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## Summary of the Archaeology of Iowa

Frederick Starr

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# SUMMARY

— OF THE —

## Archæology of Iowa

BY FREDERICK STARR, PH. D.



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STARR—SUMMARY OF THE ARCHÆOLOGY OF IOWA.

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## SUMMARY OF THE ARCHÆOLOGY OF IOWA.

BY FREDERICK STARR, PH. D.

It is now several years since I planned the work of which this is a part. As a student, in Iowa, of Iowa archæology, I believed that a systematic work carefully outlined might be carried out with profit. As the plan shaped itself it comprised five separate pieces of work:

(a) Preparation of a *bibliography*, that workers might know where to look for the literature.

(b) Publication of a *summary*, that those interested, who do not have access to libraries, may know what has been done.

(c) Organization of exploration in every part of the State; collection of data, diagrams, plans; making of a working-map, showing the location of mounds, shell-heaps, trails, village sites, etc.—in other words, *field-work*.

(d) *Publication* of a final report of the work done under such organization, and a separate publication of the map worked out by the exploration.

(e) Preparation of a pamphlet of illustrations of "Iowa types" of archæological specimens and of a series of plaster copies and models of remarkable specimens, mounds and the like, for distribution to universities, high schools, colleges, and scientific and historical societies within the State. This *educational* work is the most important and significant part of the whole plan, and can only be done well after the other parts have been performed.

How far this plan is to be realized remains to be seen. The Bibliography has been printed; the Summary is here presented. By a wide distribution of this through the State it is hoped that a body of helpers and co-workers may be raised up to work under direction toward definite ends. Persons interested are urged to write to the Academy for advice and for fuller statement of plans.

Very many individuals have helped the author in the preparation of the Bibliography and in this Summary both by criticism, supply of material, and by loan of prints; to all such we give thanks.

The following corrections should be made in the Bibliography (PROC. D. A. N. S., vi., pp. 1-24):

In No. 16, for pp. 263-281 read pp. 265-281.

[PROC. D. A. N. S., VOL. VI.]

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[February 9, 1895.]

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- In No. 23, for Vol. ii. read Vol. iii.  
 38, for pp. 9, 13 read pp. 4-5.  
 50, for p. 266 read p. 267.  
 63, strike out word *nine*; add *sums up work of 1880*; read Vol. iii., not Vol. ii.  
 64, this should be same as No. 71.  
 71, for pp. 140-146 read *for 1881*.  
 75, for John J. read John G.  
 81, for Barber read Barker.  
 85, add *and South-eastern Minnesota*.  
 93, in place of reference given, read *Zeitschrift für Ethnologie, 1886, pp. (194)-(195)*.  
 101, is part of No. 185.  
 106, for p. 106 read p. 107.  
 115, for p. 246 read p. 247.  
 139, Title, "*Antiquities of Missouri Bluffs.*" Add *Read before Iowa Academy of Sciences, Des Moines*.  
 144, for No. 172 read No. 170.  
 157, for Mercer County read Iowa.  
 162, for No. 23 read No. 44.  
 171, for Vol. vi. read Vol. vii.  
 172, for No. 94 read No. 144.  
 179, for Vol. v. read Vol. vi.  
 181, for 1887 read 1886, pp. (322)-(328).

Also, add the following titles and numbers: (The author has not seen articles thus marked\*).

206. AMERICAN ANTIQUARIAN. 1885, vii., p. 253.  
 Speaks of Henshaw on Mound-Builders' Art.
207. ARCHÆOLOGIST. 1894, ii., p. 282.  
 Refers to skeletons and relics found at Sioux City.
- \*208. CHART OF IOWA AND WISCONSIN: GEOGRAPHICAL, GEOLOGICAL, AND STATISTICAL. Philadelphia, 1838.  
 Refers to Iowa Mounds.
- \*209. COLUMBUS JUNCTION HERALD. 1876.  
 Articles on Toolesboro and other mounds.
210. EVANS, S. B. *Proc. Congres Int. des Americanistes*, 1890,  
 [pp. 498-506.  
 "On Some Claims of the American Indians." Attacks Bureau of Ethnology theory of Mound-Builders.
211. HERMANN, RICHARD. *Personal Letter*.  
 Describes relics from Dubuque County.

212. HOLMES, WILLIAM H. *Bureau of Ethnology, Third Annual Report*, 1881-2, pp. 397-423.  
 "Prehistoric Textile Fabrics," etc. Refers to Iowa specimens: pottery on p. 417, celts on p. 411.
213. LEWIS, T. H. *The Archaeologist*, 1892, ii., pp. 85-89.  
 "Effigy Mounds near Aurora, Ill." On p. 87 refers to distribution of effigies in Iowa.
214. MORGAN, BENJAMIN. *Cedar Rapids Gazette*, Oct. 14, 1887.  
 "The Mound-Builders." Mentions Iowa mounds generally, but gives some detail regarding mound in Keokuk County, containing "burial urns," and one in Warren County, containing many skeletons.
215. DE NADAILLAC, MARQUIS. *Materiaux pour l'histoire, etc.*, [1885, pp. 497-517.  
 "Les Pipes et le Tabac." Figures and describes some Iowa pipes.
216. PEET, STEPHEN D. *American Antiquarian*, xvi., p. 93 *et. seq.*  
 "Craft Symbols and Religious Emblems." Refers to Iowa pipes on pp. 93-94.
- \*217. POLK COUNTY, CENTENNIAL HISTORY OF. Des Moines, [1876.  
 At pp. 15-16 refers to earth-works on site of old Fort Des Moines.
218. PRATT, WILLIAM H. *Proc. Davenport Acad.*, ii., p. 154.  
 "Exploration of Mound 1 on Allen Farm."
219. ————— *Proc. Davenport Acad.*, iii., pp. 90-91.  
 "Exploration of mound on Allen Farm." The last mound of the series explored. Some bones and a few relics.
220. THOMAS, CYRUS. *The Cherokees in Pre-Columbian Times*, [16mo., pp. 97.  
 Refers on p. 78 to Allamakee County enclosure; on p. 81 to pipes; on p. 83 to East Iowa mounds; on p. 89 to customs in region.
221. ————— *12th Annual Report Bureau of Ethnology*, [1890-1891.  
 "Report on the Mound Explorations of the Bureau of Ethnology." On pp. 38-39 he describes the Lyon County



mounds and circles; p. 553 refers to varied character of Scott County mounds; pp. 99-112 treats specifically of Iowa archæology. Works in Allamakee, Clayton, Dubuque, Wapello, Van Buren, and Lee Counties are described.

- \*222. WEBSTER, CLEMENT L. *Nature*, Jan. 1, 1891.  
The same probably as No. 185.  
This author has written many newspaper articles, the contents of which were afterward republished in the various articles referred to in the Bibliography.
- \*223. WHINERY, S. C. *Iowa State Register*, August, 1883.  
"The De Soto Mounds."
224. WITTER, F. M. *American Geologist*, ix., p. 276.  
Describes löess at Muscatine; its organic remains and two arrow-heads and some flint chips.

In this Summary we aim at definiteness. Many articles upon Iowa Archæology are so vague as to have no value. The arrangement of material is, for convenience, in the alphabetical order of County names.

#### ADAMS COUNTY.

Thomas <sup>174</sup> lists a mound on the Thompson farm, near *Corning*.

#### ALLAMAKEE COUNTY.

Thomas <sup>169, 173, 174</sup> describes works seven miles above *New Albin*, on the Upper Iowa River. They are located upon a bluff, lying in a bend of the stream, and bordering a bayou—no doubt an old river channel. The top of the bluff is roughly rectangular. The northernmost, largest structure is an enclosure quite exactly circular, except on the east, where it conforms to the line of the bluff. At the southeast the ends overlap somewhat, leaving an entrance-way between them. A ditch within borders the embankment from the entrance on the south to the point where the circular part is broken by the bluff-line. The dimensions of the earthwork are—diameter from N. to S. outside to outside, 277 feet; diameter, E. to W. outside measures, 235 feet; circumference, 807 feet; part along the bluff, 100 feet; entrance overlap, 45 feet; the wall is quite uniform, with a height of about 4 feet and a width of 25 to 28 feet; the entrance is 16 feet wide; the ditch is 5 to 6 feet wide and 3 feet deep. At the north an excavation adjoins the wall; it is about 100 feet long, 35 feet wide at widest part, and 3 feet deep.

ALLAMAKEE COUNTY—*Continued.*

The circular embankment is composed chiefly of yellow-brown clay; this is covered with drifting sand and an accumulation of bones, river-shells, stone chips, potsherds, dirt, etc. A trench across it showed in section about 1 foot of sand, then from 1 to 2 feet of refuse matter, then the embankment proper 2 feet in height. Nearly all the implements found were of stone and very rude, little more than flakes with one sharp edge; a few arrow- and spear-points were found. Many charred bones of fish, birds, rabbit, fox, bear, wolf, elk, and deer occur in the refuse.—— Alexander <sup>2</sup> describes the same enclosure, and mentions from the locality a pottery vessel with ornamental markings. This measured at mouth, 14 inches in diameter; at widest, 26 inches. It had handles at each side. He also mentions two specimens of copper, one a thin strip 2 inches long and  $\frac{3}{4}$  inch wide, and the other a triangle 1 inch wide at base and  $1\frac{1}{2}$  inch along the side, with centre and base perforated.—— Thomas <sup>169</sup> thinks the enclosure represents two stages of occupation: (a) as a palisaded fort, (b) as a village site.——Both Thomas and Alexander describe other structures in the group—suarish enclosures to the south and south-west of the great circle, and many mounds. Of the latter Alexander speaks of eighty-three, Thomas says over one hundred, and appears to recognize an arrangement in six nearly parallel lines running north-east and south-west. The former author states that they continue to be found along the river to about twenty miles above New Albin. Thomas <sup>173</sup> describes the mounds as being mostly circular, from 15 to 40 feet in diameter and from 2 to 6 feet high; a few are oblong, from 50 to 100 feet in greatest diameter.——Certain barren spots on the plateau proved to be burial places, among which were scattered stone chips, shells, charcoal, and ashes. They were seldom more than 18 inches deep, and on excavation show a compact layer of hard, light-colored earth, perhaps mixed ashes and clay, subjected to action of fire. These were covered with sand from the butte.——In section, the mounds themselves show, first a layer of soil, then the hard, light-colored layer, then the skeletons. Bones were numerous, both in the barren places and in the mounds, sometimes mingled with charcoal and ashes, but usually as horizontal skeletons at a depth of from 1 to 3 feet. The long mound,

ALLAMAKEE COUNTY—*Continued.*

No. 1 in the east line, contained an oblong pile of sandstone near the centre; beneath it was a rude stone coffin, of slabs, 6 feet long and 18 inches wide. This contained a skeleton, extended with head to the west, badly decayed; also stone chips, rude scrapers, a valve of unio, and potsherds. On the sand butte near by, which is about 100 feet in height, are three mounds like the rest in structure. Three mounds within the smaller, squarish enclosure to the south-west of the great circle were opened.

Elsewhere, Thomas <sup>221</sup> describes the square earthwork on the south-west corner of the plateau, on the margin of the bluff, facing west. The wall, which is from 12 to 15 feet wide and from 2 to 4 feet high, surrounded three sides of a square, and measures on the north, 200 feet; on the east (where it is ditched on the outer side), 150 feet; on the south, 175 feet. About thirty feet east of the north-west corner is an excavation about 3 feet deep. There are three small mounds within the enclosure.

No. 1 was 30 feet long by 20 feet wide, and 4 feet high. The top layer, 1 foot thick, was of loose sand; the remainder was of hard, yellowish clay. In this were several large, flat sandstone fragments, beneath which, at original surface, was a much-decayed human skeleton, with a few stone chips, unios, and potsherds.

No. 2 was a cairn of sandstones covering human bones, charcoal, and ashes. It was 18 feet in diameter and 3 feet high.

No. 3 was a cairn covered with earth and heaped over a mass of charred bones, charcoal, ashes, and potsherds. It was 15 feet in diameter and 3 feet high.

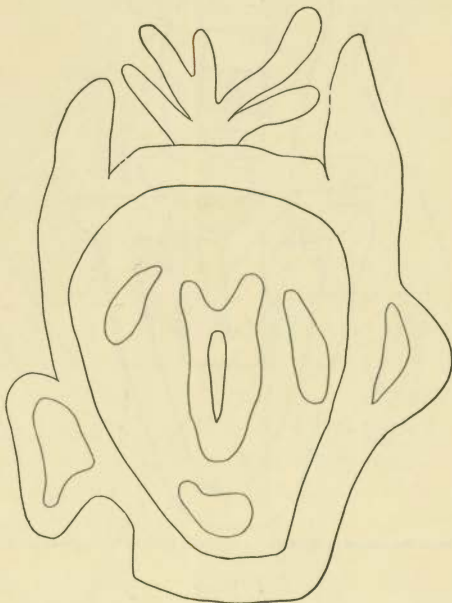
South of this group, just across an impassable slough, on a terrace at the foot of a bluff, is an oblong enclosure. Along the margin of the slough runs a wall 300 feet long; from its ends two walls run south, nearly at right angles to it; the western one is 160 feet long, the eastern is 175 feet long. The height of the walls varies from 1 to 3 feet, and the width from 10 to 15 feet. Outside of each end wall is a washout.——A walled vault in the side of the eastern bluff near here is described, and referred to some white or half-breed trapper.

Thomas <sup>174</sup> mentions mounds located on the Hays farm, just above the junction of the Upper Iowa and Mississippi Rivers, two miles south-east of *New Albin*. Besides small mounds, there



ALLAMAKEE COUNTY—*Continued.*

is here an excellent circular enclosure <sup>221</sup>. The circle consists of three parallel ditches and two intermediate earthen walls. The inside ditch was originally probably 5 or 6 feet deep and 12 feet wide; the inner wall is the same width; the middle ditch is 4 feet deep and about the same width as the wall. The circular wall is broken on the side where it strikes the south margin of the bluff overlooking the slough. The circumference of the circle exclusive of the break is 996 feet; the break extends along the bluff 225 feet. At the south-east an embankment 10 or 12 feet wide and from 3 to 5 feet high runs down the crest of a narrow spur about 150 feet, gradually tapering to a point.—Three “furnaces” of stone are here. One was in a small mound with-



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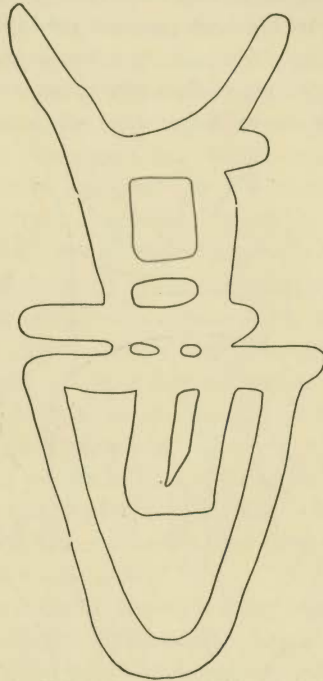
FIG. 1.

in the enclosure; the mound was 24 feet in diameter. In it were two walls of stone, flat sandstones roughly laid up and gradually drawn in near the top until one layer would cover the opening left in the top near that end. The walls were about 13 feet long, 3 feet high, and 3 feet apart. The stones show signs of fire.

ALLAMAKEE COUNTY—*Continued.*

The other two furnaces were not covered by mounds, and were outside the circle about eighty or ninety paces from its north-western part.

The caves below New Albin in the bluffs of the Mississippi River are mentioned by Thomas <sup>174</sup>, Mallery <sup>91</sup>, and carefully described by Lewis <sup>86</sup>. *No. 1* is above *Kain's Station*, in N.-E.  $\frac{1}{4}$  Sec. 26, Twp. 100, R. 4 W. A rock ledge extends for 150 yards



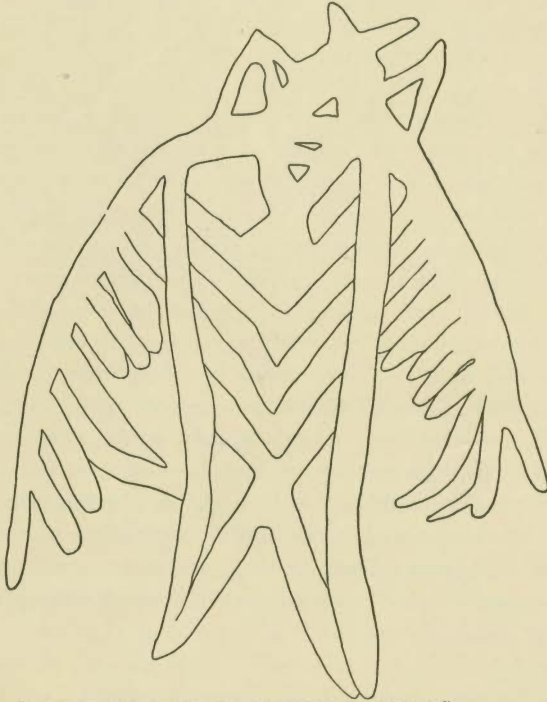
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FIG. 2.

along a slough, rising to a height of 25 feet above the water. The cave has been used as a home, and fragments of burnt bones, potsherds, etc., are dug up in the floor. Here are pictographs. One represents a human head with horns or feathers (Fig. 1). In fissures and shelters in the same ledge are other representations of hands, feet, men, bird-claws, etc. *No. 2*, in the N.-E.  $\frac{1}{4}$  Sec. 18, Twp. 99, R. 3 W., is a small cave in a ledge of rock 200 feet above

ALLAMAKEE COUNTY—*Continued.*

the river. The designs were incised and then painted; several human heads, snakes, animals, canoes, and the like occur; also one bird (?) measuring 6 x 15 inches (Fig. 2). *No. 3* is in a ledge 100 feet above the river, three or four miles below *Lansing*, in N.-E.  $\frac{1}{4}$  Sec. 3, Twp. 98, R. 3 W. Here are simply two fissures, which formerly bore a large number of designs—men, animals, snakes, birds, human feet, tracks of birds and animals, human faces, canoes, etc.—but few are left. One design appears to represent some sort of bird; it measures 14 x 19 inches (Fig. 3).



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FIG. 3.

This last locality is apparently the one referred to by Mallery <sup>71</sup> as fifteen miles south from New Albia.

Alexander <sup>2</sup> further speaks indefinitely of other works and relics. According to him, circular (and one rectangular) enclos-

ALLAMAKEE COUNTY—*Continued.*

ures occur, located usually at intervals of two miles, on the second bottoms. They range from 75 to 100 feet in diameter, and the embankments vary from 25 to 30 feet in width, and are 2 to 3 feet high. He mentions as found in them large stone mortars, pestles, stone axes, celts, arrow-heads, etc. Stone mortars may attain to 14 inches diameter; pestles are of several styles; celts range from  $2\frac{1}{4}$  inches length to the size of a blacksmith's sledge.

Uncertain location, due to Thomas' misuse of name, Little Iowa, elsewhere; means, perhaps, the Upper Iowa <sup>173</sup>. Near the Mississippi River, a short distance below where the Little Iowa joins it, a group of mounds on the crest of a ridge one-fourth mile from the Mississippi and parallel to it; thirty or more mounds; circular, 20 to 40 feet in diameter. All are burial mounds. Those on the higher sandy ground, although of about the same size and with cores of clay similar to those on the firm clayey portion of the ridge, have an upper layer of 2 feet or more added to them. Under the clay core are decaying bones, potsherds, rude stone implements; generally two or more skeletons in a mound, horizontal, side by side, on original surface. On the terrace below were remnants of a row of comparatively *large* burial mounds, largely destroyed by railroad. They ranged from 6 to 15 feet high, and were chiefly of sandy loam like the neighboring soil; each had a central core of hard clay and ashes. Usually one skeleton; relics—chiefly stone axes, arrow- and spear-points, and a few copper celts.—In one mound, 32 feet diameter and 8 feet high, less injured than the rest, was a circular vault of flat, unworked stones, dry-laid, lessening above, and covered by one stone. One skeleton, and a squat and small, globular, earthen vase. This locality is described also by Thomas in his final report. <sup>221</sup>

## BOONE COUNTY.

Fulton <sup>59</sup> mentions mound at *Moingona*.

## CERRO GORDO COUNTY.

On the south bank of Lime Creek, at *Hackberry*, a small mound on a bluff 70 feet above the stream, has been examined by Webster. <sup>187</sup> The position is a fine outlook point. The mound, partly destroyed by natural agencies, appears to have been origi-



CERRO GORDO COUNTY—*Continued.*

nally  $1\frac{1}{2}$  to 2 feet high, is circular, and measures about 15 feet in diameter. At a depth slightly below the original surface of the surrounding land was a horizontal layer of broken pottery, the fragments having their concave side upward; numerous finished and unfinished arrow-points here. In the south-east part of the mound, a few inches above the pottery layer, were found several plates from the plastron of a turtle; these may have been interred after the mound was built.

## CHEROKEE COUNTY.

*Township 93, R. 39* (Spring Township). On the banks of Little Sioux River, at 3 feet below surface, Cutts<sup>34</sup> found fragments of ornamented pottery. The river here is terraced at ten to twelve feet in height; the upper six to eight feet is alluvial soil—loëss wash; below that is a grayish clay. The pottery fragments are numerous, ornamented with cross and parallel lines and indentations; the ware is from  $\frac{1}{8}$  to  $\frac{1}{2}$  inch thick.——A circle of stones about the size of the fist was found; within it were charcoals; above this were potsherds; then the bones of buffalo, elk, and beaver.

## CHICKASAW COUNTY.

Near *Old Chickasaw*, on the west side of the Little Cedar River, a group of ten mounds has been carefully described by Webster.<sup>186</sup> Their location, about one and one-half miles below the town, is at the border of the first terrace, 20 to 40 feet above the flood-plain at its base. A spring is situated at a distance of about 260 yards to the south-east. The mounds are from 2 to 50 feet apart, are circular, round-topped, and measure from 22 to 51 feet in diameter, and from  $1\frac{3}{4}$  to 5 feet in height. The main line of mounds runs north, a few degrees east. The others run parallel to the main line. The mounds of particular interest were:

*No. 1.* Mound 22 feet in diameter and about 1 foot in height. A few inches above the original surface was a thick bed of charcoal and a large, thoroughly-burned oaken log 8 feet long and 12 inches thick; there were no ashes to speak of.

*No. 2.* This mound was graded down years ago; its structure was as that of No. 4, but the mound was smaller; at the original surface two sitting skeletons were found; the bones were

CHICKASAW COUNTY—*Continued.*

well preserved. No relics were found in these mounds nor in the surrounding fields.

*No. 3.* In this three well-preserved skeletons were found, in sitting posture, at the level of the original ground surface; (*a*) one skeleton faced the east; the second (*b*), in front of (*a*), faced it; the third, a few inches north of (*a*), faced the east. The skulls of all three of these skeletons were markedly Neanderthal-

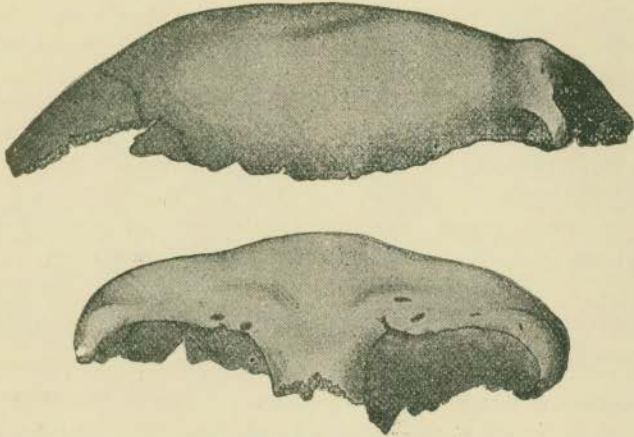


FIG. 4.

oid in type. In one specimen the lower forehead back of the eye orbits is very narrow, but rapidly expands backward; the frontal arch rises only 4.7 mm. before sloping abruptly backward, leaving a concavity back of and over the eyes. The largest cranium was  $6\frac{1}{4}$  inches long by 5 inches wide. One skull appears to be that of a woman; another appears to have belonged to an aged person.—The structure of this mound is reported. The upper  $3\frac{1}{2}$  feet was of yellow clay soil unlike that in the immediate neighborhood; under this came  $1\frac{1}{2}$  feet of earth and ashes, very hard, with scattered bits of charcoal; then, at the original level, the skeletons.

*No. 4.* Two sitting skeletons were found at the original ground level. The crania were crushed, but some of the long bones were preserved. These indicate great muscular development and lofty stature.—Structure: the upper  $1\frac{3}{4}$  feet were

CHICKASAW COUNTY—*Continued.*

of yellow earth; then  $3\frac{1}{4}$  feet of very hard earth and ashes, below which were the skeletons; scattered pieces of oak charcoal were found and patches of ashes; under the latter were thin, deeply-stained layers of earth and ashes.

*No. 9.* Four sitting skeletons at about  $1\frac{1}{2}$  feet above the original surface. The lower jaw of one was large, strong, with squared angles; the teeth were well preserved, but worn down; one molar had a decayed cavity. Another lower jaw measured  $12\frac{1}{2}$  cm. from outer angle to outer angle, but had been fractured during life; the angles were low and much straightened; the teeth, except incisors and canines, were gone and the cavities absorbed. One skull appears to have been subjected to action of fire before it was buried. The skeletons appear to have belonged to two aged, one middle-aged, and one younger individual.— In structure this mound showed, first,  $1\frac{1}{4}$  feet soft, yellow earth; then  $1\frac{3}{4}$  feet mixed earth and ashes of great hardness, with a small amount of scattered charcoal. The skeletons were at centre, upon a hillock of ashes and earth  $1\frac{1}{2}$  feet high.

*No. 10* yielded three well-preserved skeletons. The bodies had been placed sitting with feet drawn under. One lower jaw, in fine preservation, was particularly massive and broad, with large, sound but much worn teeth.— The mound was 45 feet in diameter and 3 feet high. The material was as in the others, but not packed hard. The skeletons were upon a little hillock about 1 foot in height.

*Bradford.* Webster <sup>188</sup> describes Winnebago graves on the brow of the hills overlooking the Little Iowa River. More than twelve individuals, wrapped in blankets and with provisions and possessions, were buried here. They were covered over by stakes driven obliquely into the ground on each side and meeting above; clods of earth covered these.— On the west of the stream are many graves; these were enclosed by a tight crib. (cf. Charles City, Floyd County, Iowa.)

## CLAYTON COUNTY.

Davis and McDonald <sup>162</sup> describe "lookout" mounds, yielding no relics, at localities as follows: On high bluff overlooking the Mississippi River *opposite Prairie du Chien*, the land belonging to the Girard Land Company; on bluff one-fourth mile south of

CLAYTON COUNTY—*Continued.*

the above. There are at the latter place two mounds, circular, 25 feet in diameter and 4 feet high; a third lies seventy feet back from these.

Lewis<sup>83</sup> gives description of a group of effigy mounds near *North McGregor*, 500 feet above the river, on a dividing ridge situated in S.-W.  $\frac{1}{4}$  Sec. 3, Twp. 95, R. 3 W. The surrounding

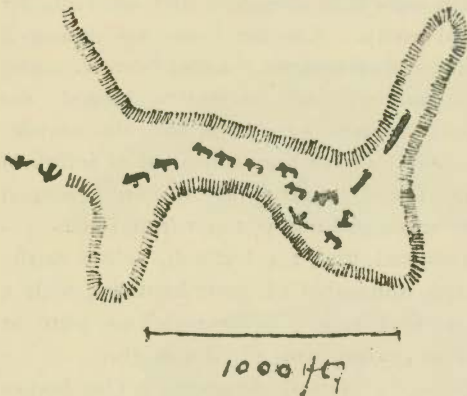


FIG. 5.

country is broken and rugged. The Yellow River lies to the north-west and Bloody Run to the south-west. The group extends a distance of about 2,000 feet, and includes ten animals and three birds, with two long embankments. The first embankment is 190 feet long, 18 feet wide,  $1\frac{1}{2}$  feet high; the second is 138 feet long, 18 feet wide, and  $1\frac{1}{2}$  feet high.

The effigies vary from 79 to 109 feet in length and are from 2 to 3 feet high; no two effigies are just alike, the variation being most marked in the head; all are tailless; though the construction is good the form and design are bad; the birds are all different and are symmetrical, but the wings are unnaturally long.——One mile south and east is one bird effigy.

Thomas<sup>174</sup> lists three groups of mounds above *McGregor*. These may be the same as above described.

Near *Sny Magill* Lewis<sup>83</sup> mentions a group of ninety-two mounds. These are mostly round mounds and embankments, but there are also two animals and two birds. A number of skeletons were found in one large tumulus in this group. The same group is listed by Thomas.<sup>174</sup>

In an article by Clement L. Webster<sup>190</sup> a mound situated four and one-half miles west of *Guttenberg* is described. The mound is on the bank of the ravine of Miner's Creek, some 60 feet above the stream; it was 10 feet long by 7 feet wide, and composed of soft soil; evidently modern, it yielded a well-preserved skeleton, with stone arrow-heads, a pestle, a catlinite pipe, etc.



CLAYTON COUNTY—*Continued.*

The same author mentions a circular, round-topped mound, 24 feet in diameter and  $3\frac{1}{2}$  feet high, situated five or six miles south-east of *Garnavillo*, on the brow of a bluff 260 feet above Buck Creek, near its junction with the Mississippi. At  $2\frac{1}{2}$  feet below the original surface, at the center of the mound, was a well-preserved skeleton, extended, with head to the north. The front part of the skull was crushed. No relics were found. The soil was soft and the mounds appeared to be modern. Lewis<sup>83</sup> says mounds and embankments, singly or in groups, are found at intervals between Guttenberg and Yellow River.

Webster,<sup>190</sup> quoting Knapp, mentions many circular and long mounds in and near *Guttenberg*. He considers most or all of them as recent. Some, he says, are 124 feet long and contain bones. One, opened by Knapp, was circular, 16 feet in diameter, 3 to 4 feet high; it contained, at centre and 2 feet below the original surface, a skeleton; at each side of the head was a large silver ornament, circular, and 2 inches in diameter; flint arrow-points were also found; the mound was composed of soft, moist soil.

The same author describes the making of arrow-heads by a band of Pottawatomies on *Twelve-Mile Island*, in the Mississippi River, near Guttenberg. A notch six inches deep cut in a tree-trunk and the leg bone of a deer were the elements in the apparatus, with which the flints were chipped by pressure.

Thomas<sup>174, 221</sup> mentions an effigy mound on a bluff overlooking the Turkey River, near *Elkport*, about ten miles west of the Mississippi River. Perhaps an otter; length, 150 feet; greatest height, 5 feet.

Webster<sup>190</sup> describes a stone grave near *Buena Vista*, three or four miles west

of the Mississippi River, on the summit of a high hill. A rude box of large stone slabs contained a skeleton extended at length, head to the north, with arrow-points, axes, and other stone implements.

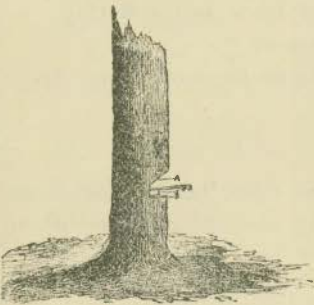


FIG. 6.

## CLINTON COUNTY.

At *Lyons* was a square mound, with flat and level top measuring 40 feet across, situated upon a bluff at some 200 feet above the river. Farnsworth<sup>49</sup> reports that its height was perhaps 8 feet, and that the structure was removed to fill in low ground in the town. In excavating, heaps of bones were found both on the east and the west sides of the mound; the skulls were distorted ("like specimens from Albany, Illinois"), but could not be preserved; some of the long bones were broken and some were gnawed before burial. Some of the skeletons of the eastern heap, especially those near the middle of the mound, appeared to have been buried extended; flat pieces of stone were laid over some of the bones; fires appear to have been kindled above some of the bone-heaps.——An oval slate tablet 5 inches long and 3 inches wide, with two holes, was found here.——Near the centre of the mound was a skeleton, well preserved, seated; about the neck were copper beads, and on the breast a thin copper sheet, 4 inches square, badly eroded; to the left were a pipe of soft sandstone and a small, polished, stone axe. The author considers this an intrusive burial.

Three miles east of *Wheatland*, on the bluffs of the Wapsipinicon, is a group of nine low, conical mounds, averaging about 15 feet in diameter and 2 feet in height. Four were opened; they were composed of a mixture of black soil and clay; no bones, relics, nor traces of fire were found.<sup>38</sup>

Cyrus Thomas<sup>174</sup> cites Colonel Norris for mounds at *Buena Vista*.

## CRAWFORD COUNTY.

A group of eight mounds in a semi-circle below *Denison* are reported by Fulton;<sup>59</sup> also a group of mounds at the mouth of *Paradise Creek*.

## DELAWARE COUNTY.

Moulton's<sup>97</sup> description is very imperfect; no locality is given, and little information regarding the size of most of the mounds. So far as we can make out from his description, three series of earthworks enclose a square open on the west and comprising about ten acres; the northern row runs nearly east and west, slightly curving with the high ground on which it is located; the

DELAWARE COUNTY—*Continued.*

eastern series consists of two earthworks, respectively 40 and 50 yards long, separated by an interval of 10 yards, and running S. 20° W.; these embankments begin 36 yards from the end of the line of mounds; from its southern end,—W. 18 yards and S. 54 yards,—begins another line of mounds, six in number, with the same course; from the southernmost of these is another series of six extending to the west; starting at the north-east corner of the series is a line of eleven mounds running in a straight line north-east. These are round and symmetrical, 4 feet high and 30 feet in diameter.

## DUBUQUE COUNTY.

Near *Peru*, according to Thomas, <sup>173, 221</sup> is a group of mounds upon a dry sandy bench or terrace, 20 feet above a bayou making out from the Mississippi River. The mounds are mostly small and circular; at the north end are four mounds from 40 to 110 feet long and from 1½ to 4 feet high; here also is an excavation some 30 feet in diameter and 6 feet deep; scattered circular earth-rings from 12 to 30 feet in diameter and 1 foot to 2 feet high occur.—— The inner part of these mounds is of hard, compact earth or clay. They yield detached parts of human skeletons. Thus in one may be a skull, in another a leg, arm, or some other part; four or five adjacent mounds might furnish a whole set of bones. Some of the bones are charred and much decayed.

At *Eagle Point*, three miles above Dubuque, is a group of mounds <sup>173, 221</sup> on a bluff fifty feet above high-water mark. There are about seventy mounds in the group, all but two of which are small and conical; two are oblong. About eleven of the small mounds were opened, and nothing but charcoal, stone chips, and potsherds were found.—— In one long mound, just west of the group, were two much decayed skeletons; near the breast of one was a gorget of blue stone and five rude stone scrapers; with the other were found thirty-one fresh-water pearls.—— An oblong and a circular mound near the extreme point of the bluff were opened; they presented a central core of clay and ashes, very hard but crumbling when broken out, and traversed by flattened horizontal cavities lined with a felt-like substance.

Woodman <sup>203</sup> speaks of mounds in the north part of *Dubuque*, adjacent to Lake Peosta. These may be the same as those just

DUBUQUE COUNTY—*Continued.*

described. He says that the group is located fifty feet above the Lake, and that it contains about seventy mounds, regularly arranged in straight or slightly-curving parallel lines. All but the three largest are circular; the smaller ones measure about 20 feet in diameter and 2 to 2½ feet in height; they average about 15 paces apart from centre to centre; they are composed of ordinary soil.——A few rods north and east from the group fragments of pottery and several flint arrow-heads were found.——The same observer remarks that many mounds have been destroyed in building the city of Dubuque.——Another author mentions a cairn near the Lake Peosta group.

McGee<sup>94</sup> figures a group of mounds located in the S.-E. ¼ N.-E. ¼ Sec. 4, Twp. 88 N., R. 1 W. These are about three miles north-east of *Farley*. There are three animal mounds and

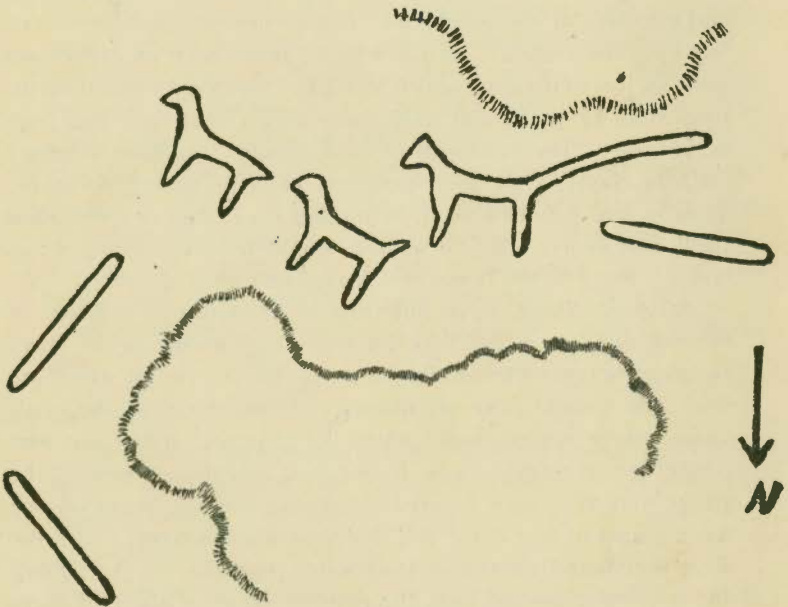


FIG. 7.

three long mounds in the group (Fig. 7).——A mile west of this group, on the same elevation, is a large animal effigy.——Two miles east, on the end of the same ridge, are two embankments, each about 40 yards long.——A great system of mounds exists



DUBUQUE COUNTY—*Continued.*

on the ridge separating the Mississippi and Turkey Rivers. The ridge is never more than a mile in width and is usually narrow; it rises two hundred to three hundred feet above the river level. Mounds, extending in a line toward the north-west for about six miles, occur upon it; they number more than forty, and comprise simple conical mounds, embankments, and effigies. This group was the one upon which McGee made his special metrological study.

Hermann <sup>211</sup> reports a fine double-grooved stone axe, 10 or 12 inches long, from a mound near Catfish Creek, and a nearly transparent quartz spear-head 7 to 8 inches long.

## EMMETT COUNTY.

Aldrich <sup>1</sup> mentions a line of thirteen large mounds, extending north and south, upon a high river terrace; they are from 1½ to 6 feet in height; no exact location is assigned.

## FLOYD COUNTY.

Webster has pursued studies here with much care, and reports the results in several important papers.

Near *Charles City* <sup>187</sup> is a large and very interesting group of thirty-one mounds. They lie, with one exception, near the centre of Sec. 26, Twp. 96, R. 16 W., about two miles north-west of Charles City (the one exception is near the centre of S.-W. ¼ Sec. 23). Twenty-eight of them are in a nearly straight line running 20° W. of N., on the summit of a low, broad ridge. The topography is shown by the diagram. (Fig. 8.)

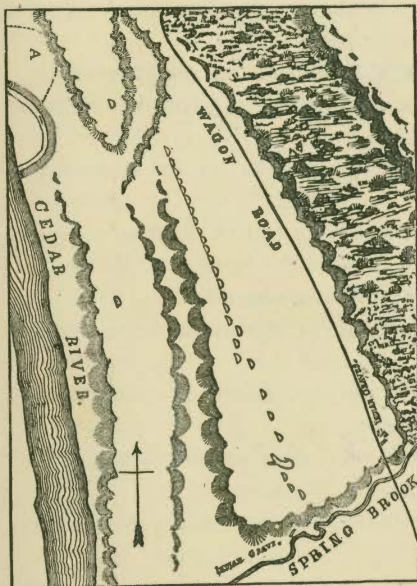


FIG. 8.

No. 1. The southernmost; largely natural elevation; no finds; 63 feet long, 48 feet wide, 3 feet high.

2. Seventy-one feet west; circular, 21 feet in diameter and 1½ feet high.

3. Fifteen feet north-west;

circular, 20 feet in diameter and 2 feet high.

FLOYD COUNTY—*Continued.*

\*4. Ten feet from last; large, curved mound, 163 feet long on outer curve; 20 to 25 feet wide,  $2\frac{1}{2}$  to 3 feet high; tapers and decreases in height toward the north-west, where it is only 8 feet wide and  $1\frac{1}{2}$  feet high; near this end is an extension of the mound—a spur 27 feet long, rapidly diminishing in height and width to 1 foot and 10 feet; apparently a natural mound, modified; no remains.

5. Three hundred feet from No. 4; circular, 21 feet in diameter,  $1\frac{1}{2}$  feet high.

6. Two hundred feet distant; circular, 21 feet in diameter, over  $1\frac{1}{2}$  feet high.

(There is an illy-defined mound between Nos. 5 and 6, not shown on the diagram.)

7. One hundred or more feet from No. 6, and like it.

8. Fifty feet distant; circular, 45 feet in diameter and 3 feet high.

\*9. Ten feet distant; 30 feet in diameter,  $2\frac{1}{2}$  feet high.

\*10. Twelve feet from No. 9; circular, 36 feet in diameter and 3 feet high; no finds.

\*11. Four feet distant; circular, 45 feet diameter,  $2\frac{1}{4}$  feet high.

\*12. Twelve feet distant; like No. 11, but slightly smaller.

13. Fifteen feet from No. 12; circular, 45 feet diameter and 2 feet high.

\*14. Sixteen feet from No. 13; circular, 51 feet in diameter,  $1\frac{1}{2}$  feet high.

\*15. Ten feet distant; circular, 30 feet in diameter,  $1\frac{3}{4}$  feet high.

\*16. Sixteen feet distant; of same character.

17 Three feet distant; circular, 25 feet in diameter,  $1\frac{1}{2}$  feet high.

\*18. Twenty feet distant; circular, 42 feet in diameter,  $2\frac{1}{2}$  feet high; homogeneous structure.

\*19. Twenty feet from No. 18; same measurements.

\*20. Twenty-one feet distant; like last.

\*21. Twenty-five feet distant; circular, 30 feet in diameter, 2 feet high.

\*22. Thirty feet distant; of same size.

FLOYD COUNTY—*Continued.*

\*23. Twenty-five feet distant; circular, flattened, 30 feet in diameter, 1 foot high.

\*24. Twenty-five feet distant; circular, 45 feet in diameter, 1½ feet high.

\*25. Twenty feet distant; circular, 45 feet in diameter, 3 feet high; a few scattered fragments of charcoal and burnt clay; the whole is packed hard.

\*26. Fifty-three feet distant; 33 feet in diameter, 3 feet high; a few small bits of oak charcoal.

27. Five feet distant; same form but smaller.

28. Forty feet distant; circular, 24 feet diameter, 1 foot high.

Several mounds in this group yielded interesting results, thus:

*No. 9.* From 20 inches and downward pottery fragments were found. On the natural surface of the ground was a bundle of human arm and leg-bones, lying east and west; on the east end of these was a crushed and somewhat separated cranium, some parts very thick, with large and strong teeth; these parts pertained to a young adult.——Two feet north-east of this was a similar bundle, directed a few degrees south of east; on the east end of this bundle lay part of a crushed skull; these somewhat charred.——A few feet south-east a similar bundle, directed 13° south of east; no skull.——A few feet north-west of the first bundle, another, lying east and west, without skull.——Evidence of fire, bits of charcoal, burned clay, and heated limestones scattered through mound.——A former exploration had removed a skull and some bone-bundles.——All the bones in the mound show some evidence of calcination, but all but second bundle apparently burned *elsewhere*.

*No. 11.* At 10 inches depth, and slightly east of the centre, a piece of broken pottery and a few small fragments of charcoal. No signs of fire built here.

*No. 12.* Numerous pieces of hard-burned clay from outside scattered through it. At 10 inches part of a calcined femur. No signs of fire.

*No. 14.* In centre, at 10 inches depth, an imperfect dog's (?) skull, facing the south-west. Near this skull and 7 inches below it were five quite closely-associated bundles of leg and arm-bones; in three cases crushed skulls were on the west end of bundles,

---

\* Opened by Webster.

FLOYD COUNTY—*Continued.*

and one skull lay between two of them; under the west end of the north bundle was half of a lower jaw, retaining teeth; the skull between the bundles was on its right side, with mouth open,

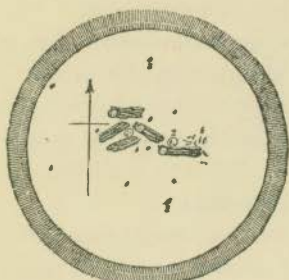


FIG. 9.

Diagram of Mound No. 14.

facing the north-west; the teeth were (some of them) scattered through the soil; all the bundles lay directed in an east, north-east, or south-east direction.——Seven inches below the dog's skull were pieces of ribs and other small bones promiscuously thrown in.——All the skulls were rather thick, with large and strong jaws and teeth. Some of the bones were of aged persons, but most were of young adults.——Scattered through the mound were numerous pieces

of burned clay and charcoal from outside.——Six inches from surface two large slabs of water-worn Devonian limestone.——The human remains had all been subjected to heat before burial here. (Fig. 9.)

*No. 16.* Human leg and arm-bones apparently thrown in promiscuously, at 17 inches depth. No fire here.

*No. 19.* An adult skeleton, at length, with head  $11^{\circ}$  south of east, found at depth of original surface. The body had been placed on its back, head on its left side, mouth open about an inch, left shoulder drawn up, and chin resting on clavicle; the arms at sides. Cranium large, well formed; jaws strong; teeth large, strong, and much worn; bones poorly preserved.——No trace of fire; no relics.——Earth around and for  $1\frac{1}{2}$  feet above body hard-tamped.

*No. 20.* In centre, at 26 inches in depth, three bundles of long bones, five crushed skulls, two decayed pelvic bones.——In the midst of these bones a very rude but nearly perfect pottery vessel, upright. The bones represent all ages, but were poorly preserved and more or less calcined—some before and some after being placed here.——Charcoal, burned clay, and potsherds with the remains.——Soil above and around bones packed hard.

*No. 21.* Within was found a circular, oval mound of red, burned clay, of about 10 feet diameter and 1 foot in height. Its



FLOYD COUNTY—*Continued.*

surface was at a depth of about 1 foot. Under this, and nearly central, were three bundles of bones, two directed  $11^{\circ}$  east of south, the third one north-west and south-east; on the north end of the two former reposed crushed skulls; on the south-east end of the third was also a crushed skull.——Many other human bones were associated with the bundles. All had been more or less burned.——No charcoal, ashes, etc. (Fig. 10.)



FIG. 10.

*No. 22.* At 2 feet depth, near the centre, a bundle of bones and part of a skull, all much decayed. The bundle lay north-east and south-west.——Pieces of oak charcoal and burnt clay from outside were scattered through the mound.——No fire here.——Soil around and above had been beaten hard.

*No. 24.* At 3 feet south of the centre a bundle of bones lying due east and west; two skulls lay, one on each end of this bundle; the one on the east was large, of moderate thickness, with very low forehead abruptly sloping backward; teeth large, strong, much worn.

[N. B.—A later study of the locality showed two curious mounds in the neighborhood of the mound No. 4 (see diagram).

Nearly to the east, 4 or 5 feet distant, was an elliptical mound, 30 feet long, 24 feet wide, 2 feet high. Still further east, 24 feet from No. 4, is a long mound 81 feet in length, 15 feet at base, and 2 feet high. (Fig. 11.)——Several small, circular mounds, from 8 to 10 feet in diameter, run in a north by north-west line from the elliptical mound.]

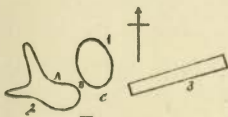


FIG. 11.

Three isolated mounds occur in the neighborhood of this group:

(a) One-third of a mile north-west of the line of mounds; it is circular, 20 feet in diameter, and only 6 inches (originally  $1\frac{1}{2}$  feet) high. It is situated upon a higher and narrower ridge than the group, and at forty rods distance from an abandoned part of the channel of the Cedar River. At 6 inches below the original surface was much broken pottery, charcoal, two sinkers,

FLOYD COUNTY—*Continued.*

an arrow-head, and flint chips; all of these were burned after being placed here; 1 foot below the pottery were parts of a human skeleton. An earlier explorer found pottery and a good net-sinker.——The pottery found showed a combination of net and basket and separate cord markings; the vessels were in some cases smoothed, all were of moderate thickness, of a reddish yellow color, and made of clay, fine gravel, and powdered granite. Parts of six vessels were found; one of the largest and best reconstructed had a diameter at mouth of  $20\frac{1}{2}$  cm.; a maximum diameter of 31 cm.; a height of 16 cm. The neck was sharply constricted. Several of the six vessels had a similar form.——

About six feet north-east of the mound is a depression 10 feet in diameter and  $1\frac{1}{2}$  feet deep, whence the material may have been taken.——Along the abandoned river channel, forty rods north-west of the mound, broken pottery, some unlike that from the mound, is found on the lower and level space; also arrow-points, lance-points, drills, flint chips, hammers, etc.

(b) One-half mile north-east of last, on the end of the brow of the ridge near the Cedar River. The mound is circular, with diameter of 20 feet and height of 2 feet. It was long since opened, and yielded pottery fragments. Other relics have been found near by—very rude arrow-heads; a spear-head; a fine knife of milky quartz,  $7\frac{3}{4}$  cm. long, 3 cm. wide, and tapering toward each end; a beautifully symmetrical ovate plummet, with a longitudinal groove about it—length,  $5\frac{1}{4}$  cm., diameter,  $5\frac{1}{4}$  cm.

(c) Opposite *No. 14*, on the second ridge, west of the line of mounds. It measured from north to south 42 feet; from west to east 30 feet; 1 foot high. About 3 feet from the base of the north-east part of the mound is a saucer-shaped depression, about 22 feet in diameter and 1 foot deep; a long, shallower depression exists along the whole east side; these spots apparently supplied the material for the mound. At 1 foot below the original surface, near the north-eastern part of the mound, were several leg and arm-bones and part of a calcined skull carelessly placed. Five feet south of here were remains of a second body, with the leg-bones and arm-bones more completely calcined; in general the long bones lay north and south; they had apparently been calcined elsewhere; a few pieces of charcoal, potsherds, and flint chips were found near the surface.

FLOYD COUNTY—*Continued.*

One-third of a mile south of the line of mounds, at a lower level, were several other round mounds which were not explored.

Eight miles north-east from *Charles City*, on the S.-W.  $\frac{1}{4}$

N.-W.  $\frac{1}{4}$  Sec. 36, Twp. 96, R. 15, an ancient earthwork lies on the east side of the Little Cedar River. The country is broken and irregular; the earthwork is about one hundred and fifty feet from an abandoned channel of the river, and about the same distance from a ravine on the south-east, tributary to the Little Cedar; the beds

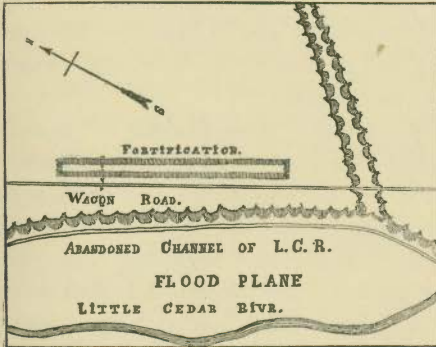


FIG. 12.

of these channels are 18 to 20 feet below the fortification. The earthwork is 124 feet long, 16 feet wide at base,  $2\frac{3}{4}$  feet high; it is composed of ordinary soil; it trends  $17^\circ$  W. of N. Arrow-heads are not uncommon in the neighborhood. (Fig. 12.)

In the "big woods" on the west side of the Little Cedar, seven miles below the above locality, are three mounds of drift bowlders and soil. They are  $2\frac{1}{2}$  feet high, 2 feet wide, and from 4 to 7 feet long.

Two miles north-west of *Charles City* is a group of four Indian graves on high, dry ground, north from a small creek. They are close together; three extend north-east and south-west, while the other is north and south; three are graves of adults and are 7 feet long, while the other is that of a child and is  $3\frac{1}{2}$  feet long. They are perhaps Winnebago graves. One-fourth mile west-south-west is a grave where a Winnebago was buried in 1849–1850. Wrapped in his blanket he was laid out at length, extending north-east and south-west, on a level space back from a creek. Slabs of green wood 3 feet long were placed over his body in an inverted V-shape, meeting at the top. The ends of the enclosure were covered over with other slabs. At the head was a post of green wood, 6 inches in diameter, driven into the ground; this post was peeled and bore characters. A tight log crib was built about this enclosure; it was of green logs laid up in log-cabin

FLOYD COUNTY—*Continued.*

fashion, and measured 10 feet in length, 7 feet in width, and more than 3 feet in height; other logs were tightly fitted over the top. —One mile below the last locality, on the south bank of the Cedar River, were several graves of Winnebago children. The bodies had been placed on the ground and enclosed on all sides by 12-inch logs; the space was then filled up with earth, which was heaped up 13 inches or so (Webster <sup>188</sup>).

Webster also describes <sup>185</sup> a group of three mounds on the west side of Cedar River, one-half mile east of *Floyd*. They are situated on a high, level space, 50 feet above and 220 yards back from the stream, midway between two points; they form a slightly curved line. They are low, circular, and separated from each other by intervals of about 20 feet. The largest and easternmost mound is about 30 feet in diameter, and was once 2 feet high; the smallest is perhaps natural. In the largest were five well-preserved skeletons. The structure of the mound shows that the surface had first been excavated into a basin shape to a depth of  $3\frac{3}{4}$  feet; the basin was then macadamized with gravel and fragments of limestone; on the center of this floor the five skeletons had been placed in a sitting position, facing north, and with the feet drawn under the body; a thin layer of earth was piled above them, then 9 inches of earth and ashes in which were a few bits of fine-grained charcoal; the remaining four feet was nearly all red from heat; the whole material was rammed or pounded hard;

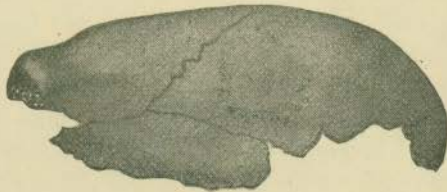


FIG. 12.

the soil about the bodies was deeply stained from decomposition. The westernmost skeleton was that of a woman of middle age; six inches east of it was an infant's skeleton; to the north, and close by the babe, was the skeleton of a large, middle-aged man; skeletons of two young adults lay east and south of the babe. The woman was apparently of low grade, and well muscled; the



FLOYD COUNTY—*Continued.*

skull was markedly neanderthaloid (Fig. 12); the forehead was low; the inner portion of the brow-ridges was prominent; the skull was small; from the lower part of the nasal bones to the upper margin of the orbits was but 4 cm.; the distance from orbit to orbit, midway between their upper margins and the lower part of the nasal bones was  $2\frac{3}{4}$  cm. Most of the skulls were crushed; one jaw had teeth well preserved. The skull of the babe was very thick; the teeth were small. The man was nearly six feet high; the crowns of his teeth were much worn down.——This mound appears to be very ancient; the limestone fragments in the floor are much decomposed.

A small mound near *Floyd* is reported to have yielded a skeleton.<sup>184</sup>

A peculiar mound is described by Webster,<sup>187</sup> in a low, level spot at about the centre of the S.-E.  $\frac{1}{4}$  Sec. 5, Twp. 95, R. 17 N., one-half mile west from *Flood Creek*. It is 16 feet in diameter and 1 foot high; circular at base, it is flat-topped, except a rounded ridge 8 or 10 inches high and 1 foot wide at the outer edge of the surface area. A trench 10 inches deep and 1 foot wide is around the base. The mound is overgrown with trees. The structure of the mound was found to be—

- (a) Decomposed vegetation and earth.
- (b) Charcoal layer.
- (c) Bed of ashes.
- (d) Soil.

This order was repeated; the natural surface then reached showed no particular evidence of strong heat; the charcoal, in large pieces and well preserved, appears to be of poplar wood; no bones or relics were found (Fig. 13).



FIG. 13.

The same author<sup>188</sup> describes a grave on low, dry ground in *Carman's Woods*, near the meeting of the Beaver Dam Brook and Shellrock River, one-half mile north of Rockford. The grave was 7 feet long,  $2\frac{1}{2}$  feet wide,  $1\frac{1}{4}$  feet high, and 3 feet deep; it

FLOYD COUNTY—*Continued.*

is excavated through soil down to the limestone; through the centre of the grave, running lengthwise from bottom to top, is a

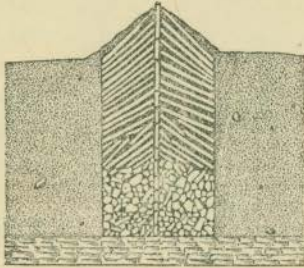


FIG. 14.

line of limestone slabs set edgewise; these slabs are from 2 to 3 inches thick; the lowest foot of depth in the graves was filled with fragments of limestone; the rest was filled with slabs of limestone set obliquely with the higher edge against the central partition; the upper slabs were so heavy as to require a man's full strength in their removal. There were no remains and no relics (Fig. 14).

## HAMILTON COUNTY.

Aldrich <sup>1</sup> reports that in 1857 or 1858 an excavation at *Webster City* revealed, at two feet depth, a heap of human bones representing at least twenty-six persons; one skull was very large and thick; round beads of soft stone were also found.—— On a knoll in the south-east part of the town three skeletons were found at a depth of thirty inches.—— North of the town plat are five undisturbed mounds. They are located on a bluff some forty feet above the Boone River, and extend in a north-east and south-west line; the earth for the mounds was taken from north of the group.—— A mile from the town there has been found a polished stone tablet, about  $2\frac{1}{2}$  inches square and  $\frac{1}{4}$  inch thick; drilled with two holes on opposite sides.

A mound north-west of *Cairo Lake* is reported by Bonney.<sup>174</sup>

## HARDIN COUNTY.

A stone carving representing a human head is said to have come from a well excavation in this county;<sup>37</sup> the depth reported is thirty-nine feet.

## HENRY COUNTY.

It is said <sup>15</sup> that there are many mounds in the county; Mansfield <sup>162</sup> mentions some near *Mount Pleasant*.

Banta and Garretson <sup>15</sup> investigated a group of nine mounds at the *Snake Den*, three miles west of Salem. They report as follows:

- (a) Twenty feet in diameter, 8 feet high; no remains.

HENRY COUNTY—*Continued.*

(*b*) Some sixty feet from (*a*); 20 feet in diameter and very low; flat rocks were found above a large quantity of broken and, in some cases, burned bones.

(*c*) Some sixty feet from (*b*); 3 feet high; one skeleton, extended, between two flagstones; the head was toward the north; bones were badly decayed.

(*d*) Sixty feet from preceding; 20 feet in diameter; 3 feet high; three badly decayed skeletons, extended, with heads to the north.

(*e*) Sixty feet distant; 20 feet in diameter and 5 feet high; smooth, flat rocks were found, laid in an elongate hexagonal form; stones were set edgewise about the border; at five feet depth were two extended skeletons with heads north.

(*f*) At sixty feet distance; 30 feet in diameter; 5 feet high; not opened.

(*g*) At sixty feet distance; 20 feet in diameter; 5 feet high; a few bones were found.

(*h*) At sixty feet distance; 30 feet in diameter; 5 feet high; is *said* to have contained a rude stone vault, with badly decayed human skull, etc.; the bodies were buried, perhaps, in a sitting (?) position; a sandstone mortar and arrow-points were found here.

(*i*) At sixty feet distance; 5 feet high; no contents.

These mounds are in a right line; (*a*) is at the western end.

Van Allen <sup>182</sup> reports mounds situated in Sec. 34, Twp. 72, R. 7 W. Three in number, they are upon a hill 120 feet high, 1,000 feet long, and more than 300 feet wide. One was opened and yielded a quantity of bones, teeth, and charcoal; some of the sticks were but half burned; the bones were in a heap; some were charred, and more than one individual was represented by them; one pinkish-white arrow-head was found.—The measurements of these mounds are: (*a*), 50 x 41 feet; (*b*), 43 x 49 feet; (*c*), 40 x 40 feet; (*b*) was one hundred and seven feet from (*a*), and (*c*) was fifty feet from (*b*); the mounds ranged from 4½ to 3 feet in height.—Two mounds about 1 foot high lie south of (*c*).

## JACKSON COUNTY.

Gass, <sup>68</sup> without assigning locality, mentions in this county a very large, oval mound, 200 feet by 100 feet, (with circumference

JACKSON COUNTY—*Continued.*

of 700 feet), and 30 to 35 feet high; the sides have a very steep slope,  $70^{\circ}$ ; the top is flat, oval, measuring about  $30 \times 50$  feet. The mound is situated on a bottom, near the bank of a creek, in a deep ravine. Excavation to a depth of 12 to 14 feet yielded pieces of hematite, some of which were burned, and two arrow-heads.—In another paper <sup>69</sup> the same author describes a mound of simple construction, with a diameter of 30 feet and a height of 4 feet. A few feet from the surface were found a number of irregularly-scattered stones and pieces of wood; at 5 feet a quantity of ashes, with burned bones, fragments of dark-colored pottery, two knives of copper, and a copper spear-head.—A human skeleton was found in a ditch excavation; near it were three ornaments of rolled copper, an arrow-head, and a bit of blanket.

With no other location than "Mr. Heisig's farm," the same author <sup>69</sup> describes a group of three mounds, arranged in an equilateral triangle, in an open, level field; they are about 15 feet in diameter and 3 feet high. Structure: (*a*) consists of hard mixed soil to a depth of 2 feet below the original surface; (*b*) consists of 3 feet of light earth, then 2 feet of mixed earth; (*c*) is like (*a*) in all respects.—A similar group in number, size, arrangement and construction is mentioned as near *Fairfield*.

One mile from *Spragueville*, on a hill near a creek is a mound composed of light earth, 15 to 20 feet in diameter and a few feet high; at 4 feet depth a human jaw-bone was found. <sup>69</sup> This mound is also mentioned in <sup>174</sup>.

In *Iowa Township*, four miles below the mouth of the Maquoketa and one-half mile from the Mississippi, on the Thomas Boothby farm, near "The Point," is a group of nine mounds; the land rises abruptly from the river; the mounds are in a single row; four of them have been examined by Mr. J. W. Boothby with the following result: <sup>89</sup>

(*a*) The furthest up the river; an elongated pyramid 5 feet high; the remains of seven skeletons were found; all were lying on their backs, three with heads east, four with heads west; under the skull of one of the latter was a thin copper crescent; above the skeletons were three or four large stones; on the floor of the mound, 4 feet north of the centre, was an earthen vessel



JACKSON COUNTY—*Continued.*

bottom-side up; this was destroyed in removing it, but measured about 25 inches in circumference and 4 inches in depth; under it was a *unio* perforated near the hinge; numerous pieces of scattered charcoal were found in the mound.

(*b*) *No. 4* in the series; is conical in form and about 60 feet in diameter and 5 feet high. It contained thirty-one skeletons, mostly with heads south and feet north, although there was no careful arrangement; a number of stones were above the bodies; on and below the cervical vertebræ of two of the skeletons were one hundred and sixty copper beads; in three of these beads the cord of woody fibre was still preserved; with one of the piles of beads were eight perforated bear's teeth; a flint spear-head,  $8\frac{3}{4}$  inches long, lay among the ribs of one skeleton; numbers of small, fresh-water bivalvé shells were found.

(*c*) *No. 6* in the series; it had about the same dimensions as the last, but was perhaps a little higher. Near the level of the original surface were four skeletons; a fifth, probably intrusive, was at a depth of one foot. The latter was in a bed of ashes, and the bones were blackened and charred.

(*d*) *No. 7* in the series; contained one skeleton which was entirely and closely covered with rocks; charcoal and burned stones were above and outside of this rock covering.

At *Bellevue*, White <sup>196</sup> examined a shell-heap which was composed of the shells of eleven species of *Unio* and one species of *Alasmodonta*; the bones of deer and buffalo, potsherds, and flint arrow-heads were found.

At *Sabula*, on the Mississippi River, a shell-heap contained shells of ten species of *Unio*, the bones of deer, wild goose, snapping-turtle, soft-shelled turtle, catfish, sheephead, and various undetermined fragments. Coarse potsherds, with bits of pounded shell in the paste, were found.—— These two shell-heaps show the mode of cooking in use among the makers; small pits were dug in the bank soil; these were  $\frac{1}{2}$ -yard wide and of the same depth; the sides and bottom show action of fire; these are closely filled with shells and bones; charcoal occurs; in the original article White gives a list of the species represented, and estimates the age of the heaps at a minimum of two hundred years.

## JEFFERSON COUNTY.

Negus <sup>103</sup> describes an iron cross, which at an early date was planted on a sandstone bluff overlooking the Cedar River; near by is a series of mounds 25 to 50 feet in diameter, and 3 to 5 feet high.

## JOHNSON COUNTY.

Webster <sup>189</sup> reports that there are at least one hundred mounds known along the Iowa River in this county. There are two classes: (a) The more common; circular, with round or flattened top; from 12 to 24 feet in diameter, and from 1½ to 3 feet high. (b) Long and narrow; sometimes forming an extension of mounds of the first type; from 12 to 13½ feet wide; from 1½ to 2 feet high.

In detail he describes:

Five miles north of *Iowa City*: Group of eighteen mounds in a slightly curved line, upon summit of a high, narrow ridge between the Iowa River and Sanders Creek.

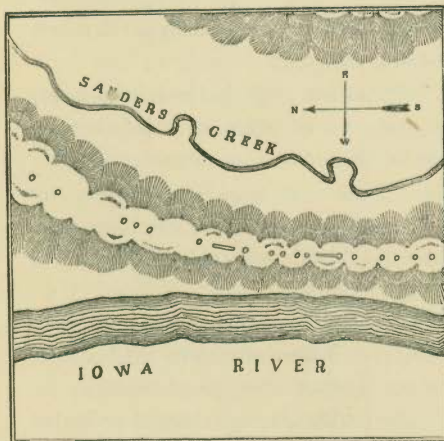


FIG. 15.

No.	Width.	Lgth.	Ht.	Direction.	Dist.
1	24		2	From—to—	
2	20		2	N.	54
3	18		2	N.	45
4	16		2¼	N.	40
5	24		3	N.	72
6	12	130	1½	N.	33
7	18		2	N.	36
8	17		2½	N.	15
9	15		2½	N.	48
10	15		2	N.	30
11	16		2½	N.	75
12	13½	45	1⅓	N.	33
13	14		3	N. by N. E.	30
14	17		2	N. by N. E.	125
15	12		1½	N. by N. E.	24
16	24		2	N. by N. E.	24
17	19		3	N. by N. E.	170
18	24		3	N. by N. E.	90

*No. 1.* (Southernmost.) Skeleton, adult, seated; small, animal-shaped vessel of pottery.

*No. 2.* Bones of a child. These and last badly preserved.

Most of the series contain bone fragments, and many have a layer of charcoal and ashes a few inches above the human remains; also, small stones somewhat burned.

*No. 11.* An arrow-point, flint-chips, small boulders.

JOHNSON COUNTY—*Continued.*

*No. 6.* A circular mound with long oval mound attached. No relics.

*No. 12.* Somewhat like *No. 6.* Unexplored.

The general material of all is yellow, homogeneous loëss, with dark earth above. No dug holes in the neighborhood. All are wooded.

Davis,<sup>40</sup> apparently in reference to this same group, states that when skeletons were found they were usually sitting, or lying

down with legs bent as if for sitting; the skeletons were covered with wood ashes from 1 inch to 1½ inches deep; one male adult cranium was small, although the upper jaw was very large.—In this reference a clay vessel or jug is said to have been found with a child's skeleton (cf. Webster's mound *No. 1?*) This vessel is described here and also by How.<sup>79</sup> It is grayish-black, with a round body 3 inches in diameter; on one side is a circle with two cross-lines and some dots; the top part narrows to a neck and is developed to resemble a turtle's beak; a spout or aperture on one side has about the diame-



FIG. 16.

ter of a man's finger; the material is pounded stone with clay; the vessel is hard-burned, and is rough and unglazed.

On the other side of the valley and further down is a group of five round mounds upon a high ridge.<sup>189</sup>

At the mouth of Turkey Creek is a circular mound on the brow of a limestone cliff 100 feet high.<sup>189</sup>

JOHNSON COUNTY—*Continued.*

Near the mill one-half mile north of Iowa City are two series of lines of circular mounds upon the top of a high, narrow ridge; the mounds are 20 to 21 feet in diameter and 30 feet apart; in their arrangement they follow the form of the ridge.<sup>189</sup>

One-half to three-fourths of a mile north-west of the mill there are from fourteen to sixteen long and circular mounds; many have been plowed away.<sup>189</sup>

White<sup>193</sup> mentions mounds along the bluffs of the Iowa River between Iowa City and Columbus Junction (Louisa County); he particularly mentions a numerous group just below the mouth of the English River; these may be in Washington County—not in Johnson.

## KEOKUK COUNTY.

Bassett<sup>162</sup> describes stone and copper implements from Keokuk County.——Morgan<sup>161, 210</sup> reports the finding of pottery at a depth of 20 inches in a mound near Richland; the mound was 250 feet in base circumference and 2 feet high; some of the vessels were very large and shaped like “a common dinner-pot;” around the rim was, frequently, a narrow band divided into triangular spaces filled with parallel lines running vertically and horizontally in alternate triangles. These largest vessels are said to have been 9 feet in circumference, and to have contained human bones.

## LEE COUNTY.

Myers<sup>98</sup> reports mounds near *Wever* and *Jollyville*; one near the latter place is on the property of John Junge; one in Layton's meadow had a diameter of 32 feet, a length of 50 feet, and a height of 7 to 9 feet.——The same author reports on the Myers Farm, *Green Bay Township*, some fifteen or twenty mounds; there are others on adjoining farms. All are oval, 12 to 30 feet in diameter, and 2 to 7 feet high; some yielded flint, pottery, and human or animal bones; some of the human bones were charred or burned.——In one mound thirty-two skeletons were found, sitting, in limestone vaults made by setting slabs on edge and covering them over with other slabs; some of these slabs weigh 250 to 275 pounds; no limestone beds are nearer than one and one-half miles.



LEE COUNTY—*Continued.*

Six miles north of *Fort Madison*, according to Negus,<sup>104</sup> are mounds 30 feet by 15 feet. They are described as divided into compartments, each occupied by a skeleton, seated, with heads on knees; articles of flint, stone, and bone were buried with them; bones of animals and birds and charcoal were found; the floors, sides, and roofs of the compartments were of limestone slabs. This is apparently the same locality as the preceding.

Negus<sup>104</sup> and Norris<sup>174</sup> mention mounds at or near *Montrose*. The latter author also mentions some near the junction of the Des Moines and Mississippi Rivers. Thomas<sup>221</sup> states that these last contained only decayed human bones, potsherds, and stone chips; some yielded articles of intrusive burial.

## LINN COUNTY.

Starr<sup>164</sup> describes a shell-heap in *West Cedar Rapids*, on a knoll near the Cedar River. The layer of shells is almost 1 foot thick; it is overlaid by dark soil and underlaid by sand. *Unio metanevrus*, *U. alatus*, and *U. rugosus* were recognized; one or two bone fragments, flint chips, and potsherds were found; also two flint implements at surface.

Bettisworth<sup>22</sup> locates several mound groups near *Cedar Rapids*. The list is as follows:

Group.	Location.	Number of Mounds.
1.	N.-W. $\frac{1}{4}$ S.-W. $\frac{1}{4}$ Sec. 35, Twp. 83, R. 7.	11.
2.	S. $\frac{1}{2}$ S.-E. $\frac{1}{4}$ Sec. 16, Twp. 83, R. 7.	14.
3.	S. $\frac{1}{2}$ N.-W. $\frac{1}{4}$ Sec. 16, Twp. 83, R. 7.	11.
4.	N.-W. $\frac{1}{4}$ N.-E. $\frac{1}{4}$ Sec. 17, Twp. 83, R. 7.	3.
5.	N. $\frac{1}{2}$ N.-W. $\frac{1}{4}$ Sec. 20, Twp. 83, R. 7.	11.
6.	E. $\frac{1}{2}$ Sec. 18, Twp. 83, R. 7.	11.
7.	W. $\frac{1}{2}$ Sec. 18, Twp. 83, R. 7.	11.
8.	N.-W. $\frac{1}{4}$ N.-W. $\frac{1}{4}$ Sec. 24, Twp. 83, R. 7.	12.

Group 1 is situated upon a divide crest running north and south; the mounds are about 30 feet in diameter and 3 feet high; usually they are separated by about two diameters; counting from the south, numbers 6 and 7 are nearer together. Groups 2, 3, 5, and 6 are quite similar to 1. Group 4 is on a bottom instead of upon a divide. In group 7 there are eight mounds in line, then a valley, and then three more mounds on the next

LINN COUNTY—*Continued.*

ridge north. Group 8 comprises twelve mounds on the crest of a divide passing around the head of a ravine; the line follows the curve of the divide.

## LOUISA COUNTY.

Gass <sup>63</sup> states that groups of mounds are thickly scattered along the bluffs overlooking the Mississippi Bottom for many miles. Quite extensive investigations have been carried on in *Grandview Township* by Gass and Blumer. <sup>23</sup> The descriptions lack definiteness; a carefully made map of the district is desirable.

*Sec. 11* (Wagner Farm). Gass <sup>71</sup> locates here a group of thirty-six mounds; the largest are 6 feet high. Many had been previously opened with no results; he opened seven.

(a). At 6 feet down an ash-bed was found, with fragments of pottery and two implements of igneous rock.

(b). The largest of the group; at 6 feet down, on the east side, was a large piece of limestone with a few pieces of pottery upon it, with an arrow-head, and a clay figure of a human head an inch in diameter and showing action of fire; on the west side was a piece of limestone with a small stone axe and a discoidal stone near it. In the other five nothing was found.

*Sec. 13.* Gass <sup>71</sup> explored two mounds in this section; they were about 4 feet in height.

(a). Bed of ashes containing bits of pottery and flints was found.

(b). Yielded potsherds.

A group of ten or more mounds occurs in the north-east corner of the north-west quarter of the section, on Viblen's Farm. Gass <sup>63</sup> explored four of these with some result:

(a). Thirty feet in diameter; 3 feet high. At 3 feet down some bones were found.

(b). Fifteen feet distant from (a); 30 feet in diameter; 2½ feet high. At 2½ feet down were one arm-bone and one leg-bone.

(c). Oval; 15 feet by 30 feet. At 3 feet down were two skeletons in clay.

(d). Twenty-five feet in diameter; 2½ feet high. A few decayed bones were found.

Kallenberger had opened six others of the group without finding anything of interest.

LOUISA COUNTY—*Continued.*

*Sec. 13* (S.-W.  $\frac{1}{4}$ ). Gass <sup>63</sup> describes here three mounds, which are numbered by him as a northward continuation of a group in *Sec. 24*. They are one and one-half miles north of those.

*No. 8*. Three hundred yards from the edge of a bluff in the centre of a number of smaller ones; it is 80 feet in diameter and 6 feet high; the upper covering is of mixed soil; at 6 feet were three horizontally-placed skeletons, one with the head toward the east, the others with head west; the skulls were badly decayed; south of these were ashes and coals, with burned clay and flint fragments; no relics.

*No. 9*. On Gast farm, one-eighth mile south of *No. 8*, in the N.-W.  $\frac{1}{4}$  N.-W.  $\frac{1}{4}$  *Sec. 24*. It measured about 80 feet in diameter and 6 feet in height; it was isolated, at two hundred yards from the edge of the bluff; at 6 feet down were ashes and charcoal, <sup>71</sup> also two arrow-heads. <sup>63</sup>

*No. 10* (N.-E.  $\frac{1}{4}$  N.-W.  $\frac{1}{4}$  *Sec. 24*). On the Godfrey Farm; two hundred yards from *No. 9*, at the edge of a bluff overlooking the valley of the Mississippi; 25 feet in diameter; 4 feet high. At 1 foot a mass of decayed bones forming a bed 5 or 6 feet across and  $3\frac{1}{2}$  feet thick; <sup>71</sup> also <sup>63</sup> emitting a stench. e

*Sec. 14* (S.-E.  $\frac{1}{4}$ ). On the bluff facing and overlooking the Mississippi River, one-fourth mile back from the edge of the bluff, Gass <sup>70</sup> describes two earth-walls from ravine to ravine; the southern wall is 24 rods long; the northern one is 21 rods; the south wall is now 6 feet high, and the ditch on its north side is 20 feet wide and 5 feet deep; the north wall is 5 feet high, and on its north side is a ditch 12 feet wide and 5 feet deep. The ravines are steep-sided and are 100 feet or more deep; on the ravine slope, near the top, at three rods south of the south wall, is a circular excavation nearly 100 feet in diameter and 15 to 20 feet deep, partly excavated, partly on down-side built up; at the lower end is a passage-way through the wall, of doubtful antiquity. At the bottom of the ravine to the west are two springs, the north one pure and cold, the south one sulphureous; the area is overgrown with large trees.

This locality may be the one referred to by Stevenson. <sup>168</sup> He speaks of a group of twenty-five or thirty mounds arranged appa-

LOUISA COUNTY—*Continued.*

rently in parallel lines, the whole being in a plot twenty-five or thirty rods in diameter. It is at the south of Muscatine slough. From this group an earthwork or causeway extended west to another row of mounds about forty rods distant. This earthwork runs in a straight line, but it has a jog or break in it where is found a depression in the ground about 80 feet in diameter. The ends of these two lines are about a rod apart, but both walls follow the same direction.

*Sec. 24* (N.-E.  $\frac{1}{4}$  N.-W.  $\frac{1}{4}$ ). Godfrey Farm; mounds opened here at different times by Gass; <sup>63, 71</sup> two, about 4 feet high—

(a). At 4 feet a horizontally-placed skeleton, with the head west; a small flint knife was obtained here.

(b). Twenty-four paces south of the preceding; at 2 feet down was a bed of ashes 1 foot thick; the clay above it was burned; in the ash-bed were several small, white stones, like unfinished pipes, which crumbled; they were apparently limestone. Two other mounds yielded a sandstone bird pipe, a copper axe, and a large copper bead.

*Sec. 24* (S.-E.  $\frac{1}{4}$  N.-W.  $\frac{1}{4}$ ). On the Schleicher Farm; Gass<sup>63</sup> opened two mounds.

*No. 1.* About 75 feet in diameter; 4 feet high; at 4 feet depth were two leg-bones and fragments of pottery and flints.

*No. 2.* Thirty-five feet south of last; 50 feet in diameter;  $3\frac{1}{2}$  feet high; yielded a few bones.

*No. 3.* On Godfrey Farm, thirty feet south of *No. 10*; 30 feet in diameter; 3 feet high; at 3 feet down were two skeletons.

*No. 4.* Thirty-five feet north of *No. 2* (?); 30 feet in diameter; at  $1\frac{1}{2}$  feet deep the earth became a burned clay; at  $1\frac{1}{2}$  feet deeper it was a soft brick-like material; below this was an ash-bed of oval form, 4 feet by  $5\frac{1}{2}$  feet, 11 inches thick; near the centre of this bed was a small copper axe showing action of fire; no bones.

*No. 5.* Thirty-six feet north from last; 30 feet in diameter; 3 feet high; at 4 feet depth were human bones, broken pottery, flint implements.

*No. 6.* Forty-six feet from the last; 30 feet in diameter; 3 feet high; at 3 feet down a few bones.

*No. 7.* Forty-five feet north-west, on Rothrock Farm; 100



LOUISA COUNTY—*Continued.*

feet in diameter; 6 feet high; at 2 feet down were three badly decayed (intrusive?) skeletons; on the south side were two skeletons, male and female, heads west and east respectively, and feet meeting at the centre. The material for 6 feet was mixed black earth and clay.

*Sec. 24* (N.-W.  $\frac{1}{4}$  S.-E.  $\frac{1}{4}$ ). Group of six mounds in crescent, on prominent point of bluff; west of the group is a field containing hundreds of mounds. Two of the group are particularly mentioned by Gass.<sup>63</sup>

(a). The southernmost of the group, in the extreme north-west corner of the S.-E.  $\frac{1}{4}$  of the section. It is about 100 feet in diameter and 8 feet in height; for 6 feet—"down to original soil"—it consists of mixed earth with flint fragments; next a layer  $1\frac{1}{2}$  feet thick of clay and sand, in which was a flint knife and a perforator; below this were four skeletons with heads west, and some bones and skull fragments; near the second skeleton was a dark red stone pipe and a small copper axe; another excavation on the east side yielded two skeletons, with two pipes near the skulls, a portion of the bones of a child, and a few copper beads.

(b). Forty-five feet north-east of the last; 45 feet in diameter;  $3\frac{1}{2}$  feet high; at 4 feet down were three badly decayed skeletons with heads toward the west; fragments of flint and pottery were found. These two mounds were excavated by Mr. Kallenberger.

*Sec. 25* (S.-W.  $\frac{1}{4}$  N.-E.  $\frac{1}{4}$ ). Blumer<sup>23</sup> reports regarding the mounds at the extreme edge of the prominent point of the bluff; ravines open into the valley at either side.

*No. 1.* It is a flattened cone, 30 feet in diameter and 3 feet high; the first  $1\frac{1}{2}$  feet were of hard clay showing here and there fire action; next came a layer of hard red burned clay, oval in form, 5 feet in shorter diameter, 3 feet thick at centre, diminishing to 3 inches at the edges; then came a body of ashes, 13 inches thick at middle and diminishing outward to the edges; in this bed, a few inches from the bottom, were a part of a carved stone bird pipe, a small copper axe, and an elephant pipe.

*No. 2.* Farm of P. Haas, fifty yards west of No. 1, in the second row of the group, extending north and south, approxi-

LOUISA COUNTY—*Continued.*

mately parallel to the edge of the bluff; the mounds about here are arranged in several somewhat irregular rows, all running the same way. This mound is 15 feet in diameter, and  $1\frac{1}{2}$  feet high; it was of mixed earth to a depth of 3 feet, where was natural yellow clay; at bottom were parts of a badly decayed human skeleton and some splinters of flint.

*No. 3.* Close to bluff-edge in first row, at fifty yards south of *No. 1*, 20 feet in diameter; 2 feet high; at 2 feet from top was an excavation into the natural soil,  $1\frac{1}{2}$  feet in diameter and 2 feet deep, full of ashes and charcoal.

*No. 4.* Fifty yards south of *No. 5*; with a diameter of 25 feet, it has a height of 3 feet. It consisted of mixed soil for 3 feet, and then of a hard layer of white clay eight inches thick.

*No. 5.* Ten yards west of *No. 4*, and in the second row; it is 25 feet in diameter and  $3\frac{1}{2}$  feet high; it consisted for  $2\frac{1}{2}$  feet of mixed soil resting on white clay 11 to 15 inches thick; below this but to one side of the middle was a small quantity of ashes and charcoal; in the centre at 2 feet or so down was a sitting skeleton; no relics.

*No. 6.* At nine yards north from *No. 5*, in the second row; it measured 20 feet in diameter and  $2\frac{1}{2}$  feet high; it consisted of a mixture of common soil resting on hard natural clay; a few fragments of decayed bones were found, but no relics.

Numbers 4 to 6 are on Stoddard's farm. The rest of this series are probably on Haas' farm.

*No. 7.* Sixty rods north from last, on the second row; 15 feet in diameter;  $1\frac{1}{2}$  feet high; composed of soil like *No. 6*. No bone fragments and no relics.—Gass<sup>63</sup> speaks of eight mounds in this quarter-section, and enumerates as relics from them a plain red pipestone pipe, a few shell beads, an obsidian arrow-head, a number of flint implements.

At *Blackhawk*, opposite Mercer County, Illinois, near the Mississippi River, on a high bluff facing New Boston, are seven or eight mounds, the largest in this part of the West. They are 4 to 5 rods in diameter, and 12 to 15 feet high; one yielded numerous partly decayed bones, also pottery, flint implements, and flint clippings. On the high level plain back of the mounds was an old embankment enclosing some 5 or 6 acres; it is now

LOUISA COUNTY—*Continued.*

nearly gone, but potsherds, flint chips and flint implements are picked up within its area; the pottery paste is of river mud mixed with pounded fresh-water shells (Shaw <sup>157</sup>). Probably the following description by Stevenson <sup>138</sup> refers to this same locality. He describes it as in the vicinity of Toolesboro:

“A raised circular earthwork; it resembles a horseshoe. The open part abuts upon the edge of the bluff among a group of mounds. The surface and soil are covered or supplied with an immense quantity of broken pottery and flint chips and implements. These last are nearly all small, uniform in shape and size; they are like a half-cone in form and are  $1\frac{1}{4}$  inches long,  $\frac{3}{4}$ -inch wide at broadest part,  $\frac{3}{8}$ -inch thick at thickest” Apparently “the circular enclosure of 10 acres” mentioned by Alexander.<sup>2</sup>

This work is also described by Toole <sup>179</sup> and by the Davenport party. The latter give considerable detail, thus: One-fourth mile north-west of these mounds was an earthwork enclosing some 15 or 20 acres; octagonal in form, the sides are curved and the inner edge is circular; the embankment, once about 2 feet high, is now nearly obliterated; the area is strewn with flint chips and potsherds; in a few hours fifty or more flint implements were found, among them a few arrow-heads; most, however, were well worked, plano-convex objects, from 1 to 2 inches long, about half as wide and  $\frac{1}{4}$ -inch thick, rounded at each end but with one more tapering than the other, even bluntly pointed at times; (the form is somewhat like a flat-iron without a handle). The pottery from this site is unlike that from the mounds; it is grayer, and composed of mixed earth and shell; broken handles are common.

Remains somewhat like stone walls also occur.<sup>138</sup>

Three miles south of *Toolesboro*, near Iowa River, are outlines of three ancient structures in which stones were used. The material was granite boulders from the river below. There were five or six such structures in a line, nearly parallel to the river bank, about twenty feet from it, about 6 feet square and some 20 feet apart. Few stones are left; the best preserved showed evidences of fire upon being opened; the bottom was rather dark and burned almost to brick for 2 inches in depth; a double row of slight depressions, less than two feet deep, alternate with these

LOUISA COUNTY—*Continued.*

remains; in some were charcoal, flint chips, and split and broken bones of animals.<sup>138</sup>

*Toolesboro.* Parties from the Davenport Academy<sup>127, 204, 205</sup> explored a group (*a*) of mounds on the edge of the bluff overlooking the Iowa River bottom two and one-half miles from its mouth. Three-quarters of a mile south is another group of six or seven mounds (*b*).

(*a*). Mounds from 40 to 80 feet diameter and from 6 to 10 feet in height, composed of a hard mixture of clay and black soil, both of local origin. They are burial mounds but the bones contained in them were not numerous and were poorly preserved. Most of them contained oak logs 6 to 8 inches in diameter placed at or near the bottom of the mound and much decayed; the bones were most frequently immediately beneath these. Some mounds were opened. In *No. 1* a few flint chips and scattered human bones were found. In *No. 2* the decayed wood was found at depths of 6 to 9 feet. The logs showed no arrangement; but skeletons were found more frequently below them than elsewhere. Portions of skeletons (including a child's skull) were found, all too badly decayed to be of use. Near one skull was a neatly carved pipe of gray pipestone representing a bird, with eyes of pure copper; also a copper awl about six inches long, hammered square instead of round and bent at right angles and flattened near one end. Mound *No. 3* was opened fully. It was composed of mixed earth; the large sticks of wood were found near the base in positions showing no arrangement. There were many irregular layers of about  $\frac{1}{10}$  inch thickness looking like white ashes; such were usually found in contact with the wood on the under side. The mound was built of firm, hard, light-colored clay, apparently the original earth of the locality stripped of its black soil. A layer of tough yellow clay about an inch thick was placed upon this. The bones, implements, etc., were directly upon this layer. No such clay layer was in *No. 1* or *No. 2*. Two or three very fragile skeletons were here; a large marine shell—*Cassis madagascarensis*— $7\frac{1}{2} \times 10\frac{1}{2}$  inches, holding about  $5\frac{1}{2}$  pints and cut out to serve as a vessel; with it and near one skull were parts of four earthen vessels; these were crushed or fragile. They had contained river shells. A few feet from this was an-



LOUISA COUNTY—*Continued.*

other skull and other portions of the skeleton. Near the head, as if laid upon the chest, was a smoothly-wrought copper axe, showing impressions and traces of cloth; some two hundred poorly-preserved beads of shell and some pearls were about the head and in the skull; a few feet away were two carved stone bird pipes, one of red pipestone with pearl eyes; close by were two more copper axes.

*No. 4.* Another copper axe, a copper awl, and several small sandstone implements were found in a mound on the bluff by Mr. Freeman; they were exposed by washing away of the bank. An arrow-head of flint was found in each of these mounds where any other relics were found.

*No. 5,* on Mrs. Mallory's property,<sup>205</sup> was explored in 1866. Probably its original height was 8 to 10 feet. It was composed of very hard mixed earth, with minute bits of charcoal scattered through it; at 4 feet 4 inches down was an evenly spread layer of quite clean yellow clay  $\frac{1}{2}$  to 1 inch thick; this was slightly below the original surface. At half-way down a small rough chert knife or scraper was found; at the west end were poorly-preserved human bones, including a frontal bone of remarkably low and brutal character; here also was a much broken turtle shell. At the middle of the mound was a finely made plain gray pipestone pipe; no remains were near it. The clay floor was found to stop (on the west and south?) along a sharply defined diagonal line. In the part of the mound beyond it was a grave, 20 inches or so deep, containing a much decayed adult skeleton with its head to the north-west, and some child bones; another adult skeleton lay at right angles to the first; the grave pit containing these was irregular in form, measuring 8 feet along the south-west side, 7 feet on the north-west, and 6 feet and 5 feet along the others.

*No. 7*<sup>205</sup> was symmetrical, one of the largest of the group; circular, with a diameter of 85 feet; the height, reduced by cultivation, was about 10 feet. The excavations brought to light about 500 square feet of the base. The construction showed that a floor of light-yellow sandy clay had been laid upon the original sub-soil of pure clay. The mound was raised upon this to a height of about 4 feet when it was covered—at least on its south half—with logs of oak irregularly laid on. Some white ash-like mate-

LOUISA COUNTY — *Continued.*

rial is found in this part though there is no charcoal or other evidence of fire. On the north side the logs are lacking, but there is a thin layer of pure clay. The material of the mound above this layer of wood and clay was a very compact stiff clay loam, with scattered patches of purer clay. In the northern part some flint chips were found. About midway of the trench and two feet from the floor some human bones were found (two femurs, a clavicle, several bones of the left forearm and hand) all in a heap, and with them a small worked flint. Several feet west of the trench a copper awl was found standing upright and firmly imbedded in the clay base. Two feet beyond this and to the south (?) were found four copper axes, two curved base pipes (one cylindrical bowl was of calcite, the other of catlinite, hawk-shaped, with pearl eyes), a large block of mica in loose sheets, a second awl, a crushed skull with skeleton attached. Under this skull one of the axes lay, wrapped in a covering of cloth and bark. Another copper axe lay under the left shoulder of the skeleton, and many dull and fragile beads of shell and pearl were taken from the region of the neck and chest. Further excavation in this same mound revealed an adult skeleton, male, with face up and head to the north-west; close by the right side, with head on the level with the shoulders of the larger skeleton, was the skeleton of a child of ten years. Beyond it was a third copper awl; about the legs and feet were shell beads. Three more copper awls pierced the floor and stood upright in a line, from 18 inches to 36 inches from the feet of the skeletons; the awls were about two feet apart; these awls were from 4 to 7 inches long, hammered square except at lower pointed end; they are turned abruptly at the top; their diameter is about  $\frac{1}{8}$ -inch. They may have served to peg or pin down a skin or cloth covering placed over the dead. The hard floor appears to have been basin-shaped.

*No. 8.* Two hundred feet west of *No. 7*; this was the largest of the group. It has been used by white men as a building site. It has a diameter of 140 feet; a height of 11 feet. At 9 feet down was a floor of yellow clay  $\frac{1}{2}$ -inch thick, laid upon the original black loam surface; just above this clay floor was black earth. Parts of four much decomposed skeletons were found, but no relics.

LOUISA COUNTY—*Continued.*

Four other mounds here were opened by Toolesboro gentlemen in 1875. They were situated on the edge of a bluff; the region was covered with a growth of oak. The farm was owned by Mr. J. J. Parsons. The structure was much as in those already described.

(a). Largest of those opened; 40 feet in diameter, 8 feet high; the bulk of the mound—140 cubic yards—was removed; at the level of the natural surface was a thin layer of sand on which were a large copper axe of  $2\frac{1}{2}$  pounds weight and of unusual form, a thin flat perforated bone implement, and several round stones; several skeletons also.

(b). Half as large as last; no floor layer. Five copper awls, one flat-sided square-edged axe, a carved pipe of mottled red pipe-stone, representing a panther or lynx, several flint arrows, a large lump of galena.

(c). Small mound; considerable quantity of broken pottery, a number of pieces of elk (?) horn several inches in length,  $1\frac{1}{4}$  inch in diameter, and rounded over one end as if used for pestles.

(d). 25 x 50 feet in diameter; 5 to 6 feet high; quantity of human bones at  $2\frac{1}{2}$  to 6 feet deep; all crumbling. An unfinished pipe of soft whitish stone; several horn implements like those from c. One of a group on the other side of the village back from the bluff, opened in 1880 by Hindman.<sup>204</sup> It was 30 feet in diameter; 3 feet high. A skeleton, two earthen vessels, (one near the head, the other opposite the middle of the body) badly crushed, lay at its right; the one near the head contained ashes and earth; a foot above the head a large piece of mica and a piece of obsidian (two pounds weight), were found near the centre of the mound at the same level with the skeleton.

Stevenson also mentions investigation here.<sup>168</sup> Two companion mounds excavated; out of line and away from bluff some forty rods. They were about 40 feet diameter and 5 feet or more high.——In one (a) a copper celt among fragments of bones, charcoal, and a decayed mass of wood; it was  $5\frac{1}{8}$  inches long, from  $\frac{7}{8}$  to  $2\frac{1}{4}$  inches wide, and  $\frac{5}{8}$  inch thick; weight 1 pound.——On a level with the axe but 8 feet from it a beautiful earthen pot, 5 inches deep and 6 inches diameter, with rounded base. Close to it a miniature pot in bad condition. Near the vessels, many



LOUISA COUNTY—*Continued.*

fragments of bone and teeth, and beneath them charcoal and flint chips. In the other mound (*b*) at about 6 feet depth, a fragment of sheet copper weighing 260 gr. It was  $4\frac{1}{8}$  inches long, 2 inches wide, and about the thickness of ordinary tin. It was slightly curved and found in the bottom of the mound lying in puddled clay. This bottom was dish-shaped, rounding up at the edge, 1 foot deep and 6 or 8 feet across. It lay below the original surface.

Gass <sup>71</sup> mentions a tablet found in a Toolesboro mound by Mr. Potter; it was taken from a depth of 13 feet where it lay on a small pile of bones; it is made of white sandstone, 2 feet by 3 feet, and 3 inches thick, is rounded at corners and bears some old signs or pictures on one side; some English letters have been recently added.

The second "Elephant pipe" in the Academy's collection came from Louisa County and was found by Peter Mare in his cornfield.<sup>142</sup>

The material regarding the Toolesboro mounds is somewhat confused. Numbers 1 to 4 of the group A are so numbered for convenience here and may not have been so numbered by the original investigators.

## LYON COUNTY.

Thomas <sup>174</sup> cites Wakefield as to mounds on sections 13 and 24, *Twp. 100 N., R. 49 W.*, and Fulton <sup>59</sup> speaks of mounds with circular terraces, 15 to 20 feet in elevation, and of remains of re-doubts and breastworks.——More definite is the work of Starr and Lewis.

The former <sup>167</sup> describes mounds and stone circles a mile beyond Brown's Station (La Valley) near the Little Sioux River and close to the Dakota line. The mounds are mostly round, 30 to 50 feet in diameter, 3 to 8 feet high; a few are oval and larger. On the summit of the ridge are stone circles or ellipses made with some care with bowlders. Some mounds lie among the bowlder circles but most are outside the circle-bearing area. The whole ridge top is strewn with flint-flakes, arrow-heads, scrapers, potsherds, etc. Good stone mauls are not uncommon. White and Starr opened two mounds. *No. 1* was of hard gravel with patches



LYON COUNTY—*Continued.*

of ashes. At 2 feet down was a skeleton with head to the north; the bones were well preserved; no relics found.

*No. 2.* Above was gravel; then black soil; then ashes and black soil; lastly gravel. Some fragments of bones and potsherds were in the black soil and the ashes and black soil.—Two other mounds previously opened by Nash and Cotton lay on south side of railroad.

*No. 3.* On a lofty ridge; two adult and one child skeletons; also the bones of a horse; also a pipe here. Lower down was an adult skeleton, with a dog's skeleton wrapped in buckskin; here were six iron bracelets, fifteen feet of wampum, a grinding stone, and a red pipestone disk pipe. The skeleton had copper ear ornaments the oxydation of which had preserved the skin and hair in contact with them. This mound was within a stone-circle.

*No. 4.* Yielded a finely made discoidal stone, an arrow-head, a small maul of reddish granitic rock, part of a jar, and some hard bone fragments. Two lines of stones, six or seven feet apart, crossed the ends of this mound. The discoidal stone is of fine-grained, dark material, beautifully polished; the two round faces are concave and the truly circular outer rim is convex; the specimen is about 6 inches in diameter and is perforated by a central hole of about half an inch in diameter; the thickness varies from less than half an inch at the inner edge to  $1\frac{1}{2}$  inches at the thickest part. For fuller particulars regarding the stone circles see references. <sup>165, 167</sup>

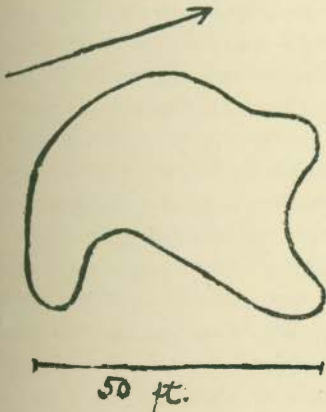


FIG. 17.

it. This one was 33 feet diameter.—In another paper

Lewis <sup>85</sup> redescibes the boulder circles and rings described by Starr. —South of the track he mentions a large inclosure or fort, with low walls. Within are *no* circles though there are some without.—Less than a mile north of this locality is another, where stone circles formerly existed. Many have disappeared. One part circle being visible the rest was dug out from the soil which had covered it.

LYON COUNTY—*Continued.*

the same author gives further particulars.<sup>87</sup> He states that the mounds north of the railroad number one hundred and five and that one of them is a rude effigy, which measures  $55\frac{1}{2}$  feet in greatest length and  $2\frac{1}{2}$  feet in height (Fig. 17). He also describes the enclosure south of the track more fully. It encloses an area of about 15 acres; the walls are from  $1\frac{1}{2}$  to 2 feet high and average 18 feet in width; the fort was built after the mounds and seven of these are within or about the fort.

## MARION COUNTY.

Robinson mentions mounds in the county. Kimberling<sup>109</sup> examined mounds at *Knoxville*. They occur in groups of five to ten in a straight line or a circle and always on bluffs or highland; in one case there was a raised way some 20 rods long, 8 or 10 feet wide, and 1 foot high, leading to an abrupt bluff. The mound structure is described thus: "2 feet of soil; 16 inches of hard baked clay, ashes and charcoal; 5 feet below the clay layer, a hearth, 2 feet by 4 feet and 10 inches deep, full of ashes and charcoal; the walls of 'the furnace' were glazed by heat; the arch is 12 feet in diameter and its height such that a tall man might stand under it. In the centre of the mound was a piece of cement with a crushed human skull below it."

## MILLS COUNTY.

Dean<sup>41</sup> and Proudfit<sup>138, 139, 140, 141</sup> have made considerable investigations. Mounds and lodge circles are common on the loess bluffs of the Missouri River. The mounds are usually small, simple, conical, from 20 to 100 feet in diameter and from 2 to 15 feet high; they yield an occasional chip of flint or fragment of pottery; they are almost always associated with lodge circles.—— These last are circular excavations from 20 to 60 feet in diameter, with a present depth of 5 feet to 4 feet; the original floor was the bluff clay; this often lies buried under 2 feet of black soil; the soil removed in excavation is sometimes piled up in a ring, still remaining as a wall along the outer edge; in one case an oak stump 18 inches in diameter was found in the centre of the lodge circle; these circles are usually on a divide, sometimes on a south slope. A single lodge is an exception; usually they occur in groups.



MILLS COUNTY—*Continued.*

*Oak Township*, S.-E. corner S.-W $\frac{1}{4}$ , Sec. 8, Twp. 73 N., R. 43 W., Allis Farm, on a spur of the bluffs, fifty feet above the plain, some four hundred feet north of a deep ravine, is a group of five lodge circles. The depressions are fairly marked, vary from 20 feet to 30 feet in diameter, and, although considerably filled, from 1 $\frac{1}{2}$  feet to 2 feet deep. The ground about is strewn with chips, sherds, and occasional arrow-heads, knives, etc.; fragments of an arrow-straightener of sandstone, some paint stones and some mussel-shells were also found.——On the site of another lodge, south of the ravine, was a catlinite pipe.

One mile west of *Glenwood*, partly on the T. D. Tipton farm, is a series of seven lodge circles extending along a crescentic ridge for three-fourths of a mile. With these is a mound. This is located five and a half miles south and two miles east of the preceding locality, near N.-W. corner, N.-W.  $\frac{1}{4}$  S.-E.  $\frac{1}{4}$ , Sec. 10, Twp. 72 N., R. 43 W. The bluff is 300 feet high and overlooks the surrounding country in every direction. The mound is elliptical at base, measures 70 feet from north to south and 40 feet from east to west; it is composed of local material taken from a spot about 125 feet to the south, where there is a depression 35 feet square and 5 feet deep. At 7 feet from the top was found a layer of ashes half an inch thick; then came a layer of stones from 2 inches to 11 inches thick and weighing from 20 to 30 pounds; (these were probably brought eight miles from across the river); this layer of stones was probably placed upon the original surface and the mound then heaped over it to a height of 6 feet; an earlier exploration found a second layer of stones at that height and the original mound perhaps was several feet higher than that. No implements, bones, or traces of fire were found in the mound.——A few flint chips and a large implement, perhaps for agricultural purposes, were found near by.——Trenching across the lodge circles showed, in one case, black soil 3 $\frac{1}{2}$  feet deep over the floor; in a second case 2 feet of black soil. In both cases potsherds, charcoal, and flint chips were found and in the latter, at the centre, a conical heap of burned earth in which was a large vessel of pottery, which was broken in the excavation.

One-half mile south of *Glenwood*, on the fair-grounds, are four still distinct lodge-circles; they are situated upon a flat,



MILLS COUNTY—*Continued.*

enclosed on three sides by heights and opening to the south upon Keg Creek. Potsherds are abundant over the area, and arrow-heads, drills, scrapers, celts and a "turtle-back" were found; the arrow-heads were small but well made.——On the crest of the south end of the encircling ridges is an ancient workshop; the place is strewn with flint chips and potsherds; at the base of the hill were found a drilled tooth for a bead, a bone implement, mussel-shells, bones, and worked flints.——On the west bank of the stream, a little east of the group of circles, was a pottery factory; great numbers of fragments occur here together with pieces of tempering stone.——The pottery of the district is rude, made of clay tempered with pounded stones; ornamentation consists of curved lines, indentations, checker-work, cob-marking and circle marks.

Half a mile east of the Tipton mound is another unopened mound, with a group of three or four circles about it.——North and west of Glenwood about four miles, on the old Pacific City road, is a low mound with accompanying lodge circles.——Five miles north of Glenwood, on the Glenwood and St. Mary's road, is a mound with several lodge circles.——Seven miles north-west of Glenwood, at the head of Indian Hollow, is a group of three small mounds and one lodge circle. This locality is four miles north of the Tipton mound.

East of Glenwood, at eight miles distance on Silver Creek are several small mounds of little elevation upon a high ridge on the east side of the creek near Lem's Mill. One mound excavated revealed great quantities of red burnt earth scattered through the mound with an occasional lump of black earth and some charcoal. No other relics. Indian graves occur on neighboring hills and corn-pits were found here early.

Three miles north of Pacific City and four miles north-west of the Tipton mound, upon a high divide, lies a mound 100 feet by 70 feet and 15 feet high; composed of surface soil, with scattered flint chips, charcoal and ashes in it, no results of interest came from its excavation. A large lodge circle is located one hundred yards south-west. A turtle-back celt is reported as found on the bluffs five miles north of Pacific City; large grooved implements have been found at Glenwood.——Of particular interest is the

MILLS COUNTY—*Continued.*

pottery vessel, entire but broken, found at 6 feet down in loëss at Glenwood (Fig. 18). It is of dark gray clay tempered with

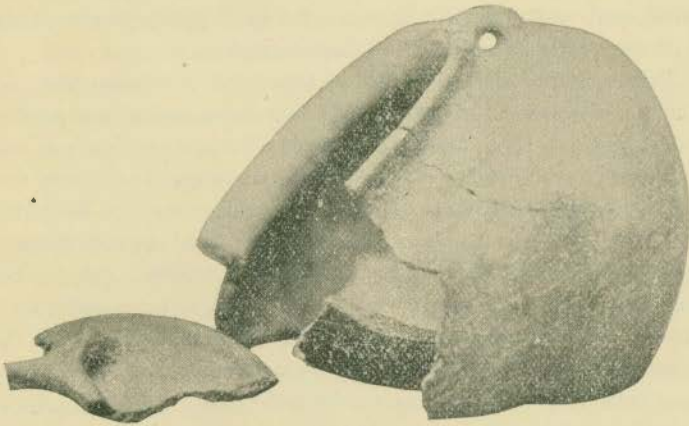


FIG. 18.

micaceous quartz. A few bits of burned clay and pottery were found later at the same place.

Proudfit describes scrapers of flint (pink and white) well worn by use or weather, found by him at foot of bluff, one mile above the mouth of Indian Hollow, in a vertical face of exposure, 6 feet below the surface.

Remains of *Elephas americanus* have been found in the loëss of Mills County at a railroad cut (C., B. & Q.) two miles south of Glenwood and at Malvern, nine miles east of Glenwood.

This author believes that great physical changes have occurred in the region since occupied by man.——He also mentions an ancient trail running for many miles along the west crest of the bluff which is, at times, worn deeply into the surface.

## MUSCATINE COUNTY.

*Pine Creek.* (a). Group of six mounds, on a high ridge, two miles above Pine Creek. Lindley<sup>88</sup> opened one composed of yellow clay; in it were found river shells and charcoal, human skeletons lying east and west, and forty-one beads.

(b). On slope of same ridge a group of mounds forming an irregular circle. One opened was about 15 feet high and 100 feet

MUSCATINE COUNTY — *Continued.*

wide at base. Four feet below surface were two layers of flat stones. Between two of these large stones and in a cavity of the lower one was a large jet-black arrow-head. A broken skull was found, with walls one-half inch thick; one leg-bone was notched as if repeatedly struck with a sharp instrument.<sup>88</sup>

Witter<sup>199</sup> describes mounds in *Montpelier Township, Sec. 22, Wm. Lowry Farm*; group of nine mounds on top of sharp ridge running W. 10° N. One, probably the largest, opened; it was seventy-two rods from the river's low water edge, and ninety feet above it. Mounds numbered from the west. No. 1 is down the point, which slopes to the west to a creek about 40 rods distant. From the centre of No. 1 to that of No. 2 is 3.2 rods. The rise between them is about 6 feet. From 2 to 3 is 1.5 rods. 2 and 3 form a sort of double mound. From 3 to 4 is 4 rods. No. 4 was the mound opened. From 4 to 5 is 4 rods; from 5 to 6 is 4.5 rods; from 6 to 7, 3.6; from 7 to 8, 2.5, and from 8 to 9 is 6.5 rods. From No. 6 the mounds diminish almost to invisibility. No. 4 is about 70 feet diameter and 7 feet high (8 feet to undisturbed bottom). Graded down by scraper for about 3 or 4 feet. At 5 feet a quantity of flat, argillaceous limestone, averaging perhaps 10 inches in each direction. These were set on edge and in a circle, although one-third or one-half the circle on the north was wanting. This circle was 8 to 10 feet diameter and apparently surrounded the centre of the mound. The stones were nearly all at the same depth and appeared to be collected in little groups a foot or so apart. Sticks of charred wood, two feet or more in length and three or four inches in diameter, with some pieces apparently of oak trees a foot or more in diameter, were with the stones on the south side, and some of the stones were burned red with the charcoal lying on them. Near the stones and apparently forming a circle was a red material three or four inches thick and about the same in depth (apparently burned stone). Charcoal was common, flint chips *scarce*. A little inside the circle of stones and perhaps a foot below were these relics: two large marine shells, *Sycotypus perversus*, one-half of the last whorl of each. These are each 9.5 inches long with spire wanting. Their diameters are 6 and 5.5 inches. Nearly one entire whorl was found close to one shell, apparently part of another shell. (The shells were probably

MUSCATINE COUNTY—*Continued.*

four feet apart—lying horizontally.) One valve of *unio?* about a foot from one of the sea-shells. A cluster of shell beads, globular, three or four inches in diameter and containing 200 to 300 beads; badly decayed; they vary from  $\frac{3}{8} \times \frac{1}{4}$  inch to  $\frac{1}{4} \times \frac{1}{4}$ . Two feet from one sea-shell and four from the other were two vessels, round, with round bottom. (1). Uniformly  $\frac{1}{8}$  inch thickness; thicker at rim; firm, fine clay, mica, and shell fragments; no sand; many minute cavities; dark in color; somewhat polished on exterior; neck smooth; rest of surface with V ornamentation. Inside measures: at top, 3.75;  $\frac{1}{4}$  inch down, 3.25;  $2\frac{1}{2}$  inches down, 5.4; 5 inches deep; capacity 1 quart.

(2). Coarser, more fragile; from  $\frac{1}{8}$  to  $\frac{1}{4}$  inch thick. Reddish clay and crushed granite; no shells; not porous; grains of quartz and feldspar (?); light red; blackish near top. Plain; 5.25 inches at rim; 6 inches at 3 inches down; 6.5 inches deep; tapers below like small end of egg; capacity 2 quarts.

(3). Fragments of a third; red clay, sand and shell; better than (2); some indentation ornament. Human teeth were taken from two points at about the same depth as the relics. Apparently from two individuals, 8 to 10 feet apart. Two teeth are in the posterior part of the right side of the lower jaw.

Davenport parties excavated a mound in the Lowry farm group in 1875. Considerable charcoal was scattered throughout the earth of which the mound was composed; no ashes were seen; at 7 feet down was a part of the forward portion of a human skull from which at least seven *rondelles* had been cut; the bone was well preserved. No other objects were found except scattered fragments of bones within 2 or 3 feet of the surface, and a single small shell bead at 6 feet down.

(c). One-half mile below Pine Creek a group of about fifteen mounds on a high ridge. One of them is nearly 20 feet high. North of it are two elongated mounds about 4 feet high, 5 feet wide and twenty feet long. One conical mound yielded, at about 2 feet depth, two-thirds of an earthen vase; at 14 feet, remains of six persons. The bodies had been arranged radiatingly, feet inward, about a large sea-shell—*Cassis madagascarensis*.<sup>88</sup>

Harrison<sup>74</sup> examined these, opening the second one in size; it was circular, 50 feet in diameter, 9 feet high; it was composed



MUSCATINE COUNTY—*Continued.*

of light clay mixed with dark earth; from 6 feet depth downward were ashes scattered through the mass, and burned clay here and there. An ash bed of irregular form and varying thickness, dividing into two branches at about the centre of the mound was found at 9 feet down; this rested upon the natural soil; scattered pieces of sandstone, some showing signs of burning, lay above this bed; no charcoal was found; only one relic—a piece of worked bone 4 inches long,  $\frac{1}{2}$ -inch wide,  $\frac{1}{4}$ -inch thick.

Stevenson <sup>168</sup> states that from a point near Drury's Landing, a few miles east of Muscatine, to a point near Toolesboro and New Boston, a distance of some twenty miles, mounds occur on all the higher points; the groups contain from 2 to 100 or more mounds from 15 to 150 feet in diameter and from 2 to 15 feet high. He estimates that there are 2,500 mounds in this area in the two States of Iowa and Illinois.——Near the limits of Muscatine itself he claims fifty mounds and long earthworks.——Nine out of ten of the works in this vicinity are circular mounds; the long ones are from 6 to 20 feet in length and 5 feet wide and are placed end to end with a gap of 5 feet between. They are made of local material; those on the ridges of clay and sand, those on Muscatine Island of sand and gravel. Sometimes they show evidence of fire action.——A map of groups is given and some notes of explanation:

*Group 1.* Containing 20 mounds of which 10 were opened with no result except an occasional bit of charcoal or a fragment of a shell.

*Group 2.* One skeleton, badly preserved, in a horizontal position, and small potsherds.

*Group 3.* On the bluffs, overlooking Whiskey Hollow. One badly decayed skeleton, with a stone axe weighing  $2\frac{1}{2}$  pounds under its head.

*Group 4.* On Muscatine Island; nearly leveled; pottery fragments, small triangular arrows very similar in style, and flint chips are strewn over the surface of the area.

The heads of skeletons here are almost always to the north. Some mounds have a hard crust arch over the remains.

Witter <sup>155</sup> mentions an arrow-head and spear-head from the

MUSCATINE COUNTY—*Continued.*

loëss at Muscatine; a piece of *Elephas* tooth was found at the same locality. Also <sup>225</sup> flint chips from loëss on Mad Creek.

On Schmale's Farm below Muscatine Gass <sup>72</sup> examined a group of five mounds 65 feet or so in diameter and from 5 feet to 8 feet high.

(*a*). The westernmost; 5 feet high; at bottom were two horizontal skeletons, with heads to the east and west; the bones were badly preserved. Pieces of charcoal and pottery found.

(*b*). One skeleton.

(*c*). Eight feet high; at a depth of 7 feet was a pit 2 by 3 feet and 1 foot deep, with human leg and arm-bones and skull fragments.

(*d*). Six feet high; at 3 feet down were three skeletons covered with pieces of wood; at their sides were pieces of pottery and marine shells.

(*e*). Smallest of the series; in it were a few human bones.

All were composed of very hard clay.

One mile west of the last group, on the Hershey farm, the same writer describes a group of forty-six mounds in four concentric semi-circles; all but two are simple conical mounds; one is oval; one is long and narrow. They vary in height from 2 to 6 feet. Twelve were explored, of which some were burial mounds; there was seldom more than one skeleton present; the bones were badly decayed; ashes and charcoal occurred in all; a few arrow-heads and potsherds were found.

At the river close by relics from an old village site—potsherds, flints, bones of animals and perhaps human beings constantly wash out. They come from a depth of  $2\frac{1}{2}$  feet, between the black soil and the sand.

Stevenson <sup>168</sup> mentions eight or ten mounds in two parallel lines on the Cedar River nine miles north of Muscatine.

Also at nine miles south-west from Muscatine on high bluffs—Group G on the map—eleven mounds in a line along the bluff edge. They are about twenty feet apart; consist of clay and gravel, the lower part mainly the latter. Seven were opened. Most gave no objects. The largest yielded flint chips and charcoal; in one, at 18 inches depth, was an intrusive burial, while 2 feet lower was a skull above a stone axe.

MUSCATINE COUNTY—*Continued.*

Near *Wyoming Hill* Gass<sup>39</sup> describes a mound on a small area of bottom land between and close to the confluence of two little creeks, almost surrounded on every side by high bluffs, opening in front toward the Mississippi River. The base is just above high water mark. Oval in form; long diameter nearly 200 feet; more than 30 feet height; it is small and rounded on top; thirty-three layers of earth, clay, sand and gravel clearly defined; scattered charcoal fragments, some large, through it. In the bottom of the mound is an immense pile of slabs of sandstone, two or three inches thick and several feet across, disposed in layers of which, the bottom one resting on the clay extend almost to the outer edge of the mound; the next smaller and so on for about 20 layers to about 8 feet in height, ending in a very broad, flat, pyramidal form. Is this really artificial?

## POTTAWATOMIE COUNTY.

*Council Bluffs.* Two grooved axes, taken from bluff deposits one eight feet below surface, one twelve feet, both near Council Bluffs. Owned by Dr. Stillman.<sup>138</sup>

Stillman explored the bluff  $1\frac{1}{2}$  miles north of Council Bluffs on the Mynster Springs road where a cut had been made. An opening about three feet across was driven into the bluff to a distance of four feet, and 5 feet below the soil surface. A large fragment of an elk's antlers; a shoulder-blade, fashioned into a rude implement; fragments of bone; a pipe; a piece of deer antler,  $4\frac{1}{2}$  inches long, polished at one end; several flint scrapers; potsherds; a charred corn-cob; several large mussel-shells; many fish-bones; several vertebræ; small bowlders showing fire action; a stone paint mortar of rough red quartzite, were found.<sup>138</sup> This find was on the western face of the bluff, 40 feet above the Missouri bottom, and not far from a lake that touches the foot of the bluff just north of this point. Above the find the bluff rises to a height of one hundred and fifty feet, with a gradual slope to the crest.

South of this point, a half-mile or so nearer the city, is an exposure at a brick yard. It is at the mouth of a hollow or wide ravine, extending back into the hills for some distance. Here, under from 6 to 8 feet of bluff deposit, are ash-heaps of considerable size, with bones, mussel-shells and pottery.<sup>138</sup>

## RINGGOLD COUNTY.

Jordan,<sup>80</sup> in an unsatisfactory article, reports a copper cup found in 1872 by Warner Ruby at Plum Creek, in Knowlton Township; the specimen is now lost. A number of mounds are reported in the neighborhood.——“Knowlton Mound” is described as 500 feet long, 130 feet wide, and 15 feet high; it is said to be serpentine on one side; near the centre black loam nearly 6 feet deep is underlaid by a coarse yellow sand. A skeleton was removed from here some years ago. The question of the entirely artificial character of this mound is raised.——A stone dam, the stones being regularly laid, causing a “ripple,” is mentioned; it might well be natural(?).

## SAC COUNTY.

Negus<sup>104</sup> mentions elliptical and circular mounds which yielded no returns to the investigator near *Sac City*. White<sup>193</sup> examined mounds on the “second bottom” well above the reach of river floods. Eight mounds with no regular arrangement extend north-east and south-west; two of them are oval and six are circular; they vary from 50 feet to 96 feet in diameter, and from 2½ to 3 feet high. No relics were found.

## SCOTT COUNTY.

*Pleasant Valley*.—Ahrman<sup>37</sup> described a curious relic found by him in digging a post-hole on an old village site, of material resembling yellow clay, but hard as stone. Very smoothly carved though rude and incomplete human form; 6 inches long; face distinctly carved, forehead flat, hands resting on chest, lower limbs not carved out.——Near the mouth of *Duck Creek* was a mound with about fifteen interments. Tiffany<sup>178</sup> found two lower jaws and the molar tooth of a bison.

The same explorer opened two mounds at *Gilbert*; one yielded an arrow-head, the other an arrow-head and flint chips.<sup>178</sup>

*East Davenport*.—Churchill<sup>31</sup> reports a group of three mounds on the edge of the bluff overlooking Camp McClellan; three hundred yards from the southern line and thirty yards west of the eastern boundary of the Russell estate in Davenport Township. The mounds are in a north-east and south-west line; they are from thirteen to eighteen yards apart. The eastern one is 15 yards in diameter and 3 feet high; the central and western



SCOTT COUNTY—*Continued.*

ones are about 9 yards in diameter and  $2\frac{1}{2}$  feet high; they are composed of earth, clay, and black soil, and are built upon the original surface; they yielded no remains or relics. Black oaks from 6 to 8 inches in diameter grow over the middle mound.

The shell-beds at East Davenport and on Rock Island, although they have yielded a bone awl, stone axe, hammer-stones, an arrow-head, etc., are believed by Pratt<sup>131</sup> to be natural formations made at times of high water. He, however, makes exception in favor of the one at the lower end of Rock Island, which is eighteen feet above the high-water level, and is irregular in position and thickness. Tiffany has described it; from it came a skull and human bones, as well as the point of an antler similar to specimens from some mounds.

*Davenport.*—A copper implement found in excavation for a gasometer, 400 feet north of the Mississippi River, at a depth of 11 feet, in a small fissure or depression in the Devonian rock. The locality is  $19\frac{1}{2}$  feet above low-water mark. The strata here are 2 feet black soil, 5 feet clay and sand,  $2\frac{1}{2}$  feet pebbles and boulders (this probably continues to the rock). The implement is pointed at both ends, tapering from the middle, and is  $4\frac{3}{4}$  inches long and  $\frac{1}{4}$ -inch in diameter. Much oxydized.<sup>36</sup>

*Near Davenport* (Capt. Hall's place).—Mound opened. Tiffany<sup>178</sup> found a copper axe covered with cloth, a stone pipe, four arrow-heads, one worked bone, and a broken crock; also fragments of obsidian, a lump of yellow ochre, flakes of mica, and parts of two skeletons.<sup>36</sup>

One mile below Davenport, on bank of Mississippi, bearing north-east and south-west (*Cook Farm*) two hundred and fifty feet from high water mark, though but 8 to 12 feet above it.<sup>55</sup>

*No. 1.* *Apparently double on surface*; diameter 30 feet; height 4 or 5 feet. The structure presents a foot of earth; a layer of stones, nicely joined,  $1\frac{1}{2}$  feet; 2 inches of shells; a foot of earth; shells 4 inches; under this, at 5 feet, five skeletons of adults, horizontal, parallel, and near together. Three lay from east to west, with skull of one on shoulder of next; the other two lay headed west. With the last two were a large sea-shell (*Pyrula perversa*) with axis and inner whorls removed; two copper axes, back to back, covered with cloth; one copper awl, a flint arrow-head, two pipes of stone—one frog, one plain.

SCOTT COUNTY—*Continued.*

*No. 2.* One hundred feet south-west of (1); like it externally. Inside, no layers of shells, but several layers of stone, with a few scattered shells; at 5 feet eight skulls and some fragments of bones; these were lying in a semicircle of five feet diameter and each skull was surrounded by a circle of stones the size of a small fist. The bodies had apparently been buried in a sitting position. Two copper axes; two small copper hemispheres; also one of silver; one bear canine; an arrow-head; red pigment; (bones of small snake, intrusive,); two skull fragments.

*No. 3.* One hundred and twenty feet south-west of the last. Largest of series. No layers of shells or stones. At  $1\frac{1}{2}$  feet, two adult skeletons, horizontal, covered with oak wood; with glass beads, fire steel, clay pipe, silver ear-ring, femur and tibia injured by some sharp instrument. These intrusive. Beneath them at 6 feet, under thin layer of ashes, bones of two adults and of one young infant, the latter covered with copper beads of several sizes and shapes and dyed deep green, and surrounded by a circle of small red stones arranged like the rays of the sun; five copper axes, all more or less cloth-covered; two stone pipes—one plain and one groundhog; teeth drilled and polished, several bear canines, incisors of gnawers, etc., one beaver incisor, fragment arrow-head; three broken pots with bones of river turtle adhering to inside; two pieces of galena; yellow pigment.

In the second excavation of this mound by Mr. Gass in 1877 two tablets of bituminous slate bearing engraved designs were found. These have caused much bitter discussion. Farquharson<sup>56</sup> carefully described them in an interesting article. Other writers, as Rust<sup>149</sup> and Seyffarth<sup>156</sup> discuss the meaning of the inscriptions they bear. Their authenticity has been questioned by Thomas in various articles, notably in his final report on mound exploration.<sup>221</sup> This is no place for a discussion of the matter, but it is proper to state that the members of the Academy generally have confidence in the genuineness of the specimens. A third tablet, of limestone, bearing curious designs, was found in Mound 11 of the group and has been described by Harrison.<sup>73</sup>

*No. 4.* Two hundred and fifty feet south-west of last; of simple construction. At 6 feet, under a layer of 6 inches of ashes, four adult skeletons lying close together; one copper axe.

SCOTT COUNTY—*Continued.*

“In the earth on which they lay, it could be distinctly seen that they had been enveloped in cloth or some woven material, and at a depth of four feet was a round heap or altar three feet high of stones joined neatly together.”

*No. 5.* One hundred feet west of No. 1. In construction like No. 2; several strata of stones with loose shells between them. At 5 feet, parts of two skeletons, above which was a 6-inch layer of hard clay; at same level, three feet north-west, a round heap of stones about 4 feet high. On this lay two very strong thigh-bones and three ribs placed diagonally across each other. Also a few bones leaning against the heap at one side. Stones show fire traces and some are burned, but bones unburned. Some charcoal by these stones. Four or five feet south, confused mass of human bones. Still south 3 feet, under 6 inches of shells, two broken pots, an arrow-head, a stone pipe, and some skeletons. Still south 4 feet, a skeleton lying east and west, and 6 inches above its skull a copper axe. Also animal teeth, incisors of rodents, bear canine, and a *rondelle* 1 inch in diameter.

*No. 6.* One hundred feet south-west of No. 5. Smaller and lower than others; fewer stones, but more shells. At scarcely  $3\frac{1}{2}$  feet depth, perhaps four skeletons. Only one lay with bones in connection. The others had them more or less separated. Two broken pots, a stone pipe, a stone knife, an arrow-head.

*No. 7.* Out of line with rest. Fifty feet west of No. 6. Small. A layer of stones and under it a thin layer of shells;  $3\frac{1}{2}$  feet below latter, much crumbled bones, two pots—one much broken, one nearly entire,—some arrow-heads.

*No. 8.* Somewhat larger and higher than average; two hundred feet west of No. 6. At  $4\frac{1}{2}$  feet (stones, earth, shells,) two skeletons, woman (?) and child; near together; east and west. To right of the adult were two broken pots, eight pieces galena, two small arrow-heads, stones of various sizes and shapes in a jagged or starlike circle; also piece of mica  $6 \times 3\frac{1}{2}$  inches. Over and around all, loam of some decaying stuff, probably a covering.

*No. 9.* One hundred feet north by west from No. 1. Much (3 or 4 feet) reduced by cultivation, etc. Near present surface a few shells and scattered stones. At  $3\frac{1}{2}$  feet two skeletons, horizontal, east to west; much decomposed; skull of western skele-



SCOTT COUNTY—*Continued.*

ton preserved; one-half of lower jaw found three feet distant. Of the other skull only the copper-soaked jaw-bone preserved well, stained by axe. Between bodies, stone pipe; obsidian arrow-point, obsidian flakes, small arrow-points of white chert, near second head; also spoon of river turtle's scapula.

In several mounds broken pottery occurred between surface and deeper part as if pots had been placed on surface of mound.

*No. 10.*<sup>65</sup> Ninety-five feet north-west of No. 1, 100 feet north-east of No. 5. Smallest and least important; 15 feet diameter, 8 inches high. All in this row—7, 5, 10,—are less elevated than the others. At 6 inches depth was a closely-packed pile of stones, about  $3\frac{1}{2}$  feet long east and west,  $2\frac{1}{2}$  feet from north to south,  $2\frac{1}{2}$  feet high. The pile rested on a hard clay bottom, 3 feet from surface of ground. The cavity was about 10 feet long east to west, 6 feet wide, over 2 feet deep, rounded at corners and bottom. In the lowest layer of the pile was a flat stone 2 feet long, 10 inches wide, 2 inches thick, with smoother side downward. Beneath it were fragments of human leg-bones pressed down into the clay. Two to  $2\frac{1}{2}$  feet west of this pile, 1 to  $1\frac{1}{2}$  feet below the surface, a layer of river shells 3 feet long north and south,  $2\frac{1}{2}$  feet wide, 1 inch thick. This layer was arched, the north and south edges being curved downward. Shells badly decayed. Three or four inches below this layer, directly under the middle, several pottery fragments and three small polished stones. The pieces were nicely packed together in a little pile. No other relics or bones.

*No. 11.*<sup>73</sup> Sixty-five feet north of No. 1, twenty-five feet south-west of No. 9, of *slight* elevation. Dark soil and red clay mixed. At 14 inches, large, angular pieces of rock laid closely together, with smaller stones fitting places between,  $2\frac{1}{2} \times 3$  feet; under this a similar layer, etc. At about 3 feet down a flat, unwrought, irregular stone, 14 inches square,  $1\frac{1}{2}$  inches thick, horizontal. It covered a space, in which lay a tablet; cavity a little larger than tablet, and about 5 inches deep. The floor on which the vault stood was of yellow clay, hard and very compact. Tablet head lay east-north-east. Four flint arrows lay on the tablet with points directed inward—one at top, one at bottom, one at each side midway between top and bottom. On upper left hand corner



SCOTT COUNTY—*Continued.*

a *Unio pustulosus* with powdered red ochre. A quartz crystal in centre of tablet over the human figure. Outside of and around the vault were many decayed shells and some small potsherds. No bones.

Tablet, evenly stratified, non fossiliferous limestone; about  $12\frac{1}{2}$  inches long,  $7\frac{1}{2}$  wide,  $1\frac{1}{2}$  thick. Under side a natural cleavage. Upper side somewhat smoothed. An uncouth human figure, astride a circle. Over his head a copper axe; above this at corners are bird-pipes, with eyes of quartz set in with some white cement. Several characters, some like those on other tablets. All these are incised; lines in small figures are  $\frac{1}{8}$  inch in depth; in large, 3 or 4 times as deep, wide and coarse. Colored deep, bright ochre red. Shows signs of heat, etc.

*Allen Farm Group.* Situated six miles down the river from Davenport, on the extreme edge of the bluff at a half mile from the river; the mounds are in a curve, following the bluff, with a general trend north-east and south-west. They are overgrown with brush. They are from one hundred to one hundred and fifty feet apart and range from 2 feet to  $5\frac{1}{2}$  feet in height. They are described by Pratt in three articles, <sup>130, 218, 219,</sup> and are numbered from the east end.

*No. 1.* Bones had been found herein previously.—Pratt describes the later exploration. The mound was 30 feet in diameter and 3 feet high. It yielded eight skulls and many bones; all were badly decomposed and were scattered except some long bones which were laid side by side; at about 2 feet depth were a number of large, flat, rough slabs of limestone, irregularly placed; six flint implements were found, some of them immediately below the long bones mentioned above; at three feet from the centre were a quantity of pottery fragments and near them a lot of charred human bones.

*No. 2.* At 4 feet down were four badly decayed and broken skulls, with other bones; no ribs or vertebræ were found and probably but parts of the bodies were buried here; the heads are west; a poor discoidal stone, two fragments of stone implements and two small beads of thin copper were obtained; there was no evidence of fire in the mound.

*No. 3.* Nearly circular; 30 to 40 feet in diameter and  $2\frac{1}{2}$  feet high; some arrow-heads are said to have been found.

SCOTT COUNTY—*Continued.*

*No. 4.* Originally 4 feet or 5 feet high, this had long been removed; bones of three skeletons, and a sea-shell were found.

*No. 5.* Had been removed to make room for a house. Remains of several skeletons, including one or two good shells, were found; one of these is broad at base, "gothic formed," and has had several *rondelles* cut from it on each side.

*No. 6.* Removed in part for a croquet ground; parts of several skeletons and two rather light, well-burned earthen jars.—What was left of it was examined. It was of mixed clay and black earth, with a few small gravel stones, two or three flint flakes and a piece of limestone. This last is a rough fragment about 10 inches long, 3 inches wide and  $1\frac{1}{2}$  inches thick; it was near the south end of the mound, upright, with its upper rather pointed end about a foot and a half below the sod. Under 4 feet of the mixed earth the undisturbed yellow clay was met; this was the bottom of an excavation made to  $\frac{1}{2}$ -foot below the natural surface; it was basin-shaped and from 6 feet to 8 feet across, being largest from north to south. Part of the body of a human cervical vertebræ was found in the mound; also a well made plain red and gray catlinite pipe, an oval stone about  $1\frac{3}{4}$  inches by  $1\frac{1}{2}$  inches and 1 inch thick, and a potsherd. These were all at about 3 feet down.

Two mounds in *Rockingham* examined by Tiffany<sup>178</sup> contained decomposing skeletons to the number of about a dozen in each.—In a mound in the same locality, already somewhat excavated, he found a small wheel like a pulley made of burnt clay and pounded shells, a red pipestone pipe, three sea-shells—*Cassis madagascarensis*. The bones found here were badly decomposed.

A low,  $\frac{1}{2}$ -foot high, mound on the Heidt farm below Rockingham; it is alongside the River Road. The elevation consists chiefly of stone; under there is the usual mixed earth; a few poorly preserved bones and two flint arrow-heads were found.<sup>37</sup>

*Staffelbach's Farm*, seven miles below the city of Davenport; three-eighths of a mile from the river. A mound on crest of a spur bearing south of west from main bluff here prominent as Eagle Point. Mound about 25 feet long, 2 feet high. Surface of black soil for 6 to 12 inches; next a burnt indurated clay, in

SCOTT COUNTY—*Continued.*

color and texture like medium-burnt brick for 30 inches. Then charred human remains 6 to 18 inches. Then undisturbed loëss, imbedded in which a very few decomposed, unburnt bones. No implements of any kind.

Considered by Tiffany a cremation furnace.<sup>36</sup>

*Cleona Township.* Gass<sup>66, 67</sup> describes engraved stones imbedded in a creek twenty-two miles west of Davenport. Five in all; two were brought to the Academy. The others were removed later. The very large one left is not particularly important.

(a). Very dark colored, hard, heavy, coarse greenstone. Irregular; it bears a human head, a quadruped, a bird, a human form, parts of human face and form, some unrecognizable marks.

(b). Same material; almost regular oval form; twice the size of a man's head. Cut in sharp grooves is a human face.

(c). Same material; smaller; a few scratches or irregular lines.

(d). Weighs 100 pounds or more. Very hard, light-colored quartzite; an uncouth human head on one side, a rude tree on the other.

There are mounds near by. A copper implement was found among the stones two years earlier.

In the various articles regarding Scott County mounds published in the Proceedings of the Academy are figures showing construction and arrangement. These cuts have been loaned to other authors and some have not been returned. As the full series can not be published here all are withheld. (F. S.)

## NOTES UPON SCOTT COUNTY SPECIMENS.

*Physical Anthropology.*—The bones from the Cook Farm Mounds were usually too badly decomposed for preservation. From Mound 2 were removed two fragments of skulls—only frontal bones, with nasal bones attached. Farquharson<sup>55</sup> says these indicate a highly-arched nose. From *No. 9* came a skull fairly preserved. It gave the following measurements: Horizontal circumference, 19.5; long diameter, 7; transverse diameter, 5.25; capacity, cubic inches, 76.2; distance of *foramen magnum*, 1.8; ratio of distance, 0.269; ratio of diameters, 0.752.

## SCOTT COUNTY—Continued.

*Objects of Copper.*—The axes are of three shapes—with flat sides, plano-convex, double-convex. All are simply hammered from native copper.

No.	Mound.	Weight, lbs.	Shape.	Length.	Width.		Thick.
					a.	b.	
1	C. No. 3	1.0721	(a)	6 $\frac{7}{8}$	2 $\frac{1}{8}$	1	$\frac{1}{2}$
2	C. No. 3	1.1564	(a)	7 $\frac{1}{2}$	2 $\frac{3}{8}$	1 $\frac{1}{8}$	$\frac{3}{8}$
3	C. No. 3	0.5387	(b)	4 $\frac{5}{8}$	2 $\frac{3}{8}$	1 $\frac{3}{8}$	$\frac{1}{2}$
4	C. No. 3	0.1056	(b)	5 $\frac{3}{4}$	2 $\frac{3}{4}$	1 $\frac{1}{2}$	$\frac{3}{8}$
5	C. No. 3	0.9961	(b)	5 $\frac{1}{4}$	2 $\frac{5}{8}$	1 $\frac{5}{8}$	$\frac{1}{2}$
6	C. No. 1	0.4242	(b)	3 $\frac{3}{4}$	2 $\frac{1}{8}$	1 $\frac{3}{8}$	$\frac{3}{8}$
7	C. No. 4	0.8114	(a)	5 $\frac{5}{8}$	3	1 $\frac{7}{8}$	$\frac{1}{4}$
8	C. No. 1	0.4602	(b)	3 $\frac{5}{8}$	2 $\frac{1}{4}$	1 $\frac{1}{2}$	$\frac{5}{8}$
9	C. No. 2	0.8464	(a)	6 $\frac{1}{4}$	2 $\frac{3}{4}$	1 $\frac{1}{4}$	$\frac{1}{4}$
10	C. No. 2	0.5085	(b)	3 $\frac{1}{2}$	2 $\frac{1}{4}$	1 $\frac{3}{8}$	$\frac{3}{8}$
11	C. No. 5	1.6575	(b)	6	3 $\frac{1}{4}$	1 $\frac{7}{8}$	$\frac{7}{8}$
12	C. No. 9	0.8743	(a)	5	2 $\frac{3}{8}$	1 $\frac{3}{4}$	$\frac{1}{4}$
13	Princeton.	0.4987	(b)	4	2	1	$\frac{4}{10}$
14	Toolesboro.	0.8171	(a)	5 $\frac{1}{4}$	2 $\frac{5}{8}$	1 $\frac{1}{4}$	$\frac{7}{18}$
15	Toolesboro.	1.7700	(a)	5 $\frac{1}{2}$	2 $\frac{1}{2}$	1 $\frac{3}{8}$	$\frac{5}{8}$
16	Toolesboro.	1.6314	(b)	6 $\frac{7}{8}$	3	1 $\frac{1}{2}$	$\frac{5}{8}$
17	Toolesboro.	0.5143	(b)	4	2 $\frac{1}{4}$	1 $\frac{1}{4}$	$\frac{7}{18}$
18	Toolesboro.	0.2143	(b)	3 $\frac{1}{2}$	1 $\frac{7}{8}$	1	$\frac{1}{4}$
19	Toolesboro.	2.4985	(c)	5 $\frac{3}{4}$	1 $\frac{3}{8}$	1 $\frac{5}{8}$	$\frac{11}{18}$
20	Toolesboro.	0.9257	(a)	4 $\frac{3}{4}$	2 $\frac{1}{2}$	1 $\frac{1}{2}$	$\frac{3}{8}$

Nos. 1, 2, 3, 4, 5, 12, 14, 16, 19, and 20 are more or less covered with cloth; 6 and 8, found together, were also cloth-covered, but were scraped on finding.

Eleven copper awls were found in mounds (with one exception). They are of ordinary types but some are bent at extremities.

Thin copper hemispheres; one, 0.8 inch diameter, weighs 34 grains; the other, 0.5 inch diameter, weighs 10 grains. With them was found a silver hemisphere 0.7 inch diameter and weighing 13 $\frac{1}{2}$  grains. (These came from the Cook Farm Mounds—No. 2.)

A curious copper implement was found partly washed out from the Cook Farm Group—No. 3. It was produced by hammering



SCOTT COUNTY—*Continued.*

—apparently out of an already hammered bar. It is rudely spoon-shaped and weighs 86 grains; the total length is 82 mm.; length of blade, 22 mm.; breadth of handle, 8 mm.; breadth of spoon at widest, 14 mm.; average thickness of handle, 2 mm.; thickness of spoon part, 1 mm.; thickness of middle part of spoon,  $\frac{1}{2}$  mm. A spot of silver occurs on one side.

The copper beads are of thin beaten strips of copper rolled up into tubes varying in size and width.

*Pottery.*—Holmes<sup>78</sup> speaks in general of Northern Mississippi ware—dark paste, sand tempered (often granitic), rough fracture, rude finish. Shapes are comparatively simple, often long, tapering below, flat-bottomed. Ornamentation of cord impressions, incised lines, and implement indentations. He also describes the same Davenport specimens as Farquharson. (See 55.)

*Ring;* color almost black; fracture, dark gray; specks of shell in the paste. Well baked. The greatest diameter is  $1\frac{1}{8}$  inches. thickness at the margin,  $\frac{3}{4}$ -inch; diameter of central aperture,  $\frac{5}{8}$ -inch; thickness at edge of aperture,  $\frac{1}{2}$ -inch; depth of groove about edge,  $\frac{1}{8}$ -inch; width of groove,  $\frac{3}{4}$ -inch. From the groove, eight small holes pass to central aperture of pottery.

From the *Cook Farm* Pratt<sup>132</sup> describes a curious object:—Natural sandstone concretion, firmly attached and almost central upon a flat, thin base-piece of light brown flint. Resembles an animal with broad, flat snout. Lower part *carved* into a tail and limbs. Eyes of bits of quartz crystal set with some kind of cement. Flint base much worn.

*Rondelles* and post-mortem trepanation.

(a). *Rondelle* cut from squamous portion of the temporal bone. Found in *debris* of mound near Davenport (Cook Farm). Circular; an inch in diameter.

(b). Part of cranial vault from which seven circular pieces had been cut. Found in mound on Pine Tree Creek, Muscatine County, and alone occupied the base of the mound.

(c). Skull from which three *rondelles* had been cut. Found on Allen Farm, near Davenport, at the base of the largest mound in the group. (Farquharson.<sup>54</sup>)

*Elephant Pipe.*—Farquharson<sup>53</sup> describes No. 1 with care:—Soft fragile sandstone; with dark external polish; weight, 164

SCOTT COUNTY—*Continued.*

grammes; extreme length (of head) 88 mm; height at shoulders, 39; girth, 85; thickness at shoulders, 24; circumference of trunk at extremity of lower tip, 33; length of trunk from tip to angle at mouth, 35; tail length, 29. The animal is represented with feet together, trunk coiled and resting on ground.

*Mound-builders' Cloth.*<sup>37</sup>—Each cord of the warp is composed of two double and twisted cords, and the woof of one, which passes between the two parts of the warp, the latter being twisted at each change, allowing the cord to be brought close together so as to cover the woof almost completely.

Holmes<sup>212</sup> also gives a cut of a cloth impression from a pottery fragment from Iowa. One series of strands appears to be quite rigid while the other has been pliable and appears in the impression only where they cross the rigid series.

*Tablets.*—Lack of space forbids any details regarding the tablets here. A careful study of them will be published in time.

## TAMA COUNTY.

Beal and Loos<sup>18</sup> explored a mound three miles west of *Toledo*. Many bones and flint arrow-heads were found; the bones lay without arrangement; one skull had an arrow-head imbedded in it. The bones were all thick and heavy—particularly the small bones.

## TAYLOR COUNTY.

Proudfit<sup>138</sup> mentions “a large grooved celt of unique design” from this county.

## VAN BUREN COUNTY.

A group of mounds located upon a sharp ridge overlooks the town of *Doud*, near the Des Moines River, in the north-west township of the County.<sup>174, 193</sup>

Thomas further describes these in his final report.<sup>221</sup> There are eighteen mounds, circular in form and placed in a nearly straight line on the very crest of a sharp ridge.

*No. 1* was 25 feet in diameter and 5 feet high; it yielded two gray disks each 4 inches in diameter, a grooved axe, and flint chips.

*No. 7* was 20 feet in diameter and 3½ feet high; it had a central core of hard earth.

*No. 12*, with a diameter of 25 feet and a height of 4 feet, con-

VAN BUREN COUNTY—*Continued.*

tained, under the hard core and at depth of original surface, decayed human bones and three fragments of dark-colored pottery.

*No. 14* yielded nothing.

*No. 15*, of same size as *No. 12*, contained scarcely more than traces of a skeleton which lay with head north, beneath a very hard core.

Negus<sup>104</sup> refers to mounds near *Kilbourne*. Two opened yielded human bones; the mounds were 130 feet in circumference and 6 feet high.

From far above Pittsburg to a point several miles below Keosauqua, according to Evans,<sup>48</sup> a continuous chain of works is to be seen.

The Dahlbergs<sup>35</sup> describe pottery found near the mouth of Chequest Creek at *Pittsburg*, on the Des Moines River; the paste was composed of clay and sand mixed with small pebbles; the pottery was hard, firm and durable; vessels of at least 18 inches diameter at the mouth appear to have been represented among the fragments; rude ornamentation of nodes and incised lines; some edges were crimped.—They also mention a bed of ashes and charcoal 3 inches thick and 2 feet from the surface, in the river bank.

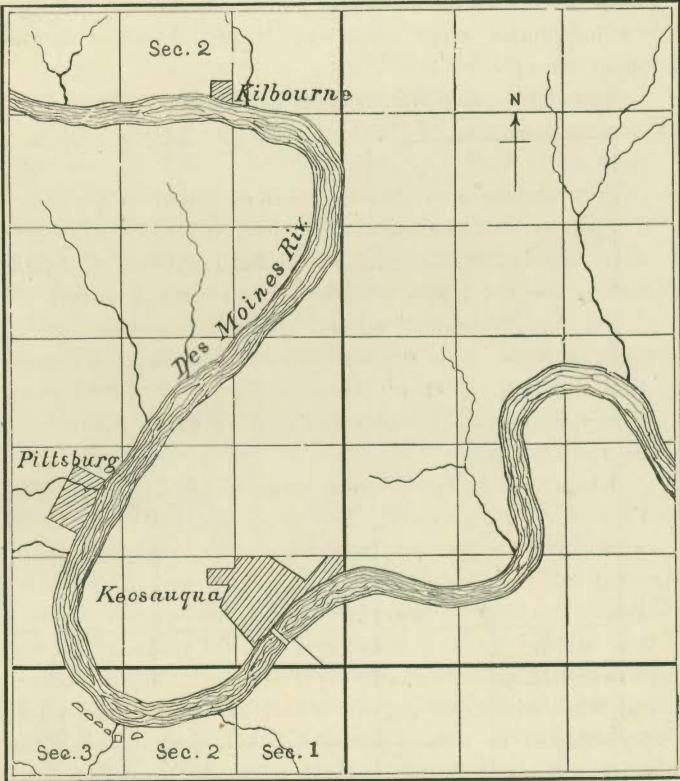
Evans<sup>44</sup> describes mounds between Pittsburg and *Keosauqua*. Thus in *N.-E. ¼ S.E. ¼ Sec. 3* (see map) is a mound on a bluff point, two hundred feet from the water's edge, and one hundred feet above the stream. In it, at 2 feet down, was found a human skeleton, except the lower jaw and leg-bones, with potsherds; the head of the skeleton was toward the south-east; the skull was somewhat Neanderthaloid.—Fifteen rods north 55° west from last, was a half-moon-shaped mound, about two hundred feet from the water's edge; thigh-bones were found in it.—Fifteen rods north 45° west from last was a mound, which yielded only a small fragment of pottery.

In the *N.-W. ¼ S.-W. ¼ Sec. 2*, (see map) at thirty rods south 45° east from the mouth of Ely's Creek, one hundred feet above the water and twenty rods from its edge, was a mound 60 feet in diameter and 5 feet 6 inches high. At 5 feet down was a thigh-bone; an upper arm-bone and fresh-water shells were also found.

White<sup>195, 196</sup> and Evans<sup>44</sup> describe the shell heap at *Keosauqua*,

VAN BUREN COUNTY—*Continued.*

on the Des Moines River, twenty rods north  $55^{\circ}$  west from the mouth of Ely's Creek; it is forty feet from the river's edge and twenty feet above its bed. About 4 feet in thickness, of silt-like material derived from floods, is crowded with *Unios* of a dozen species; bones of deer are common, and the long bones are split open for marrow; bones of bear, wolf, dog, and snapping-turtle



are also found. Flint flakes, arrow-heads, a greenstone axe and pottery fragments were found; the pottery is of common clay with sand tempering and is poorly burned; its ornamentation is simple, of lines or cord markings; pieces of limestone laid together show evidence of fire action.

Wilson <sup>198</sup> reports five rude chipped implements from a depth of 2 to 5 feet in a clay soil, from near *Bonaparte*.

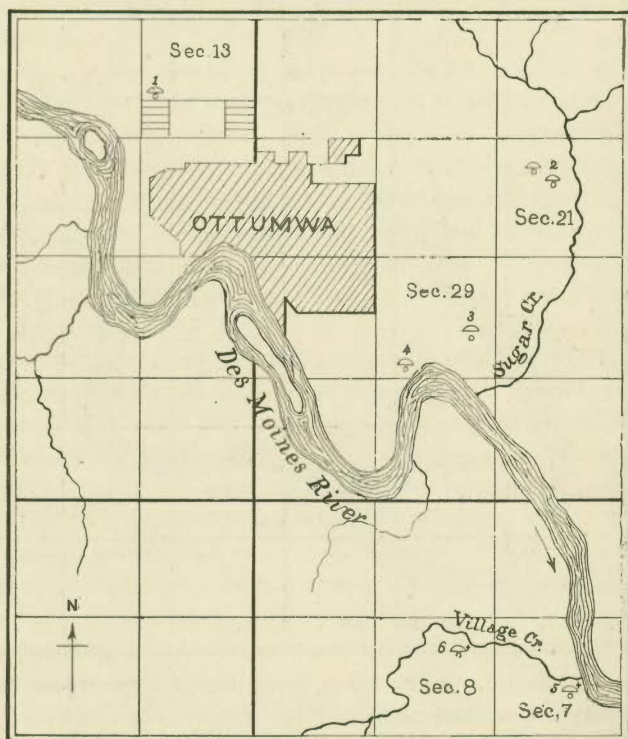


## WAPELLO COUNTY.

Negus<sup>104, 105</sup> gives some indefinite statements regarding mounds in this county and Fulton<sup>59</sup> refers to some fully described by Evans. Ketterman<sup>162</sup> states that a line of mounds runs from north to south through the county and mentions those in *Twp. 72, R. 13 W.*—The only serious work is that of Evans.<sup>44-48</sup>

Near *Ottumwa*—to the north (see map) on the Hederick Farm—is a group of mounds. Two are prominent; one is 50 feet in diameter. No relics were secured except a few chips of flint.

Sugar Creek Mounds (see map). Two were examined.



*No. 1.* On the highest point about; overlooks the next one and the Trawell Group. In circumference 150 feet, it has a diameter of 50 feet and a height of  $3\frac{1}{2}$ . It yielded bits of charcoal and decomposed ashes.

WAPELLO COUNTY—*Continued.*

No. 2 was 180 feet in circumference, 60 feet in diameter; it yielded a few bones but no relics. East of No. 1 and one-fourth mile away are the remains of an old hearth, near which a number of arrow-heads were found.

Trawell Group (see map). Consists of three mounds of same size and appearance as the last. From one was taken a small hatchet of greenstone.

Stiles Group (see map). Yielded a few broken arrow-heads, a small greenstone hatchet, and some bits of obsidian.

Village Creek Groups (see map). There are seven or eight mounds in each of the two groups; the eastern group is on a high ridge; the mounds are about 150 feet in circumference and 4 feet high; they are about one hundred and fifty feet apart. Structure as shown in them is: 1 foot earth; 2 inches of ashes, charcoal, and calcined bones; two other ash-layers at about 1 foot intervals; these ash-layers extend to the very edge of the mound.— Similar evidences of fire action are found in the western group.

*Cliffland.* Six miles from Ottumwa, on a high site in view of the Village Creek Groups and on the opposite side of the river from them, are three mounds, about forty rods apart and ranging east and west; the easternmost is much like the Village Creek mounds, consisting of clay and ashes; it is 50 feet in diameter and nearly 4 feet high; in it were several small pieces of magnesian limestone, yellow and red sandstone, and a few bits of flint, all showing signs of having been heated. No bones were found, but a gray pulpy mass may be traces of them.

Near *Eldon*, in Washington township, one and a half mile east of the village, on level river bottom land are three east and west lines of mounds. There are five in each range; the ranges are about eighty yards apart; the mounds measure from 10 to 50 feet in diameter and from  $1\frac{1}{2}$  to  $2\frac{1}{2}$  feet high. They consist of loose sand and mould and are supposed to be fairly recent graves of Omaha Indians.

Thomas describes this region <sup>221</sup> and assigns a group of mounds south of Eldon to the Iowas and a group further south, and just north of Iowaville, to the Pottawatomies. Black Hawk's grave is with the former group. Near it also are three hard worn parallel tracks nearly a mile long—a race-course.

## WARREN COUNTY.

Morgan <sup>174, 214</sup> mentions a mound in this county which contained a great number of skeletons.

## WEBSTER COUNTY.

Aldrich <sup>1</sup> mentions several mounds on the Des Moines River, six or eight miles above Ft. Dodge. In one an arched structure was found.

*Ft. Dodge.*—Fulton <sup>59</sup> mentions at this locality mounds and an embankment, with gateways and openings, enclosing many acres. Williams <sup>197</sup> mentions excavations which yielded parts of thigh-bones, imperfect skulls, teeth, coals, pieces of burned wood, etc. He inclines to the belief that they are house sites.

The latter author also mentions mounds at forks of Boone River.

## WOODBURY COUNTY.

Fulton <sup>59</sup> states that a mound in this county, measuring 65 feet by 100 feet, contained seventeen skeletons, one sitting, the rest lying feet to feet in two rows; at the head of the rows was an earthen vessel.——Skeletons and relics were found in a mound at Sioux City. <sup>207</sup>

## WRIGHT COUNTY.

One mile north-east of *Clarion* were twenty pits in an elliptical form, within an area of one acre; the pits were 3 feet by 10 feet and from 2 to 3 feet deep and were spaced; an opening occurred in their arrangement on the south-east; many animal bones were found. (Fulton. <sup>59</sup>)