

ANTIQUITIES IN TENNESSEE.

CHAPTER I.

BURIAL CAVES.

By the first settlers of Tennessee, many of the caves which abound in the limestone formation were found to contain human bones in abundance, which had been deposited by the race formerly inhabiting this country. The working of these caves for *nitre* during the revolutionary war, the Indian war, the last war with Great Britain, and the recent civil war of 1861-1865, has resulted in the removal and destruction of these human remains. I have visited several caves which are known to have contained human bones in former times, without obtaining any of these ancient relics. As far as my observations extended, the caves containing the human remains were always located in the vicinity of fertile valleys and plains in the neighborhood of some river or never-failing spring of water. Large mounds were generally found in the same localities, and the condition of the former inhabitants was evinced by the numerous fragments of pottery, arrow-heads, and other stone implements.

Numerous stone graves containing human remains are, at the present day, found along the banks of the rivers and streams, in the fertile valleys, and around the cool springs which abound in the limestone region of Tennessee and Kentucky. These ancient repositories of the dead are frequently surrounded by extensive earth-works, which inclose imposing monumental remains.

In these remains we have proof that this country, in common with other portions of the great valley of the Mississippi, was inhabited in ancient times by a comparatively dense population, which subsisted on the products of husbandry as well as by the chase.

It is important, in the first place, to examine the testimony of the earlier explorers and writers upon the deposits of human bones in caves.

The early pioneers and hunters discovered everywhere in the more fertile regions of Middle Tennessee marks of the ancient inhabitants, and they described the caves which they visited at that time as "full of human bones." Haywood¹ relates that, in the spring of the year 1811, the remains of two human beings were found in a copperas cave in Warren County, in West Tennessee, about fifteen miles

¹ Natural and Aboriginal History of Tennessee, pp. 163-166.

1 March, 1876.

southwest from Sparta, and twenty miles from McMinnville. One of them was a male, the other a female. They were interred in baskets made of cane curiously wrought, and evidencing considerable mechanical skill. They were both dislocated at the hip-joint, and were placed erect in the baskets, with a covering of cane made to fit the inclosure in which they were placed. The flesh of their bodies was undecayed, of a brown color, and adherent to the bones and sinews. Around the female, next to the body, was wrapped a well-dressed doe-skin; next to this was a mat very curiously wrought from the bark of a tree, and feathers. The bark seemed to have been made into small strands, well twisted. Around each of these strands feathers were rolled, and the whole was woven into cloth of a fine texture, after the manner of our common, coarse fabrics. This mat was about three feet wide, and between six and seven feet in length. The whole of the fabric thus formed of bark was completely covered by the feathers, the body of it being about one-eighth of an inch in thickness, and the feathers extending about one-quarter of an inch from the strand to which they were attached. The appearance was highly diversified by green, yellow, and black feathers, presenting different shades of color when exposed to the sunlight in different positions. The next covering was an undressed doe-skin, around which was rolled, in good order, a plain shroud, manufactured after the same plan as the one ornamented with feathers. This article resembled very much, in its texture, the bags generally used for the purpose of holding coffee exported from Havana to the United States. The female had in her hand a fan formed of the tail feathers of a turkey, bound with buckskin strings and scarlet-colored hair, so as to open and shut readily. The hair of the mummies was still remaining upon their heads, and was of a yellow cast and of very fine texture.

De Soto, during his march in 1539 and 1540 through the territory now included within the limits of Florida, Alabama, Georgia, and Tennessee, saw great numbers of similar feathered mantles among various Indian nations; and the Mexicans, at the time of the Spanish conquest, were clad in similar garments. John Lawson, in his "New Voyage to Carolina," in describing his visit to the King of Santee, says: "He brought with him their chief doctor or physician, who was warmly and neatly clad with a match-coat made of turkeys' feathers, which makes a pretty show, seeming as if it was a garment of the deepest silk shag," p. 18. In the island of O-why-hee, in the Pacific Ocean, in the year 1777, when Captain Cook visited it, the king and his chiefs were dressed in red feathered cloaks, which in point of beauty and magnificence were said to have been nearly equal to those of any other nation. Fans were made there also of the fibres of the cocoa-nut, of the tail feathers of the cock and of the tropic bird, and also feathered caps were worn. In 1730, the Indians of North Carolina used feathered match coats, exceedingly pretty, says Dr. Brickel; some of which, he also remarks, are beautifully wrought with a variety of colors and figures, which seem at a distance like a fine flowered silk shag. When new and fresh, he continues, they serve for a bed instead of a quilt. Some match-coats, he says, were made of hair, or of raccoon, beaver, or squirrel skins; others again were made of the green parts of the skin of the maulard's head or of the skins of other fowls, which they stitch or sew perfectly well

together; their thread being the sinews of the deer divided very small. When they were finished, they appeared very beautiful.

Haywood describes a cave, the aperture into which was very small, near the confines of Smith and Wilson Counties, on the south side of Cumberland River, about twenty-two miles above Cairo, on the waters of Smith's Fork. The workmen digging in the apartment next the entrance, after removing the dirt, came to another small aperture upon the same level, which they also entered, and found a room twenty-five feet square. This room seemed to have been carefully preserved for the reception and burial of the dead. In it, near the centre, were found three human bodies sitting in baskets made of cane, the flesh being entire, but a little shrivelled and hard. The bodies were those of a man, a woman, and a small child. The color of the skin was said to be fair and white, without any admixture of a copper color; their hair auburn and of a fine texture. The teeth were very white; in stature they were about the same as the whites of the present day. The man was wrapped in fourteen dressed deer skins, and over these were wound what those present called blankets. They were made of bark, like those found in the cave in White County. In form the baskets were pyramidal, being larger at the bottom and tapering towards the top. The heads of the skeletons were outside of the blankets.¹

At the plantation of Mr. William Sheppard, in the County of Giles, seven and a half miles north of Pulaski, on the east side of the creek, is a cave with several rooms. The first is fifteen feet wide, twenty-seven feet long, and four feet deep; the upper part is of solid rock. Leading into this cave was a passage which had been so artfully covered that it escaped detection till lately. A flat stone, three feet wide and four feet long, rested upon the ground, and, inclining against the bank, closed part of the mouth. Into the part of the mouth left open, had been rolled another stone which closed the whole opening. When these stones were removed and the cave was first entered, the jaw-bone of a child, the arm-bone, the skull, and thigh-bones of a man were found. The whole bottom of the cave was paved with flat stones of a bluish color closely joined together, but of different shapes and sizes. They formed a smooth floor upon which the bones were laid.²

Twelve miles below Carthage, and about a mile from the Cumberland River, is a cave in which occurred human bones of all sizes. There is a burying-ground near to the fortification, in which, fifteen years ago, were discovered many skeletons, and with them were deposited pipes and water-vessels of earthenware. Near to this cemetery is a deep creek running into the river, and forming an acute angle with the latter. At some distance from the junction is a ditch running from the creek to the river, and the remains of a parapet. Opposite to the entrance-way, and about six feet from it, is the appearance of a wall on the inside, so formed as to turn those entering to the right or left. In the interior were several mounds.³

Captain Daniel Williams, a man of undoubted veracity, is said to have affirmed that, several years ago, in a cave five or six miles above Carthage, on the Cumber-

¹ Natural and Aboriginal History of Tennessee, p. 191.

² Haywood, Nat. and Ab. Hist. p. 195.

³ Haywood, p. 169.

land River, workmen were collecting earth for saltpetre, and that many human skeletons were found, one of which was a female in a good state of preservation, with yellow hair, and shrivelled flesh. Around the waist was a silver girdle, with marks resembling letters. The body was replaced in the cave whence they had taken it.¹

On the north bank of the Holston, five miles above the mouth of the French-Broad, are six mounds, within half an acre of ground, placed without any apparent regularity. They are in form truncated pyramids. The bases are from ten to thirty feet in diameter. The largest of them are ten feet in height. Their form is remarkably regular. In one of them, which was cut into perpendicularly, a small quantity of charcoal and ashes was discovered. These mounds are inclosed by an old ditch, which can at this time be traced distinctly on the sides, and which incloses several acres of land besides the mounds. At every angle of the ditch is a bastion in the form of a semicircle. On the south bank, opposite the mound, is a bluff of limestone, in which is a cave. This bluff is one hundred feet in height. On it are faintly painted, in red colors, the sun and moon, a man, birds, fishes, etc. These figures have in part faded within a few years. Tradition says they were made by the Cherokees, who were accustomed in their journeys to rest at this place. Whether such a tradition is entitled to credit is for the judicious reader to determine. Wherever perpendicular cliffs or bluffs occur on the rivers of Tennessee, and especially if caves are in them, mounds are often found near them, inclosed in entrenchments, the sun and moon being painted on the rocks, and charcoal and ashes being found in the smaller tumuli. These tokens seem to afford evidence of a connection between the mounds, the charcoal and ashes, the paintings, and the caves. The latter frequently contain the skulls of human beings alleged to have been sacrificed by fire on the mounds. The paintings are supposed to have represented the deities whom the people worshipped; and the ditches may possibly have pointed out the consecrated ground, which was not to be polluted by the tread of unhallowed feet. The large mounds with levelled tops, containing below the surface of the upper part an image of stone, which is supposed formerly to have stood upon the summit, or sometimes having the image at the margin of its base covered with soil a few inches, as if it had tumbled from the top, are supposed to have been the high places around which the people assembled to offer up their adorations.²

"A human body was found, in the year 1815, in one of the limestone caverns of Kentucky. The skin, bones, and other firm parts were in a state of entire preservation. The outer envelope of the body was a deer-skin dressed in the usual way, and, perhaps, subsequently softened by rubbing before being used. The next covering was a deer-skin, the hair of which had been cut away by a sharp instrument. The remnant of the hair and the gashes in the skin nearly resembled the sheared felt of beaver. The next wrapping was of cloth, made of *twine* doubled and twisted. The innermost wrapping was a mantle of cloth like the preceding, but

¹ Haywood, p. 100.

² Haywood, pp. 148, 149.

finished with large brown feathers arranged and fastened with great skill, so as to be capable of guarding the living wearer from wet and cold. The plumage was distinct and entire, and the whole bore a near similitude to the feathered cloaks now worn by the natives of the northwest coast of America. The body was in a squatting posture, with the right arm bent forward, and its hand encircling the right leg. The left arm hung down, with its hand extending partly under the body. The individual, who was a male, did not probably exceed the age of fourteen at his death. There was a deep and extensive fracture of the skull near the occiput, which was probably the cause of his death. The skin had sustained little injury. It was of a dusky color, but the natural hue could not be decided with exactness from its appearance at that time. The scalp, with small exceptions, was covered with sorrel and foxy hair. The teeth were white and sound. The hands and feet seem to have been slender and delicate. Some are inclined to the opinion that this specimen belonged to the Peruvian race."¹

The light color of the hair, in these so-called mummies of Tennessee and Kentucky, was most probably due to the action of the lime and saltpetre.

When Kentucky was first explored, great numbers of human bodies are said to have been found in a state of preservation in a cave near Lexington. As the pioneers did not appear to attach much importance to antiquities, these bodies were not preserved. The bodies found in the saltpetre cave of Kentucky are said to have been considerably smaller than the men of our times; and their teeth are described as long, white, and sharp, and separated by considerable intervals.

Mr. Caleb Atwater quotes Mr. Clifford of Lexington, Kentucky, to the effect that the mummies were generally found enveloped in three coverings; the first a species of coarse linen cloth of about the consistency and texture of cotton bagging; the second a kind of network of coarse threads formed of very small, loose meshes, in which were fixed the feathers of various kinds of birds, lying all in one direction, so as to make a perfectly smooth surface; the third and outer envelope either like the first or consisting of skins sewed together.²

Mr. Charles Wilkins, in 1817, recorded the following facts with reference to an exsiccated body discovered in a saltpetre cave in Warren County, Kentucky: "It was found at the depth of about ten feet from the surface of the cave, bedded in clay, strongly impregnated with nitre, placed in a sitting posture, encased in broad stones standing on their edges, with a flat stone covering the whole. It was enveloped in coarse clothes, the whole wrapped in deer-skins, the hair of which was shaved off in the manner in which the Indians prepare them for market. Inclosed in the stone coffin were working utensils, beads, feathers, and other ornaments of dress."³

This observation is important, for it establishes the fact that the mode of burial practised in the case of this so-called mummy was similar to that in use along the banks of the Cumberland and other streams of Tennessee and Kentucky; and we

¹ Natural and Aboriginal History of Tennessee, Haywood, pp. 338, 339.

² *Archæologia Americana*, p. 318.

³ *Ibid.*, p. 392.

are justified in the conclusion that the bodies deposited in the stone graves were arrayed in dresses similar to those in which the exsiccated bodies in the saltpetre caves were inclosed. The latter were preserved from decay, undoubtedly, by the saltpetre and lime salts and the drier atmosphere of the caves.

In the numerous stone graves which I have opened, traces of the garments which originally surrounded the bodies could be discerned in only one of the most perfectly constructed stone coffins.

CHAPTER II.

MODES OF BURIAL PRACTISED BY THE ABORIGINES OF AMERICA.

Stone Graves.

THE ancient race of Tennessee buried their dead in rude stone coffins or cists, constructed of flat pieces of limestone or slaty sandstone which abound in Middle Tennessee.

Extensive graveyards, in which the stone coffins lie close to each other, are found in Tennessee and Kentucky, along the river-courses, in the valleys, and around the springs.

A considerable portion of the city of Nashville has been built over an extensive Indian graveyard which lay along the valley of Lick Branch. A large number of these graves have been destroyed in the building of North Nashville. In this section of the city I saw a number of them quite exposed during the digging of the cellars of a row of houses, and obtained from them a small stone hatchet and another implement of hard silicious material, beautifully polished. This stone implement is supposed to have been used in the dressing of hides. All around the sulphur spring, traces of the aborigines are manifest in the form of fragments of large pots and various stone implements. It is supposed that the salt lick was frequented by the aborigines for the purpose of killing the buffalo and deer which resorted there, and also for the manufacture of salt. A number of interesting relics are said to have been found in the banks around the sulphur spring; and I myself have gathered a large number of fragments of pottery in this locality, and found them to be uniformly composed of a mixture of crushed river shells and clay. Many of these fragments were nearly one inch in thickness, with an almost imperceptible convexity indicating that they had once formed parts of very capacious vessels. From the markings upon the exterior they appear to have been moulded in baskets made of split cane.

An extensive burying-ground lies on the opposite bank of the Cumberland, directly across from the mouth of Lick Branch, surrounding a chain of four mounds. One of these mounds appeared to have been the burying place of a royal family. Two of the smaller ones are thought to have been the general burying-ground of the tribe, whilst the largest one may possibly have been erected as a site for the residence of the chief, or for a temple. In the low alluvial plain, all around these stone graves, are scattered fragments of pottery, arrow-heads, and other stone implements. The caving of the bluff constantly exposes stone graves, skeletons, and relics of various kinds.

A graveyard is located on the same bank of the Cumberland River, about a mile and a half lower down; another at Cockrill's Spring, two and a half miles from the sulphur spring; another six miles from Nashville, on the Charlotte Turnpike; another about eight miles above, near the mouth of Stone's River; and still another at Haysborough. I opened a number of stone graves on the farm of Col. W. D. Gale, about three miles from Nashville. At the foot of the hill upon which the residence is situated flows a never-failing spring. The Indians used the hill above the spring as a burying-ground. I exhumed from one grave a small black idol, from another copper ornaments, and from other graves upon the same hill vases of various forms. Many other localities might be enumerated in the immediate vicinity of Nashville.

Numerous stone graves are also found on White's Creek; on the Dickinson Turnpike, nine miles from Nashville; at Sycamore, twenty-two miles from this city, in Cheatham County; on the plantation of Col. Overton, nine miles from Sycamore; in and around Brentwood; at the Boiling Springs; and on the plantation of Mr. Scales.

Extensive Indian burying-grounds are also found in White County, near Sparta, and along the various streams flowing into the Cumberland and Tennessee Rivers, as Harpeth, Duck, Elk, and Stone Rivers.

At the plantation of Gen. De Graffenreid, two and a half miles above Franklin, numerous stone graves are found within and around an extensive earthwork, which appears to have surrounded a considerable Indian town. One large mound, pyramidal in shape and two hundred and thirty feet in diameter, together with a chain of small conical mounds, is found within the ancient fortification. Several of the smaller mounds contain numerous stone graves; some are also scattered about at the base of several of the larger mounds. An extensive burying-ground is also situated on the slope of the hill overlooking the mounds and earthwork.

One of the most extensive and remarkable collections of stone graves is on the west fork of Big Harpeth, six and a half miles from Franklin, at a place called Old-Town, the property of Mr. Thomas Brown.

Extensive graveyards are also found at various localities along the banks of the Harpeth River down to its junction with the Cumberland.

These graves, although justly considered as rude fabrics, nevertheless exhibit considerable skill in their construction, and are standing memorials of the regard in which this ancient race held the memory of the dead.

The manner of burial seems to have been as follows: An excavation of a size agreeing with that of the body of the dead was made in the ground, and the bottom carefully paved with flat stones. Flat stones or slabs of limestone and slaty sandstone were placed along the sides and at the head and foot of the grave. The body was then placed within this rude coffin, and with it were deposited vases, small ornaments, pearls, beads, bands of wampum, large sea-shells, idols, warlike implements, stone hatchets and chisels, spear-heads, arrow-heads, stone swords, paint bowls, and even copper ornaments. The top of the grave was then covered with one or more flat stones. The upper slabs covering the graves were generally on a level with the surface of the ground. In some localities, however,

and especially in the most carefully constructed burial mounds, the graves were covered with a foot of earth or more, and in order to discover their location I was obliged to sink an iron rod into the loose soil until it struck the lid of the coffin. These burial mounds will be more fully described hereafter.

In some localities the sides of the tombs stood up above the surface from four to eight inches, as in the case of the stone graves described by Bartram. When a number of coffins were placed together, the side stones of the first frequently constituted the side of the second, and so on. Many of the stone graves are quite small, and capable of containing only the body of a *new-born* infant. These small graves were constructed with great care, and the sides, bottom, and top were formed of much thinner and smoother slabs than the graves of the adults. Many of the short, square graves, not more than eighteen inches or two feet in length, contain the bones of adults piled together, the crania being surrounded by or resting upon the arm and leg bones. This class of graves containing the bones of adults packed in a small space were probably constructed at the general burying festival, or contained the remains of the dead which had been transported from a distance. This view is sustained by the fact that in some of these graves I have found portions of two or more skeletons, sometimes two crania, and in others only a portion of a single skeleton.

It has been frequently asserted that the smaller graves contained the bones of *small adults* or *pigmies*. It has been further asserted that *entire cemeteries were composed of these small graves*.

The determination of the true character of the remains in these graves appeared to me to be of much interest, and I opened a large number of them in various ancient cemeteries, with the following results:—

1st. Some of the small graves contained nothing more than the bones of small animals and birds. The animals appeared to be a species of dog, also rabbits, raccoons, and opossums. The bones of the birds appeared to belong to the wild turkey, eagle, owl, hawk, and wild duck. Occasionally bones of these animals and birds were found in the large graves along with the bones of human adults.

2d. The small graves were frequently in groups, in the neighborhood of the large graves. The most carefully constructed burial mounds which appeared to contain the remains of royal families, generally revealed not more than two or three small graves, inclosing the remains of children *who had died during the process of dentition*.

3d. All the crania and bones which I examined in the small graves were, beyond controversy, those of children. The bones of the crania were so soft and thin that, after numerous trials, I was able to obtain only a single tolerable specimen. I was enabled, in many cases, however, by exercising much care in removing the earth, to ascertain the exact outline of the crania; as, however, they contained earth within, the attempt to lift them was followed by the breaking of the different bones into fragments. In all cases the crania were much flattened at the occiput, giving an exceedingly short longitudinal or occipito-frontal diameter, and a very long transverse or parietal diameter. This fact was determined by removing the earth with great care from around the crania, and examining them *in situ* in the

small graves before the attempt was made to remove them. As soon as the effort was made to remove them, the component bones separated at the sutures, and crumbled during the effort of lifting them out of the grave.

4th. The conclusive demonstration of the character of these remains lay in the *existence of both sets of teeth in the upper and lower jaw-bones, thus proving that they belonged to children or infants who had probably died during the period of dentition.*

Haywood, in his "Natural and Aboriginal History of Tennessee," devotes an entire section to the consideration of "*the ancient pigmies.*" The following is a synopsis of the facts stated by him in reference to this matter:—

A number of small skeletons were discovered a few miles from Sparta, Tennessee, in White County, an account of which was given by a Mr. Lane. The graves were about two feet in length, fourteen inches broad, and sixteen inches deep. These extend promiscuously throughout the farm of Mr. Lane, and in a large and closely connected burying-ground in the vicinity; there were others of the same description four miles south of Sparta, and it is said that hundreds of them might be found throughout the locality. There is no discernible rising on the surface of the earth on account of these graves, and they were found by sinking an iron rod into the ground until it struck the covering stone of the coffins. These graves generally contained small skeletons of human beings so much decayed that they could not be removed without being broken to pieces, or crumbling to dust. There were also found in them remnants of pottery and shells, as well as bones of animals. In one the skeleton lay on its back, with its feet drawn up, so as to raise the knees about four inches above the bottom of the grave; the head was also so raised as to cause the chin to lie upon the breast. This skeleton, carefully measured as it lay, was found to be, from a little below the ankle-joints to the top of the skull, two feet ten inches, making a proper allowance for the bending of the legs and the inclination of the head.

But one grave of the whole series was of a larger size and of a different form, being constructed after the manner of a coffin, fourteen inches broad at the head, twenty-two at the elbow, and ten at the foot; the sides and ends were of flag-stones, the same as those of the small graves. In this grave lay a skeleton five feet five inches long, the head to the west and the feet to the east. This skeleton was carefully uncovered without displacing any of the bones until the whole was exposed to view. Its mouth was wide open and contained a full set of teeth, the arms lay along the side, the ribs were broad and flat and more than double the size of those of the Pigmies. The head was also larger, the eyes wider apart, and the forehead higher than those in the smaller graves. The skull was perfect, with the exception of a fracture on the right cheek-bone; and a quantity of fine, straight hair adhered to it, which was of a bright gray color. No vessels or trinkets were found with this skeleton, and, from the great dissimilarity in the shape of its head and the size and form of the bones, it seemed to belong to a different tribe from the skeletons of the smaller graves.

From the great number of small graves found here, says Mr. Lane, all of the same description, and, among them all, but one being of a large size, it seems to indicate that there was, in ancient times, a race of people whose height was from two feet ten to three feet.

As old as the hair of the large skeleton seemed to be, there was not a tooth lost or unsound in either jaw, but one of the Pigmy heads had in the upper jaw a decayed tooth, whence it was conjectured that the person to whom this skeleton belonged was older than the former.

Specimens of the contents of these graves were submitted to medical gentlemen of Nashville, and various opinions were entertained as to the maturity or infancy of the smaller skeletons. The prevailing one seemed to be that these skeletons belonged to adult persons of small size, and also that some of the bones found were those of animals.—*Natural and Aboriginal History of Tennessee*, pp. 200–209.

In a note added to this description, Haywood records the fact that, in the neighborhood of St. Louis, Mo., small stone graves exist, as in Tennessee; and that, in certain ancient mounds near Lake Erie, skeletons of people of small stature are found, pp. 360, 361.

The preceding account of the pigmies of Tennessee is an example of how a wild hypothesis may, from the love of the marvellous, be founded upon a few hasty and imperfect observations. This tradition had been repeated so often that it was generally believed in the State at the time of my exploration, and I have, therefore, given the facts upon which it appears originally to have been founded. It is evident that these facts do not establish the existence of a race of small people (*pigmies*) in former times; the decayed state of the bones, and especially of those of the crania in the graves opened by Mr. Lane and others, was almost conclusive proof that they belonged to the skeletons of children. On the other hand, the skeletons of adults remain to this day in a good state of preservation in the stone graves. Even Haywood, who was anxious to make out a special case, represents the testimony of the physicians of Nashville as doubtful; and one of the crania or cranial bones sent was evidently that of a child. The color of the hair could not determine this question, as it had been buried in the moist earth for more than a century at the time of these examinations.

I myself have examined the bones from fifteen different aboriginal cemeteries, and have never discovered a single skeleton of an adult of unusually small stature. I have examined graves of all sizes, from those just large enough for the still-born infant to those enclosing skeletons more than seven feet in length, but, in every case, the small graves contained either the skeletons of children or the bones of full-grown adults, which had been deposited in the square stone coffins, after they had been separated from the flesh and disjointed.

The experience of my lamented and honored friend, the late Col. A. W. Putnam, was in like manner against the existence of a race of pigmies in former times. All the small stone graves which he opened contained the bones of children, as was evident from the state of the teeth. The testimony of Dr. Troost, the learned geologist of Tennessee, was also to the same effect. In his "Account of some Ancient Remains in Tennessee," after mentioning six extensive burying-grounds in a circle of about ten miles diameter around Nashville, and after stating that the burying-grounds on the banks of the Cumberland, in the suburbs of the city of Nashville, to which we have alluded, extended at that time, 1844, about a mile in length, almost to Mr. Macgavoc's, and that the stone coffins were constructed in such a manner that each corpse was separated by a single stone from the next, he says:—

"Some of our inhabitants consider these places as battle grounds, and the graves as the graves of the slain. The Indians do not bury their fallen foes, but leave them to be devoured by the wolf, the cougar, and other carnivorous animals; their own slain they carry to their towns, or hang up in mats upon trees. They have afterwards burying festivals, when they collect the bones thus preserved, and bury them; and thus, in my opinion, originated those small graves which are attributed, but I believe erroneously, to pigmies. I have opened numbers of these small graves and have found them filled with a parcel of mouldered bones, which, judging from some fragments I have seen, belonged to common-sized men. In one of them I found amongst the mouldered relics two occipital bones; of course, here was a mere mixture of the parts of more than one skeleton. These bones lay without any order. This is not the case with the relics of the old extinct race, whose graves are much larger, the skeletons being generally stretched out. Nevertheless, I have found them also more or less doubled up, so that the part of the thigh-bone next to the knee lay near the lower jaw; in other graves I have found the head with the face downwards; in fact, they seem to

have buried their dead in every position. The present Indians generally bury their dead doubled up, the thigh against the breast."¹

Owing to the nature of my professional duties, and my official relations as Health Officer of Nashville, Tennessee, I was unable to examine the graves at Sparta in person, although desiring greatly to do so; in order, however, to settle this question, I addressed letters to the most prominent physicians and citizens of Sparta and White County, requesting them to open the graves and to forward the remains to me in Nashville.

I select the following from the replies received in response to this request. The first is from Drs. E. L. Gardenhire, of Sparta, and J. Barnes, of Livingston, Tennessee:—

"We have to say that we know of no graves or skeletal remains of an extinct race in White County, Tennessee. About eight miles north of Sparta, in a beautiful fertile valley of Cherry Creek, there is a very large mound, but whether there are Indian graves or bones near it we do not know. We have not heard of anything of the kind.

"Twenty-one miles north of Livingston, in Overton County, near Maj. John F. Jewett's residence, we learned that there is a cave in which there is a large deposit of human bones. Whether they are of the ordinary size or not we have not learned, but the fact that they are there is well authenticated.

"The writer of this, E. L. Gardenhire, of Sparta, Tennessee, twenty-five years ago, dug into a large mound near said cave, and found human teeth in a good state of preservation. He found, also, parts of the bones of a human cranium. The latter, however, was soon reduced to powder by exposure to the air.

"At Floyd's Lick, in Jackson County, Tennessee, thirty miles southwest of this place, are the remains of an ancient fortification plainly to be seen. It seems to have consisted of earthworks, with small mounds at the corners, and a much larger mound in the centre. Near the fortification are numerous graves. They are uniformly about four feet in length and two and a half feet wide. The graves are about four feet deep, and consist of broad, smooth, slate stones, pretty nicely cut out and fitted together in the excavations so as to form a stone box. The writer opened one of them twenty years ago, found some bones much decayed, a small earthen vessel or pot, and some flint arrow-heads. The bones were so much decayed that nothing of their size or shape could be ascertained.

"The writer was in company with Dr. Z. R. Chowning, near his residence, many years ago, and found a considerable quantity of human bones in a tolerable state of preservation. It is remembered that we found thigh and leg bones and crania. Upon measurement the thigh and leg bones were uniformly larger than the bones of the present race of men. The locality of the bones was not like the usual burial places. We supposed, therefore, that anciently a battle may have been fought there, and the bones of the slain may have been thus deposited. We remarked nothing very peculiar in the size of the crania found.

"Dr. Zachariah R. Chowning lives thirteen miles northwest of Livingston. This is all the information we can now give you." * * *

The next is from Dr. Jas. H. Snodgrass, of Sparta, Tennessee.

"There are many of these graves in our country, in the vicinity of rich borders of land. The two large pieces of carved shell seem, from the position in which they were found, to have been worn upon the breast, and the little balls as ear-ornaments. The head of the femur is forwarded to show you the condition of the bones. The small stone was picked up in the vicinity. There is a small earthen pot, holding about half a gallon, in every grave, but when exposed to the air a few minutes it crumbles upon the slightest touch. These vessels are marked with a great deal of taste." * * *

¹ Transactions of the American Ethnological Society, vol. i. pp. 358, 359.

In a subsequent letter Mr. Snodgrass states that "all the graves examined inside of a certain entrenchment are much smaller than those immediately outside. Those inside are about eighteen inches square, those outside are eighteen inches by thirty inches; in all, the dead are buried in the same position."

I examined carefully the bones from the small graves near Sparta, sent me by Mr. Snodgrass, and found them to be the remains of infants and children during the period of dentition. The age of the individuals to whom the remains had belonged was absolutely demonstrated by the existence of two sets of teeth, the first and the permanent, both in the upper and the lower jaw-bones.

The shell ornaments lying upon the breasts were similar in all respects to those from other parts of Tennessee, having the figure of the sun carved upon them. The pottery was composed of the same materials (crushed river shells and clay) as the vases exhumed from the stone graves and mounds at Nashville, Franklin, Old Town, and many other places.

It was evident, from all the testimony that I could gather, that the graves around Sparta, which had furnished Haywood with the materials for the construction of his romance of the ancient race of pigmies, inclosed the remains of individuals of all ages from infancy upwards, and that whilst the infants or children were frequently buried in groups apart from the graves of the adults, there was nothing peculiar about their organic remains. The fact that the large and small graves in some cemeteries are intermingled, and that both varieties occur all through this section of country, without any apparent division into distinct districts, sustains the view that all the stone graves were constructed by the same people, who were large and well formed, and that the hypothesis of the existence of a race of *pigmies* in Tennessee in ancient times is a mere figment of the imagination.

As far as our knowledge extends, the mode of burial in carefully constructed stone coffins, practised by the aborigines of Tennessee, was different from that in use among many Indian tribes of the present day; and an inquiry into the different modes of sepulture, practised by the aborigines of America, is of importance in its bearing upon the history of the former inhabitants of Tennessee.

At the time of the invasion of De Soto, more than three centuries ago, certain tribes or nations of the Southern Indians are described as inclosing the remains of the dead in coffins, in which were placed pearls, shell ornaments, and idols; and these coffins were deposited in special cemeteries and temples.

Hernando De Soto, Luis Fernandez De Bimeda, the *gentleman* of Elvas, and the Inca, Garcilasso De la Vega, have recorded the singular history of the *Christian*, John Ortiz, who came to Florida with Pamphilo de Narvaez, and was captured by the Indian Chief Ucita and held in captivity for twelve years, until released by De Soto. The life of John Ortiz, who had been condemned by Ucita to be bound hand and foot, upon a raft erected upon four stâkes, and burned to death, was saved, like that of the celebrated John Smith, the founder of Virginia, by the earnest intercessions of the daughter of the Indian King. John Ortiz was placed in charge of the temple or burial mound to keep away the wolves, which often carried away the corpses from the coffins. The bodies of the dead were said to have been deposited in wooden boxes covered with boards, without any fastening except a stone

or a log of wood laid upon the top. In the graves of one of the chief towns in the province of Cutifachiqui, the Spaniards found fourteen rows of pearls (weighing three hundred and ninety-two pounds), and little images of men and birds made of them. These facts indicate that the mode of burial practised by the aborigines of Tennessee dates back more than three centuries, and was employed by the Indians inhabiting, at the time of the expedition of De Soto, that portion of the country which is now included in the States of Florida, Alabama, Georgia, and Tennessee.

Lafitau, in his great work, "*Mœurs des Sauvages Américains, comparées aux Mœurs des Premiers Temps*," quotes a lengthy and elaborate description by Pere de Brebeus, of the mode of burial practised in early times by the Hurons and Iroquois. The bodies of the chief men were, in former times, subjected to a process of embalming. The skin was removed and oiled; the flesh was removed from the bones, and the skeleton placed within the skin, which was then stuffed with sand and laid upon a scaffold. The flesh was smoked, dried, and packed in blankets, and placed at the feet. This mode appears to have been practised only in the case of the most distinguished chiefs. The Illinois are said to have buried the bodies of the women, but they wrapped the bodies of the men in skins and hung them upon trees. When the Hurons and Iroquois buried bodies in the ground, they dug a circular hole, which was carefully lined with bark, and the body wrapped in skins was placed in the grave, with a vessel containing water or food at the side, together with ornaments, pipes, and weapons of war. The mouth of the grave was then covered with bark and earth. Pere de Brebeus has also described at length the grand burial festival observed by the Iroquois at long intervals of time, varying from eight to twelve years. The dead bodies and bones of the nation or tribe were collected and deposited in a large grave, into which large numbers of utensils, hatchets, pipes, etc., were thrown, and the whole covered with bark and earth. Various ceremonies were performed during this grand collection and burial of the deceased.¹

Narvaez, upon first landing in Florida, found a temple in which were chests, each containing a dead body covered with painted deer skins.

Jacob le Moyne,² who accompanied Rénaud de Laudouinière in his second voyage to Florida, says, in his work on the Indians, that when a chief or prophet died, upon the St. John's, he was placed in the ground, and a small mound of conical form was erected over him. The base of this mound was surrounded with arrows stuck in regular order. Some of the tribe sat and others kneeled around it, and continued to weep and howl for the space of three nights. Chosen women next visited the mound for a long time every morning at the break of day, at noon, and at night.

The description given by Joutel of the mode of burial practised by the Chouanons, although presenting some features in common with that of the ancient inhabitants of Tennessee, was most probably drawn up from that portion of the nation which had settled with the Illinois. As this author does not mention the use of stone slabs in the construction of their tombs, it is probable that the country in which

¹ *Mœurs des Sauvages Américains, etc.*, par C. P. Lafitau, tome second, pp. 386-458.

² As quoted by Pickett, *History of Alabama*, vol. i. p. 72.

they then lived was destitute of this material. In fact, the mode of burial employed by the inhabitants of Tennessee was only practicable in a region of country abounding in flat rocks. Large portions of the Southern and Western States are without slate or thin flat rocks, and hence it is impossible to determine by their stone graves the precise limits of the country formerly inhabited by the aborigines of Tennessee. It is certain, however, that these stone graves are found over a tract of country extending from the head waters of the Savannah River nearly to the shores of Lake Erie.

The mode of burial practised among the Illinois is stated by Mr. T. Rale, and deserves to be mentioned. "Their custom," says Rale, "is not to bury the dead, but to wrap them in skins, and to attach them by the head and feet to the tops of trees."¹

According to Mr. Lewis H. Morgan, different customs have prevailed among the Iroquois in relation to the mode of burial. At one period they buried the dead in a sitting posture, with the face to the east. Skeletons are still found in this position, in various parts of the State of New York, with a gun-barrel resting against the shoulder, thus fixing the period of their sepulture subsequently to the first intercourse of this people with the whites. Another and more extraordinary mode of burial prevailed among them. The body of the deceased was exposed upon a bark scaffolding, erected upon poles or secured upon the limbs of trees, where it was left to waste to a skeleton. After this had been effected by the process of decomposition in the open air, the bones were removed either to the former home of the deceased or to a small bark house by its side prepared for their reception. In this manner the skeletons of the whole family were preserved from generation to generation by the affection of the living. After the lapse of a number of years, or in a season of public insecurity, or on the eve of abandoning a settlement, it was customary to collect these skeletons from the whole community around, and to consign them to a common resting-place. To this custom, which was not confined to the Iroquois, are, doubtless, to be ascribed the barrows and bone mounds which have been found in such numbers in various parts of the country. On opening these mounds the skeletons are usually found arranged in horizontal layers constituting a conical pyramid, those in each layer radiating from a common centre. In other cases they are found placed promiscuously. There were Senecas residing at Tonawanda and Cattaraugus, in 1851, who remember having seen, about sixty years before, at the latter place, these bark scaffoldings on which bodies were exposed. The custom still prevails among the Sioux upon the Upper Mississippi, and among some of the tribes in the far west. The notions entertained by the Iroquois as to the state of the soul when disembodied were vague and diversified; but they all agree that, on the journey, it required the same things as were of use while it dwelt in the body. They, therefore, deposited beside the deceased his bow and arrows, tobacco and pipe, and necessary food for the journey. They also painted his face and dressed his body in its best apparel. A fire was built upon the grave at night to enable the spirit to prepare its food.²

¹ See his Letters in Kip's Jesuit Missions, p. 38.

² League of the Iroquois, pp. 172-175.

Captain Bernard Romans says that the Chicasaws bury their dead almost the moment the breath is out of the body, in the very spot under the couch in which the deceased died, and the nearest relatives mourn over it with woful lamentations. The mourning continues every evening and morning during a whole year.¹ When one of the Chactaws dies, a stage is erected, and the corpse is laid on it and covered with a bear skin; if it be that of a man of note, it is decorated, and the poles painted red with vermilion and bear's oil; if that of a child, it is put upon stakes, set across. The relatives then come and weep, asking many questions of the corpse, such as, why he left them? did not his wife serve him well? was he not contented with his children? had he not corn enough? did not his land produce sufficient of everything? was he afraid of his enemies? etc., and this accompanied by loud howlings; the women are there constantly, and sometimes with the corrupted air and heat of the sun, faint, so as to oblige the by-standers to carry them home; the men also mourn in the same manner, but in the night or at other times when they are least likely to be discovered. The stage is fenced round with poles; it remains thus a certain time, but not a fixed period; this is sometimes extended to three or four months, but seldom more than half that time. Old men, who wear very long nails on the thumb, fore, and middle finger of each hand, as a distinguishing badge, constantly travel through the nation, that one of them may acquaint those concerned, of the expiration of this period, which is according to their own fancy; the day being come, the friends and relatives assemble near the stage, a fire is made, and the venerable operator, after the body is taken down, with his nails tears the remaining flesh off the bones, and throws it with the entrails into the fire, where it is consumed; then he scrapes the bones and burns the scrapings. The head being painted red with vermilion is put, with the rest of the bones, into a chest (which for a chief is also made red), and deposited in the loft of a hut built for that purpose, and called the bone-house; each town has one of these. After remaining here one year or thereabouts, if the deceased was a man of any note, they take the chest down, and in an assembly of relatives and friends, they weep once more over him, refresh the color of the head, repaint the box, and then consign him to lasting oblivion. An enemy or any one who commits suicide is buried under the earth as one to be directly forgotten, and unworthy of the above-mentioned obsequies and mourning.²

Romans remarks upon this strange treatment of the dead, that Apollonius Rhodius mentions a similar custom of the inhabitants of Colchis near Pontus; Ives in his voyage relates a like custom of the ancient Peruvians; and we find again in Hawkesworth's voyage that the people of Otaheite perform their obsequies in a manner little or nothing different from that of the Chactaws.

The dead of the Muscokes or Creeks, according to Bernard Romans, are buried in a sitting posture, and they are furnished with a musket, powder and ball, a hatchet, a pipe, some tobacco, a club, a bow and arrows, a looking glass, some

¹ Concise Natural History of East and West Florida, p. 71.

² Natural History of East and West Florida, pp. 89-90.

vermilion, and other articles, in order to come well provided into the world of spirits.

According to the same author, the Arkansas, Kansas, Kappas or Kwappas, bury their dead, like the Creeks, with the addition of tying the head down to the knees.

William Bartram says that the Muscogulges bury their deceased in the earth. They dig a deep square pit under the cabin or couch on which the deceased lay in his house, lining the grave with cypress bark. Into this they place the corpse in a sitting posture, as if it were alive, depositing with him his gun, tomahawk, pipe, and such other matters as he held of the greatest value in his lifetime. His eldest wife, or queen dowager, has the first choice of his possessions, and the remaining effects are divided among his other wives and his children.

The description of the burial customs of the Chactaws by Bartram is as follows, and agrees in the main with that of Captain Romans, but contains several important additions: "The Chactaws pay their last duties and respects to the deceased in a very different manner from the Muscogulges. As soon as a person is dead, they erect a scaffold eighteen or twenty feet high, in a grove adjacent to the town, where they lay the corpse, lightly covered with a mantle; here it is suffered to remain, visited and protected by the friends and relatives, until the flesh becomes putrid; then undertakers, who make it their business, carefully strip the flesh from the bones, wash and cleanse them, and when dry and purified by the air, they are placed in a curiously wrought chest or coffin, fabricated of bones and splints, which is deposited in the bone-house, a building erected for that purpose in every town. When this house is full, a general solemn funeral takes place. Then the nearest kindred or friends of the deceased, on a day appointed, repair to the bone-house, take out the respective coffins, and following one another in order of seniority, the nearest relatives and connections accompanying their respective corpses, and the multitude following after them, all as one family, with united voice of alternate alleluiah and lamentation, slowly proceed to the place of general interments, where they place the coffins in order, forming a pyramid; and lastly they cover all over with earth, which raises a conical hill or mound. Then they return to town in the order of a solemn procession, concluding the day with a festival which is called the feast of the dead."¹

James Adair, who was a trader with the Indians, and resided in their country for forty years, has given the following account of the burial of the dead by the Cherokees and Chactaws or Chokta.

"Except the Cheerake, only one instance of deviation from the ancient and general Indian custom (of burying articles with the body) occurs to me: which was that of *Malakeke*, the late famous chieftain of the Kow-wetah head war town of the lower part of the Muskohge Country, who bequeathed all he possessed to his real and adopted relations; being sensible that his effects would be much more useful to his living friends than to himself during his long sleep.

"The Cheerake of late years, by the reiterated persuasion of the traders, have entirely left off the custom of burying effects with the dead body; the nearest of blood inherits them. They, and several

¹ Travels through North and South Carolina, Georgia, East and West Florida, pp. 515-16.

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others of our Indian nations, used formerly to shoot all the live stock that belonged to the deceased, soon after the interment of the corpse; not that they might accompany and wait upon the dead, but from a narrow-hearted avaricious principle. When any of them die at a distance, if the company be not pursued by an enemy, they place the corpse on a scaffold, covered with notched logs to secure it from being torn by wild beasts or birds of prey. When they imagine the flesh is consumed, and the bones are thoroughly dried, they return to the place, bring them home, and inter them in a very solemn manner. They will not associate with us when we are burying any of our people who die in their land. And they are not willing we should join with them while they are performing this kindred duty to theirs. Upon which account, though I have lived among them in the raging time of the smallpox, even of the confluent sort, I never saw but one buried, who was a great favorite of the English, and chieftain of *Ooehasa*, as formerly described.

"Notwithstanding the North American Indians, like the South Americans, inter the whole riches of the deceased with him, and so make his corpse and the grave heirs of all, they never give them the least disturbance; even a blood-thirsty enemy will not despoil the dead. The grave proves an asylum, and a sure place of rest to the sleeping person, till at some certain time, according to their opinion, he rises again to inherit his favorite place; unless the covetous or curious hand of some foreigner should break through his sacred bounds. This custom of burying the dead person's treasures with him has entirely swallowed up their medals and other monuments of antiquity, without any probability of recovering them.

"The Indians use the same ceremonies over the bones of their dead as if they were covered with their former flesh. It is but a few days since I saw some return with the bones of nine of their people, who had been, two months before killed by the enemy. They were tied in white deer skins separately; and when carried by the door of one of the houses of their family, they were laid down opposite to it, till the female relatives convened, with flowing hair, and wept over them for half an hour. Then they carried them home to their magazines of mortality, wept over them again, and buried them with the usual solemnities; putting their valuable effects in along with them. The chieftain carried twelve short sticks tied together, in the form of a polygon. The sticks were only peeled, without any paintings; but there were swans' feathers tied to each corner. They called that frame, *Terukpe toboh*, 'a white circle,' and placed it over the door, while the women were weeping over the bones.

"When any of the people die at home, they wash and anoint the corpse, and soon bring it out of doors, for fear of pollution; thence they place it opposite to the door, on the skins of wild beasts, in a sitting posture, as if looking into the door of the winter house, westward, sufficiently supported by all the movable goods of the deceased; after a short eulogium and space of mourning, they carry the body three times around the house in which it is to be interred, stopping half a minute each time, at the place where they began the circle, while the religious man of the deceased person's family, who goes before the hearse, says each time *Yah*, short and with a bass voice, and then invokes on a tenor key, *Yu*, which, at the same time, is likewise sung by all the procession, as long as one breath allows. Again he strikes up, on a sharp treble key, the feminine note, *He*, which in like manner is taken up and continued by the rest; then all of them suddenly strike off in the solemn chorus and sacred invocation, by saying, in a low key, *Wah*; which constitute the divine essential name *Yoh ewah*.

"After they had celebrated these funeral rites of the chieftain, they laid the corpse in its tomb, in a sitting posture, with its face towards the east, its head anointed with bear's oil, and its face painted red, but not streaked with black, because that is a constant emblem of war and death. He was dressed in his finest apparel, having his gun and pouch, and trusty hickory bow, with a young panther's skin full of arrows along side of him, and every other useful thing he had been possessed of. His tomb was clean inside, and covered with thick logs so as to bear several tiers of cypress bark and such a quantity of clay as would confine the putrid smell, and be on a level with the rest of the floor. They often sleep over these tombs together; which with the loud wailing of the women at the dusk of the evening and dawn of the day, on benches close by the tombs, awake the memory of their relations.

"The Choktahs having placed the dead on a scaffold stockaded round, at the distance of twelve yards from the house, opposite to the door, the whole family convene there at the beginning of the fourth moon after the interment, to lament and feast together. After wailing a while on the mourning

benches, which stand on the east side of the quadrangular tomb, they raise and bring out the corpse, and, while the feast is getting ready, a person whose office it is, and properly called the *bone-picker*, dissects it with his sharp-pointed knife. He continues till he has finished the task and scraped all the flesh from the bones. They then carefully place the bones in a kind of small chest, in their natural order, and proceed to strike up a song of lamentation, with various wailing tunes and notes; afterwards, they join as cheerfully in the funeral feast as if their kinsman was only taking his usual sleep. Having regaled themselves, they go along with those beloved relics of their dead, in solemn procession, lamenting with doleful notes, till they arrive at the bone-house, which stands in a solitary place, apart from the town; then they proceed around it, much after the manner of those who performed the obsequies of the Chikkasah chieftain already described, and deposit them alongside of those of his kindred, till in due time they are revived by Ishto hoollo Aba, that he may repossess his favorite place.

"These bone-houses are scaffolds raised on durable pitch-pine forked posts, in the form of a house covered on the top and open at both ends. I saw three of them in one of their towns, pretty near each other; the place seemed to be unfrequented; each house contained the bones of one tribe, separately, with the hieroglyphical figures of the family on each of the odd-shaped arks. They reckon it irreligious to mix the bones of a relative with those of a stranger, and much less will they thrust the body of their beloved kinsman into the tomb of an enemy. I observed a ladder fixed in the ground, opposite to the middle of the broadside of each of those dormitories of the dead, which was made only of a broad board. On the top was the carved image of a dove, with its wings stretched out and its head inclining down, as if earnestly viewing or watching over the bones of the dead. From the top of the ladder almost to the surface of the earth, there hung a chain of grape-vines, twisted together, in circular links.

"To perpetuate the memory of any remarkable warrior killed in the woods, every Indian traveller as he passes that way, throws a stone on the place. We often see in the woods innumerable heaps of small stones in those places, where, according to tradition, some of their distinguished people were either killed or buried, till the bones could be gathered. They then continue to increase with heap, as a lasting monument and honor to them, and an incentive to great actions. * * *

"Many of these heaps are to be seen in all parts of the continent of North America. Where stones could not be had, they raised hillocks or mounds of earth, wherein they carefully deposited the bones of their dead, which were placed either in earthen vessels or in a simple kind of arks or chests."

The burial customs of the Natchez, who are said to have inhabited, in former times, the southwestern portion of the Mexican Empire, and who, on account of the wars with which they were continually harassed by neighboring Indians, wandered northeast and finally settled on the banks of the Mississippi, resembled those of the ancient Mexicans and Peruvians. The habitation of the great chief is described as standing upon an artificial mound, fronting a large square. The temple of the sun, in which a perpetual fire was preserved, was situated at the side of the cabin of the chief, fronting the east, and at the extremity of the square. It was oblong in form, forty feet in length and twenty in breadth, and within it were the bones of the deceased chiefs, contained in boxes and baskets. Lafitau, in his work on the "Manners of the American Savages," to which we have before referred, gives representations of the temple and ceremonies at the death of the chiefs (vol. i, p. 167, vol. ii, p. 410), as well as descriptions of their religious customs and belief.

Father le Petit, in his account of the Natchez Indians, has given the following description of the bloody and remarkable rites performed at the death of the suns, or chiefs:—

¹ The History of the American Indians, etc., pp. 177-185.

"The sun is the principal object of veneration to these people; as they cannot conceive of anything which can be above this heavenly body, nothing else appears to them more worthy of their homage. It is for the same reason that the great chief of this nation, who knows nothing on earth more dignified than himself, takes the title of *brother of the sun*, and the credulity of the people maintains him in the despotic authority which he claims. * * * When the great chief dies, they demolish his cabin, and then raise a new mound on which they build the cabin of him who is to replace him in this dignity. One of the principal articles of their religion, and particularly of the servants of the great chief, is that of honoring his funeral rites by dying with him, that they may go and serve him in the other world. In their blindness they willingly submit to this law, in the belief that in the train of their chief they will go to enjoy the greatest happiness.

"They first put on all their finery and repair to the place opposite the temple, where all the people are assembled. After having danced and sung a sufficient time, they place around their neck cords of buffalo hair with running knots, and immediately the ministers appointed for executions of this kind come forward to strangle them, recommending them to go and join their master, and to render to him in the other world, services, even more honorable than those which had occupied them in this. The principal servants of the great chief having been strangled in this way, they strip the flesh from their bones, particularly from their arms and thighs, and leave them to dry for two months in a kind of tomb, after which they take them out to be shut up in baskets, which are placed in the temple by the side of the bones of their master. As for the other servants, their relations carry them home with them, and bury them with their arms and clothes. The same ceremony is observed in like manner on the death of the brothers and sisters of the great chief. The women are always strangled to follow the latter, except when they have infants at the breast, in which case they continue to live for the purpose of nourishing them. And we often see many who endeavor to find nurses, or who themselves strangle their infants, so that they shall not lose the right of sacrificing themselves in the public place, according to the ordinary ceremonies, and as the law prescribes. * * *

"When one of these Indians dies, his relatives assemble and mourn his death during an entire day, when they array him in the most beautiful dresses, paint his face and hair, and ornament him with plumes, after which they convey him to the grave prepared for him, placing by his side, his arms, a kettle, and some provisions. For the space of a month, his relatives come at the dawn of day and at the beginning of the night to weep for half an hour at his grave. Each one names his degree of relationship. If he were the head of a family, the wife cries, 'My dear husband, oh! how I regret you!' The children cry, 'My dear father!' The others, 'My uncle!' 'My cousin!' etc. The nearest relations continue this ceremony for three months; they cut off their hair in sign of grief, they abstain from painting the body, and are never found at any assembly for festivity."¹

Father Charlevoix, in his "Historical Journal," describes the obsequies of a female chief, as he had it from a traveller who was witness of them, and on whose sincerity he had good reason to depend. The husband of this woman not being noble, that is to say, of the family of the great chief, his eldest son strangled him, according to custom. They then cleared the cabin of all that it contained, and erected in it a kind of triumphal stage, on which the body of the deceased woman and that of her husband were placed. A moment afterwards they ranged around these carcasses twelve little children, which their parents had strangled by order of the eldest daughter of the woman chief, who succeeded to the dignity of her mother. This being done they erected in the public place fourteen scaffolds, adorned with branches of trees, and with clothes on which they had painted various figures. These scaffolds were designed for as many persons, who were to accompany the female chief into the other world. Their relatives were all around them, and esteemed as a great honor for their families, the permission which they had obtained to sacrifice

¹ Historical Collections of Louisiana, iii, p. 141-149.

themselves in this manner. They apply sometimes two years beforehand to secure this favor; and the persons who obtain it must themselves make the cord with which they are to be strangled.

They appear on their scaffolds dressed in their richest habits, each holding in his right hand a large shell. Their nearest relative stands on their right-hand side, holding under the left arm the cord which is to serve for the execution, and in the right hand a fighting club. From time to time these nearest relatives make the cry of death; and at this cry, the fourteen victims descend from their scaffolds, and go and dance together, in the middle of the open space which is before the temple, and before the cabin of the deceased chief. During some days preceding the execution, the victims are treated with great respect; they have each five servants, and their faces are painted red. Some add that during the eight days which precede their death, they wear a red ribbon round one of their legs; and that, during this time, everybody strives who shall be the first to feast them. However that may be, on the occasion now referred to, the fathers and mothers who had strangled their children, took them up in their hands and ranged themselves on both sides of the cabin. The fourteen persons who were also destined to die placed themselves in the same manner, and were followed by the relatives and friends of the deceased, all in mourning; that is to say, with their hair cut off. They made the air resound with such frightful cries that one would have said that all the devils in hell were come to howl in the place. This was followed by the dances of those who were to die, and by the songs of the relatives of the female chief.

At last they began the procession. The fathers and mothers who carried the dead children appeared first, marching two and two immediately before the bier, on which was the body of the female chief carried by four men on their shoulders. All the others came after in the same order as the first. At every ten paces the fathers and mothers let the children fall upon the ground. Those who carried the bier walked upon them; so that, when the procession arrived at the temple, these little bodies were all crushed.

While they were burying the body of the female chief in the temple, they undressed the fourteen persons who were to die. They made them sit on the ground before the door, each having two savages by him, one of whom sat on his knees, and the other held his arms behind. Then they put a cord about his neck and covered his head with a roebuck's skin. They made him swallow three pills of tobacco, and drink a cup of water; the relations of the female chief then drew the two ends of the cord, singing till he was strangled; after which they threw all the carcasses into the same pit, which they covered with earth. When the great chief dies, if his nurse is living, she must die also.¹

John Lawson relates, that when one dies among the Santee Indians, who were governed by a despotic ruler, a mole or pyramid of earth is raised, the surface thereof being worked very smooth and even, sometimes higher or lower, according to the dignity of the person whose monument it is. On the top of

¹ Journal d'un Voyage fait par ordre du Roi dans l'Amérique Septentrionale, adressé à Madame la Duchesse de Lesdiguières, par le P. De Charlevoix, Tome Sixième. See also Historical Collections of Louisiana, Part iii, pp. 163-5.

this is an awning, made ridge-ways, like the roof of a house, and is supported by nine stakes or small posts, the grave being six or eight feet in length and four feet in breadth; about it are hung gourds, feathers, and other similar trophies, placed there by the dead man's relatives. As soon as the person is dead, they lay the corpse upon a piece of bark in the sun, seasoning or embalming it with a small root beaten to powder, which appears as red as vermilion; the same is mixed with bear's oil, to beautify the hair and preserve their heads from vermin, which is plentiful in these parts of America. After the carcass has lain a day or two in the sun, they place it upon crotches, cut of a sufficient length for its support from the earth; then they anoint it all over with the fore-mentioned powder of beaten root and bear's oil. When this is done, they cover it very carefully over with bark of the pine or cypress tree, to prevent any rain from falling upon it, sweeping the ground very clean all about it. One of his nearest of kin brings all the temporal estate the deceased was possessed of at the time of his death, such as guns, bows, arrows, beads, feathers, match-coat, etc. This relative is the chief mourner, being clad in moss, and having a stick in his hand, keeping up a mournful ditty for three or four days, his face being black with the smoke of pitch pine mingled with bear's oil. All the while he tells the dead man's relatives and the rest of the spectators, who the dead person was, and of the great feats he performed in his lifetime; all the discourse tending to the praise of the deceased. As soon as the flesh will separate from the bone, they take it off and burn it, making all the bones very clean; they then anoint them with the ingredient aforesaid, wrapping up the skull very carefully in a cloth artificially woven of "*'possum's hair*." The bones they carefully preserve in a wooden box, every year oiling and cleansing them. By these means they preserve them for many ages, so that you may see an Indian in possession of the bones of his grandfather, or of some of his relatives of a greater antiquity. The Indians have other sorts of tombs, as when one is slain: in that very place, they make a heap of stones (sticks where stones are not to be found); to this memorial, every Indian that passes by adds a stone, to augment the heap, out of respect to the deceased hero.¹

In his detailed account of the Indians of North Carolina, Lawson adds several particulars, illustrating more fully their mode of burial. The dead body is wrapped in mats made of rushes or cane, and these coverings are surrounded with a long web of woven rods or hollow canes, which constitutes the coffin, and which is wound round the body several times, and tied fast at both ends, making a very decent appearance. After certain ceremonies and the rehearsal of the good deeds and possessions of the deceased, the body is borne to the grave, which is about six feet deep and eight feet long, having at each end (that is, at the head and foot), a light-wood or pitch-pine fork, driven into the ground, close to the grave, and designed to support the ridge pole. Before the corpse is laid in the grave, they cover the bottom with two or three thicknesses of the bark of trees; then they let down the corpse with two of the straps with which the Indians carry their burdens; a pole is then placed over the grave, the ends resting in the two forks,

¹ A New Voyage to Carolina, etc., 1709, pp. 21-22.

and having provided a great many pieces of pitch-pine logs, about two feet and a half long, they plant them on the sides of the grave, with the upper ends together, so that they resemble the roof of a house. This structure is covered with bark, and the earth that came out of the grave is thrown on and beaten down very firmly. By this means the dead body lies, as it were, in a vault, nothing touching it. Lawson says that, when he saw this mode of burial, he was greatly pleased with it, esteeming it very decent and pretty, as he had seen a great many Christians buried without the tenth part of the ceremony. When the flesh has rotted and mouldered from the bone, they take up the skeleton, clean the bones, and then join them together; afterwards, they wrap them in pure white dressed deer-skins, and lay them amongst their grandees and kings in the *Quiogozon*, which is their *Royal Tomb*, or burial place of their kings and war captains. This is a very large magnificent cabin, raised at the general charge of the nation, and maintained in a state of repair and neatness. About seven feet from the ground is a floor or loft, on which lie all their princes and great men that have died for several hundred years, all attired in the dress previously described. The bones of no person are allowed to lie here or to be thus dressed unless the relatives give a large sum of money to the rulers for their admittance. If they remove ever so far, to live in a distant country, they never fail to take all these bones along with them, though the tediousness of their short daily marches keeps them a long time on their journey. They are taught to regard this *Quiogozon* with all the veneration and respect that is possible for such a people, and they would rather lose all they possess than have any violence or injury offered thereto. Lawson also states that the tribes of Indians in Carolina differ somewhat among themselves in their burials; yet they all agree in their mourning, since they appear every night at the sepulchre and howl and weep in a very dismal manner, having their faces daubed over with light-wood soot (which is the same as lamp-black) and bear's oil. The women are never honored with these ceremonies after death.¹

According to Catlin, the Mandan Indians never bury the dead, but place the bodies on slight scaffolds, just above the reach of human hands and out of the way of wolves and dogs; and they are then left to moulder and decay. Whenever a person dies in one of the Mandan villages, the customary honors are immediately paid to his remains. The body is dressed in its best attire, painted, oiled, feasted, and supplied with bow and quiver, shield, pipe and tobacco, knife, flint and steel, and provisions enough to last a few days on the journey which is to be performed; a fresh buffalo skin is wrapped around the body, tightly wound from head to foot with thongs of raw-hide. Then other robes are soaked in water till they are quite soft and elastic, and are also bandaged tightly around the body in the same manner, and tied fast with thongs, which are wound with great care and exactness, so as to exclude the action of the air from all parts of the corpse. There is then a separate scaffold erected for it, constructed of four upright posts, and on the top of these are small poles passing around from one post to another. Across these

¹ Loc. cit., pp. 180-183.

a number of willow rods are placed, just strong enough to support the body, which is laid upon them, on its back, with its feet carefully turned towards the rising sun. A great number of these bodies are to be seen, arranged exactly in a similar manner; but, in some instances, the remains of a chief or of a medicine man may have a few yards of scarlet or blue cloth spread over them as a mark of public respect and esteem. Hundreds of these bodies repose in this manner at these places, which the Indians call "*the villages of the dead.*" Every day in the year, fathers, mothers, wives, and children may be seen lying under the scaffolds, prostrated upon the ground with their faces in the dust, howling forth incessantly the most piteous and heart-broken cries and lamentations, tearing their hair, cutting their flesh with sharp knives, and doing other penance to appease the spirits of the dead, whose departure they attribute to some sin or omission of their own, for which they sometimes inflict the most excruciating self-torture. When the scaffolds on which the bodies have rested decay and fall to the ground, the nearest relatives, having buried the rest of the bones, take the skulls, which are perfectly bleached and purified, and place them in circles of a hundred or more, upon the prairie, at equal distances, about eight or nine inches from one another, with the faces all looking to the centre; here they are religiously protected and preserved in their precise positions from year to year, as objects of religious and affectionate veneration. There are often several of these circles, or *Golgothas*, together, twenty or thirty feet in diameter, and in the centre of each is a small mound three feet high, on which uniformly rest two skulls of buffalos (a male and a female). In the centre of the little mound is erected a *medicine pole*, about twenty feet high, supporting many articles of mystery and superstition, which were supposed to have the power of guarding this sacred arrangement. Each one of these skulls is placed upon a bunch of wild sage, which has been pulled and placed under it; and each one knows the skull of a relative by some mark or resemblance, as they are daily visited and have vessels filled with food set before them. When the bunches of wild sage decay, they are carefully renewed. There is scarcely an hour, on a pleasant day, in which a woman may not be seen sitting or lying by the skull of her child or husband, talking to it in the most pleasant and endearing language.¹

According to this author the Omahas deposit their dead in the trunks and in the branches of trees, enveloped in skins, and suspend a wooden dish near the head of the corpse; probably for enabling it to dip up water to quench its thirst on the long journey, upon which they one and all expect to enter after death. These corpses are so numerous along the banks of the river, that in some places a dozen or more of them may be seen at one view.

The Sioux often deposit their dead in trees and on scaffolds, but most generally bury them on the tops of bluffs or near the villages, where they often split out staves and drive them into the ground, around the grave, to protect it from dogs and wild animals.

¹ Catlin's North American Indians, vol. i, pp. 89-91.

Catlin gives, in his second volume (pp. 5-6), an interesting account of the grave of *Black Bird*, a famous chief of the O-ma-haws, on the Missouri River, about twelve hundred miles above St. Louis. The elevated bluff on which this grave is located may be distinguished for several leagues in different directions. On his return from Washington, Black Bird died near this spot from smallpox; and, in the last moments of life, made the request that his body should be dressed in full costume, mounted upon his favorite horse, and buried upon the pinnacle of this commanding bluff, the extensive and beautiful view from which had so often delighted him during life. In the presence of the whole nation, the dead chief was placed astride his noble white steed, with his bow in his hand, and his shield and quiver slung on his back. His pipe, his flint and steel, his tinder to light his pipe by the way, his medicine bag, and a supply of dried meat were furnished him. His tobacco pouch was replenished to last him through his journey to the beautiful hunting grounds of his fathers. The turf was brought and placed around the feet and legs of the horse, and gradually piled up, until it reached the sides of the unsuspecting animal, and covered the body and head, and even the beautiful eagle-feathered plume of the valliant rider. This mound, which is covered with a green turf, and has a cedar planted in the centre, can be seen at a distance of fifteen miles by the voyager, and forms for him a familiar and useful land-mark.

Clavigero has given, in the second volume of his "History of Mexico," an interesting description of the funeral rites and sepulchres of the Mexicans. However superstitious the Mexicans were in other matters, in the rites which they observed at funerals they exceeded themselves. As soon as any person died, certain masters of funeral ceremonies were called, who were generally men advanced in years. They cut a number of pieces of paper, with which they dressed the dead body, and took a cup of water, with which they sprinkled the head, saying, "that was the water used in the time of their life." They then dressed it in a clothing suitable to the rank, the wealth, and the circumstances attending the death of the party. If the deceased had been a warrior, they clothed him in the habit of Huitzilopochtli; if a merchant, in that of Jacateuctli; if an artist, in that of the protecting god of his art or trade. One who had been drowned was dressed in the habit of Tlaloc; one who had been executed for adultery, in that of Tlazolteotl; and a drunkard in the habit of Tezcatzoncatl, god of wine. In short, as Gomara has well observed, they wore more garments after they were dead than while they were living.

When they had arrayed the dead, they gave him a jug of water, which was to serve on the journey to the other world, and also at different times, pieces of paper, mentioning the use of each. On offering the first piece to the dead, they said: "*By means of this you will pass without danger between the two mountains which fight against each other.*" With the second they said: "*By means of this you will walk without obstruction along the road which is defended by the great serpent.*" With the third: "*By this you will go securely through the place where there is the crocodile Xochitonal.*" The fourth was a safe passport through the eight deserts; the fifth through the eight hills; and the sixth was given in order

to pass without hurt through the sharp wind; for they pretended that it was necessary to pass a place called Itzehecajan, where a wind blew so violently as to tear up rocks, and so sharply that it cut like a knife; on which account they burned all the clothing which the deceased had worn during life, his arms and some household goods, in order that the heat of this fire might defend him from the cold of that terrible wind.

One of the chief ceremonies at funerals was the killing a *techichi*, a domestic quadruped resembling a dog, to accompany the deceased. They fixed a string about its neck, believing that necessary to enable it to pass the deep river Chiuh-nahuapan, or New Waters. They buried the *techichi* or burned it along with the body of its master, according to the kind of death which he died. While the masters of the ceremonies were lighting up the fire in which the body was to be burned, the other priests kept singing in a melancholy strain. After burning the body, they gathered the ashes in an earthen vase, among which, according to the circumstances of the deceased, they put a gem of more or less value, which they said would serve him in place of a heart in the other world. They buried this earthen pot in a deep ditch, and fourscore days after, made oblations of bread and wine over it.

Such were the funeral rites of the common people; but at the death of kings, or lords, or persons of high rank, some peculiar forms were observed that are worthy to be mentioned. When the king fell sick, they put a mask on the idol of Huitzilopochtli, and also one on the idol of Tezcatlipoca, which they never took off until the king was either dead or recovered; but it is certain that the idol of Huitzilopochtli had always two masks, not one. As soon as a king of Mexico had expired, his death was published in great form, and all the lords who resided at court, and also those who were but a little distance from it, were informed of the event, in order that they might be present at the funeral. In the mean time they laid the corpse upon elaborately wrought mats, which was attended and watched by his domestics. Upon the fourth or fifth day after, when the lords had arrived, bringing with them rich dresses, beautiful feathers, and slaves to add to the pomp of the funeral, they clothed the corpse in fifteen or more very fine cotton garments of various colors, ornamented with gold, silver, and gems; they hung an emerald upon the under lip, which was to serve in place of a heart, covered the face with a mask, and over the panoply placed the ensigns of that god in whose temple or area the ashes were to be buried. They cut off some of the hair, which they preserved in a little box, together with some more which had been cut off in the infancy of the king, in order to perpetuate, as they said, the memory of the deceased. Upon the box they laid an image of the dead king, made of wood or of stone. Then they killed the slave who had been his chaplain, and had taken care of his oratory and all that belonged to the private worship of his gods, in order that he might serve him in the same office in the other world.

The funeral procession came next, attended by all the relatives of the deceased, the members of the nobility, and the wives of the late king, who testified their sorrow by tears and other demonstrations of grief. The nobles carried a great standard of paper, and the royal arms and ensigns. The priests continued singing,

but unaccompanied by any musical instrument. Upon their arrival at the lower area of the temple, the high priests, together with their servants, came out to meet the royal corpse, which, without delay, they placed upon the funeral pile of odoriferous resinous woods, together with a large quantity of copal and other aromatic substances. While the royal corpse and all its clothing, arms, and ensigns were burning, they sacrificed, at the bottom of the stairs of the temple, a great number of slaves who had belonged to the deceased and also those which had been presented by the lords. Along with the slaves they likewise sacrificed some of the deformed men, whom the king had collected in his palace for his entertainment, in order that they might give him the same pleasure in the other world; and for the same reason they used to sacrifice some of his wives. Acosta says (lib. v. cap. 8), that at the funeral of a lord, all the members of his family were sacrificed. But this is grossly false, and in itself incredible; for, had this been the case, the nobles of Mexico would soon have been exterminated. There is no record, in the History of Mexico, that, at the death of the king, any of his brothers were sacrificed, as this author would intimate. How is it possible that they could practise such cruelty, when the new king was usually elected from among the brothers of the deceased? The number of the victims was proportioned to the grandeur of the funeral, and amounted sometimes, as several historians have affirmed, to two hundred. Among the other sacrifices, the *techichi* was not omitted; they were firmly persuaded that, without such a guide, it would be impossible to get through some dangerous ways which led to the other world.

The day following, the ashes and the teeth which remained entire were gathered up; they sought for the emerald which had hung to the under lip until they found it; all were then put into the box with the hair, and deposited in the place destined for their sepulchre. During the four following days they made oblations of eatables over the place of burial; on the fifth they sacrificed several slaves, and also others on the twentieth, fortieth, sixtieth, and eightieth day after. From that time forward they sacrificed no more human victims; but, every year, they celebrated the day of the funeral with offerings of rabbits, butterflies, quails and other birds, and with oblations of bread, wine, copal, flowers, and certain little reeds filled with aromatic substances, which they called *acajettl*. This anniversary was held in the four succeeding years.

The bodies of the dead were usually burned. The bodies of those only who had been drowned, or had died of dropsy or some other chronic disease, were buried. But what was the reason of these exceptions, we know not.

There was no fixed place for burials. Many ordered their ashes to be buried near to some temple or altar, some in the fields, and others in those sacred places of the mountains where sacrifices used to be made. The ashes of the kings and lords were for the most part deposited in the towers of the temples, especially in those of the great temple. Solis, in his "History of the Conquest of Mexico," affirms that the ashes of the kings were deposited in Chapoltepec; but this is false, and contradicts the report of the conqueror Cortez whose panegyric he wrote, of Bernal Dias, and of other eye-witnesses to the contrary. Close to Teotihuacan, where there were many temples, there were also innumerable sepulchres. The tombs

of those whose bodies were buried entire, agreeably to the testimony of the Anonymous Conqueror who saw them, were deep ditches, walled with stone and mortar, within which they placed the bodies in a sitting posture upon *icpalli*, or low seats, together with the instruments of their art or profession. If it was the sepulchre of any military person, they laid a shield and sword by him; if of a woman, a spindle, a weaver's shuttle, and a *xicalli*, which was a vessel fashioned of a fruit similar to gourds, large and perfectly round. In the tombs of the rich they put gold and jewels, but all were provided with eatables for the long journey which they had to make. The Spanish conquerors, knowing of the gold which was buried with the Mexican lords, dug into several of their tombs and found considerable quantities of that precious metal. Cortes says, in his letters, that at one entry which he made into the capital, when it was besieged by his army, his soldiers found *fifteen hundred castillanos*, that is, two hundred and forty ounces of gold, in one sepulchre, which was in the tower of a temple. The Anonymous Conqueror says, also, that he was present at the opening of another sepulchre, from which they took about three thousand castillanos.

The caves of the mountains were the sepulchres of the ancient Chichimecs, who, as they grew more civilized, adopted, in this and other rites, the customs of the Acolhuan nation, which were nearly the same with those of the Mexicans.

The Miztecs retained in part the ancient usage of the Chichimecs, but in some things they were singular in their customs. When any of their lords fell sick, they offered prayers, vows, and sacrifices for the recovery of his health. If he was restored, they made great rejoicings. If he died, they continued to speak of him as if he was still alive, and conducted one of his slaves to the corpse, dressed him in the clothing of his master, put a mask upon his face, and for one whole day paid him all the honors which they had formerly rendered to the deceased. At midnight, four priests carried the corpse out and buried it in a wood, or in some cavern, particularly in that one where they believed the gate of paradise to be; on their return they sacrificed the slave, and laid him with all the ornaments of his transitory dignity in a ditch, but without covering him with earth. Every year they held a festival in honor of their last lord, on which they celebrated his birth, not his death, for of it they never spoke.

The Zapotecs, their neighbors, embalmed the body of the principal lord of their nation after death. Even from the time of the first Chichimecan kings, aromatic preparations were in use among those nations to preserve dead bodies from speedy corruption; but it is not known that these were very frequently used.¹

It appears to be established by the researches of several antiquarians² that the small pyramids disposed in rows upon the parallels and meridians which bound the four faces of the two great pyramids of the sun and moon of Teotihuacan, Mexico, served as burying places for the chiefs of tribes.

Many years ago, in cutting a new road toward Puebla from Mexico, it became necessary to cross a portion of the base of the ancient Indian pyramid of Cholula.³

¹ History of Mexico, etc., vol. ii, pp. 103-110.

² Political Essays on the Kingdom of New Spain, etc., by Alexander von Humboldt, vol ii, p. 67

³ Mexico as It was and as It is, by Brantz Mayer, p. 26.

The excavation laid bare a square chamber built of stone, the roof of which was sustained by cypress beams. In it were found idols of basalt, a number of painted vases, and the remains of two bodies. No care was taken of the relics by the discoverers, and they are lost forever.

Prescott, in his essay on the *Civilization of the Incas*, introductory to the "History of the Conquest of Peru," says that it was the belief in the resurrection of the body which led the Peruvians to preserve the body with so much solicitude, by a simple process, that, however, unlike the elaborate embalming of the Egyptians, consisted in exposing it to the action of the cold, exceedingly dry, and highly rarefied atmosphere of the mountains. Such, indeed, seems to be the opinion of Garcilasso, though some writers speak of resinous and other applications for embalming the body. The appearance of the royal mummies found at Cuzco, as reported both by Ondegardo and Garcilasso, makes it probable that no foreign substance was employed for their preservation. As the Peruvians believed that the occupations in the future world would have a great resemblance to those of the present, they buried with the deceased noble some of his apparel, his utensils, and frequently his treasures; and completed the gloomy ceremony by sacrificing his wives and favorite domestics to bear him company and do him service in the happy regions beyond the clouds. Vast mounds of an irregular, or, more frequently, oblong shape, penetrated by galleries running at right angles to each other, were raised over the dead, whose dried bodies or mummies have been found in considerable numbers, sometimes erect, but more frequently in the sitting posture common to the Indian tribes of both Continents. Treasures of great value have also been occasionally drawn from those monumental deposits, and have stimulated speculators to repeated excavations with the hope of similar good fortune. It was a lottery like that of searching after mines, but where the chances have proved against the adventurers. Yet these sepulchral mines have sometimes proved worth the digging. Sarmiento speaks of gold to the value of 100,000 *Castillanos*, as occasionally buried with the Indian lords¹ and Las Casas, not the best authority in numerical estimates, says that treasures worth more than half a million of ducats had been found within twenty years after the conquest in the tombs near Truxillo.² Humboldt visited the sepulchre of a Peruvian prince in the same quarter of this country whence a Spaniard, in 1576, drew forth a mass of gold worth a million of dollars!³

Garcilasso has left on record the following description of the corpses of the Incas:—

"In the year 1560, in the house of the licentiate, Paul Ondegardo, I saw five bodies of the Incas, three men and two women. They had till now been concealed from the Spaniards. The first was that of the king Viracocha, who, by his snow-white hair, appeared to have been very aged. The next was his nephew, the great Tupac Yupanqui; and the third was Huayna Capac. The fourth was Mama Runtu, Queen of Viracocha; and the other was the body of Coya Mama Oello, mother of

¹ *Relacions*, M. S. cap. lvii.

² *Œuvres*, ed. par Llorente. Paris, 1822, tom. ii, p. 192.

³ *Vues des Cordillères*, p. 29. (*History of the Conquest of Peru*, vol. i, pp. 54, 55.)

Huayna Capac. The corpses were so perfect that not a hair of the head or of an eyebrow was wanting. They were in such dresses as they wore when living, without any other mark of royalty than the Llautu on the head. They were seated after the manner of Indians, with the hands across the breast, and their eyes towards the earth. They were in such good preservation that they appeared almost as if alive; but the art by which they were embalmed is lost. I touched one of the fingers of Huayna Capac, and found it as hard as wood. I am of the opinion that the bodies had been dried by exposure to the air in the same manner as meat is prepared, and which, without any other process, has always been used for the provisioning of the troops, as it will keep good for any length of time. The bodies were so light that the smallest Indian could carry one on his shoulder or in his arms, when he was required to do so in order to satisfy the curiosity of a Spanish cavalier. They covered them with a white cloth as they passed through the streets, where the people fell on their knees with tears in their eyes. Even the Spaniards took off their hats in consequence of their having borne the title of kings, which gave the Indians extreme delight.¹

On the death of the Incas, and of other eminent persons, a great number of their attendants were put to death, and interred around their huaca, that they might appear in the next world with their former dignity, and be served with the same respect. On the death of Huayna Capac, the most powerful of their monarchs, above a thousand victims were doomed to accompany him to the tomb.²

The Peruvians, according to Garcilasso, buried with the deceased Inca all his vessels of gold and silver, even those for the use of the kitchen; also his clothes and valuable jewels, with some furniture. The domestics, and women to whom he had been most attached, were buried with him alive by their own desire, and it frequently occurred that so many offered themselves to accompany their deceased masters that their superiors were obliged to limit the number. The first month was devoted to tears; and the banners, arms, clothes, and all the things that were to be buried, were exhibited in the different quarters of Cuzco. The lamentations were renewed twice each month, at the full and the change of the moon. Men and women, called *weepers*, were appointed to chant, in mournful strains, the virtues and heroic acts of the deceased. The mourning was observed throughout the empire.³

The Peruvian tombs, according to Ulloa, were constituted in the following manner: The Indians having laid the body of the dead upon the ground, erected over it a rude arch of stones or bricks, and covered it with a tumulus of earth, which they called *huaca*. In general they are eight or ten toises high, and about twenty long, and the breadth is rather less; but some are larger. They are in shape not precisely pyramidal, but more like hillocks. The plains near Cayambe are covered with them; one of their principal temples having been there where the kings and Caciques of Quito were buried.

The tombs accorded in size with the rank of the deceased; with them were buried their furniture and instruments of gold, copper, stone, and clay. Out of one huaca, in the presence of Ulloa, was taken a considerable quantity of gold utensils. In another, in the jurisdiction of Pastos, great riches were found; some copper axes, small looking-glasses of the Inca-stone, and of Galinazo or black-

¹ Book V, Chap. XXIX, Book III, Chap. XX.

² Robertson, vol. ii, p. 325.

³ Book VI, Ch. IV and V.

stone. The form of these is circular, and one of the surfaces flat and as smooth as a crystal mirror; the other oval and less polished. I saw one a foot and a half in diameter; its principal surface was concave and greatly magnified objects, and the polish of which could not now be exceeded by our best workmen. A hole is drilled to hang them by. They found, also, guaqueros for drinking chicha; some of which are made of fine black clay, and others of red clay. They are round, with the handle in the middle, the mouth on one side, and the head of an Indian excellently expressed on the other. Among the gold pieces are found nose jewels, which, in form, resemble the foot of a chalice, but are a little smaller; collars, bracelets, and ear-pendants like the nose jewels, and all of them not thicker than paper. The idols which are full length are hollow, of one piece, and show no mark of soldering. Emeralds are found in the tombs, spherical, cylindrical, and conical, and pierced with the greatest delicacy; this is very remarkable, as steel and iron were unknown.¹

Humboldt states that during his travels in Peru, in visiting the ruins of the City of Chimú, near Mansiche, he went into the interior of the famous Guaca de Toledo, the tomb of a Peruvian prince, in which Garci Gutierrez de Toledo discovered, in digging a gallery in 1576, masses of gold amounting to five millions of francs, as is proved by the accounts in the mayor's office at Truxillo.²

The burial customs of the ancient Mexicans and Peruvians appear to have been similar to those of the Mongol Tartars.

Humboldt has given, in his *Personal Narrative of Travels to the Equinoctial Regions of America*, the following interesting description of the cavern and mummies of Atarupe:—

“In this shady and solitary spot, on the declivity of a steep mountain, the cavern of Atarupe opens to the view. It is less a cavern than a jutting rock, in which the waters have scooped a vast hollow, when, in the ancient revolutions of our planet, they attained that height. In this tomb of a whole extinct tribe, we soon counted nearly six hundred skeletons well preserved, and regularly placed. Every skeleton reposed in a sort of basket made of the petioles of the palm tree. These baskets, which the natives call *mapires*, have the form of a square bag. Their size is proportioned to the age of the dead; there are some for infants cut off at the moment of birth. We saw them from ten inches to three feet four inches long, the skeletons in them being bent together. They are all ranged near each other, and are so entire that not a rib or a phalanx is wanting. The bones have been prepared in three different methods, either whitened in the air and the sun, dyed red with annatto, or, like mummies, varnished with odoriferous resins and enveloped in leaves of the heliconia or of the plantain tree. The Indians informed us that the corpse is placed in damp ground, that the flesh may be consumed by degrees; some months afterwards it is taken out and the flesh remaining on the bones is scraped off with sharp stones. Several hordes in Guiana still observe this custom. Earthen vases half baked are found near the *mapires* or baskets. They appear to contain the bones of the same family. The largest of these vases or funeral urns are five feet high and three feet three inches long. Their color is greenish-gray, and their oval form is pleasing to the eye. The handles are made in the shape of crocodiles or serpents; the edges are bordered with painted manders, labyrinths, and grecques, in rows variously combined.

“It appears that to the north of the cataracts, in the straits of Baraguan, there are caverns filled with bones similar to those I have just described.” * * *

¹ Ulloa, vol. i, pp. 366-369.

² Vol. i, p. 92.

"No traces of the precious metals have been found in the caverns which have served the natives of Guiana for ages as sepulchres. This circumstance proves that even at this period, when the Caribs and other travelling nations made incursions to the southwest, gold had flowed in very small quantities from the mountains of Peru towards the eastern plains.

"Wherever the granitic rocks do not present any of these large cavities caused by their decomposition, or by an accumulation of their blocks, the Indians deposit their dead in the earth. The hammock (*chincoro*), a kind of net in which the deceased had reposed during his life, serves for a coffin. This net is fastened tightly around the body, a hole is dug in the hut, and there the body is laid. This is the most usual method according to the account of the Missionary Gili, and it accords with what I myself learned from Father Zea. I do not believe that there exists one tumulus in Guiana, not even in the plains of the Casiquiare and the Essequibo. Some, however, are to be met with in the Savannahs of Varinas, as in Canada, to the west of the Alleghanies. (Mummies and skeletons contained in baskets were recently discovered in a cavern in the United States. It is believed they belonged to a race of men analogous to that of the Sandwich Islands. The description of these tombs has some similitude with that of the tomb of Ataruipe.) It seems remarkable enough that, notwithstanding the extreme abundance of wood in these countries, the natives of Oronoco were as little accustomed as the ancient Scythians to burn the dead. Sometimes they formed funeral piles for that purpose; but only after a battle, when the number of the dead was considerable. In 1748, the Parecas burned not only the bodies of their enemies, the Tamanacas, but also those of their own people who fell on the field of battle. The Indians of South America, like all nations in a state of nature, are strongly attached to the spot where the bones of their fathers repose. This feeling, which a great writer has beautifully painted in the episode of *Atala*, is cherished in all its primitive ardor by the Chinese. This people, amongst whom everything is the produce of art, or rather of the most ancient civilization, do not change their dwelling without carrying along with them the bones of their ancestors. Coffins are seen deposited on the banks of great rivers to be transported, with the furniture of the family, to a remote province. These removals of bones, heretofore more common among the savages of North America, are not practised among the tribes of Guiana; but these are not nomad like nations who live exclusively by hunting."¹

Dr. Morton, in his "*Crania Americana*," gives, as an additional evidence of the unity of race and species in the American savage nations, the singular fact that, from Patagonia to Canada, and from ocean to ocean, and equally in the civilized and uncivilized tribes, a peculiar mode of placing the body in sepulture has been practised from time immemorial. This peculiarity consists in the *sitting posture*.

Dr. Morton illustrates this characteristic by a plate and drawing of the mummy of a Muysca Indian of New Grenada. In this instance the body is in a sitting posture, the legs being flexed against the abdomen, and the feet turned inwards. The arms are also bent so as to touch the chest, the chin being supported in the palms of the hands, and the fingers received into the hollow beneath the cheek bones. This interesting relic was brought from New Grenada, in South America, by the late Charles Biddle, Esq., who presented it to the Academy of Natural Sciences, of Philadelphia, where it is now preserved. The body is not embalmed, but only desiccated; yet the muscles are so well preserved as to render it probable that some antiseptic fluid may have been applied to them.

Dr. Morton traces this singular custom from south to north, and we give his observations in full, as they possess great interest to the present inquiry, premising that a large number of the examples to which he refers have already been referred to.

¹ Personal Narrative, Trans., vol. ii, pp. 482-489.

"The Moluches and Pampas of Patagonia bury their dead in large square pits. The bodies are placed in a row, *sitting*, with all the weapons and other property which had belonged to the dead.¹ Dobrizhoffer also observes that the equestrian tribes of that country 'prepare the corpse in such manner that the knees touch the face.'²

"The Indians of Chili had the same customs, but they exposed their dead on a stage above ground.³

"The Coroados of Brazil place the body in a sitting posture in a large pot, which is buried in the ground amidst cries and lamentations.⁴

"The Paraguas of Paraguay place the dead in a similar attitude⁵ This custom as practised among the Atures, in the Valley of the Orinoco, has already been stated

"Garcilasso de la Vega states that in the year 1560, he saw five embalmed bodies of Peruvian Incas, three men and two women. 'They were seated in the manner of INDIANS, with the hands across upon the breast, and their eyes toward the earth.'⁶ 'The mountain Indians,' says Herrera, 'commonly build their tombs high, like towers, and hollow; and they buried their dead bowing the body, their thighs bound and in the sitting attitude.'⁷ Dr. Ruschenberger, who personally exhumed several mummies near Arica, states that 'the body was placed in a squatting posture, with the knees drawn up and the hands applied to the side of the head.'⁸ Dr. Morton himself examined the desiccated bodies of six Peruvians, all of which were in the same position.

"The Indians of New Grenada followed the same custom, as is proved by the annexed illustration. The Spanish residents of that republic have a tradition that the natives, flying from the violence of their conquerors, died in caves and other obscure places, in an attitude which truly seems indicative of despair. Some very ancient monuments are said by Herrera to have been discovered by the early Spaniards near Zenu, in Venezuela: 'These graves or tombs were magnificent, adorned with broad stones, into which the bodies were placed in a sitting posture.'⁹

"The Mexicans sometimes burned and sometimes buried their dead; when they buried them it was 'in deep ditches formed of stone and lime, within which they placed the bodies in a sitting posture, on low seats, or *icpalli*.'¹⁰ The same author adds, that Quinetzin, one of the early Chichimecan kings of Mexico, was embalmed 'and afterwards placed in a great chair, clothed in royal habits.'¹¹

"When a Carib died, his body was placed in the grave in an attitude 'resembling that in which they crouched round the fire or the table when alive, with the elbows on the knees, and the palms of the hands against the cheeks.'¹²

"The Muskogees or Creeks had a similar usage.¹³ The latter author adds that the Arkansas had the same practice, 'with the addition of tying the head down to the knees.'¹⁴

"The Alibamons bury their dead in a sitting posture; in order to justify this custom they say that man is upright, and has his face turned towards heaven, which is to be his habitation.¹⁵

"On the discovery of the Mammoth cave in Kentucky, a woman was found in a state of complete desiccation. 'She was buried in a squatting form, with the knees drawn up close to the breast, the arms bent, with the hands raised, and crossing each other about the chin.'¹⁶

"Dr. Morton was informed by Mr. Nuttall, that such was the custom of the Osages of Missouri;

¹ Falkner's Patagonia, quoted in Appendix to Molina.

² Hist. Abipones, i, p. 132.

³ Forster, Obs. during a Voyage Round the World, p. 564.

⁴ Spix and Martius, Trav. in Brazil, ii, p. 250.

⁵ De Azara, Voy. dans l'Amérique, ii, p. 143.

⁶ Comment., Book V, Chap. 29.

⁷ Hist., Dec. III, Lib. 9, Cap. 3.

⁸ Crania Am., p. 109.

⁹ Hist. Amer., iv, p. 221.

¹⁰ Clavigero, Hist. of Mexico, B. VI.

¹¹ Idem, B. II.

¹² Sheldon, in Archæolog. Amer., i, p. 378; Sir W. Young, Account of the Caribs, p. 8.

¹³ Bartram, Travels, p. 515; Romans, History of Florida, i, p. 98.

¹⁴ Idem, p. 101.

¹⁵ Le Bossu, Trav. in Louisiana, i, p. 157.

¹⁶ Archæolog. Amer., i, p. 359.

of the Omahaws;¹ of the Mandans;² of the Potowatomies;³ of the Chippeways;⁴ of the Delawares;⁵ of the Nahannts and other tribes of Lenape in New England.⁶ The present town of Salem, in Massachusetts, is the site of the old village of the Naumkeags; on making an excavation a few years since, many skeletons were found, 'placed very near each other, with the knees drawn up to the breast, and the hands laid near the face, which was directed to the east.' Dr. Pearson had a drawing of the skeletons made *in situ*.

"In respect to the Canadian Indians, Charlevoix observes: 'The dead man is painted, enveloped in his best robe, and, with his weapons beside him, is exposed at the door of his cabin in the posture which he is to preserve in the grave; and this posture is that which a child has in the bosom of its mother.'⁷

"Some excavations at Goat Island, at the Falls of Niagara, have revealed the same fact."⁸

Dr. Morton was assured by Dr. Troost that the mounds he opened in Tennessee contained skeletons in the same attitude; and Lieutenant Mather made a similar communication to Dr. Morton in reference to a mound examined by him in Wisconsin.

From these examples Dr. Morton concludes that, notwithstanding the diversity of language, customs, and intellectual character, this usage may be traced throughout both Americas, and affords collateral evidence of the affiliation of all the American Nations.¹⁰—*Crania Amer.*, pp. 244-246.

We have now carefully examined the modes of burial practised by the American aborigines in extenso, and it is evident that the ancient race of Tennessee is distinguished from all others by their peculiar method of interment in rude stone coffins.

Whilst the custom of burying the dead in the sitting posture was almost universal with the various tribes and nations of North and South America, the ancient inhabitants of Tennessee and Kentucky buried most commonly in long stone graves, with the body resting at length, as amongst civilized nations of the present day in Europe and America. The method of inclosing the body in a box or sarcophagus of wood or stone appears to have originated with the Egyptians, and was employed both by the Greeks and Romans, and it is from these nations most probably that the custom extended, or rather was transmitted to the modern civilized nations.

During a recent visit to Scotland, England, Wales, and France, I examined with care the various museums with especial reference to the mode of burial practised

¹ James, Exped., i, p. 224.

² Keating, Exped., i, p. 115.

³ Smith, Hist. of New Jersey, p. 137.

⁴ Dr. Pearson's Letter to Dr. Morton.

⁵ Ingram's Manual, etc., p. 63.

⁶ This practice is not exclusively American. Mr. Edwards (*Hist. of the West Indies*, Book I, Appendix) cites Herodotus for its prevalence among the Nassamonies, a people who inhabited Northern Africa between Egypt and Carthage; and Cicero records it as a usage of the ancient Persians. The modern Circassians, on the death of a nobleman, "set up a high wooden bed in the open air, upon which they place the body of the deceased in a sitting attitude after the bowels have been taken out;" but the interment, which is eight days later, is in the recumbent posture. (Klaproth, *Caucasian Nations*, p. 337.) The New Hollanders sometimes bury their dead in this attitude. (Breton, *N. South Wales*, p. 203.) The Hottentots, says Kolbein, double up the corpse "neck and heels, much in the manner of a human fetus." (*Present State of Cape of Good Hope*, p. 315.) The people of the Tonga Islands, Pacific Ocean, inter their dead in this position (Marriner, *Tonga Islands*, p. 211); and Kotzebue has also observed it at the islands of Radack and Ulea. (*Voyage of Discovery*, iii, pp. 173, 211.)—*Crania Americana*, p. 246.

² Lewis and Clarke, Exped., i, p. 163.

⁴ Bartram, Trav., ii, p. 266.

⁶ Warren, Compar. View, etc., p. 134.

⁸ Journal d'un Voyage, etc., vi, p. 107.

by the ancient inhabitants of these countries, and in the Antiquarian Museum of Edinburgh I saw relics which had been taken from an ancient burial ground near the city, in which the dead were inclosed in rude stone coffins similar to those of the ancient race of Tennessee and Kentucky. I was informed that history threw no light upon the time when the bodies were deposited in the rude stone coffins, and they were referred to an era, at least as old as the Roman Conquest of Britain.

In looking at the rude stone coffins of Tennessee I have again and again been impressed with the idea, that in some former age this ancient race must have come in contact with Europeans, and derived this mode of burial from them.

This view is sustained, not only by the presence of copper crosses, and of vases with crosses and scalloped circles painted around them, and of bones evidently diseased by *sypphilis*, in the stone graves, but also by certain traditions formerly preserved by the surrounding Indian tribes.¹

It will be seen from the subsequent investigations into the contents of the stone graves and mounds of the aborigines of Tennessee and Kentucky, that, if they were brought in contact with the whites, an amalgamation was formed, that the Indian element preponderated, and that the mixed race retained chiefly its ancient customs and religion

¹ See Haywood, pp. 217-219.

CHAPTER III.

MOUNDS, FORTIFICATIONS, AND EARTHWORKS.

NUMEROUS mounds of various dimensions are found on the banks of the Cumberland, Big Tennessee, Little Tennessee, French Broad, Hiawassee, Elk, Harpeth, Duck, and Stone Rivers, and on the streams which empty into the Mississippi, running from the dividing ridge between that river and the Tennessee.

As a general rule, these mounds have been erected upon rich alluvial bottoms, and are either surrounded by extensive earthworks or are located in the neighborhood of the fortifications which mark the sites of ancient towns.

The mounds vary in number and dimensions with the extent and richness of the valleys and the size of the earthworks. The smallest are not more than a few feet in height, and about thirty feet in diameter; whilst the largest attain a height of seventy feet, and cover from one to two acres of ground.

Many of the smaller mounds were used for the burial of the dead, others for purposes of religious sacrifice and for the burning of the dead, whilst the largest pyramidal mounds were most probably the sites of the temples and council-houses of the aborigines.

Extensive fortifications several miles in extent, inclosing two systems of mounds, and numerous stone graves, lie along the Big Harpeth River about sixteen miles below Old Town, at Mound Bottom, and on Osborn's Place. Within these extraordinary aboriginal works, which inclose the sites of two ancient cities, are found three pyramidal mounds about fifty feet in elevation, and each one exposing about one acre on its summit; and, besides these, are numerous lesser mounds.

Such structures must have required the labor of a considerable population for a series of years; and the erection of these earth pyramids must have been slow and tedious, as the aborigines were without beasts of burden, and the immense masses of earth must have been carried by hand in baskets and skins.

The old road or trail which connected these ancient aboriginal towns can still be recognized in the forest, the well-worn and compact path being in some places a foot or more lower than the general surface of the surrounding soil.

Similar fortifications and mounds are found higher up on the same river, at Old Town, near Franklin; and it is evident, from these facts, that a chain of fortified towns extended in former times all along the Valley of the Big Harpeth. From careful excavations, examinations, and measurements, together with comparison of the crania, I am convinced that the mounds and fortifications of the Big Harpeth, Cumberland, and other rivers of Tennessee, were erected by the same extinct aboriginal race.

I have examined similar works of an extensive character on the Mississippi in the vicinity of the present town of Hickman, Tennessee.

One of the most remarkable aboriginal remains in Tennessee was found in the fork of Duck River, near Manchester, and is known as the *Stone Fort*. The walls of the structure were formed of loose stones gathered from the bed of the river. The gateway, which opens towards the neck of land lying between the branches of the river, is carefully protected by an inner line of works so constructed that the enemy entering the area would be received into a cul-de-sac. Directly in front of this gateway, and about half a mile distant, stands a remarkable mound, the structure of which is similar to that of the walls of the *Fort*, being composed of stones, the largest of which do not exceed a foot and a half in diameter. This oblong mound is 600 feet in circumference, and 40 feet in height, and the labor of collecting and depositing the loose stones by hand must have been considerable.

With these preliminary remarks I proceed to give a detailed account of the results of my explorations. It has been deemed best not only to record the general results of the explorations of the mounds, fortifications, and graves, but also to give, at the same time, descriptions of the various relics.

Stone Grave Burial Mounds.

In a small mound, about forty-five feet in diameter, and about twelve feet in height, which I explored, about ten miles from Nashville, near Brentwood, on the banks of a small rivulet issuing from a cool never-failing spring of water, and which contained, perhaps, one hundred skeletons, the stone graves, especially toward the centre of the mound, were placed one upon the other, forming in the highest part of the mound three or four ranges. The oldest and lowest graves were of the small square variety, whilst those near or on the summit, were of the natural length and width of the inclosed skeletons. In this mound, as in other burial places, the bones in the small square stone graves were frequently found broken; and whilst some graves of this description contained only a portion of an entire skeleton, others contained fragments of two or more skeletons mingled together. These square graves were not of sufficient depth to receive the body in a sitting posture, and appeared to have been the receptacles of the bones after the flesh had been removed. The small mound now under consideration was one of the most perfect in its construction, the lids of the upper stone cists being so arranged as to present a uniformly rounded, sloping rock surface. This mound was situated on the western slope of a beautiful hill, covered with the magnificent growth of the native forest. The remains of an aboriginal earthwork were still visible surrounding the site of an extensive encampment and several mounds. In a large and carefully constructed stone tomb, the lid of which was formed of a flat rock over seven feet in length and three in width, I found the bones of an aged individual. The skeleton was about seven feet in length, and the huge jaws had lost every vestige of teeth, the alveolar processes being entirely absorbed. In a grave occupied by what appeared to be a female skeleton, there was near the head a small compartment or stone box, separated from the main coffin by stone

slabs, within which were discovered the bones of an infant. Pieces of pottery were found with the bones in the stone coffins, but no entire vase or vessel, or stone implement, or idol, was discovered in this mound. Although great care was exercised, it was found to be impossible to extract the crania entire, owing to the soft, decayed state of the bone. An examination of the crania *in situ*, after the removal of the surrounding soil, showed that they were all more or less compressed in the occipital region into a pyramidal form, having a long transverse or parietal diameter. The jaw bones were massive, with widely diverging rami, and the nasal bones were large and prominent.

The aborigines of Tennessee scooped out the floor of the tent or wigwam, so as to leave a circular depression with elevated borders. Within the line of the earth-works the circular depressions of the ancient habitations or wigwams were very distinct and easily recognized. Certain low mounds, not more than from two to four feet in height, with depressions in the upper surface, as in the case of the extensive remains on the Big Harpeth, at Osborn's and Mound Bottom, appear to have once formed the floors of large circular wigwams. These hollowed sites are found most generally in regular rows within the line of fortification; I have, however, in some localities, seen them in great numbers on the banks of the water-courses at considerable distances from the main works, and, in such cases, they occupied favorable positions for a fair and extended prospect or out-look of the lowlands up and down the stream. In many localities the sites of these ancient towns have been cultivated for a number of years, and the marks of the habitations have been, to a great extent, obliterated by the plow-share.

The Mandans appear to have formed their wigwams in a similar manner, and to have left traces of their encampments. Catlin, who descended the Missouri River from the Mandan Village to St. Louis, a distance of 1800 miles, from the reputed remains of the ancient localities of this tribe, was fully convinced that he had traced them down nearly to the mouth of the Ohio River. From similar appearances, which this author observed in the interior of Ohio, he conceived that this tribe had formerly occupied that part of the country, and from some cause or other were put in motion, and continued to make repeated moves until they arrived at the place of their residence at the time of their extinction on the Upper Missouri. Catlin gives a chart of the positions of these ancient towns, and also of the numerous fortifications which are now remaining on the Ohio and Muskingum Rivers, in the vicinity of which he believed the Mandans once lived, and refers these works to this tribe of Indians. He expresses his belief that they derived their knowledge of the art of fortification from the Welsh under Prince Madoc or Madawc, who sailed with a colony from North Wales in the early part of the fourteenth century, and is supposed to have settled and mingled with the aborigines somewhere in the Mississippi Valley. According to this original observer of the Indian tribes of North America, the existence of the Mandan villages is known by the excavations of two feet or more in depth, thirty or forty feet in diameter, and of a circular form, made in the ground for the foundations of their wigwams, which leave decided remains for centuries.

The Mandans always fortified their towns by a strong picket or stockade, and

thus successfully withstood the assaults of their enemies. The Riccarees and Minetarees build and fortify their wigwams in the same way, but Catlin supposes that they derived the knowledge from the Mandans. He finds a further confirmation of his views in the fact that the pottery manufactured by the Mandans was equal in beauty and excellence to that exhumed from the ancient graves and tumuli of the Mississippi Valley. It is evident, therefore, that the art of fortification, as well as the mode of constructing wigwams, and the art of fashioning well-formed and ornamented pottery practised by the mound builders and stone-grave race of Tennessee, were preserved by the Mandans up to the time of their supposed extinction by the smallpox; and it is well known that, at the time of the discovery of the American continent, various Indian nations and tribes fortified their towns by earthworks and stockades, erected burial, sacrificial, and ornamental mounds and earth pyramids, and possessed the art of manufacturing well-formed vessels. The fact that the Mandans erected earthworks, constructed their wigwams in a certain manner, and practised certain arts, by no means justifies the conclusion of Catlin, that these Indians were the exclusive authors of the extensive works found in Ohio, Kentucky, and Tennessee. Authentic historical records exist to show that the monumental remains found in the Mississippi Valley, and along the tributaries of this great river, must be referred to various aboriginal nations.

The hill on which the residence of Colonel Overton stands, about nine miles from Nashville, was in former times occupied by an aboriginal settlement. The circular depressions of the wigwams are still visible in this locality. The aborigines appeared to have been attracted to this place by the noble spring which bursts out at the foot of the hill. "Thousands of bones" were said to have been exhumed in excavating the basement and cellar of the family mansion, and the summit of the hill appeared to have been crowned by a burial mound which has been almost entirely destroyed. The crest and southeastern slope of the hill are covered with stone graves, many of which have been opened. A large number are concealed by the rank growth of weeds and grass. Those which I examined at this locality were all constructed on the same plan. Here, as elsewhere, the graves were of various sizes, from that just sufficient to inclose the remains of a little child up to the long stone coffin of eight feet. Upon careful examination of the smallest graves, I found, that, so far from inclosing a race of *pigmies*, they contained remains of children and infants. I found the teeth in all stages of development, through the period of dentition up to the appearance of the *wisdom teeth*.

The graves which I examined at this locality were all formed on the same plan; the earth having been excavated to the depth of about eighteen inches, and the dimensions of the excavation corresponding to the size of the skeleton. The sides of each were lined with carefully selected flat stones, forming a perfect parallelogram, with a single stone for the head and foot. The skeleton or body of the dead person was then deposited at full length. In the square short grave the skull was placed in the centre and surrounded by the long bones. After great labor I exhumed an entire skull from one of these square, short graves. The long bones were arranged

in the manner indicated, and several parts of the skeleton were wanting, thus showing that the skeleton, or rather its component parts, had been deposited in this grave after the flesh had been separated from the bones.

The occipito-frontal arch of this cranium is quite perfect, but its general outline, when viewed from the base or the vertex, is irregular. The occiput is but slightly flattened, and is divided into two distinct portions by a well-marked suture running directly across from the inferior angles of the parietal bones. Below this suture the occiput presents a well-marked protuberance, which is, as far as my observation extends, uniformly absent from the crania of the stone graves. In addition to the division of the occiput into two distinct portions, we observe five other intercalated bones; three upon the left border, and two upon the right border of the occipital bone. This skull had evidently been subjected to little or no compression during its early growth in infancy and childhood, and pressure was evidently not the cause of these divisions of the occiput. Both the facial angle and the internal capacity are below the maximum of the crania of the stone grave race of Tennessee; the frontal and parietal diameters are less, and the occipito-frontal arch is greater than the average measurements. Thus: facial angle, 78° ; internal capacity, 79 cubic inches; longitudinal diameter, 7 inches; parietal diameter, 5.2 inches; frontal diameter, 3.9 inches; vertical diameter, 5.8 inches; intermastoid arch, 14.7 inches; intermastoid line, 4.6 inches; occipito-frontal arch, 15.2 inches; horizontal periphery, 19.5 inches; diameter of face and head, 7.4 inches; zygomatic diameter, 5 inches.

Frequently an earthen vessel, composed of a mixture of shells and clay, was laid under or by the side of the head, or about the middle of the stone cist opposite the pelvic bones. In a large long grave of a young man, whose jaw-bones contained the wisdom teeth still encased, a small dark vase with two small holes in the rim, and with two animals resembling a beaver and a fish raised on the side, was exhumed. This small vase or cup was probably worn suspended from the neck, and had been apparently placed in the hand of the skeleton, the crumbling bones of the fingers surrounding it. The measurements are: 4 inches in the long diameter, and 3.2 inches in the short diameter. Figs. 1 and 2 present a general outline of the top and side of this specimen.

Fig. 1.

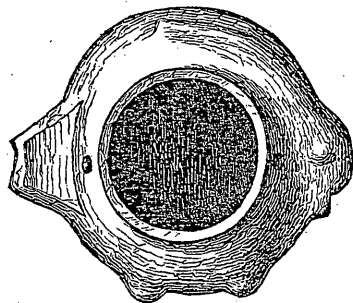


Fig. 2.

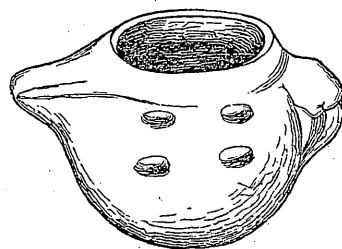


Fig. 1, front view: Fig. 2, side view, of a small vase composed of clay and crushed shells, from a stone coffin at Colonel Overton's, near Nashville, Tennessee. About one-fourth the natural size.

Graves and burial mounds are also found at and near Brentwood; and from one of the stone graves of this locality I obtained the small vase or drinking cup, fashioned like a river shell, represented in outline in Fig. 3.

This specimen is $5\frac{1}{2}$ inches in the longest diameter.

Fig. 3.

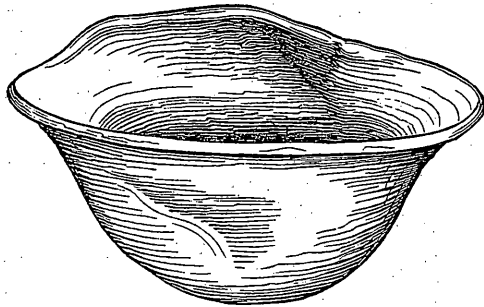


Fig. 3. Drinking cup, composed of dark clay and crushed shells, from a stone grave near Brentwood, Tennessee. About one-half the natural size.

Fig. 4.

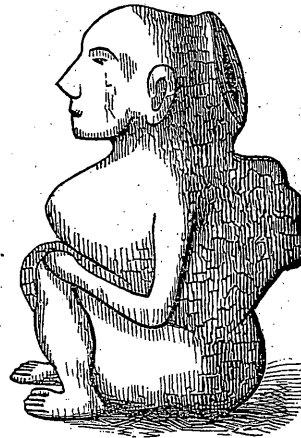


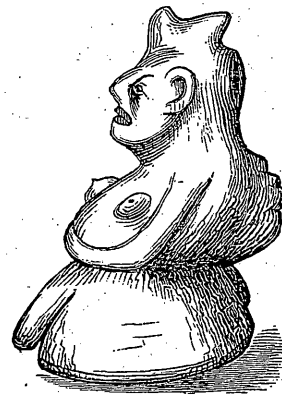
Fig. 4. Hollow image composed of clay and crushed shells, from a stone grave in a burial mound, near Brentwood, Tennessee. One-half the natural size.

The small image represented in Fig. 4 was, in like manner, exhumed from a stone grave at Brentwood.

This object is $4\frac{1}{2}$ inches in height, and represents a human figure in a sitting posture, with the hands on the knees. The breast and back of the figure resemble those of human beings in whom the spine has been diseased and curved.

From a stone grave situated upon the slope of the hill on which stands the residence of Colonel W. D. Gale, near Nashville, I exhumed a small image representing a short deformed female in a kneeling posture. It will be seen from the outline figure of this image, Fig. 5, that the nose is prominent, the forehead retreating, and that the head is ornamented with a crown. This image is composed of clay and crushed shells, is hollow within, and 4.3 inches in height.

Fig. 5.



Small image, representing a short deformed female in a kneeling posture, composed of crushed shells and dark clay, from a stone grave situated on the slope of the hill, above the spring, near the residence of Colonel W. D. Gale, a short distance from Nashville, Tennessee.

Sacrificial and Burial Mounds.

Some of the* burial mounds were evidently used also for religious purposes. Thus in a small mound, about one hundred feet in diameter, and about ten feet high, which I explored on the eastern bank of the Cumberland River, opposite the city of Nashville, across from the mouth of Lick branch, at the foot of a large mound,

which had been apparently used as a residence or site of a temple, I discovered the following remains.

In the centre of the mound, about three feet from its surface, I uncovered a large sacrificial vase or altar, forty-three inches in diameter, composed of a mixture of clay and river shells. The rim of this flat earthen vessel was three inches in height. It appeared to have been moulded in a large wicker basket, formed of split canes and the leaves of the cane, the impressions of which were plainly visible on the outer surface. The rim of this earthen vessel or sacrificial altar appeared to be almost mathematically circular. The surface of the "altar" was covered with a layer of ashes, about one inch in thickness. These presented the appearance and composition of incinerated animal matter. The antlers and jaw-bone of a deer were found resting on the surface of this object. The edges of the *altar* or fire vessel, which had been broken off apparently by accident, were carefully placed over the layer of ashes, and then covered with nearly three feet of earth; thus the ashes were preserved to a remarkable degree from the action of the rains.

Stone coffins or rude sarcophagi were ranged around this central object, with the heads of the dead toward the centre and the feet toward the circumference of the mound, resembling the radii of a circle.

The inner circle of graves was constructed with great care, and all the bodies buried around the altar were ornamented with beads of various kinds; some of which had been cut out of large sea-shells, others out of bone, and others again were composed of entire sea-shells of small size, and punctured so as to admit of the passage of the thread upon which they were strung. The large shell beads

were found most generally by the side of the crania, and upon the breast, as if they had constituted ear-rings and necklaces; the smaller beads were found most generally surrounding the waist, and the arm and leg bones.

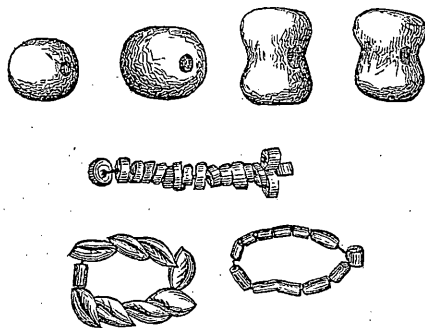
The various forms of beads from this mound are represented in Fig. 6.

In a carefully constructed stone sarcophagus, in which the face of the skeleton was looking towards the setting sun, a beautiful shell ornament was found resting upon the breast bone of the skeleton. This shell ornament is 4.4 inches in diameter, and it is ornamented on its concave surface with a small circle in the centre, and four concentric bands

Various forms of shell beads from the stone coffins, in the mounds on the banks of the Cumberland River, opposite Nashville, Tennessee. One-fourth the natural size.

differently figured in relief. The first band is filled by a triple volute; the second is plain; the third is dotted, and has nine small round bosses carved at unequal distances upon it. The outer band is made up of 14 small elliptical bosses, the outer edges of which give to the object a scalloped rim. This ornament on its concave figured surface had been covered with red paint, much of which was still visible; the convex smooth surface is highly polished, and plain with the exception of three concentric marks. The material out of which it is

Fig. 6.



formed was evidently derived from a large flat sea-shell; no fresh-water mussel in any part of the waters of Tennessee and of the surrounding States could furnish a uniform thickness of flat shell equal to this; and the regularity of its convex and concave surfaces, as well as the perfection of all its parts, and the uniformity of its thickness (about $\frac{3}{10}$ of an inch) are proofs that it must have been derived from a large shell from the sea-coast.

The form of the circles or "suns," carved upon the concave surface, is similar to that of the paintings on the high rocky cliffs on the banks of the Cumberland and Harpeth.

Figs. 7 and 8 represent the carvings on this shell ornament.

Fig. 7.

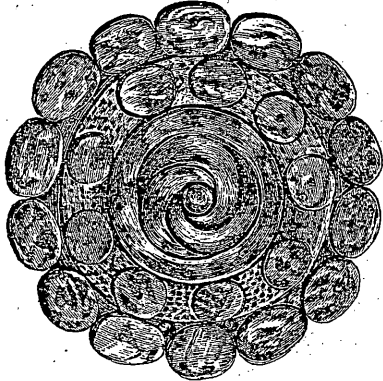


Fig. 8.



Figs. 7 and 8. Shell ornament from the breast of a skeleton, lying in a carefully constructed stone coffin, in the summit of a mound on the banks of the Cumberland River, opposite Nashville, Tennessee. Figure 7 represents the concave, carved, and painted surface, and figure 8, the convex surface.

This ornament, when found, lay upon the breast bone, with the concave surface uppermost, as if it had been worn in this position, suspended around the neck, as the two holes for the thong or string were in that portion of the border which pointed directly to the chin or central portion of the lower jaw of the skeleton. The marks of the thong by which it was suspended are manifest upon both the anterior and posterior surfaces, and in addition to this the paint is worn off from the circular space bounded below by the two holes.

This skeleton had around the neck, arms, waist, and ankles, numerous beads of various kinds. The smaller beads were all formed of small sea-shells, represented in figure 6. This form of bead was but rarely found in the stone graves; the majority of the graves containing either no beads at all, or only the small round and oblong kinds carved out of bone and shell. About one pint of these small perforated sea-shells were found with this skeleton, and the greatest number lay around the waist, as if the body had been encircled with a belt ornamented with these shells.

This stone grave, which was about two feet beneath the surface (that is, the lid of the coffin was covered with this thickness of earth), had been constructed with such care that little or no earth had fallen in, and the skeleton rested as it were in a perfect vault.

The cranium, which from the delicacy of the bones, and especially of the jaws, was judged to be that of a female, was in a remarkable state of preservation. The skeleton was dry, and seemed to be unimpaired as far as the general shape and outlines of the bones are concerned; but these were very light, and crumbled readily when compressed, thus indicating the removal of the animal matter to a great extent. I varnished the skull immediately after lifting it out of the sarcophagus, and thus preserved it entire, with the exception of a small portion of the occipital bone, in the left side of the back of the head, where the skull rested upon the earth.

This cranium is one of the most perfect in its shape, and striking in its outline, amongst the skulls which I exhumed and critically examined, measured, and figured, of this aboriginal race. The oval of the skull is unusually perfect, the nose is high and arched, and the teeth are perfect, 16 above and 16 below, and although considerably worn by use and age, only one small cavity exists in one of the anterior molars, on the right side of the superior maxilla. The occiput is less flattened than in many other crania of this race; nevertheless, this characteristic is readily observed; and when the skull is viewed anteriorly or posteriorly, it is evident that the pressure was exerted more upon the left side than upon the right. The measurements of this specimen are as follows: facial angle $76^{\circ}.5$; internal capacity 75 cubic inches; longitudinal diameter 6.3 inches; parietal diameter 5.4

inches; frontal diameter 4.3 inches; vertical diameter 5.5 inches; intermastoid arch 15 inches; intermastoid line 5 inches; occipito-frontal arch 13.5 inches; horizontal periphery 19 inches; length of head and face 7.5 inches; zygomatic diameter 5.1 inches.

In the grave of a child, near the right side of the stone grave, the description of which has just been given in detail, and at the foot of another grave which contained a skeleton seven feet in length, and apparently of a male of great age, as manifested by the loss of the teeth, and the absorption of the alveoli, a small black image was exhumed.

The features of this image, with its straight retreating forehead and prominent nose, resemble those of the Aztec or ancient Mexican sculptures. The figure is kneeling, with the hands clasped across the breast, in the *attitude of prayer*. This object is formed of a mixture of black clay and pounded shells, and is exceedingly hard, with a smooth polished surface. It might with propriety be called a vase, as it is hollow, with the

mouth or opening in the back of the head, and not at the summit as is usual with the vases of the Egyptians and Romans.

Fig. 9.



Image composed of dark colored clay and crushed river shells, from the stone grave of a child, on the summit of a burial and "Sacrificial" mound; on the banks of Cumberland River, opposite Nashville, Tennessee. One-fourth the natural size.

Fig. 9 represents a rough sketch of this image.

The under jaw of the skeleton of the aged mound builder, whose grave lay near that containing the black image, was of remarkable size, and had only one long tooth or fang, like the tusk of a wild animal.

On the left of the grave which contained the carved shell ornament, previously described, lay two other carefully constructed stone graves, in one of which numerous shell beads were found encircling various portions of the skeleton, and in the other a large sea conch. The interior portion or spiral of the shell had been carefully cut out, and it was probably used as a drinking vessel or as the shrine of a small idol, as had been observed by Dr. Troost. From the great distance whence these large marine shells must have been brought, it is reasonable to suppose that they were considered of great value by the aborigines.

The grave furnishing this vessel fashioned from a shell also contained two copper ornaments, lying on the side of the cranium of the skeleton. These ornaments should more properly be described as two round pieces of wood, perforated through the centre, and covered with a layer of copper. They appear to have been suspended from the ear by a thong, since the remains of small leather strings were observed in the central holes. I discovered similar ornaments of wood, but more finely carved, and covered with a thin layer of copper, in a stone grave near Nashville, at the residence of Colonel W. D. Gale. Upon the summit of the mound now under consideration, about six inches below the surface, immediately above the large circular earthen vessel, I also discovered several pieces of thin, corroded copper, which appeared to have formed originally a plate, vessel, or mask. A copper mask, which was fashioned with human features, is said to have been found in a mound near Franklin, Tennessee. From a stone grave near Lick Branch, I obtained several small, round masses of pure silver. Silver coins are said to have been found in a stone grave on the banks of the Cumberland, opposite Nashville, but after diligent inquiry, I was unable to obtain any reliable information. The wooden ornaments covered with copper previously described, were one inch in diameter, and presented the general appearance of Fig. 10.

Fig. 10.



Wooden ornament coated with copper, from a stone grave, in a mound on the bank of Cumberland River, opposite Nashville. One-half the natural size.

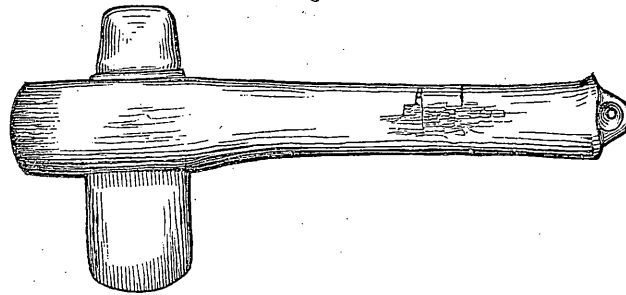
The metal was almost entirely reduced to the oxide and carbonate of copper.

Two skeletons, apparently those of a man and a woman, were found on the southern slope of the mound, near the altar: they had been interred in the earth, without any stone coffins. At the side of the female skeleton, apparently encircled by the bones of the fingers, a highly finished, light reddish-yellow vase was found painted with regular black figures. This vase is composed of light-colored clay and crushed shells: height $7\frac{8}{10}$ inches; circumference $18\frac{5}{10}$ inches. The body of the vase is divided into segments by four broad depressions extending from the base nearly to the neck. Each of the four divisions is bordered with black, and

in the centre of the circles thus formed is an inner black circular figure. This vase had evidently been subjected to the action of fire; and in its general appearance and finish compares favorably with the best Mexican and Peruvian vases that have come under my observation.

Under the head of the male skeleton I found a carefully fashioned and highly polished stone hatchet, with a double edge, and with the entire handle and ring carved out of a compact chloritic stone. On each side of the top of the handle are three grooves. A reduced drawing of this warlike weapon, which is one of the most beautiful and perfect stone implements ever exhumed from the aboriginal remains within the limits of the United States, and which appears to constitute a special type, differing from both American and European stone implements, is represented in Fig. 11. Length 13.5 inches; blade between the edges 6.1 inches; greatest width of the blade 2.5 inches; greatest width of the handle 2 inches; least width of the handle 1.5 inches.

Fig. 11.



Double-headed stone hatchet or battle axe, formed of green chloritic stone, exhumed from a mound on the bank of the Cumberland River, opposite Nashville.

A row of graves extended around the inner circle, which we have described as radiating from the altar. The stone coffins of this outer circle lay at right angles to those of the inner circle, and rested as it were at the feet of the more highly honored dead. In the outer graves no ornaments were found, and only a few arrow-heads and fragments of shells and pottery. The arrow-heads are very small, and most carefully fashioned with very sharp points. Fig. 12 represents one of these flint arrow-heads.

Fig. 12.



Arrow-head from a stone grave. One-half the natural size.

The crania from this outer circle are, as a general rule, larger and more compressed than those of the inner circle. The flattening of the occiput varies also within very wide limits. These differences were accurately indicated by the numerous photographs and outline drawings transmitted to the Smithsonian Institution in connection with the account of these explorations.

In the outer circle of this mound I exhumed the largest cranium that I was able to obtain in a perfect state from the stone graves; the internal capacity being 103 cubic inches; horizontal periphery 20.8 inches; intermastoid arch 16.8 inches;

occipito-frontal arch 15.7 inches; parietal diameter 5.9 inches; frontal diameter 4.8 inches; intermastoid line 5.3 inches; diameter of face and head 7.8 inches; zygomatic diameter 5.5 inches. The facial angle also is above the mean of the crania of this ancient race, being 81° . Dr. Samuel G. Morton, in his "Crania Americana," gives the following as the results of his measurements of the internal capacity of the cranium in the different races of men: Caucasian, in 52 skulls, the mean internal capacity in cubic inches was 87, largest in the series 109, smallest 75; Mongolian, in 10 skulls, mean 83, maximum 93, minimum 69; Malay, in 18 skulls, mean 81, maximum 89, minimum 64; American, in 147 skulls, mean 82, maximum 100, minimum 60; Ethiopian, in 29 skulls, mean 78, maximum 94, minimum 65. Upon comparison, it will be found that the internal capacity of the skull now under examination is greater than any one of the 204 Mongolian, Malay, American, and Ethiopian skulls examined by Dr. Morton, and is less than the largest Caucasian by only 6 cubic inches. The skeleton was over six feet in length, and the bones of the extremities were well formed and powerful.

Whilst the occiput of this cranium is somewhat flattened, its shape is more symmetrical, and the oval of the head more perfect, than in the majority of the crania from the stone graves. Two intercalated bones are situated at the junction of the occipital and parietal bones. The lower jaw is massive and coarse, and the teeth are somewhat worn and free from decay. The cranium from the adjoining grave is well formed and large, and bears a striking resemblance to the one just described. As the graves lay side by side, we judged that the individuals to whom these crania belonged may have been related during life. The teeth are well worn and somewhat decayed. The back of skull is more flattened on the left side than on the right; this has caused a greater prominence of the left side of the forehead, whilst the parietal protuberance is more marked, and situated further back on the right side. The effect of this unequal pressure during childhood, or rather just after birth, was to destroy the symmetry of the entire cranium, to alter the position of the foramen magnum, to throw the articulations of the lower maxilla out of the right line, and also to render one side of the face more prominent than the other. Even the symmetry of the lower jaw was destroyed by this pressure, the rami being separated more widely apart than in normal crania, and each ramus presenting a different angle and different length. This cranium, also, is one of the largest and most massive, as will be seen from the following measurements: facial angle, 80° ; internal capacity, 90 cubic inches; longitudinal diameter, 6.9 inches; parietal diameter, 5.6 inches; frontal diameter, 4.3 inches; vertical diameter, 6 inches; intermastoid arch, 15.7 inches; intermastoid line, 4.8 inches; occipito-frontal arch, 14.8 inches; horizontal periphery, 20.3 inches; diameter of face and head, 7.6 inches; zygomatic diameter, 5.5 inches. Many of these crania had evidently been subjected to considerable pressure during their early growth; and the pressure appears to have been exerted both upon the occipital and frontal bones. In the cranium, the outlines of which are given in Figs. 13 and 14, I observed that the effects of pressure had been so marked as to render the parietal diameter actually greater than the longitudinal diameter; as will be seen from the following measurements: longitudinal diameter, 6.1 inches; parietal diameter, 6.4

inches; internal capacity, 92 cubic inches; frontal diameter, 4.4 inches; vertical diameter, 6 inches; intermastoid arch, 16.5 inches; intermastoid line, 5.4 inches; occipito-frontal arch, 13.8 inches; horizontal periphery, 19.8 inches.

Fig. 13.

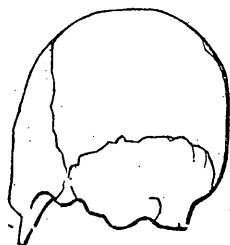
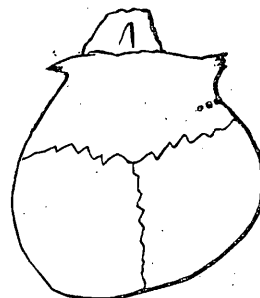


Fig. 14.



Figs. 13 and 14, outlines of a cranium, from a stone grave in a mound on the banks of the Cumberland River, opposite Nashville.

In the general outline, this cranium bears a marked resemblance to that of the Natchez, figured and described by Dr. Morton in his "Crania Americana," pp. 160-161, Plates XX and XXI. The effects of artificial compression were also visible in another well preserved cranium from a stone grave in the same mound, which afforded the following measurements: facial angle, 75° ; internal capacity, 78 cubic inches; longitudinal diameter, 6.1 inches; parietal diameter, 5.7 inches; frontal diameter, 4.3 inches; vertical diameter, 5.6 inches; intermastoid arch, 15 inches; intermastoid line, 5.2 inches; occipito-frontal arch, 13 inches; horizontal periphery, 19 inches; diameter of head and face, 7.3 inches; zygomatic diameter, 5.3 inches.

Graves also extend to the river's edge, many of which are uncovered from time to time by the crumbling of the sandy bank; the remains consisting of shells, bones, pottery, and implements of various kinds, precipitated along the shores of the river below.

From the grave of a child, near the brink of the river, I took a small shell ornament, carved in the shape of a human countenance (Fig. 15).

Fig. 15.

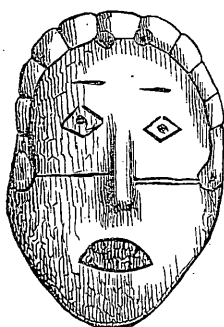


Fig. 15, shell ornament from the stone grave of a child, at the foot of a mound on the banks of Cumberland River, opposite Nashville.

The cranium of this child was removed with great difficulty from its stone coffin. This skull exhibits, in a marked manner, the effects of compression on the soft bones of the infantile cranium. The occiput is greatly flattened, and the bones yielding laterally to the growing brain, the parietal diameter actually varies but little from the longitudinal. The effects of compression on this cranium will be rendered evident by the following measurements: longitudinal diameter, 5.8 inches; parietal diameter, 5.6 inches; frontal diameter, 3.5 inches; vertical diameter, 5 inches; intermastoid arch, 14 inches; occipital arch, 12.4 inches; horizontal periphery, 16 inches.

I have examined, *in situ*, a large number of crania belong-

ing to children of various ages, and have concluded that the effects of pressure upon the bones of the cranium were much more marked in infancy, and that the marks or effects of pressure disappeared to a certain extent with the advance of years.

In the graves of several small children, adjacent to the one just described, I found the bones of birds and small animals. These small stone coffins were discovered near the river bank, about twenty feet from the foot of the mound.

About fifty yards higher up the Cumberland, and evidently connected with the mound previously described, are two smaller mounds, about forty feet in diameter, and about four feet high. These contained stone graves irregularly arranged, but no central earthen vessels, corresponding to that which we have designated as the *sacrificial altar*.

The graves which I opened contained no ornaments of any kind.

Several of the skeletons in these mounds bore unmistakable marks of the ravages of syphilis. In one skeleton, which appeared to manifest in the greatest degree the ravages of this fearful disease, the bones of the cranium, the long bones of the arm (the humerus, ulna, and radius), and the long bones of the thigh and leg (the femur, tibia, and fibula) bore deep erosions, nodes, and marks of severe inflammatory action. Many of the long bones were greatly thickened, presenting a nodulated, eroded, and enlarged appearance. When sections were made, they presented a spongy appearance, with an almost complete obliteration of the medullary cavities. The specific gravity of the bones was diminished, and the microscopical characters were in all respects similar to those of undoubted cases of constitutional syphilis, which I have observed in my hospital and civil medical practice. Every competent medical observer to whom these bones have been submitted, has concurred in the view that syphilis is the only disease which could have produced such profound and universal structural alterations.

I found a stone hatchet, and numerous arrow- and spear-heads, on the surface around these mounds. While examining the banks of the river in the neighborhood of these mounds, I observed strata of ashes and charcoal, pieces of shell and flint, stone implements, and numerous fragments of pottery: the fields around also abound with fragments of pottery, shells, stone implements, and splinters of flint. These remains indicated the occupancy of this locality for a considerable length of time by the aborigines.

After the most careful examination and comparison of the bones in the mound containing the large earthen vase or central "*sacrificial altar*," I failed to detect any marks of syphilis, whilst the traces of this disease were manifest in the bones of the two smaller mounds, which appear to have been the receptacles of the dead of the common people of the tribe or nation. The presence of syphilitic nodes, and marks of syphilitic ulcerations in these bones, is not only of interest in its medical aspect, but also in its bearing on the probable age of these remains. If this disease was unknown to the aborigines in this portion of America until its introduction by the Spaniards, then we have here evidence that the *stone grave race* of Tennessee were living at the time of the discovery and exploration of the North American continent by the Spaniards. This view of the question would lead to