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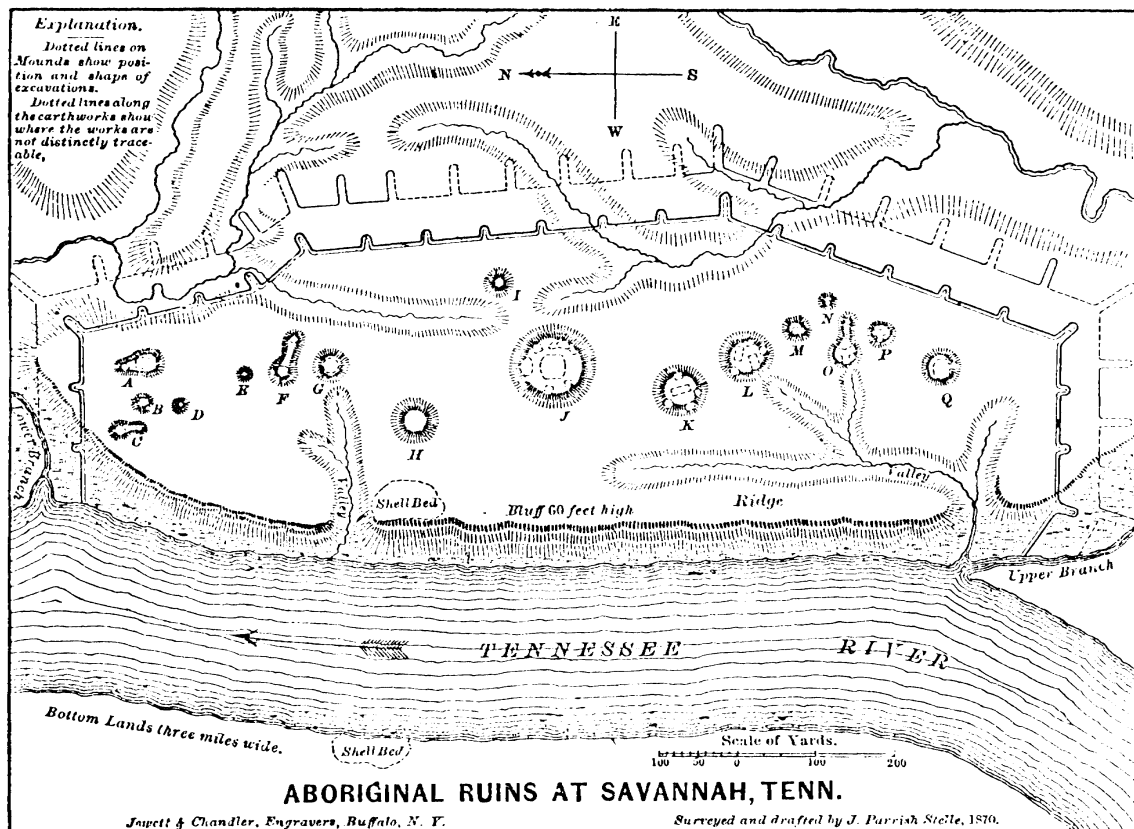
THE OPERATIONS, EXPENDITURES, AND CONDITION OF THE INSTITUTION
FOR THE YEAR 1870.

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ACCOUNT OF ABORIGINAL RUINS AT SAVANNAH, TENNESSEE.

BY J. PARISH STELLE

These ruins occupy high rolling ground, on the east side of Tennessee River, immediately on the west edge of the town of Savannah, Tennessee. North and south they measure, from outer earth-works to outer earth-works, thirteen hundred and eighty-five yards, and east and west, five hundred and fifty yards. The inner line of earth-works is distinctly traceable, and consists of an embankment thrown up inside from a deep trench, twelve or fourteen feet in width. At every eighty yards there is a redoubt, each one extending outward twenty yards, excepting those at the angles, which project thirty.



The outer line of earth-works appears to have been much lighter. At some points it is still visible, while at others, especially on cultivated grounds, it has entirely disappeared. In the diagram the obliterated parts are represented by dotted lines, and the distinct portions by continuous lines. The outer works are fifty-five yards from the inner, and parallel with them. They also have regular redoubts eighty yards apart; but the redoubts are longer than those of the inner works, measuring forty yards along the line, and fifty-five yards at the angles. The two lines are so arranged that the redoubts of one generally alternate with those of the other.

The earth in which these trenches have been dug is a tough red clay, intermixed with gravel, exceedingly hard to excavate. In fact, the entire elevation upon which the ruins lie is composed of the same material, down almost to low-water mark of the river, where a deposit of limestone begins.

The relative position of the mounds have been located on the diagram by careful measurement.

Mound A: Ten feet high, forty yards east and west, and sixty yards north and south. I made a large excavation in the highest part of it, going down in shape somewhat as shown by the dotted line. At the depth of a foot and a half we came upon a human skeleton, lying on its back, with the head to the south. The bones were so decayed that but few could be taken out. At the left side of the head was a vase, containing the remains of a shell. The root of a tree had grown against and broken the vase, but I took out all that could be found. At the right of the skeleton, about where the hand should have been, if the arm lay at the side, were found three flint implements — knives, I suppose — and a small polished stone that had probably been used for painting purposes. Nothing more was found in this mound. We dug down to the solid earth in two places, as shown by the dotted lines. The mound was composed of a soft alluvial soil, evidently brought from the river bottom, about two hundred yards distant, and down a steep hill.

Mound B: A small one, into which we made a large opening in the center, and at one foot down obtained a stone implement, which was the only article found. The composition of this mound was the same as that of A.

Mound C: Double mound, four feet high. Into this we went down to solid earth in two places, but found nothing, except some bits of charcoal and other evidences of there having been fire at several points. It was made up of alluvial soil, the same as A.

Mound D: Has a house upon it, and therefore could not be opened.

Mound E: Small mound in the garden, with a large tree upon it. I did not open it.

Mound F: Double mound, seventy yards long, forty yards wide at widest point, and twelve feet high. We dug down to solid ground by two large excavations started at the

highest points. Within three feet of the surface, in the excavation, fragments of pottery utensils were found. Nothing further was discovered. These mounds, unlike the preceding, were composed of the tough clay and gravel of the ridge upon which they stood. A depression near at hand showed where the material had been obtained.

Mound G: Forty-five yards in diameter at base, and twelve feet high. Two large white-oak (*Quercus alba*) trees were upon it. In one, which had been cut down, two hundred and fifteen rings were counted, making it two hundred and fifteen years old. We dug a large circular excavation in the center on the top. The earth at the surface gave indications of having been intensely heated. At two feet down we came upon a human skeleton lying on its back, with the hands at the sides, and the head toward the east; the bones badly decayed. At three and a half feet we found another skeleton, lying precisely the same as the first, and immediately under it. At five feet we came to loose stones lying upon one another, and rounded up mound-shaped, which we removed, to the amount of several tons, when the solid earth was reached, and a skeleton was found lying exactly as the others, but further east, the feet of this one being immediately under the heads of the other two. The stones seemed to have been thrown directly upon the body; consequently most of the bones were more or less broken. The skull was crushed entirely flat. At the left side of the head were found three copper relics, lying just as I have tied them together. The string still to be seen in one of them is made, I think from the bark of papaw, (*Asimina triloba*, Dunal,) a circumstance worthy of note, as it proves that material to be almost imperishable. Modern Indians used it extensively for strings and ropes, and I can recollect when our southern and western people did the same. It was prepared by peeling the bark from the trees when the sap was up, and sinking it under water, to remain several weeks, to "rot," as it was called. When taken out the inner separated from the outer bark, and split up into very thin sheets. It was these sheets that were used, and after having gone through this process they were much stronger than the entire bark was before. I send you a slip of "rotted papaw bark." Immediately upon the breast of the third skeleton was found the fragments of a shell ornament. Nothing further was discovered in "G," though we made careful and extensive search. The composition of the mound, aside from the stones already mentioned, was light surface soil, which seemed to have been scraped up from the high lands.

Mound H: A large mound, ten feet high. It is under cultivation, and therefore cannot be opened before autumn.

Mound I: Has a house upon it, and therefore no examination could be made.

Mound J: Is the largest mound in the group. It is over one hundred yards in diameter at the base, thirty feet high, and perfectly level on the top. We rigged a windlass, and sunk an

eight-foot shaft in the center, down to the solid earth, but found nothing,, except now and then a broken flint or fragment of pottery. We then dug in the sides, permitting the earth to fall into the shaft, until we had a large excavation, in the shape represented on the diagram, but still found nothing. We next made excavations twelve feet deep, at various points, but discovered nothing in any of them, except in one. Here, within a few inches of the surface, we came upon broken fragments of brick, or burned earth, exhibiting some kind of molded work. They were in considerable quantities, and looked as if they might originally have been hollow columns. If solid columns, the fragments would certainly have been larger; the specimens sent are of average size. Immediately under these, about one foot below the surface, was what might be styled a tile floor, perfectly level and smooth. We removed the earth, and found it to be somewhat crescent-shaped, covering a space of forty-four feet one way, and sixteen the other. How much larger it had been we could not learn, for roots had grown into it and broken it up. The tiling, if such it can be called, was about an inch thick, and seemed to have been made by spreading tempered clay smoothly upon a leveled space of earth and then hardening by means of fire built on top of it. There were no seams to indicate that it had been made otherwise and laid down in sections. Nothing else was found, except some charcoal around the edges.

Like F, this large central mound was composed of tough clay and gravel, making it very hard to dig. Within a short distance were three great depressions, from which the earth of which it was formed had evidently been taken.

Mound K: A low mound, eighty yards in diameter at the base. We opened it in various places, as shown in the drawing. Six feet in the center brought us to the bottom, eighteen inches of which was composed of a soft, black earth, in which were found bones, deer horns, shells, fragments of pottery, &c. In this deposit we also found two stone implements, probably used for pounding corn, opening shell-fish, or something of the kind.

Mound L is similar to K in every respect. In addition to the usual *melange* of black earth, bones, shells, &c., we found one pounder and two pieces of red stone, which, I suppose, had been used for painting. We also found one flint knife. Persons not familiar with such relics might mistake these knives for arrow or spear heads, from which they differ in not having notches worked in the large end for the purpose of attaching them to a shaft.

Mound M: Thirty yards across at base, and five feet high. At two feet down we came upon a fossil shell and a beautifully-finished little stone; I call it a paint mortar. There was no sign of bones, which leads to the supposition that these articles were simply buried there for safe-keeping. At four feet down we found a large and splendid stone implement. It was lying

near one side of the mound, and appeared to have been lost there, as there were no visible marks of anything further. Nothing more was found in, this mound. The composition, light soil, as usual, shows that it had been gathered from the surface.

Mound N: Fifteen yards across, and three feet high. Two feet down we found a broken stone implement, which was the only article obtained. The composition of the mound was the same as M.

Mound O: A double mound, forty by seventy yards at base of largest end, and eight feet high. We excavated at three points, and found two to be of no interest whatever. The third one, at the large end of the mound, proved otherwise. We started down through red and crumbly earth, indicating that it had been exposed to high heat. The deeper we went the stronger the indications of fire became, until finally, when three feet below the surface, we came to a bed of charcoal, or rather what proved to be a charred log lying horizontally. We opened the mound thoroughly, and found that it had three furnaces passing in at the base of the lower side, (the mound is on inclined ground,) and running parallel, about six feet apart, almost entirely through to the base of the higher side; that is, ranging upward through the mound at the angle of the surface of the solid ground upon which the mound stood. They had been formed by first digging trenches into the earth, two feet wide and eighteen inches deep. Over these, rude arches had been thrown, formed of irregular masses of tempered clay, probably sun-dried. Some of these masses we took out entire. They are about as large as a man could handle conveniently, and having been immediately in contact with the fire, are burned very hard.

In the spaces formed between these furnace trenches, and near the center of the mound, were found two small piles of human bones, (one pile in each space,) which seemed to have been thrown together without regard to regularity. I do not think there could have been more than about two skeletons in each pile. They were completely charred by the heat froth the furnaces, and consequently were very tender to handle. On drying out they became much harder. From the three main furnace trenches went up a large number of small flues, eight or ten inches in diameter, whose walls had also been formed of tempered clay, and were now burned very hard. At some points they rose directly toward the surface of the mound, while from others they wound and twisted about through it in various directions, all skillfully planned with a view to conveying the heat to all parts of the pile.

Running through the mound horizontally, at different elevations, were large logs still retaining their entire shape, but completely charred. We traced one from end to end, eighteen inches in diameter and twenty-two feet long. The ends showed that they had been burned off to make the piece the desired length, and their great irregularity of outline led me to think that the operation had been performed while the log was yet green, and retained its sap. The burning had evidently been forced by placing dry pieces of wood across the log and

keeping them carefully "chunked up," and the irregularities were due to the different positions of the cross-pieces; the log, in consequence of being green, having immediately ceased to burn when there was no direct contact.

In addition to these charred logs there were a number of upright posts, also charred, which seemed to have been placed in position as the earth had been filled in, to prevent too great a pressure upon the flues. Some of them were more than a foot in diameter and five or six feet long. Their ends presented the same irregular outline as the horizontal pieces. I found one piece of split timber four feet long, eight inches wide, and two inches thick. Its ends showed that it had been broken to its existing length by main force, for, although a solid coal, the splinters were yet perfect.

I saw, nothing about any of these timbers that indicated their having been worked by other means than fire, and if there had been anything I would certainly have noticed it, for they were entire, just as they had been placed in the mound, merely large, solid coals. The coal was in as good a state of preservation as if burned but yesterday, as you will see by the specimen sent. Two of our blacksmiths have examined these specimens. Both agree that one kind is chestnut, (*Castanea vesca*, Linn.,) but differ with reference to the other—one claiming that it is poplar, (*Liriodendron tulipifera*, Linn.,) while the other pronounces it our yellow pine, (*Pinus rigida*, Miller.) The two former trees grow abundantly about the locality of the ruins, but the pine has not grown nearer than four or five miles since the country has been known to white people.

Every part of the large end of this mound, from base to top, had been affected by the heat from the furnaces and flues. In fact, it was one huge brick, hard burned near the base, and softer toward the top. The earth seemed to have been thrown up loose; none of it had been tempered except that forming the arch of the furnaces and the walls of the flues. There were no fragments of pottery, or dross, or cinders, or anything else upon which a hypothesis could be based touching the object for which the mound had been used. Ashes in the furnaces, bones, burned earth, and charred timbers, as already mentioned, were the only things found after a most careful and exhaustive examination.

Mound P: This mound, about fifteen yards across and four feet high, was opened by curiosity-seekers two years ago. Report says they found nine copper spoons like those taken from G, a copper wedge, and a stone paint mortar, as I call it in default of a better name. After diligent inquiry among the people interested in the digging, I have succeeded in obtaining the "wedge," the mortar, and part of one of the spoons. The discoloration in the concaves of the mortar is due to something put into it since it was found — indelible ink, (nitrate of silver,) I think. The markings around the edge were the same when found.

The parties who did the digging assure me that they saw no bones, but I think they must

have overlooked them, for on opening the mound more thoroughly I found fragments of a human skull, but no other bones. These lay near the edge of their opening; hence I conclude that they must have taken the skeleton out. I also found, lower down, three fragments of stone implements. The composition of the mound was surface soil, as usual.

Mound Q: Twenty yards across at base, and nine feet high. At eighteen inches down we came upon a bed of coals and burned earth, evidently where a large fire had been. At three feet, in what appeared to be a deposit of ashes, we found a copper relic; at four feet, lying alone in the yellow earth, a stone implement; at four and a half feet, what seems to be a copper plate attached to a fragment of matting; at six feet, a second stone implement like the first; at eight feet, lying immediately together, three pieces of lead ore; and at nine feet, on the solid earth, a small string of copper beads.

There were no bones or other things in this mound indicating that it had been used as a burial-place. All the articles found, except the copper wheel, lay immediately in the yellow earth, and there were no discolorations in the adjoining soil, which must have been the case had perishable articles been buried with them.

I think you will find the beads are held together by the same imperishable material to be seen in the copper relics found in G.

SHELL BEDS.

There are two extensive shell beds in connection with these ruins, one on each side of the river. That on the eastern side has been under cultivation for years, and lying immediately upon the surface it is not in so good a condition as it would otherwise have been. It covers about half an acre of ground, and is some eighteen inches in thickness. I explored it pretty thoroughly before this season's crop was put in, and in the collection marked "R" you will find the result, together with some of the shells composing the mass.

The bed on the west side of the river was entirely undisturbed until I examined it. It covers a little less than half an acre, is about two feet in thickness, and lies three feet below the surface; that is, the overflows of the river have made a sedimentary deposit upon the shell bed three feet thick. Taking into consideration that this river seldom overflows oftener than once in a year, and sometimes but once in several years, that its waters are not then as muddy as most other rivers at such times, and that being a mountain stream it soon subsides, we can form at least *some* idea of the age of this shell bed. In addition to this, I may say there is now growing upon it a burr-oak tree, (*Quercus macrocarpa*, Michx.) fully six feet in diameter.

I explored this bed carefully, and you will find an assortment of what I obtained in the

collection marked "S," together with specimens of the shells. The broken pottery was in great abundance, and seems to have been broken vessels thrown away with the shells and other refuse. The same shell-fish are now to be met with in the river, but they do not seem to be in great abundance, judging from what are found along the shore. It is possible that they are more plentiful at the bottom of the river, however, and that these "old-time people" had some way of dredging them up.

The river is wearing the bank away where the bed crops out; consequently I had a very good opportunity of noting its position. It lies perfectly horizontal, and, for some distance up and down the river on either side of it, the caving bank is literally dotted with places where fires seem to have burned for a long time; the earth is burned hard and to redness, and ashes and coals are there. In digging out the places I found several with three stones in the center still occupying triangular positions, as if arranged for the purpose of supporting cooking utensils above the fire. These fires were generally on a level with the bottom of the shell bed.