid-builders, like that of the stone grave people, may have been across the Ohio Valley at the west end. The migration of the circle-builders, sun-worshippers, may have been north or south, across the Ohio Valley at the east end; but, on the contrary, the serpent-worshippers, whose works are found on the Ohio River and on the Mississippi River, must have migrated through the whole middle district, the Ohio River being the thoroughfare. It does not seem reasonable that they were the same people who built the bee-hive vaults or even the chambered tombs, for not one such one structure is found in all their western track,

Our conclusion is that there were various migrations of mound builders through and across the Ohio Valley, some of them having been sun-worshippers, some of them serpent-worshippers and some pyramid-builders. If any of these are to be identified with the Cherokees, others with as much reason may also be identified with the Dakotas, the testimony of tradition and of language, as well as of archæology, corresponding on this point; but this by no means precludes us from believing that there were other races or tribes of Mound-builders which preceded these, the history and names of which have not yet been discovered, and so they can not be identified with any modern tribe.

CHAPTER IX.

VILLAGE LIFE AND THE MOUND-BUILDERS'
CULTUS.

One of the most noticeable things in connection with prehistoric times is that village life was so prevalent. This seems to have been common in all ages and among all races, but it was especially prominent among the Mound-builders. It was in fact the element into which they threw their own peculiarities and which embodied their cultus. The Mound-builders' villages were not all alike, for every district had a style of village peculiar to itself, and yet they differed from those of other races, and are therefore worthy of our study. This is the factor which may enable us to draw the line between the different periods of occupation, and help us solve the Mound-builder problem.

The picture of the Mound-builders' territory which we have presented is one in which different classes or tribes occupied different districts, filling each district with their own peculiar cultus. The picture is a varied one, for the tribes or classes followed different employments, used different implements and showed different grades of advancement. The conditions of society were correlated to physical surroundings. There seems to have been, also, changes among the people at various times; migrations from one district into another, the abandonment of earth-works of one class, and the erecting of a similar class of earth-works in another region, the routes of migration being marked by the tribes, either in entering their territory or in departing from it.

The location of the modern tribes of Indians, with their peculiar habits and customs, has also come into the picture and been a prominent feature in the scene. The panorama has been a moving one; in fact, the changes have been so numerous that it has been difficult to distinguish the earlier from the later tribes, and much confusion has been the result. It is probably on this account that many have confounded the Mound-builders with the Indians and classed both together, not realizing that the Mound-builders' cultus was so distinct.

I. The character of the villages is the test by which we determine the cultus which prevailed in a certain period of time and

in particular localities, and is the especial means by which we ascertain the Mound-builders' cultus. We speak of the Mound-builders' cultus because it was distinctive, in fact, as distinctive as the cliff-dwellers or the lake-dwellers, or the Aztec or Maya cultus, and because it furnishes us a definite name for a specific period of time and helps us to separate that time from that which preceded, and that which followed; but the cultus was embodied in the village life as much as in any other element, and we shall, therefore, point to this as the factor which will enable us to distinguish the cultus. Village life may, indeed, have prevailed among the Indian tribes, as it prevailed among all of the uncivilized races, both in this continent and in every other one. Mr. Stanley informs us that villages were very common in Central Africa, that all the trails led through villages; travelers have spoken of the villages of South America and have pictured the roadways which led from one city or ancient village to another.



Fig. 1.—Village with Water Supply.

The early and later explorers maintain that there were roadways in Central America, Yucutan and in Honduras, which led from the ancient cities to the sea coast, and from the sea coast to islands. We do not maintain that village life was peculiar to the Mound-builders—as it was everywhere prevalent, and was as common among the later as the earlier races—but its features were distinctive.

The features which distinguish the villages of the Mound-builders are as follows: 1. The presence of earth-works, which in one way or another form an enclosure, either as walls, as pyramids, as circles, burial mounds or effigies. They may have been used as burial places, as lookouts, as altars, game drives, places of assembly, but all of them were connected with the villages. 2. The abundance of relics in the mounds, deposited as offerings, or personal belongings, gives evidence of a numerous population, which had its center in the village. 3. The earliest villages were those of the Mound-builders, and can be distinguished from the villages of the later Indian races by their age. The burial mounds show a succession of races, but the burials which are the earliest, or lowest down, may be taken as those of the Mound-builders*. 4. The villages of the Mound-builders were generally located upon the high land and were attended with lookout mounds, trails or roadways, and other signs which indicate that they were connected with one another, showing that the occupants were the permanent possessors of

* See Chap. I, p. 30; Chap. IV, p. 53-58; Chap. V, Burial Mounds, p. 65-74; Chap. VIII, p. 123.

the entire region.* 5. The evidence of an organized condition of society is given by the villages of Mound-builders; the villages were occupied by clans, the clans were arranged in tribes, tribes were gathered into confederacies.

The grade of advancement in the earth-works and relics distinguished the Mound-builders' villages from those which either preceded or followed, and furnishes a good test as to the Mound-builders' cult.

1. Let us take up first the study of the earth-works. Many of these were located on ground where modern cities have grown up, but there was a time when they were the most marked objects in the landscape, and the record of them is more complete than that of the temporary Indian villages which have been gathered in the same spot. The center of population was in the village throughout all ages, but in the Mound-builders' age the villages were more extensive than at any other time and were perhaps as imposing in appearance as many of the villages built by the white man, and were especially in contrast with those of the Indians.

Indian villages were often erected in the midst of Mound-builders' enclosures; Indian graves intruded into the tumuli of Mound-builders, and Indian relics are found mingled with Mound-builders' relics. But if an extensive earthwork, with heavy wall and great gateways can be distinguished from an ordinary camping place; if the deposits of beautifully carved relics, such as pipes, highly wrought copper specimens, and pearl beads can be distinguished from the rude camp kettles, the occasional brass and silver brooch, the fragments of cloth and the debris of the camp, the permanent abode or house can be distinguished from a rude wigwam, the Mound-builders' cultus can be separated from the Indian, even when the villages were in the same locality.

Any one who reads the descriptions of Indian wars, especially



Fig. 2.—Village with Sacrificial Mound.†

* See Chap. II, p. 17-18; Chap. VI, p. 89, American Geologist, article by S. D. Peet, on The Flood Plain, p. 264.

† The cuts given in Figs. 1 and 2 are taken from Atwater's book, which was the first one published upon the Mound-builders. They represent the two villages formerly situated on Paint Creek, five miles apart, with a fort between them, located at Bourneville. The same villages can be seen in the map. These villages were somewhat remarkable. The one at A had an enclosure which contained 77 acres, in the center of which was an elliptical mound, 240x160 feet, and 30 feet high, surrounded by a low embankment and covered with a pavement of pebbles. There was a crescent near this mound, set around the edges with stone, and a number of wells were inside and outside the enclosure. The circle contains 17 acres; within it was a smaller circle, which probably marked the site of the estufa. Here we have provisions for religious ceremonies as well as residence and defense. The other village (B) contained no elliptical mounds, but there was within it a pond 15 feet deep and 39 feet across, which is fed by a rivulet flowing from the high land through the walls and furnished the village with water supply.

those conducted by Gen. St. Clair, Anthony Wayne, Gen. George Washington, Gen. Braddock, can realize that the villages which were so easily destroyed by the invading whites, and which were frequently transported by command of the Indian chiefs, were but temporary camps, and in great contrast to the Mound-builders' villages. The battlefields have been located, but not one of them is marked by any earthworks, such as the ancient races were accustomed to erect. The villages which were attacked



Fig. 3.—Stockade Village near Granville, Ohio.*

were clusters of temporary wigwams, some of them without even the protection of a palisade. They were so easily destroyed that a single fire would sweep them from off the face of the earth, and, in a few years, not a trace of them was left. Even in the localities where, according to the early maps, Indian villages once stood, the explorer will seek in vain for any vestige by which he can identify the site. If he takes the names of distinguished chiefs, such as King Phillip, Pontiac, Tecumseh and Black Hawk, and seeks for their homes he will find no sign of them. The villages of Black Hawk and Keokuk were

situated on the DesMoines River, near Eldon, but not a sign of them remains; even the graves of these Indian warriors have been despoiled and their bones destroyed. There was formerly an Indian village on the Ohio, opposite the mouth of the Scioto. It was, however, located on the banks, below the terrace on which were the villages of the ancient Mound-builders. The contrast between the two villages—the ancient and the modern—can be seen here. Here we see

* The stockades represented in Figs. 3 and 4 are such as are very common in Ohio and Kentucky and many of the western States. They are not known to have been built by any Indian tribe, but may have marked the intervening period between the Mound-builders' age and that of the modern Indian. They show the difference between the cult of the early Mound-builders and that of the later race. One of these was situated near Granville, and in sight of the alligator or opossum mound, about five miles from the works at Newark. It has an area of 18 acres. The ditch is outside of the wall. Inside the wall is a small circle, 100 feet in diameter. In the circle are two mounds, both of which contain altars.

heavy walls on the high terrace, fifty feet above the bank where the modern village was located, the oval enclosure isolated on a spur, and the covered ways extending for eight miles or more, with the bastions, gateways, circles, and burial mounds all connected by a ferry with the walls, circles, mounds, on the summit of the hill opposite, and these again by another ferry with the walls, concentric circles and temple mounds, several miles away, the length of the walls being twenty-two miles. On the other hand, the Indian village is so insignificant that a single flood overflowed its site and swept away all vestige of the encampment, taking the houses of the few white settlers, which had been built upon the same spot, so that now nothing is left to reveal either of the later periods of occupation.* All signs of the Indian village and early settlement of the white man have disappeared, but the works of the Mound-builders remain, notwithstanding the growth of a modern city on the spot.

2. It has been maintained by some that the stockade was peculiar to the northern Indian, the earthwork to the southern Indian and that this constituted the only difference between the villages, but the fact is the stockade was as common at the south as at the north, and in both sections there are earthworks which were built by an earlier race. Beauchamp has shown this to be the case in the state of New York. He maintains that there was a

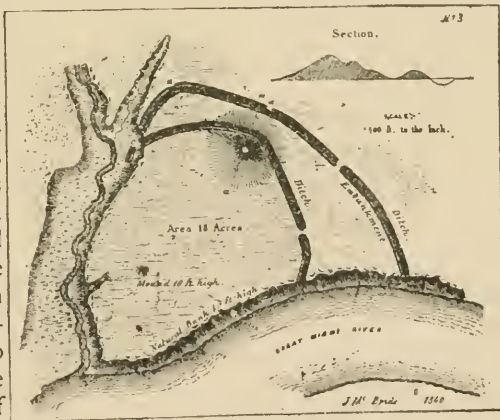


Fig. 4.—Stockade Village in Ohio.

period of time when villages were surrounded by earth-works, but at a subsequent period the timbered palisade took their place.† The stockades of the Iroquois tribes were more enduring than the temporary villages of the Algonkins, but these have so far disappeared that it is difficult to locate their villages. On the other hand, the villages of the Mound-builders, who preceded the Iroquois, are identified by earth-works which still remain. Sir William Dawson has also shown that the villages of the earlier races were attended with a class of relics which indicated a cultus peculiar to the age and the people.‡

The antiquity of the first race can be judged from the fact that a

* See map, p. 253.

† See Amer. Antiquarian.

‡ See Fossil Man.

nest of copper relics, consisting of socketed spears and spades of the Wisconsin stamp, was found while digging the St. Lawrence canal, on the banks of the St. Lawrence River, some fifteen feet below the surface. The antiquity of the Mound-builders' village in the State of Ohio can also be seen from the earth-works. The village near Dayton, Ohio, covered several miles of a level plain, but so long ago that the sweep of the waters of the Great Miami River in the time of flood has taken away a larger portion of the walls and yet that which remains extends beyond the modern village of Alexandersville, and takes in two stations on the railroad.*

3. Village life impressed itself upon the soil everywhere. Even in the region where the hunter life was prevalent, this is every-

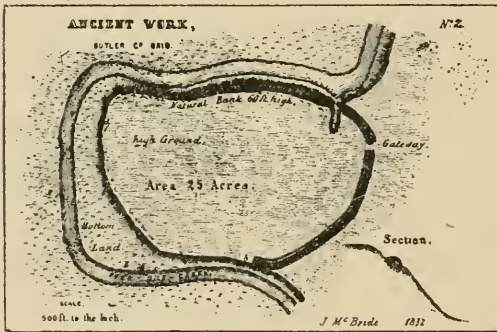


Fig. 5—Stockade Village in Ohio.

where apparent. Here the villages were surrounded either by circles of burial mounds, or by animal effigies, † or rude earth-works, ‡ but there are also lookout mounds, and game drives, garden beds, and occasionally altar mounds, which indicate that certain clans occupied the locality. Game drives

are not confined to the state of Wisconsin, but are found in Illinois and other states, showing that while the Mound-builders of this region were hunters, they dwelt in villages.

It remained, however, for the agricultural races to build the most elaborate earth-works, as a defense to their villages. These were placed uniformly upon terraces overlooking the rivers, and abounded with covered ways, graded ways, lookout mounds, dance circles, burial places, all of which were guarded by earth-walls. †

Walled villages were numerous in the middle district, on both sides of the Ohio River, but they did not all belong to the same class. In fact, four or five types of Mound-builders' villages have been discovered in this region, all of which may have been prehistoric. These were followed by the rude villages of the modern Indian races. The effort has been made to identify these modern Indians § as the descendants of the earlier Mound-builders, but

* See *Antiquities of Tenn.*, by Gen. G. P. Thurston, p. 40. Jones' *Aboriginal Remains*, p. 115. See map of works at Alexandersville.

† See William Dawson's *Description of Hochelega*, p. 40; Hubbard's *Memorial Sketches of a Half Century*, p. 232; Peet's *Emblematic Mounds*, p. 208; Smithsonian Report, *Description of Earth Walls on the Spoon River and Fox River, Illinois*.

‡ See Bartram's *Travels*.

§ See *Antiquities of Southern Indians*, by C. C. Jones.

the very contrast between the two classes of villages, the earlier and later, refutes this. The Mound-builders may have changed their location, and the occupants of the villages of one district have established their villages in another district, but if this was the case, those who migrated must have adopted another style of village architecture and manufactured a different class of relics, having dropped those to which they had been accustomed, for there are no two districts in which the same works or relics can be discovered. Relics, to be sure, are found in Iowa and Illinois which resemble those in Ohio, but there are no such earth-works. A few works are found in West Virginia and Kentucky which

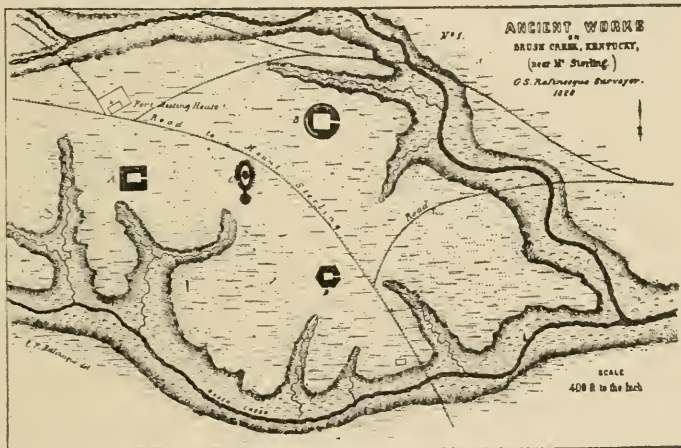


Fig. 6.—Sacred Enclosure in Kentucky.*

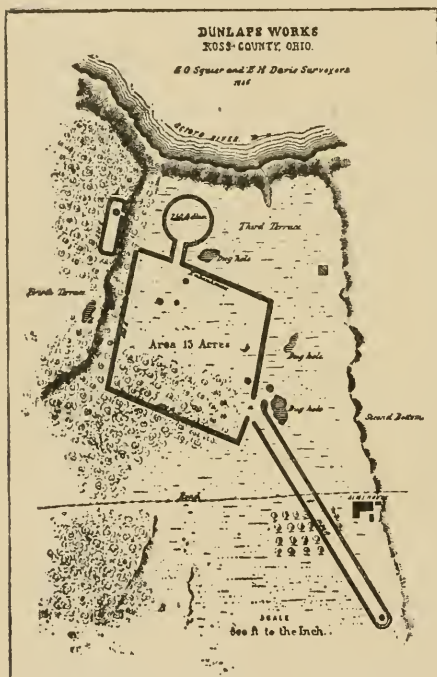
resemble the Ohio villages, but the relics are quite different. It appears that there was a period in which every district exhibited a Mound-builder's cultus, another period in which it disappeared or was lost.

4. The loss of this cultus is one of the plainest facts in archæology. We pass over the districts and study the works and relics which we ascribe to the earlier Mound-builders, but we find the people gone, and we fail to recognize or identify their cultus in any one of the modern tribes of Indians. In fact, the change of cultus has been so great in every district that we fail to reach any certainty in reference to the time of occupation or the people who built the villages. When we interrogate the Indians of any tribe, Iroquois, Algonkin, Dakota, Cherokee, Shawnee, we find their memory uncertain and their traditions indefinite.†

*The works at Mt. Sterling consist of an enclosure 100 feet square, an elliptical mound, 9 feet high, truncated and connected by a wall with a small conical mound, a circle with a ditch and square platform, and a hexagonal enclosure with a gateway to the east. These works exhibit an identity with those in Ohio and were probably symbolic or religious in their character. The proximity to the streams suggests a water cult. See Fig. 6.

†See Irving's *Florida*; for Study of Skulls see report of Davenport Academy of Science, Lucian M. Carr's *Antiquities of Tenn.*, p. 117; *Agricultural Races*, Jones Southern Indians, Eleventh report Peabody Museum, p. 384.

The Shawnees have indeed been traced from one locality to another, for they were great wanderers, but the relics which have been found in the stone graves which are said to mark their route, are as different in different localities as if they were manufactured by entirely distinct races. The abandonment of their homes by these wandering tribes must have occurred long years ago, for otherwise we could not account for the change which has come upon them in their cultus and art motives. So with



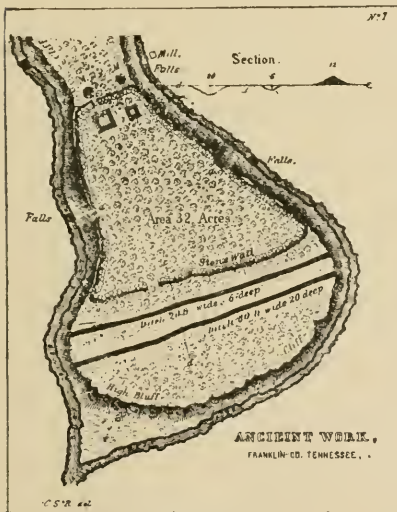
Mound-builders' Village and Covered Way.

the Cherokees, and the Muscogees and other tribes. Adair and Bartram tell us the Cherokees had a tradition that the pyramids at the south were built by a preceding race; that they only occupied them as new comers after vanquishing the nations who inhabited them, and that the former possessors told the same story concerning them; that they found the mounds when they took possession of the country. Mr. Jones says that "the works were subject to secondary uses. Temple mounds, originally designed for religious objects, were by the Creeks and Cherokees converted into stockade forts and used as residences for their chiefs or for purposes of sepulture." The tradition is

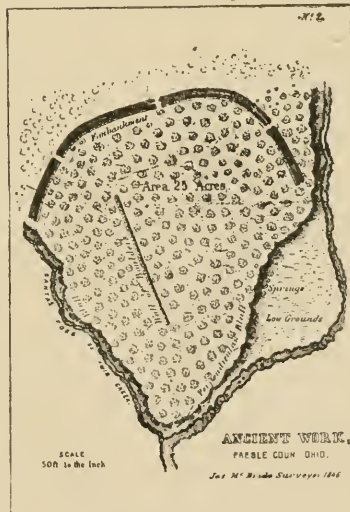
that the incursion of wild tribes from the North drove off the Mound-builders from the middle districts, some of which intruded themselves upon the southern districts, and at a still earlier date these southern tribes supplanted a race of pyramid-builders. These traditions are confirmed by the study of the relics and works, all of which indicate that many changes took place in pre-Columbian times, the transposition of new populations having brought in a new cultus, with intervals of varying length, but the village life having continued through all the changes.

* The enclosure called Dunlap's Works is situated on the third terrace above the Scioto. There is a covered way 1240 feet long, with a lookout mound at the end which commands a view of the river valley, and a terraced mound or mound and circle not far from the covered way. On the fourth terrace is an outwork which may have served as a race-course or a place of games. There was a gateway and a graded path connecting it with the enclosure. The small circle is on the bank of the river, but there is no large circle connected with the works.

5. We do not then misinterpret the evidence given by the earth-works, when we say that the confederacies of the Mound-builders, whether situated along the upper, middle or lower Mississippi, the Cumberland, St. Francis, or Ohio River, or in Florida or the Gulf States, must have long preceded that of the Indians,* and that the history of these villages was quite different from that of the modern tribes. We go back to the time of the first discovery and examine the picture of the villages presented by the historians of Ferdinand De Soto's expedition, and find that they were thoroughly equipped with the machinery of government and religion, and are to be, by this means, distinguished from the villages of the Atlantic coast and the New England States,



Stockade Fort in Tennessee.



Stockade Fort in Ohio.†

where the stockade villages were prevalent, but the changes which came upon the Mound-building tribes, both North and South, broke up the early confederacies and in a measure obliterated the Mound-builders' cultus, so that we can, with no degree of propriety, use the term Indian when we would describe this earlier condition, even if we were convinced that the Mound-builders and the Indian were of the same stock.

On this point there is great uncertainty, for the best authorities maintain that there were from two to four races in the Mound builders' territory. The pyramids at the South were

* Antiquities of Southern Indians, p. 126, by C. C. Jones.

† The stone fort in Tennessee and the earth fort in Ohio (see cuts above) illustrate the cultus of two periods. The stone fort was upon an eminence. It contained two pyramids. One of these was occupied by two lookouts, twenty feet high. This fort is on the bank of Duck Creek, just above a waterfall, and is full of the evidence of a skillful work and of an advanced people. The earth-work marks the site of an ordinary stockade village, located on the bluff, with the unfailing spring below.

occupied by a people who resembled the Polynesians, but the stockades of the North by a people who were more like the Mongolians. Relics of the Mound-builders resemble those found in Great Britain and the north of Ireland, and even suggest the transmission of the same myths and symbols from the eastern to the western continent. Let us look at the facts. In Goodyear's book on the Grammar of the Lotus,* is a picture of the divinity of the Gauls. In this picture the divinity is crowned with the horns of the deer, exactly as the Mound-builders' chief, found in the depths of the mounds on the Hopewell farm in Southern Ohio, was crowned.†

Mr. J. R. Nissley has described a pipe which combined the "cupstone" symbols, which are so common in Great Britain, with the serpent symbol. This pipe was in the form of a serpent, one cup mark in the head and another in the tail, the orifice between making the mouth-piece; but on the base of the pipe were several cup marks, making the pipe doubly symbolic.‡

The discovery of the Exeter vase of Nebraska, with its shallow receptacle and its four sides carved with animal heads, and the discovery of the Toronto pipe, with its distorted face, presenting the symbol of the tree and serpent on its side, will lead us to the thought that there must have been a pre-Columbian contact with other countries. The progress of pre-historic archæology is bringing out more and more the fact that there were great differences between the races.§

The skulls of the southern Indians certainly differ from those of the northern Indians, even if the language was the same. It is easy for a people to change language, but constitutional traits continue through many generations. The Cherokees, Iroquois, Dakotas, may have belonged to the same stock, separated from one another in the Ohio valley at some remote time, but they differed from the Muscogees and southern tribes, and as to the Shawnees, it is acknowledged they belong to a different stock from either. These facts should lead us to the habit of recognizing differences. If we are to take the traditions of the Indians into the account, we shall conclude that the southern Mound-builders came from the West, the northern Mound-builders from the East or Northeast.

If we are to obliterate all distinctions and to class the Mound-builders' cult with the modern Indian, making out that the historic tribes properly represent the pre-historic conditions, we may as well give up our study of pre-historic archæology, and for that matter the study of the science of sociology also, and say that there was no difference between a savage warrior and a settled agriculturist, or between the animal worshiper and the

* See Grammar of the Lotus.

† See Ancient Monuments.

‡ See American Antiquarian, Vol. XIV, No. 4.

§ See Thomas's History of Cherokees.

sun worshiper, between the stockade-builder and the pyramid-builder. The term Indian has been applied to all classes and all grades and all districts, embracing the Eskimo fisherman, the Indian hunter, the southern agriculturist, Zuni, Pueblos, the civilized Aztec, the Maya, but it is not the general name that we need so much as the specific term, and so we prefer to classify the works of the Mississippi valley under the name which has already gone into use and to acknowledge that there was a Mound-builder's cultus.

The theory that there was an American race which had only one language and one origin, and that this race occupied the entire continent and filled it with one type of mankind, has this evil tendency, it prevents us from drawing a distinction between the different languages, customs, symbols, and forestalls any inquiry as to previous migration or pre-historic contact with other races, but this theory is even worse, for it shuts our eyes to the distinction between the earlier and later conditions and puts everything on one dead level. We need a closer analysis and minute distinctions rather than these grand generalizations.*

If there was a historic, a proto-historic and a pre-historic period on this continent, we want to know the differences in the cults rather than the resemblances. These differences are shown by the specimens of art and architecture that still remain, and we need to study these so as to assign them to the different periods and races. When we study the pre-historic works, we recognize the differences between them and ascribe these not only to the different modes of life and religious systems which were adopted by the races, but we also assign the different cults to the period and age to which they belong?

It was this mistake which that eminent author, Mr. L. H. Morgan,† made while treating of American Sociology and which many of his disciples are making to this day. He took the cultus of the Iroquois, with which he was familiar, and made it a pattern for all the native tribes and races, reducing everything, civilized and uncivilized, to the same simple elements. The long house of the Iroquois served as a pattern to him for the houses of the Mound-builders, and seemed to prove that the same communistic state everywhere prevailed. He went so far as to reconstruct a Mound-builders' village after the same pattern, and placed the long houses on the summit of the walls, instead of inside the enclosure.‡ He imagined that the Pueblos, of Arizona, served as a pattern for the cities of Mexico and Central America and called all the places of that region communistic houses.

He maintained that the civilized races, were all of them, not only organized into clans, but were in the communistic state;

* See Brinton's American Race.

† See Morgan's Ancient Society.

‡ See North American Review; see Morgan's Houses and House Life; see Contributions to Ethnol. Bureau, Vol. III.

that their cities were nothing but Pueblos and their kings nothing but chiefs; that everything about them must be reduced to a primitive state and run in the same mold which the Iroquois furnished.

II. We are to notice the variety in the architecture of the villages, especially when we are studying the village life of the Mound-builders and seek to recognize the differences between them and the other tribes or races. While we acknowledge that village life was universal in America, yet it differed according to locality, each race or tribe having impressed upon their villages their own ethnic states and customs. The tribes, to be sure, were composed of clans, and the clans were generally gathered into villages, each clan having a village by itself.

The clans or tribes might be organized into a confederacy, the land belong to the confederacy, but it was divided and held by the clans and could not be alienated except by consent of the clans when assembled together. There was no such thing as property in severalty or landed property. Sometimes there was the removal of a nation by reason of defeats and oppressions, but the conquered tribes, when they felt that their territory had been invaded and could not be held against their enemies, generally moved as a body. Their tribal organization was stronger than their attachment to their lands. The graves of their fathers were precious to them, but they would rather leave these than to have their tribe broken up. The element of religion came in. Ancestral worship prevailed among many of the tribes and thus threw an air of sacredness over the abodes of their ancestors and made their villages permanent. The graves were near the villages and the precious remains were under the care of the villagers as such. It was like tearing up everything that was precious to them when they were forced to move. It was for this reason that the village clans remained so long in their territory and defended themselves by such novel methods. It was for this reason also that the same clans, when they changed from one district to another, became so thoroughly disorganized. Having been driven from their original territory, in which their clan life had found such embodiment, they seemed to have adopted the customs and habits of the people into whose territory they migrated, making the old village sites their abodes, changing the old works into new uses. This question, as to what became of the Mound-builders of any one district, is perhaps to be answered in the same way. The Mound-builders were evidently as tenacious of their homes as the Cliff-dwellers, but there were tribes and confederacies which had long occupied certain regions and had reached a high stage of advancement and in the course of time had constructed a most elaborate system of works. These were driven off by the invading hosts of savage hunters and never again reconstructed their villages or

their homes. The change which must have come upon the country is exhibited as much by the different style of architecture which they adopted as by anything else.

The Indian villages on the Atlantic coast and in the state of New York seem to have been more permanent than those on the western prairies. They were frequently surrounded by stockades and were connected with one another by trails. The Indian villages of Virginia have been described by early discoverers. The village of Pomeiock was pictured by the painter Wyeth. From this we learn the arrangement of the village. We see the fields of corn, fields of tobacco, garden full of melons, forests full of deer, a pond in the back-ground; a broad roadway passes through the village; on one side are the houses of the chief, the houses for the preservation of the dead, and houses for the families; on the other side the dance circle, the feast tables, and the mourning places. The houses in the village are rectangular, with curved roofs, and resemble the houses of the Iroquois.

The picture of the village of the southern Indians represent the houses as circular, the roofs dome-shaped, with the stockade surrounding them. There is, however, no earth-work in either of these pictures. The villages were just such as were occupied by the later tribes when they were in a settled condition. These Indians, to be sure, might have possibly built earth-works at one time and abandoned the habit, but if so it must have been before the discovery. The natural supposition is that they were a different class of people, who came in after the Mound-builders. We divide the Mound-builders' villages into several classes, which differ according to their location, both in their method of defense, their general arrangement, style of architecture, class of relics which they contain, and the mode of life which they exhibit. Those of the effigy mounds being in one class, the "burial mounds" in another, and military works in another, sacred enclosures in another. The most remarkable of these are in Ohio, for they show that village life had reached a high stage. The villages of Arkansas are also to be mentioned. These were filled with lodge circles, and in these were large pyramidal or dormiciliary mounds and occasionally a lookout monnd. These resembled the Ohio villages, in that they were square enclosures, but they had no such elaborate gateways, and no such watch-towers within the gateways, and no concentric circles or combination of circles and squares, and no adjoining enclosures which contained altars or burial mounds; they were plain village enclosures, in which all the purposes of village life were carried out and only a single wall surrounding the whole, the defense being given by this wall and a stockade placed upon the summit. They resembled the villages of the stone grave people of Tennessee, in that they contained many graves within the enclosure, as well as lodge circles and pyramids. These

may be called the villages of the pottery-makers, for large quantities of pottery have been found in the enclosures. Entire mounds of large size have been opened and found full of nothing but pottery. The villages of the Gulf States were peculiar. These, for the most part, were destitute of any circumvallation. In its place, however, is to be found a large moat, which served all the purposes of a moat around a feudal castle, the defense of the village having been formed by a palisade of timbers, with gateways and, perhaps, draw-bridges.

The chief peculiarity of these villages is that there are so many pyramids grouped around a central area, with the abrupt sides turned toward the moat or fish-ponds, but the sides on which approaches and graded ways and terraces are to be seen are directed toward the central area. The villages of the eastern district of the Gulf States are also marked with pyramids, but they are generally pyramids placed in pairs—one of them being rectangular, with terraced sides and graded ways for approaches; the other oval or conical, with its summit truncated, and a spiral pathway leading to the summit. In these villages was a chunky yard, also a distinctive feature; the rotunda, having been elevated on the summit of the cone, was placed at one end of the yard, the pyramid, with the chief's house on its summit, was located at the other end of the yard. The area within the yard was used as the public square or campus, the dance ground or the place for the trying of captives. Descriptions have been written by various travelers, such as Adair and Bartram, who visited these villages when they were occupied by the Cherokees, so we that know exactly the use to which each part of the village was applied. Descriptions given by the Portuguese traveler, the historian of De Soto's expedition, reveal to us also the use which was made of the pyramids in the western district by such tribes as dwelt there at the time.

The Tennessee villages were furnished with more conveniences and show better provisions for defense, for subsistence and for the carrying out of all the purposes and customs connected with village life, but they were, after all, arranged after the same general plan and show the same clan organization. The houses were generally arranged around a public square, within which the people assembled, making it a common campus. The temples, council houses, dance grounds and burial grounds they placed separately by themselves, making them somewhat exclusive and more sacred than their private houses. There were in all the villages provisions for the different classes—governmental and common—and conveniences for religious ceremonies, popular assemblies, festivals and amusements, and for burials.

In the ancient villages of Ohio, there seems to have been a separate enclosure for each of the classes and for each especial purpose. The clan elders had their houses inside of the square

enclosure and the people had their lodges inside of the large circle; but the religious houses or round houses were located in a small circle adjoining the two, the burial places and dance grounds being placed in enclosures by themselves. Some of these villages in Ohio present evidence that there was a sacrificial

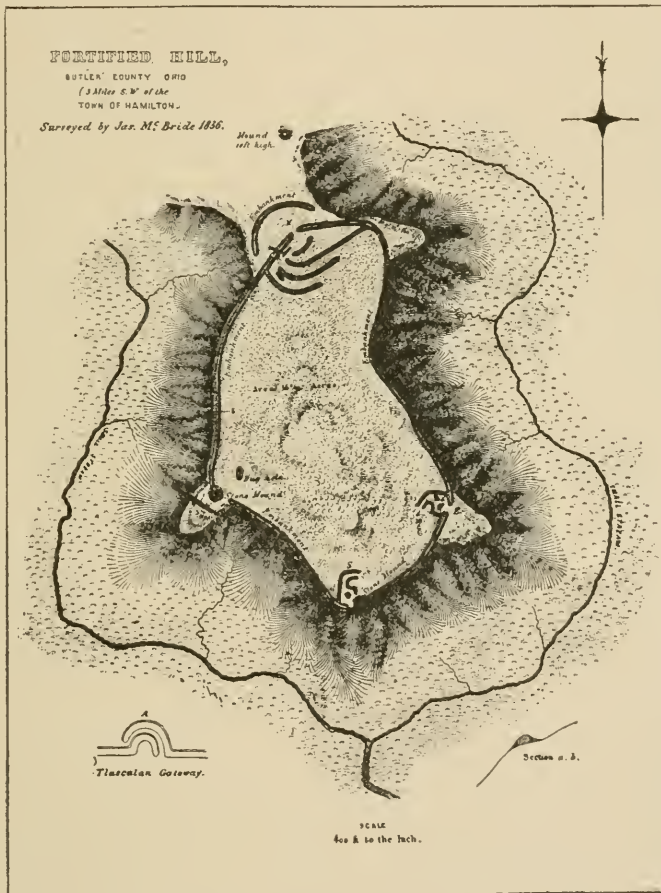


Fig. 10.—A Mound-builders' Fort.*

place in the midst of the large enclosure, and human sacrifices were offered to the sun.

This thought that the Mound-builders had reached a stage where the different classes were recognized and where conveniences were provided for them is worthy of notice, for in this consists one great difference between the ages. It matters not

*The works represented by this cut and the one on page 138 are situated in Butler County, Ohio. The difference between the walled villages and the forts will be seen from the cuts.

what stock or race was represented by the villages, yet the fact that there are earth-works which were occupied by the different classes shows that the cultus was entirely different from that of savagery. Savages may indeed have had chiefs and clan elders and priests or medicine men, but their villages were rarely built to accommodate these different classes.* The fact that there were different kinds of villages in the same territory is then important in this connection. It appears also that at one period there were tribal capitals or central villages, and perhaps places of tribal assembly for the observance of religious ceremonies, as well as clan villages.†

The proximity of villages to one another and their location along the valleys of the streams show that the tribal system prevailed, and that the tribes took the rivers for their habitats, the villages being the abodes of the clans. The discovery of the central villages and works peculiar to themselves proves also that there were confederacies which combined the tribes. These filled the districts with the works devoted to defense, government and religion, as well as domestic life, and so gave great variety to the earth-works.

The defense of the village varied according to the locality. In some places it was secured by placing a heavy earth wall around the entire village; in others by placing the villages in the midst of isolated tongues of land, making the position a source of safety; in others the pyramids were erected, their abrupt sides forming a barrier against approach, while the terraced sides and graded way furnished easy access to the people who might desire to resort to their summits in time of danger. The groups of pyramids were sometimes surrounded by moats, which served as fish-ponds in times of peace but barriers in times of war, resembling in this respect the feudal castles. There were a few villages that were destitute of circumvallation, though these were perhaps at one time surrounded by timber palisades or by stone and earth walls, which have disappeared. The size of the enclosures varied according to the population they were designed to accommodate. They varied from twenty-five to two hundred acres. In some cases‡ there were several adjoining enclosures, so that the village would be divided into two or three parts, the entire circumvallation extending several miles, including one or two hundred acres, and in other cases§ there was a single enclosure, everything being included in that.

Burial mounds are generally connected with villages. These vary also according to the district. Those in the prairie region form one class, those in Ohio another class, and those in the Gulf States still another class. recent explorations show-

*Mr. Thruston thinks there was a division of labor, and refers to the trowels discovered among the stone graves as proof that the plasterers' trade was followed.

†Aztlan, Marietta and Portsmouth were capitals; Newark, Circleville and many other places were clan villages. ‡In Ohio. §In Indiana.

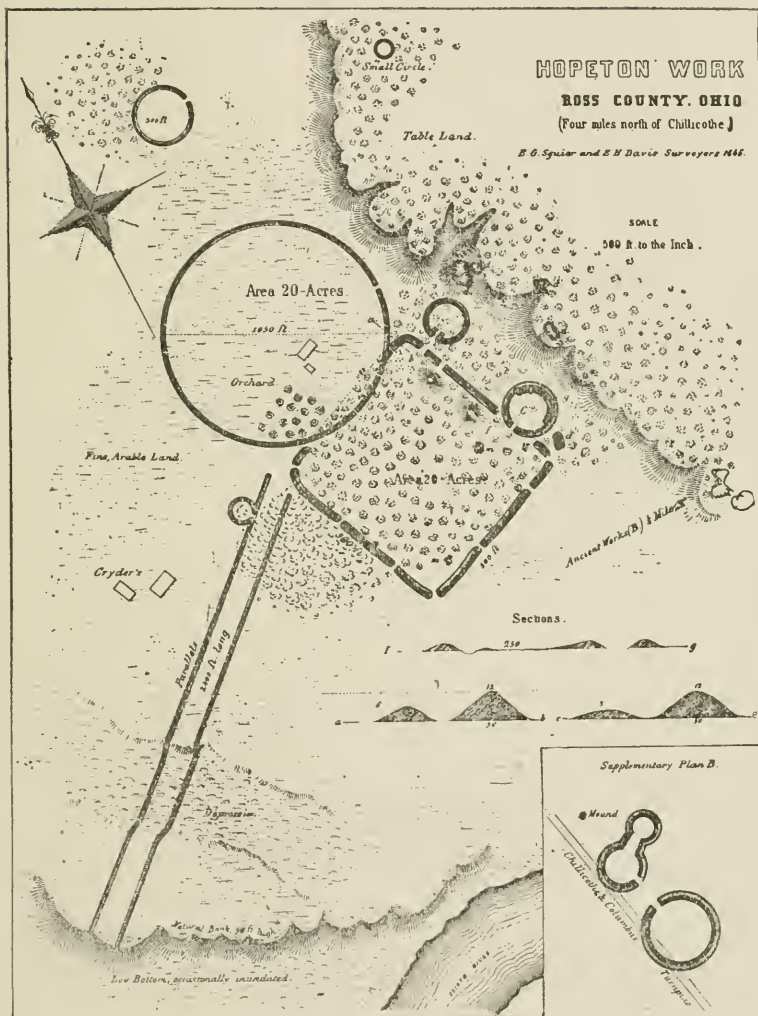


PLATE III.—VILLAGE ENCLOSURES AND COVERED WAY.

The works at Hopeton, High Banks and Cedar Banks represent the character of the ancient Mound-builders' villages and the contrast with the villages of the later Indians. Those at Hopeton are on the third terrace, just below an elevated plain; the rectangle measures 950 by 900, the circle 1,050 feet, twelve gateways, measure 25 feet in width. The two circles measure 200 and 250 feet; one covers a gateway, the other cuts into the square. The walks of the rectangle were 12 feet high and 50 feet base. Two parallel walls extend toward the river, 2,400 feet in length, 150 feet apart. They terminated at the foot of the terrace, where the river once ran through, and a fertile bottom now intervenes. This covered way may have connected the village of Hopeton with Mound City, which is just opposite, and suggests the religious ceremony of crossing the river with their dead, similar to that of the Egyptians.

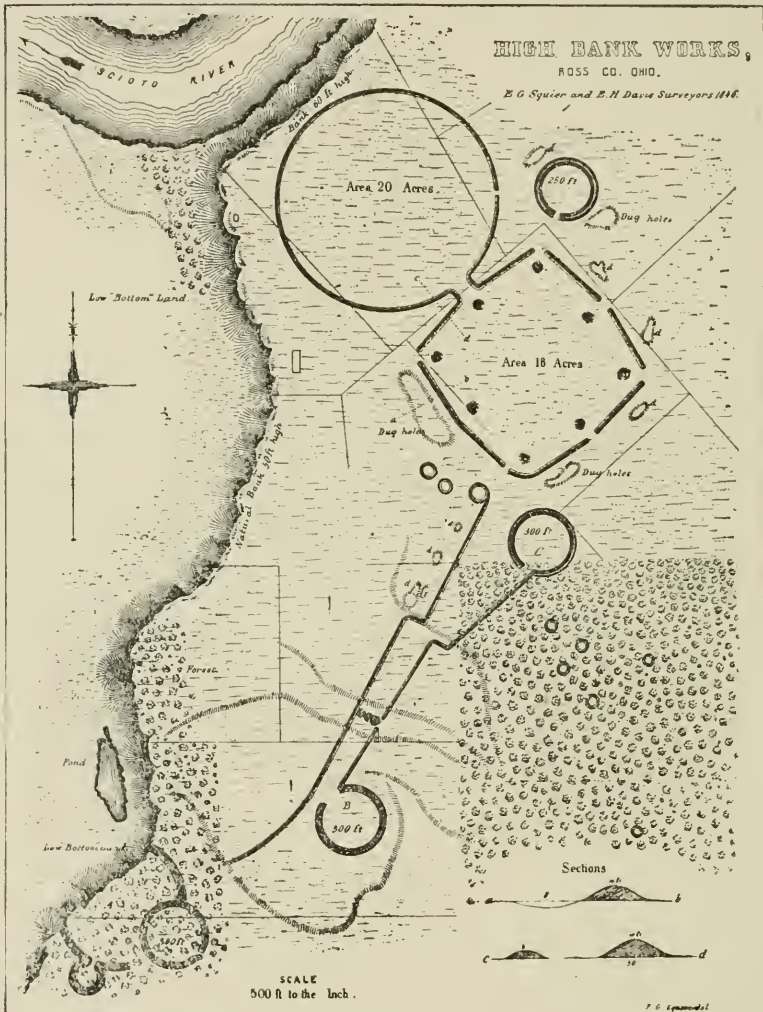


PLATE IV.—VILLAGE ENCLOSURES AND DANCE CIRCLES.

The Cedar Bank work is a square enclosure, and is but half a mile from Hopeton. Between the two were the large truncated mound and circle, giving the idea that these were the sites of temples where the villagers worshipped. The works at High Bank illustrate the same point. They consist of one octagon 950 feet in diameter, a circle 1,050 feet, and two small circles 250 feet; the walls were formerly 12 feet high and 50 feet at base. A large truncated mound 30 feet high was formerly on the terrace, one-quarter of a mile away. A covered way connects the village with the circle on the bank of the river. The age of this village is here shown. The river formerly flowed near the bank and cut away the terrace and a part of the circle, leaving a short distance below this point and an Indian burial place on the brow of the hill, the two contrasting strangely with the ancient works of the Mound-builders.

ing that many of the large mounds, both pyramids and pyramidal and conical, were used for burial purposes. Altars have been found in some of them.

III. We now turn to a comparison of the village enclosures. This comparison might lead us to consider the villages of all the modern Indians. We shall, however, confine ourselves mainly to the enclosures of Ohio, for these seem to be the most complete specimens of village enclosures to be found anywhere among the uncivilized races. We find in them the elements which go to make up village architecture everywhere. The following are the elements given by the Ohio earth-works: 1, the circumvallation; 2, the lodge circle, including the estufas; 3, the temple platform; 4, the observatory or watch tower; 5, the covered ways, including the protected landing, or graded way; 6, the sacrificial place or sacred burial enclosure; 7, the fortifications; 8, the lookout mounds.

We now take up the description of the villages.

1. It should be noticed, that the villages of the different districts all had circumvallations which were very marked. The villages of the emblematic mound-builders had effigies near them, those of the tomb builders had circles of burial mounds about them, those of the pyramid-builders had pyramids around them, and those of the lodge-builders had walls on the outside and lodge circles inside, to characterize them. In like manner the defenses of the serpent worshipers had the serpent effigy to characterize them, and the villages of the sun worshipers had the circle, crescent, horse-shoe, and other symbols to characterize them, each district containing a different religious system and a different class of works which embodied it.

There is this difference, between the villages of Ohio and those found elsewhere. The villages here were always characterized by a double or a triple enclosure, one of them being a square and the other a circle or a cluster of circles. That at Newark contains five enclosures and three sets of parallel walls, with an effigy in one of the enclosures and many small circles scattered around among the covered ways.

The most remarkable of all the village sites are perhaps those at Hopeton, Newark, Circleville, Highbank, and Twinsburg. That at Hopeton is the most beautiful, where there is a square and circle, and two or three smaller circles joining the squares on the outside. There are found on the third bottom. They consist of a rectangle with an attached circle. The rectangle measures 950 by 900 feet. The circle is 1050 feet in diameter. The gateways are twelve in number, and have an average width of about 25 feet. On the east side are two circles, measuring 200 and 250 feet, the gateways or opening to the circles corresponding to the gateways in the square. The walls of the larger work are 12 feet high, 50 feet wide at the base. "They

resemble the heavy grading of a railway, and are broad enough on the top to admit the passage of a coach." It is probable that on the summit of these walls there was a timber palisade resembling those at Circleville, or possibly like those described by Dr. William Dawson as Hochelega. There are no ditches outside the wall, but a ditch inside that of the smaller circles.

This characteristic of the Ohio villages has never been explained. It was probably owing to a peculiar social organization, but that organization is now unknown, and we are left only to conjecture as to what it was. The square may have been used for the governing class, very much as the truncated pyramids at the south were. The large circular enclosure may have contained the lodges of the common people, the village proper. The small circles may have been the sweat houses or assembly places for the villagers. In the cases where there are three enclosures, the third, which was a circle, may have been used by the priestly class, if we may suppose that there was such a class.

2. We have said that the enclosures were used as clan residences. These residences were in villages. Wherever there was a clan there was a village, and what is more the villages were not built by individuals or by families, but were built by the clan. We are uncertain what kind of houses they were. They may have been frail temporary structures built of poles, covered with skins, bark or dirt, similar to those of the Mandans. They may have been circular lodges, such lodges as have left their rings in many places in the south and west. They may have been long houses, however, built after the model of the Iroquois long house. There may have been a difference between them, some of them being mere circular lodges or tents, others square or rectangular buildings, resembling those built by the southern tribes—Choctaws, Chickasaws and Creeks. The sweat houses or estufas, or assembly places, may have been circular buildings, resembling the rotundas of the Cherokees, while the house of the chiefs may have been square, or rectangular, similar to those which were erected on the summit of the platforms or pyramids of the Gulf States. There are lodge circles or rings with fire-beds in Ohio, such as have been found in Tennessee and Missouri, and in some cases in Iowa. These lodge rings, however, are suggestive, for they show what might have been the arrangement of the houses among the Ohio mound-builders. These rings were generally placed in lines around the outside of a central square, or plaza, as the Spaniards call it. Somewhere in the enclosure there would be a high mound which was used as a lookout. This would be near the edge of the village.

3. In the center of most of these villages there is a platform or truncated pyramid, which is supposed to have been the place where the chiefs had their houses. This is the uniform arrange-

ment of the villages, as they are found in the mountain district of Tennessee and in the cypress swamps of Arkansas and Missouri. The arrangement of the Ohio villages may have been the same, at least there are platforms, elliptical or circular in shape, which are situated in the center, showing that a public building of some kind was in the midst of the enclosure.

4. The parallel walls form another peculiar feature of the villages of Ohio. These generally extend from the enclosures to the river's bank, but sometimes extend from one enclosure to another. They were probably intended to protect the people as they went to and from the villages. The works at Newark illustrate this point. (See the Plate.) These works are interesting. They are situated in the midst of a fertile plain, which is surrounded by high hills on all sides, one hill being especially prominent, the hill on which the alligator mound is situated. The works are very extensive. They cover in extent about two miles square, and consist of three grand divisions, which are connected by parallel walls. The most prominent is the circular structure, which is called the old fort. The area of this structure is something over thirty acres. In the center of it is the mound of singular shape, which is called the bird; the head of the bird pointed directly toward the entrance of the enclosure. This so-called bird originally contained an altar. It seemed to point out a religious design to the whole structure, and yet it may have been only a central object in the midst of a village, an object which would show that the villagers were peculiarly superstitious. The gateway of this fort, so-called, is very imposing. The walls are not less than 16 feet in height, and a ditch within is 13 feet deep, giving an entire height of about 30 feet. "In entering the ancient avenue for the first time the visitor does not fail to experience a sensation of awe, such as he might feel in passing the portals of an Egyptian temple." Such is the testimony of the author of "Ancient Monuments," but the writer can bear witness that the same impression was made upon himself when entering it for the first time. The circle is nearly a true circle, its diameter being 1189 by 1163 feet. The circle is united with a square by parallel walls, which form a wide covered way. There is between the square and the creek or river another large enclosure, which is partially surrounded by walls, and which has a complicated system of covered ways connected with it. This seems to have been the central spot for the two villages which were located here. It may have been a place of assembly, a dance ground or a feast place. There is a single circle within it, a number of conical mounds, and a graded way which leads from it to the edge of the terrace, situated south of it. This graded way is a peculiar work, but is similar to those found at Piketon and Marietta. The chief peculiarity of the work is that there are parallel walls; two of these, which are upwards of a mile in length, extend

from the works just described to the octagon situated west or northwest of the old fort or great circle. These parallel lines were probably covered ways, one of which connected the village enclosures with one another, the other connecting the west enclosure or octagon with the bottom land and river's edge, though the two covered ways are nearly parallel. There is a third line, which extends from the octagon southward for nearly two miles. This covered way loses itself in the plain. It may have been designed to protect the villagers as they went to and from the fields.

In the center of the works, nearly surrounded by the covered ways, is a large pond, which may have served as a reservoir of water for both villages, as access could be gained to it through the openings in the walls from either side. There are small circles scattered around among the works. These may have been the estufas or sweat houses, as they all have the same general appearance and dimensions. The chief feature of the work is the octagon and small circle.* The octagon has eight gateways, each gateway being guarded by an elliptical mound or truncated pyramid, 5 feet high, 80 by 100 feet at base. The circle connected with the octagon is a true circle 2080 feet—upwards of half a mile—in circumference. It has on the southwest side what was probably once a gateway, but it seems to have been abandoned and an observatory built in its stead. See Fig. 7.

5. The watch towers and observatory mounds are also to be noticed. The observatory at Newark is very imposing. It is 170 feet long, is 8 feet higher than the general embankment, overlooks the entire work, and may have been used as a look-out station to protect the fields adjoining. A number of small circles, which are called watch towers by Atwater, are found connected with the works, and are chiefly embraced in the area between the parallel walls.

In reference to the works at Newark in its different parts, Messrs. Squier and Davis say: "Several extraordinary coincidences are exhibited between them and the works situated elsewhere. The smaller circle is identical in size with that belonging to the Hopeton works and that at Highbank, which are situated seventy miles distant. The square has the same area as the square at Hopeton and the octagon at Highbank. The octagon has the same area as the square at Marietta. There are mounds inside of the gateway the same as found in other places. The observatory here corresponds to the large observatory at Marietta, though that is somewhat higher. The small circles, which we call estufas, are of the same general character and

*Each has a diameter of about 200 feet, has a ditch interior to the walls, and elevated embankments in the shape of crescents interior to the ditch. This is the common form with all of the small circles which are so numerous in connection with the village sites.

dimensions as those found at Hopeton, at Highbank, at the junction group, and at Chillicothe. The resemblances between the village at Newark and those found elsewhere in this district are, we think, quite significant. We find in many of the other works, especially those on Paint Creek and in the Scioto Valley, that there are three enclosures, two of them being a circle and square, and a third being irregular in form, but generally larger than either the circle or square. This larger enclosure sometimes intervenes between the circle and the square and sometimes it is situated at the side of each, making a tri-

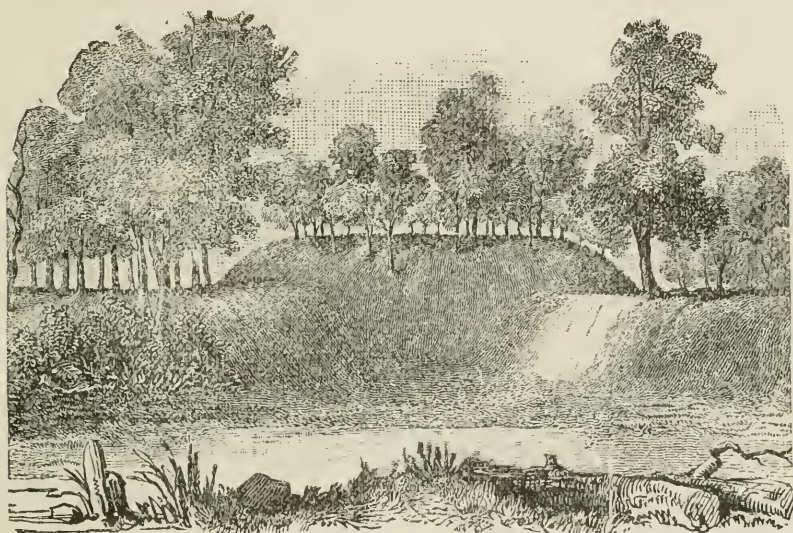


Fig. 7.—Observatory at Newark.

angle with them. It is probable that the same use was made of this large enclosure in the other localities that was made of the large enclosure at Newark, the only difference being that connected with the circle and square, it constituted one village, but in this case it served for the two villages, the connection between them being secured by the parallel wall.*

6. We turn to the description of the graded ways. These are very interesting works, but confirm what we have said about village sites. There is a graded way at Newark, another at Picketon, another at Marietta, and another is said to be situated at Piqua. They all have the same general characteristics. They

*The reader will see this plainly by examining the plates in the Ancient Monuments. See Highbank works, Plate XVI, works on Liberty Township, Plate XY, works on Paint Creek, Plate XXI, 1 and 2, and works on the Scioto near Chillicothe, and on the north fork of Paint Creek, at Old Chillicothe, Plate XXI, Nos. 3, 4. See works at Hopetou, XVII, also works in the Scioto Valley, Plate II, also at Blackwater group, XXI, No. 2. Clark's Works contains the square and the circle, but the circle is inside of the large enclosure, which is very much larger than the ordinary square, being 2800 by 1800 feet, and contains an area of 111 acres, instead of 50.

run from the terrace on which the village enclosure was situated down to the bottom lands. The bottom lands are now dry, but it is probable that at the time the works were built they constituted the river bed. The object of the graded way was undoubtedly to secure a landing place for canoes. The rivers of Southern Ohio are still subject to floods. They were probably severer in prehistoric times. The walls on either side of the graded way would serve a double purpose; they would protect the villagers as they went to the water's edge, and would also keep the canoes from being carried away by the sudden rise of the water. The graded way at Newark has a tongue of land which extends beyond the walls. This may have served

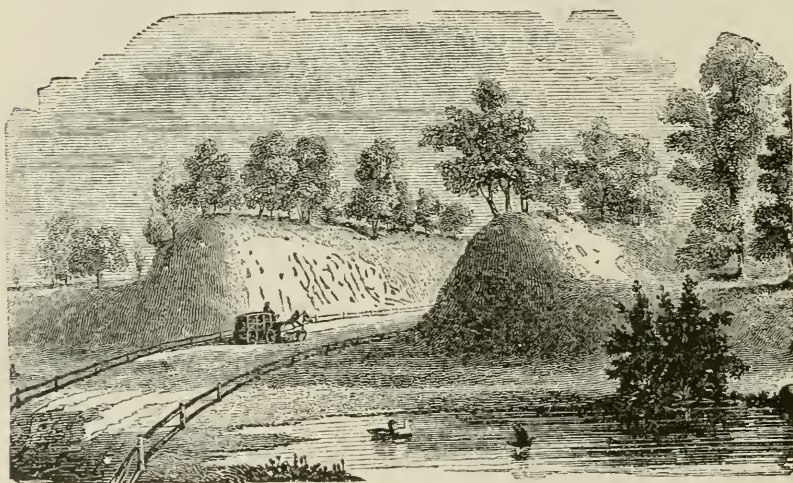


Fig. 8.—Graded Way at Picketon.

as a sort of landing place or quasi wharf. Owl Creek, a small stream, flows south of this work. The elevated grade was extended out to the water in this creek. In the case of the graded way at Picketon and at Newark the incline begins at the bottom land and rises by a gradual ascent to the summit of the terrace. The breadth between the walls at Picketon is 215 feet at one end and 203 at the other, but the way is 1080 feet long; the rise is 17 feet. See Fig. 8. The height of the wall, measured from the lower extremity of the grade, is no less than 22 feet, but measured from the common surface varies from 11 feet at the brink to 5 feet at the upper terrace. The ascent is very gradual. At the upper extremity of the grade there is a wall which runs 2580 feet toward a group of mounds, which at present are enclosed in a cemetery. There is also another mound 30 feet high about 40 rods away. The object of this graded way is unknown, but judging from its similarity to other graded ways in the same state, we conclude that there was a village site on

the upper terrace, though there are no walls perceptible there. The graded way at Marietta is also very interesting. This has already been described. A distance of several hundred feet intervenes between the end of the graded way and the bank of the river, which is here 35 or 40 feet in height. It has been conjectured that the river flowed immediately at the foot of the way at the time of its construction. If so, it would prove the antiquity of the works to be very great. Graded ways similar to these in Ohio are found in Georgia in connection with the high conical mounds, but they generally lead to ponds, and may have been used for a different purpose.

7. In reference to the association of the fortifications with the villages and the sacred enclosures, a few words will be appropriate. It is explained by the peculiarities of clan life. It appears that among all uncivilized races the clan was the unit. The family was nothing when compared with the clan. In fact, the clan seemed to be more important than the tribe. It was much more important than the nation, if the nation existed. It is probable that the communistic system prevailed in most of the clans. Subsistence was secured by members of the clan. The burials may have been in clans, or by a number of clans uniting together. The so-called altar mounds were probably the places where several clans were brought together and presented their offerings and made their burials. The fortifications were also places where the clans came together for common defense.

Many of these hill forts are situated in the midst of village enclosures. One of them, that at Bourneville, has been frequently described. It is very large, containing 140 acres, being situated in the midst of the villages on Paint Creek. The Ancient Fort and that at Hamilton, on the Great Miami, were also large. These were situated not far from other village enclosures. The fortified hill called "Fort Hill," in Highland County, is not very far from villages, being but thirty miles from Chillicothe. The fortified hill near Granville is near the works at Newark, but it was probably built by a later race, as it differs very materially from the works at Newark. The ancient works on Massey's Creek, in Greene County, may have been erected by the typical mound-builders of the district, but of the works at the mouth of the Miami, on the Great Miami, in Butler County and Hamilton County, there is some uncertainty. Some of them may have belonged to the typical mound-builders, but others may have been built by an earlier or a later race.

This is also the use which was made of Fort Ancient. A part of this had been built by a race of effigy-builders, the same race who built the great serpent and made it the great center of serpent worship. A part of it, however, was probably built by the same people who erected the village enclosures, who were sun worshippers. There are some reasons for believing that the ser-

pent worshipers migrated from this part of Ohio and afterwards became the effigy-builders of Wisconsin, as there are many serpent effigies scattered along the bluffs of the Mississippi River, the route which they are supposed to have taken in their migration. The sun worshipers may possibly have been the same people, and yet the probability is that they migrated southward and became the pyramid-builders of the Southern States, embodying that worship in the pyramid as they had here in the circles and crescents.

8. The connection of the village enclosures with the lookout mounds is our last point. These lookout mounds may have been used by all of the different tribes or races which occupied the district, but it is plain that they were also used by the people of the village enclosures. Squier and Davis speak of the lookout on the top of the hill above Chillicothe, the lookout which commands a view of the whole district in which the villages were situated. The writer has visited the great mound at Miamisburg, and found that it commanded a view of the valley in which were the works at Alexandersville, and at the same time was connected with others which reached as far as Fort Ancient. One peculiarity about this mound was noticed. At a certain height on the side of the mound the view extended over the valley where were the various earthworks, but it was limited by surrounding hills or headlands. The summit, however, gave a view of other hills beyond these, and the writer was convinced that it was raised to this height in order that signals might be exchanged between those who were living in the Miami valley and those who were living in the valley west of it, thus showing that the White River and the Miami River were included in one district. Rev. T. J. McLean has also studied out the signal stations and made a complete net-work of them throughout Butler and Hamilton Counties. Whether this system of signal stations extended beyond the district which we are now describing we are unable to say, but we have no doubt that the signal stations were used by the village people who erected the typical earth works of Southern Ohio. Grave Creek mound may have been one of the signal stations, an outwork which was farthest to the east. The high conical mound at Marietta was another. The high conical mound at Circleville reached the height of ninety feet; this is another of the signal stations which were used by the village Indians.

CHAPTER X.

THE RACE QUESTION.

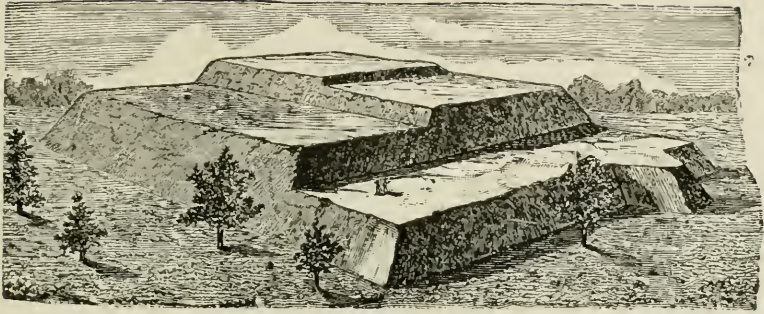
We now take up the subject of the races. It was once the opinion that there were different races on this continent, some of them were identical with the races known to history, and the mounds were supposed to furnish evidence of this. The particular race which built the mounds was not known but the most popular theory was that they were either Phœnicians or were the members of the lost tribes of Israel. Whole books were written to prove this theory, one of them by the celebrated Adair, who was an Indian agent, and had an abundant opportunity to know about the Indians of the Gulf States. The great work of Lord Kingsborough, on which he spent his fortune, and which resulted in his financial ruin, and imprisonment for debt, was marred by a similar theory. Opposite to this theory, is the position which is taken by the members of the Bureau of Ethnology at Washington, which is, to the effect, that all the tribes in America belong to one race, which should be called the Amerinds, a barbarous word coined out of two other words, viz: American Indians. This opinion, however, is not accepted by all; in fact, many of those who have had the best opportunities to know, take the ground that the continent was settled by different stocks that entered from the northwest, and spread out in different directions; the Eskimos toward the north and east along the Arctic coast; the Athapascans south-east into the interior; the Algonkins and Iroquois eastward toward the Atlantic; the Nahuas southward, ultimately reaching New Mexico and Mexico and where they became the founders of the Pueblos and the Toltec civilization.* This is the opinion of Mr. Edward H. Payne and Mr. L. H. Morgan who identified the Mound Builders with the Pueblo tribes. This diversity of opinion has had a tendency to keep the mound builder question open, as some hold that there were different races formerly dwelling in the Mississippi Valley, some of them having come into the valley at an

*The account of their migration is preserved in the picture writings of the Nahuas. There is also a tradition among the Muscogees that their ancestors migrated from the west into the Gulf States and began at an early date to build mounds. The Delawareans and Iroquois also have a tradition that when they came into the Mississippi valley—a people called Alleghewi were living in villages but after long wars they were driven to the south. These traditions are confirmed by the study of the altar mounds and their contents and by other tokens.

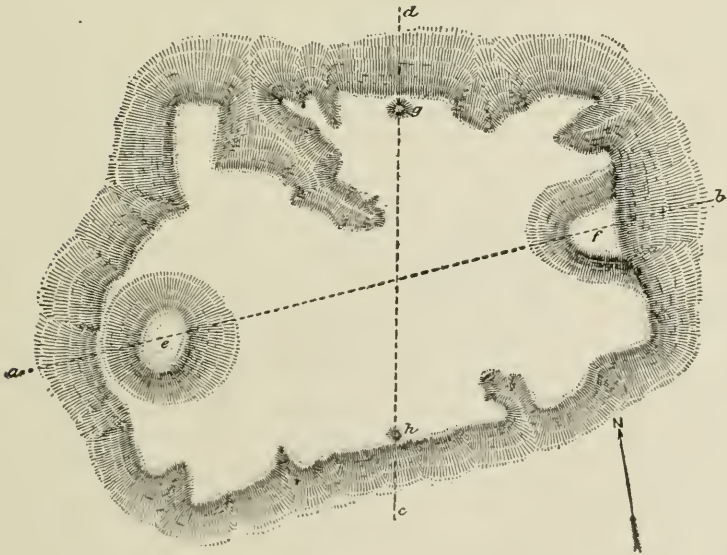
early date from one direction, and some from another, three or four different stocks being represented by the different classes of mounds and earthworks which have been identified though the subject is in that state of uncertainty that no one has been able thus far to say where these stocks originated, or at what time they first settled in the Mississippi Valley. There is one fact which has not received as much attention as it deserves. It is, that there was a succession of population in nearly every one of the districts into which the Mound Builders' territory has been divided. The succession began perhaps before the last glacial period, but continued even up through the time when the continent assumed its present condition, and did not cease until after the Discovery by Columbus. This succession has been traced not only in the relics which have been discovered, but in the skulls and skeletons, as well as in the mounds and earthworks, for the mounds were not built all at the same time, but at different times, and by different peoples,

It is claimed by Prof. F. W. Putnam and others, that the Esquimaux reached as far south as Cape Cod, and left their relics in the shell mounds found on the coast; also, by Rev. W. M. Beauchamp, that they once dwelt in New York state, for their relics have been found there beneath the soil. It is also well known that the Iroquois and Delawares claim that they were preceded by a race called the Allighewi, who have been identified by some as the Mound Builders of the Ohio Valley, though others think they were the Cherokees. Dr. Horatio Hale held that the great Dakota stock once dwelt on the Atlantic Coast, and a portion of them migrated through the Mound Builders' territory and finally reached their home on the Missouri and upper Mississippi rivers. The evidence is that at one time the southern Mound Builders moved northward and took possession of the valley of the Ohio, and built the great mounds at Calokia in Illinois, and at St. Louis, as well as those in Marietta, Ohio. Since the Discovery, several tribes have passed over the same region, among them may be mentioned the Cherokees, the Eries, the Iroquois, the Shawnees, the Delawares, and the Hurons; all of these having used the mounds as burial places, and left their relics in them, but the difficulty has been to separate the relics from one another, and identify the tribe by the relics. The archæologists have also been puzzled over the finding of certain highly-wrought and finely finished relics in the state of Ohio; relics that give the idea that a people or a tribe once dwelt there who had reached a much higher stage of art than any of the Indian tribes of the north, and yet they do not seem to have been left by any white race.

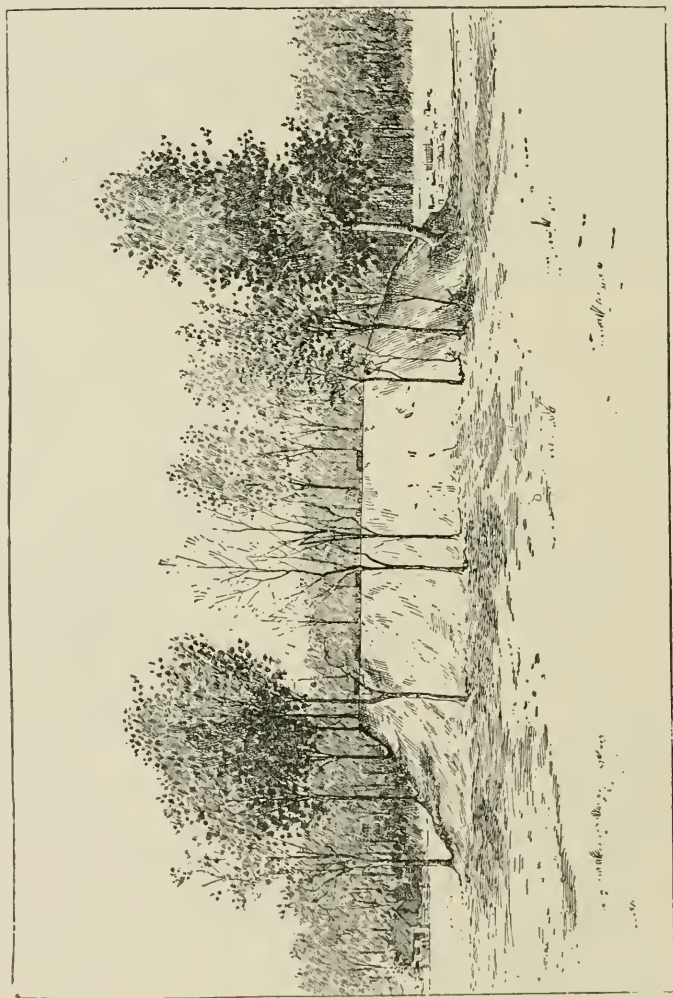
These relics have been found in the larger mounds, such as are situated in the Scioto valley in Ohio, and in the Etowah valley in Georgia. It is also worthy of notice that many burial



PYRAMID MOUND IN ILLINOIS.



PYRAMID MOUND IN MISSISSIPPI.



PYRAMID MOUND AT ETOWAH.

mounds of Ohio present a succession of burials, some of which belong to the early mound builders, others to the nomadic tribes, such as the Algonquins, while the large platform mounds found on the Tennessee river are stratified in such a way as to show that they were built at different times, as a succession of council-houses or great houses had been built upon them.

Another fact is worthy of notice. Each mound building tribe followed the kind of life which was best suited to the region which had been selected for its own habitat. Those who dwelt in the forests naturally took to woodcraft, and to the mingled life of hunting, fishing, and partial land tilling; those who dwelt on the Ohio river where everything was favorable to permanent and stable life, naturally took to the cultivation of the soil, and the establishing of villages, though they were obliged to surround their villages with earth-works as a matter of defense; while those who dwelt in the prairie region of the west naturally followed the nomadic life, occupying their villages in the winter, but moving them in summer in order to follow the herds of buffalo and wild animals to their feeding grounds. It is noticeable that the people who dwelt in the cypress swamps of Arkansas built villages on the sand ridges, while drawing their subsistence from the swamps, and the people who dwelt in the mountain regions of Tennessee and Kentucky "called the Stone Grave" people, established themselves on the rivers and built their fortified villages, in which are the remains of their council-houses, their temples as well as their burial places, and private houses and hearths while the Gulf states present the remains of a people who differed in many particulars from all others. These were visited by the early explorers under Ferdinand de Soto, and were found to be living in large villages, and to be agriculturalists, their fields of corn extending from village to village, but their houses generally being concentrated into a small compass.

Another thought arises in this connection. The magnitude of the mounds and earthworks on the Ohio River and the Gulf States, impresses nearly everyone with the conviction that the people who erected them were more industrious, energetic and better organized than the hunter tribes farther north, the contrast between the two classes of earthworks suggesting the idea that they were erected by different races. The largest of the earthworks were situated in southern Ohio, and constituted the village enclosures of an agricultural tribe which formerly dwelt there, but was driven off by the combined forces of the Iroquois and Algonkins, fierce battles being fought in their territory. These villages were surrounded by earth-walls, which perhaps were surmounted by timber stockades, making a series of "walled towns" which must at one time have presented a very imposing appearance.

In some of the valleys, especially those of the Scioto and Miami Rivers and their branches, several villages were cluster-

ed together, making a busy scene when they were occupied, and the rich fields were under cultivation. These village enclosures were all connected with the river banks, agricultural fields and the places of religious gatherings where their sacred dances were conducted, by so-called "covered ways," showing that the people were constantly besieged by enemies and so needed the protection of earth-walls.

There is no place on the continent which is more suggestive of conflict than southern Ohio. The Pueblos of the west were built in stories, and in such a way that large villages could be contained in a single great house, the lower story presenting a dead wall without door-ways, so that no lurking foe could gain entrance to the village except by the aid of ladders which were drawn up at night, the architecture of the village suggesting that the people who dwelt in them were surrounded by hostile forces.

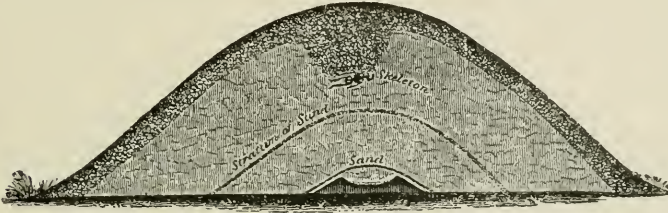
The same is true of the Cliff Dwellings, for they were placed in the most secure positions amid the cliffs and were protected by towers, which were either situated above the cliffs or in the valleys below.

The villages of the Mound Builders also convey the impression that hostile forces were besieging them, for on every hill-top adjoining the valleys where the villages were situated, were high conical mounds on which were placed sentinels by day and signal fires were lighted by night, so that no attack could be made without an alarm being sent from village to village, and from valley to valley. These village enclosures and high conical mounds excite our wonder especially when we consider the poor appliances for constructing them. There were no steel spades or shovels known to the people; no tramways or cars for carrying the dirt of which they were built, as no iron-bound wheel has ever been found, and no evidence that the wheel or axle was known to the people. All that the builders of the earth-works had to help them in this work were the rude stone axes, the few copper spades, a few stone hoes, a number of baskets woven out of reeds, and such other contrivances as a rude people had devised. The work of constructing the walls which surrounded the villages, and building up the lofty lookout mounds was very difficult under the circumstances, but was accomplished by the combined forces which were undoubtedly directed by their chiefs or by such overseers or officers as had been appointed.

I. The evidence is that the masses were governed by the ruling classes exactly as they were in the southern states among the Muscogee tribes who built the pyramid mounds which are so numerous in that region. The view which is presented by the great valley is a very interesting one, for it suggests that here was a state of society, and a form of religion, quite different from that which prevailed among the hunter tribes to the north, east, and west of the region, and was like that which

existed among the so-called civilized races of the south-east where the masses were under the control of kings and priests.

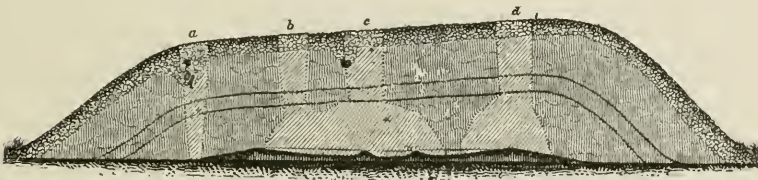
We should say that there is in this region a greater variety of tumuli or burial mounds than is found any where else on the continent. Some of these are stratified and show a succession of burials. They suggest to us that the region was occupied by different tribes, each tribe having its own method of burial and its own class of relics, and its own customs and ways. This renders the region an interesting field for study,



MOUND NO. 2, MOUND CITY.

for it confirms what we have said of the migration of tribes through this same valley.

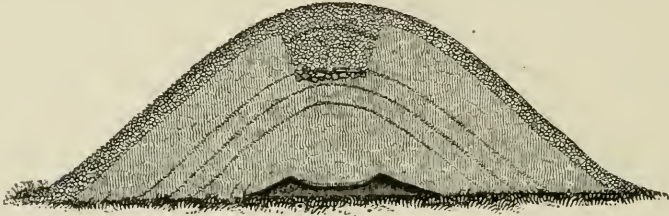
We are to notice further that there are altar mounds in southern Ohio, and that the altars contain a great variety of relics, great numbers of which show a high degree of art. What is remarkable about the altars is that they are always found at the bottom of the mounds, thus showing that the people who first occupied the region, and began the process of mound building, were far more advanced than those who followed them, and for this reason they have been called the "mound builders," par excellence.



MOUND NO. 3, MOUND CITY.

In studying these altar mounds and the so-called temple mounds which adjoin them, we find that they were generally close by some village enclosure, and probably mark the places of sacrifice and religious ceremony, which the early mound builders were accustomed to observe. This confirms the position we have taken that the earth works which surrounded the village enclosures, were symbolic of sun-worship, as they abound in circles and squares, and in connection with them are crescents and crosses, giving an idea that there was a recognition of the four points of the compass, and motion of the heavenly bodies, as well as the phases of the moon. All of them were

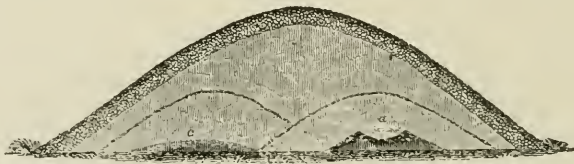
objects of worship, and furnished motives for the people to observe religious ceremonies at certain periods of time. This habit of sacrificing to the heavenly bodies, and making offerings to them, at particular periods, is evident from the fact that in many localities relics have been found, partly burned, upon the altars, and even human bodies have been partially cremated, so that we are obliged to acknowledge that they were a very religious people and were under the direction of their priests who kept the calendar, and ordered the ceremonies.



MOUND NO. 18, MOUND CITY

The peculiarity of these altar mounds is, as we have said, that they were near villages, sometimes within them, which villages were surrounded by circular walls, the altars themselves being in the shape of circles and squares, and sometimes surrounded by crescents.

It is true, also, that there were many dance grounds on the high lands, overlooking the beautiful villages, all being surrounded by earth-works in the form of circles and crescents, and connected with the village enclosures by covered ways, or



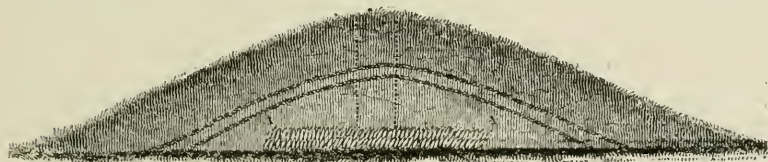
MOUND NO. 6, MOUND CITY.

parallel walls; thus showing that the builders were an industrious and religious, and at the same time a peaceable people and depended upon their earth-works and village enclosures for defense. All this throws much light on the village life of the people that prevailed, and makes us realize how permanent and peaceful their villages were.

The impression formed by the study of the earth-works and relics left by this early people, is very different from that formed from the study of the so-called stockade or palisade villages which are so numerous in the State of New York, and to a certain extent in northern Ohio. The impression is, that there was a succession of tribes, that the early people were driven

away by wild tribes who came in and built forts and stockade villages.

We do not undertake to solve the problem or to say who the people were who built these village enclosures, and these altar mounds; but we associate them with the great stone forts and the high lookout mounds which are seen upon the hill-tops overlooking the valleys, and conclude that there was formerly a confederacy of tribes which was well organized and governed by permanent officers, who might either be called kings and priests or chiefs, and medicine men; and one object



MOUND NO. 10, MOUND CITY.

of building the high conical mounds was, that the people dwelling in a village in one valley might send signals to those living in another valley, in time of attack, that all might escape to the great forts which were in the vicinity, and were so well provided with natural defenses.

The picture is certainly an interesting one, and proves that the "mound builders," so called, of the Ohio valley, were much more advanced and perhaps better organized, and governed, than were the wild tribes which dwelt in the stockade forts farther north, or the nomadic tribes which roamed over the prairies of the west and were mainly hunters.

The clue to all this picture is furnished us by the village



PAVED ALTAR AT MOUND CITY.

life that prevailed and filled the villages with such a busy scene. In proof of this, we shall speak of the altar mounds and their contents; but before doing so shall merely refer to the opinion of those gentlemen who first entered into the work of exploring the mounds and enclosures, and exhumed from them so many highly wrought relics of various kinds; Squier & Davis. The following is their description of the different earth-works and mounds:

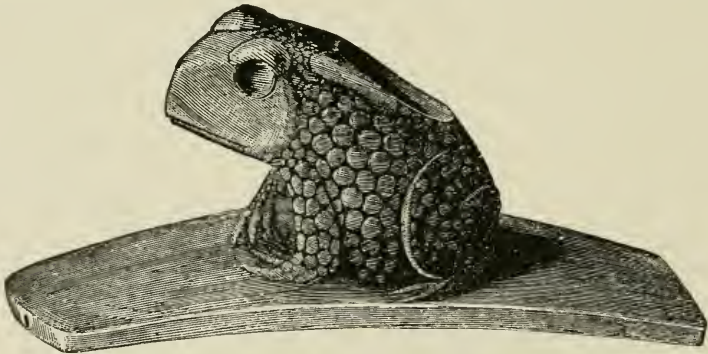
"In connection, more or less intimate with the various earth works already described, and the tumuli or mounds; together these two classes of remains constitute a single system of works, and the monuments of the same people. While the enclosures impress us with the number and power of the nations who built them, and enlighten us as to the amount of military knowledge and skill which they possessed, the mounds and their

contents serve to reflect light more upon the customs and conditions of art among them.

Within these mounds we must look for the only authentic remains of their builders; they are the principle depositories of ancient art; they cover the bones of the distinguished dead of remote ages, and hide from the profane gaze of invading races the altars of the ancient people.

In respect to the position of the mounds, it may be said that those of Ohio, occur within or near enclosures; sometimes in groups, but oftener detached and isolated. The altars or basins found in these mounds are almost invariably of burned clay."

"The great size of the foregoing structures precludes the idea that they were temples in the general acceptation of the term; as has already been intimated they were probably like the great circles of England; the squares of India, Peru, and Mexico, within which were erected the shrines of the gods of the ancient worshippers, and the altars of the ancient religion. They may have embraced consecrated groves, and as they did in Mexico, the residences of the ancient priesthood. In Peru, none except the blood of the royal Incas, whose father was the son, were permitted to pass the walls of their primitive worship, and the Imperial Montezuma humbly sought the pardon of his insulted gods for venturing to introduce his unbelieving conqueror within the area consecrated by their shrines. Analogy would therefore seem to indicate that the structures (circles and squares) under consideration, were nothing but sacred enclosures. We find within these enclosures, the altars upon which the ancient people performed their



SCULPTURED PIPE FROM ALTAR MOUND NO. 8.

sacrifices. We find also pyramidal structures, (platform mounds) at Portsmouth, Marietta, and other places which correspond entirely with those of Mexico and Central America, except that of being composed of stone, they are constructed of earth; and instead of broad flights of steps, they have graded avenues and spiral pathways leading to their summits."

See Ancient Monuments page 157.

The first locality that we shall speak of is the one called the "Mound City;" it is situated in Ross county, Ohio. The most striking feature of this work is the unusual number of mounds which it contains; there are no less than twenty-four within its walls. All of these have been excavated and found to contain altars and other remains which put it beyond question as a place of sacrifice. One mound is 17 feet high with a broad base nearly 100 feet in diameter.

These altar mounds were evidently the places of sacrifice of the people who dwelt in the villages of the Scioto Valley, and were probably the places of sacrifice for the entire tribe, rather

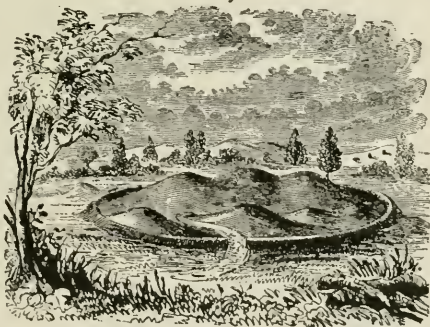
than one clan, as the relics offered were more numerous than one clan would be likely to present.

As proof of this we refer to the fact that within a distance of twelve miles there are no less than six village enclosures, and a great number of burial mounds scattered indiscriminately over the surface, and the great fortified enclosure on the north fork of the Paint Creek was but a few miles away, while lookout mounds were situated on the hill-tops surrounding the valley, showing that the people were banded together for defense as well as for worship.

That altar mounds were connected with the village enclosures and were the places for sacrifice for the people dwelling in them is proved by the works which were discovered on the north fork of Paint Creek, an enclosure that contained 111 acres, and near the centre of which was a smaller enclosure which contained the altar mounds. This semi-circular enclosure was about 2,000 feet in circumference; within it are seven mounds, three of which are joined together, forming a continuous elevation 30 feet high, 500 feet long, 180 feet broad at the base. All the mounds were places of sacrifice containing altars.

The first discovery was made at what is called Mound city, a small enclosure situated in the Scioto valley not far from the

city of Chillicothe, in the region where village enclosures are numerous, and where there are high lookout mounds on the hill-tops and forts not far distant, giving us the idea that it was the home of a numerous people, all of whom dwelt in walled villages and were confederated together for mutual defense, and gained subsistence by cultivating the



ENCLOSURE ON PAINT CREEK.

soil in the rich bottom lands and were happy and prosperous.

Mound City contained twenty-six altar mounds which varied from 7 feet high and 55 feet base to 11 feet high 140 feet base, all of which contained an immense number of articles, many of which were wrought into the shape of birds and beasts, and were the finest specimens of art which have been discovered.

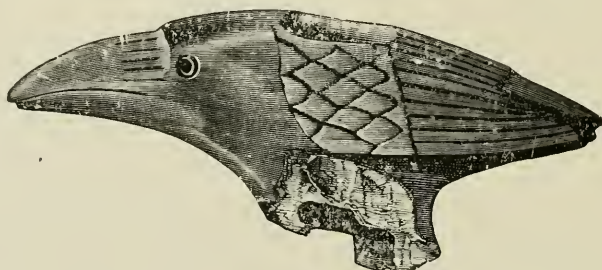
The chief impression about the people is that they were very religious, and so under the control of chiefs and priests, that nearly everything was done from a religious motive; even their dances and amusements were in reality religious ceremonies. In this respect they resembled the mysterious people called Cliff Dwellers, and their survivors the Pueblos of the far west. In proof of this we would refer to the great number of altar mounds and the wonderful relics which they contained,

all of which show that the people had not only reached a high stage of advancement in sculptured art, but they were willing in the time of emergency to part with their most precious relics on which they had expended so much labor and care, in sacrifices to their divinities. Such is the impression we have gained, both from the examination of the works themselves, and from the testimony of the various explorers who have dug into the mounds and discovered these altars and their relics.

The following is a description of the altars and relics taken from them by Squier & Davis the authors of *Ancient Monuments*:

A large number of these altars were found in an enclosure called Mound City, on the banks of the Scioto river. One of these is 7 feet high and 55 feet base; it was stratified and contained an intruded skeleton near the top; the altar was perfectly round and contained pottery vases of excellent finish; copper disks; a layer of silvery mica in sheets overlapping each other; and calcined bones.

Another mound No. 2 was 90 feet in diameter, 7½ feet high; it was stratified and contained an intruded skeleton at the top; the altar measured 10 foot in length and 8 feet in width, height is 18 inches; among the ashes was a beautiful vase. In the mound 3 feet below the surface were found two well preserved skeletons; many implements of stone, horn and bone; sev-



SCULPTURED BIRD FROM ALTAR MOUND NO. 8.

eral hand axes and gouges of stone; articles made from the horns of the elk; one from the shoulder blade of a buffalo; a notched instrument for distributing paint and lines on the faces of the warriors.

Another mound No. 4 was 90x60 feet base, 6 feet in height and an altar, the base of which sank below the original surface of the soil.

Another mound No. 3, egg-shaped, measuring 140 foot in length, 60 foot wide, 11 feet high, contained a double altar, one within another. The remains found in this mound consisted of a quantity of copper; many implements of stone; a number of spear heads beautifully chipped out of quartz and garnet; a quantity of fragments of quartz and crystals of garnet; obsidian arrow point; a number of fine arrow-heads of limpid quartz; two copper gravers or chisels, one measuring eight inches in length; copper tubes; a couple of carved pipes made out of marble, one of them the figure of a bird resembling the toucan.

Another mound No. 8, contained an altar 6 feet 2 inches by 4 foot, and, in the altar about 200 pipes, much broken up by the heat, composed of red porphyry stone resembling the pipe stone, all of them carved in figures of animals, birds and reptiles, all of them executed with strict fidelity to nature, and with exquisite skill, among them an otter holding a fish in his mouth; the heron also holds a fish; the hawk grasps a small bird in its talons, tears it with its beak; the panther; the bear; the wolf; the beaver; the squirrel; racoon; hawk; heron; crow; swallow; buzzard; paroquet; toucan; and other birds; the turtle; frog; toad; and rattle-snake, are recog-

nized at first glance. But the most interesting and valued are a number of sculptured human heads, no doubt faithfully representing the physical features of the ancient people by whom they were made.

Another mound No. 18, has three strata an intruded burial, and an altar which contains no relics but at a depth of $4\frac{1}{2}$ feet a pavement 6×4 feet was reached, upon this pavement a skeleton upon which a fire had been built, partially cremating it.

Another mound No. 7, measured $17\frac{1}{2}$ feet high, 90 foot base; it was stratified at the depth of 19 feet, was found a smooth level floor of clay, and a layer of silvery mica formed a rounded sheet one foot in diameter and overlapping each other like the scales of a fish; the entire length of this crescent was 20 feet and greatest width was 5 feet. This crescent suggested the idea that it was used as the symbol of the moon and was dedicated to that luminary.

Mound No. 9, was found in the great work on the north fork of Paint Creek, and contained an altar, within which were found several instruments of obsidian; several scrolls cut from thin sheets of mica, used as ornaments of a robe; a trace of cloth; a number of bone needles; graven tools; a quantity of pearl beads. Another mound contained an altar that had a casing of pebbles and gravel paved with small round stones, a little larger than a hen's egg; and upon the altar ten well wrought copper bracelets encircling some calcined bones, conveying the idea that the body had been cremated.

Another mound No. 10, in the same enclosure, has two sand strata, but instead of an altar there are two layers of discs chipped out of stone. They were placed side by side, a little inclining and one resting a little above the other. Out of an excavation of 6 feet long by 4 feet wide, not far from 600 were thrown. Supposing it to be square we have not far from 4,000 of these discs represented here.

It should be remarked that while all these have the same general features, no two are alike in the size and shape of their altars, or character of the deposit made on them. One mound covers a deposit made almost entirely of pipes; another of spear heads or of galena, or calcined shells or bones.

We pass from this region to the stone graves of Tennessee. These bring us into contact with another class of mounds, and another race or tribe of people. Gen. Gates P. Thruston is an authority on this subject.

The examination of the stone graves in Kentucky and Tennessee, confirms what has been said about distinct races having existed in the Mississippi valley. He says:

"They present unmistakable evidence of a state of society above the social condition of the pre-historic tribes of Canada and the northeastern states, including New York, Pennsylvania and Virginia. This well recognized fact seems to separate the culture of the Mound Builders from that of the ancient tribes of the northeast, the Iroquois, the Hurons, and the Indians of the Algonkin stock by well defined lines of distinction, indicating that the tribes of the north were more nomadic and lived in a more barbarous state.

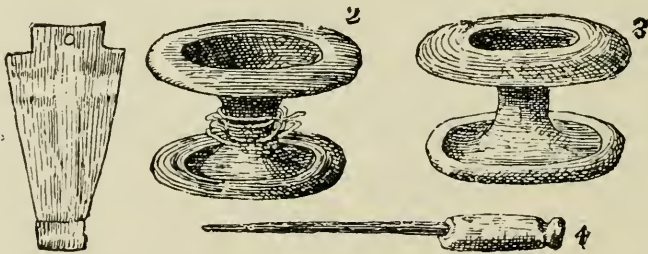
Unmistakable evidences are also presented in the preceding pages of contact, intercourse, or relationship, between the aborigines of the Mississippi Valley, and the ancient peoples of the southwest and of the Pueblo districts. The similarity in the forms of the crania found in the ancient graves within the mound area, and the crania of the ancient inhabitants of Mexico, Central America, Peru and the Pueblos, suggests a common origin. The broad headed or brachycephalic type is predominant. It appears to distinguish the cranial types of the old peoples of the south and southwest from the long or oval crania of the northern tribes. The short, broad skulls seem also to have represented the ethnic tendencies toward progress and development that characterized the ancient Mexicans and the Indians of the village or semi-village class."

Prof. Putnam, in speaking of the diversity of races, says:

"We find that the prevailing form of the skulls from the older burial places across the northern portion of the continent, from the Pacific to the Atlantic, is of the long, narrow type (dolichocephalic), while the skulls of the old peoples of Central America, Mexico, and south-western and southern portions of the United States, are principally of the short, broad type (brachycephalic). Following the distribution of the long and short skulls, as they are now found in burial places, it is evident that the two forms have spread in certain directions over North America; the short, or broad-headed race of the South spreading out toward the East and Northeast; while the long, or narrow-headed race of the North has sent its branches southward, down both coasts, and toward the interior, by many lines from the North, as well as from the East and West. The two races have passed each other here and there; in other places they have met; and, probably, nowhere, is there more marked evidence of this meeting than in the Ohio Valley, where have been found burial places and sepulchral mounds of different kinds and of different times."

Mr. Thruston speaks of the art of the stone-grave people as furnishing analogues and identities which connect the antiquities of Tennessee with the ancient arts and industries of the Mexico and Pueblos. He says:

"The remarkable and mythological figures upon the shell gorgets and



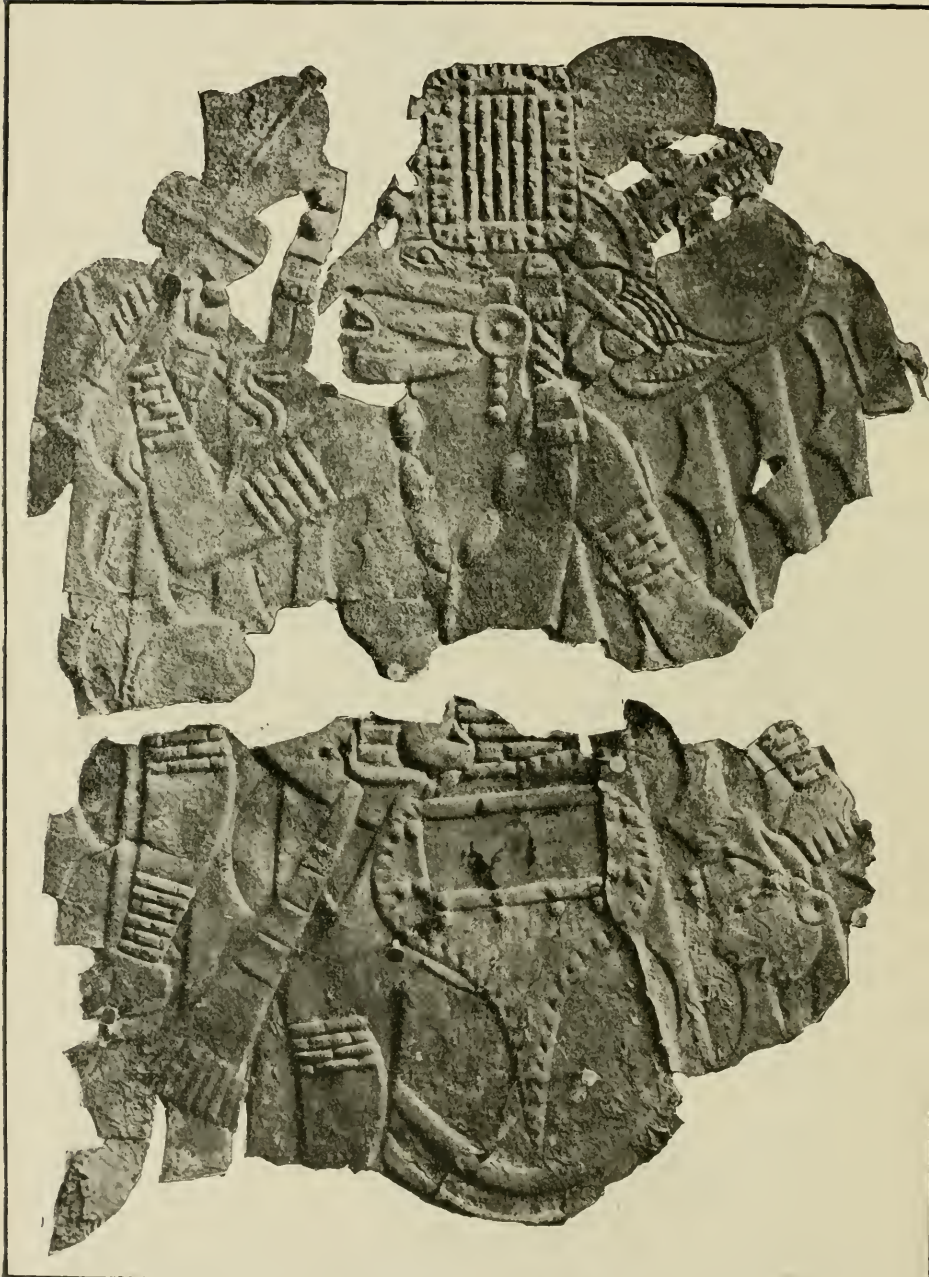
SPOOL ORNAMENTS FROM TENNESSEE.

copper plates surely show unmistakable evidences of a Mexican origin or affiliation. The tube pipes from the valley of the Cumberland, the large ear ornaments, the images, the idols, the grotesque forms, the long ceremonial flints—all seem to connect the mound tribes with the arts, culture, or religion of the peoples of the west and southwest, and to separate them from the tribes of the north and northeast. The better class of pottery from the graves and mounds, and the ancient ware of the Pueblo districts of New Mexico and Arizona, also show decided marks of resemblance.

II. The best proof that the Southern Mound Builders were allied to the people of the far west and south-west, is given by the shape of the mounds themselves. These are truncated pyramids and were built in terraces. The abodes of the ruling classes were upon the upper platform, and were built around a hollow court exactly as they were among the Pueblos of the west and the ruined cities of the south-west, especially at Palenque. This is not a mere co-incidence nor was it the result of the physical surroundings, as has been maintained but was an ethnic style. The same form of construction was peculiar to the Nahua stock and all who descended from them. These pyramid mounds differ from the villages of the northern tribes where the enclos-



COPPER EAGLE FROM ETOWAH MOUND.



EAGLE MAN FROM ETOWAH MOUND.

ures are full of mounds and burial places, lodge circles, hearths, and stone graves, which show that they were occupied for a long time. The skulls that have been found in the mounds show that they were occupied by different races—an earlier and later. The swamp villages were fortified by walls which surrounded the enclosure, and were at the same time protected by the isolated position of the villages upon the ridges.

The evidence is that the Ohio River was the dividing line between two classes of Mound-Builders—the northern and the southern. But it was also the line of migration for eastern tribes to the west, and for western tribes to the east. A succession of tribes, is also shown by the relics and the works. All the tribes are supposed to have occupied villages, which were surrounded with earth walls. They had also burial mounds, which were connected with the villages; though it is uncertain whether they were house burials, or what may be called clan



Double Mound near Chillicothe.

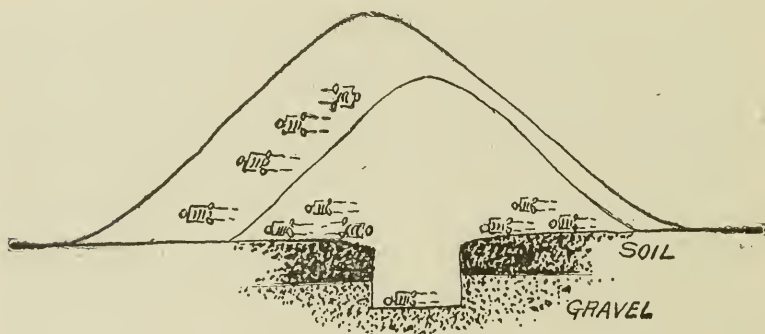
burials. The difference between them consisted in the fact that single families might deposit their dead in the very spot occupied by their houses, but in case of clan-burials there would be a common burial place for all the members of the clan.

In reference to this question, recent explorations have revealed the fact that certain mounds contain the remains of houses, situated at the level of the ground or lower, and were used for the burial of several persons, with such relics as were in common use, including those used for personal ornaments, as well as those for domestic purposes; while at a higher level bodies were deposited in the ground without any structure over them, yet very similar relics were deposited at their side. One such mound has recently been described by Mr. W. C. Mills, which seems to have been built at different times.

This mound was built over a mound, the shape of the original mound being retained, but the latter mound arose to a greater

height and extended to either side. The upper mound contained similar relics, but there were no traces of the house in it, or even of a hearth.

It is worthy of notice that the mounds of Tennessee contained stone graves, which were so arranged as to resemble a conical hut, the bodies being placed in the graves with the relics, but the space in the center was left as if designed for the central fire. The superstition of the people was that the fire continued to burn, and that the burial mound continued to be the abode of the spirits of the dead. The relics found in these stone graves of Tennessee resemble, in some respects, those found in the Ohio Valley, but there was a symbolism in them, which shows that there was a different religious system prevailing in the two sections. The symbols show that there was a recognition of the revolving sky, as well as the bird, the serpent, and the various animal divinities; this would naturally suggest that among the Southern Mound-Builders there was a higher



Succession of Burials in the Adena Mound.

state of civilization and a different form of religious belief.

The same thing is proved by the relics discovered near the Etowah Mound. Some of these relics consisted of copper plates, which have been hammered or swedged, so as to present human forms with wings protruding from the shoulders, having masks on their faces, like beaks of birds; ornaments extending from the head, like the double-bladed axe so common in the regions of the far East, and carrying in their hands a mace on which was a figure of the cross and other symbols. In the same mound was found a copper plate, with an eagle stamped upon it, the shape suggesting that it was used as the symbol of divinity.

In reference to all the relics found in the stone graves, near the Etowah Mounds, we may say that they resemble those found in the neighborhood of the Cahokia Mound and as far west as the mounds in Missouri and Arkansas. But those found in the Ohio mounds are of quite a different character.

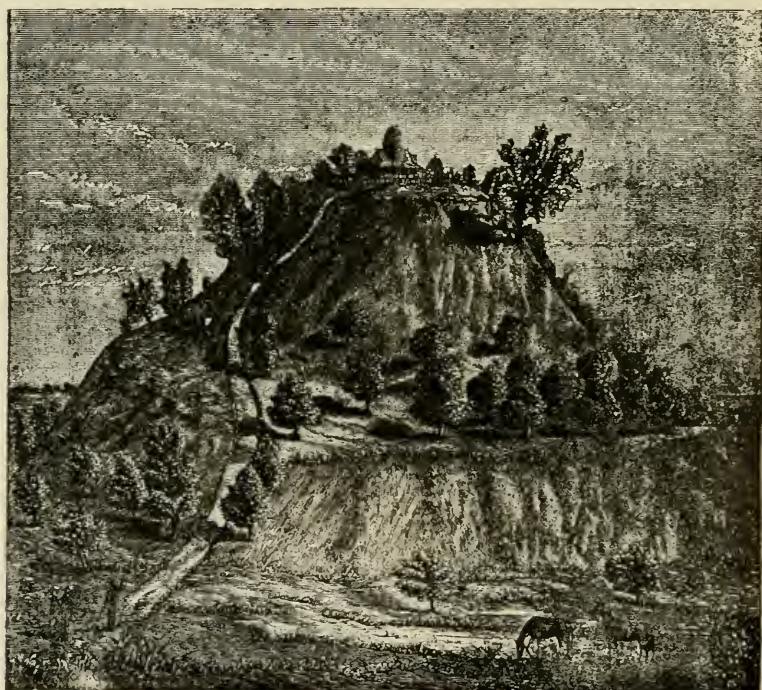
III. The same thing is proved by the shape of the mounds. We have seen that in Ohio the large majority of the burial mounds were hemispherical, and that the earth walls were in the form of circles and squares, and occasionally crescents, yet they formed village enclosures. This suggests the thought that the village enclosures themselves were made to represent the symbols which were common and well known to the people, and that there was a sense of security and of sacredness connected with them. All the processes of social life were conducted under the direction of religious leaders, and embodied the religious beliefs of the people. If we take, then, the works and relics found in the Ohio Valley and compare them with those common in the Gulf States, we shall find a great contrast.

The pyramids show that the villages were built by those who were subject to the authority of chiefs, and who worked in masses under the control of a few master minds. The scarcity of burial mounds show that the bodies were preserved in dead houses, and were afterwards subject to "bone burials," or were cremated. The absence of walls show that they were a peaceable, agricultural people, who erected pyramids as the abodes of their chiefs. These pyramids were arranged in clusters and were surrounded by artificial ponds called fish preserves, but were generally situated upon the banks of some stream. They were often built upon the bottom lands, where the soil was fertile, but sometimes upon the hill tops. Those on the low lands are supposed to have been erected for the accommodation of the chiefs, priests, and elders, or the ruling classes, but were also used as places of refuge, by all the villagers, in the time when the freshets flooded the bottom lands. This is the best explanation which can be given of the pyramidal mounds which are found on the Great American Bottom, opposite St. Louis. Here, there are about sixty high pyramids. They are arranged in parallel lines, some of them in pairs, with small ponds or excavations near them. The great mound called Cahokia Mound has often been described. It covered sixteen acres of land, and was about ninety feet high. It is surrounded by rich fields, in which are an immense number of relics, especially pottery vessels, and vast quantities of bones have been exhumed. Mr. J. M. Brackenridge says of this :

There is no spot in the western country capable of being more highly cultivated, or giving support to a more numerous population than this valley. If any vestige of an ancient population could be found, this would be the place to search for it. The great number of mounds and the astonishing quantity of human bones dug up everywhere, or found on the surface, with a thousand other appearances, announce that this valley was at one time filled with inhabitants and villages. The whole face of the bluff which bounds it on the east, appears to have been a continued burying ground. But the most remarkable appearances are the two groups of mounds or pyramids themselves: one about two miles above Cahokia (a village nearly extinct), the other nearly the same distance below it. At a distance, they resemble enormous hay-stacks scattered through a meadow. One of the largest, which I ascended, was about two hundred paces in circumference

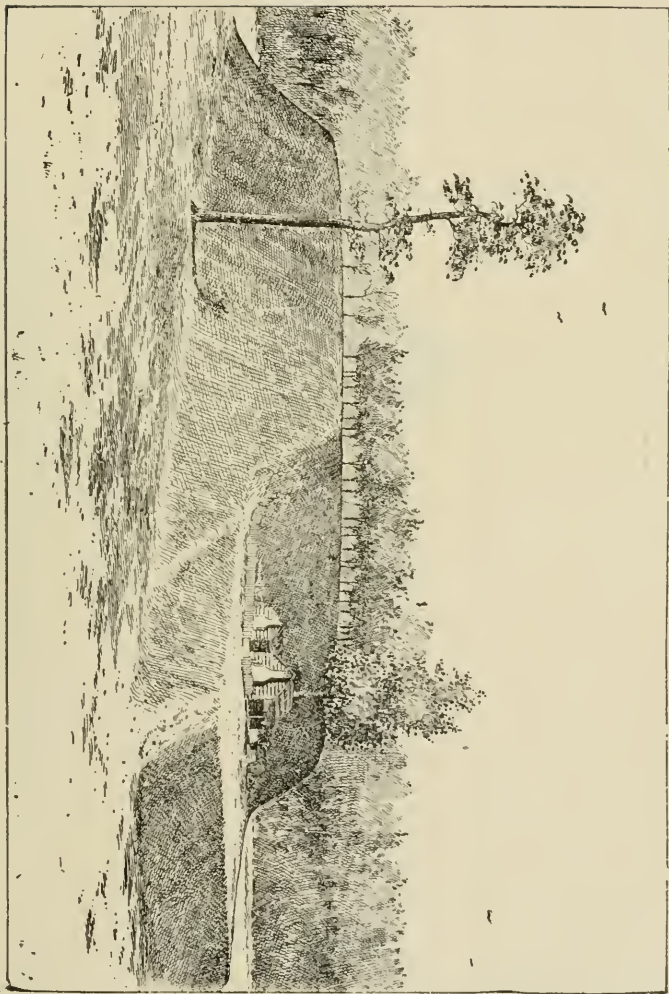
at the bottom. The form was nearly square, though it had evidently undergone some alterations by the washings of the rains. The top was level, with an area sufficient to contain several hundred men. The prospect from the mound was very beautiful. Looking toward the bluffs, which are dimly seen at a distance of six or eight miles, the bottoms at this place being very wide, I had a level plain before me, bounded by islets of wood and a few solitary trees; to the right (the south), the prairie is bounded by the horizon; to the left, the course of the Cahokia River may be distinguished by the margin of wood upon its banks. Around me I counted forty-five mounds or pyramids, beside a great number of small, artificial elevations. These mounds cover more than a mile in extent, to the open space on the river.

This description by Mr. Brackenridge was written in 1811, and gives the impressions which were formed upon his mind, as he looked upon them in their undisturbed state. Since his

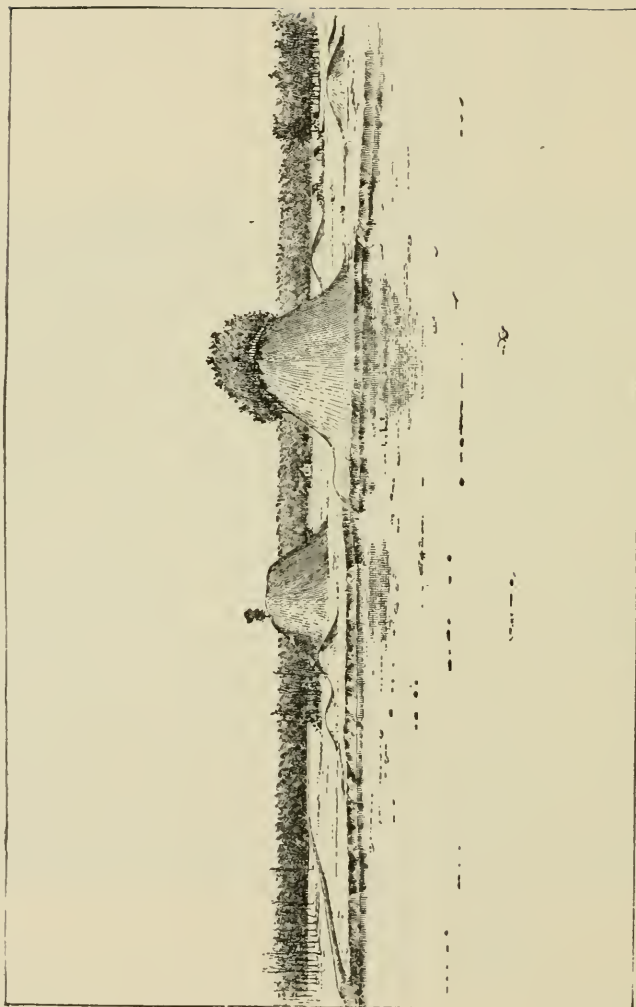


Cahokia Mound Restored.

time, the entire bottom land, which is called the Great American Bottom, has been filled with an industrious population. The mounds have been taken for building sites, and are now covered with houses, barns and kitchen gardens. The summits, when partially leveled, are large enough to meet the requirements of a first-class farmer's abode. There are sixty-five of these mounds within a space of two miles. All of them are arranged on either side of the wide roadway, which leads from the bluff to the banks of the river. The Great Mound stands by itself, like a giant, in the midst of the plain—over-



PYRAMID MOUND AT PINE BLUFF, ARKANSAS.



THE KNAPP MOUNDS IN PULASKI COUNTY, ARKANSAS.

topping the other mounds; while the farm house by its side looks like a little bird cottage, so great is the contrast between the prehistoric and the historic structures.

These truncated pyramids were evidently used for the accommodation of the village chiefs, and were surrounded by the huts of the common people. The number of them shows that a large population had concentrated here.

Mr. Brackenridge speaks of the two mounds in the distance on the bluff. One of these is called Sugar Loaf. It was evidently used as a look-out, as it commands an extensive view. So favorable was this mound for an observatory, that the Coast Survey took advantage of it, and made it a station for triangulating. Our conclusion is that here, opposite the mouth of the Missouri, a people resembling the race of Southern Mound-Builders once made their home, and carried on agriculture in the midst of this rich bottom land, but built the pyramids as the abode of the ruling classes and a refuge for the people in the time of high water.

The same impression is formed by the group on the bluff at St. Louis. It is fully as interesting as that at Cahokia. The peculiarities of the group were as follows: First, they were arranged in a line on the second terrace, overlooking the bottom lands and the river, but at a height so as to be free from any over-flow; second, there was in the center of the line a group, which was in the form of an amphitheater, the back part forming a graceful curve, but the front part flanked by a pyramid on one side, and the "falling gardens" on the other; third, the mound, called "Falling Gardens," was terraced, the terraces all on the east and so situated as to give a good view of the river; fourth, the big mound was located at the extreme north of the line, and was connected with the group by a series of irregular pyramids, all of them on high ground. The arrangement of the mounds about a hollow square or open area is significant, for it is the arrangement which is very common among nearly all the groups scattered through the Gulf States. It indicates that the pyramids were built for the accommodation of the village chiefs; the large mounds for their abodes, and the open area in the center of the pyramids as the assembly place for the entire village.

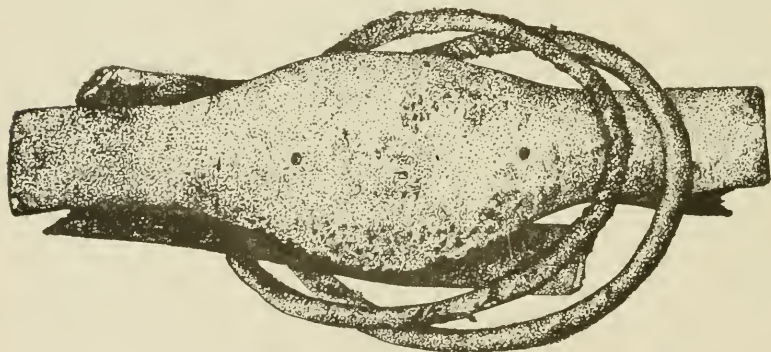
There are many pyramid mounds resembling those at Cahokia scattered along the Mississippi River, from St. Louis to New Orleans; some of them on the bluffs overlooking the river, others on the bottom lands; all of which give the impression that they, who built them, were an agricultural people and in the habit of cultivating the bottom lands near the largest streams. But they built the pyramids to such a height as to escape the high water.

There is a truncated pyramid, resembling the one at Cahokia, near Pine Bluff, in Jefferson County, Arkansas. It is represented in the plate. It is 60 feet high; its top, which is flat, is

144 feet long by 110 feet in width, and has a terrace at one side similar to that at Cahokia. There is also a large excavation near it, from which the earth was taken for its construction.

There is in Pulaski County, Arkansas, a group of mounds and earthworks, called the "Knapp Mounds," which is worthy of attention, as they are surrounded by a large earth-wall, and are situated upon the bank of a lake, and give every evidence of having been occupied as a village site. A description is furnished by Dr. Thomas in his report for 1890-91, which is as follows:

The lake is three miles long, and about a quarter of a mile wide. The field in which the group is situated, is from two to eight feet above the water level. The surrounding earth-wall is five or six feet in height, and a little over a mile in length. It starts at the margin of the lake, circles around the field and comes to the lake again on the north side. In 1844, the period of the greatest overflow known, these mounds were clear of water; and it is said that many people came here for safety, bringing their household effects and stock with them. The largest mound is forty feet high, 280 feet long, and fifty feet wide. The summit is about fifty feet wide.



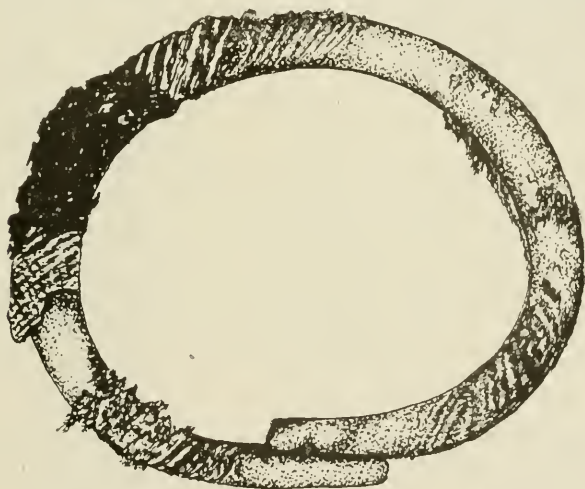
Boat-Shaped Gorget and Amulets.

and ninety feet long. A second mound is oblong, and measures 175 by 200 feet at the base, and 80 by 100 feet on top, and thirty-eight feet high. There is a large pond near it. Mounds lie to the southeast of the larger one, the largest of them, twelve feet high, 100 feet long, and ninety feet broad. In four places were patches of burnt clay, doubtless the remains of former dwellings. Ten other mounds, circular in shape, ranging from two to ten feet in height, from 25 to 100 feet in diameter, and 40 to 350 feet in length; all bearing evidence of having been used for residences, as pottery, stone tools, and the refuse of chips of stone work are found associated with them.

IV. The relics found in the mounds prove also that there was a great diversity among the people, whom we call the Mound-Builders, for some of these relics show a high stage of progress; others, a stage which was so much lower, as to indicate an entirely different social status, though it is probable that all belonged to what Mr. Morgan would call "the upper status of savagery, or the lower status of barbarism." The question arises, whether these differences were owing to different race qualities, or to the influence of environment?

The same question arises when we consider the material used in making the relics. It appears that the Mound-Builders as a class, were in the habit of using copper in making a certain class of relics, and this fact would indicate that they were passing out of the Stone, into the Copper Age. This, however, was not owing to any race quality, nor does it prove the unity of the race; but it does show that there was an abundance of copper, and that it was used in place of stone for convenience.

A remarkable fact is to be mentioned in connection with this subject: the Effigy-Builders of Wisconsin had the greatest number of copper relics in their possession, though they were ordinary hunters and were in a comparatively low stage of progress; while the Southern Mound-Builders, known to be agriculturists and the most advanced in social status, had the



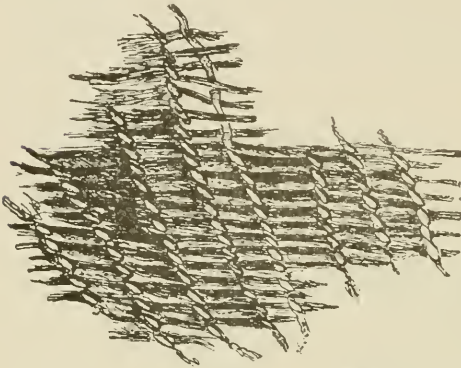
Copper Bracelet from the Adena Mound.

least number. This, however, was owing to the copper being more abundant in the one locality than in the other. The proximity of the copper mines gave the advantage to the Effigy-Builders.

We may say that the use made of copper illustrates the race tendencies even more than the use of stone, for it enabled each race to embody their ideas in material form, even better than the stone did or could do. This is illustrated by the following facts: The Mound-Builders of Ohio, distant from the mines, used this metal mainly for personal ornaments, such as wristlets, bracelets, breastplates, and occasionally for head-pieces, such as those for holding plumes.

Mr. W. C. Mills discovered at the Adena Mound a large number of bracelets made of heavy bands of copper, specimens of which are seen in the cuts. These were made of a

rounded piece, tapering to a point, the ends over-lapping each other, around these bracelets was a quantity of woven cloth; copper rings were also found, and a piece of woven cloth, showing the texture; a head-dress made of large strips of mica; a perforated tablet, and a pipe; a boat-shaped gorget pierced,



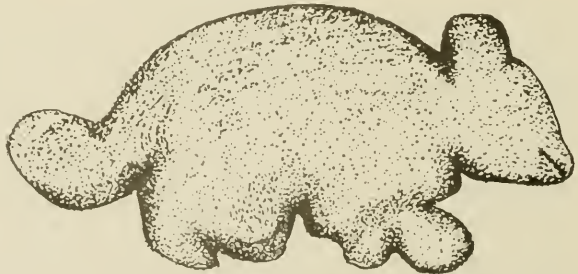
Piece of Cloth from Adena Mound.

with two holes, with strings through these, holding the gorget to the arm, as a protection against the bow-string; an ornament of shell, representing the figure of a raccoon, was found in the same mound. Also, a comb, made of the rib bones of an elk; and a number of needles and awls; all of which show that the industries of the Mound-Builders had passed beyond the primitive stage.

The Southern Mound-Builders used copper, both for ornaments and mechanical purposes. Mr. C. C. Jones has described an axe, found in a stone grave in the Nacoochee Valley, nearly 10 inches long, $2\frac{3}{4}$ inches wide, and very thin. It was marked by an abrasion from the handle, and made of copper beaten into its present form. A Portuguese narrative speaks of hatchets, drawn bows, bands of copper, implements ornamented with rings of pearls, and gigantic wooden statues found in the temple of Talomeco.

A copper axe and some copper rods or spindles were found in an ancient grave in the Etowah Valley, and copper pendants

in upper Georgia. Copper ornaments and other articles of this metal were found in the stone graves of Tennessee. Copper plates were found in Florida, and

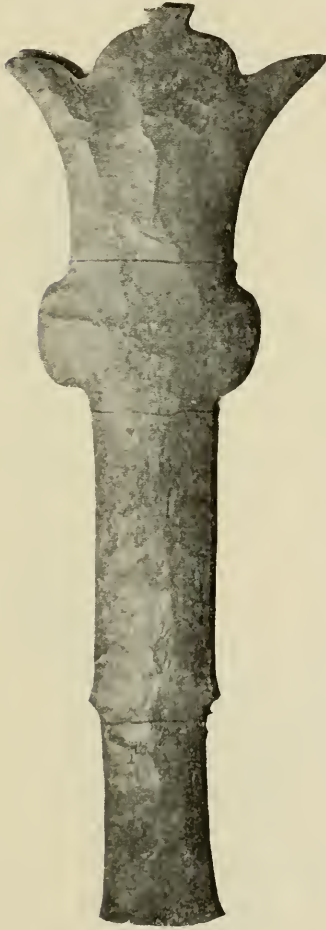


Raccoon Amulet from Adena Mound.

images with wings made of beaten copper plates, were found in a grave in one of the Etowah Mounds.

These copper relics, so widely distributed, at first thought, might lead us to conclude that the Mound-Builders all be

longed to a single race, with no difference between them, but they only prove that there was an extensive commerce between the tribes, that each tribe and race followed its own method in the manufacture of the metal. The difference in the uses shows the difference in the tastes of the people. It may be that these tastes came from ethnic causes, and are really proofs of ethnic differences. This is illustrated by the celt, which represents a stone mace from the stone graves. This mace has exactly the same shape as the one held in the hand of the dancing figures.



Stone Mace from the Stone Graves.

There is another proof, more forcible than the use of copper. It comes from the portrait pipes and the pottery images found scattered over the territory of the Mound-Builders. These pipes are more numerous in the valley of the Ohio, and in the stone graves of Tennessee. And in each locality, they seem to be designed to portray the features of the persons that were living there. This will be referred to further in connection with the pottery, but the testimony is valuable and pertinent.

These images are very interesting as objects of study, as they furnish an idea as to the different types of faces common among the prehistoric people. We notice that some of the faces which are portrayed on the pipes, especially those found in New York and Canada, have features like those of the white man, and occasionally the features of the Chinaman; but the majority show the features of the Indians of different tribes. The question arises, how these faces came to be so diverse, if the

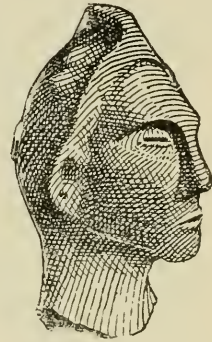
people all belonged to one race? The answer might be given by some, that they were not designed as portraits, but that the differences were owing to accident, rather than intent. But this answer is not satisfactory, for we know that the prehistoric people were great imitators.

It is true that there are more of these portrait pipes among



Sculptured Head from the Ohio Mounds.

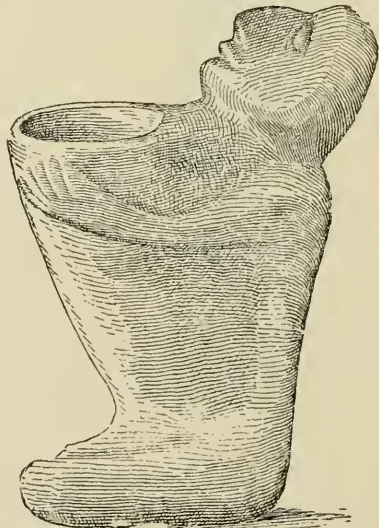
the stone graves than in any other locality, but this only confirms the position taken by many explorers in reference to the stone grave people, namely, that there were different races represented among them; a position that was taken from a study of the skulls, rather than of the relics. It is well known that the many southern tribes had the habit of flattening the forehead by artificial pressure, and the result was that the skulls were abnormal in shape. Mr. C. C. Jones has spoken of this and given a plate representing the skull of a Mound-Builder,



Pottery Portrait from a Stone Grave.

as compared with that of a modern Indian, buried on the the side of a mound, only a few feet away. He says: "The Flat-head Mound-Builders may have been a colony of the Natchez, journeying hither from their habitat on the banks of the Mississippi River."

The fact is that the Creeks, Choctaws, Chickasaws, and many other southern tribes, flattened their heads by artificial means, as well as the Natchez. And it is probable that the idols and pottery portraits found in the stone graves and the mounds of the Gulf States, represent the features of these tribes, as they were in prehistoric times. We shall reproduce some of these portraits at the present time to illustrate the point. Let us take the portrait pipes and compare them with one another, and then take the two maps which represent the location of the tribes and the distribution of the relics. It will be



Pottery Pipe from the Gulf States.



A MAP SHOWING

1. OCCUPATION,
2. RELIGION,
3. CHARACTERISTIC WORKS.
4. Belies

OF THE MOUND-BUILDERS.

found that each had its own mode of burial, its own style of art, and its own mode of decorating the person, and its own peculiar cast of countenance. Thus showing that, instead of a unity, there was a great diversity. The most remarkable thing is that the faces represented in the pipes and pottery portraits from the Southern States is exactly the same as that which may be seen in the carved columns of Central America; the low retreating forehead, the large nose, and the thick lips, being remarkable signs in each locality.

There is so great a resemblance among the features represented in these artifacts, as well as in the skulls exhumed from



Inscribed Tablet from an Ohio Mound.

the stone graves and the mounds of the Gulf States, that many have been led to the opinion that there were at least two different races mingled together in this region in prehistoric times, exactly as they were in the Ohio Valley; one of which belonged to the Northern, the other, to the Southern type.

The inscribed tablets may also be referred to, as illustrating the same point. The most of these tablets have been discovered in the Ohio mounds; one of which is represented in the cut. Another, called the "Guest Tablet," resembles this in many respects. Both of them represent a human-

ized tree in combination with the serpent symbol. It should be stated here, that humanized trees are very common in Asia, and the fact that they are found in the mounds would indicate that the Mound-Builders were in some way connected with Asiatic races.

V. The study of languages and migration legends leads to the same conclusion. Mr. Gallatin, Dr. Brinton and Mr. A. S. Gatchet have demonstrated from the aboriginal names of persons, places and things mentioned by the narrators of De Soto's expedition, that the tribes then inhabiting the region were the Muscogees. The latter have a tradition that they came from the west, led by the sacred pole, and settled east of the Mississippi River at an early date. The chief seats of power were upon the various rivers, and were marked by mounds. Dr. Brinton held with Dr. Horatio Hale, that the Dakotas went from the Atlantic coast westward to the Mississippi River; that America was peopled during the great Ice Age, and that the first settlers came from Europe by land connection over the northern Atlantic but that their long and isolated residence on this continent had moulded them into a singularly homogeneous race.

But the important fact is to be borne in mind, that those who have carried their studies on the Pacific slope, have reached the opposite conclusion, viz.: that the continent was peopled from Asia, rather than from Europe. While those who have studied the Mound-Builders and their works, hold that there were two races and that they met in the Mississippi Valley and never lost their characteristics. While the pipe from Georgia represents a person with flattened forehead, large nose, and thick lips.

Another inference has been drawn from the same data, viz.: that the Southern Mound-Builders belonged to the Malay race, but the Northern Mound-Builders belonged to the Mongolian race. This is an inference first advanced by Squier and Davis, but was adopted by others, especially those familiar with the civilized tribes of the Southwest, and it is still worthy of consideration, though few are prepared to take the ground at present.

CHAPTER XI.

DEFENSIVE WORKS OF THE MOUND-BUILDERS.

One of the chief things impressed upon us by the study of the Mound-builders' works is the peculiar method of defense which prevailed among them. This method was, to be sure, one which they held in common with all other prehistoric races, but it was in strong contrast with all that have ever existed in historic times.

We may imagine that their fortifications are like those of modern times, but when we come to consider them more closely we find them entirely different. A few words in reference to these differences will be in place here.

1. The people to be defended.—The picture before us is not that of a nation occupying a continent, nor of a people filling a State, nor a community occupying a township, but it is of a tribe occupying a river valley, or of a clan occupying a limited district. The clan was the unit of society. Each clan had its own burial place, its own place of religious assembly, its own chief, and we may suppose also its own stronghold. The method of defense was for the clans to gather and make common cause, the tribe itself being only a combination of clans.

2. The class chosen to be defenders.—The Mound-builders never attained to the modern method of employing a distinct military class for defense. There were no different classes among them, and scarcely any division of labor. All followed the same general mode of life, were either fishermen, or hunters, or agriculturists, the means of subsistence being common to all, and the responsibility of defense being shared by all. This condition of things secured safety to the people. They all were organized into clans, but the organization was such that every young man, when he was initiated into the clan, became a warrior. They became a race of warriors by this means. The obligation to defend the clan was made a condition of membership. It has placed this duty before that of securing subsistence. The government was based on this system. There was a village government as well as a tribal one, each village having its own chief and its own council house.

3. The extent of territory defended.—The Mound-builders occupied the Mississippi Valley, and their defenses are scattered over the whole region, every part of it giving evidence not only

of an extensive signal system, but of fortifications as well. Still, so far as can be ascertained, the system of defense which, while it embraced this entire valley, was one which was divided and adapted to limited districts. There are, to be sure, evidences that confederacies existed among the Mound-builders. Where these prevailed the system of defense extended over comparatively large districts, districts which, in some cases, cover the half of a modern State. As a general thing the territory was more limited than this. It was the tribal territory that was defended. The village was, to be sure, the clan abode, and this must be defended first, but the clans were organized into tribes, and so the system of defense embraced the habitat of the tribe.

4. The means of defense are in contrast. These differ even in historic times. In modern days the forts are the main source of protection. The entire people are defended by the forts, The mediæval method was to make the walled towns the chief source of protection, the castle being the dwelling place of the feudal despot. The ancient method was to surround the cities with walls and to make the citadels the chief source of protection. The prehistoric method was to make the village the permanent residence, depending on the clan organization as the main source of protection. The clan dwelt in the villages, and sometimes protected these with walls and sometimes left them without walls. Their chief defense seem sto have been in the forts. Were they clan forts or tribal forts? The probability is that they were the latter. They were placed in the midst of the villages for the protection of the clan as well as the tribe,

5. The location is to be considered. We have divided the Mound-builders' territory into different districts. The method of defense varied according to the location. In the northern regions the wilder and more uncivilized races dwelt. These erected stockades resembling Cæsar's Forts, built in the forests of Gaul. In the central regions were the agriculturists. These lived in walled villages resembling those of mediæval times, their fortifications resembling castles. In the southern districts we find the system of pyramids, which resembled those of the ancient people of the East, especially the Assyrian and Chaldean. On these pyramids the chiefs had their residence, and found protection in their height. The Mound-builders' defenses embraced a great variety, if we take the different districts into account, and yet there was a resemblance between them.

6. The stage of progress prevalent among the Mound-builders is another element of difference. We may draw a parallel between the historic and prehistoric ages, locating the different grades in different belts of latitude, recognizing the stages of progress as we cross these belts. The defensive system is, however, very different. This system depended largely upon the condition of the people. There was never any such protection as that given

by the ancient cities. We must judge the two periods by different standards.

7. The religious system is perhaps the chief element of contrast. We shall find that religion was a prominent factor in the defenses of the Mound-builders, superstition being as powerful among them as among the modern savages. We can not omit the element of religion from prehistoric races.

With these few remarks we now proceed to the study of the different methods of defense among the Mound-builders.

I. The first method to which we shall call attention is that which appears in the extensive signal and observatory stations. We have already called attention to this system in the chapter on burial mounds. We will now consider it more especially in connection with village life. The fact is that a system of signals by which the villages could communicate with one another, and through which the people could be aroused to the sense of danger, everywhere existed. The extent of this signal system was, of course, dependent upon the extent of the tribe or confederacy. In some cases the system would be limited to the valley of a single river, or perhaps to a portion of the valley. In other cases it would extend across the country from one river to another. In a few cases the signal system extended even beyond these limits, and may be supposed to have reached out till it covered the whole country with a network of beacons and signals. The defense which this system gave to the Mound-builders can not be over estimated. The people may have dwelt in villages. Many of the villages were situated upon low ground, but the signal stations were so placed upon the high points surrounding them that there was a constant outlook, and the protection covered a large region of country.

I. We notice that this system was common among all the tribes of Indians. We have the testimony of explorers that it was very common in the far west. We present a few cuts which are taken from the reports of the Ethnological Bureau, and would refer to the remarks of Col. Garrett Mallery, Dr. W. J. Hoffman, W. H. Holmes and others. It appears that one method of signalling a village was to place a horseman on an eminence so that he could be seen in all directions. The horseman had a way of riding in a circle, and the sign was easily understood. The plate illustrates this, for here the horseman is on the hill and the village is in the valley, and the attacking party approaching from a distance. See Plate I. Another method is to build fires upon prominent points, so that the smoke could be seen by day or the flame by night, and the warning be given in this way. This is illustrated by Plate II. This particular cut shows the signal which was given to convey tidings of victory, but similar signals were given also as warnings. The natives have a method of signaling by fire, which is peculiar to themselves.

The Dakotas, for instance, mix their combustibles so as to cause different shades of smoke; using dried grass for the lightest, and pine leaves for the darkest, and a mixture for intermediate shades. These with their manner of covering a fire with their blankets, so as to cause puffs of smoke, or of leaving the smoke to rise in unbroken columns, gave to them a variety of signals. Sometimes a bunch of grass was tied to an arrow and lighted, and shot into the air. The tribes of the southwest signal by this means. The Aztecs signaled to each other by fire during the siege of the City of Mexico.



Fig. 1.—Hill Mound near Chillicothe.

There are many signals among the tribes which are used in case of victory, and others for hunting purposes, and still others for purposes of recognition, but those for defense are the most important. We give a cut illustrating the method by which the natives now make signs to one another for the purpose of recognition (see Plate III).* The same custom of stationing sentinels on prominent points as lookout stations, has been long prevalent. Circles of stones are often found upon elevated points of land, where a good view of the surrounding country can be obtained. These circles are common on the Upper Missouri, among the Dakotas in Arizona, among the Hualpai, among the Pah Utes of Nevada, in the Sho-Shonee country, in Wyoming, and in many other places of the far west. Frequently the ground

*These Plates are reproduced from *The American Antiquarian*, Vol. V, No. 3.

around these watch stations is literally covered with flint chip-pings, as it was the custom of the sentinels to spend their time in making bows and arrows while watching.

This signal system still prevails. It is more prevalent in an open country like the plateau of the west, and yet it probably prevailed in ancient times, in the region east of the mountains. Traces of it are seen among the Mound-builders.

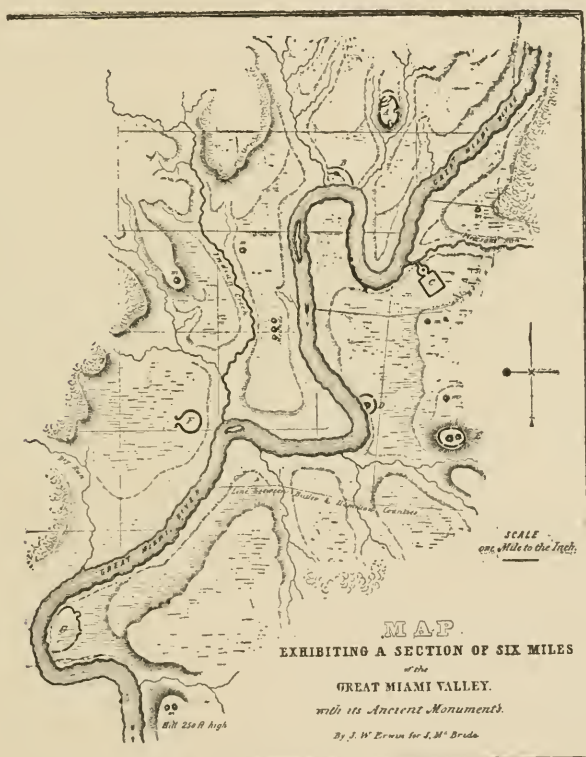


Fig. 2.—Map of Forts on the Miami.

2. The combination of signal mounds or observatories with beacons was a common method of defense. Some of these are accompanied with vast quantities of ashes, showing that beacon fires were long kept burning. In one case the ashes were thrown over a steep embankment, and yet were, when discovered, many feet in depth. Many of the burial mounds were used as watch stations or beacons, and it may be that a double protection was given by them. These observatories or beacon mounds are sometimes placed on very high points,† and thus they command the view of other points at a great distance. This idea is given by Dr. Lapham, in connection with Lapham's Peak, a high knoll

†See map of Scioto Valley, also of Miami Valley and of works at Marietta.

in Washington County, which commands a very extensive prospect for miles in every direction. Dr. J. W. Phene in his visit to this country recognized the same in connection with the great serpent mound in Adams County, Ohio. He states that this work is located on an eminence, from which a view can be had of Lookout mountain, in Highland County, twelve miles away. The same has been observed by the author in connection with the works at Circleville. The great mound at Circleville was sixty feet high, and commanded a view of Lookout mountain, twelve miles to the south of it. On this mountain an observatory was located which commanded a view of the works at Hopeton, situated just below, and the works at Chillicothe, several miles to the south of it. It is maintained by E. G. Squier, that such a series of lofty observatories extend across the whole States of Ohio, of Indiana and Illinois, the Grave Creek mound on the east, the great mound at Vincennes on the west, and the works in Ohio filling up the line. Other persons who have made a study of the works along the Ohio River maintain that there is a series of signal stations running up the branches of the rivers, such as the Scioto, the Great and Little Miami, the Wabash, and other rivers, and that all the prominent works through Ohio and Indiana are connected by a line of observatories. This net-work of signal stations is interesting if studied in connection with the village enclosures; as there are many scattered throughout this whole region.

Here we call attention to the explorations of the Rev. J. T. McLean, who has described the location of the large mounds on the Miami River. He has shown that they were connected with one another and with the forts and villages on that river. See Fig. 2. The author has followed up the subject and has found that a line of signal stations extends from Fort Ancient, on the Little Miami, to the great mound at Miamisburg, on the Big Miami. The latter mound was raised to the height of sixty-five feet, so as to give a chance to signal over a range of hills situated just west of it. The great mounds at Grave Creek, at Marietta, at Chillicothe and elsewhere were placed on prominent points that they might serve as signal stations.

Dr. J. C. Proudfit has traced the signal system along the Missouri River and has shown that it is very extensive. Hon. C. C. Jones has traced them through Georgia, in the Southern States. Gen. G. P. Thruston has traced them through Tennessee and the Cumberland Valley. Dr. J. H. Baxter has traced them on both sides of the Ohio River from Cincinnati to Louisville. We may suppose that the system extended over the entire Mound-builders' territory. It is probable that nearly all the large mounds were lookouts, and were essential factors in the military system of the Mound-builders. The distinguishing points of the system are as follows:

3. A signal station designed for defense is generally a mound located on a prominent point, in close proximity to some village, and is so connected with other observatories that signals can easily be exchanged. The signal stations on the hills commanded other stations at a great distance, so that no enemy could come within miles of the spot without being seen. Such a system of outlooks may be seen surrounding the ancient capital at Newark, which was singularly situated in the midst of a natural amphitheater, while the observatories were located on the hills surrounding. It has been stated also that observatory mounds are located on all the hills in this region, forming lines between this center and other prominent though distant points. A line has been partially traced from Mt. Vernon to Newark, the large mound in the cemetery at Mt. Vernon being one of the series.

On a hill opposite Chillicothe, nearly 600 feet in height, the loftiest in the entire region, one of these signal mounds is placed. A fire built upon this would be distinctly visible for fifteen or twenty miles up, and an equal distance down, the valley of the Scioto, including in its range the Circleville works, twenty miles distant, as also for a long way up the broad valleys of the two Paint Creeks, both of which abound in the remains of ancient villages. In the map of the Miami valley a similar position observed, and similar mounds occur along the Wabash, the Illinois, and the upper Mississippi, showing how extensive this signal system was, at the same time showing how intimately it was connected with the villages. The author has also, during the preparation of this paper, discovered sites of ancient villages near the lofty eminence called the Platte mounds, in Wisconsin, and the conviction has grown with the study of the works in all sections of the country that the signal system was closely connected with all the prominent points, and that villages were frequently located near these points for the very purpose of securing the defense offered by this system.

4. The large conical mounds were used as signal stations. It took a long time to finish one of these conical mounds. The beacons or funeral fires may have been kept burning, and so defense of the living as well as burial of the dead was accomplished by them. The fact that conical mounds were so often placed upon high points and commanded extensive views would indicate that the interchange of signals was very extensive. We have given elsewhere cuts of the large conical mounds at Grave Creek,* Marietta, Miamisburg and Vincennes. These were located near ancient villages and were connected with many other works. The mound at Vincennes is only one of a group which surrounds the city, and is said to mark the site of an ancient capital. These

*This point can be seen in the cuts illustrating the articles on "Sacred Enclosures" and "Migrations". These cuts show how the signal stations and the forts are connected with the villages.

are, however, only a few of the many localities. In fact there is scarcely a bluff along the whole course of the Mississippi River where some such beacon mound is not found. The same is true on the Missouri, the Ohio, the Cumberland, the Tennessee, and other tributaries. It is the commonest thing for explorers to find burial mounds which were used as lookout stations. It is always interesting to notice how skillfully these spots are chosen and how extensive the views are from them.

5. Beacon fires were frequently lighted on the walls of the defensive enclosures, and many elevated points within village enclosures were used for the purpose of signaling distant places, so that we cannot confine the signal system to mounds or isolated stations, though as a general rule the signal system was outside and supplementary to the village enclosure. For illustrations of this see Plate representing the hill fort.

We would refer here to the fact that in the ancient fortification at Bourneville, O., there was a rocky summit which overlooked a great valley below, on which traces of beacon fires have been discovered, and that upon the walls of the enclosure at Fort Ancient traces of fire have also been discovered.

On the other hand there are many villages where the location of some lofty point near by would give great opportunity for exchanging signals either by fire or smoke for great distances. Many such points are seen in different parts of the country.

Messrs. Squier and Davis mention the fact that between Chillicothe and Columbus, in Ohio, not far from twenty of these points can be selected, the stations so placed in reference to each other that it is believed that signals of fire might be transmitted in a few minutes.

II. We now turn to the second method of defense. This consisted in the erection of stockade forts. It may be said that this was the common method of the wilder tribes and was peculiar to the northern class of Mound-builders. There were three varieties of stockades:

1. Those located on high ground, and which were naturally defended and needed only a double wall across the tongue of land to protect this. This is the simplest kind of a fort. Many of them have been seen and fully described in the northern part of Ohio.* Col. C Whittelsey has described some of these. They are situated at Conneaut, at Ashtabula, at Painesville, at Cleveland, and various places on the Cuyahoga River, near Sandusky, on the Sandusky River, and at many points along the valleys of these different streams which run into Lake Erie. We call attention to these works, as they illustrate the number and

*See Tract No. 41, Western Reserve and Northern Ohio Historical Society, Ancient Earthworks. See also, Ancient Earth-Forts of the Cuyahoga valley, Ohio, Cleveland: 1871. See History of Ashland county by Dr. A. H. Hill. See work on Mound-builders by Rev. I. T. McLean, and Aboriginal Monuments of Western New York, by E. G. Squier.

situation of the works of the late Indians, and also show the difference between their works and those of the Mound-builders. It would seem that a perfect network of these defenses was spread over the northern part of the State. We give a cut of the fort at Newburgh, Ohio. See Fig. 3. This illustrates the style of fort. There are many such forts in Northern Ohio,

It will be seen from these that the defense consisted mainly in the location. The walls were erected merely to supplement the natural defense which the rocky precipices and the isolated points of land would furnish. But with these inclosures there was also the combination of the outlook. Dr. Hill, of Ashland, O., has given this idea in his description of his works which are situated in Ashland county. He says, that here the forts are within sight of one another through the whole length of the river, those prominent

parts, or tongues of land, which would give distant views having been chosen for the erection of forts. It should be said that this part of Ohio abounds with prominent bluffs, whose precipitous heights furnish excellent defense. The Huron Shale is here worn down by the action of

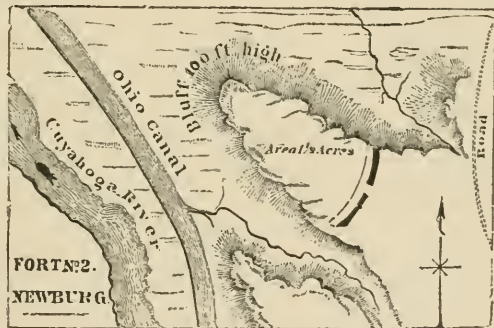


Fig. 3.—Stockade Fort in Northern Ohio.

water, leaving terraces projecting out in scalloped form and which make a series of level platforms, while the circuitous valleys below make an open territory between them, and thus fortifications could be easily erected, and a complete system of signal stations be established along the river.

2. Another type of stockade is common in the State of New York. It is also found in the northern part of Ohio, the fortification at Conneaut being a good specimen. Here there are remains of stockades, the stockades having been placed on the summits of the hills where an extensive outlook could be had. These stockades may have so been connected that a complete system of signals could be conducted across the country, and natives defend one another by the combination of the outlook with the enclosure. These ancient stockades have been described by E. G. Squier, but the connection between them has not been traced.

It is a fact, however, that this State was the seat of a great confederacy, that of the Iroquois, and this renders it probable that these prehistoric forts were connected by a signal system. It is known that the Iroquois had a complete military organiza-

tion; their central capital was at Onondaga, but there were trails running from this point throughout the whole State, and the villages were connected by the trails. It is known also that the Iroquois had stockades, and that they defended themselves against the whites by these fortifications. Some of the sites of the Iroquois forts have been identified. The boundaries of the different tribes are also known. Under such an organization the signal system would come into use, and we can imagine how completely the State was protected by the combined watchfulness of the people with the defenses offered by these stockade forts.

There are descriptions of the defenses of the Iroquois which enable us to understand the military architecture of the prehistoric races. We give a cut taken from the Documentary History of New York, which illustrates the subject. It is a picture of a village of the Onondagas, attacked by Champlain in 1615. See Plate IV. "The village was enclosed by strong quadruple palisades of large timber, thirty feet high, interlocked the one with the other, with an interval of not more than a half of a foot between them, with galleries in the form of parapets, defended with double pieces of timber, proof against our arquebuses, and on one side they had a pond with a never-failing supply of water from which proceeds a number of gutters, which they had laid along the intermediate space, throwing the water without and rendering it effectual inside for the purpose of extinguishing fire."

The picture illustrates several points. (1) The villages were frequently surrounded by stockades, the houses within the enclosure being arranged in blocks. (2) The location of the enclosure was convenient to water, and attended with natural defenses. There is no evidence of the signal system in this case, and the use of water in the manner described is uncommon among the northern races, though in the southern states there are many cases where the villages were surrounded by artificial ditches and ponds of water. (3) The manner of constructing the wall which surrounded the defensive village enclosures. We call special attention to the elevated platform or parapet, as it may possibly help us to understand the manner in which the villages of the Mound-builders were defended. If we substitute for this timber wall a solid earth work, making the top of the earth wall a platform or parapet, and place the barricade on the outside, we shall have a defense very similar to this of the Iroquois. The combination of stockade with an earth wall would thus make an admirable defense for a village, and with much less expense of labor and time than if it were wholly of timber.

In reference to this Rev. William Beauchamp advances the idea that the erection of earth-walls as parapets preceded this method of stockades with platforms, but that the latter was found to be the easier method, so the earlier mode was abandoned. A view of one of these stockade forts is given by Sir

William Dawson in his work "Fossil Men." He has given a quotation from Cartier's voyage, which describes this fort at Hochelaga, and has given a cut of the fort as it existed. According to the cut the walls of the fort were built of round trunks of trees, rather than of planks, but the town was a regular circle, with the houses arranged around a square. "The city of Hochelaga is round compassed about with timber, with three course of rampires, framed like a sharp spire or pyramid. It had but one gate or entry, which is shut with pikes, stakes and bars. Over it, and also in many places in the wall, there is a kind of gallery to run along and a ladder to get up with, and all filled with stones and pebbles for the defense of it. There are in the town about fifty houses, at the utmost fifty paces long and twelve or fifteen broad, built all of wood and covered with bark. They have in the middle of their towns a large square place, being from side to side a good stone's cast. They showed us the manner of their armor. They are made of cordes and wood finely wrought together." The diameter of this enclosure is given as about 120 yards, and each side of the square in the center about thirty yards. It was situated at the base of Mt. Royal, on a terrace between two small streams. The opinion is expressed that it was intended to accommodate the whole population in times of danger.

3. A third class of stockades is one which we are now to consider. It consisted in creating an enclosure capable of holding an extensive settlement, placing a heavy earth wall about the enclosure, and surmounting this by a palisade of timber. This was the common method among the Mound-builders of the ruder class. There are many such fortifications scattered over the Mississippi Valley. Some are situated in the prairie district, others in the forest region. Many such are found in New York, Michigan and Southern Ohio, but they should be distinguished from the regular Mound-builders' forts. The peculiarity of this class of stockades was that they were very large. The area within them frequently amounted to thirty or forty acres, though twelve to fifteen acres would perhaps be the average. We may take the fortified hill near Granville, Ohio, as a good specimen of this class. It encloses the summit of a high hill and embraces not far from eighteen acres. The embankment is carried around the hill and conforms generally to its shape. The ditch is on the outside of the wall, the earth having been thrown inward. There are no palisades on the summit, but the probabilities are that these surmounted the wall and have perished. Upon the highest part of the ground within the enclosure there is a small circle, two hundred feet in diameter, within which are two small mounds. Upon excavation, these mounds were found to contain altars.

A fortification similar to this is described by Squier and Davis,

as existing near the sacred enclosure on the Scioto River. This also had a mound in its center, and within the mound an altar. On this altar were discovered some remarkable relics. The area of this was twenty-five acres. It is surrounded by a ditch, and has six gateways. The character of the work resembles that of an ordinary stockade fort. The only thing which would identify it as the work of the Ohio Mound-builders is its proximity to the sacred enclosure called Mound City and the fact that it contained a mound with a paved fire-bed and the remains of a sacrifice. The Granville works contained a very large mound in the exact center, and yet had all the characteristics of the common stockade. The discovery of the paved altar in the fort near Chillicothe has been interpreted by some as proving the identity of the Mound-builders of Ohio with the stockade-builders of New York, but in the absence of other proof we must consider it a mere conjecture. Stockade forts like these were very common throughout the Mississippi Valley, but they are generally ascribed to the later rather than to the earlier Mound-builders. The prevalence of stockade forts in the midst of the Ohio Mound-builders' works only proves a succession of population.

Descriptions of the stockade forts have been given by Squier and Davis. We would refer the reader to the work by these authors for more definite information. Nearly all of these have high mounds in the interior of the enclosure or in the vicinity, which vary from twelve to fifteen feet in height, and were probably used as lookouts.

We give a copy of the plate (see Fig. 2) from the "Ancient Monuments," which exhibits a section of six miles of the Great Miami Valley. No less than seven enclosures are in this square, the most of them forts. It will be noticed that, besides the square enclosure (C), there are three classes of stockades. 1. Those which have remarkable gateways (A). 2. Those which have double walls, ditches and lookout mounds (B). 3. Those which have single walls across a promontory (G). The forts which interest us are those with the remarkable gateways. Some of them are on the terraces near the river, several are upon the summit of the bluff overlooking the terraces. In area they vary from eighteen to ninety-five acres. We shall describe at present only a few of these, the ones called stockades—these being the largest. The fort marked A will be described under the head of "Hill Forts". It will be noticed that there are lookout mounds on all of the high hills; that the hill fort is isolated and well protected by walls on all sides; that the stockade forts are on lower ground than the hill forts, being situated on the terrace, near the river. We make a distinction between these forts, because they seem to belong to different periods and were probably built by different classes or races of Mound-builders. We take

the one called the Colerain, six miles south of Hamilton. It encloses ninety-five acres. Its walls have an average height of nine feet. It commands a large peninsula, two miles in circumference, formed by a singular bend in the river. It is upon the terrace, which is thirty-five feet above the river. Some distance from the fort, and still further to the south, is a hill three hundred feet high, upon the top of which are two mounds measuring five and ten feet in height; they are composed of earth and stones considerably burned. There is a ditch on the outside of the wall. See Fig. 4. At one extremity of the works, the wall is looped, forming a bastion of singular shape.

This fort is classed with the stockades. We elsewhere ascribe it to the serpent-worshippers, classing it with the old work at Fort Ancient and with the fort near Hamilton, and others. Our reasons for so classing it are as follows: 1. Its great size. Squier and Davis say that it is a work of the first magnitude and compare it to Clarke's Fort, on the north fork of Paint Creek. 2. The unusual height of the walls—nine feet—would indicate that it was no ordinary stockade. 3. The peculiar shape of the gateway. 4. The location of the fort. It is on the terrace overlooking the flood plain. It is not a hill fort, and hardly answers to the stockade fort. It seems to have been a village—perhaps a village of the serpent-worshipping Mound-builders.

Two other forts, which we class among stockades, may be seen on this map. One is situated on the terrace near the river. It covers eighteen acres, and is surrounded by a double wall, with the ditch on the inside. The peculiarity of this fort is that the inner wall and ditch pass over a large mound, which is denominated a lookout mound.

The next fort in the series is situated on the Big Miami River, six miles south of Hamilton. It consists of a simple embankment of earth carried around the brow of a high, detached hill, overlooking a wide and beautiful section of the Miami Valley. The side of the hill on the north, towards the river, is very abrupt and rises to the height of one hundred and twenty feet above the valley, from which an extended view may be obtained. There are two mounds of earth placed near together, on the highest point within the enclosure, measuring ten feet in height. The area of this enclosure is twenty-seven acres.

Two other enclosures containing single walls and single gateways are mentioned. One on Four-mile Creek contains twenty-five acres, and is situated on a promontory formed by a bend of the creek. The other is on Nine-mile Creek. Both of these have high mounds in the interior of the enclosure, varying from twelve to fifteen feet in height, which were probably used as sacrificial or lookout mounds.

Two other fortifications are mentioned by Squier and Davis,

situated on the Miami River, one of them two and a half miles above the town of Piqua. It occupies a third terrace, which here forms a promontory. It contains about eighteen acres, and is surrounded by a wall composed mainly of stone. The other is on the bank of the Great Miami, three miles below Dayton. It resembles the one southwest of Hamilton. The side of the hill towards the river is very steep, rising to the height of one hundred and sixty feet. At this point there is a mound, which commands a full view of the surrounding country for a long distance up and down the river. A terrace, apparently artificial, skirts the hill thirty feet below the embankment. The terrace may be natural, but it has all the regularity of a work, and may be compared to the work at Fort Ancient.

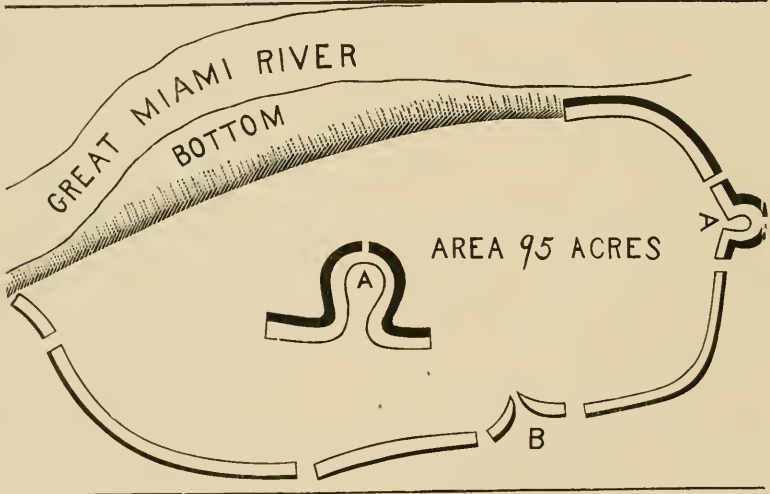


Fig. 4.—The Works at Colerain.

The next fort which we shall mention is also situated on the Miami. Fig. 5. It corresponds in all essential particulars with those already described, with the exception of the gateway. It occupies the summit of a promontory bordering the river, which upon three sides presents high and steep natural banks, rendered more secure for purpose of defense by artificial embankments. The remaining side is defended by a wall and ditch, and it is from this side only that the work is easy of approach. The most interesting feature in connection with this work is the entrance on the south. The ends of the wall curve inwardly as they approach each other, upon a radius of seventy-five feet, forming a true circle, interrupted only by the gateways. Within the space thus formed is a small circle, one hundred feet in diameter; outside of which, and covering the gateway, is a mound

(e), forty feet in diameter and five feet high. The passage between the mound and the embankment, and between the walls of the circles, is now about six feet wide. The gateway or opening (d) is twenty feet wide. This singular entrance, it will be remarked, strongly resembles the gateways belonging to a work to be described under the head of stone forts, although much more regular in its construction. The ditches (ff) which accompany the walls on the south subside into the ravines upon either side. These ravines are not far from sixty feet deep and

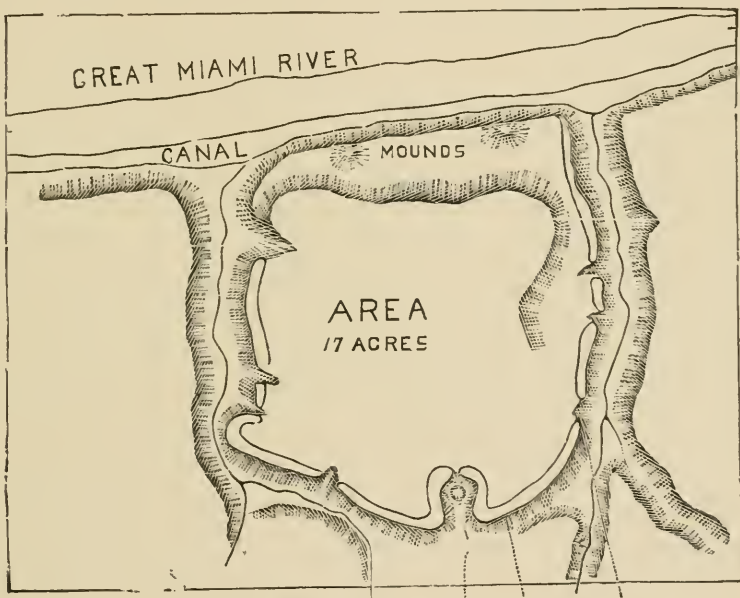


Fig. 5.—Works near Hamilton, Ohio.

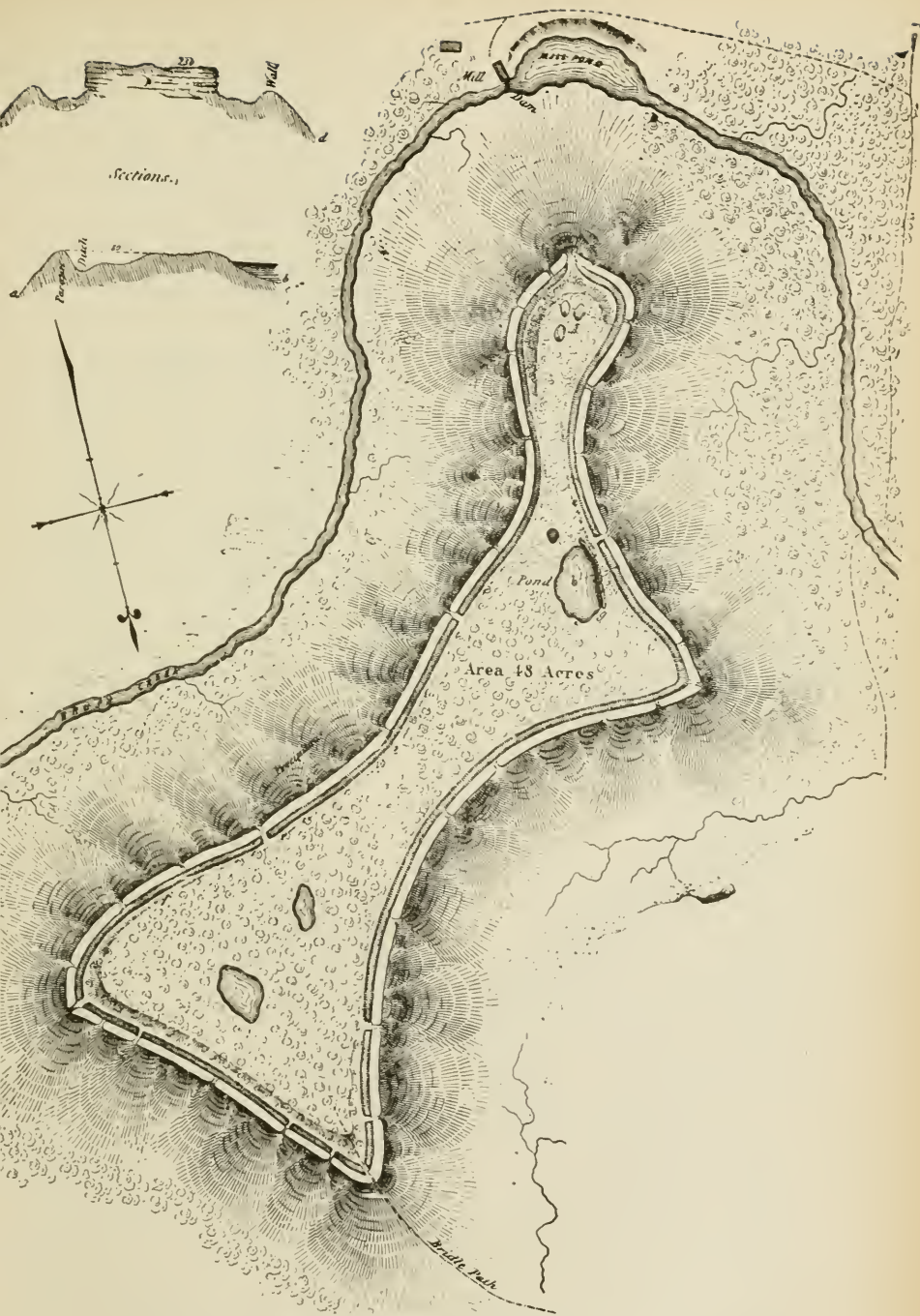
have precipitous sides. The area of the work is seventeen acres. The valley beyond the river is broad, and in it are many traces of remote population, of which this work was probably the fortress or place of last resort during turbulent periods. The gateway of this enclosure resembles serpents' heads, and reminds one of the entrance to the lower enclosure of Fort Ancient.

III. We now turn to the third method of defense. This consists in the selection of some "stronghold" of nature and there placing a fortification, walls of earth being placed on the summit of the precipice as a supplement to the natural defense, the whole designed to be a place of retreat in time of danger. To understand clearly the nature of the works, it should be remembered that the banks of the rivers are always steep, and where these are located they are invariably high. The edges of the

table lands bordering on the valleys are cut by a thousand ravines, presenting bluffs, high hills, steep and detached and isolated heights with steep sides, and cliffs which are precipitous and often absolutely inaccessible. The natural strength of such positions certainly suggest them as the citadels of the people having hostile neighbors or pressed by invaders. Accordingly we are not surprised to find these heights occupied by strong and complicated works, the design of which is no less indicated by their position than by their construction.

Here let us say that these fortifications are to be distinguished from the walled towns or villages so common in certain parts of the country, especially in Southern Ohio. In reference to this we are to notice (1) that the fortifications are always placed on high and steep hills. Their walls always take the form of the outline of the hill, and hence are more or less irregular in shape, as they enclose the whole top of a hill and conform to the shape of the hill in contour. The walled villages are more regular. They are usually found on a level plain, one of the river benches or terraces, and have no natural barriers to prevent the regularity of their shape. The square and circle predominate, and are often found united in a seemingly arbitrary manner. (2.) In point of size, the fortifications vary greatly. Some of them contain only a few acres; others contain from one hundred to four hundred acres. The fortified villages are, however, quite uniform; the area varying from eighteen to fifty acres, but the majority containing about twenty-seven acres. (3.) The position of the ditch, whether inside or outside of the vallum or wall, is to be noticed. At one time it was thought that all works which had the ditch on the inside were sacred enclosures, while those which had the ditch outside were fortifications belonging to the Indians. There is, however, no uniformity. The material taken from the ditch was placed in the embankments, and in cases of fortifications on the hilltops it would be a matter of necessity that the ditch should be on the inside, the excavations or pits from which the dirt was scraped being in the immediate vicinity of the wall. The forts are found on the tops of the highest hills. They were sometimes surrounded by stone walls and sometimes by earth embankments, according to the convenience or abundance of the material furnished by the locality. (4.) Mound-builders' forts in Ohio were characterized by much engineering skill, and are distinguished from later Indian forts by this circumstance. Some of the Mound-builders built their forts very large and placed elaborate and complicated walls at their gateways, exercising much military skill in erecting the walls and planning outworks which would furnish the best protection. Others erected only rude earth walls, took no pains with their gateways and exercised little skill in their construction. There are many such fortifications.

This class of defenses we have called "hill forts." This term we



EARTH FORT IN HIGHLAND COUNTY, OHIO



STONE FORT AT BOURNEVILLE, OHIO.

use for the sake of convenience, rather than for its accuracy. Nearly all the forts are situated upon hills, but the "hill forts" technically so called, are different from the ordinary class. Their strength consists in the fact that the hill upon which they are placed is itself a stronghold. The artificial wall placed upon the hilltop is only supplementary to the defenses of nature. The "hill forts" so called are very common in Southern Ohio. They are found at the mouth of the Little Miami River, on Brush Creek, on Paint Creek and in many other localities. Some of the largest forts in the Mississippi Valley are included in this class. Descriptions of "hill forts" have been given by Squier and Davis; we shall draw from them our information.

1. The first fort which we shall describe is called Fort Hill. "It is situated in the southern part of Highland County, thirty miles from Chillicothe. The defensive works occupy the summit of a hill five hundred feet above the bed of Brush Creek and eight hundred feet above the Ohio River. The hill stands isolated, and is a conspicuous object from every approach. Its sides are precipitous. The fort has an area of forty-eight acres. Running along the edge of the hill is an embankment of mingled earth and stone, interrupted at intervals by gateways. The length of the wall is 8,224 feet—something over a mile and a half. The ditch on the inside has an average width of fifty feet. The height of the wall, measuring from the bottom of the ditch, varies from six to ten feet, but rises in places to fifteen feet. There are thirty-three gateways, most of them not exceeding twenty feet in width. Considered in a military point of view the spot is well chosen and well guarded, and may be regarded as nearly impregnable and as a natural stronghold. It has few equals. The degree of skill displayed and the amount of labor expended in constructing its artificial defenses challenge our admiration and excite our surprise. The evidence of antiquity is worthy of more than a passing notice. The crumbling trunks of trees and the size of the trees which are still living would lead irresistibly to the conclusion that it has an antiquity of at least one thousand years." Plate V.

2. We turn to the works at Fort Ancient. This is a remarkable specimen of a "hill fort."* Here is an enclosure capable of holding an extensive settlement, the walls being nearly three miles and a half in extent, and the area of the enclosure being about one hundred acres. We see also an outwork, consisting of a covered way, which runs from the enclosure toward the east. This outwork is distinguished by one feature: At the end of the covered way is an observatory mound. The supposition is that this observatory was the place where a watchman was stationed, but that the distance was so great that the com-

*The book on Fort Ancient by W. K. Moorehead is the best authority.

munication might be cut off, and that the parallel walls were constructed so as to give protection to the sentinel and to keep up a communication. The country about the enclosure, especially that to the east, is open prairie and has no natural defense. This wall is 2,760 feet in length. The original height of this wall is not known, as cultivation of the soil has nearly obliterated it. Two high mounds are found between the enclosure and the covered way, making a double opening to the enclosure, and, at the same time, giving an outlook from this point. The enclosure itself is remarkably well adapted to the purpose of defense. See Fig. 6.

(1) Its situation is to be first observed. It is on top of a promontory defended by two ravines, which sweep around it to either side, forming precipitous banks, in places 200 feet high. The ravines are occupied by small streams, with the Miami River close by, and below the works, on the west side. The hill upon which it is located is divided into two parts by a peninsular, its summit being two hundred and thirty feet above the level of the Little Miami. On the verge of the ravine the embankment is raised, and winds around the spurs and re-enters to pass the heads of gullies, and in several places it is carried down into ravines from fifty to one hundred feet deep.

(2.) The Walls.—The fortification is a strong one. Where the work is most exposed to an enemy it is of the greatest solidity and strength. At the isthmus the walls are twenty feet high. Where the Chillicothe road enters from the west the walls are fourteen feet high and sixty feet base. There are over seventy gateways. These openings appear to have been originally ten to fifteen feet in width. It has been suggested that some of these gateways were once occupied by block houses or bastions. Although the wall is chiefly built of earth, gathered from the adjacent surface and from the interior ditch, it is partially underlined with stone. One of the most interesting facts is the different methods adopted for defending the more easy approaches. Here the wall is of ordinary height, but the ridge immediately outside is cut down several feet, so as to present a steep slope. This gives the appearance of a terrace a few feet below the wall. In reference to the terrace, there are important features. The isthmus just north of the so-called large mounds is undefended. This fact, as well as the difference in the construction of the walls of the different parts, has led certain persons to the conclusion that there were two forts, one called the "old" fort and the other the "new".

(3.) The Terraces.—One terrace is located in the wildest region. It is situated in the southeast portion of the old fort. The terrace is covered with stone graves, the contents and construction of which have been described by Mr. Warren K. Moorehead. At the southwest there are two large terraces, between

the top and bottom of the hill. These terraces are supposed by many to have been merely natural, but by Squier and Davis, Moorehead and others they are thought to be artificial. It has

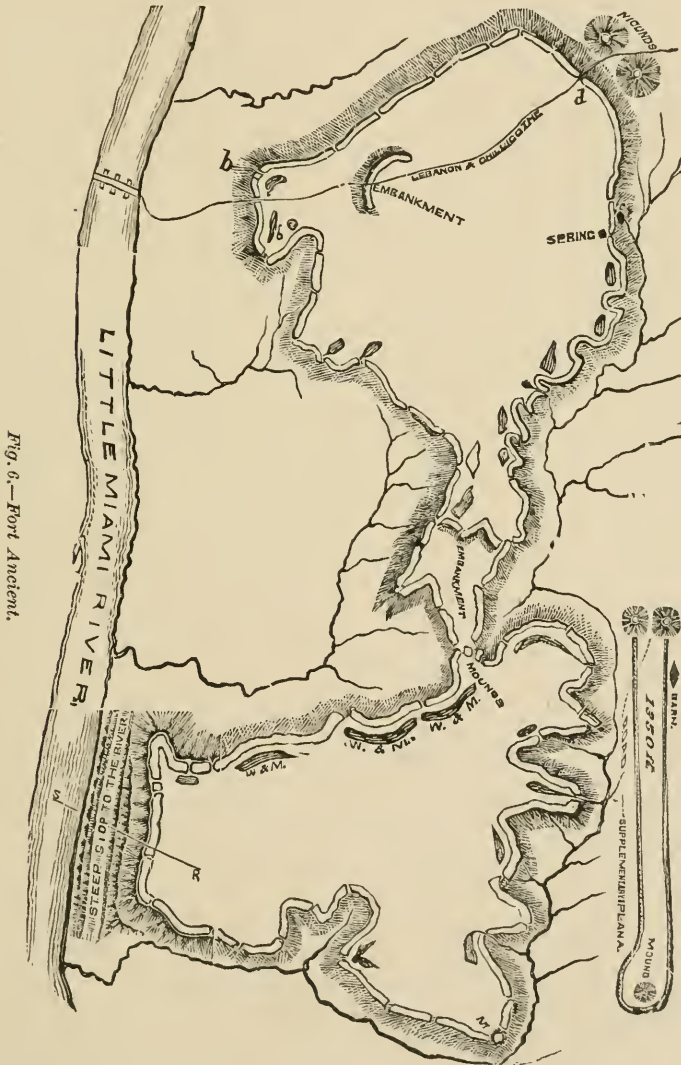


Fig. 6.—Fort Ancient.

been suggested that they were designed as stations from which to annoy an enemy. Mr. Moorehead dwells upon the terraces of the region, maintaining that they are all artificial. He gives the entire length of these terraces as amounting to ten miles. They are from twenty to twenty-five feet wide, and run along the

hillsides with surprising regularity of height, and have the appearance of structures designed for a purpose.

(4.) The gateways of Fort Ancient are among its most important features. There are seventy-four of these, and they differ greatly in their dimensions. Some of them are thirty feet wide at the top and ten feet at the base; others are twenty feet at the top and five feet at the base. The wall of either side is always sloping. In many places there are large quantities of stone at the ends of the walls. These stones lie in a confused mass, but it is supposed that they were used as a wall to hold and strengthen the embankment. The position of the gateways is also to be noticed. It appears that some of them open out upon the terraces; others open to the road leading down the hill, which is now occupied by the pike. One to the east opens out to the prairie region, but it is guarded by two conical mounds, and instead of furnishing a passage-way to the open country, only leads to the long, narrow covered way which extends from this point to the east.

The Great Gateway.—The gateway is situated between the two forts. Here two mounds about twenty feet high and ten feet apart leave just space enough for a wagon to pass between them. At their base is a raised platform four feet in height. When examined it was found to contain many human bones. Outside of the gateway, in the space between the two forts, for a considerable distance, there is no embankment, the ravines here having a steep angle and coming very near together, so as to make a narrow passage way. All about this gateway are masses of stone. These must have been piled up in the form of a rude wall to strengthen the base of the embankment. Here the embankment is the steepest of the entire earth-work. The stones are on the outside of the wall. "From the great gateway the two walls which constitute the old fort greatly diverge. The wall running east swings around to the south; the other wall runs in a very irregular manner and is more tortuous than any other portion of the entire structure." This is the place where we recognize the snake effigy.

Other gateways are found at intervals on the different sides of the fort. The supposition of Squier and Davis is that some of these were formerly occupied by bastions and block houses. The so-called east gateway is the one which forms the direct entrance. It is a remarkable feature of the fort. It consists of two large conical mounds, which seem to have been placed at the openings both as guards and as lookouts. The dimensions of these mounds is given as twelve feet in height and eighty feet in diameter. Between these two mounds is a pavement laid with limestone. The use of the pavement is conjectural. Some of the stones give evidence of having been subjected to the action of fire. The area of the pavement is said to be 130x500 feet.

(5.) The Covered Ways.—Running due northeast from these two mounds are two parallel walls or embankments, about a foot in height and twelve feet wide. They run for a distance of 2760 feet and terminate by enclosing a small mound, about three feet high. They are 130 feet apart. A suggestion has been made in reference to these, that they were used as a race-ground, and that the wall at the end was the goal or turning point. Our conjecture is that the mound was a lookout station, and that the walls were designed to protect the sentinels and to keep open communication between the fort and signal station.

(6) The Isthmus.—The division of the fort into two enclosures has been noticed. A peninsula joins the two forts. This has been called the "isthmus." The isthmus, however, seems to be a sort of middle fort. Here we find crescent-shaped embankments on one side and a great gateway on the other. "The space is well enclosed, and is one of the strongest positions of the entire fortification." The crescent gateway, on account of its beauty and the curve of its walls, may be regarded as belonging to the new fort. The other so-called gateway may be regarded as belonging to the old fort. Here the question of symbolism comes in. We have said that the walls of the old fort resemble two massive serpents, and that the mounds at the end, which constitute the sides of the gateway, represented the heads of the serpents. We now maintain that the crescents forming the gateway to the middle fort were also symbolic, and at the isthmus we find the clue to the character of the builders of the two forts. There is a crescent-shaped embankment near the western opening to the new fort. This we also regard as symbolic. We conjecture that the new fort was erected by the sun-worshippers and the old fort by the serpent-worshippers.*

(7.) In reference to the old enclosure, it appears almost certain that a large village once flourished within this fort. The wall is much more irregular than in the new fort. The terrace on the east side of the gateway has many stone graves. The stone graves are generally outside of the walls. "The terraces on the west side have scattered graves on them." Large quantities of stone were placed over the graves, one hundred wagon-loads in one place and forty in another. In the river valley below Fort Ancient was a village site. Ash-heaps were discovered here, and also many relics of a rude population. Five feet of earth were above the lowest site of the village. Well preserved skeletons have been found. "Three village periods have been recognized, and the mingling of two races seems to be indicated by the relics." The new fort was evidently built by a people more advanced than those of the old fort. The walls are much more skillfully constructed, have more perpendicular sides, sharper angles, wider gateways, and give more evidence of workmanship.

*Illustrations of the different parts of this fort are given by Mr. W. K. Moorehead

3. The fortified hill in Butler County is another specimen of a "Hill Fort". This is situated on the west side of the Great Miami River, three miles below the Hamilton. The hill is not far from two hundred feet high, surrounded on all points by deep ravines, presenting steep and almost inaccessible declivities, skirting the brow of the hill and conforming to its outline. Its wall is of mingled earth and stone, having an average height of five feet, by thirty-five feet base. The wall is interrupted by four gateways or passages, each twenty feet wide. They are protected by inner lines of embankments of a most singular and intricate description.

The gateways in this fort are its distinguishing peculiarity. It will be noticed from the plate that they occur where the spurs of the hill are cut off by the wall or parapet and where the declivity is the least abrupt. Two of them have the inner walls arranged after the same manner, with re-entering angles, curved walls, narrow passage-ways, excavations in the passage-ways. It will be noticed also that there are stone mounds on the summit of the hill near the gateways.

This style of gateway has been called the Tlascalan, as it is common among the Tlascalans and the Aztecs. The ends of the wall overlap each other, in the form of semi-circles having a common center. The northern gateway is especially worthy of notice. The principal approach is guarded by a mound, which was used perhaps as an alarm post. A crescent wall or embankment crosses the isthmus, leaving narrow passages between its ends and the declivity. Next comes the principal wall of the enclosure. Within this are two crescent-shaped embankments, placed between two prolongations of the walls, making a series of defenses so complicated as to distract and bewilder the assailants.

The stone mounds or beacons are to be noticed in this connection. These mounds are placed on the summit of the hill at the very entrance of the gateways. Similar stone mounds are found elsewhere, and they form a striking feature of the "Hill Forts". It is probable that they were used as beacons and that fires were lighted upon them.

The height of the ground is also to be noticed. It gradually rises from the interior to the height of twenty-six feet above the base of the wall, and overlooks the entire adjacent country. In the vicinity of this work are a number of others occupying the valley. The location of this fort will be seen by a study of the map of the works on the Great Miami.

4. Another "Hill Fort" that may be mentioned is represented on the same map. It is situated at the mouth of the Miami, six miles from Hamilton. It occupies the summit of a steep, isolated hill, and consists of a wall composed of earth thrown from the interior. The three sides are as nearly perpendicular as they could be. The wall corresponds to the outline of the hill,

but it cuts off a spur, leaving a promontory outside the walls. On this promontory is a mound, corresponding in its purpose with that which guards the principal avenue in the fortified hill just described. This fort was visited by Gen. Harrison and was regarded by him as admirably designed for defense, exhibiting extraordinary military skill and as a citadel to be compared to the Acropolis at Athens.

5. Two "Hill Forts" remain to be described. One of these is situated on the Big Twin, near Farmersville. It has been described by Mr. S. H. Brinkley. Its form is an irregular triangle,

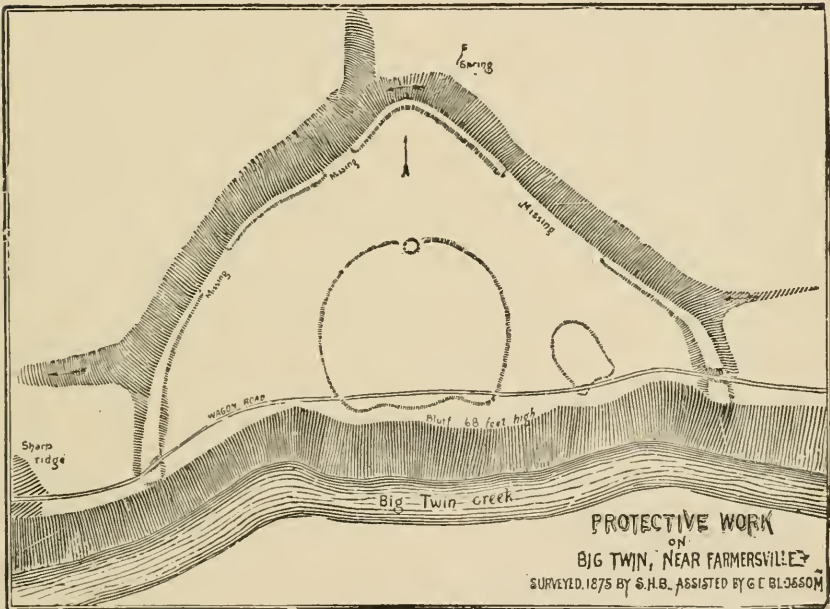


Fig. 7.—Farmersville Fort.

two sides resting upon the margins of wide ravines, the third on the Big Twin. The wall extends along the edge of the ravine; it is five feet high and forty feet wide; is flanked by a ditch on the inside. The entire length is two hundred and sixty-seven feet. There are three enclosures within this fort; two in the shape of horse-shoes; the third is a small circle. One of the horse-shoe enclosures has a diameter of three hundred and eighty feet north and south, four hundred feet east and west. The diameter of the other is one hundred and eighty-five feet and one hundred in width. The circle is but twenty-five feet in diameter. It is placed at the entrance of the larger enclosure, which is here forty feet wide. See Fig. 7.

These remarkable enclosures have been excavated and found to contain fire-beds or hearths filled with charcoal and ashes.

The supposition is that these hearths marked the sites of lodges. The shape of the enclosure is remarkable. It reminds us of the horse-shoes at Portsmouth, Ohio. What is strange is that a stone object wrought out of dark shale, with an exact representation of a horse-shoe upon it, was found in an adjacent field.

The gateway to the horse-shoe enclosure is noticeable. It is an exact circle twenty-five feet in diameter. This circle was placed at the entrance of the enclosure, partially filling the space, the entire opening being forty feet; but the circle took a little more than twenty-five feet, leaving a space or passage way on either side of it. Mr. Brinkley's idea is that the circle was the council house and that the horse-shoe enclosure was the place of residence. This is plausible, and yet it is the only enclosure of the kind which has been discovered. The other fort which Mr. Brinkley has described is also situated on the Big Twin, a tributary of the Great Miami. Its location is on a hill or bluff near Carlisle, so it has been called Carlisle Fort. See Fig. 8. The work comprises two distinct enclosures. The eastern division contains about nine acres, the western about six acres; the eastern division is protected by the precipitous bluffs which border upon the Big Twin, or rather which overlook the bottom lands or terrace of the Big Twin. On the north and south there are deep ravines, which protect it on those sides. The space between the two enclosures is made secure by a remarkable combination of walls in the form of a symmetrical crescent, three successive lines stretching, in graceful bends, from one ravine to the other, leaving a space between of forty feet and sixty-five feet, measured at the middle point. The inner wall is continued along the crest of the ravine, and forms a circumvallation for the fort. The length of the crescent-shaped wall is about four hundred and fifty feet; the height was originally about five feet. The western enclosure is protected by a ravine which passes around three sides of it. On the summit, overlooking this, there is a circumvallation, which is about three hundred and fifty yards in length and encloses about six acres. At a point between the two forts there is a ravine which partially separates them, but from which a spring flows into the bottom land. Above this ravine is a wall, which protects the western fort, and near the wall two circular enclosures, which seem to have formed guards to the gateway or entrance to the fort, though they may have had connection with the spring below. In the eastern division there was a stone enclosure, seventy-eight feet in length and forty-five feet in breadth, in the shape of a horse shoe, with a return at each corner, leaving an open space one-third of the width, fronting the east. The object of this horse-shoe enclosure is unknown. Mr. Brinkley thinks it was the foundation of a building, but of this there are no proofs. We would here call attention to the resemblance of Carlisle Fort to that at Fort Ancient. It is a double fort, the

two enclosures being separated by an isthmus, guarded by triple crescent-shaped walls. The entrance to this fort is by a path consisting of a most delightful promenade, which leads by an easy grade from the fort to the terrace. "The promenade is located on a ridge, but improved by the plastic hand of man." This promenade is on the side which leads to the Big Twin. One remarkable feature of this gateway is that near it there was a signal station or lookout mound and not far from the mound a pavement or fire-bed, beneath which were traces of fire.

This hearth or fire-bed is worthy of notice. The evidence is that here, as at the Farmersville Fort, there were fire signals. The walls near the gateway show this as well as the pavement. Near the Big Twin works there was a truncated mound thirteen feet high and a pavement ninety feet square. Near this pavement were ash-piles, which had been poured over the sides of the cliff, until they had attained a depth of ten feet. The symbolism connected with these forts is somewhat remarkable.

Here we have the fire at one end of the fort and the water supply at the other; the hearths or pavements connected with one and circles connected with the other. The horse-shoe symbol is contained in the shape of the bluff itself and in the stone enclosure.

IV. We now come to another class of strongholds, namely the "Stone Forts." These forts resemble the "Hill Forts" and may, by some, be regarded as identical. We classify the stone forts separately. Our reasons for so doing are as follows: (1) They seem to be more advanced in their style and

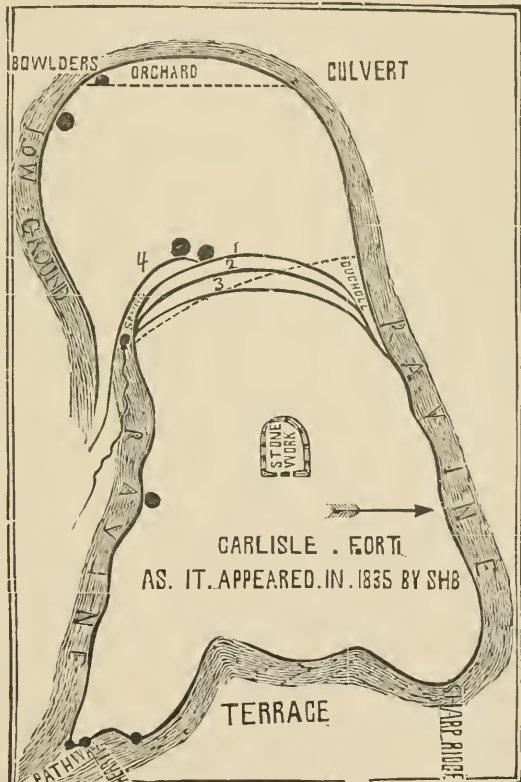


Fig. 8.—Carlisle Fort.

mode of construction. Wherever they are located they are always characterized by the same feature. They are generally situated on eminences, where there are rocky precipices. (2.) In several cases the precipices are veneered with artificial walls which make a barrier against the wash of streams and furnish a foundation to the walls above. (2.) The gateways of the stone forts are frequently quite elaborate. The wall is generally four or five feet high and varies from twenty to thirty feet wide at the base. It is sometimes laid up in regular order, making a smooth even front with sharp angles, but generally is merely in the form of an irregular pile of stone, and resembles an earth wall, except that the material is different. The question has arisen whether the wall was surmounted by a stockade; on this point there is uncertainty. The stone walls generally conform to the nature of the ground. Stones were employed because they could be readily procured, although the hammer had nothing to do with the preparation of the materials, yet there is evidence of great labor and the place of location is selected with a military eye.*

The stone forts may properly be considered as belonging to the village Mound-builders, and perhaps were designed as especial retreats for the villagers. It will be noticed, at least, that in Ohio this kind of fort is frequently situated in the midst of square enclosures, so giving evidence that they were built by the same people.† In the Miami Valley there is a square enclosure on the terrace, and the fort is on the hill near by. So with the fort at Bourneville. This is situated in the midst of the valley of Paint Creek, and was surrounded by enclosures, which we have imagined to be villages of the sun-worshippers. The same is true of the fort on Massie's Creek, near the Big Miami River. The stone fort near Manchester, Tennessee, and that of Duck Creek, of the same state, may be regarded as specimens; yet these were located near the walled villages of the Stone-grave people and may have been built by that people. The same may be said of the stone fort of Southern Indiana. This last fort was located on the Ohio, somewhat remote from the region of the "sacred enclosure," so called, but there are on the White River many earth-works which resemble those on the Scioto, and so we place this stone fort among the works of the sun-worshippers.

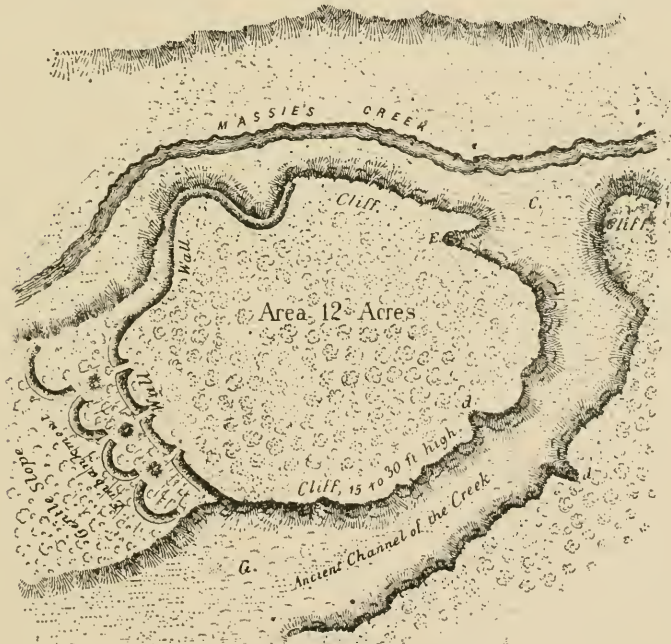
The subject of symbolism comes in here. It is to be noticed that two of the forts—Bourneville and Massie's Creek, in Southern Ohio—have walls in the shape of crescents, with mounds between the walls. Our conjecture is that these were designed as symbols. This last fort is beautifully situated on a hill-top, but is attended with a large square enclosure situated in the valley. The fort has a series of gateways guarded by conical mounds,

*Haywood's Tennessee.

†See map of Miami Valley; also of Paint Creek and the Scioto.

and an outer wall, divided into four sections, in the shape of crescents. See Fig. 9. The enclosure is nearly square, and is attended with several earth embankments, which are also in the shape of crescents. The impression gained is that here was a settlement of sun-worshippers.

The difference in the symbolism of the forts is to be noticed in this connection. The Hill Forts, if they contain any symbolism, contain that of serpent-worship; but the Stone Forts illustrate the symbolism of the sun-worshippers. The Hill Forts were generally located in a wild or rough hill country—a country which was probably occupied by hunters. The Stone Forts



No. 9—Stone Fort on Massie's Creek.

were generally located in regions favorable for agriculture and are surrounded by evidences of a numerous population; a population which was given to agriculture. With these conjectures we proceed to a description of the specific forts.

1. One of the best specimens of the stone forts is at Bourneville. See Plate VI. The description of this is given by Squier and Davis. It occupies the summit of a lofty, detached hill twelve miles west of Chillicothe. The hill is not far from forty feet in height. It is remarkable for the abruptness of its sides. It projects midway into the broad valley of Paint Creek, and is a conspicuous object from every point of view. The defenses consist of a wall of stone, which is carried around the hill a

little below the brow, cutting off the spurs, but extending across the neck that connects the hill with the range beyond. The wall is a rude one, giving little evidence that the stones were placed upon one another so as to present vertical faces, though at a few points the arrangement lends to the belief that the wall may have been regularly faced on the exterior. Upon the western side, or steepest face of the hill, the stones are placed so as to resemble a protection wall. They were probably so placed to prevent the creek from washing away the hill and undermining the fort. Upon the eastern face, where the declivity is least abrupt, the wall is heavy and resembles a stone heap of fifteen or twenty feet base and four feet high. Where it crosses the isthmus it is heaviest. The isthmus is seven hundred feet wide. Here the wall has three gateways.

The gateways are formed by curving inward the ends of the wall for forty or fifty feet, leaving narrow passages not exceeding eight feet in width. At other points where there are jutting ridges are similar gateways, though at one point a gateway seems to have been for some reason closed up. At the gateways the amount of stone is more than quadruple the quantity at other points, constituting broad, mound-shaped heaps.

These stone mounds exhibit the marks of intense heat, which has vitrified the surfaces of the stones and fused them together. Strong traces of fire are visible at other places on the wall, particularly at F, the point commanding the broadest extent of country. Here are two or three small stone mounds that seem burned throughout. Nothing is more certain than that powerful fires have been maintained for considerable periods at numerous points on the hill. There are several depressions or reservoirs, one of which covers about two acres and furnishes a supply of water estimated as adequate to the wants of a thousand head of cattle. The area enclosed within this fort is something over one hundred and forty acres, and the line of wall measures upwards of two and a quarter miles. Most of the wall and a large portion of the area was covered with a heavy primitive forest. Trees of the largest size grew on the line, twisting the roots among the stones. The stones were of all sizes, and were abundant enough to have formed walls eight feet thick. In the magnitude of the area enclosed, this work exceeds any hill-work now known in the country, although less in length than that of Fort Ancient. It evinces great labor and bears the impress of a numerous people. The valley in which it is situated was a favorite one with the race of Mound-builders, and the hill overlooks a number of extensive groups of ancient works.

2. The stone fortifications in Clark County, Ind. This is a very interesting fort, situated at the mouth of Fourteen-mile Creek, on the Ohio River, at the point of an elevated, narrow ridge, which faces the river on one side and the creek on the

other. This fort presents many new and strange features. The ridge is pear-shaped, with a narrow point to the north, the broad part toward the river. It is two hundred and eighty feet above the level of the Ohio, though at the south end there is a terrace which is sixty feet above the river. Along the greater part of the river front there is an abrupt escarpment of rock, too steep to be scaled, and a similar barrier on the side facing the creek. This natural wall is supplemented on the north side by an artificial stone wall made by piling up loose stone without mortar. It is about one hundred and fifty feet long. It is built along the slope of the hill and had an elevation of about seventy-five feet above its base, the upper ten feet being vertical. The inside of the wall is protected by a ditch. The ridge on the south and southwest sides, or the broad end of the pear, is also protected by an artificial wall, built in the same way, but not more than ten feet high. The elevation of the side wall above the creek bottom is eighty feet. This artificial wall is supplemented by a string of mounds which abut against the wall on the inside, but which rise to the height of the wall throughout its entire length. Within the fort there is a ditch twenty feet wide and four feet deep, which separates the mounds from the enclosure, or rather from the ridge, on the summit of which the fort was supposed to be. The top of the enclosed ridge embraced ten or twelve acres. There are as many as five mounds that can be recognized on the flat surface. One near the narrowest part (the stem of the pear) was so situated as to command an extensive view up and down the Ohio River, as well as an unobstructed view across the river and a creek, both east and west. It is designated as Lookout mound.

The locality afforded many natural advantages for a fort or stronghold. Much skill was displayed in rendering its defense as perfect as possible at all points. One feature about the fort is unique. The wall is made up both of stone and earth, the stone forming a shield to the earth wall, part way up on the inside, and completely to the summit on the outside, the two together forming an elevated platform which overlooked the steep bank below, and offered an excellent opportunity for defense. The wall, and accompanying mound or earth-work, is situated below the summit of the ridge on an escarpment of rock, with a ditch on the inside, so that there was a double defense, the wall itself serving as an outwork, and the sides of the ridge inside forming a second barrier for defense. Prof. Cox says of this fort: "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 which has yet been found in the State. The walls around the enclosure, which fill up the protected spaces, are generally ten feet high, but at a naturally weak point on the northwest part the gap was closed by a wall that from the outer case to the top was

seventy-five feet high. From the summit of the ridge, which is two hundred and fifty feet above the river, one can look over the beautiful scenery for a stretch of eight or ten miles up or down the Ohio River."

(3.) Prof. Cox speaks of a second fort or enclosure, on the spur of a ridge skirting Big Creek, in Jefferson County. "The ridge is protected on the north and south by a natural cliff, sixty-five to eighty feet high. Across the narrow neck of the spur of the ridge were two artificial stone walls, one seventy-five feet long and twelve feet wide, and the other four hundred and twenty-five feet long, leaving an enclosure between the walls of twelve acres. "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." Three stone mounds formerly could be seen, near this fort, upon level ground. One of them is called the egg mound, on account of its shape. "Stone was hauled from these mounds for building foundations, fire-places and chimneys for all the houses for miles around." "From the great fortified town at the mouth of Fourteen-mile Creek to the fortification at Big Creek, a distance of about thirty miles, there appeared 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."*

V. A fifth mode of defense is the one to which we now call attention. It consists in the system of "walled towns" or villages.

We call them, for the sake of convenience, "walled towns". This is a significant term. It reminds us of the "walled towns" of the ancient and mediæval times, and suggests the idea that these may have been the outgrowth of such villages as prevailed in prehistoric times. We are to notice their peculiarities. Their peculiarities were: (1.) The villages were surrounded by walls, but were permanent residences. (2.) The villages were surrounded by ditches, sometimes upon the outside of the wall and sometimes on the inside. (3.) The majority of these walled villages had some high pyramid or domiciliary mound, which answered in a rude way to the temples. (4.) There was always a lookout mound in connection with the walled village, which served the same purpose as a tower. (5.) In many of the walled villages the domiciliary mound was located in the midst of the lodge circles, the arrangement of the lodges being around a square, the chief's house being in the square. (5.) Burial mounds are frequently found in these villages. These contain the greatest store of relics, giving the idea that care for the property as well as for the remains of the dead, was one element of village life. Let us consider the different classes:

Among the hunter tribes the walled village embodied it-

*See Geological Report for 1874, p. 36.

self in the stockade, a single enclosure constituting the defense. Among the sun-worshippers the walled villages contained three enclosures, though the object of these enclosures is now unknown. Some have accounted for these enclosures by imagining that the square was designed for the residence of the chiefs, corresponding to the public square of the southern Indians. The larger circle was the residence of the people, and included the corn-fields and kitchen gardens, while the small circle was the residence of the priest or medicine man. Among the stone grave people the walled village consisted of a wall, without bastions,

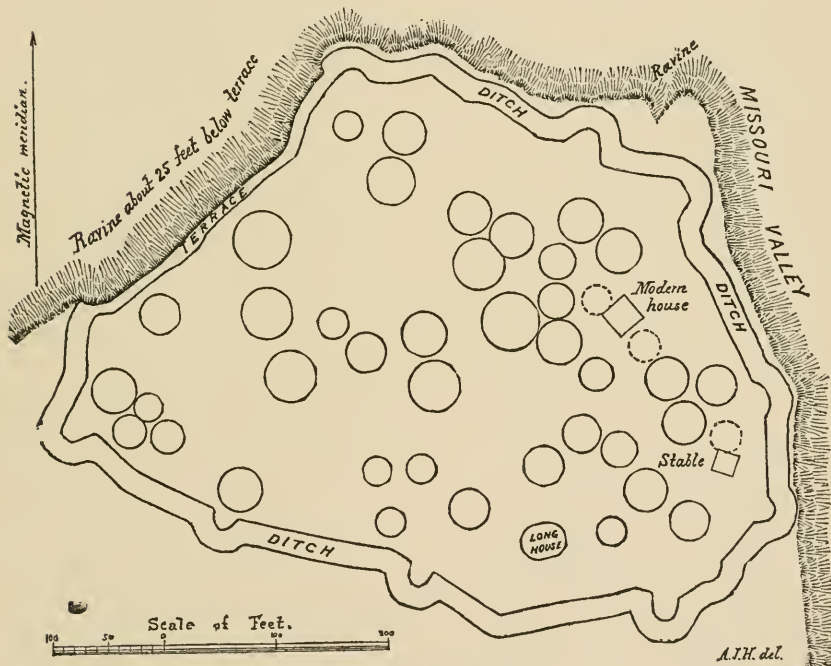


Fig. 10.—A Mandan Fort.

surrounding the village in the form of a semi-circle. Within this wall is found a series of earth-works—pyramids, cones, burial mounds, etc. These are very common in Tennessee. They may be called the mountain villages, or their builders may be called the mountain mound-builders. We give this name to them, not because they are on the mountains but because they are in a mountainous region, the Appalachian range being the only mountains in the Mississippi valley, or in other words, the only mountains in the Mound-builders' territory.

Another class of walled villages is the one found in Arkansas, among the cypress swamps. It consists of a square enclosure with an earth wall on all sides, the enclosure being filled

with lodge circles arranged in rows around an open square. In these villages there are large domiciliary mounds in the shape of pyramids, and many conical mounds. There is a resemblance between these villages and those of Tennessee; the shape of the enclosure is the main point of difference. A specimen of the fourth class of walled villages is found at Savannah, Tennessee. This is a square shaped enclosure. A peculiarity of it is the wall is built with bastions or redoubts resembling those of modern forts.

We will illustrate the subject by specimens of walled villages. (1.) The first is one common among the Indians, such as the Mandans. This consisted in a mere group of lodges arranged around a square. Some of the Mandan villages seem to have had walls with bastions. See Fig. 10. This reminds us of the

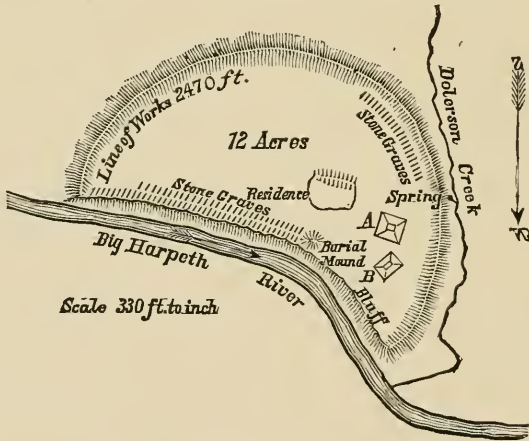
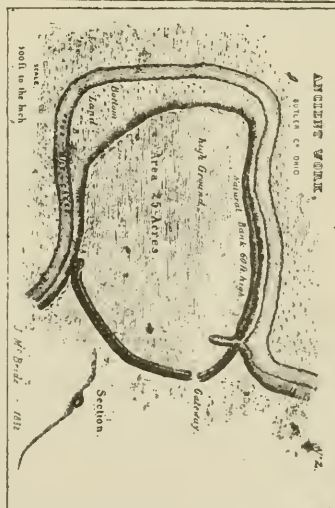
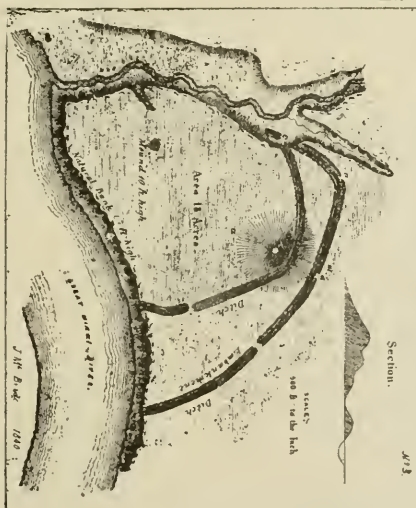
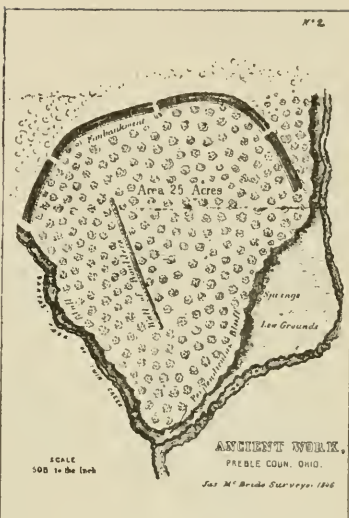
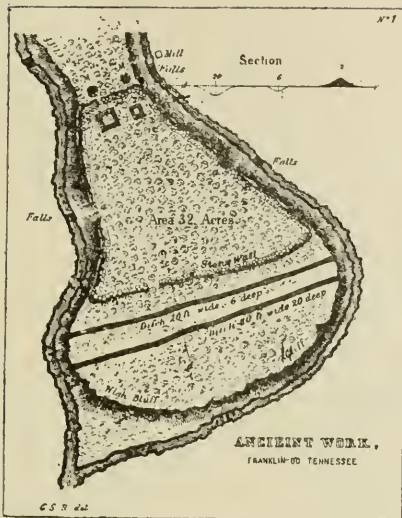
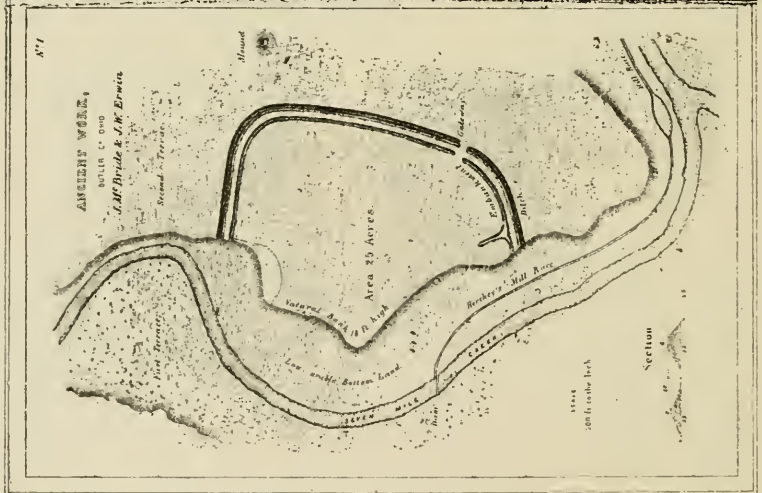
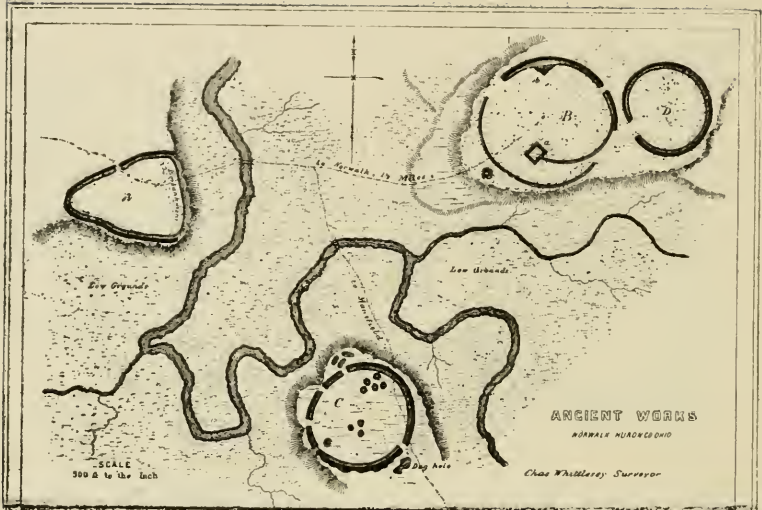


Fig. 11.—Walled Town on the Big Harpeth.

ancient village called Aztalan, in Wisconsin, which also had bastions and outworks. (2.) The villages found in the State of Tennessee. Mr. Jones says, "On the southwestern side of the Big Harpeth River, about two and a half miles from Franklin, Tennessee, is an earth-work which encloses about thirty-two acres of land. See Fig. 11. It is in the form of a crescent, which is 3,800 feet in length, situated on a perpendicular bluff forty feet above the waters edge. It was admirably chosen for defense. Within the earth-works are nine mounds, the largest, marked A, resembles a parallelogram two hundred and thirty feet in length, ten feet in breadth and sixteen feet in height. The remaining mounds vary from one hundred to twenty-five feet in diameter and one to four feet in height." The large oblong mound contained an altar with ashes and charcoal resting on it; this is near the original surface of the earth, and the mound seemed to have been erected upon the altar. Four mounds, marked B, C, D and F, also contained evi-

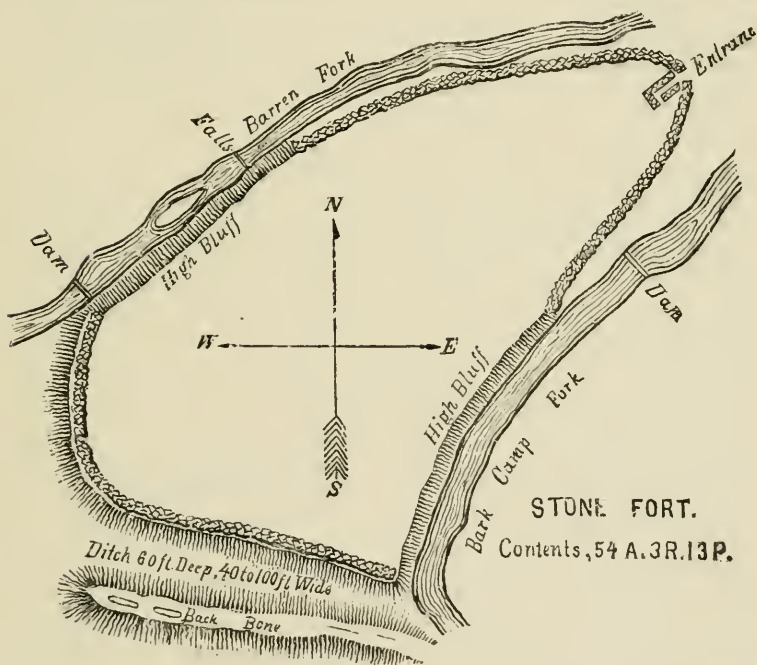


STOCKADE AND STONE FORTS IN OHIO.



STOCKADE FORTS IN NORTHERN OHIO.

dence of hot fires in a red burnt stratum, resembling brick in hardness. The fort represented in the cut, Fig. 11, is also situated on the Big Harpeth, about six miles from Franklin. This fort contains twelve acres. It has a crescent-shaped wall surrounding it, 2,470 feet in length. There are two pyramids at one side of the enclosure. One of them (A) is 65 x 112 feet at the base and eleven feet high; the other (B) is 60 x 70 feet at the base and nine feet high. This enclosure contains a large number of stone graves, arranged in rows at either side of the village. The probability is that the lodge sites of the villagers were contained within this fort, and the pyramids



marked the sites of the houses of the chiefs, the burial place

Many such stockade forts have been found in Tennessee. They contain but one enclosure, and in this respect differ from the walled villages, or sacred enclosures, of Ohio, many of which have three enclosures connected with one another, as well as covered ways, joined by parallel walls, which connect the enclosures with streams, the fields, and sometimes with the dance circles.

Descriptions of these stockade villages have been furnished by Gen. G. P. Thruston in his book on "The Antiquities of Tennessee," by Prof. F. W. Putnam in the Reports of the Peabody Museum, and Mr. Joseph Jones in his work on "The Aboriginal Remains of Tennessee." They were not the only

forts, for Mr. Jones has described a stone fort on Duck Creek, though it had been previously described by Mr. Haywood. He says:

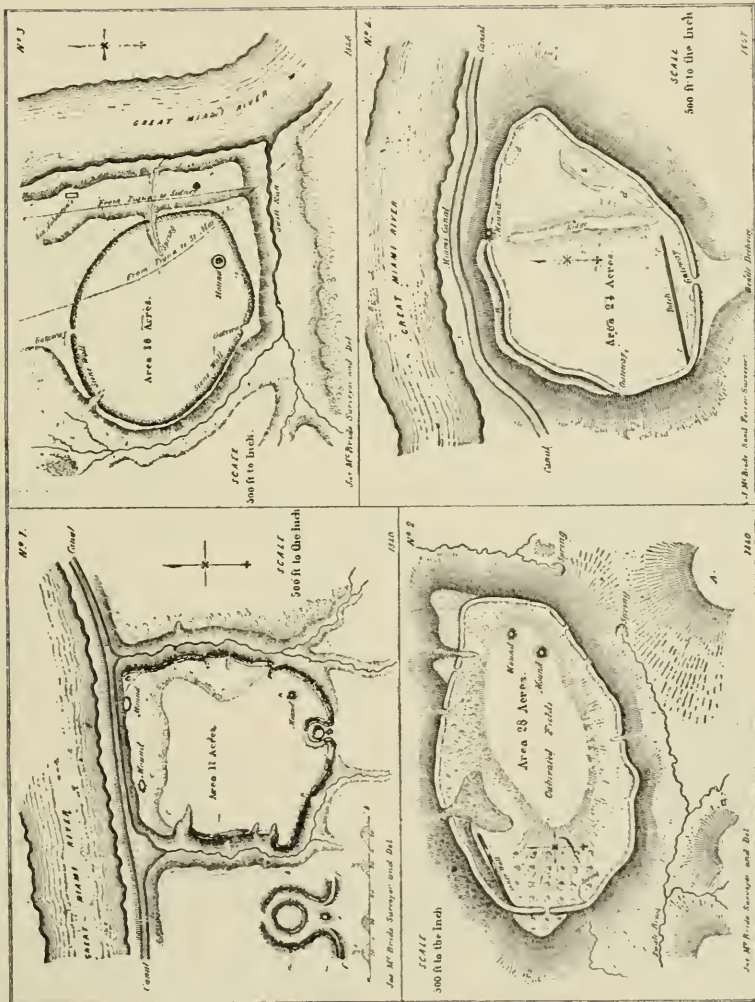
The wall is composed of loose rocks, the fortification is from four to ten feet high. Where the bluff is steep, the wall ceases. The fort is on the bluff, or on a tongue of land, between two forks of a stream, and is separated from the main land by a gullev, 60 feet in depth and 40 to 100 feet wide, and a high limestone ridge, called the "Backbone." Outside of the gullev, the entrance to the fort resembles that which was common in the stone forts of Ohio, as there are parallel walls which extend into the enclosure; one of which bends at right angles, thus making a cul-de-sac. Defensive towers, about sixteen feet square and ten feet high, made of stone, are situated at the opening to the fort. Many relics were found in this fort, among them a remarkable stone pipe, carved in the shape of a hawk. Images, or idols, representing human figures—male and female—have been found in a rock mound near Pulaski, and many pottery vessels, having the human form, either seated or kneeling, generally with the face upturned, but with retreating foreheads.

An explanation of these idols and vessels is found in the fact that the Choctaws flatten the foreheads of the children, making them resemble the Flatheads of Oregon though they, with the Chickesaws, formerly occupied the region now embraced by the Gulf States, including that west of the Cumberland River. They probably were the occupants of these stockade forts, and left the idols and pottery relics in the region. Idols resembling them have been found in the mounds and scattered over the village sites of the South. The Natchez occupied the banks of the Mississippi River to the west, but were mainly confined to the west side.

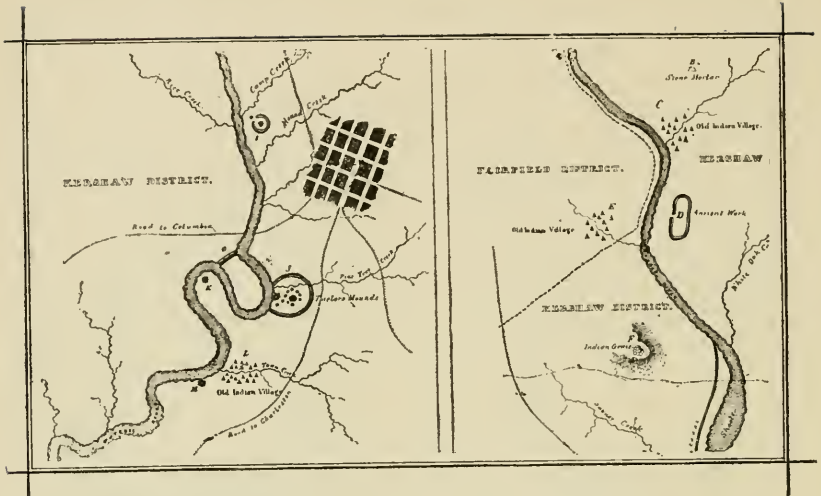
Du Pratz, who lived among the Natchez, says that their territory extended from the sea to the Wabash River, and that they practised human sacrifices similar to the Aztecs, and had retreating foreheads, like the Toltecs, who were sun-worshippers.

There is no region that has such a variety of relics, as that in which are found the stone graves and the stockade villages. There are paint cups, and chunky-stones, and discs, besides many spool ornaments and copper implements of various kinds, but the engraved shell gorgets are the most interesting. These contain symbols of the sun, moon and stars; also circles, looped, squares with a cross in the center and birds' heads projecting from the sides; also coiled serpents, and many other figures. Here pottery impressed with fabrics, shows the pattern of the weaving. Spinning whorls are also common.

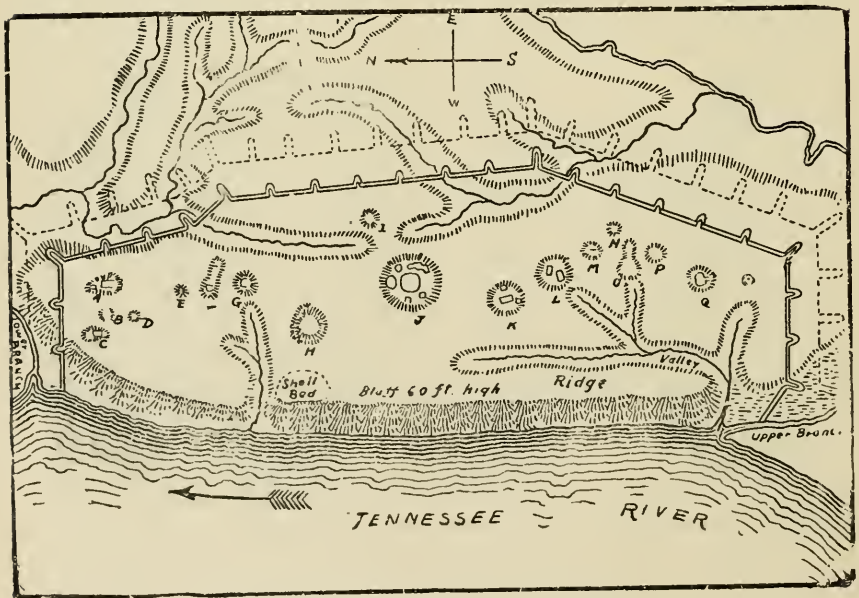
The evidence is that the villages, or stockade forts, were connected with one another and in harmony, while the open land was used for hunting and, perhaps, for agricultural purposes, but there was no such attempt to protect the people as they went to and fro from the villages, as was common in southern Ohio. Another peculiarity of the stockade villages was that many of them contained pyramids, which were probably occupied by the chiefs and ruling classes, resembling the pyramids in the Gulf States.



STOCKADE FORTS IN SOUTHERN OHIO.



FORTS AND VILLAGE SITES IN NORTH CAROLINA.

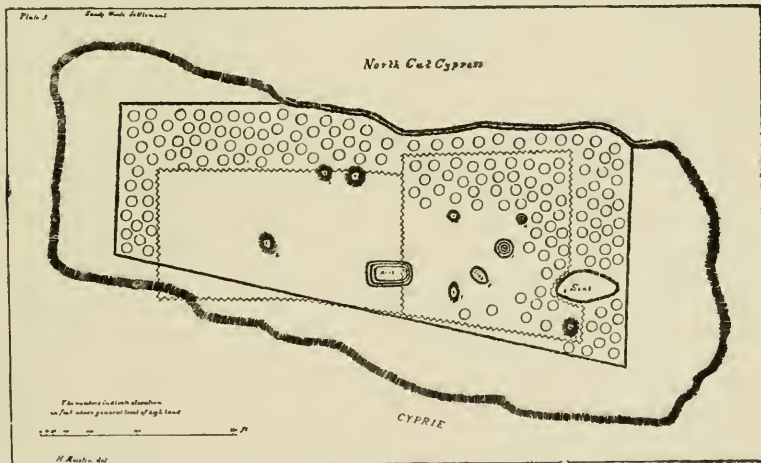


FORT WITH BASTIONS IN TENNESSEE.

Prof. Putnam speaks of some of these pyramids as presenting the traces of council houses, or great houses. Some of them show a succession of such houses, giving the idea that they had been burned and rebuilt, but with intervals of time between them.

There are other forts in this region which resemble the well-known fort at Aztlan in Wisconsin, as they are built in rectangular shape, open on the river banks, and are furnished with bastions, which project from the wall, but there are no effigies near them.

VI. There are villages in Arkansas and Missouri which are situated in the midst of the cypress swamps, but resemble in many respects those just described. They contain a large number of hut rings, or lodge circles, arranged generally in rows, but leaving an open space in the center, with pyramid mounds



Swamp Village With Defences and Lodge Circles.

in the midst of the rings, and a wall surrounding them, but with a ditch on the outside of the wall. These villages were defended in three ways: they were in the midst of the Cypress swamps, and were difficult of access, in fact they were hidden away in the swamps as thoroughly as the forts were which De Soto found in the swamps of Florida; the ditch surrounding them resembled those which surrounded the villages of the Gulf States; the pyramids inside of the walls furnished a last resort to the people in the case of an attack. These walled villages were evidently erected by an agricultural people, who also gathered subsistence from the wild fruit which grew in the swamps, and the fish as well as the birds and animals of the forests, and so combined the three kinds of employment in one—fishing, hunting and tilling the soil.

This people were great pottery makers, for a very large number of pottery vessels have been found on the village sites,

some of which have been gathered into the museum in St. Louis, and have been described in the reports of the Academy of Sciences in that city. The relics discovered on the village sites resemble those found near the great Cahokia Mound opposite St. Louis. Among these relics are shell gorgets and inscribed plates, which are very interesting, for they contain the same symbols as those found in the stone graves of Tennessee, and represent the same kind of religion.

Who they were that occupied these villages is unknown, but they had the same method of defense and apparently the same form of government as the Stone Grave people, but differed mainly in the fact that they were among the Cypress swamps. This resemblance of the pottery relics and the shell gorgets to those found in the stone graves, refutes the idea that the latter were built by the Shawnees, and confirms the supposition that the Southern Mound-Builders once extended north as far as St. Louis, the mouth of the Ohio and the Wabash, and, perhaps, along the valley of the Illinois River, for shell gorgets have been found in the latter region, which resemble those found on the Cumberland.

The lodge circles contained in these swamp villages are very numerous, and pyramids are always found near them, but with an open space or public square in front of the pyramids. The pyramids varied from 16 to 20 feet in height, with a base of 120 x 250 to 210 to 270 feet, and the summit varying from 120 x 250 to 110 x 165 feet. The burial mounds within the confines of the settlements contain a large number of bodies, generally from 100 to 200. They also contain from 800 to 1,000 specimens of pottery and other relics. The relics most numerous in these settlements are articles for household use and agricultural tools, but there is a scarcity of implements of war. Pottery is found in the greatest abundance, also beautiful specimens of spades and hoes, several engraved shells bearing the figures of spiders and human forms and other symbols, but very little copper.

The conclusion which we draw from these facts, is that the mound-building tribes all dwelt in villages, but had different methods of defence,—methods which were best adapted to the region occupied, for those who dwelt in the hill country had what are called "Hill Forts"; those who dwelt upon the river banks and in the midst of forests, surrounded their villages with stockades; those in the midst of swamps depended upon their isolation, yet all continued their village life, notwithstanding the dangers by which they were surrounded.

CHAPTER XII.

RELIGIOUS WORKS OF THE MOUND-BUILDERS.

NORTHERN DISTRICT.

We have undertaken in this chapter to give a map of the religion of the Mound-builders. To some it may seem to be a Utopian scheme, only based upon speculation, but we maintain that the effort is not only useful in giving us more definite conceptions of the different phases of that religion, but in reality is correct in its classification. The following particulars will show this: 1. The religious systems in the map correspond to the ethnic divisions of the Mound-builders' territory which we have already made. These divisions indicate that there were different races occupying different districts, and the present view not only confirms this, but indicates that the races had systems of religion which were distinct and different from one another.

2. The classification of the religious system corresponds with that of the works and relics, and so proves that the religious cult had much to do in giving them their special characteristics.

3. The map shows that there was a progress in the religious cult which corresponded to the other lines of progress made by the Mound-builders. The different stages of progress may be recognized in each district as we pass over their territory. The northern districts were evidently occupied by totemistic hunter tribes; their works consist mainly of burial mounds, animal effigies and the remains of stockades of forts and villages. The middle districts by a class of agriculturists, who were evidently sun worshipers; their works consist of three classes—pyramids, sacred enclosures and large mounds which contain chambered tombs. The southern districts by sedentary tribes, who were pyramid-builders and sun worshipers, and who were idolaters.

4. The different phases of nature worship given by this map have been recognized among historic races. We maintain that they really originated among prehistoric races. Some of these are rude and primitive, but they wonderfully illustrate the systems that prevailed in ancient times, and help us to understand the origin and growth of the different historic faiths. They seem to be mere superstitions and unregulated fancies of rude savages; but in them we find the beginnings of that extensive system which grew into so many elaborate faiths and forms. We are thus brought to the threshold of a great mystery and into the midst of a deep problem, the whole field of comparative religions having

suddenly opened before our vision, and the relation of man's religion to his environment rising like a mountain in the background.

5. There was evidently a supra-naturalism among the native races, which was dim and shadowy, but as, among the Mound-builders, it embodied itself in the relics and in the earth-works it becomes an object of study, and so we may define each phase by referring to these material forms. We do not claim that any one system was exclusive of all others, for the systems are often mingled together; yet there was such a predominance of one over the other that we may take the map as a fair picture of the different systems. The complications are, to be sure, numerous and the tokens varied, but the geographical divisions separate them sufficiently and we may actually decide what the characteristic of each cult was.

6. The religious sentiment was strong among the native races of America. It seems to have manifested itself in different ways in different localities, showing that it was everywhere subject to the influence of climate, soil, scenery, and physical surroundings. It largely partook of the character of nature worship, but obeyed the law of natural development. If we take a map of the continent and draw lines across it, somewhat corresponding to the lines of latitude, we will find that this map not only represents the different climates and occupations, but the religions of the aborigines. What is more, these different religions will embrace nearly all of those systems which have been ascribed to nature worship: Shamanism prevailing among the ice fields of the north; animism having its chief abode in the forest belt; totemism, its chief sway among the hunter tribes that inhabited the country near the chain of the great lakes; serpent worship in the middle district; sun worship among the southern tribes, and an advanced stage of the nature worship among the civilized races of the southwest.

The divisions in the map correspond with the divisions of various Indian tribes or races, which are known to have inhabited the country at the time of the opening of history, thus showing that there were ethnic causes that produced the different systems of religion among them. There is a wonderful correspondence between the systems which prevailed in the modern Indian and the mound-building period, showing that the native races were affected by their surroundings.

7. In reference to the geography of the religion of the Mound-builders, we conclude that the key is found in the physical environment. If among them there was a system illustrating the stages through which religion passes on its way to the higher historic faiths, this corresponded to the social status, grades of progress and geographical districts among the Mound-builders, and is to be studied in the material relics and tokens which are

to be found in the different districts. The picture which is presented by the larger map is concentrated into a smaller compass, the different forms of nature worship having embodied themselves in the works and relics of this mysterious people. Here then we have a schedule by which we may classify the different systems as they appear before us. Recognizing the various aboriginal religions in the different districts, we find in them the various phases of nature worship, and so can follow that worship through its different stages.

The order of succession in the line of growth, would be about as follows: We find a trace of animism predominating among the wild tribes, which consisted in giving a soul to everything, but this prevailing among the Mound-builders led them to erect many chambered mounds and to take great care in depositing relics in them.

The same animal worship that led the native tribes to the recog-

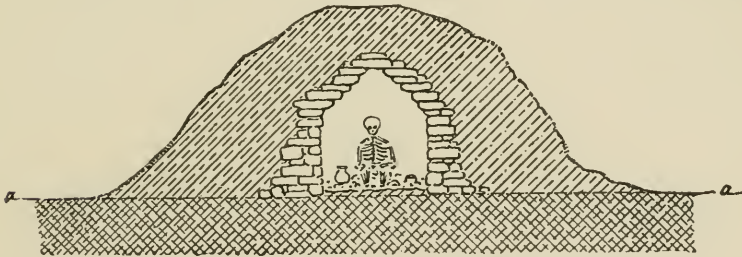


Fig. 1—Mound on the Iowa River.

nition of the animals as their divinities led the Mound-builders to erect animal effigies on the soil. The system of sun worship which led the agriculturist to regard the sun as his great divinity would lead the Mound-builders to embody the sun symbols in their works. The system which led the civilized races to erect vast pyramids of stones and consecrate shrines to the sun divinity on the summit, induced the Mound-builders to erect their earth-works in the shape of the pyramids and place images upon the summits. These different phases of nature worship only illustrate the law of parallel development, a law which prevailed in prehistoric tribes as well as in historic. We are, however, to remember that there are no hard and fast lines by which these systems were separated, for they were blended together everywhere, the only difference being that one system was more prominent than the other. We take the different districts and learn from the works and relics that these embodied the religions of the Mound-builders, but at the same time see the shading of one into the other, and avoid making the divisions arbitrary.

I. Let us take the system of animism. This, in the larger field and among the living races, was the religion of the savages and belonged to the lowest stages of human development. Ani-

mism prevailed among the Mound-builders. Among them it was also the lowest form of religion. Remains of it are, to be sure, occasionally seen among the higher stages, but it was, nevertheless, a superstition of the savages. The essence of animism consisted in ascribing a soul to everything, and making the soul of material things about as important as the human soul. The savage, when he buried the body of the dead, deposited the various belongings with the body, for he thought that the spirit would use the weapons and relics in the land of the shades. With the Mound-builders the same superstition prevailed, but with them it was often the custom to break the relics in order to let out the soul. It was to the same superstition that chambers and vaults, resembling the houses and tents of the chiefs, were left in the center of the mounds and that the bodies were placed inside these vaults. The thought was that the spirit remained; every individual having a double lodge, one occupied before death, the other to remain inhabited after death.

We give a series of cuts which illustrate the points referred

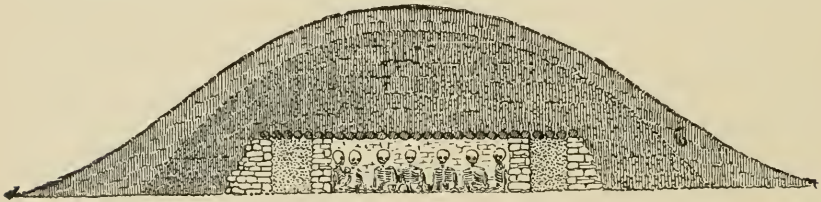


Fig. 2.—Mound near East Dubuque.

to. It will be noticed that in each of these the mound contains a chamber, and in the chamber are skeletons, and with the skeletons are relics which were used in the life-time; the idea being that the soul needed the same after death. The first figure (see Fig. 1) illustrates a mound situated on the Iowa River, a region where hunter races are known to have lived; in this mound is a stone vault having the shape of an arch, and in the vault a single skeleton, sitting, with a pottery vessel by its side. The next (see Figs. 2 and 4) represent a mound situated on a high bluff on the Mississippi River in East Dubuque. In this mound was a cell divided into three apartments; in the central apartment were eight skeletons sitting in a circle, while in the center of the circle was a drinking vessel made of a sea shell; the other cells are said to have contained chocolate-colored dust, which had a very offensive odor. The whole chamber was covered with a layer of poles or logs, above which were several layers of cement, made partly of lime. Another figure (see Fig. 3) represents a burial mound containing a chamber, in the bottom of which were several skeletons, a top covering of sand, a layer of clay, a layer of hard clay mixed with ashes, and a layer of mortar over the bones. This mound was in

Crawford County, Wisconsin, in the region of the effigy mounds. Another figure (see Fig. 5) represents a chambered mound in Missouri. The vault in this mound was rectangular, and was built and was laid up with stones very much like a modern building, but has a passage-way at the side which reminds us of the European cists or dolmens. It is a remarkable specimen of the handiwork of the Mound-builders. Whether these different chambers or vaults can be regarded as representing the houses of the Mound-builders is a question; but the fact that they are in the burial mounds, and so many of them contain relics and remains, would indicate that such was the case.

We have said that burial mounds of hunter tribes were generally stratified. We find, however, stratified mounds containing pottery vessels near the heads, as though there was an association of the spirit with the vessel. We find also groups of lodge circles on the sites of villages, but within the circles are bodies and relics, giving the idea that they were buried within the lodge. It was the custom of certain tribes to bury the body on the very spot where life had departed. The tent and its furniture and

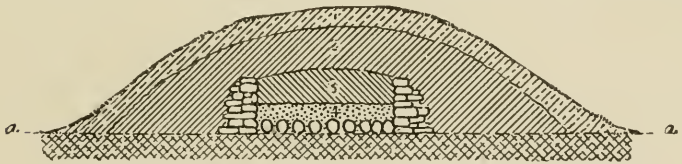


Fig. 3.—Mound in Crawford County, Wisconsin.

equipments were either burned or removed, but the body remained where it was. May we not ascribe these lodge circles to the same superstition? It was the custom, also, of other tribes to bury the body in the very attitude which it assumed in "*articulo mortis*". May not this explain the peculiar attitude of some of the bodies found in the tops of the mounds, where the face rests upon the hands, the body on the sides with the knees drawn to the chin? It was the custom of the Dakota tribes to remove the sod and expose the soil for the sacred rites of certain feasts, as the Master of Life was supposed to dwell in the soil. The sacred pipes and other emblems were placed near the fresh earth, as if to be offered to the spirit which dwelt there. May not this same superstition, that the soul or spirit of life was in the soil, account for the burial customs which were embodied in the mound? The same punctillious care over the details of burial was observed in prehistoric times that is now seen in the sacred ceremonies of the modern historic tribes. We cannot dwell upon this subject, but, doubtless, if we understood the customs of the Mound-builders better, we should find that there was not a single item which did not have its special significance. Great variety is, to be sure, manifested in the burial mounds.)

Some contain relics, the very relics which had been used during the life of the deceased; the bodies of children being covered with bone beads, the very beads that had been worn as necklaces and wristlets; the bodies of warriors being attended by the arrows, axes, spear heads, badges, gorgets and ornaments which



Fig. 4.—Skeletons at East Dubuque.

they had carried through life; the bodies of chiefs being attended with pipes, spool ornaments, pearl beads and many other precious relics, which were their personal belongings. Vases filled with sweetmeats were sometimes buried near the children; pottery vessels and domestic utensils near the heads of females, and brooding ornaments or bird-shaped relics, used as the signs of maternity. Even tender fabrics, such as the cloth woven from hemp, feather robes and coverings, made from the hair of the rabbit, delicate needles made from bone and from copper, spool ornaments made from wood and covered with copper and sometimes with silver; in fact, all the articles that made up the toilet of women or furnished equipments for men, or were playthings of children, were deposited at times in the mounds, not as offerings to the sun divinity, nor the serpent or fire, but as gifts or possessions to which the spirit of the dead had a right.

II. We now come to the second form of nature worship. This prevailed chiefly among the Mound-builders, though we sometimes recognize it among living tribes. It is the system of animal worship—the normal cult of the hunter tribes. According to this system, the animals were frequently regarded as divinities. They were the ancestors of the clans, as well as their protectors, and gave their names to the clans. This system prevailed among the northern and eastern tribes, such as the Iroquois, the Algonquins, Chippeways or Objibways, and, to a certain extent, the Dakotas, though among the latter it was greatly modified. It prevailed especially through the northern districts and along the chain of great lakes. Its peculiarity was that the people were not permitted to eat the flesh of the animal whose emblem they bore, nor were they permitted even to marry into the clan of the same animal name; a most remarkable system when we consider its effect upon the details of society and its influence in the tribal organization. The same system prevailed on the northwest

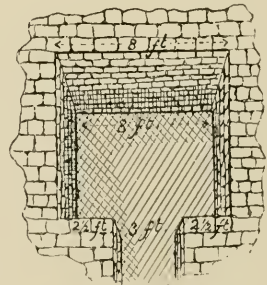


Fig. 5.—Chambered Mound.

coast, but it was here modified by the presence of human images carved into genealogical trees, with the thunder-bird generally surmounting the column.

This system prevailed among the Mound-builders, especially in the northern districts. It was embodied in the effigies which are so numerous in the State of Wisconsin, but was also exercised by those people who have left so many animal figures made in effigy from standing stones which are found in Dakota. Descriptions of these effigies have been given by the author in the book on "Emblematic Mounds." Other specimens have been discovered since the volume was published. We maintain that there were three specific uses made of these effigies—the same uses which may be recognized in the totem posts of the northwest coast. They are as follows:

1. The perpetuity of the clan name. In the totem posts the clan name was mingled with the family history, but generally surmounting the column, the genealogical record of the family



Fig. 6.—Totems in Wisconsin.

being contained in the elaborate carvings found below. They might be called ancestor posts, for the name or image of each ancestor was given, a great effort being made to extend the genealogical line as far as possible. This same use of animal figures as tribal or clan signs, designed to represent the clan names, may be recognized in some of the old deeds which were given by the Iroquois to the whites.* Here the bear, the turkey and the wolf are drawn on paper to signify the clan emblem of the chief. The same custom has been recognized in the emblematic mounds, with this difference: instead of being written on paper or carved in wood, in this case the totems were moulded into earth-works; massive effigies of eagles, swallows, wolves, squirrels, bears, panthers, turtles, coons, buffaloes and other animals, and having been placed upon the soil to mark the habitat of the clans. They served the purpose, because they were on the hill-tops as well as in the valleys, and marked not only the sites of villages, but the game drives, the sacrificial places, the dance grounds and council houses of the clans. See Fig. 6.

2. The protective power of the totems is to be noticed. On the northwest coast the houses are sometimes furnished with

*See Documentary History of New York. Vol. II.

figures of whales, serpents and other animals. In some cases the entrance to the house is through the body of a fish; other houses have the image of the thunder bird, with spread wings, placed over the doorway; the entrance of the house being under the body and between the wings. The same custom was common among the Mandans and other tribes of the prairies; they painted upon the outsides of their tents the figures of a deer or elk, making the opening to the tent through the body of the animal. We have noticed also among the effigy mounds that figures of the squirrels, panthers and wolves were placed at the entrance-way to the villages, so placed as to give the idea that they were designed to protect the villages. In all such cases they were the clan emblems. We have also noticed that the clan emblems were placed near the game drives, as if the protection of the clan divinity was invoked by the hunter. Sometimes the clan emblem would be placed at a distance on a hilltop above the village, giving the idea that there was an overshadowing presence. A favorite custom was to seize upon some cliff, or ridge, or knob of land which had a resemblance to the clan emblem and there place the effigy, as if there were a double protection in this: animism and totemism conspiring to strengthen the fancy. See Figs. 7 and 10.

3. The mythologic character of the totems is to be noticed. On the northwest coast the great myth bearers are the totem posts. We learn from Mr. James Deans* that the myths of the people were carved into the vacant spaces upon the posts, and that it was the ambition of the people to perpetuate as many myths as possible.



Fig. 7.—Turtle Totem.

The hideous masks which are so common in the same region were also designed to be myth bearers. These masks served the same purpose as buffalo-heads and elk-horns did among the Dakotas. They helped to carry out the semblances of the animals which were assumed by dancers at the great feasts, the buffalo dance and the elk dance being characterized by imitations of the attitudes of the animals. The effigies were also myth bearers. Groups of effigies are found which contain all the animals that were native to the region, closely associated with human figures (see Fig. 8), the effigies in their attitudes and relative positions giving the idea that there was a myth contained in them.

4. The totems also served a part in the pictographs. One fact illustrates this: The Osages have a secret order in which traditions are preserved by symbols tattooed upon the throat and chest.† One of these traditionary pictographs is as follows: At the top

*American Antiquarian, Article by James Deans, Vol. XIII., No. IV.

†Sixth Annual Report of Bureau of Ethnology, page 378, "Osage Traditions," by Rev. J. O. Dorsey.

we see a tree near a river, called the tree of life; just under the river we see a large star, at the left the morning star, and next are six stars, then the evening star; beneath these are seven stars, or the pleides; below these the moon on the left, the sun on the right, between them a peace pipe and a hatchet; below these are the four upper worlds, represented by four parallel lines,



Fig. 8.—*Myth Bearer of the Dakotas.*

a bird is seen hovering over the four worlds. The object of the tradition or chart was to show how the people ascended from the lower worlds and obtained human souls when they had long been in the body of birds and animals. The Osages say: "We do not believe that our ancestors were really animals or birds; these things are only symbols of something higher." Mr. Dorsey also says: "The Iowas have social divisions and personal names of mythical persons and sacred songs, but these are in the Winnebago language." He says: "Aside from traditions even the taboos and the names of the gentes and the phratries are objects of mysterious reverence, and such names are never used in ordinary conversation." We take it for granted that the totems of the Mound-builders were also as thoroughly subjects of reverence and that there was much secrecy in reference to them.

There were probably secret societies and "mysteries" among the Mound-builders, and it would require initiation on our part to understand the symbols which have perpetuated the myths and traditions as much as if they were hieroglyphics and we were without the key. The subject of totemism is very complicated, but was prevalent in prehistoric times as one of the wide-spread systems of religion.

5. Another phase of totemism was that which connected itself with various objects of nature—trees, rocks, caves, rivers. It was thought that invisible spirits haunted every dark and shadowy place. The caves were their chief abode; the cliffs were also filled with an invisible presence. Every rock or tree of an unusual shape was the abode of a spirit, especially if there was any resemblance in the shape to any human or animal form. It was owing to this superstition, that gave a soul to every thing,



Fig. 9.—*Myth Bearer from a Cave in Wisconsin.*

It was owing to this superstition, that gave a soul to every thing,

that so many double images are found in the Mound-builders' territory. The image of the serpent, of the lizard, of the turtle, was recognized in the bluff or rock or island or stream; and the mound resembling the same creature was placed above the bluff to show that the resemblance had been recognized. Totemism, then, was not confined to the savages who roamed through the dark forest of the North, nor to those Northern tribes which made their abode upon the prairies, and left traces of themselves in the idols and images and foot tracks and inscriptions, which are now such objects of wonder, but it extended far to the southward, and was mingled with the more advanced systems which prevailed in this region.

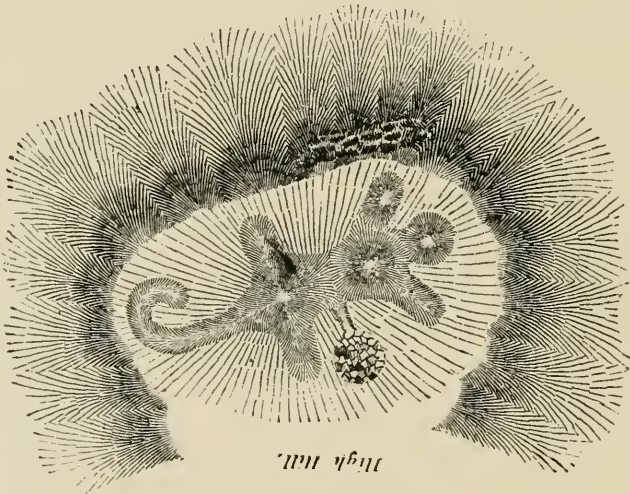


Fig. 10.—Alligator Mound in Ohio.

This was totemism. We conclude that it bore an important part in the Mound-builder's life. It was very subtle and obscure, yet if we recognize it among the living tribes we may also recognize it among those who have passed away.

6. Under the head of totemistic symbols we shall place those remarkable works, the great serpent and alligator mounds. These closely correspond to the shape of the cliff or hill on which they are placed. They must be regarded as sacred or religious works, as they probably had a mythologic significance. The alligator mound is situated upon a high and beautifully rounded spot of land, which projects boldly into the beautiful valley of the Raccoon Creek. The hill is 150 or 200 feet high. It is so regular as almost to induce the belief that it has been artificially rounded. It commands a view of the valley for eight or ten miles, and is by far the most conspicuous point within that limit. Immediately opposite, and less than a half mile distant, is a

large and beautiful circular work; to the right, three-fourths of a mile distant, is a fortified hill, and upon the opposite side of the valley is another intrenched hill. The great circles at Newark, which we have designated as village inclosures, are but a few miles away and would be distinctly visible were there no intervening forest. Squier and Davis say: "The effigy is called the alligator, though it closely resembles the lizard. The total length is about 250 feet, breadth of body 40 feet, length of legs 36 feet. The paws are broader than the legs, as if the spread of the toes had been imitated. The head, shoulders and rump are elevated into knobs and so made prominent. Near the effigy is a circular mound covered with stones, which have been much burned. This has been denominated an altar. Leading to it from the top of the effigy is a graded way ten feet broad. It seems more than possible that this singular effigy had its origin in the superstition of its makers. It was perhaps the high place where sacrifices were made on extraordinary occasions, and where the ancient people gathered to celebrate the rites of their unknown worship. The valley which it overlooks abounds in traces of a remote people and seems to have been one of the centers of ancient population."* See Fig. 10.

In reference to the altars so called, we may say: "One is to be distinctly observed in the inclosure connected with the great serpent and another in connection with the cross near Tarlton, and still another in connection with the bird effigy at Newark." This bird effigy is also worthy of notice; it was in the centre of the great circle, and seems to have been erected for religious purposes, like the great circles of England, and in the squares of Peru and Mexico, enclosures within which were erected the shrines of the gods of the ancient worship and altars of ancient religion. These may have been spots consecrated by tradition, or rendered remarkable as the scene of some extraordinary event, invested with reverence and regarded with superstition; tabooed to the multitude, but full of significance to the priesthood. They may have embraced consecrated graves, and guarded as they were by animal totems, have been places where mysterious rites were practiced in honor of the great totemistic divinity.

III. The third form of nature worship we shall mention, is the one which consisted in the use of fire. It might be called fire worship, although it has more of the nature of a superstition than of worship. This custom, of using fire as an aid to devotion, was not peculiar to the Mound-builders, for it was common in all parts of the world; the suttee burning of India being the most noted. In Europe cremation or burial in fire was a custom peculiar to the bronze age, and indicated an advanced stage of progress; the relics which are found in the fire-beds being

*Ancient Monuments, Page 101.

chiefly of bronze and many of them highly wrought. In this country the fire cult was, perhaps, peculiar to the copper age; at least, the larger portion of the relics which are found in the fire beds are copper. As to the extent of this cult, we may say it was prevalent among the native tribes both of the Mississippi Valley and of the far West, and, in some cases, appeared upon the northwest coast. There are instances where cremation or burning of human bodies was practiced which, in many of its features resembled the suttee burning. The custom of keeping a perpetual fire was one phase of this fire cult. This seems to have been general among the tribes of the Mississippi Valley, so well as among the civilized races of the southwest. It was a superstition of the Aztecs, that if the fire went out in the temple, the nation ceased to exist. The ceremony of creating new fire was the most sacred and important event among them. Charlevoix says that fire among the Muscogees was kept burning in honor of the sun. It was fed with billets or sticks of wood so arranged as to radiate from a common center, like the spokes of a wheel.* Temples were erected for this purpose, and in them the bones of the dead chieftans were also kept. Tonti says of the Taensas: "The temple was, like the cabin of the chief, about forty feet square; the wall fourteen feet high; the roof dome shaped; within it an altar, and the fire was kept up by the old priests night and day. The temples were quite common throughout the region known as Florida, extending from Arkansas to the southern point of the Peninsula. They were found in many of the villages, and great care was exercised that the fire within them should be perpetual. The temples finally disappear, and, in their stead, we find the hot house or rotunda or council houses, such as are known to the Cherokees. The time came when a temple was no longer spoken of, though the rotunda embodied something of its sacredness. It was within this rotunda that the first fire was kindled; and it was here, under the care of the priests, that the perpetual fire was kept burning. A very interesting rite was observed annually, when all fires of the tribes were put out and kindled anew by the fire generator. This took place on the occasion of the feast of the first fruits on the third day. On that day, as the sun declined, universal silence reigned among the people. The chief priests then took a dry piece of wood, and, with the fire generator, whirled it rapidly. The wood soon began to smoke; the fire was collected in an earthen dish and taken to the altar. Its appearance brought joy to the hearts of the people. The women arranged themselves around the public square, where the altar was, each receiving a portion of the new and pure flame. They then prepared, in the best manner, the new corn and fruits, and made a feast in the square, in

*Charlevoix Letters, page 113.

which the people were assembled and with which the men regaled themselves."*

As to the prevalence of the fire cult among the Mound-builders, it was not confined to the southern districts, where the rotundas were and where sun worship was so prominent. At least one stage of this fire cult, that which consisted in cremation of the bodies, appeared in the regions north of the Ohio River and was quite common.

We shall see the extent of this custom if we draw a line diagonally from the region about Davenport, Iowa, through Illinois, Indiana, Southern Ohio, West Virginia and North Carolina. We shall find that the line strikes the majority of the fire beds and altar mounds. What is remarkable, also, along this line are found those relics which have been associated with the fire cult of Ohio, many of them having been placed upon the altars and offered either to the sun divinity or to the fire. Among these relics we may mention as chief the so-called Mound-builder pipe. This was a pipe with a curved base and a carved bowl, the bowl being an imitation of some animal native to the region. The pipes are very numerous in the vicinity of Davenport, Iowa. The animals imitated are very nearly the same as those represented in the Ohio pipes—the lizard, the turtle, the toad, the howling wolf, the squirrel, ground-hog and bird. One pipe has the shape of the serpent wound about the bowl, an exact counterpart of the serpent pipe which was found upon the altar in Clarke's Works in Southern Ohio. Similar pipes, carved in imitation of animals—badgers, toads and birds—have also been found upon the Illinois River, in Cass County, and upon the White River, in Indiana, showing that the people who occupied the stations were acquainted with the same animals and accustomed to use the same kind of pipe. The Davenport pipes are not so skillfully wrought as the Ohio pipes, but have the same general pattern.

They were not all of them found in the fire beds, for many of them were discovered in mounds where the fire had gone out. These mounds are situated along the banks of the Mississippi River, from the vicinity of Muscatine through Toolsboro, Moline, Rock Island and Davenport, the most remarkable specimens having been found on the Cook farm, just south of the latter city. There were fire beds and altars in this group, but even here, as in the case of other mounds where there was no fire, the pipes were placed near the bones, which were still well preserved, and none of them showed traces of fire.

Let us here notice the difference between the tokens in the two sections. 1. In Ohio nearly all Mound-builder pipes, including the finely wrought serpent pipes and the other animal pipes, had been placed upon the altar and subjected to the

*Journal of American Folk-Lore, Vol. IV, No. XIV. Social Organization of The Siveau, by J. O. Dorsey, page 245. See map in Chapter II.

action of fire and so badly burned that they were broken into fragments. In western mounds they were unbroken. 2. Another difference is noticeable. While there were as many copper relics in the Davenport mounds, as in the Ohio mounds, they were mainly copper axes, many of which were wrapped in cloth and placed with the bodies. Fig. 11. Farquharson calls them ceremonial axes. There were no signs of use in them. They varied in size and shape, some of them being flat, others flat on one side, convex on other; still others convex on both sides. The cloth in which they were wrapped was well preserved by action of the copper; it was made of hemp and resembled burlap. In the Ohio mounds no such copper axes have been found. Copper beads and copper chisels are numerous, however, and beads and pendants are as common as in Davenport. 3. The characteristic



Fig. 11.—Copper Axes and Pottery Vessels from Toolsboro.

relic of the altar mounds of Ohio is the copper spool ornament. In the Davenport mound there were very few spool ornaments, but awls and needles were quite numerous; copper beads and pendants were common. Many of these were found in various localities, both on the Scioto River and in the Turner group. 4. Another point of difference between the two localities is the shape of the altars. Those in the Davenport mounds are never paved as in the Ohio mounds, the altars in the Davenport mounds being merely round heaps of stones or columns. Near these the bodies were placed, but the relics were beside the bodies and not upon the altars. In one case a few long shin-bones were crossed upon the top of the altar and others found leaning against the side of the stones, but no relics. The bodies do not seem to be cremated, but buried in the fire. The relics, including pipes, copper axes, copper awls, and obsidian arrows, were placed at the side or head of the body, but were rarely burned.

5. Another point of difference is that burials and cremations

in Ohio were made before the mound was erected, while in the Davenport mounds, if there was any cremating, it took place at the time of burial, and the fire was smothered in the process of mound building. Prof. Putnam explored a burial mound on the Scioto River, which was situated in the great circle near the eastern corner of the great square. It was 160 feet long, 90 feet wide and 10 feet high. It contained a dozen burial chambers made from logs. In these chambers the bodies were placed evidently wrapped in garments. With the bodies were buried various objects, such as copper-plates, ear-rings, shell beads and flint knives, and on the breast of one skeleton was a thin copper plate or ornament. In some of the chambers there were evidences of fire as if the bodies had been burned on the spot. Prof. Putnam's opinion is that the burials and cremations were made before the mound was erected, several burnings having occurred in one spot. The mound was erected over all, and was finished with a covering of gravel and with a border of loose

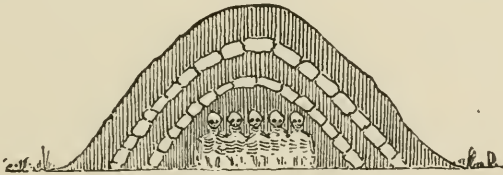


Fig. 12.—Mound near Davenport.

stones. This was the usual manner of erecting mounds among the fire worshippers. Squier and Davis in 1840 dug into the same mound and found a skeleton, with a copper plate and a pipe. They also found in other mounds altars in which bodies had been burned, but the ashes had been removed, a deposit of the ashes being found at one side of the altar. 6. The intense heat to which the relics were subjected in the Ohio mounds as compared to the partial burning in the Iowa mounds is to be noticed. Prof. Putnam says that in the Turner group the fire was intense, and the iron masses were exposed to great heat on the altar and were more or less oxydized. Squier and Davis say that the copper relics found in the Ohio altars were often fused together, and the pipes of the Mound-builders were all of them broken.

The question here arises, who were these fire-worshippers? Were they the Cherokees, who survive in the mountains of Tennessee? or were they the Dakotas, who so lately roam the prairies in the far West? or were they some unknown people? Our answer to this question is, that no particular tribe can be said to represent the fire worshippers, for this cult prevailed among nearly all the different classes of Mound-builders. Mounds containing fire beds have been found in Wisconsin, Iowa, Illinois, Indiana, Ohio, West Virginia, East Tennessee, North Carolina, and the

Gulf States. In Wisconsin the fire beds are without relics; in Iowa they contain relics, but they are unburned; in Ohio they contain many relics which seem to have been thrown upon the altars as offerings; in East Tennessee there are mounds which contain fire beds that resemble those of Ohio; in West Tennessee the mounds contain traces of fire, but no altars or fire beds. The relics are unburned. These latter mounds are said to have been built in the shape of cones, the cists containing the bodies being arranged in a circle about a central space, but each tier being drawn in so as to make a cone. The fire was in the center of the circle; outside the circle, near the heads, were pottery vessels, which made a circle of themselves, the whole arrangement indicating that there was not only a fire cult here, but that it was associated with sun worship, the superstition about the soul being embodied in the pottery vessels, the three forms of nature worship being embodied together in one mound.

We call attention to the cuts which represent the fire cult of the different districts. Fig 12 represents a mound on the Cook farm near Davenport, one of the group from which so many relics were taken. This mound contained no chamber, but in its place were two strata of limestone, but over these a series of

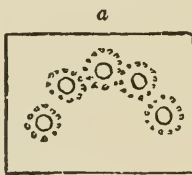


Fig. 13.—Crescent and Circle.

skulls so arranged as to form a crescent, around each skull was a circle of stones. See Fig. 13. With the skeletons in the mound were two copper axes, two hemispheres of copper and one of silver, and several arrows. In an adjoining mound were two skeletons surrounded by a circle of red stones; the skeletons were under a layer of ashes and with them were several copper axes, copper beads, two carved stone pipes, one in the shape of a ground hog. The difference in the mounds will be noticed. In the latter mounds there were indications of fire worship and sun worship. Fig. 11 represents the vase and copper axes taken from the mound at Toolsboro. They exhibit an advanced stage of art and seem to indicate that the Iowa Mound-builders did not fall much behind the Ohio Mound-builders in this respect.

The Moquis practice a modified form of fire worship. No other living tribe preserves the cult to the same degree, and yet there is no evidence that the Moquis were ever Mound-builders. Two theories might be entertained; one, that there was a progress in the fire worship; another, that there was a decline, and yet there is no surviving tribe in which we recognize the fire cult of the ancient times.

We can say that while the tokens of the fire worshipers, such as fire beds, copper relics and Mound-builders' pipes, are found scattered as far as the effigies on the north and the pyramids at the south, these three classes of tokens, one indicating ani-

mal worship, the other fire worship, and the third sun worship, are crowded into the single State of Illinois, and constitute the tokens of the middle Mississippi district. We notice also that the relics indicate three different modes of life or occupations. Among the effigy mounds are many copper relics, but mainly spear-heads, arrow-heads, chisels, knives, such as would be used by hunters. The relics in the fire beds and burial grounds near Davenport are axes, awls and needles; no copper spear-heads or knives. The relics south of these fire-beds, especially those near the Cahokia mound, are mainly agricultural tools—spades, hoes, picks. The pottery of the three localities are in contrast, showing that three different stages of art and different domestic tastes in the three localities. The Mound-builder pipes are not found either among the effigies or pyramids, and seem to be confined to this narrow belt between the two.

Still the fire cult must have been early in the Mound-builder period. We notice both in the Mississippi Valley and upon the Ohio River that the fire beds and altars are at the bottom of the mounds. In very many of the mounds there are layers of bodies, some of which were recumbent, others in various postures, but either without relics or having relics of a ruder or more modern character. These may have been deposited by various Indian tribes, such as the Sacs and Foxes, Pottawattamies and Illinois. Mound-builder pipes, copper axes and other relics are always found as low down as the surface of the soil. They are not always in fire beds, but frequently there will be a hard floor and a saucer-like basin below the bodies, and above them piles of wood or logs, conveying the idea that the intention was to cremate the body, but the fire had gone out before the wood had been burned. The descriptions given by all the explorers of the mounds of this vicinity are always to this effect.*

IV. The prevalence of the moon cult will next be considered. The moon cult was evidently associated with sun-worship, and prevailed in the district where the works of the sun-worshippers are so numerous, namely: Southern Ohio. The evidences of this are as follows: 1. In this district we find earth-works, which seem to be symbolical of the moon; their shape, location and probable use show this. They are crescent shape, but are sometimes grouped around circles, and were probably used in connection with dances and feasts, which were sacred to the moon. We take for illustration the works which are called the Junction Group, which is described by Squier and Davis. This group is situated on Paint Creek,, two and one half miles southwest of

*See descriptions by Rev. G. A. Gass, C. E. Harrison, W. H. Pratt, C. H. Preston, Rev. A. Bloomer, A. F. Tiffany, R. J. Farqueson; also proceedings of Davenport Academy of Science, Vol. I., page 96 to 143; Vol. II., pages 141 and 289; Vol. III., page 135; Vol. V., page 37; also American Antiquarian.

the town of Chillicothe. It consists of four circles, three crescents, two square works and four mounds. The eastern enclosure is the principal one, and, in common with all the rest, consists of a wall three feet high with an interior ditch. It is two hundred and forty feet square; the angles much curved, giving it very nearly the form of a circle. The area bounded by the ditch is an accurate square of one hundred and sixty feet side, and is entered from the south by a gateway twenty-five feet wide. To the southwest of this work, and one hundred and fifty feet distant, is a small mound, inclosed by a ditch and wall, with a gateway opening to it from the north. The ditch dips from the base of the mound, which is three feet high by thirty feet base.

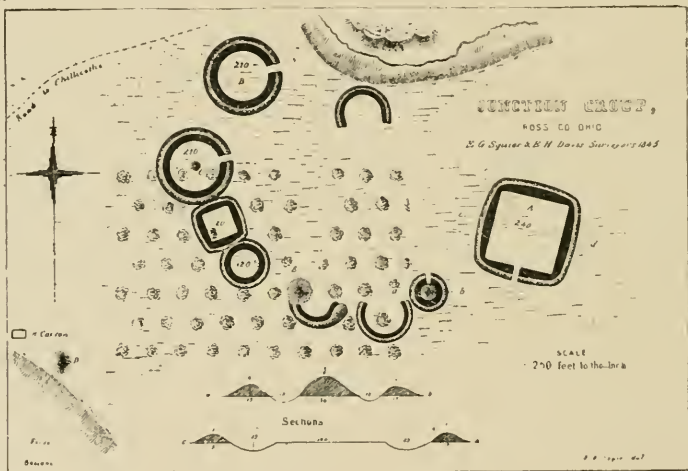


Fig. 14.—Junction Group.

Almost touching the circle enclosing the mound is the horn of a crescent work, having a chord of one hundred and thirty-two feet. Sixty-six feet distant, in the same direction, is still another crescent, which terminates in a mound of sacrifice, seven feet high by forty-five feet base, which commands the entire group of works. This mound was opened and found to contain an altar; such an altar as is peculiar to mounds devoted to religious purposes. Upon it were a number of relics clearly pertaining to the Mound-builders. In reference to these works Squier and Davis say: "That they were not designed for defense is obvious; and that they were devoted to religious rites is more than probable. Similar groups are frequent. Indeed, small circles resembling these here represented, are by far the most numerous class found in the Scioto Valley."

Next is the Blackwater group. This is situated on the right bank of the Scioto, eight miles above Chillicothe. It is especi-

ally remarkable for its singular parallels (A and B of the plan). Each of these is 750 feet long by 60 broad. A gateway opens from the southern parallel to the east. They were in cleared ground and have been cultivated for twenty years. The ground embraced in the semi-circular works (C and B) is reduced several feet below the plain on which they are located. The resemblance between this group and the one just described will be noticed. 1. The group is arranged in an irregular circle. 2. There are three crescents in the group, each of them opening into the central space. 3. There is a small circle with a ditch and mound enclosed, the usual sun symbol of this region. 4. A conical burial mound is found near one of the crescents. 5. The location of the group is quite similar to that of the Junction group, being in a high place above the river, this one being some two or three miles from Hopeton, the Junction group being two miles southwest of Chillicothe. Both of them occupy the third terrace and overlook the other works in the vicinity.

Another place where the crescent-shaped wall is found is in the township of Seal, Pike County. The large work and the small circles would attract especial attention. The larger enclosures, situated on the terrace above the bottom land, consist of the usual figures, the square and circle, the square measuring 800 feet and the circle 1,050 feet, the connection by parallel walls, 475 feet. In the small works we have the square, the circle, the ellipse, separate and in combination, and the crescent, all of them arranged as usual around an open space. From the small circle (D) a wall leads off along the brow of the terrace. It is probable that at the other end of this wall there was another small circle which has been destroyed by the wasting of the bank. The river now runs at a distance, but it seems to have

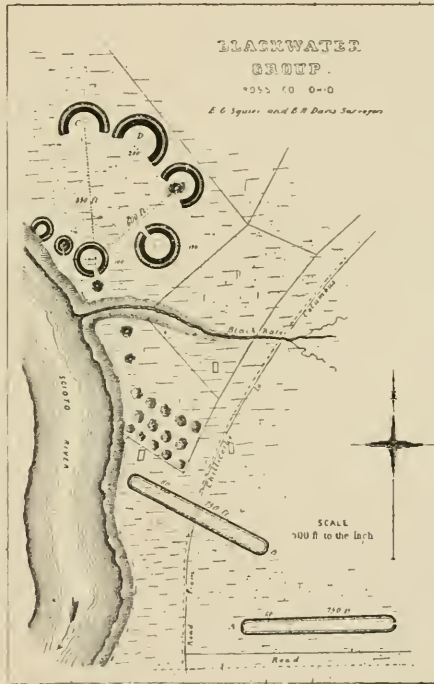


Fig. 15.—Blackwater Group.

worn the terrace away in several places before it receded. This shows the antiquity of the works. Nothing can surpass the symmetry of the small work (A). The other enclosures are perfect figures of their kind. The walls of the square coincide with the cardinal points of the compass, a fact which has great importance in connection with this form of nature worship.

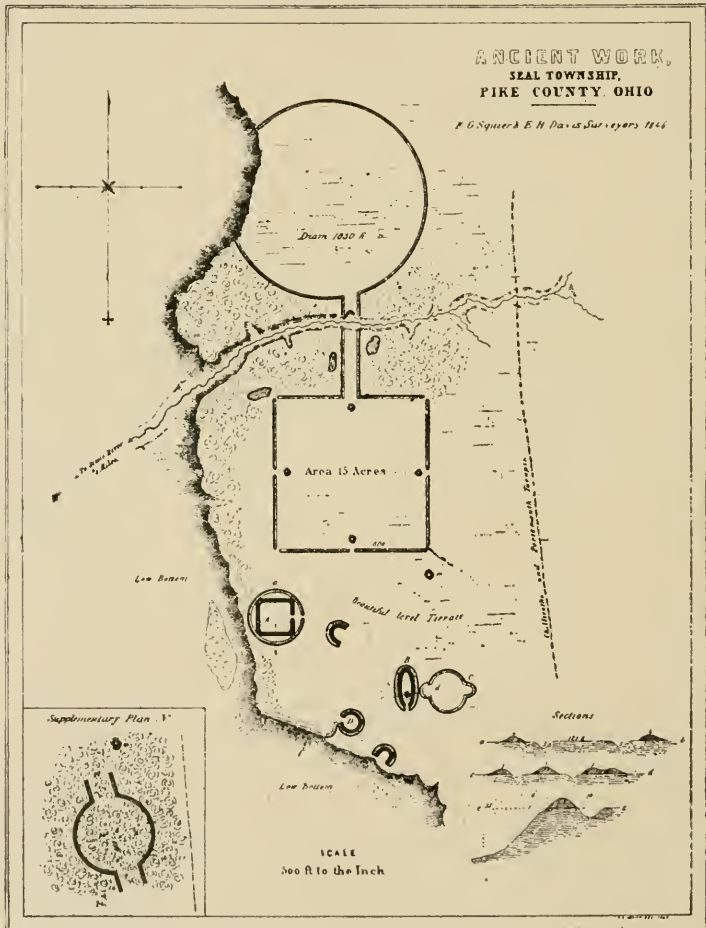


Fig. 16.—Symbolic Works in Seal Township, Ohio.

The object of these works is unknown, but our theory is that the small figures mark a place of assembly for the clan which resided in the square enclosure, a peculiar symbolism being embodied in them. It may be that there was a secret order which perpetuated the religion of the people and which ruled over their feasts, the group of mounds being the place where their mysteries were celebrated.

* There are various crescent-shaped walls, near certain forts in Southern Ohio, which we take to be symbolic, and imagine that there was a protective power in the symbol. An illustration of this is found at Massie's Creek, seven miles from Xenia. There we find a wall of stone surrounding an inclosure. This wall, near the gateway, is ten feet high, with thirty feet base. Just outside the gateways are the stone mounds, so situated as to guard the entrances; outside the stone mounds are four short, crescent-shaped stone walls, each about three feet in height, the four making an outwork to the fort, on the side toward the highlands. Our conjecture is that these were in the shape of crescents, as the walls at Fort Ancient were in the shape of serpents,—the superstition being that the symbol itself was a source of safety. There are several other forts which have crescent-shaped entrances, one being at Bourneville, a region where the sun worshipers dwelt and had numerous villages.

Another evidence is to be found in the many crescent-shaped walls, near square enclosures, whose use is unknown except as symbols of the moon. There are three such walls near a square enclosure, just opposite the stone fort on Massie's Creek, evidently connected with that fort.*

There are crescent-shaped walls also within the enclosures at Marietta, as well as at the new fort at Fort Ancient; also at Liberty Township. The crescent-shaped wall, near the bird effigy in the large circle at Newark, is to be noticed. These fragmentary walls may have had a practical use as well as symbolic, but the fact that they are so frequently associated with the square and circle, and so peculiarly related to those figures, would indicate that they were symbols of the moon. It would seem from the study of the enclosures that these walls mark the place of religious assemblies or the residences of the priests or medicine men, and that they correspond to the sweat-house or rotunda of the southern tribes and to the estufas of the Pueblos though the crescents themselves may have been only the seats of the chiefs and prominent men as they gathered around the sacred fire, which sent up its spiral column in the centre of the temple, which was consecrated to the sun.

The work near Bainbridge, Ross County, situated on the Valley of Paint Creek, affords another of the thousand various combinations. It can only be explained in connection with the superstition of the builders. It could answer no good purpose for protection, or subserve any useful purpose, such as the limits of fields, or boundaries of villages.

There is another point to be considered in connection with the earth-works in Southern Ohio. Many of them have exactly the same shape with the relics and badges which are taken from the

*See Ancient Monuments, page 94. Plate XXXIV.

mounds, the two together showing that the moon cult must have been dominant. Among these we may mention those crescent-shaped altars, in which the silvery mica is supposed to have reflected the light of the moon, such as was found at Mound City, and the crescent-shaped pavement, near the great mound at Circleville, both of which were evidently symbolic. We recognize the counterparts to these in the various maces and badges and leaf-shaped relics. These maces are frequently crescent-shaped, some of them double crescents. They may have been placed at the heads of staffs and borne by medicine men or priests at the head of processions at their sacred feasts, but they show in their shape that there was a symbolism among the Mound-builders in which the moon-shaped crescent was a prominent figure. We sometimes recognize in the maces the sun circle, but the crescent was more common. What is most singular about the earthworks and relics is, that the same shapes are recognized both in the altars themselves and the relics contained within them.

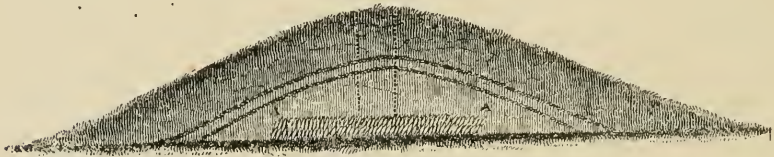


Fig. 17.—Altar of Leaf-shaped Implements.

We may say in this connection that an altar was found upon the Illinois river, in Cass County, which consisted of several layers of leaf-shaped implements, which were almost the exact counterpart of one found in Mound City, near Chillicothe, Ohio. The body on this altar was not burned. There was upon the breast a copper plate in the form of a crescent, shell gorgets, and other relics. Dr Snyder says the mound gave evidence of a water cult; but the resemblance to the Ohio mounds would show that it was connected with the fire cult. In reference to the shape of these flint relics and their religious significance, we may say that the exploring party led by Mr. Warren K. Moorehead has recently come upon a remarkable find, which consisted of 7,300 flint relics, placed in an oval bed, at the bottom of an elliptical mound. The shape of the altar and mound corresponded, though the axis of the stone heap trended west, while the mound itself was directly north and south. This fire bed is said to have been twenty feet wide by thirty feet long, and the flint relics which constituted the pavement varied from twelve to fifteen inches in length and five to eight inches in width, making the pavement something over a foot in depth. This find was upon the north fork of Paint Creek, in the group of mounds from which Squier

and Davis, many years ago, took so many valuable and curious relics, showing that the offerings which were placed upon the altar were in reality devoted to the moon as well as to the sun, the mound, the altar and the relics being combined in symbolizing the different phases of the moon. Our conclusion is that the moon cult was as prominent as the fire cult, and that both of these were associated in the minds of the sun-worshippers. They gave significance to the altars, the relics and the earth-works of this region. Proofs of all this are given in the fact that offerings were placed upon altars which were very carefully constructed, the shapes of the altars perhaps being symbolic. The fire was lighted until the offerings were consumed.

Squier and Davis speak of this when they describe the mounds in Mound City: Mound No. 1 showed traces of fire near the summit, which increased until the altar was reached. The relics found within the altar varied. In one they consisted of fragments of pottery, ornamented very tastefully, convex copper discs and a layer of silvery mica, in sheets overlapping each other, and above the layer a quantity of human bones.

Mound No. 2 contained an altar in the shape of a parallelogram of the utmost regularity. It measured at the base 8x10 feet, and at the top 4x6 feet, and was 18 inches high; dip of the basin 9 inches. Within the basin was a deposit of fine ashes, fragments of pottery and a few pearl and shell beads. This mound also contained an intruded burial, for at three feet below the surface two skeletons were found. With these skeletons were found implements of stone, horn and bone, as follows: Several hand-axes and gouges; beautiful chip of horn-stone, the size of one's hand; several knife handles made of deer's horn; an implement made from the shoulder-blade of a buffalo, and a notched instrument of bone, designed for distributing paint in lines on the faces of the warriors.

Mound No. 3 is egg-shaped; measured 140x60 feet, 11 feet high; contained four strata. At the base of this mound there was a double altar. The entire length of the bottom altar was not far from 60 feet; that of the upper was 15 feet. The dip of the first basin was 18 inches. Relics were found within the smaller basin. It was found that the one altar had been built and used for a time, and then another one built within this basin, the process having been repeated three times, the ridge forming the last altar having a basin 8 feet square, while the first altar was five times that size, or 40 feet in diameter. The relics found in this mound were numerous and valuable. They were as follows: A large number of spear-heads, quartz and garnet; an obsidian arrow-point, and other arrow-heads of limpid quartz. These had been so broken by the heat, that out of a bushel or two of fragments, only four specimens were recovered entirely. Among the copper relics were the following: Two copper

chisels, one measuring 6, the other 8 inches in length; twenty copper tubes or beads, one and a quarter inches long, three-eighths in diameter; two carved pipes were discovered, one in the shave of a toucan cut in white lime-stone; a large quantity of pottery, out of which two vases were restored.

Mound No. 7 was 17½ feet in height, 90 feet base. It was composed of six different strata of soil and sand, and contained at its base a floor of clay or altar, at one side of which was a layer of silvery mica formed of round sheets, 10 inches or a foot in diameter, overlapping each other like the scales of a fish, which made a pavement in the shape of a crescent around the altar twenty feet long and five feet wide. The mound was very compact, required an immense amount of labor to excavate it. Squier and Davis say that the presence of the mica crescent renders it probable that the Mound-builders worshiped the moon and that this mound was erected with unknown rites to that luminary.

The personal ornaments which have been found indicate the same thing. Squier and Davis speak of discovering certain scrolls and discs made from sheets of silvery mica, which were perfect in their outline. These were perforated with a single hole, and were probably attached in some way to the dress. When placed together they make an ornament which reminds us of the celebrated "winged globe" or feathered disc, which was so common in Egypt and the East. The shell gorgets, which are so numerous at the south, represent the same symbols. These contain crescent-shaped figures in the center, surrounded by circles, with dots between the circles: the whole contained within four concentric rings; the number four symbolizing the four quarters of the sky, the dots symbolizing the stars, the small circles the sun and the crescent in the center the moon. These gorgets are never found in Ohio, but they show that the moon cult was associated with the solar cult among the Mound-builders of the south.

CHAPTER XIII.

THE WATER CULT AND THE SOLAR CULT.

In our last chapter we spoke of the different systems of religion prevalent among the Mound-builders, with especial regard to their location and geographical distribution. We noticed that there were different systems embodied in the works of the different districts. The works of the effigy-builders, who were probably hunters, indicated totemism; those of the tomb-builders of the prairies, who were nomads, denoted animism; those of the altar-builders of the middle district, who were agriculturists, exhibited fire worship; the sacred enclosures or villages of the Ohio district denoted the moon cult. We did not, however, complete the study of the districts, nor did we exhaust all the systems prevalent. It remains for us to finish this task.

There still remain to be considered several other systems—the water cult, the solar cult, and the beginnings of image worship. These found their embodiment in the works and relics of the three districts—those on the Ohio River, the mountain district and the gulf district—the tokens of each cult being found in all three districts and the systems having apparently overlapped one another throughout the entire region. We are to devote the present chapter to two of these systems, the water cult and the solar cult.

These systems were associated with the fire cult and serpent worship, and in some places seem to have been attended with the phallic symbol and the human tree figure, these symbols having been distributed over the middle and southern districts. They prove the religious systems of the Southern Mound-builders were much more elaborate and highly developed than those of the Northern Mound-builders, suggesting that the Southern Mound-builders belonged to a different race or received their religion from a different source. These systems are certainly more artificial, more highly organized, and show more highly developed thought. They may have sprung from nature worship, the same as the northern systems, and been owing to the growth of religious sentiment in the more permanent and advanced condition of society which prevailed at the south. Still, there are so many strange symbols in these districts, resembling those in oriental countries, that we are tempted to ascribe them to contact with civilized races, and to say that they are identically the same as

those prevailing in Europe, Asia and the far East, and must have been transmitted to this country. We do not undertake to follow up the channel through which they flowed, nor to decide as to the country from which they came, but we can not help the conviction that they bear the impress of systems which are known in historic countries and which appear in the early ages in those countries.

We imagine that there was once in the far East a system of nature worship which was as rude as anything found in America; that at that time the elements of fire, water, lightning, the sun and moon, and all the nature powers, were worshiped, or, at least, divine attributes ascribed to them. We are sure that serpent worship and tree worship prevailed, and appeared in the East, though we do not know exactly at what time they appeared. Phallic worship and image worship also came in at a certain stage in the progress of thought. The last served to corrupt and degrade the other systems, and very soon perverted them, so that they became sources of degradation to the people. The Scriptures condemn these, and history confirms the justice of the sentence. The tradition of the serpent in the Scriptures may be an allegory or a statement of fact, but there is no doubt that the serpent worship was a source of degradation and a sentence was placed upon it by enlightened conscience. The personification of the nature powers did not elevate the people, for when the personification grew more elaborate the moral practices grew more degraded. When the Eleusinian mysteries were introduced into Egypt and Greece, everything became significant of the processes of nature. Names were given to the nature powers, and myths were invented to explain the origin of the names; but the myths and mysteries did not save the people from degradation.

While the doctrine of immortality and the future state was understood and the anticipation was symbolized by nature worship, yet cruelties were practiced and degraded rites attended the worship of the elements. The phallic worship and fire worship were devoted to human sacrifices, and sun worship itself was attended with the immolation of human victims.

All of these systems are found in America, and their symbols are scattered far and wide. We do not know whether they are to be connected with the decline of religion in oriental countries, or with the progress of religion in America, for they are closely connected with the nature worship, from which all moral distinctions were absent. Still, the symbols which, in Eastern lands, are suggestive of degraded practices are the very symbols prevalent here. They are symbols which, in the East, belonged to the secret mysteries, the very mysteries which were so full of cruelties and degradations.

We maintain that the religion of the Mound-builders not only embodied the same elements as those which became so strong

in the oriental religions when at a certain stage, but it shows how these elements interacted. The fire became the symbol of the sun and consumed the offerings made to the sun, and became sacred as his servant. The serpent was frequently regarded as a divinity in some way amenable to the sun, and so serpent pipes and serpent effigies were connected with the sun circle in the symbolism of the Mound-builders. It is possible that there was a certain kind of tree worship;* the same element of life having its chief embodiment in the tree, which was able to stand up in its force. The moon cult also prevailed, for the moon is always an attendant upon the sun. Whether there was a distinction of sex between the sun and moon is unknown; but the sun circle and the moon crescent may have been male and female.

These three types of nature worship, in which the fire, the serpent and the sun were the chief divinities, probably prevailed throughout the Mound-builders' territory, though their symbols varied with different localities. We recognize the water cult, the solar cult, and the image worship, as different phases of nature worship; but we find that in the symbols there was a remarkable resemblance to the symbolism of other countries, and whether able or not to trace one to the other, we are struck with the thought that there was a studied and intentional symbolism, which resembled that of the Druids, in all their earthworks. The altars, the temple platforms, the burial mounds, the dance circles, the village enclosures, and the covered ways, were all here used not only for practical purposes and such as would subserve the convenience of the people living in the villages, but they were especially devoted to religious purposes and contained symbols in them. The relics also were symbolic, and many of them were buried with the persons,—their very position, in connection with the bodies, having a religious significance. It was not one cult alone that was symbolized in these, for some of the burial mounds contained offerings to the spirit of the dead—the symbols of the soul being placed in the mouth; but there were other offerings made to the water, to the sun, others to the fire, and others to the moon. The relics placed upon the altars, the ornaments, the flint discs, the copper crescents, the mica plates, the carved images, and the pottery figures, were all consecrated to the sun, and, when placed as offerings upon the altar, bore in their shape the symbol of the sun, as much as the altars themselves, or the earth-works in which they were enclosed. There is no locality where this system of sun worship is not symbolized. What is more, the system seemed to have brought into its service, and made useful, the symbols of the preceding

*This is the explanation given by the Dakotas of tree worship. The spirit of life was in the tree. It may be that this will account for the tree worship in the East, and will explain how tree worship and phallic worship became associated. The two in the East were symbolized by the sacred groves, so-called, the symbol of Asharah, or Astarte, the moon goddess.

stages of worship. The serpent, the phallic symbol, the carved animals, the crescent-shaped relics, the fire-beds,—all were associated with the sun circle and made parts of the symbolism of sun worship. We imagine the combination to have been as follows: The sun symbol was embodied in the earth circles; the moon cult in the altars; the fire cult in the ashes in and beside the altars; the water cult in the ponds and wells found in and near the enclosures; animal worship in the effigies; the phallic symbol in the horse-shoe earth-works. We also find that the elements, such as the four quarters of the sky, four winds, four points of the compass, are symbolized by the cross and four concentric circles. So we come to look at everything as more or less symbolic. It is remarkable, as we study the village sites, how many of the conveniences of village life were placed under the protection of the sun divinity, and how much provision was made for the worship of the sun under all circumstances. We notice that the ponds and springs are near the villages; that covered ways connect the villages with the river's bank, and we imagine there was among the Mound-builders, as well as among the Pueblos and Cliff-dwellers, a cult which regarded springs and rivers as sacred and peopled them with divinities. We imagine that the most sacred ceremonies were observed in connection with these springs, and that the elaborate earth-works were erected to give solemnity to the various mysteries, which were directed by the secret orders. These different cults were combined, but, for the sake of convenience, it will be well to take them up separately.

I. First let us consider the water cult. This is a system which was very obscure in America, as, in fact, it was in the East. It seems to have existed here, but was closely connected with the solar cult, the ceremonies of that cult requiring the presence of water to make it complete. We have shown how extensively distributed was the tradition of the flood in America, how varied was the symbolism which perpetuated this tradition. We do not know that any such tradition existed among the Mound-builders nor can we discover any symbol which perpetuated it; but the water cult which we recognize is very similar to that which prevailed in Europe at a very early date, and was there symbolized in the prehistoric earth-works. We turn, then, to the resemblance which may be recognized between some of the earth-works in Southern Ohio and those in Great Britain. We have already spoken of this, but as certain new investigations and new discoveries have been made, we review the evidence.

1. The first group of works which we shall cite is the one at Portsmouth. The chief evidence is given by the avenues or the covered ways, which seem to have connected the enclosures on the different sides of the river. These, by aid of the ferry across the river, must have been the scene of extensive religious

processions, which can be compared to nothing better than the mysterious processions of Druid priests which once characterized the sacrifices to the sun among the ancient works of Great Britain. It has been estimated that the length of the avenues or covered ways was eight miles. The parallel walls measure about four feet in height and twenty feet base, and were not far from 160 feet apart. It is in the middle group that we discover the phallic symbol (see Fig. 1), the fire cult, the crescent of the moon and the sun circle. In the works upon the west bank of the Scioto we find the effigy enclosed in a circle (see Fig. 2), as a sign of animal worship, and in the concentric circles (see Fig. 3) with the enclosed conical mound, on the Kentucky side, we find the symbols of sun worship. We would here call attention to the theories recently thrown out by Mr. A. L. Lewis that the water cult was combined with the sun cult at the great works at Avebury; the avenues made of standing stones having passed over the Kennet Creek before they reached the circle at

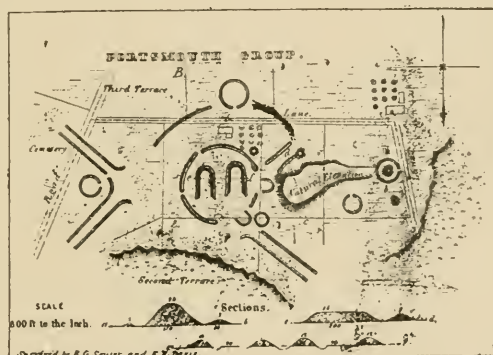


Fig. 1.—Horse Shoe Enclosures at Portsmouth.

Beckhampton; the same is true at Stanton Drew and at Mount Murray, in the Isle of Man. In each of these places were covered avenues reaching across marshy ground towards the circles. "If the circles were places of worship or sacrifice, such avenues connecting them with running streams may have had special object or meaning."*

Mr. Lewis says: "I have never adopted Stukeley's snake theory, for I could never see any great resemblance to a serpent, nor could I see any thing very suggestive of a serpent in the arrangement of the other circles. Still, Stukeley's statements about the stones of the avenue, leading from the great circle toward the river, are very precise." Stukeley says: "There were two sets of concentric circles surrounded by another circle, which was encircled by a broad, deep ditch, outside of which was an embankment large enough for a railway; two avenues of stone leading southwest and southeast. The theory now is that they led across the water of Kennet Creek to Beckhampton and to Overton Hill. The so-called coves in the large circles mark the

*Journal of Anthropological Institute, February, 1891.

site of altars, whereon human sacrifice may have been offered to the sun; but the avenues mark the place through which processions passed in making their sacrifices,—a passage over water being essential to the ceremony.”

This is a new explanation of these works, but it is one which becomes very significant in connection with the works at Portsmouth. Here the avenues approach the river in such a way as to show that a canoe ferry was used to cross the river, the ceremony being made more significant by that means. The covered ways, to be sure, do not reach the edge of the water, but terminate with the second terrace, leaving the bottom-land without any earth-work. This would indicate that the works are very old, and were, in fact, built when the waters covered the bottom-land. It may be said, in this connection, that all the covered ways are similar to these; they end at the second terrace, and

were evidently built when the flood-plain was filled with water. As additional evidence that the works at Portsmouth were devoted to the water cult and were similar to those at Avebury, in Great Britain, we would again refer to the character of the works at either end of the avenues.

Without insisting upon the serpent

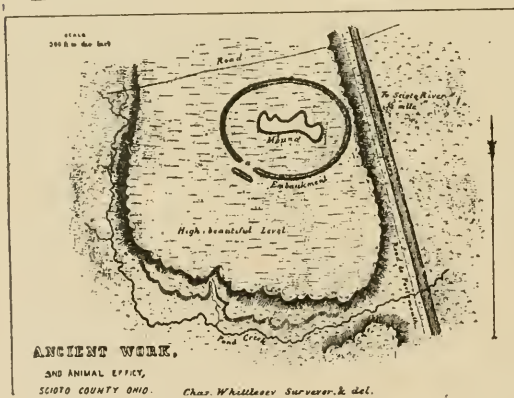


Fig. 2.—Effigy on the Scioto.

symbol being embodied in the avenues, we think it can be proven that the most striking features of the work at Avebury are duplicated here; the sun symbol being embodied in the concentric circles upon the Kentucky side; the phallic symbol in the horse-shoe mounds upon the Ohio side (see Figs. 1, 2, 3) and the avenues of standing stones corresponded to the covered ways which connected the enclosures on the Kentucky side with that on the Ohio side.

The group on the third terrace is the one which is the most significant. Here the circle surrounds the horseshoe, as the circle of stones does at Avebury. Here, too, is a natural elevation that has been improved by art, and made to serve a religious purpose. Mr. T. W. Kinney says this mound, which was a natural elevation, was selected as the site for a children's house. In excavating the cellar there was discovered a circular altar composed of stones which were standing close together, and showed evi-

dence of heat. This altar was four feet below the surface. Leading from the altar was a channel about eighteen inches wide, composed of clay, which was supposed to be designed to "carry off the blood", giving the idea that human sacrifices were offered here, as they were upon the altars at Avebury. Squier and Davis say that the horse-shoes constitute the most striking features; they are both about the same size and shape. They measure about eighty feet in length and seventy feet in breadth. Enclosing these in part is a wall about five feet high. These horse-shoes might well be called coves. The ground within them was formerly perfectly level. They open out toward the river and were on the edge of the terrace, and so were elevated above the surrounding country and were in plain sight. Near them was a natural elevation eighteen feet high, but gradually subsiding into a ridge towards the enclosed mound. A full view of the entire group may be had from its summit. The enclosed mound was twenty-eight feet high by one hundred and ten feet base. It is truncated and surrounded by a low circumvallation. As additional evidence to this, we may mention here the great work situated about a mile west. See Fig. 4. Here is a group of exquisite symmetry and beautiful proportions. It consists of an embankment of earth, five feet high, thirty feet base, with an interior ditch twenty-five feet across and six feet deep. Enclosed is an area ninety feet in diameter; in the center of this is a mound forty feet in diameter and eight feet high. There is a narrow gateway through the parapet, and a causeway over the ditch leading to the enclosed mound. This is a repetition of the central mound with its four concentric circles. It is said that there was near this a square enclosure resembling the chunky yards of the South, and that the group taken together was of a Southern type. There are several small circles, measuring from one hundred and fifty to two hundred and fifty feet in diameter; also a few mounds in the positions indicated in the plan.*

Most noticeable is a mound within four concentric circles, placed

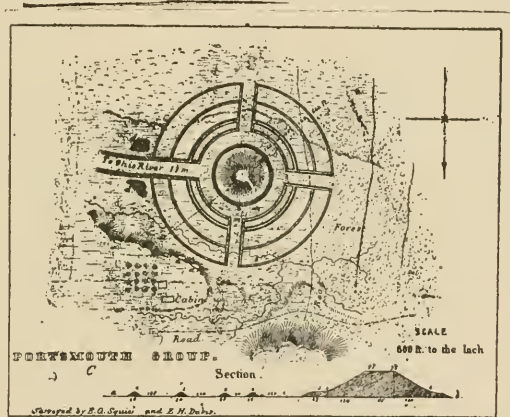


Fig. 3.—Sun Circles.

*Mounds like this are common in this district and may be regarded as sun symbols. See the cut of works at Portsmouth; also of terraced mound in Greenup County, Kentucky, and at Winchester, Indiana.

at irregular intervals in respect to each other. These were cut at right angles by four broad avenues which conform nearly to the cardinal points. From the level summit of this mound a complete view of every part of this work is commanded. On the supposition that it was in some way connected with religious rites, the mound afforded the most conspicuous place for their observance. See Fig. 3.

"The mound in the center, at first glance, might be taken for a natural elevation. It is possible that it is a detached spur of the hill enlarged and modified by art. It is easy while standing on the summit of this mound to people it with the strange

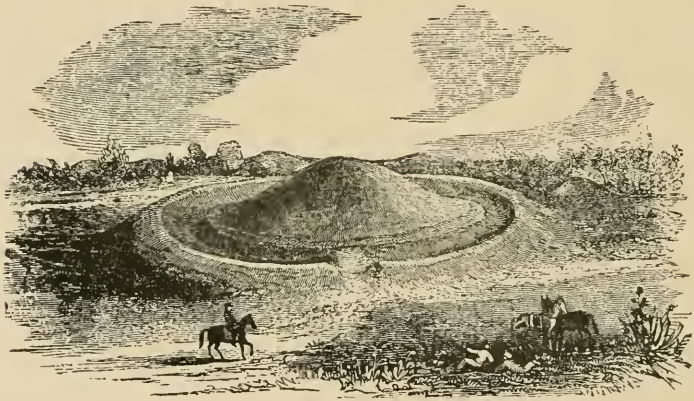


Fig. 4.—Terraced Mound opposite Portsmouth.

priesthood of ancient superstition and fill its walls with the thronging devotees of mysterious worship. The works were devoted to religious purposes and were symbolic in their design.”*

Atwater speaks of this group as having wells in close proximity to the horse-shoes. He speaks of the earth between the parallel walls as having been leveled by art and appear to have been used as a road-way by those who came down the river for the purpose of ascending the high place. We have dwelt upon these peculiarities of the works at Portsmouth for the very reason that they seem to prove the existence of a water cult, and because it so closely resembles those in which the water cult has been recognized in Great Britain. We maintain, however, that it was a cult which was associated with sun worship, and that the phallic symbol was embodied here. We maintain that sacrifices were offered to the sun, and that the human victims were kept in the corral on one side of the river; that they were transported across the water and carried up to the third terrace, and immolated

*Ancient Monuments, page 82.

near the horseshoe, and that afterwards the processions passed down the terrace, through the avenue, across the river, a second time, and mounted the spiral pathway to the summit of the terraced mound situated at the end of the avenue.

In reference to this corral, so called (see Fig. 5), we may say that the walls surrounding the area are very heavy, and are raised above the area enclosed, in places as much as fifty feet.

They convey the idea that the enclosure was for holding captives, for they resemble the walls of a state's prison rather than those of a fort; being level on the top and made as if designed for a walk for sentinels. The parallel walls or covered ways on each side of this enclosure have an explanation from this theory. They were built to the end of the terrace and were probably intended to protect the sentinels who were stationed at the ends. They command extensive views, both up and down the river, and were convenient places from which to watch the enemy, as they might approach to release the captives. The groups upon the Kentucky side and the effigies on the Scioto are connected with these horse-shoes and with one another by the avenues. The group to the east is the most interesting on account of its symbolism, and the most interesting part of it is the mound with the spiral pathway.

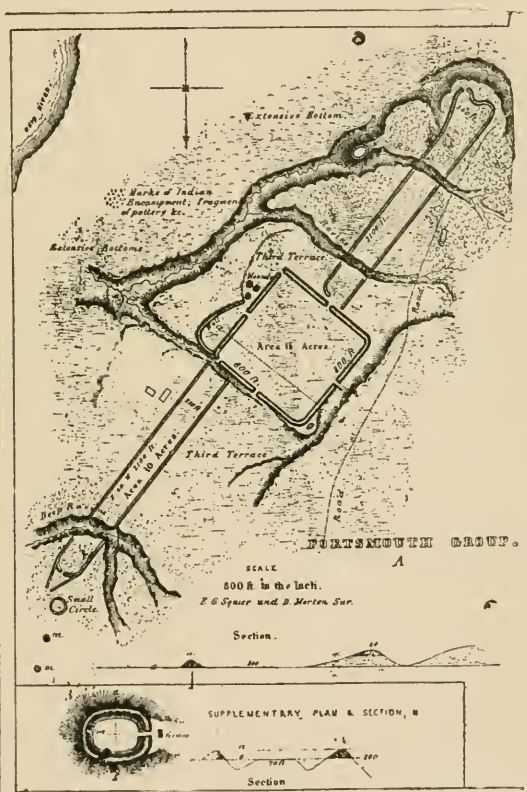


Fig. 5.—Corral.

2. The works at Newark are next to be considered. These works are described in the chapter on "sacred" or village enclosures, but we take them up here in connection with the water

cult. The most remarkable feature of this entire group of works is that presented by the various lines of parallel walls, which extend from one enclosure to another, and from the enclosures to the water's edge. There were five sets of parallels: One has been traced from the octagon westward for about two miles; another extends from the octagon toward the large square for about a mile in length; a third extends from the octagon to the bottom-land, and probably once reached the water's edge; a fourth extended from the circle called the old fort to the square; a fifth extended from an irregular circle, on the edge of the terrace, to the bottom-land, and, perhaps, to the water's edge.

One of the peculiarities of these parallels is that the roadway, in many places, was elevated above the wall. In the northern avenue this elevated grade extends for a quarter of a mile, and is broad enough for fifty persons to walk abreast. A similar grade is found in the avenue that leads from the large square to the irregular circle. The same is true of the parallel leading from the large circle, down the terrace, to the South Fork. The bank of the third terrace, here 20 feet high, is cut down and graded to an easy ascent. The roadway is elevated above the walls, and extends out upon the alluvial bottoms beyond the wall. A similar grade is constructed at the extremity of the northern wall. There was a road excavated into the terrace for one hundred and fifty feet, but the earth was used to form an elevated way over the low, swampy ground at the foot of the terrace. These excavations constitute quite an imposing feature when seen on the spot. The inquiry is, what was the object in erecting these parallel walls, and making such elevated roadways, with grades at the ends of the roads leading to the bottom-lands? The water is now not there and the grade seems to be useless. One supposition is, that at the time the works were erected, the water flowed over the first terrace and washed up to the foot of the second terrace; and that these grades were used for canoe landings.* Why are the roadways elevated and made so broad? Were they designed for the passage of armies, with troops marching abreast? Were they designed for religious processions, which were led from the water to the sacred enclosures? Let us examine the works more particularly. Squier and Davis say that a number of small circles were found within the paral-

*Mr. Isaac Smucker says the terrace was fifty feet above the bottom land; very few mounds and no walls on the bottom lands. He thinks one set of parallels may have led across Licking Creek to Lancaster. He says that formerly there was a fort on a hill to the west of these works; a fort which contained fifty acres, whose walls were conformed to the outline of the hill. This may have been another of the hill forts, which were used by the sun worshippers as a refuge when their villages were attacked. He also says that the works extended from the Raccoon to the Licking and covered the plain. The octagon was on the bank of one stream, the irregular circle and graded way near the forks, and the parallel led toward the other stream. The alligator effigy and the fort referred to were several miles west. He speaks of a reservoir or artificial lake, twenty rods in diameter, and a sugar-loaf mound, about fifteen feet high, situated on one of the bluffs, also of a crescent earth-work and large enclosure between the alligator mound and the old fort. See *American Antiquarian*, Vol. VII, Page 349.

lels,—they probably mark the site of ancient circular dwellings. Circles having diameters of one hundred feet, with ditches interior to the walls, and elevated embankments interior to the ditch, are also seen at various points at the ends and along the sides of the covered way. These circles, with their enclosed crescents, betray a coincidence with those connected with the squares and covered ways at Hopeton, at Highland and elsewhere. May they not have been circles in which religious houses were placed? There is one circumstance which favors this supposition. Mr. Isaac Smucker says there was a group of burial mounds near the old fort, around which was a paved circle eight feet wide,—the mounds being closely connected at the base. Each one of the mounds was made up of a series of layers of earth alternating with layers of sand, followed by layers of cobble stone,—the cobble stones being first placed over a strong burning. In the mounds six or eight post holes were discovered filled with sand; the center post extending down several feet. The conclusion was, that the conical buildings and rotundas had been built upon these mounds; and that fires and burials or burnings had taken place in the rotundas. Different hearths or fire beds had been built inside, making different occasions of sacrifice. Mr. I. Dille says: "To the east of the line of embankments on the second bottom of the creek, are numerous mounds. In 1828, when constructing the canal, a lock was built here. Fourteen human skeletons were found four feet beneath the surface, some of which seemed to have been burned. Over these skeletons, carefully placed, was a large quantity of mica in sheets and in plates; some of them were eight and ten inches long, and four and five inches wide. It is said that from fourteen to twenty bushels of this material were thrown out."

We are to notice, in this connection, the various religious works at Newark. 1. The effigies; there was a bird effigy inside the old fort, with its altar; an alligator effigy, with its altar, at Granville. 2. The circles; there are circles inside the avenues, various circles on the terrace inside the large enclosures; many of these circles have crescents, showing that the moon cult prevailed. 3. The ponds and water-courses; the pond near the old fort has a peculiar shape. 4. The corrals; the old fort was a good specimen; it resembled that at Portsmouth, on the Kentucky side; this had the ditch on the inside and had a high wall, which gave the impression that it was designed to hold captives within the area rather than to defend the area from an attack from without. 5. The parallel walls located near the fort; these were undoubtedly for the trial of captives, where they ran the gauntlet. 6. The network of walls and gateways; this can be explained only on the supposition that elaborate ceremonies were observed here; the walls can not be regarded as game-drives; they may have been designed for protection of the villages, but,

if so, they were villages of a class of sun-worshippers. But it is probable that here all forms of worship—animal worship, fire worship, moon worship, water cult—were mingled together and brought under the control of the solar cult.

3. The same lesson is impressed upon us as we go away from this series of works and enter the circles and sacred enclosures on the Scioto River, on Paint Creek, the Muskingum River, the Miami River and the White River. In nearly all of these places we find the enclosures having the form of the square and the circle, and having about the same area as those of Newark. We find also that there are small circles with ditches and small crescent embankments inside of the circles; also gateways opening toward the enclosures, giving the idea that they were places of sacred assembly and at the same time symbolic in character. We notice, too, that in many of the groups there are covered ways resembling those at Newark, and that the graded ways generally



Fig. 6.—Works at Paint Creek.

lead from the sacred enclosures to the water's edge, giving the idea that they were used for processions, the water cult being common in all of the localities. At Marietta the graded way leads from the second terrace up to the third terrace, and connects the enclosure and the three temple platforms with the river, thus giving the impression that they were used for religious purposes rather than for warlike, that processions leading captives passed from the water's edge up to the temples and to the high conical mound.*

Mr. Harris says there was at Marietta a well sixty feet deep and twenty feet in diameter, of the kind used in early days, when water was brought up in pitchers by steps. This well may have been for the convenience of the people living in the enclosures, but its proximity to the temple platforms and the conical mound and the graded way makes it significant.

4. The works at Paint Creek. There were wells or reservoirs inside both the enclosures at this point. Atwater says in one there was a large pond or reservoir fifteen feet deep and thirty-nine

*Squier and Davis say there was a sloping terrace 700 feet wide between the end of the covered way and the bank of the river; that there were no works on this terrace, which was about forty or fifty feet above the river. They seem to doubt that the river flowed over the terrace at the time that the graded way was built. It is possible that the village was upon this terrace, and that the enclosure upon the upper terrace was the sacred place, where the chiefs dwelt, and that the graded way with the protecting walls were designed for processions from the village to the temples, though the other supposition is a plausible one.

feet in diameter. It was supplied by a rivulet which runs through the wall, but at present sinks into the earth. These wells may have been merely for the convenience of the villagers, but there are so many places where hot houses or assembly houses were placed near ponds of water or streams or springs, we conclude that water served an important part in the religious ceremonies. These enclosures on Paint Creek contain mounds or sacrificial places, which seem to be connected with the ponds. Atwater speaks of one covered with stones and pebbles. He says this mound was full of human bones. Some have expressed the belief that on it human beings were once sacrificed. Near this was an elliptical mound, built in two stages, one eight feet high, the other fifteen feet. On the other side of the large mound was a work in the form of a half moon, set round the edges with stones, and near this a singular mound, five feet high and thirty feet in diameter, and composed entirely of red ochre, an abundance of which is found on a hill near by. The small circular enclosure opens into a large area and connects with it by a gateway. Inside the circle is a lesser circle, six rods in diameter. It seems probable that this circle marks the site of the rotunda and that the whole enclosure was used for sacred purposes, the

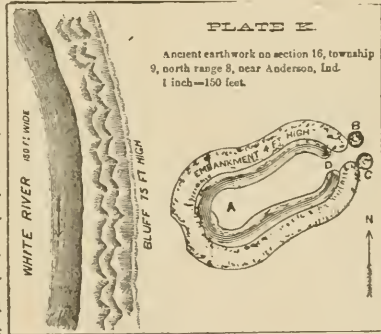


Fig. 7.—Sacred Enclosure near Anderson.

larger enclosure being the place where the imposing religious ceremonies were observed. Atwater speaks especially of the wells, one of them being inside of the enclosure, near the mound, and others outside the walls. It would seem from the proximity of the wells to the mounds that there were here the water cult, the fire cult, the moon cult combined, and the complicated system of religion in which the priests had great power.* See Fig. 6.

Another locality where the water cult is apparent is on the White River, in Indiana. Here, in one place, is a square enclosure with a diameter of 1320 and 1080 feet, which has a mound in the center nine feet high and one hundred feet in diameter. This is on the fair grounds at Winchester. Near Anderson, on the banks of the White River, there is a group of small enclosures. One of these has a constricted elliptical embankment one hundred and fifty feet in diameter. Another has a length of two hundred and ninety-six feet and a width of two hundred and fifty feet,—the wall being thirty-five feet at base and four feet high; ditch, eight feet wide, with a gateway which is protected by two

*Ancient Works on Paint Creek.

small mounds. On the same section is a group containing four circles, two ellipses, and a terraced mound. The embankment of one at the base is fifty feet wide and nine feet high; the ditch is five feet wide, ten and one half feet deep. The central area is 130 feet in diameter, and contains a mound four feet high and

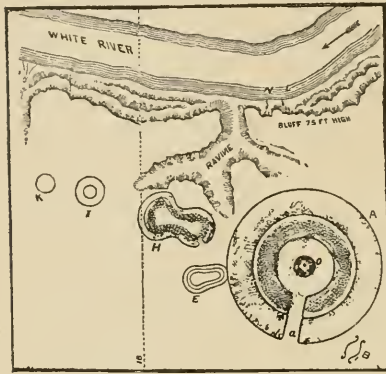


Fig. 8.—Sun Circle on White River.

30 feet in diameter. The gateway is 30 feet wide. Carriages may drive in through the gateway and around the mound on the terrace, and have room to spare. The group is an interesting one, and was evidently designed to be symbolic. Other earth-works similar to this are found near Cambridge, in Wayne County. Here there are two circles, with embankments four feet high, and wide enough on the top to allow two carriages to pass each other. The ditch is on the inside of the embankment, and within the ditch is a circular, level area, with a causeway leading across the ditch through the gateway. These are situated on the bank of the Whitewater River. A passage-way leads from the bluff to the water's edge, equally distant from both circles.

These circles seem to be all religious symbols, the enclosure with the circular mound and ditch, and passageway across the ditch, being symbolic of the sun, the constricted ellipses being a symbol which resembles the banner stones. The graded ways from these small enclosures to the water's edge show that with the solar cult the water cult was here associated.

There are several structures devoted to the water cult on the Kanawha River, in West Virginia, and on the Wateree River, in North Carolina. These resemble the earth-works in Southern Ohio. Their peculiarities are that they are circular enclosures, have uniform measurement of 660 feet in circumference, have a ditch on the inside and a mound on the inside of the ditch. Several of the circles have a truncated mound situated outside of the gateway and guarding the entrance, conveying the idea that there may have been a rotunda on the summit, and an

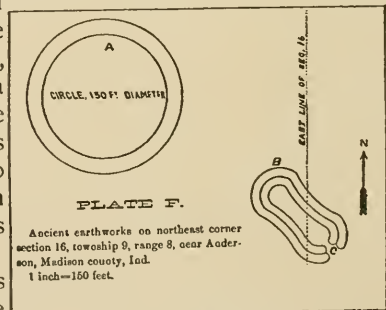


Fig. 9.—Circle and Ellipse near Anderson, Indiana.

assembly place or council house inside the circle. There is near one of these circles a graded way which leads from the enclosure through the terrace down to the bottom land of the Kanawha River, a feature which is noticeable in the Ohio mounds, and was there ascribed to the water cult. One of these mounds was explored and found to contain an altar exactly like the altars in Ohio. It was covered with charred human bones. There were in the same mound, at different depths, skeletons; one recumbent, two in sitting posture. The altar was at the bottom, this showing that the ancient race was the same as the sun worship-

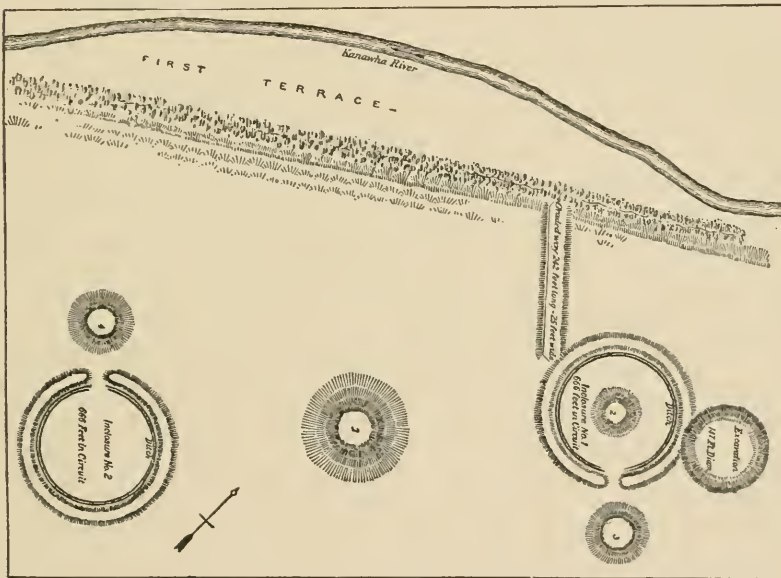


Fig. 10.—Sun Circles and Graded Way on the Kanawha River.

ers of Ohio. But it was followed by others, who built mounds, but did not build altars.

5. The same lesson is conveyed by the graded ways, which have been discovered in the Southern States, and which, according to Squier and Davis, are quite numerous. Descriptions have been given of these by Mr. Bartram, and his explanation of them was that they had been used for avenues which connected the estufas with the artificial ponds used for bathing. They are called savannahs, as they are now meadows, but they were once undoubtedly filled with water and are artificial. The mounds were probably foundations for rotundas.

Mr. H. S. Halbert has described another mound situated in Winston County, Mississippi. Here was a mound about forty feet high with a semicircular rampart surrounding it. A roadway led from this mound towards the creek, but ended in the

intervening swamp. The Messier mound in Georgia is another specimen also. This is a pyramid, which was once surrounded by a rampart or wall. There is near it a large, artificial pond, covering an area of about two acres, and an immense circular well forty-eight feet deep. The mound is one of the largest in the Southern States,—320 feet long, 180 feet wide, 57 feet high, situated upon the summit of a hill. It was not erected for defensive purposes, but as a temple. In the religious festivals observed here, ablutions served an important part, and water was an essential element.

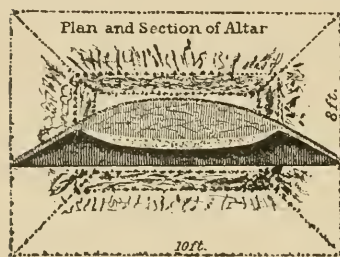


Fig. 11.—Altar.

II. We now come to the system of sun worship. This was a very extensive system, and one which seemed to rule over all others. In fact, we may say that all the other systems are adjuncts or tributaries to this. Sun worship was widely

distributed, and prevailed among nearly all the districts in the Mound-builders' territory, though it is the most prominent in the middle and southern districts. It found its highest, or, at least, most complicated, development in Southern Ohio. Here a very ancient people were devoted to sun worship, whose history is unknown, but whose works and relics were left in great numbers. We enter this district, and shall study the earth-works and relics here, with the idea that we shall ascertain something about the system. There is no part of the country where the tokens are more suggestive and interesting. In fact, nearly everything here is suggestive of this system. A most complicated series of earth-works, some of them designed for villages, some of them for forts, some for dance circles, some for council houses, but they were all symbolic. Here were also many solid mounds, some of which contain altars; others were sacrificial places; others were lookout stations; others were temple platforms; others were places of religious assembly; but in all of these we find symbols of the sun. It would seem as if the sun worshipers had been so impressed with their system that they had used the works of nature as contributors to worship—the hilltops, the valleys, the streams, the very springs having been used by them in carrying out the different parts of their varied cult. The clan life prevailed here, and clan villages were numerous; clan emblems were not uncommon, but sun worship was the uniform element with all the clans. This uniformity extended not merely to the river system, bringing



Fig. 12.—Altar.

together the clans scattered along each river, but it extended also from river to river, and brought together the people of the entire district into one grand confederacy. This confederacy extended from the White River, in Indiana, to the Muskingum, in Ohio, and may have embraced all the country between the Wabash and the Alleghany Rivers. There are also some evidences that it extended from Kentucky into West Virginia, and that the works upon the Kenawha River and the Licking River belonged to the same system.

The altar mounds described in the cuts (Figs. 11 to 14) contain no relics. The first one contained fragments of pottery; the second a mass of lime and fragments of calcined shells.

May it not be that pottery vessels were offered in one and inscribed

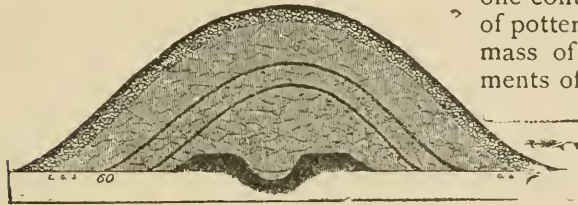


Fig. 13.—Altar Mound.*

shell gorgets in the other, the fire having reduced these to ashes. The other mounds in this enclosure contained altars on which offerings of costly and highly wrought relics had been placed—two hundred pipes on one, large quantities of galena, thirty pounds in all, on another, obsidian arrows and pearl beads on another, copper gravers and ornaments made of copper and covered with silver on another. The mica crescent depicted in Fig. 15 was at the bottom of the largest mound, one which overlooked the whole group. The crescent was shelving, its outer edge being raised a few inches above the inner edge, but there was no altar in the mound and no other relics. The location of the group of mounds is to be noticed here. "Mound City" is opposite the



Fig. 14.—Altar in Relief.

*The description of the mounds containing the altars is given in another chapter. The altars represented in cuts 11 and 12 were found in mounds Nos. 2 and 4. No. 3 contained a double altar. This altar showed marks of intense heat. The relics which had been offered were varied; arrow-points of obsidian, of limpid quartz, of copper gravers or chisels, copper tubes and carved pipes. In mound No. 8 was an altar somewhat resembling that in Mound No. 2. The deposit on this altar was very extensive; 200 pipes carved in stone, pearl and shell beads, discs and tubes made of copper, copper ornaments covered with silver. Masses of copper were found fused together in the center of the basin. The pipes were in fragments. They represented animals, such as the otter, heron, fish, hawk with bird in its talons, panther, bear, wolf, beaver, squirrel, raccoon, crow, swallow, buzzard, parouquet, toucan, turtle, frog, toad, rattlesnake, and a number of sculptured human heads. Mound No. 7 was the one which contained the crescent, Fig. 13. It was the largest and highest of the group, and commanded a view of the entire group. It contained no altar, merely a clay floor, but the crescent was shelving or dish-shaped; the outer edge rested on an elevation of sand, six inches in height. The mica crescent was the chief feature of the mound, though the earth of the mound was incredibly compact. Mound No. 9 contained an altar and a layer of charcoal. In the altar were instruments of obsidian, scrolls of mica, traces of cloth, ivory and bone needles, pearl beads. The articles contained in the altars show an extensive aboriginal trade as well as an advanced stage of art. The symbolism contained in the altars prove that the offerings were made to the sun and moon. See chapter on Altars and Ash-pits; see also figure of Mound City.

enclosure at Hopeton and nearly opposite the square enclosure at Cedar Bank. The covered way at Hopeton leads toward Mound City. May it not be that this was the way through which processions passed on the occasions when the annual burial feast or "great burning" took place? The passage across the river by a ferry to the place of burning would resemble the Egyptian custom, and would fulfil the picture which Virgil has drawn of Charon crossing the river Styx with the souls of the dead.*

Let us take up the works in detail, and see the symbolism contained in them. We notice that there are truncated pyramids or platforms in this district, generally inside of square enclosures, that they were orientated and had inclined passage-ways to their summits. We notice also that there were elliptical and conical mounds inside of the circular enclosures, many of them sur-

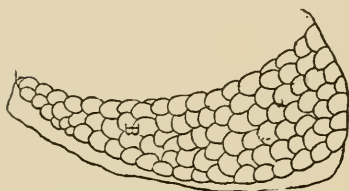


Fig. 15.—Crescent Pavement.

rounded by pavements in the form of ellipses and crescents. We also notice that these large enclosures are always connected by parallel walls or covered ways with the clusters of small circles and crescents; that the altar mounds are generally surrounded by circular walls; that even lookout mounds are inside of circles. We notice further that there are terraced mounds with spiral pathways on their sides, and many of these have ditches and circles surrounding them, some of them have several concentric circles. We notice also that some of the enclosures are in the shape of constricted ellipses, others have triangular gateways, others combine the square and circle in one. We notice also that the altars are carefully built in the form of circles and squares.

We conclude that a complicated system of symbolism prevailed, a symbolism devoted to sun worship. We notice further that the relics are symbolic, that while many of the pipes were carved in the shape of animals and serpents, some of the tablets were inscribed with human tree figures. The mica plates and copper ornaments and other metallic relics were in the shape of crescents, circles and scrolls. Some of them had the suastika inscribed upon them, a mingled symbolism being apparent in the relics. We notice still further the resemblance between the earth-works and the relics, animal figures being found in some of them, as in the pipes, but crescents, circles and scalloped figures in the earth-works as well as in the tablets and metallic relics. While the suastika has not been recognized in an earth-work, the cross has been. The serpent and the bird effigy are well known, but these remind us of the figures on the inscribed shell gorgets so

*H. S. Halbert speaks of an ancient road which crosses the Tombigbee, connecting the cemetery on Line Creek in Mississippi and Mound-builders' settlements in Alabama. The habit of crossing streams with the bodies of the dead is an old one, and was common among the Egyptians and other Eastern nations.

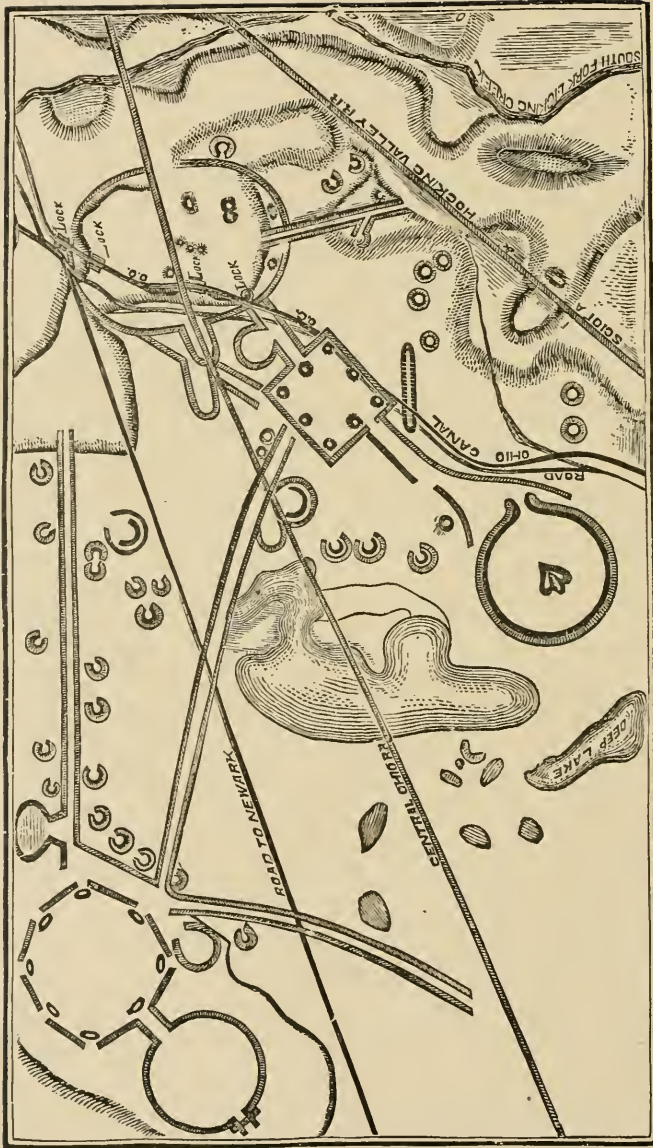


PLATE II.—WORKS AT NEWARK.

common in the South, the elliptical enclosure in the body of the serpent resembling the same figure on the inscribed shells.

The earth-works of Ohio were designed to protect the villages, which were so numerous there, but they were villages which were pervaded by sun worship. The people dwelling within them were surrounded by the symbols of the sun and followed all the processes of village life under the control of this luminary. They went to the fields, to the dance grounds, to the places of assembly, to the ponds and streams and springs under its protection, and even placed their dead in graves or upon altars which were symbolic of the sun. When they conducted war, they brought back their captives, kept them for a time in enclosures consecrated to the sun, and afterwards immolated them as victims and perhaps presented their bodies or hearts as offerings to the sun, making the remarkable terraced mounds the place where this chief rite was celebrated. The platform mounds may have been foundations for temples; they were, however, temples which were depositories for the bodies of their eminent men, rather than assembly places, and were approached by great and solemn processions, the graded and covered ways having been built for the express purpose of accommodating these ceremonies. There was nothing like this among the aborigines of the North or of the South, though we imagine that if we substituted stone monuments for the earth-works that the Druidic system which prevailed in Great Britain would fit the frame and make the two pictures very similar. There was no living race in America that had any such symbolism or customs. The nearest approach to it would be the confederacies of the South, that were in the midst of the pyramids, and who occupied them, though they may not have built them.

The similarity between the symbolism of the Ohio Mound-builders and that of the stone grave people will be seen from an examination of the cuts. See Plate IV. These cuts represent the shell gorgets found in these graves, as well as in the southern and southeastern mounds. In the gorgets the serpents are coiled and the concentric circles have symbols of the sun and moon and stars between them, as the squares have birds' heads at their sides and loops at their corners, but the figures are the same and the significance similar to those contained in the circles, squares and serpent effigies of Ohio.

Let us now draw the comparison between these works and those found in the Southern States. The Mound-builders of the South were evidently sun worshipers, but they embodied their system in an entirely different series of works, the pyramids being the chief structure of that region. There are contrasts and resemblances—contrasts in the works, resemblances in the relics. We have opportunity of studying this contrast in this locality. The pyramid builders reached as far north as the Ohio River and

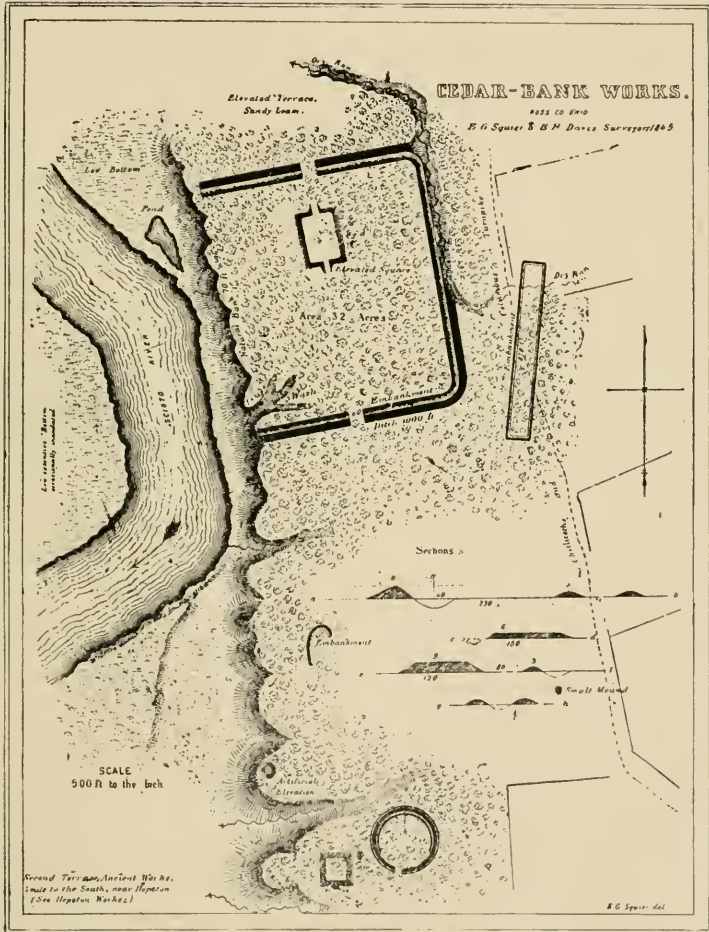


PLATE III.—TEMPLE PLATFORM AT CEDAR BANK.

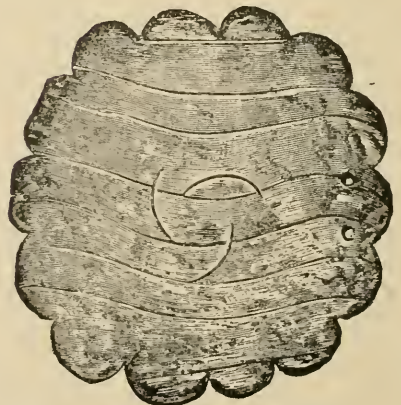
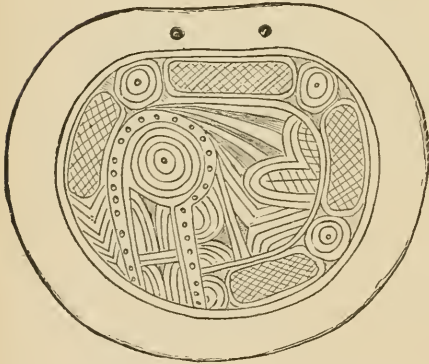
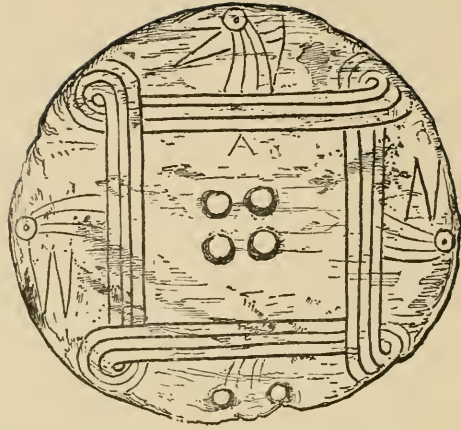
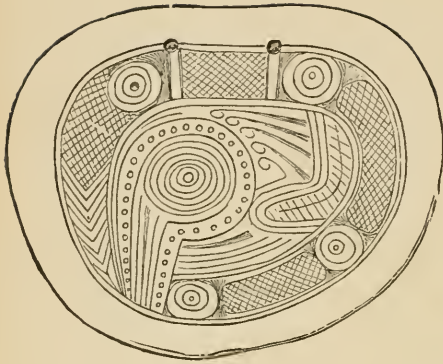


PLATE IV.

center, while the works on the White River marked the western extremity of the Ohio district, the two classes being brought into close proximity. We may notice the contrast between them. It may be that the Mound-builders of the Wabash River and of the Miami River migrated south at the incursion of the savage Indians and became the pyramid-builders of the Gulf States, one class erecting the pyramids on the Mississippi and the other those on the Atlantic coast. In that case, we shall be studying the relics of the same people when we take up the shell gorgets and the tablets of the South.

Passing out from this region on the Wabash River, where there are so many pyramids, we come to the region where the circles are so numerous. We first find some of these on the White River, some of which have already been described. They become more numerous as we reach the Big Miami, the works at Alexandersville and at Worthington (see Figs. 16 and 17) being notable specimens. The works at Worthington are very interesting. There is here a square enclosure whose diameters are 630x550 feet. It is orientated. At one corner of this is the small circle, 120 feet in diameter, whose gateway is in line with that of the square. On the wall is the truncated cone, 20 feet in height and 190 feet in diameter. Opposite the circle, on the bank of the stream, is the small circle with three openings. This circle has a ditch inside, and seems to combine the circle, the square and triangle in one. The author discovered at one time a group similar to this, at Fredericksburg, twenty miles north of Newark. Here were the triangle, the square and the circle all combined in one. Near by was another enclosure, which was even more striking in its shape. It was situated on the bank of a beautiful stream and was in the midst of a fine forest of maples. The wall was in the shape of an ellipse with scalloped sides and ends, the curves being very graceful. Within the walls was the ditch, which had varying widths. The platform within the ditch was rectangular. From the center of the platform a symmetrical oval mound rose to the height of fifteen feet. This was leveled at the top, but its base just fitted the platform, the ends and sides extending to the ditch. No one

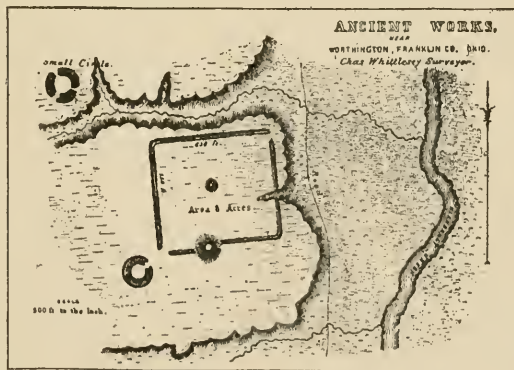


Fig. 17.—Works at Worthington, Ohio.

who had seen this group could deny the taste and skill of the Mound-builders, or doubt that some of their works were erected for ornament and for the embodiment of a religious symbolism.

We come next to the works on the Little Miami. These have recently been explored under the auspices of the Peabody Museum. Prof. Putnam says: "In this region are some of the most extensive ancient works of Ohio, such as Fort Ancient, with its walls of earth from twelve to twenty feet high, enclosing over a hundred acres; Fort Hill, with its surrounding walls of stone, enclosing about forty acres; the great serpent effigy, more than a thousand feet in length, the interesting works at High Bank, at Cedar Bank and at Hopeton, with their squares and circles, besides hundreds of mounds measuring from a foot or two in height to others forty or fifty feet in height. Here we have found elaborately constructed works of a religious character. Here, too, as offerings during some religious ceremony, we have found the most remarkable objects that have yet been taken

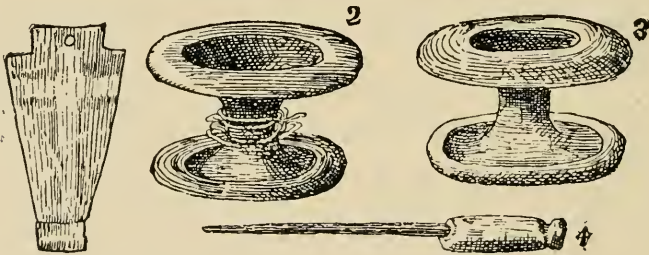


Fig. 18.—Spool Ornaments and Cross from Stone Graves.*

from ancient works in the United States—small carved terra cotta "figurines," representing men and women; ornaments made of native gold, silver, copper and meteoric iron; dishes elaborately carved in stone; ornaments made of stone, shell, mica, and the teeth and bones of animals; thousands of pearls perforated for ornaments; knives of obsidian; all showing that the intercourse of the people of that time extended from the copper and silver region of Lake Superior on the north to the home of the marine shells in the Gulf of Mexico on the south; to the mica mines of North Carolina on the east and the obsidian deposits of the Rocky Mountains on the west."

The beautiful location of this group of earth-works indicates that in this locality there must have been a great population, the relics containing evidence of the wealth of the builders, as well as the religious character of the works themselves. Near this group of works the explorers found in the burying place of the sun worshipers a number of graves containing skeletons attended

*We would here acknowledge our obligation to General G. P. Thruston, who has kindly loaned us the cuts which he has used in illustrating his excellent work on "The Antiquities of Tennessee."

by a large sea shell made into a drinking cup and a number of shell beads, and enclosed in the bones of each hand a spool-shaped ornament made of copper, a copper pin, a wooden bead covered with thin copper, several long, sharp-edged, flint knives of the same shape and character as obsidian flakes from Mexico. Of the ear ornaments, Prof Putnam says: "I have never found them in any of the several thousand stone graves of the Cumberland Valley which I have explored, nor have we found traces of them among the hundreds of graves associated with the singular ash-pits in the cemeteries which we have explored in the Little Miami Valley, nor with the skeletons buried in the stone mounds of Ohio. They seem to be particularly associated with a people with whom cremation of the dead, while a rite, was not general, and who built the great earth-works of the Ohio Valley. I can further say that in all recent Indian graves I have opened this peculiar kind of ornament has not been found; we have certainly found them in such conditions in Ohio that they must have been buried with their owners long before the times of Columbus." One peculiarity of the altars is that they seem to have been emptied and used over and over again, but the bones and ashes were removed and buried by themselves. In reference to the locality Prof. Putnam says:

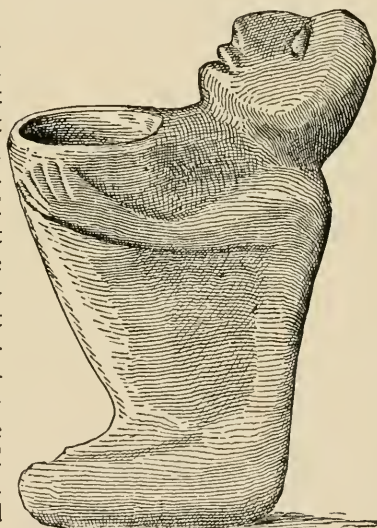


Fig. 19.—Pipe from Etowah Mound.

"The more we examine these works the more interesting and instructive they become; we have already spread before us the outlines of a grand picture of the singular ceremonies connected with the religion and mortuary customs of a strange people."

Spool ornaments have since been found among the stone graves and described by Gen. Thruston. Fig. 18. The cross was found in the Big Harpeth works in Tennessee. One of the spools—No. 2—was found in a large mound, embedded in ashes, south of Nashville. This had a thread of vegetable fibre about the central shaft. The other—No. 3—was found in a mound in the Savannah works. The little copper awl, with horn handle, was found on Rhea's Island, Tennessee. Gen. Thruston says in reference to these spools that their similarity to those of Ohio illustrates the intercourse which prevailed during prehistoric times. We call attention to the idol pipes; the one represented in the cut (Fig. 19) was taken from the great Etowah mound in

Georgia, ploughed up near the base of the pentagonal pyramid. It may have been used by one of the ancient caciques in blowing or puffing tobacco smoke to the sun at his rising, as was their habit. It shows the prevalence of sun worship during prehistoric times. The Mound-builders of this section had many idol or image pipes. Some of these pipes represented females holding pottery vessels, others males holding pipes; the sex being discernible in the faces and by the utensils used; the faces always directed towards the sun.

What is peculiar about the works in Ohio is that the very mounds where so many relics were discovered and where offerings had evidently been made were in circular enclosures which were sacred to the sun. The dimensions of the enclosures are as follows: That upon the hill was a perfect circle, 550 feet in diameter; contained a large mound, in which was a stone wall, four feet high, surrounding an altar of burned clay, from which objects of shell, stone, copper were taken. A graded way from the top of the hill to the level land below connects the circle above with an oval enclosure, whose greatest diameter is 1500 feet. Near this oval is an earth circle, 300 feet in diameter, and in the circle a small mound. At the foot of the graded way is another small circle, enclosing a burial mound and a group of altar mounds, around each of which is a circular wall. Here, then, we have the same symbol as at Portsmouth—a conical mound inside of a circular enclosure, and what is more the mound has proved, after excavation, to contain an altar and relics upon the altar, thus confirming the thought that this was a symbol of the sun.

The works at Cedar Banks suggest the same combination. This work is situated upon a table-land. It consists of a square enclosure, 1400 feet wide, 1050 feet in length, with two gateways 60 feet wide, and an elevated platform 250 feet long, 150 feet broad and 4 feet high, which is ascended from the ends by graded ways 30 feet broad, and in all respects resemble the truncated pyramids at Marietta. About 300 feet distant from the enclosure are the singular parallel walls, connected at the ends, 870 feet long and 70 feet apart. About one third of a mile south is a truncated pyramid, 120 feet square at the base, 9 feet in height, and a small circle, 250 feet in diameter, with an entrance from the south 30 feet wide. The sides of the pyramids correspond to the cardinal points. The circle has a ditch interior to the embankment. It has also a semi-circular embankment interior to the ditch, opposite the entrance. The group is so disposed as to command a fine view of the river terraces below it. The head land seems to have been artificially smoothed and rounded. See Plate III.

It is difficult to determine the design of these works. The most plausible theory is that the truncated pyramid within the

square enclosure was the site of a temple or depository for the dead; that the small circle and small pyramid were covered with religious houses resembling rotundas; that the parallel lines were devoted to the trial of prisoners or captives, and that the whole group was used for religious purposes.

We pass from this region to Circleville (see Fig. 20), at the head of the Scioto River. Here was formerly a group of mounds which were the first ever explored. The exploration called attention to the ancient works of the State. Here were a large circle and square. Within the circle the conical mound, surrounding the mound a crescent-shaped fire-bed or pavement, composed of pebbles extending six rods from the base of the

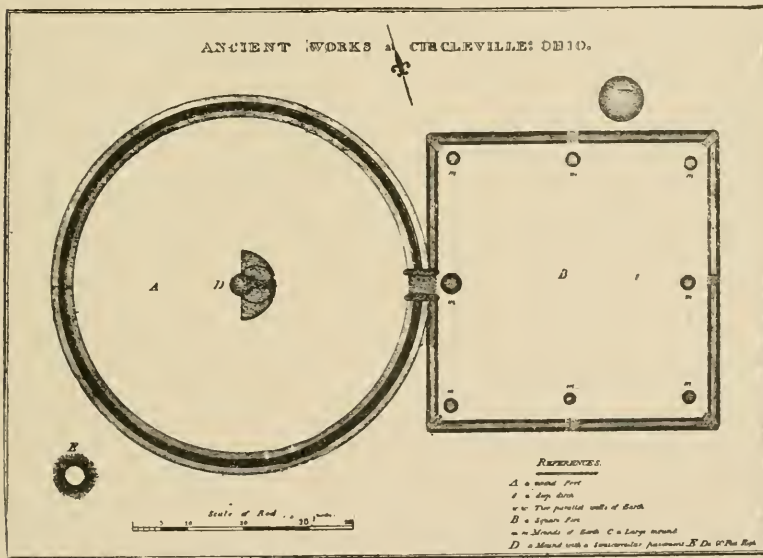
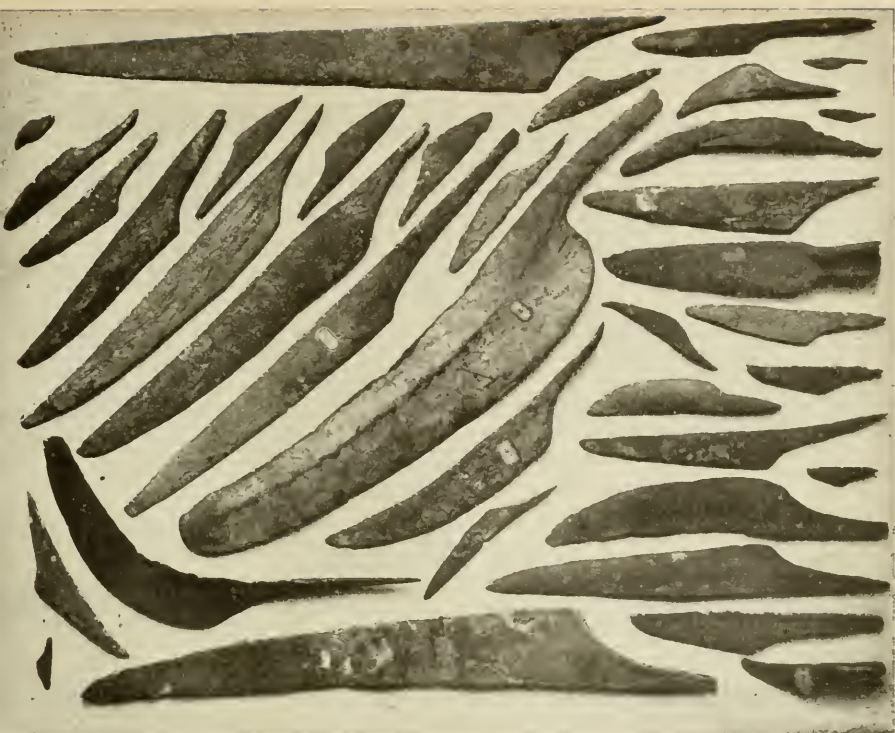


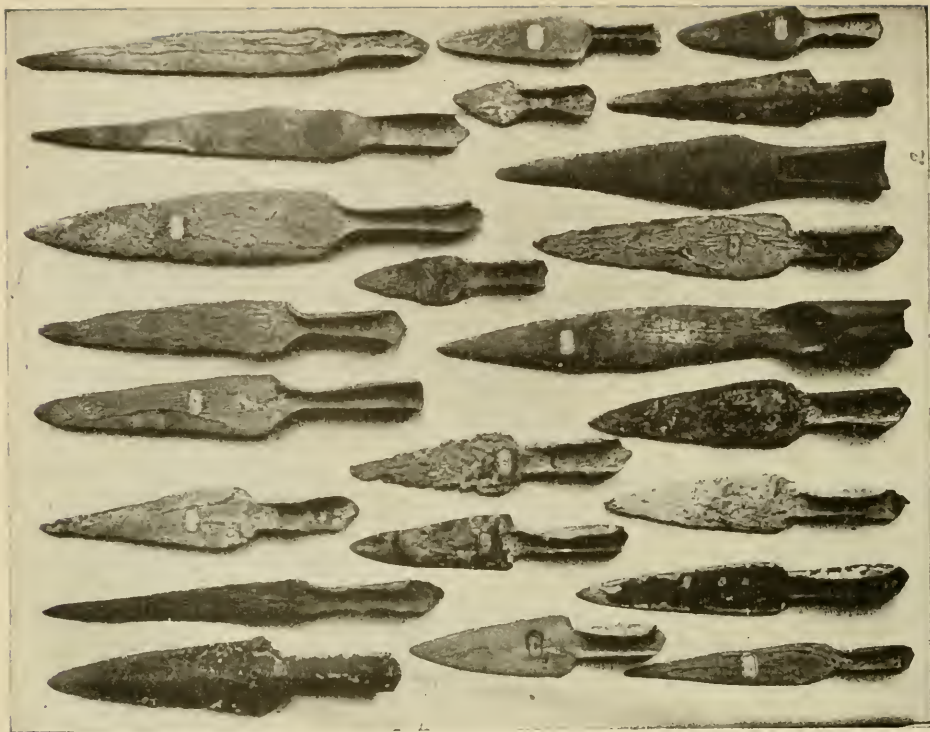
Fig. 20.—Circle and Crescent at Circleville.

mound. Over the pavement was a raised way, which led from the area of the enclosure to the summit of the mound, the inclined passage or bridge making the ascent easy. The crescent pavement attracted attention and was a very interesting feature of the work. It may be that fire was kept burning in this pavement and that the passage to the summit of the mound was through the fire. Atwater says that the pavement was east of the central mounds and extended six rods from it. The mound was 10 feet high, several rods in diameter at the base; 26 feet in diameter at the summit. The circle was surrounded by two walls, with a ditch between,—the height being 20 feet from the bottom of the ditch. They were picketed. The walls of the square were 10 feet high, and had eight gateways with watch towers or mounds, 4 feet high, inside the gateways.

Two human skeletons were found lying on the original surface of the earth, with charcoal and wood ashes, several bricks, well burned, a quantity of spear heads, a knife of elk's horn, a large mirror, made of mica, three feet in length, one and one half feet in breadth, one half inch in thickness. The skeleton had been burned in a hot fire, which had almost consumed the bones. The tumulus outside of the circle contained many skeletons that were laid horizontally with their heads toward the center, feet out. Beside the skeletons were some stone axes, knives and perforated tablets. The fosse near the mound, which contained skeletons, was semicircular in shape.

Here, then, we have the symbolism of the fire cult, of the moon cult, and the solar cult, and we imagine the ceremonies observed were symbolic. It was the custom of the East to make the victims pass through the fire. It is possible that the same was practiced here, and that human sacrifice was offered on this mound. The crescent pavement is to be noticed, for there were others resembling it. Mr. S. H. Brinkley speaks of a pavement surrounding a large mound, near the Big Twin Fort. This pavement was to the east of the mound and was crescent shaped; it was ninety feet in width, and extended under the foot of the mound. To the west of the mound, on the edge of the bluff, and below the bluff, was an immense heap of ashes, ten feet deep. The mound was elliptical in form and was perched upon the brow of the bluff in a sightly place. Mr. Brinkley thinks the ashes were the result of cremated remains; and he is a very careful observer. From the quantity of ashes, we judge that the fire must have been long continued. Here, then, we have again a crescent shaped pavement associated with fire and ashes. The significance of these different works will be understood if we compare the rites and the ceremonies of the sun worshippers of this district with those which prevailed in Syria and Phœnicia, in Old Testament times. The pavement of the crescent suggests the idea that the victims passed through the fire. The ashes within the mound suggest human sacrifices. The position of the bodies indicates that they were sacrifices to the sun. The height of the works suggest the thought that there were temples upon them which were devoted to the sun,





CHAPTER XIV.

THE RELICS OF THE MISSISSIPPI VALLEY.

The study of the relics of the Mississippi Valley has been followed by various archæologists for fifty years or more, with such diligence that we have now, a fairly reliable source of evidence as to the actual condition of the people who occupied that valley during prehistoric times. The work of gathering the relics has been followed from different motives and with varied success. But, notwithstanding the desultory method, the result has been productive of good, and all that the student has to do now, is to go to the various museums, where private collections are sure to be gathered in course of time, and there study the relics at his leisure. Of course the absence of the people who used the relics will be felt, and the want of familiarity with the life which once existed, but which has so greatly changed, will be realized; still, to the one who has read history and is familiar with archæology, there is no great difficulty in rehabilitating the scene and repeopling the land with a population which shall correspond to that which has long since passed away. It is, however, not merely by taking one locality or one tribe, or even one period of occupation, that the complete lesson is to be learned, but rather by taking the whole great valley through which the Mississippi River and its branches have flowed for ages, as the field for study; then familiarizing oneself with its physical features, its varied scenery, its diverse natural products, its separate divisions, and its former inhabitants, with the various wild animals and creatures which formerly prevailed, and imagine the whole scene to be filled with a diverse population, each engaged in its own activities.

There may, indeed, come before the mind various visions which are unreal, and one may imagine a succession of population which never existed. He may picture out scenes and events which never occurred, and yet when one considers the isolation of the continent in prehistoric times and especially the isolation of this particular region from all other regions in the continent, there is not so much danger of going astray as some have imagined. One good result has followed from the discussion which has gone on during the last half century concerning the difference between the Mound-Builders and the Indians, viz., by this means all the vague and visionary views of the visits and sojourns of foreign people who occupied the region and mysteriously disappeared, have been dispelled, and we are now reduced to the necessity of taking the Indians, even in their degenerate condition, as the sole survivors and

only representatives of the people who formerly dwelt upon this continent, only taking the liberty to designate their former condition by using the term "Mound-Builders," and their present condition by using the term "Indian."

We have already made a map of this valley showing the character of the mounds, and another map which shows the location of the various tribes, and the reader has undoubtedly noticed the correlation between the two maps. But the filling in of the outlines and the peopling of the scene has been left altogether to the imagination.

The work now is to study the relics which have been gathered from these different districts, and draw the comparison between them, so that the two maps may be equally instructive, one map serving as a back-ground, the other map serving as a composition or outline. But the relics themselves serve as the different parts of a mosaic which may help to bring out the figures and make them even more life-like.

In fact this work has been accomplished by some of the State Museums, and whole volumes have been written upon the relics and published at the expense of the State, so that it is an easy task now to identify the relics which belong to a limited district, and understand the peculiar style of art which prevailed in that locality, and even apprehend the mode of life which was led by the prehistoric people who lived there. This is the work which the archæologist has before him. It is not merely the collecting of relics, either as curiosities or as works of art, but the recognition of the life which was led by those who wrought out and used the relics that he has set before him.

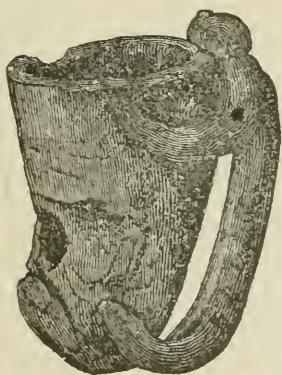
It will be the object of this chapter to so describe the relics which have been discovered in the various portions of the Mississippi Valley, that the reader may discover the unity and diversity which prevailed among the prehistoric populations, and gain a picture of the condition of each particular district in prehistoric times.

It is to be noticed that there is a correlation between the artifacts of each particular locality and the physical surroundings, so close that one may read the various collections as he would read a book, and learn through them the employments and modes of life of the people who dwelt in the locality.

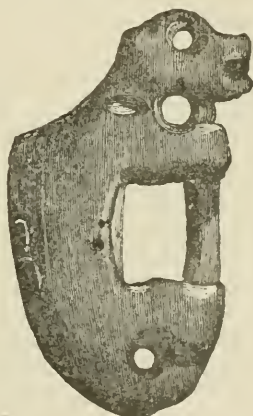
There were in this Valley several distinct stocks, each of which was divided up into two or three distinct tribes; each tribe was divided into clans, and each clan having its own villages and clan habitat, so that the collecting of relics from each locality into some large museum is equal to furnishing the local documents by which the history of a people may be learned. There is often an advantage in taking the descriptions which have been written by some intelligent collector, then placing them together with others, and from the whole series learn the style which prevailed with the particular tribes, and

at the same time recognize the difference between the tribes. There is, however, a work for the student which is broader than this. It is to take the literature which has been written about the different tribes, and from this learn the life which was formerly led, and by this means apprehend the significance of each article which may have been preserved, and by readjusting the fragments really get a new mosaic of the same scene.

Some may say that the history of the Indian tribes is not important enough to give so much attention to it; they are a doomed race and are likely to disappear. But this is not becoming to any man who is engaged in the study of ethnology, and is not worthy of notice. It is, however, not merely a question about the Indians, for there is hidden behind the record contained in the relics another question in reference to the origin of the Mound-Builders and the Indians and their



Effigy Pipe.



Bear Pipe.

relation to the tribes and races of the Old World, and the larger question of the peopling of the continent is brought before us by the solution of this problem. The similarity of the customs of all people who have reached certain stages is also made apparent, and the whole subject of the origin of art, the origin of religion, the growth of civilization, are all concerned in the answer which we shall receive, from the study of the rude and primitive objects which lie buried in the mounds. There are, to be sure, many theories which are liable to mislead us; one of which is the theory that we find the traces of a preceding civilization; another, which is just the opposite, is that we shall find a development on this continent entirely separate and distinct from all others. The two extremes are the result of theories rather than actual evidence.

I. We begin with the northern district, that which was situated on the St. Lawrence River, and extended from the

New England coast to Georgian Bay, a region which was occupied by the great Iroquois stock, a stock which was divided into several great tribes,—the Hurons, who were situated north of the St. Lawrence River; the Eries, on the south shore of Lake Erie; the six tribes that formed the Iroquois confederacy in the State of New York, including the Tuscaroras, who were formerly situated south of the Potomac. East of these were the various Algonquin tribes, who dwelt in the region covered now by the New England States. South of them were other Algonquin tribes, such as the Delawares, Powhattans, and the Shawnees; and in the same region were various tribes belonging to the great Dakota stock. Now, it is a singular fact that the relics of the Iroquois, the Algonquins, and the Dakotas, were scattered over adjoining regions, yet they were so unlike in their form and appearance and general character, that it is easy to distinguish them from one another, and so we have the means by which we may ascertain the mode of life which was followed by these tribes even in prehistoric times.

The Algonquins of New England never built mounds and, therefore, their relics are left out of the account, and we are shut into the limited district covered by the Iroquois and their congeners. It is to be noticed that throughout this entire region there was a peculiar form of clay pipe, which is easily recognized as belonging to the Iroquois stock, and which we are able to identify wherever found. (See cut.) No such pipes were ever wrought by any other stock, though stone pipes having somewhat the same shape have been found further west. Many of these pipes are portraits and are made to represent the human form, though it is difficult to recognize a resemblance to people. The pottery found in this district was of an inferior grade, and was generally plain and coarsely wrought. The wampum belts were more numerous among this people than any other tribe, and were generally wrought with great care and were preserved as tribal possessions.

Copper relics were not so numerous as they were among the tribes farther north and west, for the reason that the copper mines were at a distance and were in the territory belonging to hostile tribes. Still, the discovery of copper relics at a considerable depth on the south shore of Lake Ontario shows that copper was used by these people in ancient times. Mr. W. M. Beauchamp says:

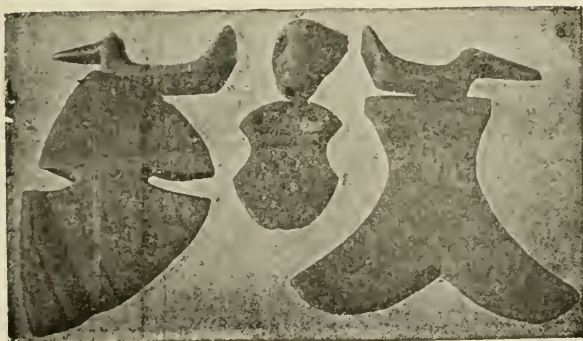
Besides one hundred and thirty-five copper beads found in a grave, five miles north of Schenectady, Mr. Van Epps reported a native copper axe in the *American Antiquarian* for 1894, found twenty years earlier. Mr. J. W. Nelson reported a fragment of native copper with silver veins, and a double-pointed knife, four inches long. In 1901 Mr. L. Ogden of Penn Yan, obtained a fine copper spear, six inches long. Copper articles were found in opening a mound at Mt. Morris, in 1835. Among Canadian relics is a native copper knife, found with two others on Wolf's Island.

A native copper celt with flanged socket, and a native copper knife from Plattsburg, also native copper spears from

Saratoga Lake, copper celts from Seneca River, copper spears from Cayuga Lake, another from Oneida Lake, two native copper spears with flanged sockets from Oswego, N. Y.; a copper knife from Venice, N. Y.; a copper axe from Auburn, copper celts and arrows from Oxford and Pompey, and a large number of other relics, are depicted in Mr. Beauchamp's Report.

Horn and bone implements are very numerous. They consist of bone awls, bone pins, bone knives, spatulas, bone arrows, bone chisels, punches, needles, whistles, beads, pendants, besides a large number of bone and teeth ornaments, such as beads, bear's teeth, bone carved as human heads, bone pipes, crescents, bone images, combs, and along with these, implements used for fishing, such as fishhooks, harpoons and spears, in great variety of patterns. These also are depicted in Mr. Beauchamp's report on horn and bone implements.

Occasionally there are found in the Iroquois district ornaments made of slate, which resemble those of Ohio, but they



Maces and Badges from Ohio.

were probably gained in trade, and were not common among the Iroquois. By far the most common relics are those which were used in war, such as spears and arrows. There are in the New York collections large numbers of pestles which were used in pounding the grain. Most of them were straight in shape, without a flange at the end. Some of them were three feet long, and were probably used in deep mortars made of wood.

II. The second district is very interesting because of the fact that the art of the Stone Age was so much more advanced there than it was elsewhere, and especially because of the fact that so many different tribes passed through the region, each leaving traces of themselves in the relics which have been discovered. This was the home of the Mound-Builders "par excellence," for the mounds are found here in greater number and in greater variety than in any other part of the continent, and in fact in any part of the world. What is more, the

mounds contain a greater number of relics. Some of them show a great proficiency in art. This district is situated in Southern Ohio, and extended from the mouth of Grave Creek in West Virginia to the mouth of the Miami River, but included its tributaries and all the region both sides of the Ohio River between those two points.

The relics and remains are found at different depths, and so present different "horizons," but they are all so highly wrought and so well finished that it is easy to distinguish them from those which were left by later Indian tribes. These horizons show that there were different tribes which dwelt in the region during the mound-building period, each of which was considerably advanced in their art. It is difficult to decide what these tribes were, but if we take the traditions which are still extant among the tribes which formerly dwelt in the Mississippi Valley, but are now in the Indian reservations, we may at least



Portrait Pipes from Ohio.

form conjectures in reference to them; especially as the Cherokees and Dakotas both have a tradition that their ancestors dwelt in this region. There is a tradition that was long extant among the Iroquois, that they at a very early date united with the Delawares in carrying on a war with people who were situated on this river and dwelt in villages that were thoroughly fortified, but after long and bloody conflicts they were able to overcome them and drive them out from their possessions. The date of this event is unknown, but it is probable that it was before the time of the formation of the Iroquois confederacy, and perhaps soon after the Iroquois had come into possession of the territory which they occupied at the opening of history, for they speak of migrating together with the Delawares across a great river, and first carrying on a war with the Snake people, and afterward with the people who lived in villages. The interpretation of this story has varied according

to the author who has made a record of it. Heckwelder, who

was a missionary among the Delawares, represents the great river, which the two tribes crossed before they entered the Mound-Builder territory, as the Mississippi River; while Dr. Horatio Hale and Dr. D. G. Brinton, judging from the study of languages and the names, as well as the original documents and picture records, concludes that it was the St. Lawrence rather than the Mississippi, and that the contest occurred before the two tribes had become settled in any permanent territory.

The point we shall make in this connection is, that there were two distinct tribes formerly situated on the Ohio River, as well as two tribes that crossed the "Great River." One was



Portrait Pipe from Tennessee.

called the Snake People, because of the fact that the snake or serpent was their great divinity and tribal totem. The other was the people who were at the time called the Alleghewis, and, according to all authorities, were identical with the Cherokees. This conjecture is confirmed by the fact that there are still to be seen mounds and earthworks in Ohio which are quite distinct from one another, both in character and location. The Great Serpent at Brush Creek, in Adams County, differs in nearly all respects from the earthworks which are found in the Scioto Valley, giving the idea that they were built by two distinct peoples.



Portrait Pipe from Ohio.

The conjecture formed by the study of the mounds is

that the people who built the Serpent Mound were not contemporaneous with those who built the village enclosures, but preceded them; and the tradition represents the wars with the Serpent Nation and the Alleghewi as carried on by a long succession of chiefs.

It is also a remarkable fact that the Dakotas have a tradition among them that they once occupied the valley of the Ohio, and lived in villages and were tillers of the soil; but after the appearance of the buffalo herds in their midst, they changed their mode of life and became hunters, and followed the herds until they reached their later habitat, west of the Mississippi River on the banks of the Missouri River. Now, the point which we make is this: the serpent effigies which have been found in the Dakota territory and on the Mississippi and Missouri Rivers at various points, so resemble that found in Southern Ohio that they convey the impression that the same people built the serpent effigies wherever found. But the relics which have been found in the altar mounds and the earthworks which constituted the village sites near those mounds, so resemble those which are found in the Kanawha Valley and the Cherokee territory that they have given rise to the theory that the Cherokees were actually the people who built the majority of these earthworks. The relics found in the ash-pits, and the structures which have been found near them, so resemble those found in the Stone Graves, that the conjecture is forced upon us that the Shawnees were the third tribe that occupied this region before the date of history.

Now, the record which is contained in the earthworks and relics is never so reliable as that which comes from the art of writing; but if the study of relics or earthworks is of any value to science or history, we ought to gain from it information in reference to the succession of tribes and the periods of occupation, and separate them from one another. We maintain, however, that this work of interpretation has been hindered more than helped, by the various attempts to identify the Mound-Builders with the Indians, for the term "Indian" conveys the idea that they were all contemporaneous and on a common level; whereas the other term "Mound Builder," conveys the idea of great antiquity and suggests the thought that there may have been a succession of tribes during the mound-building period. The social status of the Indians is supposed to be the same among all the tribes, and on this account it would be very difficult to draw a distinction between them were it not for their language and physical appearance; whereas there was a great contrast among the Mound-Builders in their social status, their art products, their mythological systems, their religious symbols and ceremonies, and all that went to make up their inner and outer life.

We think generally of the Indian as a hunter and a savage, but we think of the Mound-Builder as having some degree of

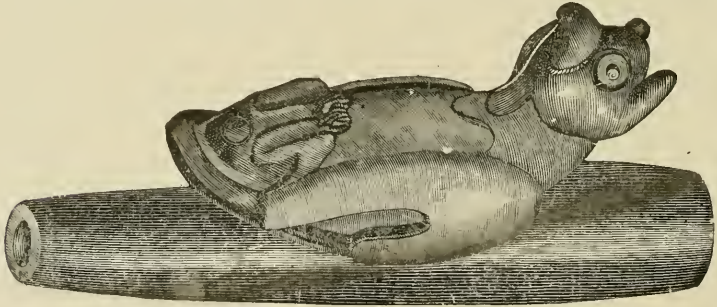
civilization, and this impression is increased by the study of the relics, especially those in the Ohio Valley. Relics have here been discovered which have so modern a look that there is doubt whether they belong to the historic or prehistoric period, but there are other relics which have such an air of antiquity about them, that there is no doubt whatever but that they belonged to prehistoric times; and, what is more, there is difference enough between them to prove that they belonged to a succession of tribes, and not to one tribe of Mound-Builders. To illustrate: the relics which were discovered just before the Centennial Exposition in Chicago, and which came from the Hopewell group of mounds, have such a modern look about them that their antiquity has been doubted by many, and yet it is difficult to identify them as belonging to any known tribe, or to absolutely prove that they were affected by the touch of the white man. On the other hand, the relics which were discovered by Squier & Davis nearly fifty years before, have been acknowledged by all to have belonged to the Mound-Builders' period. A few have thought that even these, especially the carved pipes, were too good to belong to any prehistoric people.

These relics, however, have been subjected to close scrutiny, both in this country and in England, where they are at present, and the universal belief is that they belonged to the Mound-Builders, and prove that the art of the Mound-Builders was higher than that of the ordinary Indians. These relics are distinguished for their highly-polished and delicately-carved pipes, some of which have been called monitor pipes, from their resemblance to the monitors. These carved pipes have been discussed many times. Some have claimed that they were close imitations of the birds and animals which were peculiar to the region; but others contain the figures of birds, such as the toucans, which are only found in Mexico, and of animals, such as the manitus, which were only found in the Gulf States. At the same time there were obsidian arrow-heads from the Rocky Mountains, mica sheets from North Carolina, copper from the ancient mines of Lake Superior, pearls from the seacoast, shells from various distant regions, as well as specimens of cloth and many other articles, all of which reveal a high stage of imitative art; but there were no patterns which could be recognized as belonging to a historic country. The difference between the relics exhumed by Squier & Davis and those discovered by Mr. Moorehead is just this: in the latter we discover patterns and symbols which are known to be common in Europe and are not uncommon in America.

The mica sheets seem to have been cut into patterns by sharp instruments. The spool ornaments seem to have been melted in a mold. The copper axes were hammered into shape by a process different from that common among the Indians.

The conventionality of the symbols and patterns, and the size and number of copper axes, and the peculiar form of the pipes, throw a shade of doubt upon their being of prehistoric origin; and yet they were all discovered in the same locality, and some of them in the same group of mounds as those which have been pronounced by all as a purely prehistoric group. The majority of these relics were placed beside the forms of Indian chiefs, and seem to have been buried as though they were their personal possessions.

This may be said in favor of their prehistoric origin: that the same kind of material was used in these relics which have such a modern look, as was common in all the buried relics of the region—sheets of mica, copper axes, copper spools, pearls, shell beads, obsidian knives and arrow-heads, brown hematite—and many of them were placed upon altars similar to those discovered by Squier & Davis over fifty years ago. The copper bands that surrounded the wrists of skeletons,



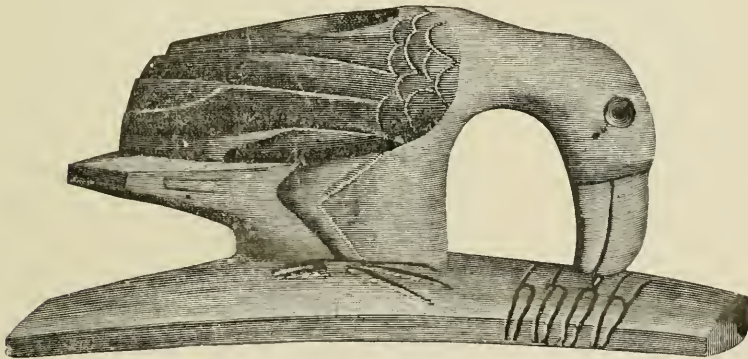
Bird Pipe from Ohio.

resemble those which were discovered in Marietta in the early settlement of the place. The bear tusks, flint arrow-heads, flakes, panther teeth, and many other objects show that the people who buried these modern-looking relics were familiar with the wild animals of the forest. The details of this discovery cannot be dwelt upon here, but the "find" forces us to the conclusion that, if the bodies were those of Indian chiefs, they show that the Indians who built the mounds of this region had a wider acquaintance with the products which come from distant parts of the continent, than is usual with the Indians of the present day, and there must have been a wide interchange of products, and no such isolation and separation as has been common since the early days of history.

The cuts show the character of the relics which were peculiar to this district. In these we see that the form and finish of the pipes common here, was very different from that which prevailed elsewhere. We see also that there were various ceremonial objects, which were commonly worn on the person and had a significance at the time which is unknown to us. Among

these we might mention the bird ornaments, which are sometimes called brooding ornaments, and are supposed to have been a symbol of maternity by the women; also articles called the butterfly ornaments, as they have a resemblance to a butterfly. These are supposed to have been used as maces or badges by the chiefs. Spool ornaments were not peculiar to this region, for they are common among the Stone Graves and other localities. These, as well as the shell beads and the perforated tablets and necklaces made out of bear teeth, were the private possessions of persons who were of authority in the tribe or clan, and were, consequently, buried with the body, on the same principle that the jewels and precious things that were found in the treasure house at Mycenæ by Schliemann, were buried as the personal possessions of the king.

It should be said of the Moorehead find, that the imitation of elk horns, made of wood and covered with sheet copper, fitted



Bird Pipes from Ohio.

to a crown of copper, bent to fit the head; the copper plates, which were placed upon the breast, the stomach and the back; the cloth of coarse texture in which was interwoven nine hundred beautiful pearl beads; the copper spools and other implements that were placed by the side; the pipes of granite and the spear-head of agate near the right shoulder, and the pipe of very fine workmanship and highly-polished, constituted the outfit of the chiefs of the Mound-Builder tribe, as consistently as did the diadems and many other magnificent objects of gold and silver, made the outfit of the proud Mycænian kings, and, if we use the adjective in describing the kings, we see no reason for not using the adjective in describing the chiefs.

This is certainly true. If the carving of pipes, cutting and polishing stone ornaments, sharpening stone axes, perforating stone tubes, chipping flint arrows, mining, cutting and hammering copper plates, and fashioning copper knives and spools, of molding and ornamenting pottery vessels, of shaping and molding and polishing various stone ornaments, and especially

sculpturing the form and feathers of birds, can be taken in evidence, we may say that the art of the Mound-Builders of this region had reached a higher stage of development than was common among the Indians of this or any other locality, and places them on a higher level, as far as art is concerned, than can be ascribed to many who live in the historic period. We find no such specimens of art among the prehistoric mounds of Europe, and our ideas of the Indian are exalted by the study of the relics as well as by the works.

. III. The region which lies on either side of the Mississippi River, especially the northern half, is interesting because of the mounds which abound there, especially the relics found in them. It is well known that there is in the Museum of the Academy of Science at Davenport, a large collection, which contains a great many carved pipes resembling those found in the mounds of Ohio, also copper axes which were wrapped in a kind of coarse cloth, many shell beads and other articles, all of which were taken from the mounds in the vicinity. Dr. Cyrus Thomas has founded his argument as to the migration route of the Cherokees on the similarity of the pipes to those found in Ohio, and seems to think that the Cherokees took a very circuitous route; that they crossed the "Great River" somewhere below Lake Huron, moved westward until they reached the Mississippi River, left their relics there and migrated eastward to the Ohio River, and after their long conflicts with the Iroquois, crossed the Ohio River, passed up the Kanawha River, and finally settled in the mountains of western Tennessee, where they were visited by De Soto and his army.

At the same time Dr. Thomas holds the theory that the Shawnees left the shell gorget which was found by Major Powell near Peoria, and those found by General Thruston in the Stone Graves in Nashville, and those found by his own assistants near the Etowah Mound in Georgia, because of the fact that Stone Graves are scattered over this region, and because these gorgets all have figures on them resembling one another.

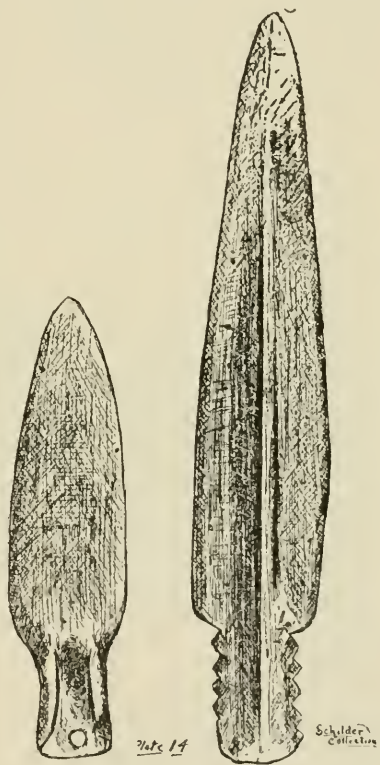
The salt mines found in Illinois are quite likely to have been worked by the Shawnees, for they were situated in this region at one time, and the name Chaouanans on the early maps, which is applied to the Ohio River, was taken from the name Shawnees and printed with the French spelling; but the claim that the carved and inscribed shells which have been discovered in these widely scattered regions belong to the Shawnees, seems to have come from theory rather than facts. The Shawnees were Algonquins, and were a tribe of nomads and never reached a very high grade of art, or adopted any such mythology as may be indicated by these figures. Mr. F. H. Cushing has compared them to the mythologic figures found among the Pueblos, and called them "man eagles" or "eagle men"; others have compared them to the mythologic figures

found in Mexico and Central America. The only reason for ascribing them to the wild tribes would be the costumes represented, and yet the warriors were dressed about the same everywhere.

The discovery of a shell gorget was made near the Etowah Mound, containing an inscribed figure, which so resembles the image of Buddha, that Dr. Thomas Wilson took it as evidence of contact with the Asiatic continent, and bases his theory on the evidence. It is, however, unsafe to place any theory on these fugitive articles; as unsafe as it was to take the sacrificial scene found on the tablet at Davenport, to base the theory that the story of the Deluge and Noah and his family was recorded in those tablets.

There is no doubt that the Shawnees were at one time located on the Cumberland River, and it may be that they borrowed many of the forms of art that the Muskogee tribes had for a long time used, but to maintain that all of these artifacts found in the Stone Graves belong to the Shawnees is certainly misleading. The Shawnees were upon the east side of the river, as were other Algonquin tribes, but the Dakotas were on the west side. A branch of them the Winnebagos, were on the east side in Wisconsin. There are many finely-carved stone pipes in the Davenport Museum, resembling those found in the Ohio mounds, but the pattern may have been borrowed, or the pipes secured by the Dakotas before the migration to the west.

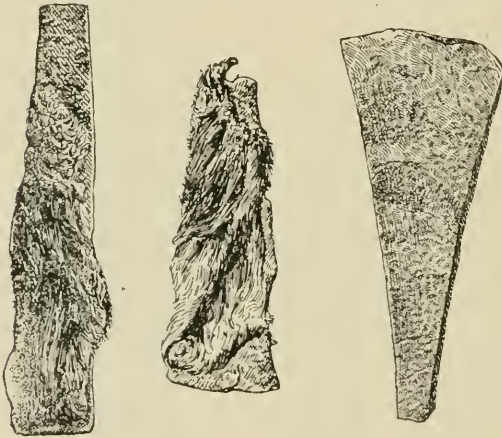
The discovery, near Davenport, of a large number of copper axes wrapped in coarse cloth, would identify the people with the Dakotas, or, at least, the Winnebagos, who also had a great many copper relics, but would not quite account for the peculiar pipes which are associated with the axes. The horizons presented by the mounds do not indicate any great diversity of population, and so do not justify the hypothesis that the Cherokees left the pipes here. On the other hand, the absence



Arrow-Heads from Wisconsin.

of stone graves in the neighborhood of the Cahokia Mound throws a cloud of doubt over the theory that the Shawnees built that mound and left the relics surrounding them. A more plausible theory is, that we have in this region the meeting place of three great races: the Dakota race on the north and west; the Algonquin race on the east, mainly in Illinois; the Muskogee race on the south, though what particular branch of that race reached the spot is difficult to say.

The Cherokees* belonged to the Iroquois stock, and seem to have left the majority of their relics somewhat near the Iroquois territory in Southern Ohio, and have left their names on the waters of that river. This, then, is the lesson which we learn from the study of the relics and the traditions. The Dakotas, the Algonquins, and an unknown race formerly inhabited the upper part of the Mississippi River, and extended



Copper Axes from Davenport.

down as far as the St. Francis River, and were there up to the time of De Soto's expedition.

It is not our object to prove any theory, but the fact that the pyramid mounds so closely resemble those found along the Mississippi River and along the Gulf States, would indicate that a colony from the great Muskogee stock had built up the

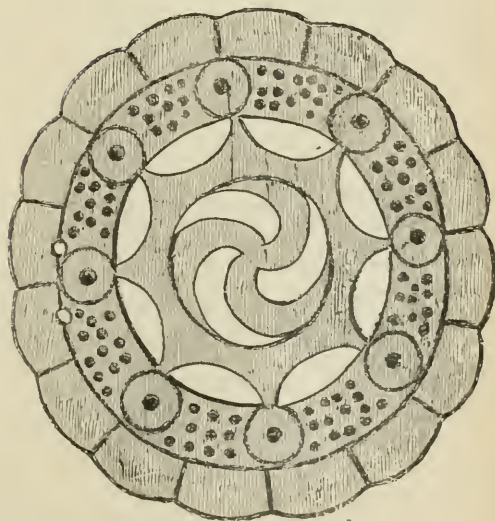
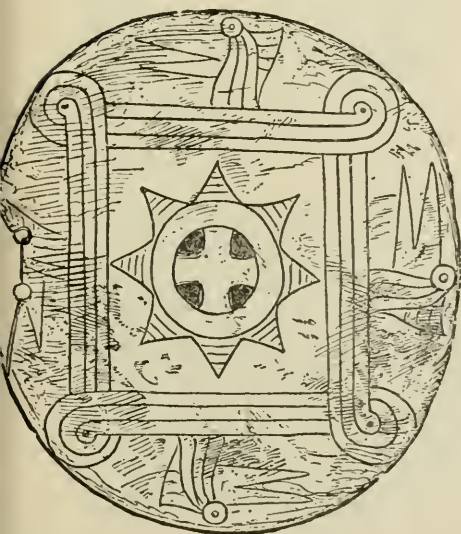
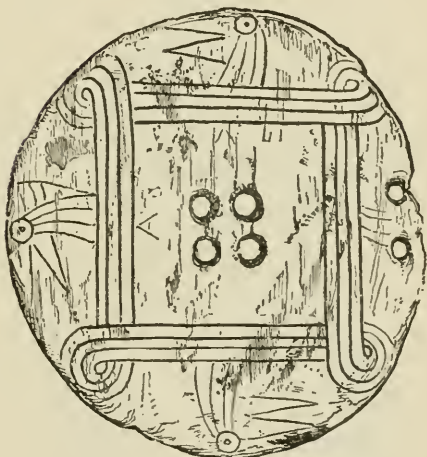
large cluster of pyramid mounds which are situated here.

The resemblance of the relics found near these mounds to those found at New Madrid, Missouri; St. Francis River, and near the pyramid mounds scattered through the Gulf States, confirms the impression that they were left here by a branch of the Muskogee stock rather than the Shawnees.

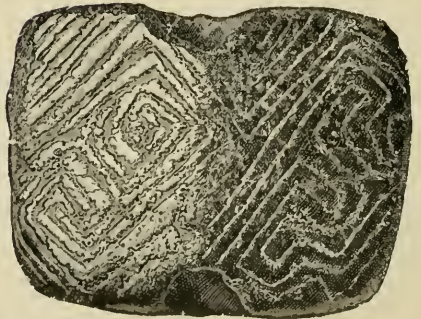
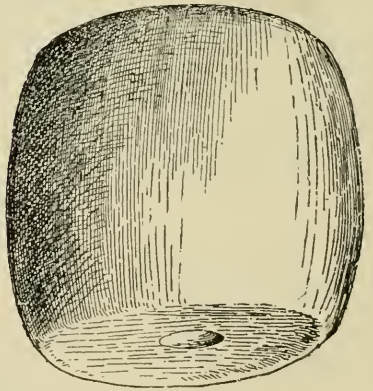
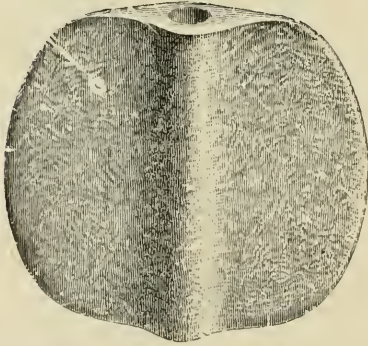
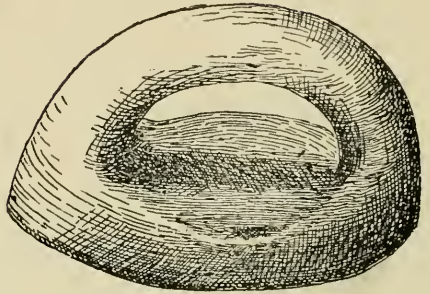
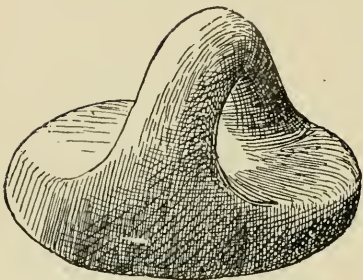
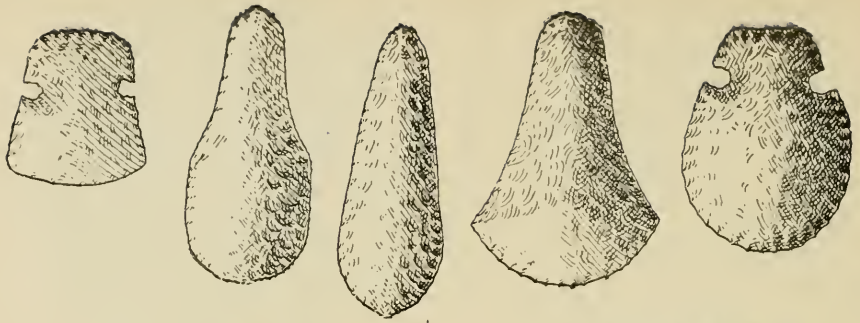
We may say that copper relics are more numerous from Davenport northward than they are below that point, but pot-

* Dr. Hale says: "Following the course of migration from the Northwest to the Southwest, which leads us from the Hurons of Eastern Canada to the Tuscaroras of North Carolina, we come to the Cherokees of Northern Alabama and of Georgia. Recent investigations have disclosed to us the fact that tribes belonging to the Dakotas lived in early times east of the Alleghanies, and were found by the first explorers not far from the Atlantic Coast.

"The country from which the Lenapes migrated was the land of the fir trees; not in the West, but the far North. There can be no reasonable doubt as to the Alleghewi, who gave their name to the Alleghany River, being the Mound-Builders. The evidence of language leads to the conclusion that the course of migration has been from the Atlantic Coast westward. The Basques of Northern Spain have a speech of the polysynthetic character which distinguishes the American languages, and has many of the characteristics of the American aborigines." See *American Antiquarian*, Vol. V., pp. 118-121.



SHELL GORGETS FROM TENNESSEE.



IMPLEMENTS AND ORNAMENTS FROM TENNESSEE.

tery moulded into the shape of animal figures, gorgets, and stone spades are more numerous near St. Louis than they are anywhere north of that point, though this does not really identify the relics with any particular tribe.

It is to be noticed that the relics partake of the material which is most abundant, at least the best specimens in each locality are made out of the material which abounds in the region. There are no such copper axes, spear heads, spuds, spears with sockets, needles, and chisels, as are those found made of copper, which are common in Wisconsin near the copper mines. There are no such pottery vessels as the beautifully-moulded and finely-grained specimens found near the Cahokia Mound. There are no such large burial caskets, made out of clay, as are found among the Stone Graves of the Cumberland; and yet in all these localities there is a great variety of relics, and many of them show an equal proficiency in art, though it is expended on different material. The same distinction may be drawn in reference to the mounds themselves and the earthworks.

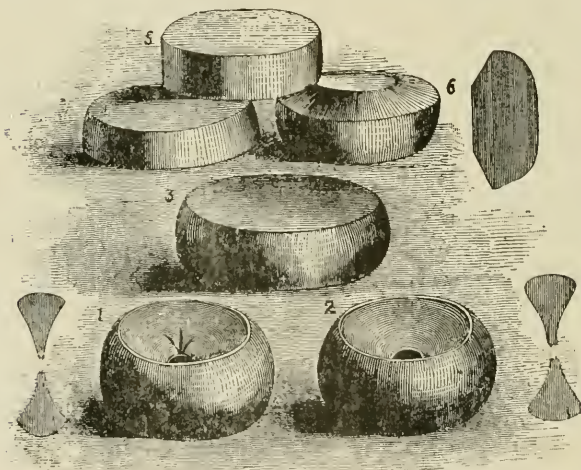
The large number of pyramid mounds situated in double lines across the great American bottom, of which the Cahokia Mound is the chief, proves that the people were industrious and well organized. It was necessary to build the mounds large and high to escape the water during the freshets, but the discovery of large numbers of stone spades and hoes and agricultural implements prove that the people cultivated the soil, notwithstanding the malaria which prevailed and the freshets which frequently flooded the region.

The author has discovered conical mounds with pyramid mounds, and a wide platform between them, which so resembled those common in the Gulf States that they conveyed the idea that here was a "chunky yard" similar to those found in the last mentioned locality. It seems very likely that a branch or colony of the Muskogees passed up the Mississippi River and built the Cahokia Mounds, but that they returned to the south long before the days of history. The resemblance of the pipes and pottery and shell gorgets among the Stone Graves and those found in the Cahokia Mound, may be owing to the presence of the same races on the Cumberland River. The same, possibly, may explain the presence of the copper plates in the Stone Grave near the Etowah Mound.

IV. The region which next calls forth our attention is that which was situated on the Cumberland and Tennessee Rivers. This is the region where so many stone graves have been discovered.

The best authority on the relics of the Stone Graves is Gen. G. P. Thruston, whose work, "Antiquities of Tennessee," is of great value; illustrations from which have been borrowed, and they show the character of the relics found here better than words can describe them. The relics present a great variety

of material and form, but all show considerable skill in construction. In fact, the relics found in the Stone Graves are so numerous and so varied that one can easily reconstruct the social condition from them and gain a picture of the society which prevailed. The study of these relics is something like the study of the relics and remains found in the ruins of Pompeii, for it brings before us a stage of culture which was unique and peculiar to the locality, and suggestive of a people who had acquired a certain rude skill, and had applied it to every department of life, using the material which was at hand, but had buried voluntarily all the specimens of their skill in the graves. One is inclined to draw a parallel between the people who evidently dwelt here in prehistoric times, and the pioneers who afterwards inhabited the region, for both classes of people seem to have manufactured their own tools



Chunky Stones from Tennessee.

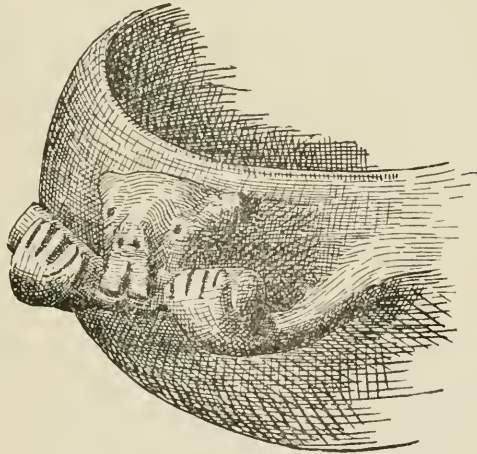
secured their own materials with which to make themselves comfortable and carried on their industries without introducing anything from a distance.

The introduction of gunpowder, the invention of the loom, and the use

of the steel axe gave great advantage to these pioneers; yet when we consider the houses which were erected within the stockade forts, which were plastered on the inside, and remember the scenery and resources of the region, we may well imagine that the difference between savagery and civilization was not so great as some have imagined. It is not often that this comparison is drawn, yet if we take the relics which have been discovered among the Stone Graves, and compare them to those which were used by the pioneers, we will find that there were many points of resemblance, for the same kind of tools, utensils, implements, and weapons are apparent in both, and we are obliged to give the same names to them, notwithstanding the fact that the materials are so different.

Under the head of tools we find knives, axes, chisels, awls, mauls made out of stone, which resemble those made out of

iron; we have such weapons as daggers, spears, dirks, knives, arrows, resembling those made out of steel. Under the head of utensils we find plastering trowels, pottery stamps, paint grinders, mortars for grinding corn, pestles for pounding, made out of stone and bearing the same shape as those made out of iron or wood. Under the head of agricultural implements we have scrapers, hoes, spades, made out of stone, instead of iron; many of the hoes have the same shape. For domestic use we find dishes, cups, spoons, and many other articles made out of shell. We find pots, kettles, bowls, basins, jars, bottles, made out of pottery ware; needles, awls, chisels, instruments for polishing, smoothing and cutting, made out of bone; textile fabrics and skins made into various garments; planting sticks, rude looms, spear handles, as well as bows and arrows, made out of wood. Besides these there were many articles whose use is unknown, but they so much resemble those in common use at the present day, that we give to them names which are familiar and common, such as buttons, spools, pulleys and wheels, ear ornaments, rings, amulets, some of which are made of copper. Even child's rattles and marbles have been found, and many other toys in imitative shapes resembling animals and human figures. These bring the domestic life before us. The social



Pottery Bowl from Tennessee.

life is also made apparent by the number of pipes which have been found, some in what might be called "trumpet" shape; tubes, cylinders, monitor pipes, platforms and discs; others have imitative shapes resembling animals, birds with wings spread, as if flying; others with their wings folded; pipes in the shape of ducks being very common. There were also stone pipes in the shape of wild animals, others in the shape of human images with the bowl upon the shoulder, others seated holding large jars in front of them, others in kneeling posture with bowl in the back.

The agricultural and mechanical implements were numerous and were generally made out of stone. Some bear the shape of notched hoes, axes, paddles; others were leaf shaped; others with a square blade, notched in the upper part; spades or shovels similar to those found in the neighborhood of the Cahokia Mound. There were double-barbed spears, notched

swords, sceptres, ceremonial objects carefully flaked, chipped stone hooks and stone claws, flint discs, and stone turtles.

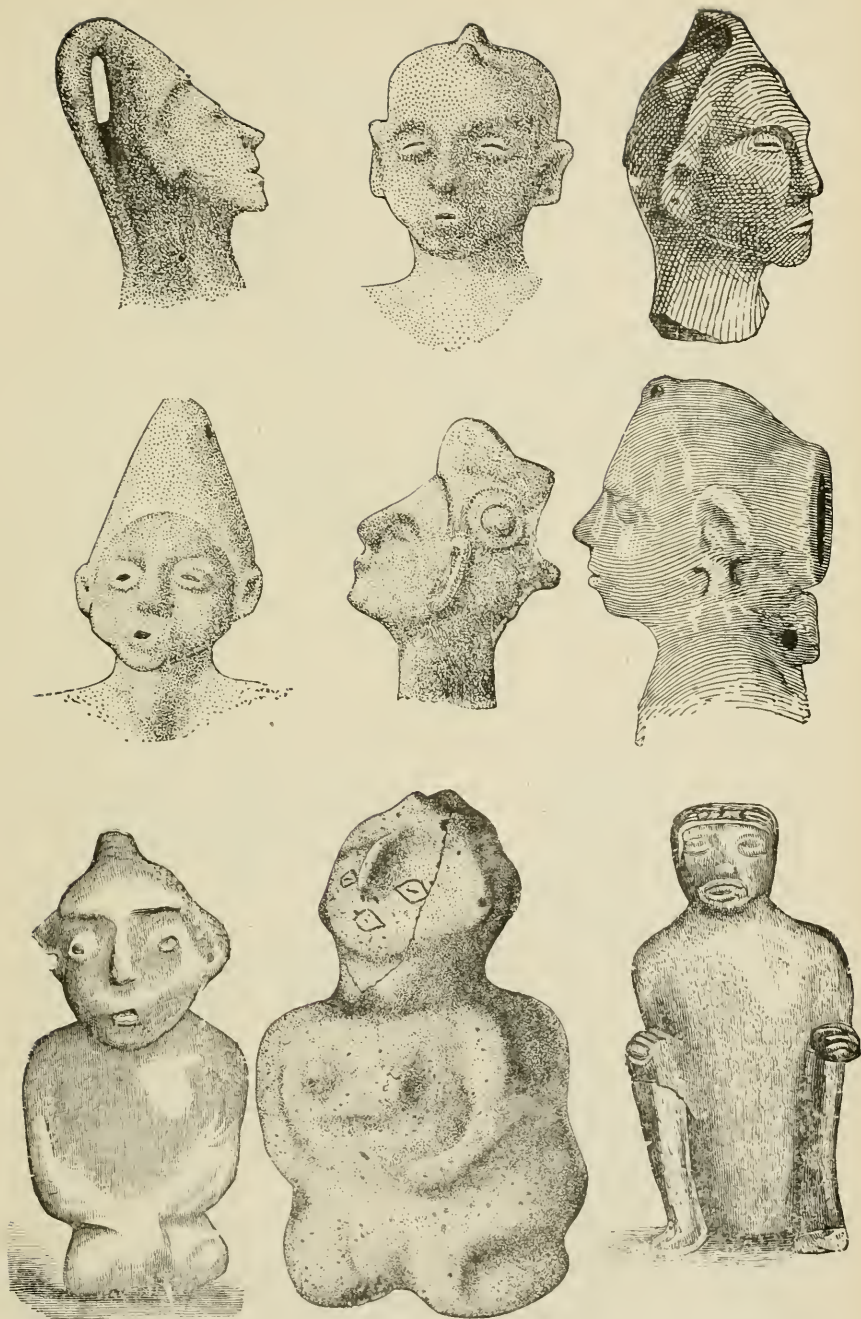
The pottery vessels show much skill in moulding clay into imitative shapes, for we have a great variety of bowls and dishes in the shape of ducks, frogs, fishes, toads, and birds of various kinds; others presenting lizards and animal figures and paws molded into shape, and raised upon the outer surface, or serving as handles upon either side. There are no such finely-carved pipes as are found in Southern Ohio; no such delicate work or pains taken in imitating the feathers and forms of birds, and yet the pottery vessels were wrought into human shapes with such skill that one may easily recognize the features of the people, and imagine a personal semblance that make them appear as portraits. In a few cases the bear and the dog are represented, even the panther and other wild animals, with much skill and taste.

The shell gorgets are the most interesting of all the ornaments found in Tennessee. They represent serpents coiled up so as to make a circle, spiders with legs spread, the whole surrounded by four circles. Shell gorgets with human figures engraved upon them, are very interesting. One such represents two warriors armed with stone knives and stone hooks, who seem to be fighting with one another, but they are clothed in a symbolic manner, as wings extend from the face, claws from the feet, and yet they are clothed in such a way as to represent the style in which the warriors were arrayed, as they have belts about the waist, two sets of bands around the arms and legs, the spool ornament in the ear, a peculiar badge or mace in the hand, the head decorated with a single plume. The wings and tail of the eagle are well represented. They are called the "Eagle Men."

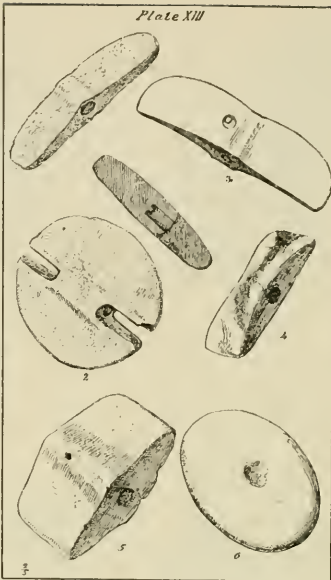
V. The relics of the Gulf States remain to be described. These were first seen and described by Cabeza de Vaca, and the various writers who accompanied De Soto; next by Bartram, the famous botanist and traveller; afterward by Mr. C. C. Jones in his excellent book, "The Antiquities of the Southern Indians"; and still later by Mr. Clarence Moore, Mr. A. E. Douglas, Mr. F. H. Cushing, Mr. A. S. Gatschet, and others.

They may be classified according to the geographical districts in which the various tribes were formerly situated, or according to material used, or the earthworks with which they were associated; but they all present peculiarities which distinguish them from those in the northern districts.

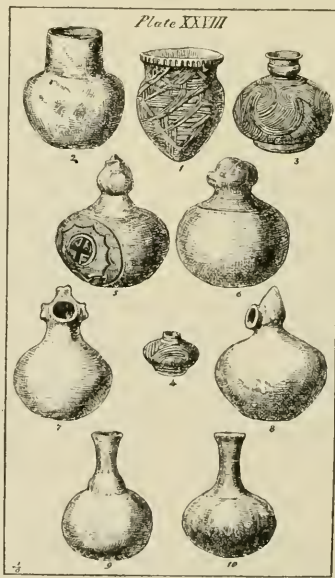
It may be said that there were at the time of the Discovery several different tribes situated in the Southern States,—the Seminoles in Florida, the Creeks in Georgia, the Chicasaws, and Choctaws in Alabama and Mississippi, the Natches in Louisiana, and the Cherokees in eastern Tennessee; the first have been described by Mr. Clarence E. Moore.



PORTRAIT PIPES AND IDOLS FROM THE STONE GRAVES AND GULF STATES.



PIPES AND MACES FROM THE GULF STATES.



POTTERY VASES AND BOTTLES FROM THE GULF STATES.

It would seem from Mr. Moore's account, that the tribes formerly situated in Florida had more and larger pottery vessels than any other, many of them in imitative shapes. The Muskogee tribes had more idols and carved stone relics and shell gorgets; but the tribes situated in both Eastern and Western Tennessee had more shell gorgets and copper plates than any other. Some of these copper plates have been considered by Dr. Thomas as very modern and bearing the touch of the white man, and in one found near the Etowah Mound Mr. Thomas Wilson has recognized the image of Buddha.

Copper relics are quite numerous. The natives that De Soto met spoke of copper mines in the mountains of Appalachee, and the whole army was led into the mountain region in hopes of discovering gold.* In passing through the towns between the coast and the mountains, they found many large towns or villages; in one of which—Talemeco—was a temple with three gates, one of which was guarded by gigantic wooden statues, variously armed with clubs and wooden vases, canoe paddles, copper hatchets, drawn bows, and long pikes which were ornamented with rings of pearl and bands of copper.

The relics which are peculiar to the Gulf States have been described by Mr. C. C. Jones. The most interesting of these consist of pipes, which may be divided into different classes: 1. The idol pipes, which are always associated with the large pyramid mounds, and frequently represent the human figure, upon the knees in an attitude of devotion, clasping an urn-shaped bowl; head thrown back; forehead retreating; eyes up-turned. 2. The calumets, among which are the bird-shaped pipes made of serpentine, oolite, feldspar, gneiss, mica, slate and soapstone. Some of these are seven inches long, three inches high, and two inches wide; the walls of the bowl half an inch thick. They are generally found in the mounds and in the fields, and may be regarded as the public property of the tribe, or the private property of the chiefs and medicine men. The stone pipe in the shape of a panther is depicted by General Thruston in his book. The panther was the totem emblem of the Creeks or Muskogees; the wild cat was the totem of the Chicasaws. The discovery of these bird pipes in the Stone Graves is very significant. 3. The common pipes were made of stone and clay, and were generally used with a reed stem; some of them represent the human face.

4. Another class of relics consists of maces or double-bladed axes. Mr. C. C. Jones says:

NOTE.—Mr. James Mooney has made a close study of the route taken by the Spaniards. He maintains that after passing up the Gulf, where they found the forts amid the swamps, they came to the province of Cutifachiqui and, accompanied by the queen, they marched toward the mountains, where they were met by the Cherokees. Crossing the Blue Ridge, they came at the end of a month to the town of Guaxula, where the people came out to meet them dressed in robes of skins, who gave them three hundred dogs for food. They passed down the Chatahochee, and came to Cauasauga, a frontier town. They marched southward toward the Gulf, passed through Tuscaloosa, and finally reached Mobile.

These ceremonial axes occur frequently in the relic beds along the banks of the rivers where the natives congregate for fishing. The most of them are broken. Their edges are not sharp. Fashioned principally of a talcose slate, they were unfit for service, and must be regarded as ornamental or ceremonial axes. They vary in size and form, the most of them being less than six inches in length and very light. Three of them were found in a grave mound in Louisiana, made of quartz; marvels of symmetry, and polished to the highest degree; evidently intended for ornaments or badges of distinction. One, made of diorite beautifully polished, is four inches long and an inch and three-eighths in diameter (Fig. 4). Another, made of syenite (Fig. 5), measures four inches in length and two and three quarters in width, weighing twenty-seven ounces. In another (Fig. 2), the drill hole had not been completed. Another (Fig. 3) is wing-shaped, and is made with points around it, but not brought to a cutting edge, made of slate. Another is made of close grained diorite, beautifully polished, four inches long. This was an ornamental or ceremonial axe, intended for display, and not for use. (See Plate.)

5. Another class of relics consists of chisels and gouges. Of these Mr. C. C. Jones says:

They are made of green stones in sockets of wood, and stag's horns of bone, similar to those found in the Lake Dwellings of Switzerland. The gouge differs from the chisel in that it is larger and stronger, having one side scooped out and the other rounded. Bone gouges are made of the leg bones of the deer and buffalo. These were obtained from mounds, shell heaps and relic beds gathered upon the sites of ancient villages and fishing resorts, or plowed up in cultivated fields.

The discoidal stones are common in the Gulf States. They are all circular in shape, with diameters varying from one to six inches. Many are flat on the sides, slightly convex, hollowed out on both sides. The cavities are circular and four inches in diameter. One has four cavities, two on each side, precisely similar and one within the other; the depth of the outer, five-eighths of an inch, and the inner, three-eighths of an inch; the rim one-quarter of inch thick. The general distribution of the stones shows that the game was in common esteem among the various Georgia tribes.

6. The pottery of the southern Indians is superior to that manufactured by the northern tribes. In some of the Southern States, kilns in which the ancient pottery was baked are now to be met with. In the Etowah Valley kilns constructed of water-worn stones have been discovered. One of the best specimens of burial urns (Fig. 1, Pl. XXVII.), 15½ inches in height and nine inches in diameter, contained the bones of a young child. The urn taken from an earth mound near Sparta (Fig. 2), is 14 inches high, 14 inches in diameter, and has the pattern of wicker work. A numerous class of flat-bottomed jars are represented by Figs. 3 and 4. Figs. 5, 6, 7 and 8 represent pots with ears and legs; while in Figs. 1 and 2 next Plate, we find the wide-necked jars; and in Figs. 3, 4, 5, 6, 7, 8, 9 and 10 bottles taken from the Grave Mounds.

CHAPTER XV.

SYMBOLIC CARVINGS AMONG THE MOUNDS.

At the Springfield meeting of the American Association for the Advancement of Science, Prof. Putnam read a paper upon the Symbolic Carvings of the Mound-builders. The abstract has been printed and we take the occasion to reprint it.* He controverted the theory advanced by some writers that the ancient earth-works of the Ohio valley and southward are of comparatively recent origin, and were made by the immediate ancestors of the Indian tribes living in that region three centuries ago. The belief forced upon Prof. Putnam, by continued archæological research in the field for more than a quarter of a century, as well as by study of the human remains and works of man found in the older earth-works and mounds, is that the people who made the great earth-works and the burial mounds associated with them were a branch of the great southwestern people, represented by the ancient Mexicans, the builders of the old cities of Yucatan and Central America, and some of the Pueblo tribes of Utah, Colorado, Arizona and New Mexico and adjoining portions of old Mexico. He also believes that the customs and some particular ceremonies and phases of art found among the living tribes to the northward and eastward of this great region were simply survivals by contact of these tribes with the short-headed peoples of the southwest, of which the old earth-work builders of the Ohio valley were one extreme branch. In this connection he emphasized the necessity of distinguishing between the older of these earth-works and the burial mounds and village sites of the intrusive tribes from the northward and eastward.

I. The particular object of this paper was to illustrate some of the peculiarities of the incised art of this older people of the Ohio valley and to point out the close resemblance in the motive of the symbolism expressed in the carvings from this region with those of the southwest and even Central America. At the same time attention was called to certain remarkable resemblances in the technique of some of the similar work of the Haidas of the northwest coast of America. The paper was illustrated by a series of diagrammatic figures, showing peculiar and in some ways extraordinary carvings; and another set of drawings illustrated the carvings of natural size.

The objects illustrated and studied were arranged in three

*Abstract of Paper published in *Popular Science News* for January, 1896.

groups. First, the famous Cincinnati tablet, found within a mound in Cincinnati in 1841, over which there has been so much controversy and so many different theories as to its meaning. Second, the objects which were found in the great group of mounds surrounded by an earth-work, known as the Turner group, which was most thoroughly explored during ten years of continued work by Prof. Putnam and Dr. Metz and several assistants of the Peabody Museum of Cambridge, where these objects are now preserved. Third, the remarkable lot of specimens from the earth-work figured and described by Squier and Davis as the Clark work, but later known, from the present owner, as the Hopewell group. These objects were secured by Mr. W. K. Moorehead while acting as Prof. Putnam's assistant in obtaining material for the exhibit in the Department of Ethnology of the World's Fair, of which department Prof. Putnam was chief. This collection is now preserved in the Field Columbian Museum of Chicago.

The first specimen to which attention was called was that of a portion of a human femur which had been scraped and rubbed to a high polish, and on this rounded surface intricate figures had been incised. At first it was difficult to recognize in the apparent medley of lines any intelligible design, but after studying the lines for a while they resolve themselves into human and animal faces, combined with ovals, circles and other symbolic designs. A prolonged study of the carving shows that the figure is made up of elaborate masks and combined headdresses. The discernment of these several faces and headdresses, represented in the combination figure, is made easier by a comparison with several other objects found in the same mound. Among these are numerous designs cut out of thin sheets of copper, made by hammering nuggets of native copper. Among these are the serpent and sun symbols, also shown in the carvings. Another copper object represents the deer's antler. In the same mound a skeleton was found about which were many ornaments; and still resting upon the skull was a copper headdress made of a sheet of copper curved to cover the head from the forehead to the occiput; and from this branched a pair of antlers, made of wood and covered with thin copper.* Still another object was that of a similar sheet of copper through which was thrust two short, rounded pieces of wood, representing the antlers of the deer just starting in their growth. Prof. Putnam called attention to the fact that a comparison of these two headdresses with the figure carved upon the human legbone showed that two of the

*One of the bodies which was exhumed from this graded section is illustrated by Mr. Moorehead in his book on Primitive Man in Ohio. It is impossible, however, to tell from the book or from the article here quoted whether the large number of so-called spool ornaments and the peculiar black rings called pulleys, and the duck pipe which is made out of the same material, came from this mound, and if from this mound it is impossible to tell whether they were connected with the body of the chief or with the skeleton of the child or young person. The whole description given by Mr. Moorehead is very vague and indefinite.

figures in this combination represented two masks or human faces surmounted with just such headdresses—one with the budding antlers, the other with the full formed antlers. He then showed that these were not all the faces shown in this singular combination of lines. There was also an animal head with a broad mouth, closed eyes and drooping ears; while in the center of the design was to be seen the beak of the Roseate Spoonbill—a bird often represented in similar incised carvings from the mounds. Particular attention was called to the way in which the eyes were represented on the human face, with the double curved projecting lines which has much to do with many of the symbolic carvings which were described.

Prof. Putnam then alluded to a similar carving, but with different designs, upon a human arm-bone, obtained with thousands of other objects from the altar of the great mound of the Turner group. On this carving there are several conventional animal heads interwoven and combined in a curious manner; and over each head are represented the symbolic designs, circles and ovals, common to nearly all the carvings. Here the lines were cut with such skill and ingenuity that parts of one head form portions of another above and below; and on reversing this combination figure still other heads are discernible. The many combinations here shown, he said, could only have been made by carefully preparing the distinct figures, and combining them in the way here shown, which must have required a vast amount of ingenuity as well as mechanical execution.

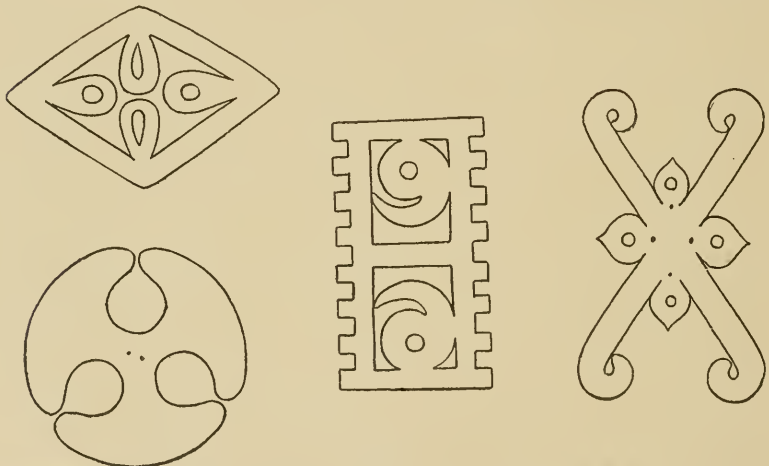
Another of these interesting carvings was from the Hopewell mound, and was also upon the highly polished surface of a portion of a human femur. In this the principal designs are the conventionalized serpent and the bear totem, represented by the five claws; while other designs are the same in outline as some of the great earth and stone works in the Ohio valley—particularly the outline of the so-called "Stone Fort"* in Ross county, and the so-called "Entrance"† to the earth-work in Butler county, figured by Squier and Davis.

Prof. Putnam dwelt particularly upon the figures carved on the stone known as the Cincinnati Tablet, and he showed how the strange figures there delineated were both conventionalized and symbolic, the serpent head being one of the symbolic designs of the tablet. This tablet, he said, has been described by several writers during the last half century, and has often been considered as a fraudulent piece of work; but of its authenticity there can now be no doubt, as the figures upon it are partially understood, and several of them are of the conventional serpent form, identical in form with those found in other mounds of Ohio, and also agree essentially with the representation of the

* This stone fort represents a double-headed snake with four tails. See my book on "Myths and Symbols," p. 63. † See Mound-builders' Fort, p. 147.

serpent head in the sculptures of Central America; while the singular duplication of the parts recalls a similar method in the carvings and paintings of the Haidas of the northwest coast of America. He considers that the combination of the human and serpent forms in this tablet makes it a most interesting study in this new light.

In connection with a study of this tablet attention was drawn to a very interesting object of copper found in the Hopewell mound. Many comparisons were made between these two objects, which, unlike as they seemed at first glance, were shown to have identical lines evidently representing the same symbolic figures. Another object shown was a serpent cut from a piece



Symbols found in the Copper Relics from the Hopewell Mound.

of mica, upon which were incised lines representing the same symbols found on the carvings on bone. This was from the Turner mound. In connection with this representation of the plumed serpent, the authors of the paper made many comparisons, showing the modification of the serpent in ancient art, from Ohio through the Pueblo regions to Mexico and Central America. The peculiar representation of the eye of the serpent is also dwelt upon, this eye becoming symbolic of the serpent itself. Several objects from the mounds are simply these symbolic serpent eyes, and attention was called to the persistence of this symbol from Ohio to Central America.

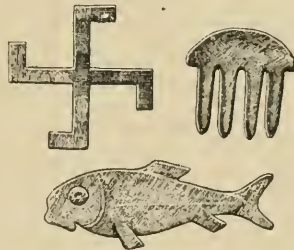
The next group of symbolic carvings described was that of the circle divided by the four arms, representing the horizon and the four quarters of the earth. Attention was called to the wide spread of this symbol over North America; common to the carvings of the mounds, it extends westward to Mexico.

II. The particulars as to the Hopewell "Find" are very important in this connection. These have been difficult to get

hold of, but we quote below the account of it which was furnished by Mr. Moorehead while still at work in the field and published in the *Illustrated American*. It is the best report which has thus far appeared, though the writer did not realize the importance of giving the exact spot where every relic was situated.

"All of the twenty-six mounds above mentioned were carefully examined.* Photographs and drawings were made of every skeleton which was surrounded by ornaments or objects, of the various colored strata in the mounds, the altars, and other things of interest. It is the purpose of this paper to describe only one of the mounds explored: the large one indicated in the center of the accompanying plan, around which there is a semi-circular embankment.

"Seven thousand two hundred and thirty-two unfinished flint implements, averaging in size 5x7 inches and half an inch in thickness, had been deposited in Mound No. 2, in the form of a layer 20x30 feet and one foot in thickness. The Effigy Mound is 500x210 feet, with a height of 23 feet, and resembles externally the human trunk. On account of its great size the expedition was compelled to open it in seven sections, each 60 feet in width. The greatest diameter of the mound is east and



Symbols found in the Effigy Mounds.

west. The cross sections were run north and south, and were, therefore, about 200 feet in length, with walls of earth at the center 23 feet high, which gradually sloped toward the ends until they reached the original surface beyond.

"Before giving a description of the finds in each cut, it would be well to speak generally regarding the construction of the mound. The builders first selected a level strip of ground, cleared it of underbrush, weeds and grass. They then took clubs or other heavy objects and beat the earth until it was hard and flat, and filled all the little depressions and hollows. The floor being thus far prepared, they built large fires upon it and kept them burning for several days.

"All the skeletons taken from the mound, with the exception of one or two, lay upon this hard burnt floor. The mound was erected in eight or nine sections and considerable time elapsed between the completion of one and the beginning of another. When a mound has stood a number of years it becomes covered with underbrush and small trees. If the aborigines decided to make further interments, instead of constructing a new mound,

*The location of the different mounds within the enclosure can be learned from the plate which gives the general plan of the shape of the mound in the semi-circular enclosure.

they frequently used the old one. They placed the bodies upon the surface of the ground at the base of the first one and heaped earth above until either the first mound was covered or a structure was formed nearly equaling it in size. The decay of underbrush and logs leaves a dark line between the two mounds conforming to the contour of the first. This is called the sod line.* Such sod lines were apparent in the Effigy Mounds. In cut No. 1, which was projected through the eastern end of the mound, nothing was found except near the summit. Boulders had been laid about two feet below the summit of the mound extending down the south slope of the structure for a distance of forty feet. They were thought at the time to represent the figures of two panthers. The effigies†—if they were intended to represent effigies—were very rude, and while the tails were clearly defined and one or two legs apparent, the head and fore legs had been disturbed by the plow to such an extent that it was impossible to follow them. Boulder mosaics are occasionally found in mounds, particularly in Iowa, but their occurrence in the Ohio valley is extremely rare.

“In cut No. 2, thirteen or fourteen skeletons were exhumed from the base line. The most important of these was recorded as Skeleton No. 248. It lay with the head to the south, and was five feet eleven inches in length, and fairly well preserved. No skeleton in the mound indicated a person of more importance than No. 248. Copper antlers, 22x23 inches, extended from the forehead upward. The breast and back were covered with copper plates, bear teeth, and other singular ornaments. Strings of beads lay about the ankles and wrists, while at the feet were traces of decayed sandals. The copper horns had been originally fastened to a helmet of copper, covering the skull from the upper jaw to the base of the occipital. A rough cloth skirt extended from the waist to the knees. Where the copper plates came in contact with the fabric it was well preserved. Beautiful pearl beads and large bear and panther tusks were interlaced or strung upon the front of the garment. The other skeletons were covered with shell beads and a few copper plates and celts accompanied them.‡ In cut No. 3 a number of bodies were found surrounded by large ocean shells (*Busycon and Pyrula*), plates of mica, lumps of galena, stone pipes, spear-heads, and beads. In the centre of the cut upon the base line a deposit of two hundred copper objects and implements was laid. The deposit covered a space 6x10 feet. Among the objects found were an

* The facts which Moorehead brings out about the gradual enlargement of a burial mound is important. It only confirms what the writer has often advanced; but it here explains some things which would otherwise be difficult to account for, especially the diversity of relics found in the mound.

† These effigies were pointed out by gentlemen from Washington who were visiting the spot.

‡ A cut representing this skeleton and its novel helmet is given in Moorehead's book and in the *Illustrated American*. A reproduction of the last can be seen in the plate.

enormous copper axe $22\frac{1}{2}$ inches long and weighing 38 pounds, and copper plates or square sheets of copper used for ornamental purposes. With the deposit were 25,000 pearl and shell beads. Accompanying the copper implements of the more ordinary form were anklets, bracelets, combs, saucers, several fish and suastikas and crosses. The discovery of four crosses, which are peculiarly oriental in character, marks a new epoch in American archæology. M. G. de Mortellet, the eminent French anthropologist, refers in his works very generally to the same style of cross found by the survey, and gives numerous illustrations in his works of its occurrence on pottery, sepulchres, and monuments of Brittany, Italy and, particularly, India. The Suastika was used as one of the emblems of Buddha worship before the Christian era, and may have spread later into Phœnicia. This symbol is occasionally found in Egypt and China, but, so far as the writer is aware, not in Yucatan or Mexico. A cross does occur on the Palenque tablet, but it is not the Suastika.

"The crosses and the other objects were worked from sheet copper which had been beaten thin in a cold state and not rolled. All the copper was placed in a layer several inches above two badly decayed skeletons. Many of the bones of the skeletons were badly decayed, and the few entire ones were covered with dendritic deposits. Twenty-three feet below the surface, with alternating layers of compact clay and coarse gravel, their decay is unquestionably due to age and not to the action of atmospheric agencies. The copper crosses and effigies were at first thought to be modern; in fact, we would not say positively at the present writing that they are ancient. But if the field testimony is of value (and the survey has had such experience that it is hardly probable its members are easily deceived), it is certain that the objects evince a degree of workmanship beyond the ability of the two tribes of people that inhabited Southern Ohio in pre-Columbian times. This is admitted by even those who are of the opinion that the objects were made by the early traders and trappers who came in contact with the Indians of the Ohio Valley one hundred and fifty years ago. Probably not one of the traders ever heard of the Suastika cross. That the early French met the Ohio tribes on the shores of Lake Erie, in Illinois, and at Fort Duquesne long before the Ordinance of 1787, opening the territory of the Northwest for settlement, is quite true.

"That they should have made copper fish, combs, anklets, etc., strangely like the Etruscan and Phœnician designs, and crosses the duplicate of those used so extensively in India is hardly possible. No race of American aborigines were quicker to employ the superior implements and more beautiful ornaments of the whites than the Indians of the Ohio Valley. Had they secured these crosses from the whites they would have undoubtedly buried glass beads, iron tomahawks, medals, and other evidences

of European influence, with their dead. The whites would not have issued to the Indians a singular and purely religious oriental emblem and have omitted to present mirrors, beads, and other flashy and more acceptable gifts."

III. These accounts of the relics found in the Hopewell group and the symbolism contained in them are very important. Further consideration of them will be necessary, however, before the conclusions reached will be adopted by all, and for the following reasons: 1. The relics are unlike those which are generally found in the mounds. Professor Putnam takes the position that the symbolism contained in the relics of the Hopewell mound is the same as that in the Turner mounds, in the Cincinnati Tablet, and the copper relics from the Etowah mound. Mr. Moorehead says nothing about the symbolism of the bone relics which he discovered; though he describes the copper relics and speaks of the oriental character of the suastika and some other symbols which may be recognized, and intimates that this is the first time that the suastika had been seen among the mounds. This is not true, though it is perhaps the first found north of the Ohio River. Mr. Moorehead, however, admits that there have been many doubts as to the prehistoric character of the copper, mica and other relics which were taken from this mound. This doubt has been increased from the examination of the relics which are now in the Field Columbian Museum, having been returned from the Peabody Museum, to which they were taken.

2. The symbols on the copper relics strangely resemble the symbols common in mediæval times in Europe, especially the copper sheets which were cut into the shape of the old-fashioned Maltese cross in combination with the clover leaf. The cross is in the shape of the letter X and was common before the Christian era, but the clover leaf is modern European. (See cut.) We say nothing about the composition of the relics in the shape of pulleys, nor the strangely uniform stereotyped shape of the spool ornaments, which make them look as if they were stamped; nor of the flat pieces of copper with turreted edges, all of which look as if they were cut by a sharp knife or chisel, and all at one time, or the vast quantity of copper which came out of the mound. We only ask the question: Why do the symbols on the bone implements appear so ancient and the symbols and other art forms on the copper relics appear so manifestly modern?

3. The figure on the Cincinnati tablet, which Prof. Putnam calls a feather-headed serpent, is plainly a humanized tree, with the legs and arms transformed into branches and leaves, and folded up against the body after the fashion common among the Haidas, the eyes being hidden among the leaves, which take the place of the hair, the whole figure having a human semblance, and not the least trace of the feather-headed serpent can be recognized. See plate.

IV. The comparison of symbols which were common among the mounds with those which are common in Asiatic countries will be of interest to those who have extended their studies far enough to appreciate the subject. It has been a disputed point for many years, whether there was any contact between this country and the Asiatic continent, and some have been so positive, as to be ready to cut off debate. The time has come for a thorough consideration of the subject.

Candor obliges us to acknowledge that many things may be said upon both sides, for while there are many symbols which resemble those common in the East; yet they are so mingled in this country with imitative forms, which must have been purely aboriginal in their origin, that it is difficult to identify them.

Still, there are certain other symbols, which have been recognized as common on both continents, and these we may take as evidence on the subject of contact.

We take first the symbol of the hand. This is acknowledged to be almost universal in its distribution, for it is found in India.



Hand on Mound-Builders' Pottery.

in Australia, and in all parts of America, and is always a very impressive figure wherever seen, as it reminds us of the red hand, which is so common in the Old

World. The hand upon the rock, is, perhaps, too common to have any particular significance; but where the hand is placed inside of a circle, especially inside of one formed by a knotted serpent, the symbol becomes very suggestive. One such figure is shown in the cut. This is especially significant, as it contains the symbol of the eye marked upon the palm. Doubts have been thrown upon its genuineness, yet the evidence is in its favor.

Mr. W. H. Holmes says of it: "I have seen in the National Museum a stone disk, on which is a well engraved design, which represented two entwined or knotted rattlesnakes. Within the circle, or space, is a well-drawn hand, in the palm of which is placed an open eye. There is not sufficient assurance of its genuineness, to allow it undisputed claim. It is said to have been



Hand in Central America.

obtained from a mound near Carthage, Alabama." General Thruston, however, says that the similarity of the open hand to those upon the vessels of pottery from Ten-

nessee and Alabama seems to confirm its genuineness. Two vessels of pottery decorated with the figure of an open hand have been discovered since the publication of Mr. Holmes' article.

It is well known that the open hand is a common symbol on the monuments of Central America, and they are often associated with the serpent and



Hand and Serpent on Shell Gorget.

human figures. The cuts illustrate the point and make it plain that there was a peculiar, and yet mysterious significance to the symbol; and this of itself may account for its world-wide distribution. The suastika is also a symbol which is world-wide in its distribution. This is generally regarded as an equivalent to the fire generator, but the symbol has many variations and many meanings. It varies from the gramadion, which was com-

mon in Cyprus and Athens, and has the same significance as the four-rayed wheels in India, and the *crux ansata* of the Phœnicians. It always implies revolution, and, as found among the mounds, is supposed to symbolize the revolution of the sky. It may be called a solar cross.

It is interesting to verify the fact that the same combination of circles, squares, solar crosses and suastikas are found with variations among the mounds, that are common in Asia, as well as Europe. There may have been a spontaneous agency of the same factors in this symbol, and the same natural phenomena may have been symbolized by it; yet the distribution of the symbol is so extensive, and the significance is so similar, that one is inclined to ascribe it to an extraneous origin.

The owl face is also another symbol, which is almost world-wide in its distribution. The winged globe is seen in two particular localities in Central America, and has become familiar to archæologists from Mr. J. L. Stephen's description. It is uncertain whether any such symbol is to be found among the mounds, yet Mr. Clarence Moore has described a vessel found in Georgia, near Hare Hammock, which contained a peculiar decoration resembling the winged globe or winged circle, the wings having a peculiarly natural appearance. He has, however, described a vessel found in the Walker Mound in Georgia, which had upon the outside a number of circles, with plumage surrounding them, which convey the idea that they were imitations of feathers of birds and were purely indigenous in their origin.

GREAT SERPENT EFFIGY IN OHIO.





GREAT SERPENT CLIFF NEAR BRUSH CREEK.

The serpent and tree is another symbol, which has been found among the mounds. This is one of the oldest and most widely-diffused emblems in the East. Sometimes it is found as a column, crowned by a palmette, with branches extending to either side, with a vine stretching from the end of the



Tree and Face.

branches to the bottom. Sometimes it is a fire drill, and the serpent is a rope which turns it. Again, it is a tree from which the first pair are plucking fruit. In Central America the symbol varies in form. It sometimes has a bar across the branches, making a cross; sometimes it is represented with branches shooting out on either side, blossoms at the end of the branches, with grotesque human figures clinging to the trunk; sometimes the cornstalk is substituted for the tree, and human faces are seen as at Palenque; but the idea is the same wherever the symbol is seen. There are two tablets, which come from the mounds; one of them, called the Gest Stone, once owned by Mr. Gest of Cincinnati. In this, the symbol

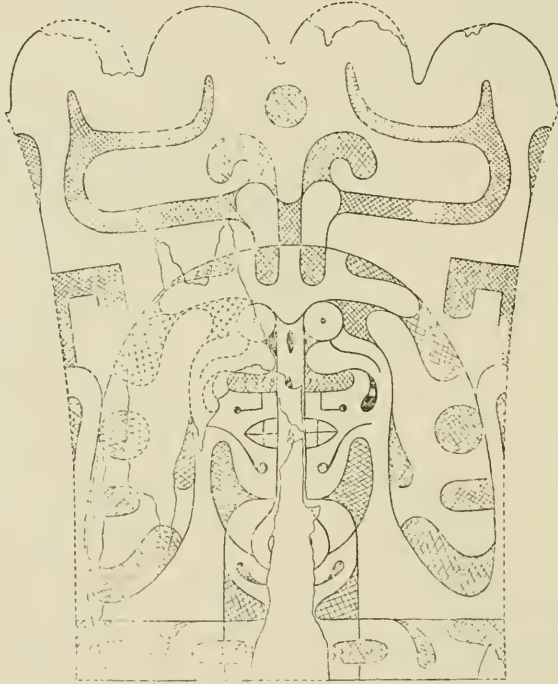
of the tree is combined with the serpent; a serpent in one view being very plain; but in another view, the human face, the arms bent inward toward the body, being in the shape of branches, and the legs turned upward, also as branches; the roots of the tree apparently served as support. The detail, which is characteristic of the sacred tree in most distant countries, is the appearance of serpents, which twine themselves around the trunk or stem. The only relic which contains any resemblance to this, is the pipe, which is carved in the shape of a human face, with branches of a tree wound around the face; the tree itself resembling the serpent, recalling the story of Manbozho and the serpent.

The winged human figure is also a common symbol in America, as well as in the East. Everyone knows that winged human images are common in Babylonia, and are suggestive of the prehistoric period; but there are winged figures among the mounds which are as interesting as even these. These remind us of the Priesthood of the Bow common among the Pueblos, and described by Mr. F. H. Cushing, though he calls the figures found on the copper plates "Eagle Men," or "Man Eagles," and gives to them a mythological significance. The cut below represents a winged figure found in the Hope-well Mound.

There were engraved on this single bone, the head of the serpent, with the circles and cross inside of the head, making a cosmic symbol; also a human image, with feet turned out, after the manner of Central American sculpture, the head crowned with deer's horns; while from the shoulders extend the wings of a bird, the eyes being made of dotted circles, and

the human face hidden beneath the cross hatching, which symbolized the serpent's skin.

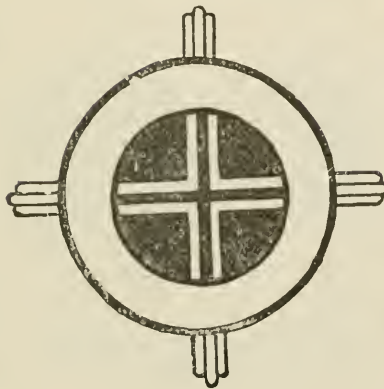
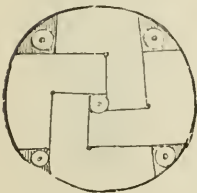
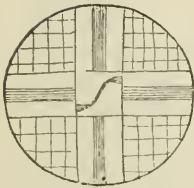
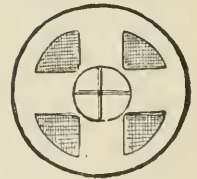
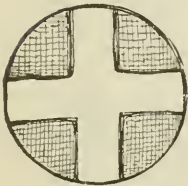
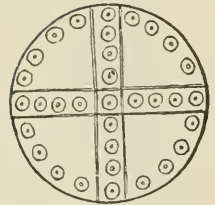
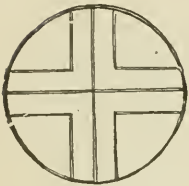
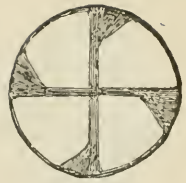
The coiled serpent is another symbol which is common among the mounds. This is significant of the motion of the sky, and resembles the suastika in that respect. There is no symbol which is more frequently seen, or more significant. The serpent is divided into four parts by rings, the head is always within the coil, and the tail on the outside. It is the same symbol as that which can be seen on the calendar stones in Mexico, the chief difference between them being that the



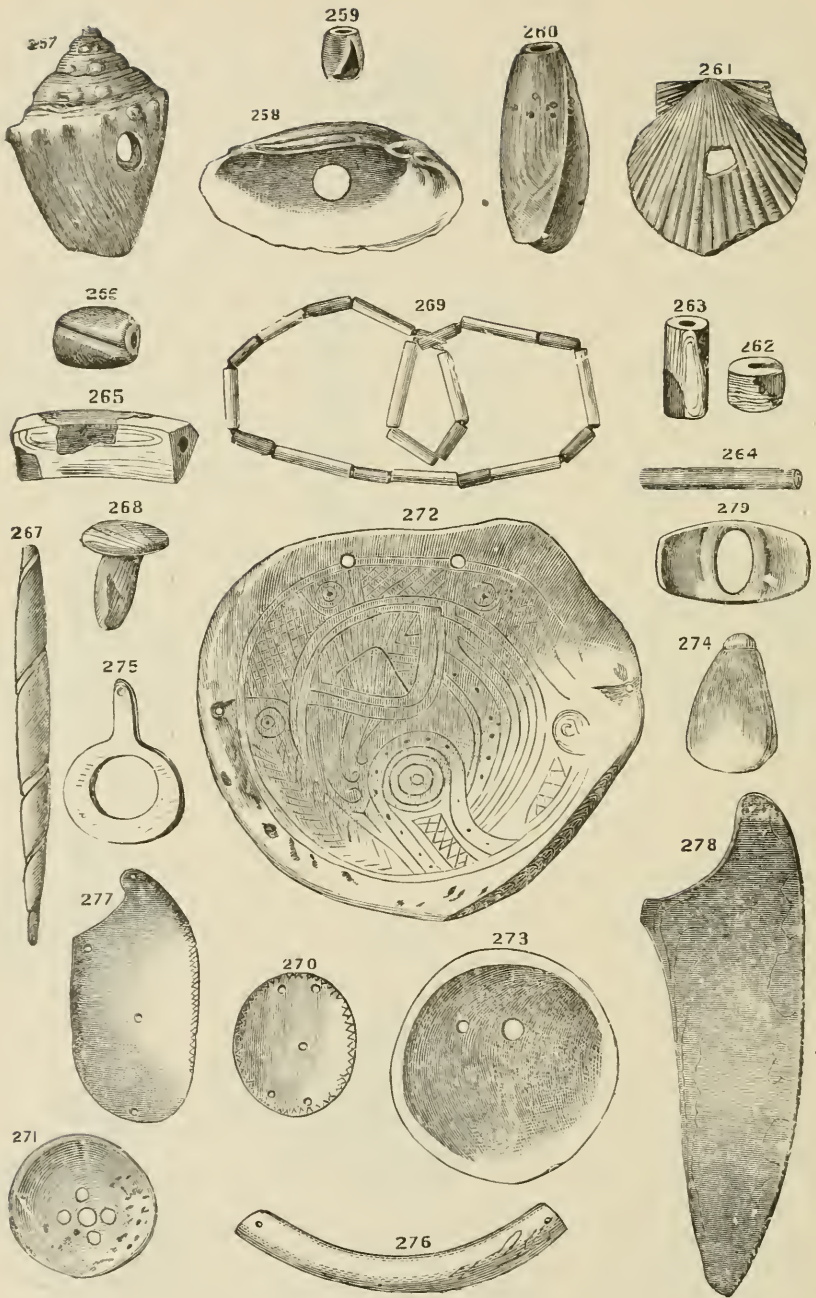
Winged Figure.

serpent on the calendar was divided into thirteen parts and has a human face issuing from the mouth; while in the shell gorgets, the head of the serpent has the shape of concentric circles. There are codices in Central America in which four serpents are represented with heads joining together; four serpents forming a square, with a human face in the middle. The spines of the serpents numbering thirteen multiplied by the four serpents, making fifty two, exactly as four joints of the serpent multiplied by the thirteen circles which are seen upon some of the gorgets make fifty-two years in the Mexican cycle.

The bird is sometimes used alone as a symbol of rain. In such cases it has its wings spread and its plumes drooping,



CROSSES, CIRCLES AND SUASTIKAS.



VARIOUS SYMBOLS IN SHELL.

suggesting the idea of a cloud hovering over the earth and dropping rain upon the soil. There is an earthwork in Ohio, which represents the bird with drooping wings. It is contained within a square enclosure and situated upon the summit of a hill. Every opening to the enclosure is guarded by a mound, showing that it was a sacred place. It may be that the same tribe erected this effigy that inscribed the rain bird on the rocks, namely the Dakotas. The thunder bird, as seen on the rocks, is shown by the cut, the lightning serpent being caused by the flash of the bird's eye. The lightning god is also seen in the cut. This is a humanized tree, as well as a lightning serpent.

The looped square with the birds' heads is another symbol. This seems to signify the four quarters of the sky, which was a common conception among the aborigines. The birds' heads are always turned in one direction, and seem to symbolize the revolving motion of the sky and is generally associated with



Humanized Lightning.



Thunder Bird.

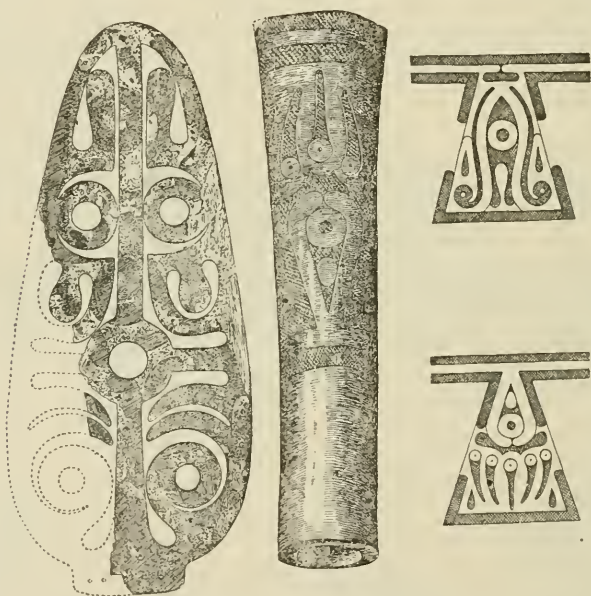
the serpent gorgets, the serpent symbolizing the water, as the bird does the air. See plate.

The suastika is a symbol, which is also common in the mounds, may be regarded as a cosmic symbol; but it has the additional factor suggesting the idea that it symbolized motion. Some of the gorgets have the crescents without the circles, showing that the rotary motion was more important than the circles which symbolized the heavenly bodies. The suastika was also used to symbolize the same thing. The gorgets, which have birds' heads projecting from a looped square, have been found in Mississippi, Louisiana, and other localities.

It also suggests the revolution of the sky as well as the four quarters of the earth, and so may be regarded as a cosmic symbol—the bird symbolizing the sky, but the looped square the earth, as on the humanized figures the horns symbolized the wild animals of the forest; the wings symbolized the creatures of the air, and the human form symbolized the position of man among all other creatures

The cosmic symbol, has also been recognized in the copper plates found in the Hopewell Mounds. It resembles the cosmic symbol found at Copan and in various parts of Mexico. But it is here combined with the serpent symbol, and is contained in a copper plate, which has the shape of a serpent's head. On this plate there are four circles, with a circle in the center. The significance of this symbol, is that the four points of the compass and the four quarters of the sky are brought together into one.

Prof. Putnam has described this cosmic symbol in a pamphlet upon the symbolism found in the Hopewell Mound. The bear, the serpent, the human face, the horns of the elk, wings of

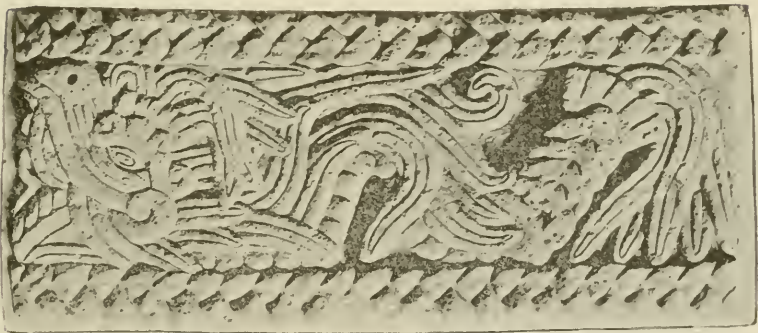
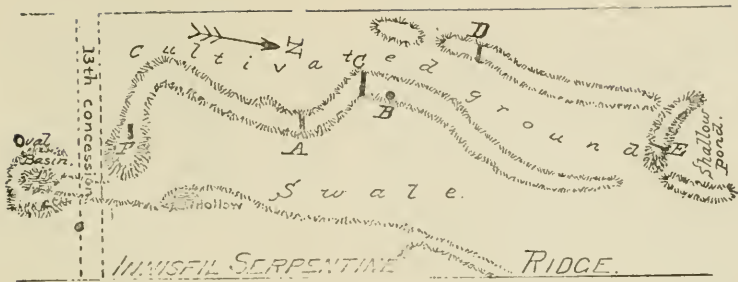


Cosmic Symbol and Serpent Head.

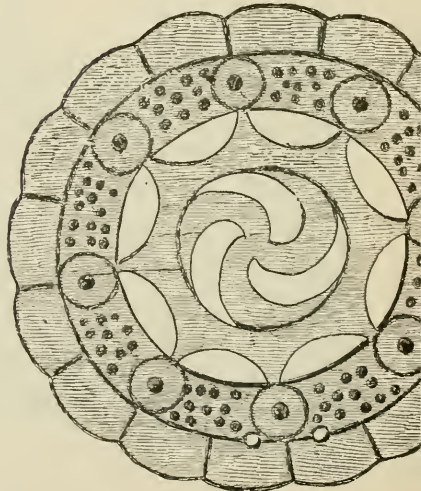
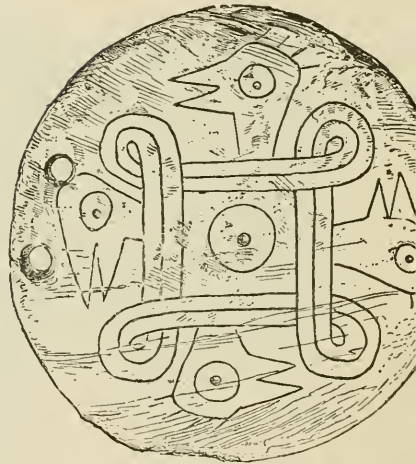
the bird, the claws of the bear, the serpent's head, all are strangely mingled together in the engraving which was mingled with cross-hatching on a human femur. The great serpent encircled the whole, very much as the serpent encircles the earth in the Norse mythology.*

The phallic symbol was used by the Mound-Builders, and signified life and the creative power. It is sometimes seen issuing from the mouth. The tablet found near the Cahokia Mound illustrates this.

* A study of the cuts will show how the Mound-Builders combined birds' wings, animal horns and serpent bodies with human figures, both in their effigies and their relics, and often made them symbolic of the lightning, the rain, and the operations of nature, using even the spider and the butterfly for the same purpose.



• SERPENT SYMBOLS.



INSCRIBED SHELLS FROM THE STONE GRAVES.

V. The inference which we draw from the study of the symbolism used by the Mound-Builders, is that there was a general system which was common throughout the continent of North America, and was shared by the Mound-Building tribes, but adapted to their circumstances and their preconceived ideas. This symbolism did not supplant the religious systems which prevailed, but was absorbed by them and conformed to them, and made to express the religious thoughts which the people had received from their ancestors. We maintain that there was a great variety of religious systems among the Mound-Builders. Animal worship, or totemism, prevailed among the hunter tribes of the North; sun worship prevailed among the agricultural tribes situated along the Ohio River; a modified and complicated system of nature worship prevailed among tribes which dwelt in the villages of Missouri or Kansas and Tennessee; a modified system of idolatry, combined with ancestor worship, prevailed in the Gulf States. Each system required different symbols, by means of which it could make itself known.

Our supposition is, however, that much of this symbolism was borrowed from the civilized tribes of the Southwest, and adapted to the systems which prevailed among the Mound-Builders, and was made to express their religious thoughts and their inherited mythology, without radically changing the religious system which prevailed. This may seem like a mere conjecture, yet the great similarity of the symbols found among the mounds of the Mississippi Valley and the ruined cities of the Southwest, proves the position. This similarity has been recognized by different authors, among whom we might mention Mr. W. H. Holmes, Gen. Gates P. Thruston, and others. Mr. F. H. Cushing has spoken of the similarity of the symbols of the Zunis and the Moquis and those on the copper plates found in the stone graves and near the Etowah Mound. Mr. Holmes takes the carved shells and engraved disks and gorgets, and describes the designs upon them, and compares them with the pictographic manuscripts of Mexico, arranging them in groups in the following order: the circle, the cross, the looped square, the bird, the spider, the serpent, the human face, and the winged figures, and analyzing the parts and showing the resemblance between them.

In reference to the cross, he says: "The design is symbolic, undoubtedly used as a symbol by the prehistoric nations of the South, and was probably known in the North. They all belonged to the American type. It is frequently associated with sun worship and has reference to the points of the compass." Mr. Holmes also says:

It is well known that the barbarous tribes of Mexico and South America had well-developed systems of sun worship, and that they employed symbols, which retained a likeness to the original. The form of the circles, or suns, carved upon the concave surfaces of the shells, is similar to that of the paintings on the high rocky cliffs.

No developed calendar is known among the wild tribes of North America. The highest achievements known of in this line, consisting of simple pictographic symbols of the year, but there is no reason why the Mound-Builders should not have achieved a pretty accurate division of time, resembling in its main features the systems of their Southern neighbors.

The ancient Mexican pictographic methods abound in representations of trees, conventionalized in such a manner as to resemble crosses. By comparison of these curious trees with the remarkable cross in the Palenque tablet, I have been led to believe that they must have a common significance and origin. The branches of these cross-shaped trees terminate in clusters of symbolic fruit, and the arms of them are loaded down with symbols. The most remarkable feature is that the crosses perform like functions, in giving support to a symbolic bird, which is perched upon the summit. The analogies go still further, the bases of the cross in the tablet and in the paintings are made to rest upon a highly conventionalized figure of some mythical creature. A consideration of these facts seems to lead to the conclusion that the myths represented are identical, and the cross and the cross-like trees have a common origin; whether the origin is in the tree, or in a cross, otherwise evolved, is uncertain.

With all people the bird has been a most important symbol. It came naturally to be associated with the phenomena of the sky, the wind, the storm, the lightning, and the thunder. In the imagination of the red man it became the actual ruler of the elements and the guardian of the four quarters of the heavens. The storm bird of the Dakotas dwells in the upper air. When it flaps its wings, we hear the thunder; when it shakes out its plumage, the rain descends.

The significance of the looped figure, which forms a prominent feature, has not been determined, but it would be well to point out the fact that a similar looped rectangle occurs several times in the ancient Mexican manuscripts.

Among the insects, the spider is best calculated to attract the attention of the savage. It is in many respects a very extraordinary creature, and is endowed with powers, which naturally place it along with the rattlesnake and other creatures possessing supernatural attributes. With the great Shoshone family, the spider was the first weaver.

An examination of the plates will show that the serpent and tree, the circle and cross, and the human figures were represented by effigies, as well as by relics. It will also reveal the fact that human sacrifices and contests between warriors are depicted by the relics found in the mounds, as well as by the codices from Mexico.

Now, the question which we ask in connection with these resemblances, is whether they do not prove a transmission of symbols; but if a transmission from one part of the continent to another, why not from the Eastern to the Western. It is acknowledged now that the symbols which have been found in the buried cities of Knossos, Crete and Mycenæ were received from Southern Asia, but the very same symbols are also found on the American continent, and what is more they have the same combinations and seem to have the same underlying thought.

There are, to be sure, certain serpent effigies here, which are not found elsewhere, but if we look at the circles and squares, the serpents and trees, birds' wings on human bodies, cosmic symbols and whirling crosses, priestly robes and warrior attitudes, and phallic symbols in human mouths, we shall find the parallel most surprising. It will be noted that the serpent

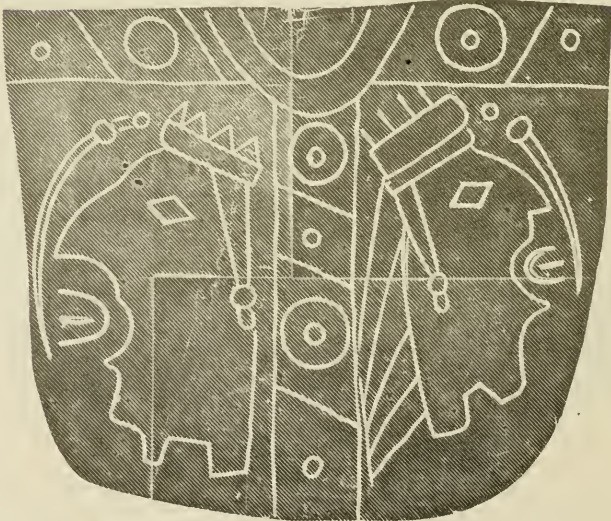


BIRD TABLET FROM OHIO MOUNDS.

This tablet has the same contour as certain earthworks, both of which show the taste of the Mound-Builders.



Cahokia Tablet—Reverse.



The Phallic Symbol on the Cahokia Tablet.

and, what is more, that the figure of the tree is also apparent in these figures, showing still more conclusively that there was a mingling of eastern symbols with the native aboriginal emblems in these human tree figures.

CHAPTER XVI.

THE SOUTHERN MOUND-BUILDERS; THEIR WORKS AND RELICS.

We have now passed over the different districts which were occupied by the Mound-Builders, and have described their earthworks, their relics, their symbols, their religious customs, and their migrations; but have said little concerning their domestic life and their social condition. This will be the subject of the present chapter. But in treating of it, we shall draw illustrations mainly from the Mound-Builders of the South.

It will be understood that there was quite a difference between the Mound-Building tribes, for some were hunters and lived a comparatively wild life, and resembled the wandering tribes which were well known to history. The Southern Mound-Builders led an agricultural life and were settled in permanent villages, many of which may be identified by the groups of mounds which are found in different localities, the most of them having the form of pyramids, and are found on the banks of the rivers and larger streams. These Southern Mound-Builders may have been ancestors of the Muscogee tribes, which were visited by De Soto in his famous expeditions, but if they were, they must have passed through a great change before they became known, for the testimony of travellers is to the effect that many of the Southern tribes, especially the Cherokees, declared that they did not build these mounds, but found them when they first came into the region, and the Muscogees themselves seem to know very little about their ancestors.

This may be said of the Mound-Builders of the Gulf States, they were more advanced in their stage of culture and in their art products than any other class of Mound-Builders, though the tribes which dwelt in Southern Ohio were, perhaps, similar to them in many respects.

In treating of them, we shall class them together, without regard to the tribes which survived them, taking the earthworks and the relics which have been discovered throughout the Gulf States, as our special object of study.

I. We begin with the earthworks. It will be understood that pyramid mounds are found as far north as St. Louis and the mouth of the Missouri River, as far west as the St. Francis River in Arkansas, as far east as the Etowah River in Northern Georgia, and as far south as the Gulf of Mexico. The largest number of them are found at different points along the Mississippi River. All the groups present striking resemblances. This will be seen if we examine the cut, which represents the works at St. Louis, for here we find that the platform mounds were all arranged around an open area, and were furnished with graded ways which led to the summit, making them resemble the various groups which are scattered throughout the Gulf States.

In reference to the Southern Mound-Builders, we may say that they were Pyramid-Builders, and resembled the Pyramid-



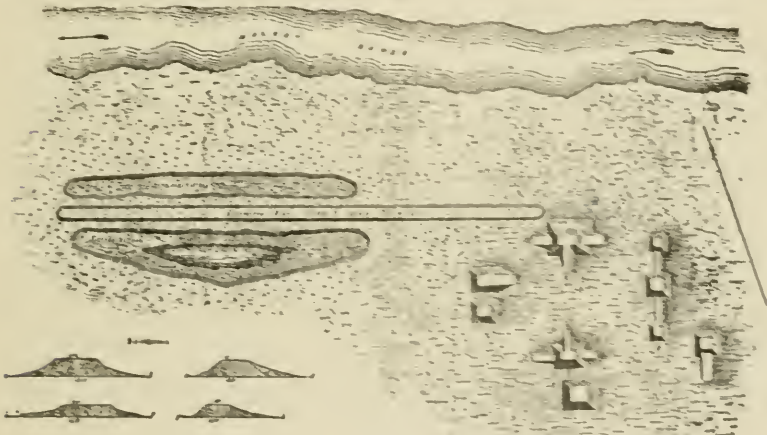
Earth Works at St. Louis.

Builders of the Southwest, in many respects, suggesting the thought that they either belonged to the same stock, or had been in contact with them.

The idea conveyed by their earthworks, is that they mark the sites of ancient villages, and were used by the ruling classes as the places in which they erected their great houses and their rotundas; while the common people dwelt on the level ground about them. These great houses, if they were situated in Central America and built of stone, would be called palaces, and the rotundas would be called temples; for they present the same general plan of arrangement, and indicate that a very similar form of government prevailed in both regions. We may take, then, these groups of pyramids scattered through the Gulf States, as representing the same system of society, but at a lower stage; the villages which were located around these pyramids, having been organized after the same

general model as the cities of the more civilized tribes. We give a series of cuts which represent these village sites, some of which were situated on the Mississippi River, others on the rivers farther to the east. It will be noticed that these villages contained groups of pyramids, but were surrounded by artificial ponds, which have been called "Fish Preserves," and were protected by the ponds, very much as the castles of Europe were by the wide moats that surrounded them. In one case, at Walnut Bayou, the pyramids were connected by platforms, and a long wall extended from the pyramids along the side of the stream, or bayou. (See the cut.)

It is an interesting fact that Herrera describes the villages through which De Soto passed as "fortified, with a ditch full of water conveyed to it through a canal from the great river.



Pyramids at Walnut Bayou.

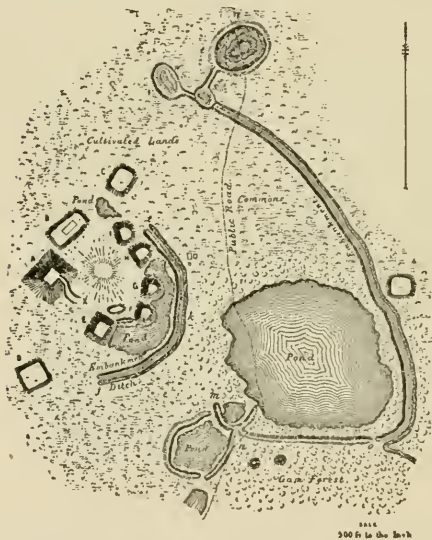
The ditch enclosed three sides of the town, the fourth side being secured with high and thick palisades." Having entered the province of Amilco, they traveled thirty leagues to a town of 400 houses and a large square, where the cacique's house stood upon a mound, made by art, on the bank of a river.

Du Pratz also speaks of the Natchez in 1720. He says: "The sovereign of the Natchez showed me their temple, which is about thirty feet square and stands on an artificial mound, about eight feet high, by the side of a river. The mound slopes from the front, but on the other side it is steeper."

The principle structure at Walnut Bayou is 220 feet long, 165 feet broad, and 30 feet high. It has a roadway on the south side, 60 feet from the base, and leads in regular grade to the top. A similar mound, smaller in size, faces the pyramid, with a graded way and similar platforms. At the east side are three pyramids which are connected, the central one being

96 feet square, and 10 feet high; two others, 60 feet square, and 8 feet high, the three being connected by a wall, or terrace, 40 feet wide, but only 4 feet high. One of these terraces is 75 feet long; the other, 125 feet long. The elevated way is 3 feet high, 75 feet wide, and 2,700 feet in length. There are excavations on either side of the embankment, 200 feet wide and 300 feet long. The relative situation of the pyramids to one another, would indicate that they were the abodes of the chiefs, that the public square was between them, and that the houses of the common people were situated on the level ground outside of the pyramids.

The relative situation of the excavations to each other and to the elevated way suggests the idea that the latter may have been used as a place of refuge, or a canoe landing, in case of high water; or, what is more probable, as a path from the pyramids to the fish preserves.



Pyramid Mounds at Prairie Jefferson.

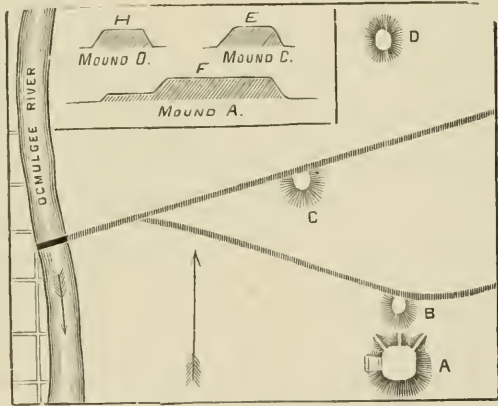
The works at Prairie Jefferson are situated in the midst of cultivated lands, and have two lines of ditches surrounding them, with large ponds inside the ditches. This would indicate that the people depended upon the fields, in which they raised maize, for subsistence; but at the same time gathered fish into their artificial ponds. The grouping of the pyramids suggests the thought that they were not only used

as platforms on which the ruling classes placed their houses, but also were places of resort in high water, exactly as were the pyramids surrounding the great Cahokia Mounds. The size of these pyramids may be found in the following table :

The works at Prairie Jefferson consist of six mounds, which vary from 4 to 48 feet in height, from 60 to 120 feet in length, and 40 to 135 feet in width. One mound called the "Temple," has a level area on its summit, 51 by 45 feet in diameter. The top is reached by a winding way; but it reminds us of the stairways leading up to the temples of Central America. The mounds which face this temple are all alike; they have terraces in front which incline toward the open space, but are quite steep in the rear. There is an embankment, with a ditch, on the outside, and a pond on the inside, which may have served

as a defense. The ponds surrounding this group have outlets, which were controlled as the Mound-Builders desired. But the earth which was taken from them was probably used in forming the pyramids.

There is another group at Selzertown, Mississippi. It consists of a truncated pyramid, 600 by 400 feet at the base, and covers six acres of ground. This is 40 feet high, and is surrounded by a ditch averaging ten feet in depth, and is ascended by graded ways. The area on the top embraces about four acres. There are two conical mounds on the summit, one at each end; the one at the west end is not far from 40 feet in height, and has an area at the top of about 30 feet in diameter. This may have been used as a rotunda, though it is unusual to have a rotunda on the summit of a square pyramid. This large mound has its sides to correspond with the cardinal points. It is surrounded by eight other mounds, placed at various points. These are comparatively small. There are other groups of pyramids along the Mississippi River, from Cairo to a point fifty miles above New Orleans. The whole region joining the Mississippi River and its tributaries was densely populated by the same people.



Village on Ocmulgee River.

Mr. G. C. Forshey describes works of the same kind, some of immense proportions at Trinity in the parish of Catahoula, Louisiana. Other mounds are found at Natchez, one of them 25 feet high. Prof. J. T. Short says:

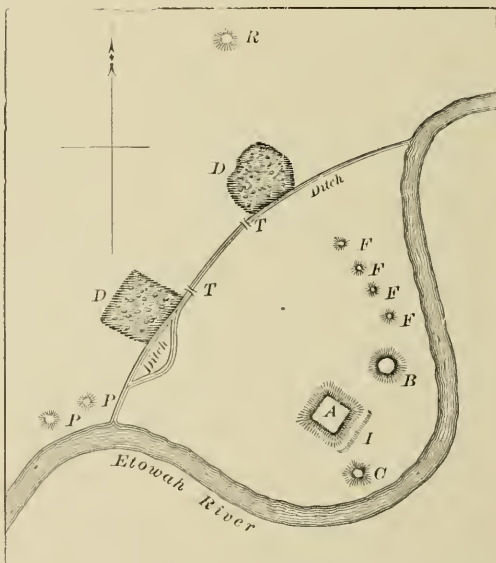
These observations convince us that the State of Louisiana and the valleys of the Arkansas and Red Rivers, were not only the most thickly populated wing of the Mound-Builders' dominion, but also furnished remains which present affinities with the great works of Mexico so striking that no doubt can longer exist that the same people were the architects of both.

There are other works similar to these, in Georgia on the Ocmulgee River, at Shoulder Bone Creek and other localities, cuts of which are given. The most interesting group is that on the Etowah River. These mounds are in the midst of a beautiful and fertile valley, occupying a central position, covering an area of some fifty acres, bounded on the east by the Etowah River, and on the west by an artificial canal and two artificial ponds. The width of the canal is from 20 to 55 feet,

and from 5 to 25 feet in depth. Within the enclosure are seven mounds. The largest of which is a pentagon, the sides as follows: 150, 160, 100, 90, and 100 feet; the diameter, 225 feet; height, 65 feet. The approach to the top is by an inclined plane, leading from one terrace to another. The terraces are 65 feet in width, and extend from the mound toward the southeast. There is a pathway on the eastern angle, which Mr. Jones thinks was designed for the priesthood alone. Dr. Thomas thinks this mound was visited by De Soto, and was the place where the ambassadors of the noted Cacique of Cutifachiqui delivered their message to him.

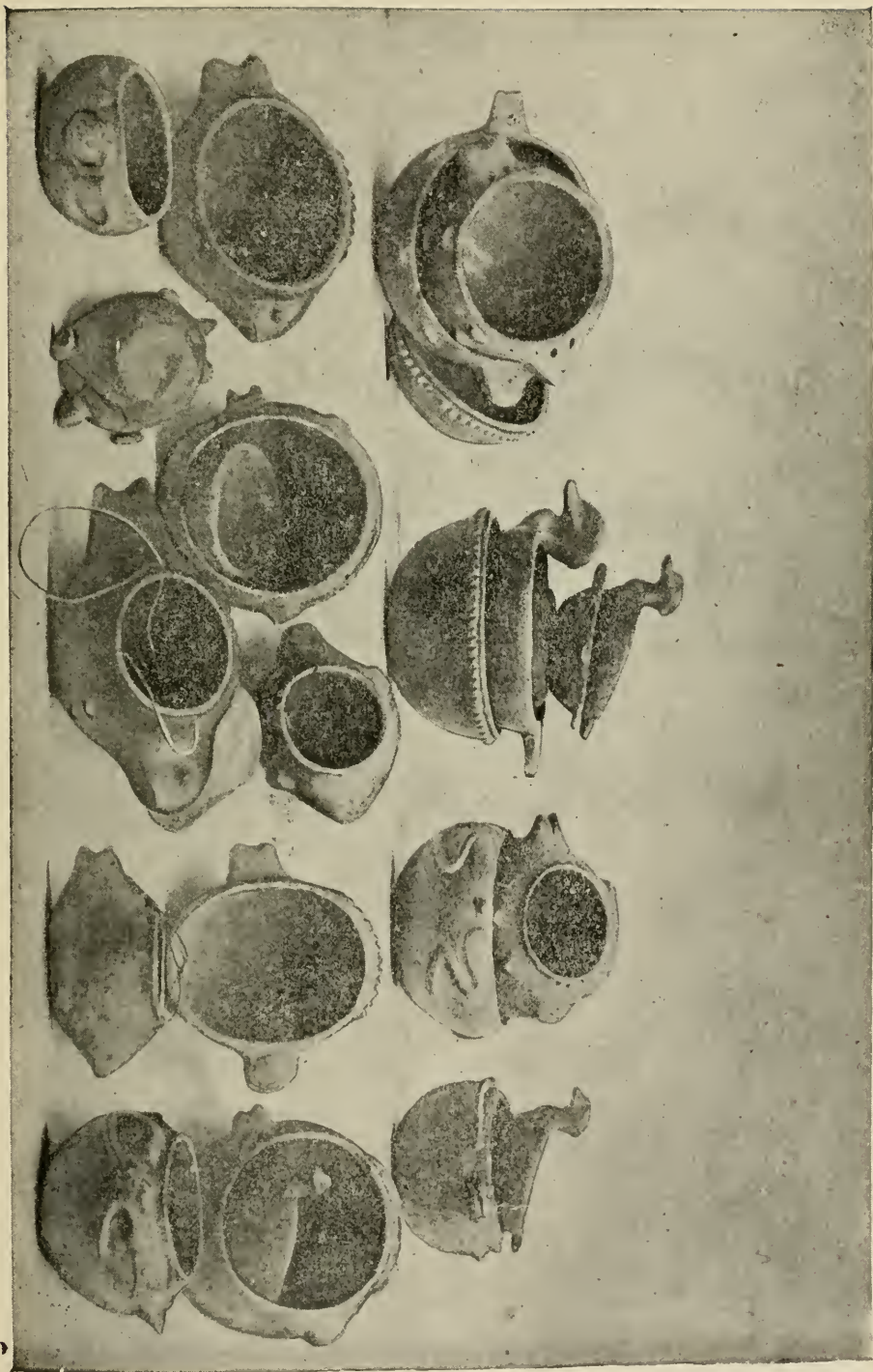
In the mound marked B, adjoining this pyramid, the assistants of the Bureau of Ethnology found two copper plates which

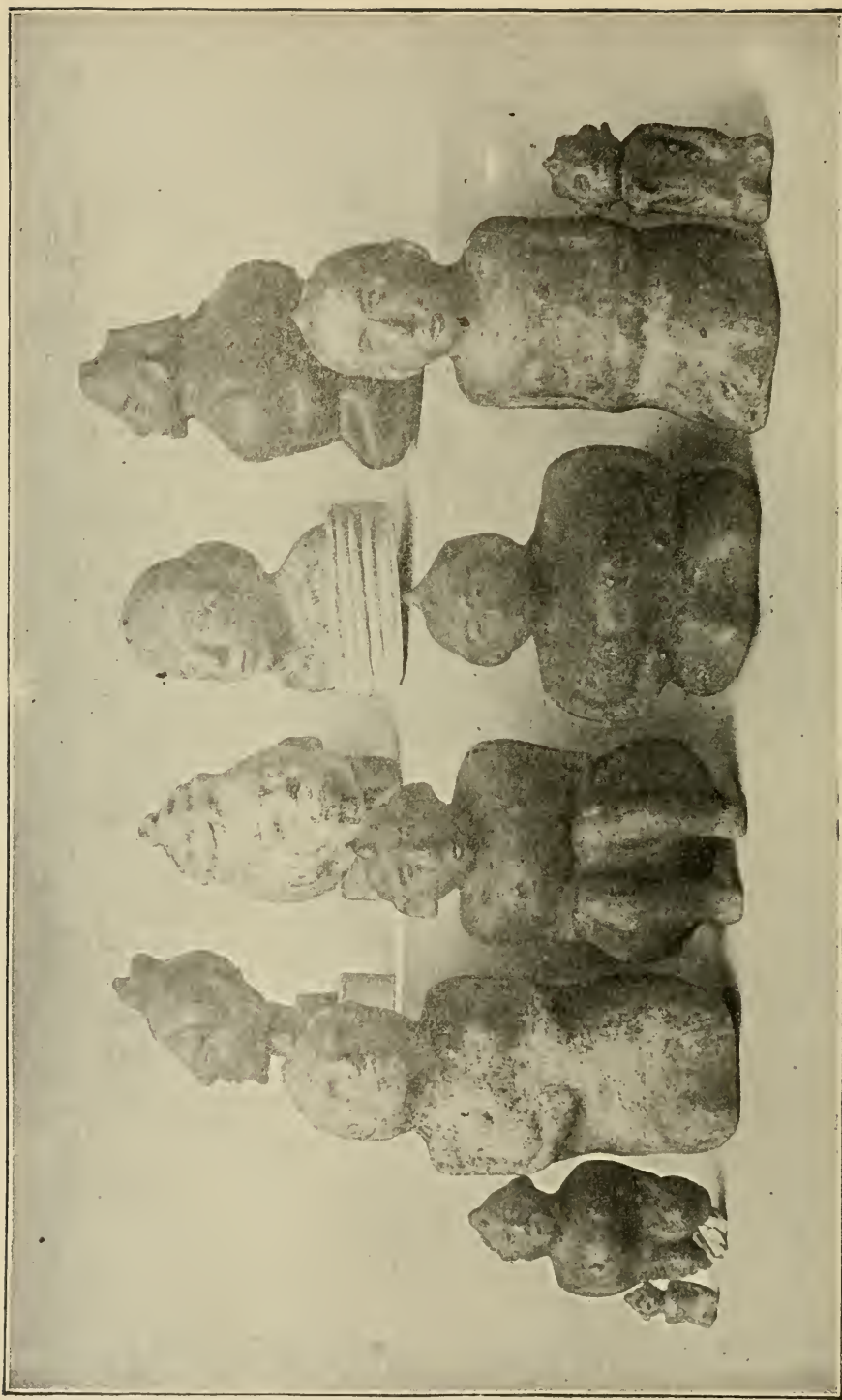
represent human figures with wings issuing from their shoulders. These figures have peculiarities, which remind us of the Mexican or Aztec Divinities. They also resemble those found in Babylonia, but they have arms as well as wings. Still, these figures represent dancers covered with birds masks and wings, but having the usual costumes of the Indians, with knit bands around the ankles, legs, wrists and arms, with a pouch at the side, a maxtli or sash falling down in front. The attitude reminds us of a medicine man, or chief, engaged in dancing.



The Etowah Mound.

II. The houses of the Southern Mound-Builders are worthy of study. These differed from the huts of the Northern Indians in all respects, for they were built with upright walls, with rectangular rooms, and with roofs which were generally thatched but projected over the side and came down near the ground. Some of the houses were built with posts, and were lathed and plastered both outside and inside, though without using nails. The lathing was made of canes, worked in and out around the posts and held in position by interwoven twigs. The plaster was applied both inside and out. (See the cut.)



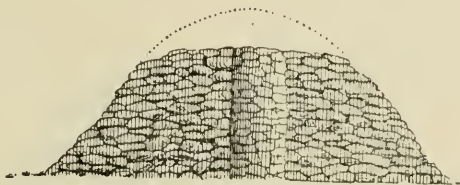


POTTERY PORTRAITS FROM THE STONE GRAVES

Loaned by Gen. Thruston

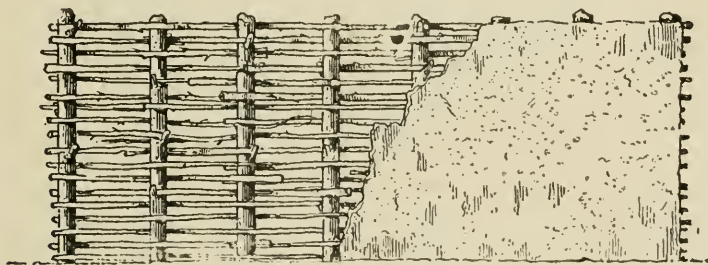
The remains of such houses have been found in the mounds of Missouri, and in the villages which abound amid the cypress swamps of Arkansas. There were many dwelling sites, some of which contained a number of fire beds, showing that a succession of dwellings had been built, one above the other; the dwellings having been burned and rebuilt a third or fourth time. One of the dwellings contained three rooms nearly square.

Skeletons were found under the layers of the hearth inside the dwellings. These were of different sizes, and, perhaps,



Stone Cist in the Shape of a Hut.

represent members of the same family. This shows that the custom was to bury bodies under the hearth, burn the houses and build again; or, possibly, burn the house on the occasion of any death in the household. It was the custom of the Natchez to burn the body of the chief, and along with him his wives and servants, but there is no evidence of such a custom among the Mound-Builders of this region. The author, at one time, discovered in Adams County, Illinois, a mound which contained at its base a fire-bed, or altar, on which a



Mound-Builders' House Wall.

chief had been cremated, with his wives and servants by his side.

It is plain, then, that there was a succession of tribes throughout the Mississippi Valley, some of which built their houses in rectangular shape; others, in conical form. The very shape of the houses furnish a hint as to the stage of culture reached. The ordinary style of building a house among the hunting Indians was that of a cone or hemisphere. But with the sedentary tribes, who were agriculturist, the long house was

common. The Southern tribes varied according to situation. Lodge circles are very numerous on the banks of the Missouri River and in the cypress swamps of Arkansas, and among the stone graves of Tennessee.

But throughout the Southern States the council houses, or great houses, were rectangular. They were sometimes built on the summits of pyramids, and formed a quadrangle, called a public square. Such houses, according to Bartram, were common among the Cherokees and various tribes situated in the Gulf States.

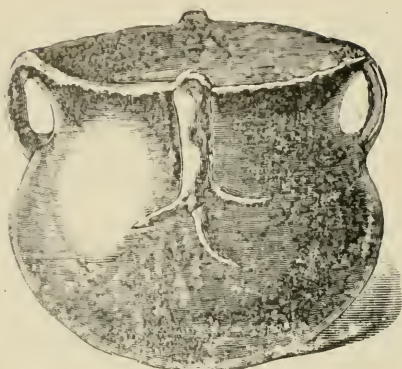
The stone graves were often placed in a circle and arranged in tiers, one above the other, making a heap resembling a con-



Head Vase from Tennessee.

cal hut, but with a fire-bed in the center. In this way the dead were supposed to be following the same habits with the living, exactly as was the case with the ancient inhabitants of Europe, who erected the dolmens, though there the bodies were placed in a sitting posture, and the chambers were rectangular. Among the stone graves the usual mode of burial was horizontal, with a bowl or jug near the head or feet or hips, and always with a bottle near the body. This is very suggestive of the belief in the future state. Sometimes vessels in the shape of the human head, or masks inscribed with the human face, were buried with the body. One vessel has been found finely decorated with a life-like mask.

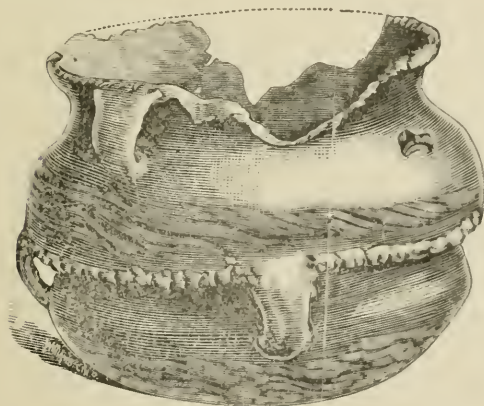
There is a lesson to be learned from this succession of houses, for it proves that the villages were occupied for a long time, and instead of being as recent as some would represent, the villages were ancient. The same impression is made by the study of the burial mounds, for some of these present a succession of burials and indicate that a number of different tribes are buried in the same mounds, thus unconsciously leaving a record of occupation, which may have stretched over a period of even a thousand years, and embraced a succession of population.



Pottery from Ash-Pits in Ohio.

III. The pottery and other specimens of art which belonged to the Southern Mound-Builders were of a superior character, and show that this people had more than ordinary skill in moulding clay into imitative shapes. This is indicated by the vase in the shape of a human face, just described. It is also further proved, by the great variety of shapes in which clay was moulded by this unknown people.

We may say that the pottery of the Southern Mound-Builders was very superior to that found in most of the Northern mounds, though there are a few exceptional cases. To realize this, we only need to examine the rude vessels taken out from the mounds of New York and the ash-beds of South-



Pottery from the Ash-Pits in Ohio.

of Tennessee and the cypress swamps of Arkansas. We shall find that the former occasionally have handles on the side, some with two rows of handles. But there are rarely any imitative shapes presented by them. They are, for the most part, plain cooking vessels, designed to be suspended over the fire, though they occasionally have a pointed base, giving the idea

that they were forced into the ground and a fire built around them. It is easy to draw a picture of the people using these pottery vessels, as gathered about the fire outside their hut. But it would be a picture of a rude people, without skill in moulding pottery, and with no taste in decoration. The only taste displayed was in decorating the bodies of their chiefs with feathers, and painting their own faces in different colors, or carving pipes in shapes imitating birds and animals.

The Southern Mound-Builders decorated their pottery with a great variety of ornaments, with spiral lines, with circles, with bands, crosses, volutes or scrolls, and occasionally with the suastika or hooked cross. There are vessels, also, which give the shape of a star, with four, eight or nine rays, and a circle on the face of a star, representing the sun. One bottle described by General Thruston has a hand painted on the outside; this was from the stone graves. But a number of bottles and vases from the middle Mississippi district, are decorated



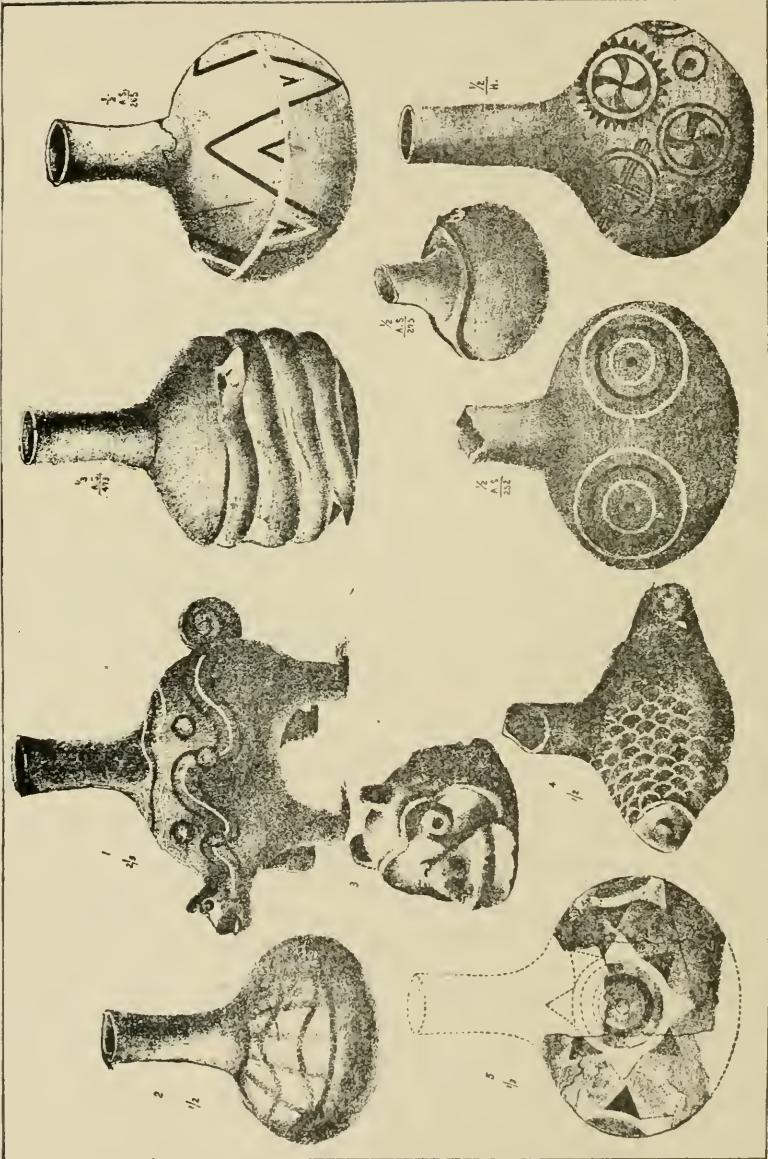
Pottery from the Stone Graves.

with scrolls and loops, as well as spirals, and are very graceful.

Dr. Edward Evers has described the pottery found in the swamp villages of Southeastern Missouri, and so throws additional light upon the character and civilization of the people. He says all the pottery belongs to nations, who had abandoned their nomadic habits and were following agricultural pursuits.

All this pottery is made of dark-grayish clay, mixed with sand and shells. The larger portion of it is sun-dried. In many of the ornamented specimens the decoration is painted in red, white and black. Some are decorated with birds' heads, which are hollow, holding clay pellets, which rattle when the vessel is shaken. The curious shape of one vessel suggests that it was a lamp. Square-shaped vessels are the earliest shapes, very rarely decorated. Other vessels have short cylindrical necks, with no handles, resembling large vases or jars, but decorated with disks and circles; occasionally with pointed rays in different colors. One jar has a band around the bowl, with circles above and below the band. Other jars are imitative in shape, of gourds and other natural objects.

The bottles present the most graceful forms. Some of these are shown in the plate. One shows a fish with scales,



POTTERY FROM ARKANSAS.

which are very natural; another, a domestic dog, with spiral lines from mouth to tail; another has a serpent around the bowl; another, a series of circles with a cross inside, and the suastika is found in other circles. Another bottle has concentric circles in different colors. The form of these bottles is very graceful. The symbolism is quite suggestive. There are other vessels and dishes, some with flaring sides, scalloped rims; others very plain, resembling large bowls; others of rectangular shape.

There are also dippers which resemble gourds, and pots which are made in the shape of animals and fishes; the back of the animal is open, but the sides or body make the bowl. Occasionally human heads are represented, the neck forming the base, the face and head the bowl, and the opening of the bowl being at the top of the head. The most graceful of all are the bottles, for these have long necks and spherical bowls, which present beautiful rounded shapes, decorated with attractive figures. The vases in imitation of gourds are very beautiful.

The pottery from the stone graves of Tennessee resembles that found in Missouri and Arkansas, and is probably made by the same race of Mound-Builders. A large number of these vessels are kettle shaped, varying in size from little toys, one inch wide, to large pots, a yard in diameter. A set of bowls of well-burned ware present symmetrical forms. A bowl, or drinking cup, with a head on the edge, is one of the best pieces of modeling in terra-cotta. Another bowl, with a head on the rim, and arms and feet on the sides, is interesting. Drinking cups in the shape of sea shells are numerous. A little toy vessel in the shape of a fish, is also attractive.

A group of pottery from the stone graves representing fish and animal forms are familiar models of the old pottery-makers. These may represent the emblems of the Southern tribes. Similar forms are found in Arkansas and Missouri.

The pottery vessels which imitate the human face and form are very interesting, because they give an idea of how the pottery-makers looked. There is a difference between them, for some of the faces resemble those of Indians; others have the features of the white man. The very color of the pottery makes the resemblance the more striking.

There is a tradition that a white race formerly existed among the Mound-Builders, though the general supposition is that they were Albinos. The pottery vessels, however, represent faces which resemble those of white men of historic countries. We base no argument upon this resemblance, and yet it is very striking. Dr. Thomas Wilson holds, in his work on "Suastika," that the shell found in the Big Toco Mound in Tennessee, represented in the Twelfth Annual Report of the Bureau of Ethnology, gives evidences of Buddhism in the Western Hemisphere. This shell is in fragments, but it represents a

person with slim waist, legs crossed Hindu fashion, with long feet, broad toes; a girdle about the waist; a triangular covering on the hips; bands about ankles and arms; wings extending from the shoulders, the feathers marked by circles and dots. The whole figure being seated upon a circular cushion, represented by the edge of the shell.

All these show a different dress from the ancient North Americans. There is a mystery about this whole subject of symbolism, which cannot be solved at present. We only call attention to the figure, for the sake of showing that the art of the Southern Mound-Builders was quite superior to that of the Northern Indians. And this suggests that they belonged to a

different stock, and may have come from a different source. Possibly they may have received some of their symbols from more civilized races.

The pottery found in the sand mounds of Florida, is very different from that found in the Gulf States further west, and indicates a different stage of culture. This pottery is made up of large bowl-like vessels which have no bottom, the use of which is a mystery. There are also many pottery vessels in the shape of animals and fishes, some of which are very grotesque, as if made only for amusement.



Vase With Three Heads.

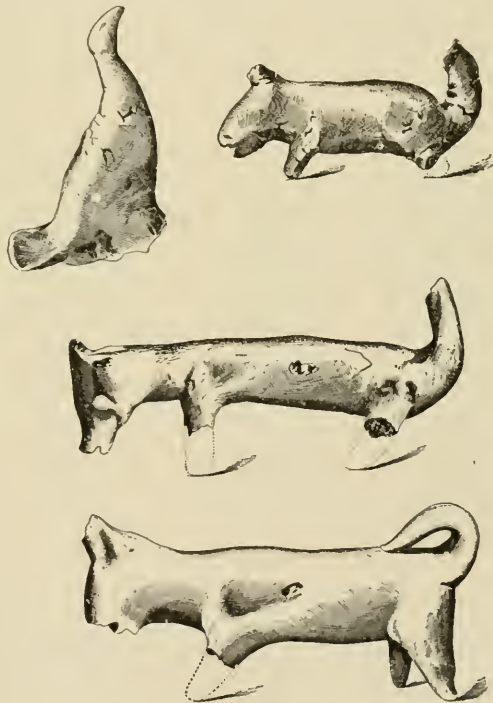
There is very little decoration on this Florida pottery, and no such symbolism as may be seen in that found in the stone graves. Still, if we compare the Florida pottery with that found in the Northern States—New York, Michigan, Wisconsin, Minnesota, and Iowa—we shall conclude that this people were better pottery-makers. This impression is confirmed by the study of the fragments picked up on the surface, for many of these are decorated with a variety of patterns.

The pottery of the Gulf States furnishes some problems not easy to solve, as we occasionally come upon vessels which seem to be extra limital in origin. One such vessel is shown in the cut. It represents a water vessel supported by a tripod, in which we recognize three human faces. These remind us of

the Triad of the Hindus, though there is no symbolism and no ornament about the faces, and we are left only to the simple fact that the three faces are joined together and belong to the same piece. Still, if we take the strange combination of heads and compare it with the tripods made up of Vishnu, Siva and Brahma, so common in India, and then take the shell ornament, which presents the seated figure in the attitude of Buddha, we shall be led to ask whether there was not at one time some Hindu visitor in the land. This vessel was found in the Hollywood Mound in Georgia. Another bottle was found in the same mound, which was ornamented with the figure of a large star with eighteen rays; also a light and a dark circle, with a cross in the center of a circle, the whole representing a combination of symbols which is very significant. In the same mound was a pot which was ornamented with a feathered serpent, whose body was covered with lozenge-shaped figures and cross-hatching, making it resemble the serpent symbols of the far Southwest. There were fragments of porcelain and pieces of iron in the mound, which showed the presence of the white man.

IV. The copper relics which have been found in the mounds are the best

sources of information, as to the state of culture reached by the Mound-Builders. Copper relics seem to have been scattered all over the Mound-Builder territory, but are not wholly confined to that territory, for a few have been found on the Northwest coast, and others in the far Southwest. All of these have different shapes from those of the Mississippi Valley, and seem to have been used as badges of distinction, or emblems of office. The same is true of a certain portion of the copper found in the mounds, though the majority of them are articles used for practical purposes, such as

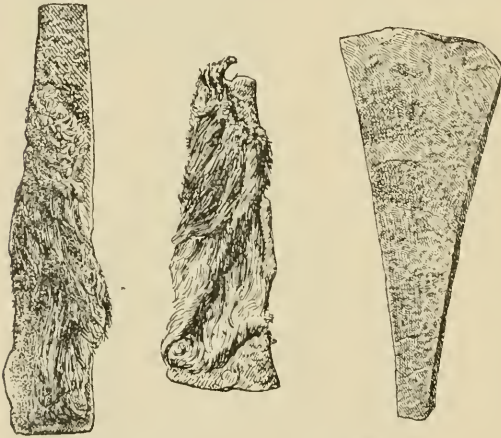


Florida Pottery.

axes, chisels, knives, spear-heads, awls, needles and fish-hooks.

They are more numerous in the region of the copper mines of Wisconsin. No state has furnished a greater number or variety of copper relics than Wisconsin, in which copper mines are situated. Large collections of copper relics from this state may be found in Chicago, in Madison and Milwaukee, Wis., and Davenport, Iowa; also, in the National Museum, Washington, and many other localities.

The first account of the finding of copper relics, was published by Colonel Sargent in Drake's "Picture of Cincinnati," and by Dr. S. P. Hildreth of Marietta, Ohio. It appears that certain silver-covered plates of copper had been found in one of the streets of Marietta, near the old fort. These had been buried in a mound with a body; but the obsequies had been celebrated by fire, and while the ashes were yet hot, a circle of



Copper Relics from Iowa Mound.

flat stones had been laid over the body, and the fire smothered. A mound, ten feet high and thirty feet in diameter, was then erected. The find consisted of three large circular bosses, or ornaments for a sword belt. A buckler, of copper over-laid with a thick plate of silver, was on the forehead of the body. About the same time, other copper relics, which were called "sword scabbards," were discovered; also a piece of sheet copper, used as an ornament for the hair, and a copper plumb and a cylinder of copper. All of these, especially the "sword scabbards," suggested the presence of a civilized people, and were so interpreted by the discoverers.

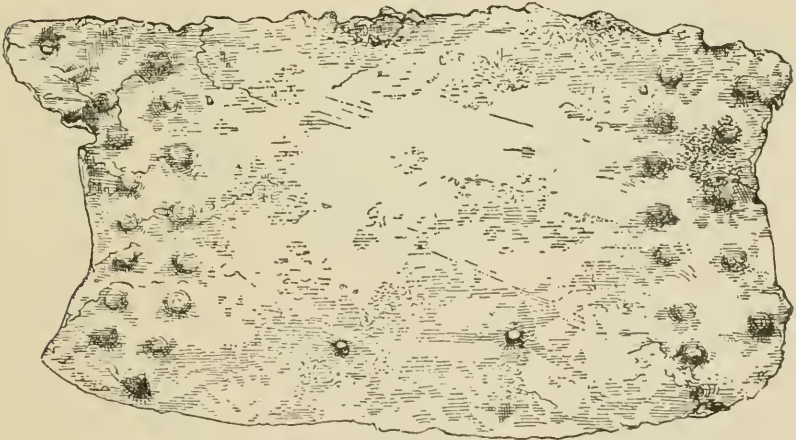
The so-called sword scabbards were afterward explained by Prof. F. W. Putnam, and the so-called bosses were shown to be ear ornaments, or spool ornaments; and the silver-plated sword scabbards were shown to be sheaths for spears. The theory that a sword scabbard and belt, plumb bobs or bosses, and articles of iron had been found in the mounds was soon abandoned.

Later on, in the year 1876, a discovery was made of copper relics, and many other objects, in a mound at Davenport, Iowa. These relics consisted of axes wrapped in a coarse cloth; also

a number of copper needles and other articles. The find was described by Dr. J. W. Farquharson, who also described the Davenport Tablets, and mentioned the fact that some had regarded them as containing a narrative of the Flood.

The discussion over the Mound-Builder problem was precipitated anew by these different finds; some holding that a mysterious people had once dwelt in the Mississippi Valley, but had disappeared; others believing that these relics were left by the ancestors of the Indian tribes. The latter opinion was upheld by the Bureau of Ethnology.

A copper plate from a mound in Vernon County, Wisconsin, is given in the cut. This mound was 50 feet in diameter, and 4½ feet high. Ten skeletons were found at various depths; at the depth of four feet, two were found; on the skull of one



Copper Plate from Mound in Wisconsin.

was a thick copper plate, beaten out of native copper with rude implements, which had been probably used as a breast plate and part of the dress of the Mound-Builder. This plate resembles one found by Professor Andrews of Ohio, both of which show that the Mound-Builders of this region were accustomed to use copper as articles of dress, as well as weapons and personal ornaments and religious symbols.

A discovery was made by the assistants of the Bureau, in 1883, in the neighborhood of the great Etowah Mound, which non-plussed all parties.

Several stone graves were found here at the bottom of a conical mound, near the great mound, or pyramid, and within the same enclosure. Each of these graves contained a single skeleton. Three of them were those of children; four of them, those of adults. The children had on the wrists and neck shell beads. One of the adults had a large conch shell

and a lot of copper near the head; another had an engraved shell on the breast; another, a piece of copper under the head. The most interesting objects were two thin copper plates, and two engraved shells, each of which presented a human figure in the attitude of dancing. These had wings on the shoulders and a mask upon the face, resembling the beak of a bird, thus making composite figures, part human and part animal, suggesting a peculiar superstition or ceremony. The discovery of these figures gave rise to renewed discussion. This discussion was, however, affected by the theories which had been previously held and advocated. Those who believed in the identity of the Mound-Builders with the modern Indians, advocated the idea that the figures proved a contact with the white man, and were post-Columbian in their origin; while those who advocated the antiquity of the Mound-Builders, believed that they showed a contact with the Toltecs and Aztecs. The latter is the opinion of the writer, for two of these figures seem to be holding in the hand a human head or mask; thus suggesting a human sacrifice, a custom peculiar to the Aztecs, and not common among the Indians.

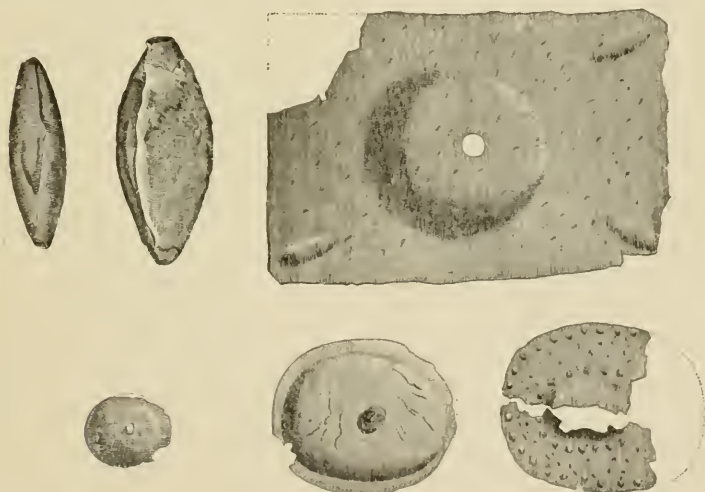
The figures have bands about the arms and legs, pouches at the side, and badges in the hands which resemble those worn by Indian dancers; the badges on the top of the head resemble the banner stones, but suggest the double-bladed axe, so common a symbol in the East. The attitudes are those of Indian dancers, but the wings which protrude from the shoulders resemble those which are seen on the shoulders of the priests of Babylonia. The fact that these graves were near the Etowah Mound, and that these copper plates were so full of symbols resembling others which are common in the region, confirms the theory that the Southern Mound-Builders were partakers of the peculiar customs and symbols of the tribes of the Southwest. Still, the fact that a single plate was



Shell Gorget from Etowah Mound.

found in each grave, shows the official character of the person buried, and suggests that there may have been a transmission of symbols from one part of the country to another, and that the Southern Mound-Builders had contact with the civilized tribes of Central America in prehistoric times.

It is not an unusual thing to find a mound containing a number of these cists arranged in two, three or more tiers. Dr. Jones says graves of this character have been observed in Northern Georgia, Eastern Tennessee, the valley of the Delaware, Ohio and Southern Illinois. He expresses the belief that in some former age this ancient race must have come in contact with Europeans, and derived this mode of burial from them, and bases his view on the presence of copper crosses and vases with crosses and scalloped circles. Dr. Thomas thinks that they



Copper Relics from Florida.

were built by the Shawnees, and says that "it was in the graves near the Etowah Mounds that the copper plates and engraved shells were found, which have given rise to so much discussion. In all their leading characteristics the designs are suggestive of Mexican or Central American origin; but the copper plates are suggestive of European influence. First, the wings rise from the back, as angel's wings, and do not replace the arms, as in Mexican designs; second, the stamping seems to have been done by a harder metal than the aborigines were acquainted with; third, that engraved shell gorgets form a link which not only connects the Mound-Builders with historic times, but tends to corroborate that the stone graves were built by the Shawnees."

On the other hand, Dr. Thomas Wilson maintains that the copper relics and the shell gorgets found in the Etowah Mound and in the stone graves, prove that there was contact

with historic countries in prehistoric times, and that Buddhistic symbols may be recognized in various localities.

Bartram's description of the burial customs of the Choctaws proves that they rather than the Shawnees, were the Stone Grave people. After keeping the bodies of the dead heroes for a time, they make a grand funeral. The people then take the coffins and slowly proceed to the place of interment, where they place the coffins in order, forming a pyramid of them, and lastly cover all with earth, which makes a conical hill or mound. This proves that the Stone Grave people were Muscogees, but there are analogies between the Muscogees and the Mayas which are also very surprising. These analogies are as follows: 1, the rotunda resembles the caracol in shape and location; 2, the great house, or public square, resembles the palace; 3, the platform mounds resemble the terraced pyramids; 4, the artificial lakes resemble the cenotes; 5, the earth walls on either side of the chunky yards resemble the "seats" on either side of the "gymnasium"; 6, the location of the rotunda, with its serpent pillars, near the chunky yard, is the same as that of the stairway and temple, with the serpent balustrade.

Copper relics have been found in Florida, which differ in all respects from those found among the Mound-Builders. These have been described by Mr. Clarence E. Moore, who has made many discoveries among the sand mounds. He claims that these copper relics are prehistoric, and show the symbolism which prevailed in Florida.

Mr. Moore describes a piece of sheet copper, with a central boss and elliptical ornaments at the corners; also an oval ornament, with oval boss surrounded by double lines of beaded ornamentation; another oval boss; also two elliptical beads of sheet copper, and a small button of copper; all of which were found at Port Royal, Florida.* He says that the presence of bark and vegetable fabrics with the copper is almost universal. A breast plate, with a decoration consisting of circles and symbols, arranged in a very regular manner, but showing rivets which have joined two small copper sheets, all of which exhibited the workmanship of the prehistoric people, was found in the same region.

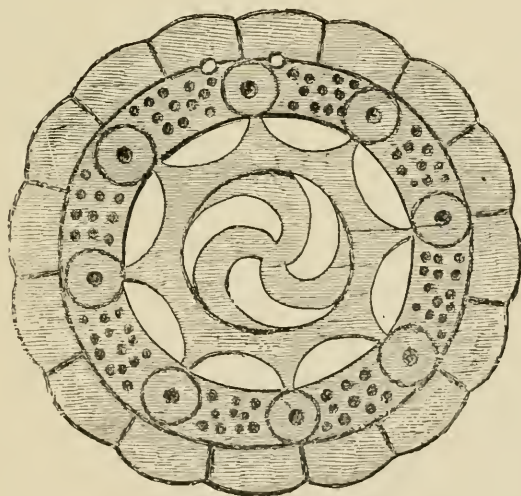
V. The symbolism of the Southern Mound-Builders remains to be described. We have seen that there was a great difference in the religious systems of the Mound-Building tribes; for those situated in Wisconsin were evidently totemistic animal worshippers; those in Ohio were sun worshippers; the Stone Grave people were apparently given to the worship of the heavenly bodies and the personification of the Nature powers; while those in the Gulf States possessed idols, which they placed in their houses and on the pyramids.

We may say that there is no part of the Mississippi Valley

* See the figures on the preceding page.

where symbols are more numerous than among these stone graves and the pyramid mounds of the Gulf States. This is found in the spool ornaments, in the shell gorgets, in the copper plates, as well as upon the pottery;* but is somewhat difficult to unravel. There is, to be sure, a distinction between the symbolism and the ornaments, and yet the fact that both are found to resemble those prevailing among the Southwest tribes, is very suggestive.

The spool ornaments found in the stone graves and in the Ohio mounds, show that there was considerable intercourse between the tribes of the Mississippi Valley. These spool-shaped articles were always of copper, and resembled the earrings which may be seen on the copper plates found near the Etowah Mound, and on the shell gorgets found in the stone



Sun Symbol on Shell Gorget.

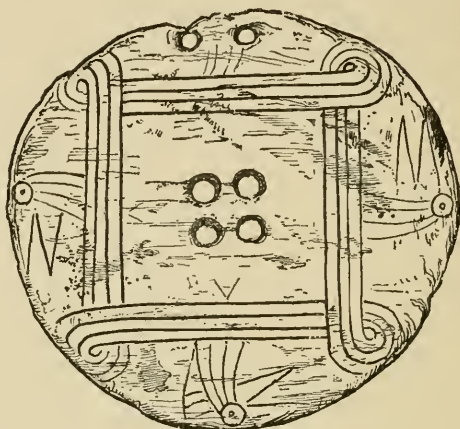
graves. They were probably used for holding the tassels, or feather bundles, which were the ensigns of office with the chiefs and medicine men.

They resemble the ornaments which are seen on nearly all the human figures found in the codices of the Mayas, as well as those which are sculptured on the façades of the shrines and temples. The same is true of the bands encircling the ankles, the legs, wrists and arms of the dancing figures. There is no such combination of symbols in these dancing figures, as may be seen in the image of the god Tlaloc, for in the latter we find the shoulders draped with a tiger skin. The *mactli*, or sash, is in the shape of a serpent, and the head-dress is full of all

* The plate representing the pottery from the Cypress Swamps shows the various symbol which were common among the Southern Mound-Builders. In this we see the serpent, the cross, the circles and the swastika. The shell gorgets from the Stone Graves also exhibit the same figures.

kinds of symbols of the vegetable and animal world, showing that the symbolism had become complicated. But so far as it goes, the symbolism of the Stone Grave people and the Southern Mound-Builders was of the same general character.

There is considerable resemblance between the symbols of this people and those which are given by the mythology of the various Indian tribes, for we find the number four in the looped square, with the birds' heads projecting from the square; also in the cross contained in the square; the lines which form the square itself, and the dots and circles which are inscribed upon the shells, as well as in the joints of the spiders' legs, showing that the number four was very sacred. We find



Birds' Heads and Looped Square.

also that the number thirteen is not so common as in Central America, nor the number twenty; yet, it may have been introduced among the civilized races by the priests, who made their sacred year to consist in the multiplying of thirteen by twenty, and the secular year by multiplying eighteen by twenty. The comparison between the symbolism of the Pueblos and the Mound-Builders is very



Spider Gorget from Missouri.

marked. Here, we find seven and thirteen are sacred numbers. These are drawn from the four quarters of the sky, with the zenith and the nadir added, making six, which, with

the same division of the sky and the common center, gives us the number thirteen; exactly as the four divisions of the sky and the earth, with the throne of the emperor in the center, gives the number nine to the Celestial Empire. The resemblance between the symbolism of the wild tribes of the North and that of the Mound-Builders, has been taken by some to prove that there was no difference between the people; the tribes were all alike, and were in contrast with the people of the Southwest.



Fighting Figures from Stone Graves.

We have, however, only to compare the fighting figures which are seen upon the shell gorgets with the figures found in Central America, to prove that there must have been contact. There are birds' wings and claws in these figures, just as there are birds' wings in the shield of the Priesthood of the Bow found among the Pueblos, and in the thunder bird ornaments of the Thlinkits. But in the latter there are no arms along with the wings; while with the gorgets, the arms are prominent, and the hands hold weapons, as important parts of the figure. The fact, however, that the serpent and the circle are so closely associated with the symbols common among the civilized tribes of the Southwest, would show that they were either borrowed from them, or were developed independently, and yet embodied the same fundamental principles.

The great serpent in the Ohio Valley shows how prominent this symbol was among the Mound-Builders of that region, but the combination of the serpent, the cross, the circle, the bird, the winged figure, and the human image, shows that symbolism



Fighting Figures from Mexico.

had reached a great perfection among these Southern Mound-Builders, and only needed the presence of a more cultivated priesthood for it to equal that which existed in the Southwest.

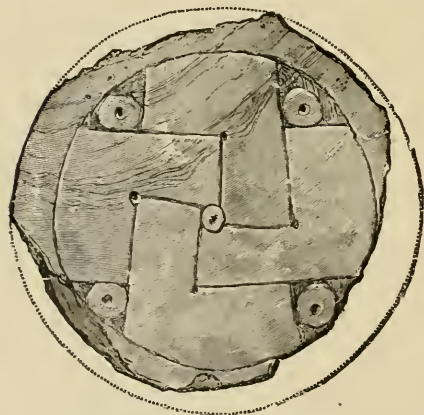
The shell gorgets found in the stone graves are very interesting on account of their symbolism, as they indicate a familiarity with the motion of the heavenly bodies and the apparent revolution of the sky, and the habit of personifying the Nature powers under the figures of birds, spiders, serpents, circles, crosses, and occasionally human faces.

The engraved shell gorgets and the copper plates found in the mounds of the Gulf States, are deserving of a closer study than they have ever received; for they show that a religious system had been developed among them, far more elaborate than any among the wild tribes of the North. And it was

purely of prehistoric origin, and not owing to contact with the white man after the time of the Discovery.

The point which we shall make from all these facts, is that the Mound-Builders, and especially those situated in the Gulf States, were not by any means as recent in origin, or as wild and uncultivated, as many have imagined them to be.

The attempt to identify them with the modern Indians has been over-riden, and has had a tendency to put the Mound-Builders, as a class, in the



Suastika on Shell Gorget.

wrong light, for there is no Indian tribe of the present time who properly represents the real condition of the Mound-Builders of the prehistoric age. There was certainly a difference between them and the Indians as at present known, and it is far better to take the picture presented by their works and relics as our guide, than to take the Indians, degraded as they have been by contact with the white man, as representatives of the people who have passed away, but whose works are still remaining upon the soil, and whose relics are gathered in museums and cabinets for our inspection. The resemblance between the Southern Mound-Builders which occupied the region from the Etowah Mound to the Great Cahokia Mound, and on farther west to the Cypress Swamps of Missouri, is on the other hand very striking. This resemblance is found in the pottery and the symbols seen on the shell gorgets, as well as in the shape of the mounds themselves.

The pipes and the pottery which are made in imitation of

birds and animals, are numerous in the stone graves; while idol pipes are more numerous in the region of the pyramids. The best of these were plowed up near the base of the pyramid mounds on the Etowah River many years ago.

The Southern Mound-Builders, however, seem to have recognized the motion of the sky, for all of the symbols, such as the serpents and crescents, hooked cross, and birds' heads, are presented in coils, as if to represent revolving motion. The circles also are arranged in a way to suggest the sun, moon and heavenly bodies. Even the human figures have bent legs and arms, and hemispherical heads. The various elements also seem to have been recognized and symbolized, for the spider has the zigzag in its mandibles, to symbolize lightning. Its legs were divided into four parts, the hooked cross inside of a circle forms the body, while the four bars and eight dots are seen in the tail. The birds' heads projecting from the looped square, with an eight-rayed star inside the square, and a circle and cross on the face of the star, evidently symbolized the air, or rather sky, in motion. The symbols for fire are not so easily recognized, yet the suastika was originally a fire-generator. The earth was also symbolized in the shell gorgets.

The wooden relics which were discovered by Mr. F. H. Cushing on the Island Keyes off the coast of Florida, are also carved in imitation of birds and animals, showing that even here an ancient people lived, who were allied to the Mound-Builders.

It is strange that a people should have lived here on an island remote from the coast, and remain totally unknown until by accident their works were brought to light. For many vessels had passed by these Keyes and many visitors had landed on the shores without knowing that they had ever been inhabited.

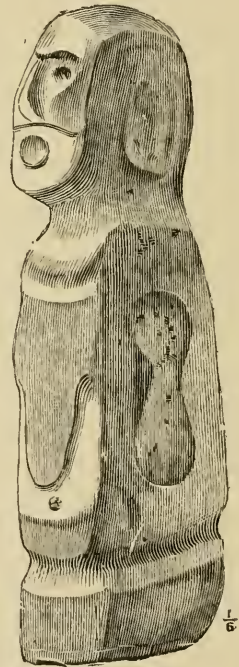
It was found that the earthworks, which were erected in the midst of the island, had the same general shape as those in the Gulf States. They were pyramids and had graded ways leading from the water to their summits; but they arose out of the water, giving the idea that the people who built them were navigators and fishermen, but they also led a village life similar to the Southern Mound-Builders. The chief peculiarity of the village was that it was surrounded by an embankment, which was veneered with conch shells, and protected from the force of the waves by this means. There was an opening through the embankment by which the people entered the bayou and reached their habitations. It is supposed that into the same opening, schools of fish were driven, and that it served as an immense fish weir.

Prof. Putnam, in his comments upon this find, points out the resemblance between the wooden objects and masks and those found in Central America, South America, Alaska and the Northwest Coast, and finds an argument upon this that

the Mound-Builders migrated from the West to the East, and finally reached the Florida Keyes; and that they early had their home in the Central American region, which extended around the gulf to Florida.

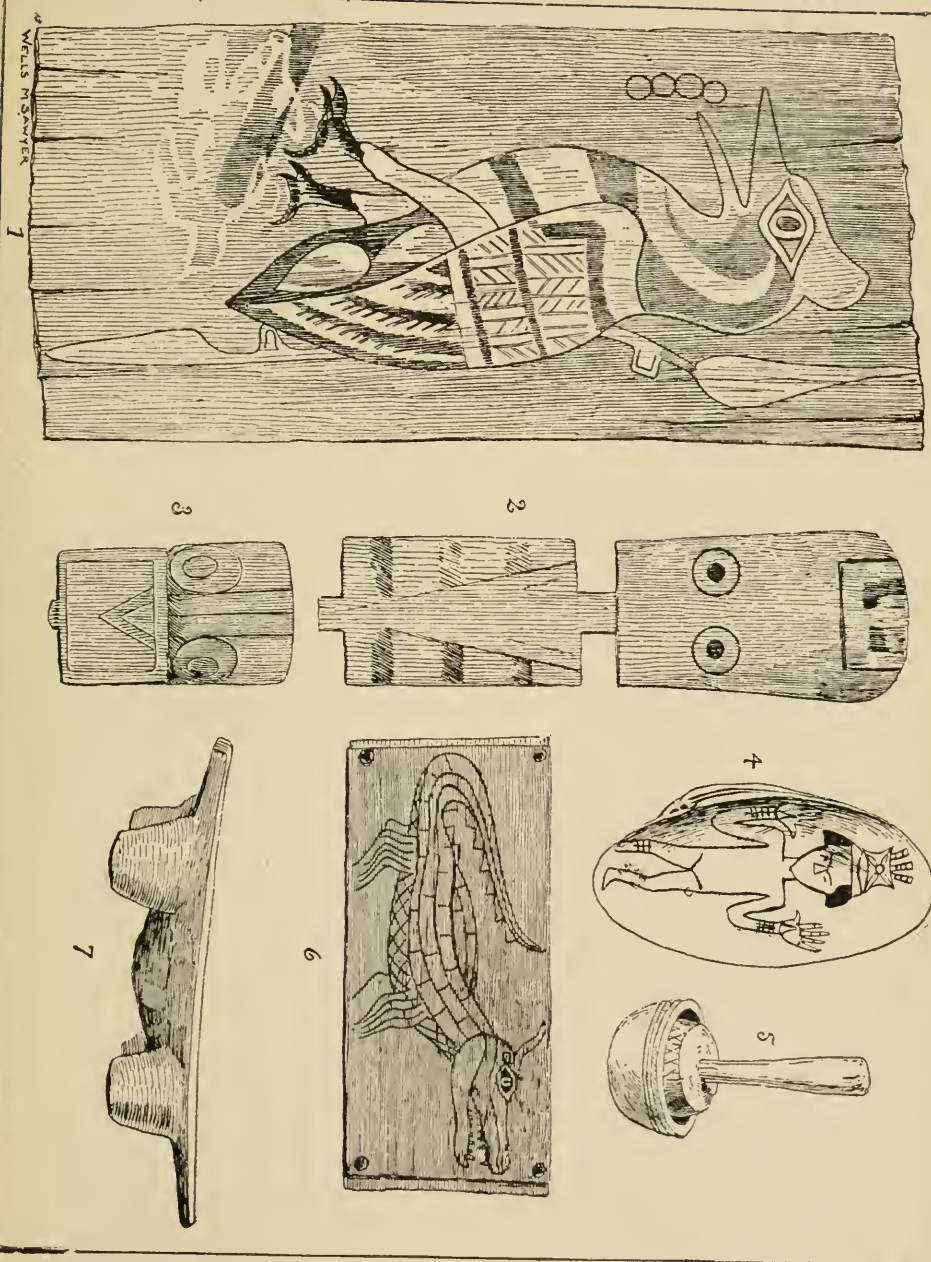
VI. The idols found in the mounds are very significant. These images remind us of those sometimes seen on the façades of the palaces in Central America. They also remind us of the worship of the god of war, of rain, of death, and the god of light, which prevailed in Mexico. These idols became scattered, some being found in Ohio and various parts of the Mississippi Valley; but the images found in the so-called "dead houses" of the Southern tribes indicate that their religious system was different from that of the Ohio tribes.

The idols of the Stone Grave people are of various sizes, from large stone images, two feet or more in height, to small clay figures not over three inches in length. They were made of sandstone, limestone, fluor spar and stalactite, as well as of clay. Some have been discovered in caves, others on the summits of high mounds, a few in the depths of the mounds; but a large majority have been picked up from the surface. One of these is represented in the cut. It was found in a cave in Knox Co., Tennessee. It may have been fashioned from a large stalactite. It is twenty inches in length and weighs thirty-seven pounds. It shows a prominent nose, heavy eye-brows, full cheeks, broad square chin and retreating forehead; all of which are features of the Muscogees or Southern Indians. The mouth is formed by a projecting ring; a groove runs across the face, between the nose and mouth, in this respect it resembles the sculptured figures found in Mexico and Central America.



*Idol from Knox Co.,
Tennessee.*

Another idol in a sitting position, was found in Perry County, Tennessee. Gen. G. P. Thruston, the best authority on the antiquities of Tennessee, has described several stone idols and terra cotta images found in the Stone Grave settlements at Nashville. These show the flattened forehead, and vertical occiput, characteristic of the crania of the Stone Grave Race. He says the features of the face were of a heavy Ethiopian cast, similar to those of the dark image in the pottery idols shown in the plate. Traces of garments are some-



WOODEN TABLETS AND PAINTED SHELL FROM THE FLORIDA KEYS.

Fig. 1 is the Kingfisher Crest of the warrior class. Fig. 2 is an Ancestral Tablet. Fig. 3 is the Horned Crocodile which, according to Bartram, was painted on the facades of the great sacred houses of the Creek Indians. Fig. 4 is a Shell painted with the humanized bird god, resembling the copper bird-god found at Etowah Mound.



IDOL PIPE FROM THE ADENA MOUND.

times found on images of clay. The hands of the clay figures were frequently found in the same position.

Mr. Caleb Atwater mentions two idols, found in a tumulus near Nashville, Tennessee; another, near Natchez, Mississippi. Thomas Jefferson mentions two Indian busts, found on the Cumberland River. Du Pratz says the Natchez had a temple filled with idols, images of men and women of stone and baked clay. According to the "Brevis Narratio," the Indians venerated, as an idol, the column which Ribault had erected, to which they offered the finest fruits, perfumed oils, bows and arrows, and decorated it with wreaths of flowers.

De Soto found a large temple at Talomeco, in which were gigantic statues of wood, carved with considerable skill, which stood "in a threatening attitude and ferocious looks," at the



Idol from Tennessee.



Idol from Georgia.

entrance. The interior of the temple was decorated with statues. Adair saw carved human statues of wood, in the Muscogee country, which seemed to be "the effigies of heroes and the symbols of tribal pomp and power."

There was, however, a difference between the idols found in the Gulf States and the image pipes, or so-called idol pipes, sometimes found in the valley of the Ohio. This difference will be seen in reading the description of one recently discovered in Ohio, by Mr. W. C. Mills, of the Archæological Society of Ohio. The following is his description of the mound and pipe:

The Adena Mound is on the estate owned by Governor Worthington. This mound belongs to the Chillicothe group. From its summit the noted Mound City could be seen directly to the north; also the Chillicothe group to the south, directly east was the Scioto River, to the west is the large hill

on which is the mansion called "Adena." Near the mound at the foot of the hill was an artificial lake, from which the dirt was taken in building the mound. It measured 26 feet in height and 445 feet in circumference. The mound was built at two different periods. In the first period the original mound was 20 feet high, with a base 90 feet in diameter. It was constructed of dark sand taken from the lake. In the second period the mound was covered with a few feet of soil different from that used in the first period. The base was extended more than fifty feet; the apex, twelve or fifteen feet. The burials belonged to both periods. In the first period, a rude sepulchre, made of unhewn logs, was below the surface, and the body deposited in this. In a number of cases the loose earth was removed from the sepulchres, disclosing large rooms, some ten feet long and seven feet wide, with an arched roof, high enough for a man to stand upright in them. In the second period, the burials were quite different: no sepulchres were prepared for the dead; not one of the skeletons was covered with bark, and only one showed any trace of a woven fabric. This was preserved around a copper bracelet.

The idol pipe represented in the plate was taken from the bottom of this mound, and from a sepulchre made of large logs, placed eight feet apart, the top covered with smaller logs. The implements and ornaments were placed promiscuously in the sepulchre. The effigy represents the human form in a nude state, except a covering about the loins. On the front of this covering was a snail-like ornamentation. The mouth-piece formed a part of the headdress of the image. The front part of the pipe was gray and the back, brick red, and covered with a deposit of iron ore. From the lobe of each ear hung an ear-ornament, resembling the button-shaped copper ornaments frequently found in the mounds.

This review of the religion of the Mound-Builders is fragmentary and somewhat unsatisfactory, but so far as revealed by the symbols and the relics, the conclusion is warranted, that there was a progressive series from the North to the South, consisting of animal worship and sun worship, the worship of the elements and the sky, and the worship of human attributes, in the shape of idols, but no apprehension of the personality of the Supreme Being, this indicates that the Mound-Builders, as a whole, had developed whatever system they had, independently of all other nations.

INDEX.

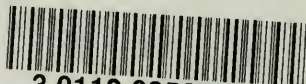
- Adams Co., Ill., Serpent Effigy in, 123.
 Adams Co., Ohio, Serpent Effigy in, 123.
 Adena Mound, 174, 179, 339.
 Alexanderville, O., 86, 138, 264, 265.
 Algonquins, 21, 64, 116.
 Alligator Mound, Granville, O., 230.
 Altars, 47, 124, 165; 231, 242, 243, 260.
 Animal Effigies, 71, 227, 228.
 Antiquity of Mounds, 31, 53, 138.
 Appalachian Mountains, 27, 215.
 Arkansas, Mounds in, 122, 145, 215, 217.
 Arrow Heads, 283.
 Ashtabula, O., Mounds at, 192.
 Asia, Mounds in, 5.
 Atwater, Caleb, 52, 88, 90, 135, 252.
 Aztlan, Wis., 110, 170, 171, 216.
- Banner Stones, 37, 290.
 Bartram, 146, 259.
 Baum Works, 126.
 Beacon Mounds, 189.
 Beauchamp, Rev. Wm., 137, 194.
 Beehive Tombs, 115, 127, 128.
 Beloit, Wis., Mound at, 71.
 Binkley, S. H., 208, 270.
 Big Harpeth, Tenn., 216, 267.
 Big Twin Works, 207, 270.
 Bird-shaped Amulets, 285, 289.
 Bird Pipes, 280.
 Blackwater Group, 238.
 Bourneville, O., 115, 155, 192, 210.
 Brackenridge, J. M., 98, 176, 177.
 Brinton, Dr. D. G., 102, 121.
 British Columbia, Mounds in, 341.
 Brooding Ornaments, 288.
 Brush Creek, 85, 139.
 Buffalo and Indians, The, 49-55.
 Burial Mounds, 12, 59-74.
- Cahokia Mound, 98, 159, 175, 178, 285.
 California Relics, 34.
 Carlisle Fort, 209.
 Carr, Lucien, 126.
 Cartier, Jacques, 19, 280.
 Cass County, Ill., 233, 242.
 Catawba Indians, 128.
- Catlin, J. C., 121.
 Cedar Banks, Works at, 89, 268, 269.
 Chambered Mounds, 75, 223-226.
 Chattahoochie River, Mounds on, 178.
 Chatanooga, 179, 285.
 Cherokees, 97, 110, 116, 116, 118, 125, 131, 235.
 Chillicothe, O., 85, 156, 191.
 Choctaws, 29; Map, 183.
 Chunky Stones, 286, 290.
 Cincinnati, O., Works at, 85, 117.
 Circles and Crosses, 55, 84, 94, 152, 217, 231, 249, 255, 263, 266, 269, 284, 297, 304, 306.
 Circleville, O., Works at, 86, 190, 269.
 Clan Emblems, 22, 71, 122, 144.
 Clans among the Mound-Builders, 141, 144, 155, 185.
 Clark's Works, 89, 95, 196, 197.
 Cloth in Mounds, 52, 69, 184, 234, 283.
 Coleraine Works, 95, 198.
 Concentric Circles, 135, 256.
 Cook Farm, Mounds on, 233.
 Copper Relics—Awls, 67, 234; Axes, 40, 43, 46, 52, 69; Beads, 234, 267; Bell, 333; Chisels, 234; Crescents, 247; Crosses, 266, 332; Disks, 248; Masks, 79; Mines, 35, 349; Plates, 51, 52, 327; Rings, 179, 274, 312, 329, 332; Spools, 234, 236, 239, 261, 266.
 Covered Ways, 93.
 Crawford County, Wisconsin, 225.
 Creek Indians, 131.
 Crescent Earthworks, 228, 256.
 Crescent Pavements, 262, 269.
 Cultus of the Mound-Builders, 133-148.
- Dakota, Mounds in, 24, 62, 67, 114, 142.
 Dakotas, 29, 64, 85, 113, 118, 120, 139, 142.
 Davenport Academy, 41, 45, 53, 68.
 Davenport Mounds, 43, 67, 283.
 Davenport Pipes, 41, 233.
 Davenport Tablets, 43, 48.
 Dawson, Sir William, 116, 137, 150.
 Dayton, O., Works at, 138, 198.
 Defensive Walls, 92.

- Defensive Works, 185, 220.
 Delawares, 21, 26, 121, 129.
 Des Moines River, 122, 136.
 Detroit, Mich., 74.
 Districts, Different, Map of, 182.
 Divisions of Territory, 15, 23, 62.
 Dunlap's Works, 89, 140.
 Eagles, Copper, 52, 171.
 East Tennessee, Works in, 118.
 East St. Louis, Works at, 98.
 East Dubuque, Works at, 224, 226.
 Effigy Mounds, 71, 227, 250.
 Effigy Pipes, 197, 273.
 Elephant Pipes, 41.
 Enclosures in Ohio, 18, 26, 51-56.
 Eries, The, 116.
 Etowah Mound, 161, 179, 314.
 Etowah, Ga., Works at; 141, 285.
 Europe, Mounds in, 16, 60.
 Evansville, Ind., Works at, 170.
 Excelsior, Minn., Mounds at, 66.
 Falling Gardens, 106, 177.
 Featherstoneaugh, 163.
 Fire Beds, 38, 115, 237, 302, 312, 313.
 Fire Worship, 172, 231-237,
 Flint Ridge, 35, 57.
 Flint Hoes, 35, 289.
 Florida, Relics in, 38.
 Florida, Works in, 38, 337.
 Fort Ancient, 203, 241.
 Fort Hill, 201, 266.
 Fort in Clark County, Ind., 212.
 Forts on Miami River, 196.
 Forts on Scioto River, 210.
 Fortified Hill, 206, 216, 218.
 Fortified Villages, 39, 148, 194.
 Galena, Illinois, Mounds at, 65.
 Game Drives, 138.
 Garden Beds, 35.
 Gasconade County, Missouri, 11, 39.
 Gateways, 151, 199, 204, 212.
 Geographical Divisions, 23, 62, 182.
 Georgia, Mounds in, 35, 280.
 Gold Ornament, 38.
 Gorgets, Shell, 128, 264, 305.
 Graded Ways, 153, 175.
 Grades of Culture, 136, 353-356.
 Granville, O., Mounds at, 155, 195, 230
 Grave Creek Mound, 76, 114, 121.
 Graves of Indians, 324, 335.
 Great Miami River, 189, 196.
 Grotesque Portraits, 277.
 Habitation Mounds, 214, 264.
 Hamilton County, O., 197.
 Hand Symbol, 301, 302.
 Hardinsburg Fort, O., 116.
 Hearths, 209.
 High Bank, 87, 149.
 Highland County, O., 190.
 Hill Forts, 206-211.
 Hochelaga, 138, 146.
 Hocking Creek, 85.
 Hoes and Spades, 35, 275.
 Holmes, W. H., 187, 301, 307.
 Hopeton, O., 51, 89, 149, 255, 266.
 Horn Handles, 104.
 Horse-shoe Symbol, 207, 249, 303.
 Hubbard, Hon. Bela, 74.
 Human Sacrifices, 298.
 Hunter Tribes, 63, 64, 225.
 Hurons, 279.
 Idols, 288, 317, 339.
 Illinois, Mounds in, 17, 24, 53, 56-57,
 63, 67, 69, 122, 130, 158, 224, 236,
 242, 302, 306.
 Illinois River, Mounds on, 52, 56-57.
 Images, Pottery, 108, 339.
 Images, Stone, 339.
 Implements of Bone, 326.
 Indiana, Mounds in, 24, 41, 63, 86,
 212, 235, 257, 261, 264.
 Indians and Mound-Builders, 50-58.
 Indian Traditions, 120, 125, 130, 137,
 140, 142, 144, 165, 229, 232, 237,
 247, 281.
 Indian Villages, 55, 135, 141.
 Inscribed Tablets, 48.
 Intruded Burials, 124.
 Iowa, Mounds in, 24, 53, 63, 67, 130,
 224, 225-226.
 Iowas, 129, Map.
 Iroquois, 26, 119, 129, 226, 279, 282.
 Iron in Mounds, 60.
 Jade, 36.
 Johnson, H. L., 108.
 Jones, C. C., Hon., 39, 190.
 Jones, Dr. Joseph, 216.
 Kaskaskia, 101.
 Kenawha Valley, 27, 115, 131, 258.
 Kentucky, 38, 41, 139.
 Keokuk, 136.
 Kickapoos, Map.
 Kinney, T. W., 250.
 Knives, 104.
 Koch, Dr., 39.
 Koshkonong, 71.
 Kunz, G. F., 38.
 Lake-dwellings, 34.
 Lake Michigan, 23.
 Lapham, Dr. J. A., 189.
 Leaf-shaped Implements, 242.
 Leni Lenape, 121.
 Lodge Circles, 145, 219.
 Lookout Mounds, 187-192.
 Louisiana, Pyramids in, 175, 178.
 Maces, 181, 275, 287.
 Marietta, Ohio, 83, 89, 91, 152.

- Marquette, 168.
 Masks, 228
 Massie's Creek, 211, 241.
 Mastodon, 32, 39, 41.
 McAdams, William, 162.
 Messier Mound, 182,
 Mexican Semblances, 180.
 Mexico, 34, 36.
 Miami River, 116, 156, 256, 265.
 Miamisburg, Ohio, 86, 191.
 Mica Crescents, 262, 298.
 Mica Mines, 35.
 Micos Cabin, 145.
 Middle District, 114 132.
 Middle Tennessee, 104.
 Military Works, 25, 137, 141, 189.
 Mississippi, Pyramids in, 311-312.
 Mississippi River Relics, 277.
 Missouri, Mastodon in, 39.
 Missouri Pottery, 322.
 Missouri River, Mounds on, 114.
 Mitchell Station, 56.
 Moquis, 236.
 Moline, Illinois, 52, 69, 233.
 Monk's Mound, 100.
 Moon Cult, 237-244.
 Margan, L. H., 143, 353.
 Moorehead, W. K., 50, 203, 242.
 Mounds, Altar, 47, 124, 231, 242, 260,
 297, 300-324.
 Mounds, Bacon, 191.
 Mounds, Chambered, 110, 124, 223.
 Mounds, Conical, 265.
 Mounds, Effigy, 23, 69, 227, 250.
 Mounds, Fire, 111, 192, 233.
 Mounds, Great, 117, 164, 177, 264.
 Mounds, High, 117, 164, 177.
 Mounds, Hill, 119, 188.
 Mounds, Lookout, 64.
 Mounds, Maps of, 17, 18, 22, 47, 58,
 60, 94, 115, 174, 189, 263.
 Mounds, Northern, 341.
 Mounds, Observatory, 152.
 Mounds, Oblong, 242.
 Mounds, Platform, 27, 83, 150.
 Mounds, Pyramid, 29, 157 184.
 Mounds, Sacrificial, 93, 256.
 Mounds, Serpent, 122, 296.
 Mounds, Signal, 189.
 Mounds, Stratified, 53, 56, 225, 235,
 244, 313.
 Mounds, Symbolic, 252, 269.
 Mounds, Terraced, 166, 173, 239.
 Mounds, Truncated, 265.
 Muscatine Slough, 17, 68, 233.
 Muscogeas, 100, Map.
 Muskingum, 85, 115, 256.
 Nashville, Tenn., 283, 288.
 Natchez, 29, 100, 118.
 Newark, O., 86, 152, 263.
 Newburg Mastodon, 39.
 North Carolina, Mounds, 27, 115, 128.
 Northern Georgia, 28, 129.
 Number of Mounds, 20.
 Observatory Mound, 163.
 Obsidian, 33, 261.
 Ocmulgee River, 173-182.
 Ohio, Defences in, 84, 92, 119, 122,
 Ohio, Mounds in, 84, 92, 119, 122,
 126, 137, 138, 152, 188, 192, 206, 288.
 Ohio, Relics in, 34, 233, 242, 261, 268,
 278, 282, 291, 315-321.
 Painesville, Ohio, 74.
 Paint Creek, Ohio, 85, 87, 115, 197,
 256, 298.
 Panther Pipe, 110.
 Parallel Walls, 151.
 Pavements, 204, 209, 257, 262.
 Pearls, 318, 322.
 Phallic Worship, 300.
 Piketon, 154.
 Pipe Stone Quarry, 35.
 Platform Mounds, 263.
 Portrait Pipes, 283.
 Portraits, 106.
 Portsmouth, O., 85, 88, 94, 248, 255.
 Pottery, 102 112, 279.
 Pottery Heads, 109.
 Pottery in Vessels, 314-325.
 Prairie Jefferson, 174.
 Putnam, Prof. F. W., 165, 235.
 Pyramid Builders, 114, 132, 158-184,
 307.
 Pyramid Mounds, 157, 176, 185, 320.
 Quincy, Ill., 67, 123, 296, 304.
 Races Among Mound-Builders, 20,
 150.
 Red River, 63.
 Religious Works, 221-237.
 Relics, 21, 266, 271-292.
 Sacred Enclosures, 81-96 252, Map.
 Sacrificial Mounds, 93, 314.
 Sacs and Foxes, 237.
 Salt Springs, 348.
 Savannah, Tenn., 170, 219.
 Seal Township, 89, 239.
 Scioto River, 87, 115, 119.
 Scrolls and Spear-heads, 322.
 Sea Shells, 251
 Serpent Mounds, 122, 123.
 Serpent Pipes, 302, 322.
 Serpent Symbol, 265, 304, 306, 322.
 Shawnees, 100, 119, Map.
 Shell Beads, 33, 235, 243.
 Shell Gorgets, 128, 132, 306.
 Silver in Mounds, 36, 56, 319.
 Silver Ornaments, 38.
 Silvery Mica, 127, 243, 262, 314.
 Solar Cult' 245-247.
 South Carolina, 131.

- Spider Gorgets, 284, 302, 307, 332.
 Spool Ornaments, 266.
 Squier & Davis, 87, 88, 125, 131, 235.
 St. Louis, 157.
 Stockades, 193-195.
 Stockade Villages, 38, 142, 192.
 Stone Forts, 141, 147, 211, 342.
 Stone Grave People, 97-112, 118, 161, 216, 220, 278, 285, 323.
 Stone Mounds, 79, 212, 214, 312.
 Sun Circles, 251-259.
 Sun Symbols, 252, 260.
 Sun Worship, 85, 125, 164, 251, 259, 267.
 Suastika, 51, 54, 301.
 Symbolism, 82, 293, 304.
 Tablets, 42-46, 48, 303, 322.
 Tennessee, Mounds in, 97, 102, 112, 128, 141, 170, 267, 301, 342.
 Terraced Mounds, 74, 146, 158, 166, 170, 252.
 Thomas, Dr. Cyrus, 73, 116.
 Thruston, Gen. G. P., 99, 190, 267, 296.
 Toad Pipe, 321.
 Toolsboro, 234.
 Totems, 22, 72, 225, 227, 229, 230, 250.
 Traditions of Indians, 120, 130, 137, 142, 144, 165, 229, 237, 281.
 Trumpet Pipe, 281.
 Tube Pipes, 282.
 Turner Group, 318.
 Upper Mississippi, 63.
 Urns, 65.
 Vases, 107, 324, 326, 334, 340.
 Vaults, 70, 126.
 Villages of Indians, 139, 145, 187, 194, 215.
 Villages of Mound-Builders, 126, 156, 173-194.
 Vincennes, Ind., 117, 190, 264.
 Wateree River, Mounds on, see Map.
 Winged Figures, 173.
 Wooden Relics, 337.
 Worthington, O., Works at, 265.
 Woven Cloth, 180.
 Wyalusing, 12.
 Wyandottes, 2 6129.

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