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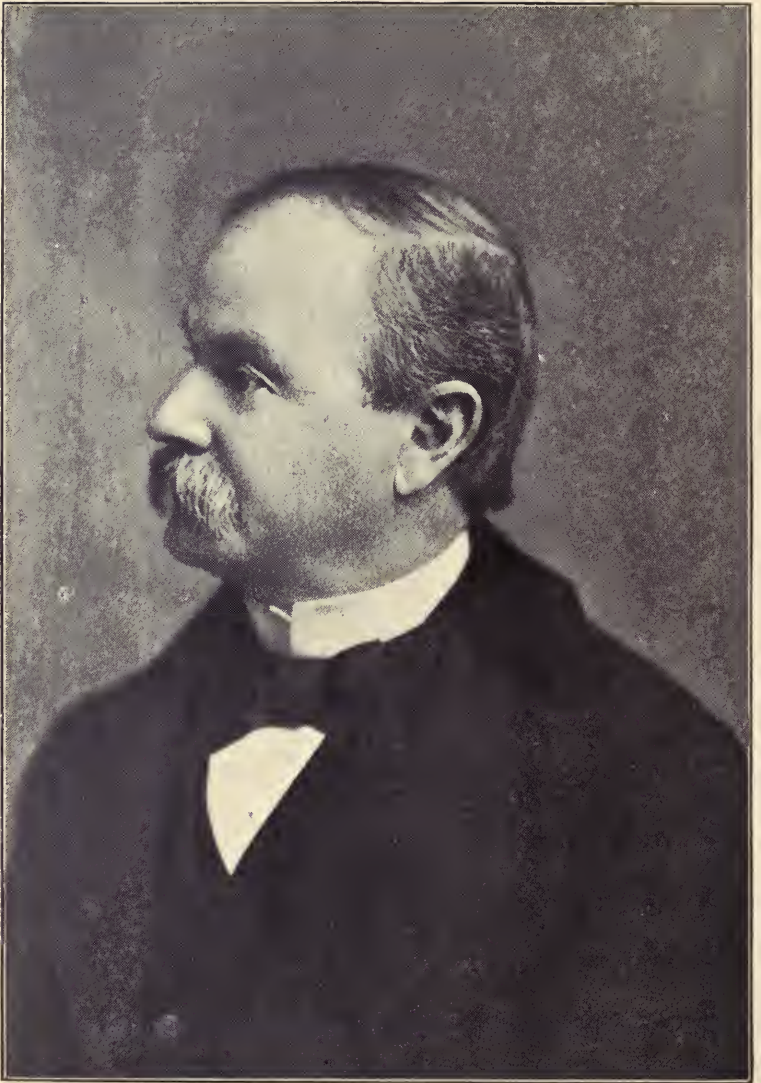


THE
Thruston Collection

VANDERBILT UNIVERSITY

REPRINTED FROM VANDERBILT QUARTERLY
OCTOBER-DECEMBER, 1961

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GEN. GATES P. THRUSTON.

(1835-1912)

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Glenn, Leonidas Chalmers

VANDERBILT

UNIVERSITY QUARTERLY

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No. 4

Ohio

GENERAL GATES P. THRUSTON.

June 11

General Gates P. Thruston, the donor of the Thruston collection described elsewhere in this issue of the QUARTERLY, was born in Dayton, Ohio, in 1835. He is descended on his father's side from English ancestors, who settled in Virginia in 1666, and may be said to have inherited both his military and legal bent, since one ancestor, Colonel Charles Minn Thruston, was a noted Revolutionary officer of Virginia, and later another, Judge Buckner Thruston, was a United States Senator from Kentucky, and afterwards United States Judge of the District of Columbia for thirty-six years.

General Thruston was valedictorian of the class of 1855 at Miami University, and has since been honored by Miami with the degree of L.H.D. because of his archæological research and literary work. He took his degree in law at the Cincinnati Law School.

At the outbreak of the Civil War he was commissioned captain in the First Ohio Infantry, and was with his regiment at Shiloh and elsewhere. At Stone's River he was promoted for gallantry, and soon after appointed major in the adjutant general's office. At Chickamauga he was brevetted brigadier general for his gallantry and services and appointed judge advocate of the Army of the Cumberland on General Thomas's staff. He was on duty with General Thomas in the battles around Atlanta, and served as judge advocate until the close of the war.

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At the close of 1865 he married Miss Ida Hamilton, daughter of Mr. James Hamilton, of Nashville, and decided to remain here and enter upon the practice of law in Tennessee. As an ex-Federal officer and an adopted citizen of Tennessee he became of much service in fighting and mitigating the evils of Reconstruction in this State.

He soon built up a large and lucrative legal practice in Nashville; but in 1878, owing to an accident that somewhat impaired his health, he retired from his profession and spent two years traveling in Europe and elsewhere with his wife. On his return to Tennessee he accepted the presidency of the State Insurance Company and has become director in numerous business enterprises, so that his attention is now largely given to his property and financial interests.

In 1894 he was united in marriage to Miss Fannie Dorman, daughter of Mr. R. Dorman, of Nashville.

General Thruston is a Fellow of the American Association for the Advancement of Science; honorary member of the Missouri Historical Society; for years Vice President of the Tennessee Historical Society; corresponding member of the New York and Philadelphia Archæological and Numismatic Societies; trustee of the University of Nashville, of the Carnegie Library, and of the Ladies' Hermitage Association; and Chairman of the Watkins Institute Commission. He is also President of the Society of the Army of the Cumberland.

Thus deeply engrossed in his many business cares, and giving so largely of his time to the service of the public through his membership on numerous boards of a civic nature, such as the Watkins Institute and the Carnegie Library, he has felt the need of mental and physical relaxation and diversion, and has found it not in cessation but in entire change of activity, and for years has devoted his leisure hours to the study of archæology and mineralogy, and with what success the splendid collections in these subjects given by him in 1908 to Vanderbilt University amply show.

His interest in these subjects really dates from early boyhood. The State geologist of Ohio was an intimate family friend. He was a lover not only of his geological work, but of science

in general, and often took young Thruston on his geological walks to carry the hammer and basket. The fields about Dayton were rich collecting grounds. The glacial boulders and gravels of the Miami Valley furnished many specimens that had been brought there from far to the north, while the blue Silurian hillsides yielded many well-preserved fossils. The Miami Valley was also studded with ancient Indian mounds and earthworks and rich in archæological remains. The most interesting cone-shaped mound in the State of Ohio was near Dayton.

It was in these scientific excursions in boyhood that the strong taste for archæology, mineralogy, and paleontology was developed, which later in life was to furnish General Thruston diversion and enjoyment. The boy was evidently father to the man.

When General Thruston came to Nashville at the close of the Civil War he brought with him a small but interesting collection, which became the nucleus of the collection recently presented to the university. Additions were made to this collection as time and opportunity permitted, as, notably, for instance, when on a European trip he obtained special permission as an ex-officer of the United States army to excavate for himself among the ruins of Pompeii and retain his finds. As a result of this concession, now no longer to be gained by any one, the Thruston collection contains a number of most interesting relics of this ancient Roman city. On these European and other trips he made a habit of frequenting the shops of lapidaries and dealers, and constantly added choice specimens of gems, minerals, and crystals to his collection.

Some years later, when a large aboriginal cemetery was discovered just south of Nashville and several individuals and institutions became interested in exploring it, General Thruston became a most active and enthusiastic participant, and persisted in his explorations here and elsewhere until he had amassed an unrivaled collection. He also undertook to prepare for the Tennessee Historical Society a pamphlet describing some of the fine types of pottery and other objects from the stone box graves. He tells us in the preface to his book on "The Antiquities of Tennessee and the Adjacent States" how it soon became apparent that it would be impossible to do the subject justice in the

modest way at first contemplated, and how the "pamphlet" gradually grew into the handsome volume of some 380 pages, with its many plates and cuts describing and illustrating the rich finds made in the field. Some idea of the time and means given by him to this field work may be gained from the fact that he had some 4,000 or more graves carefully excavated.

His entire collection, in spite of the intimate personal association so many of the specimens necessarily had for him, General Thruston has given to Vanderbilt University and dedicated them to the service of science.

In years ago it was quite customary in the United States for business and professional men of scholarly inclination to interest themselves in some study or pursuit outside of their immediate vocation, and they often made their highest mark in connection with this diverting subject. Such custom is still maintained in England; but in America, unfortunately, it has become exceedingly rare. Here commercialism has so absorbed our energies that we have time left for but little else. It is especially gratifying to see in General Thruston a surviving embodiment of this fine old custom, and it is commended to others as worthy of emulation in the pleasure alone which it affords its pursuer, and doubly worthy if it results, as in the present case, in giving to the public, and especially to the cause of science, such a collection as the one here gathered together. L. C. GLENN.

THE THRUSTON COLLECTION.

In a former volume of the *QUARTERLY* brief mention was made of the presentation to the University by General G. P. Thruston of his widely-known collection of Indian antiquities, gems, and minerals. This collection is especially noteworthy, as it is the largest and best collection known to be in existence of the pottery and other implements of the ancient aborigines of Tennessee—that curious people who buried their dead in the quaint stone-box graves or cysts, and who doubtless also built the mounds and erected the earthworks that are still to be found in many places in Tennessee and adjoining States. It is largely to these

two peculiarities of these people that we owe the possibility of gathering such a collection as this, since much the larger part of it was obtained by exploring these stone-box graves and mounds. It seems that the art and culture of these ancient mound builders reached a higher state in Tennessee than elsewhere, and that the center of this struggle upward toward enlightenment was in the region about Nashville, where more of their graves and other remains have been found than anywhere else. General Thruston has for years been an enthusiastic collector of the pottery, chipped stone, and other remains of these ancient Tennesseans, and the splendid results of his work are contained in the collection he has so generously donated to the University.

Collections like this, made in a region of exceptional archaeological interest and richness, from sources that are already fully limited and determined, and which when once exhausted permit of no further renewal or increase, possess a unique importance and value. Not only is the formation of such a collection as this a matter of years of patient, persistent work and of large expenditure of both time and money in doing the great amount of excavation necessary, but when once made every addition adds proportionately more and more to its value and makes it more and more impossible to duplicate it. So many of the known graves and mounds have been opened in building this collection that it is exceedingly doubtful whether any amount of money and time would now suffice to bring together another collection of similar extent and value.

In the formation of such a collection General Thruston has placed all students of Indian archæology, whether present or future, under a deep and lasting debt of gratitude to him, and has further increased that debt by giving the collection into the keeping of Vanderbilt University, where it is housed in a special room known as the Thruston Room, on the main floor of College Hall, a modern, fireproof building, where it is safeguarded from destruction by fire and is accessible at all times for inspection or study.

General Thruston is by far our best authority on the remains, manners, and customs of these ancient inhabitants of Tennessee, and has given to the world the results of his studies in his work

on the "Antiquities of Tennessee," a volume of some 380 pages, now in its second edition, which contains many plates and figures illustrating the objects in this collection. This volume has been very freely drawn upon by the writer in preparing this sketch, and due acknowledgment is here made of this fact.

The Thruston Room is on the main floor of College Hall, on the right-hand side of the main entrance. The door of the room is appropriately lettered "Thruston Collection of Antiquities and Minerals." So great is not only the scientific but also in many cases the intrinsic value of many of the specimens in the collection—as, for instance, some of the diamonds and other gems or some of the nuggets of gold—that it is not deemed wise to keep the door unlocked and thus throw the room open to the public at all times as freely as are the other museum rooms. A key may be had, however, at any time by applying at the Secretary's office; and where it is desired by archæologists to make a special study of the collection access may be freely had to the cases and books of reference, and other facilities for work will be placed at the student's service.

This article is designed to call general attention to the collection and to give some idea of the great wealth and variety of objects comprised in it, without pretending in any way to give an exhaustive description of it.

As one enters the room the first impression is of the wealth and variety of the specimens, and as one studies in detail the contents of the various cases this impression is only deepened, until the conviction comes that these vessels and implements were the product not of the ordinary savage or wild Indian such as were most of the tribes found by the whites when America was discovered, but were the product of a people farther advanced in the arts of civilization and possessed of no mean skill in craftsmanship and no little appreciation of artistic beauty. One would not, however, conclude that these vanished people were different in kind from the modern Indian, but rather that, while they were of the same race, they were more advanced in the arts of peace, and that when compared with them the modern Indians, at least in this general region, would seem to have retrograded, probably through the influence of intertribal wars.

In the front case are displayed many fine examples of the aboriginal clay-workers' art. Many of the objects show quaint conceits and fanciful ideas that invest both the ware and its makers with a special interest. There are, for instance, many animal bowls of striking design. Some of these represent the human form. In this case the head rises above one edge of the bowl and is turned so as to look across the circle of the bowl, along either side of which the arms extend, while the legs and feet may project from the opposite side. Other bowls represent the duck, the wild turkey, the turtle, the fish, or some quadruped, such as, possibly, the bear or beaver or opossum. Many are so skillfully modeled that there is no difficulty in determining what animal is intended to be represented. Some oval bowls have the head of a fish on one end, the dorsal and ventral fins on the sides, and the tail fin at the other end, all so modeled that there is no doubt the perch was the fish in the mind of the modeler. On some of these animal bowls projecting heads are deftly contrived to serve as handles. On some the handle represents a dog gnawing a bone, or perhaps a beaver swimming with a stick in his mouth and front paws. On some the heads are perhaps fanciful, and may be intended to represent dragons, fetishes, or other creatures of the imagination.

The mussel shell was everywhere a familiar and useful object to the aborigines, and so it is only natural to find many of their terra cotta bowls modeled to represent either a single valve of such a shell or made double to represent two valves still united by their hinge ligament, but flaring widely open as the shells themselves may often be seen in the sand and gravel by a stream's edge. The exteriors of these bowls are usually plain and smooth, though at times they show painted ornamentation or are decorated with impressed lines either in scroll, zigzag, or other geometrical design. Although these animal bowls possess a certain rudeness of finish, yet they also have a certain grace of outline and a decided quaintness of conception that give them a peculiar interest.

There are many other bowls of more conventional design, most of which are broad and shallow and with margins that may either be polygonal, scalloped, or entirely circular in outline.



PLATE I. IMAGES OF TERRA COTTA FROM THE STONE GRAVES.
(One-third size.)



PLATE II. FISH AND ANIMAL FORMS OF POTTERY.
(One-fourth size.)



PLATE III. IMAGES FROM STONE GRAVES.
(One-fourth size.)

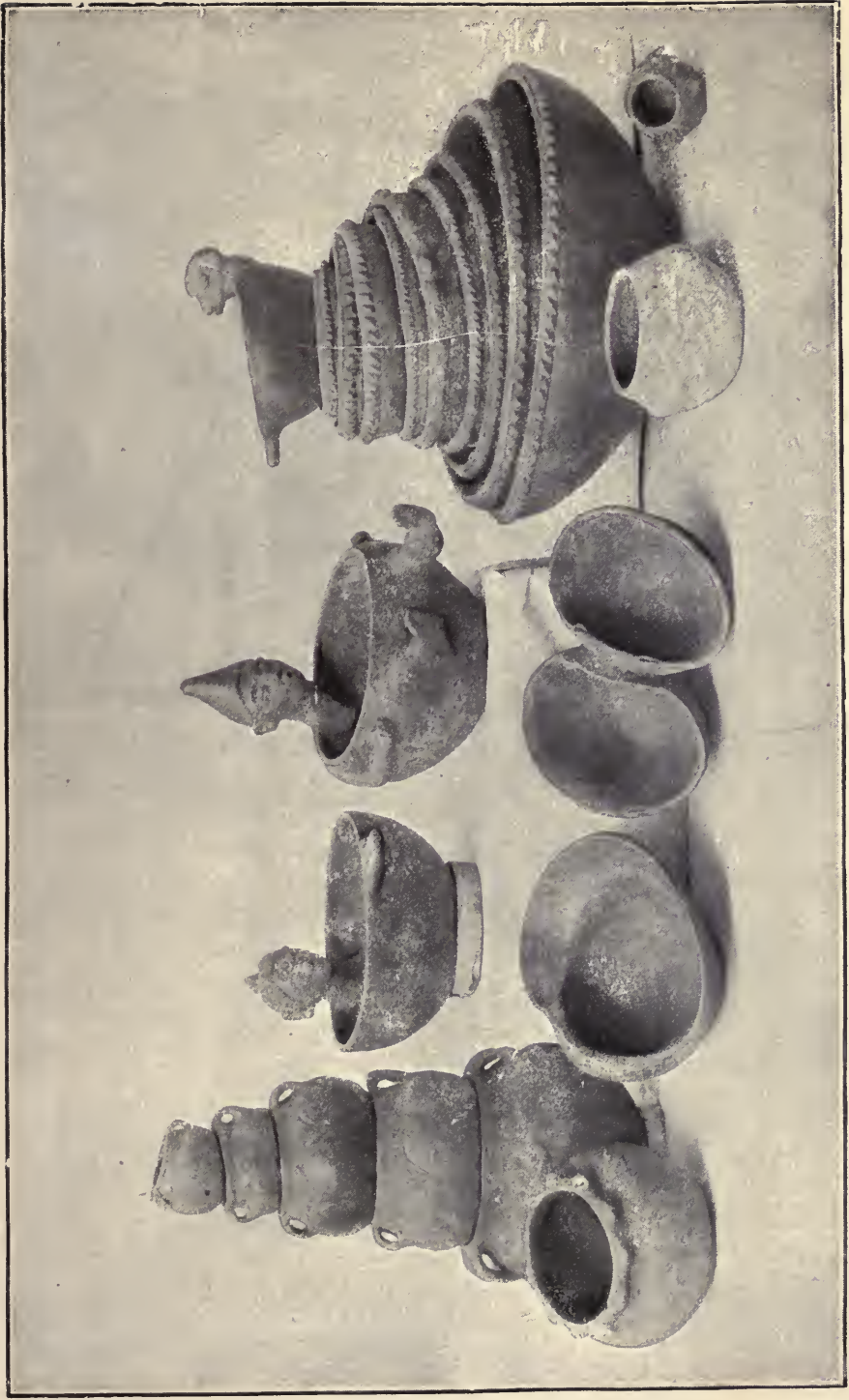


PLATE IV. POTTERY FROM STONE GRAVES.
(One-fourth size.)

These margins may be smooth and simple or they may be beaded or lobed in various ways. The outlines of these bowls were easier to mold than the animal bowls were, and their forms show more grace and beauty, though there is no evidence of the use of the potter's wheel.

There are numerous clay vessels of circular outline, with their rims drawn in somewhat, giving them the form of a pot. They usually have flattened clay handles somewhat like the handles of a modern jug. Others are pierced around the margin, and were suspended by thongs of hide or strips of bark.

The front case also contains a large number of vases of varied design, many of which are of graceful outline and show an appreciation of artistic form that is as pleasing as it is unexpected. The body of the vase is in most cases smoothly rounded and more or less globular in shape, though in some of the finest pieces it is beautifully lobed after the manner of various seed pods, some of which may have suggested the idea. The necks of the vases may be long and slender or short and large. In most the body of the vase is simply flattened to form a base, though in some it rests on rounded, tripod-like legs. The vases range in size from mere toys that would hold only a few thimblefuls to those that hold several quarts.

Closely akin to the vases in general design and doubtless also in use are the bottle-shaped vessels with necks surmounted by fanciful animal or human heads, in the backs of which are the openings into the vessels. The body of these bottles—for such they would seem to be—is often modeled after the human torso, and is frequently made humpbacked and grotesque. Occasionally it is modeled after a bird or other animal. One piece, for instance, is a very realistic owl, with its body painted to represent feathers, while other familiar types are the bear and the fox or wolf.

Many of the figurines are hollow and served some useful purpose, and General Thruston has suggested that they possibly may have contained some kind of prehistoric "Worcestershire sauce" or aboriginal vinegar or other luxury of the ancient cuisine. A few are apparently of solid terra cotta, and could only have been of ceremonial or religious significance, and were probably used as idols; for early explorers and travelers describe the

modern Indians of the Southern part of the United States as having such objects in their council houses or sacred edifices. The smallest ones are only an inch or two in height, and may have been worn as an amulet or charm, especially as some of them are pierced with holes as if for suspension. The largest is a foot in height and is carved of yellow sandstone.

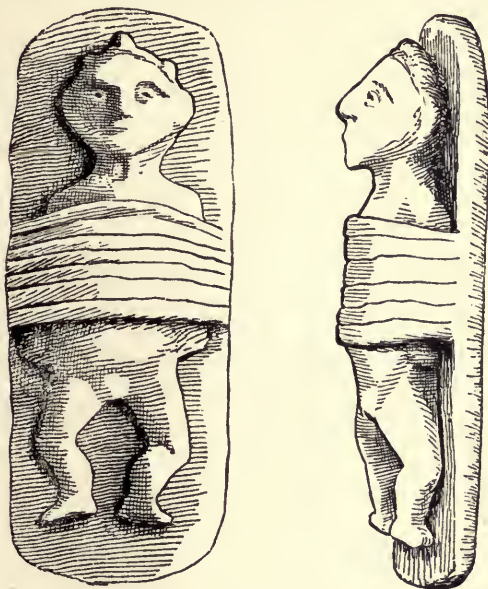
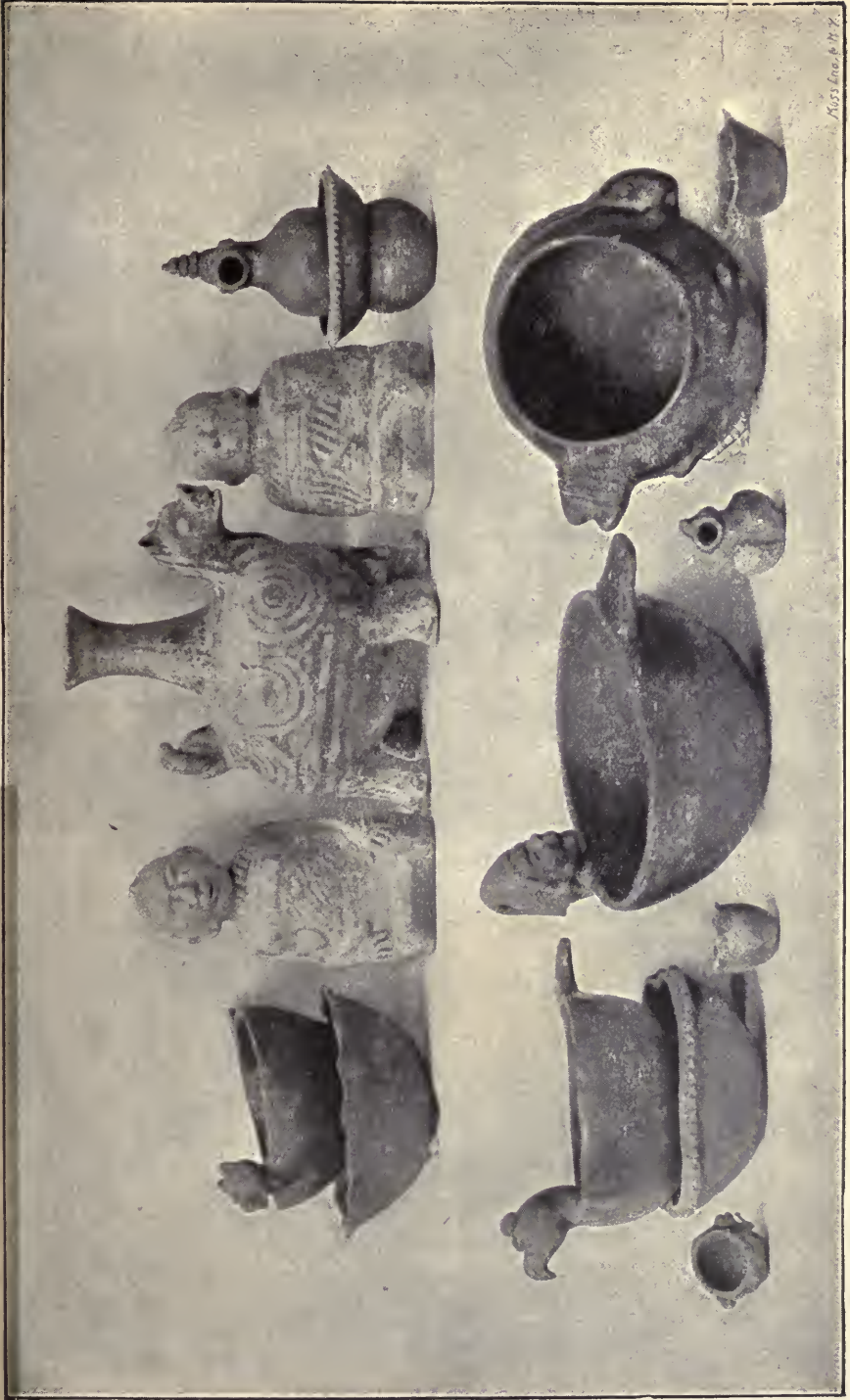


FIG. I. CLAY FIGURE OF CHILD STRAPPED TO ITS CRADLE BOARD.

One of the most interesting and highly treasured objects in the entire collection is a unique terra-cotta image of a child, or papoose, bound to its cradle board. It was found in a child's grave by Mr. George T. Halley, of Nashville, and obtained from him by General Thruston. It shows that this ancient race carried their infants strapped to boards just like the modern Indian did, and explains why in almost all of the crania found in these graves the occiput is flattened, and usually flattened more on one side than on the other, since the papoose doubtless soon formed the habit of holding its head more to one side than the other. In the same grave, indeed, with the child and its cradle-board image or toy, was found an adult cranium that shows



PLATE V. VASES AND ANIMAL BOWLS FROM STONE GRAVES.
(One-fourth size.)



Miss Lane & M. Z.

PLATE VI. VESSELS AND IMAGES OF POTTERY.
(One-fifth size.)

marked unsymmetrical occipital flattening. It is the skull, in all probability, of the mother or father of the child, interred along with it, doubtless as a companion and guide on the journey to the "happy hunting grounds." This adult skull is in the George T. Halley collection in the Thruston Room.

The modeling of the faces on these terra-cotta images and vessels furnishes interesting material for study and speculation. While they are not faithful reproductions of any one individual face, yet they must be the expression of the lineaments of some real or ideal face in the minds of the ancient artisans who modeled them. The remarkable fact, as General Thruston has pointed out, is that the faces represent no one type, but show as great a variety of feature and expression as one would see on the streets of a modern city. The headdresses and caps are also worthy of study.

Besides the forms carved from sandstone, there are a few small heads cut from crystals of beautiful purple-colored fluor-spar such as may be found up the Cumberland River near Carthage.

A final group of objects in the first case consists of children's rattles and toys, such as miniature bottles, vases, and other vessels found in children's graves and placed there by some heart-broken mothers, to be used again by their little ones during and after their long journey.

The variety of objects in the second case from the front of the room is even greater than in the first, and because of their more varied material and use give us even a better insight into the life and customs of their ancient owners. While many of the pieces in this case are utilitarian, very many are ceremonial or ornamental, or relate to their sports or personal habits, especially the widely prevalent one of smoking.

There is a considerable group of shell spoons, both large and small, cunningly carved from the shell of the fresh-water mussel. It is somewhat remarkable that every one is cut from the left valve of the mussel and is so shaped that it had to be held in the right hand when in use; so that it would seem that our ancient Tennesseans must have all been right-handed. These spoons vary in size from three or four inches in length down to

ones only about an inch long, the smaller ones evidently being used by children, as they are found in children's graves. Sometimes the spoon was found among the bones of the hand, at other times it is in an earthenware bowl, which was most probably filled with food for the deceased, although all traces of this food have long since disappeared.

Although among civilized peoples the fork is a modern invention only a few hundred years old, and not used even yet by some nations, it is possible that these Tennessee mound builders ages ago were evolving the idea of such an implement, for one flattened piece of shell is slit into a four-tined, forklike implement. When it is remembered that our four-pronged fork is an invention of very recent years, it will be seen that these ancient Tennesseans were not so backward, after all, in at least one of the refinements of civilization.

The large conch shell was used for cups, and a number of excellent examples of them are shown, some of which hold a pint or more. One side was cut away and the central axis removed, making a very serviceable vessel. Its shape suggested a form in which pottery was sometimes modeled, and the collection contains several clay bowls modeled after a conch design; and in the same way they reproduced the shell spoons in pottery, and molded it almost as thin as the shell itself.

Knives are represented by many specimens, sometimes of chipped flint, but more often of smoothed stone, some of which were probably held in the hand, while others, especially the smaller ones, were deftly inserted into hollow bones or pieces of deer's horn as handles, as may be seen by several specimens still so mounted. These knives were probably mostly used to skin and cut up the game killed by their hunters, though with the sharper ones they doubtless scarified their own faces and bodies and used them for a variety of other purposes where a sharp cutting tool would be desired.

There are numerous strings of shell beads, some of which are of flattened, discoidal shape, with holes drilled through their centers, while others are rounded or elongated, beadlike in form. They were sometimes found encircling the neck or the wrist, or large numbers were found about the waist, and doubtless were

used as necklaces, bracelets, or belts, as well as serving as money. Holes were also drilled through the long, sharp teeth of the fox, wolf, or bear, and they were also used as necklaces or ornaments. Furthermore, beads were made of clay in imitation of the forms in shell, as may be seen from the examples shown, and still larger rounded ornaments, pierced with holes and so designed to be worn on a string, were made of stone; while others yet were made of the hollow bones, probably of birds, cut into cylinders each an inch or more in length, so that it will be seen that they skillfully adapted quite a variety of materials to the same general purpose.

Closely akin to the beads were the flattened pieces of shells, generally cut circular, some three or four inches in diameter, and usually elaborately engraved and pierced near one edge with a couple of small holes for suspension as a ceremonial breastplate or gorget. These were doubtless worn by the priests or medicine men. The collection also contains other gorgets or pendants made of stone or of copper. Most of the stone ones are rounded and flattened, though one pendant is a well-carved turtle; while another is a turtle of roughly-chipped chert, but with much strength and realism in the representation. The engraved gorgets are ornamented with circles, whorls, crosses, serpents, suns, coiled serpents, or even human forms, and exhibit considerable skill in carving. The symbols represented certain significant features, no doubt, of their religious or social customs. Some, for instance, may have pertained to sun worship or serpent worship, or may have merely been tribal insignia.

There are also numerous bone needles used in sewing skins for clothing, in weaving, making nets, and in other industries, and a very odd-looking set of four flat spatula-like forms with long, slender handles, each carved from a single piece of bone, and looking very much as if they might have been used, as General Thruston suggests, in some ancient apothecary or medicine man's shop for mixing his nostrums. They were found together in one grave near Nashville, in the hand of an adult who had doubtless used them during life and was thought probably would need them in the next world, though whether they regarded medicine-giving as necessary in that existence is uncer-

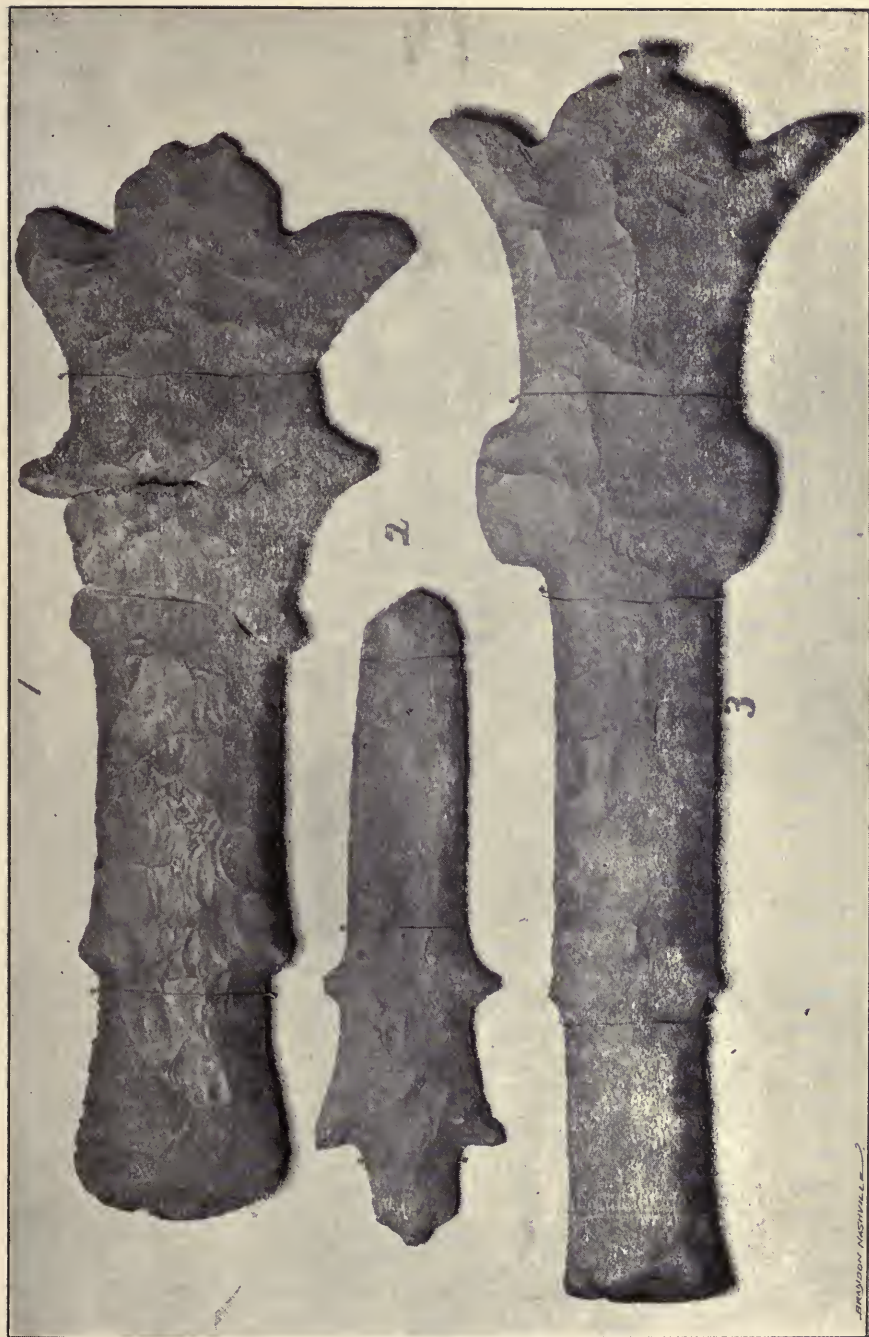


PLATE VII. SCEPTERS OR MACES OF FLINT.
(Two-fifths size.)



FIG. 2. MYER SHELL GORGET, SUMNER COUNTY, TENN.
(Natural size.)

tain. Or it may be that they were not medicine mixers, after all. Who knows? Many a riddle is wrapped up in the silent specimens that fill these cases.

Of ceremonial use also were the fine, large chipped-flint maces and curved, hooklike forms. Some of these are over a foot in length and show great skill in chipping to produce the symmetrical outlines they possess. Their use as ceremonial implements is shown by finding an engraved shell gorget near where one of these flints was found, with a human figure holding such a scepter-like flint in one hand and a mask or human head in the other. One of the Thruston flints looks as if it were the one depicted in the engraving, a copy of which is contained in the



PLATE VIII. FINE SMOOTHED STONE IMPLEMENTS.
(One-half size.)

case with the flint. The hook-shaped flints were probably used as a crest or part of the ceremonial headgear worn when the medicine men were in full regalia, as is also indicated by the engraved gorgets.

Other ceremonial pieces in this case include some spadelike implements of smooth stone eight to twelve inches long. Each consists of a long, rounded handle about an inch in diameter, terminating in a flattened semicircular expansion some three inches across, and rubbed down to a thin edge on its curved border. There are also some leaf-shaped, butterfly-shaped, or rectangular flattened stones some three or four inches in maximum length and each pierced with a hole about half an inch in diameter. One of these is a beautifully polished piece of hard crystalline rock with the hole so perfectly straight and uniform in diameter as to excite our admiration for the people who could ever have drilled so perfect a hole in such hard rock with the crude implements at their command. They are too fragile to have been used in any rough, mechanical way, but must have been ornaments or symbols for ceremonial use.

Another odd ceremonial stone is a slightly curved crescent some twelve inches long and an inch or slightly more in cross section at the middle and tapering to a point at the ends. It reminds one strongly of a miner's pick, but could not have been used for any practical purpose. Still other ceremonials are flattened or plano-convex stones of various shapes, generally pierced with small holes that they might be worn in some way.

This second case also contains a number of objects of native copper, one of which, some six by eight inches in size and shaped like a letter H with curved, upright strokes, was probably used as a breastplate. There are copper rings for the ears, thin sheets of copper, a copper awl or spindle, and rings and wheels of stone or wood sheathed in thin copper. This copper seems to have been beaten out from the native metal, and is probably from the Lake Superior region, though some might have been gotten from the Ducktown section of our own State, where native copper was formerly found in small quantities and where there have been found remains of what were aboriginal furnaces, used prob-

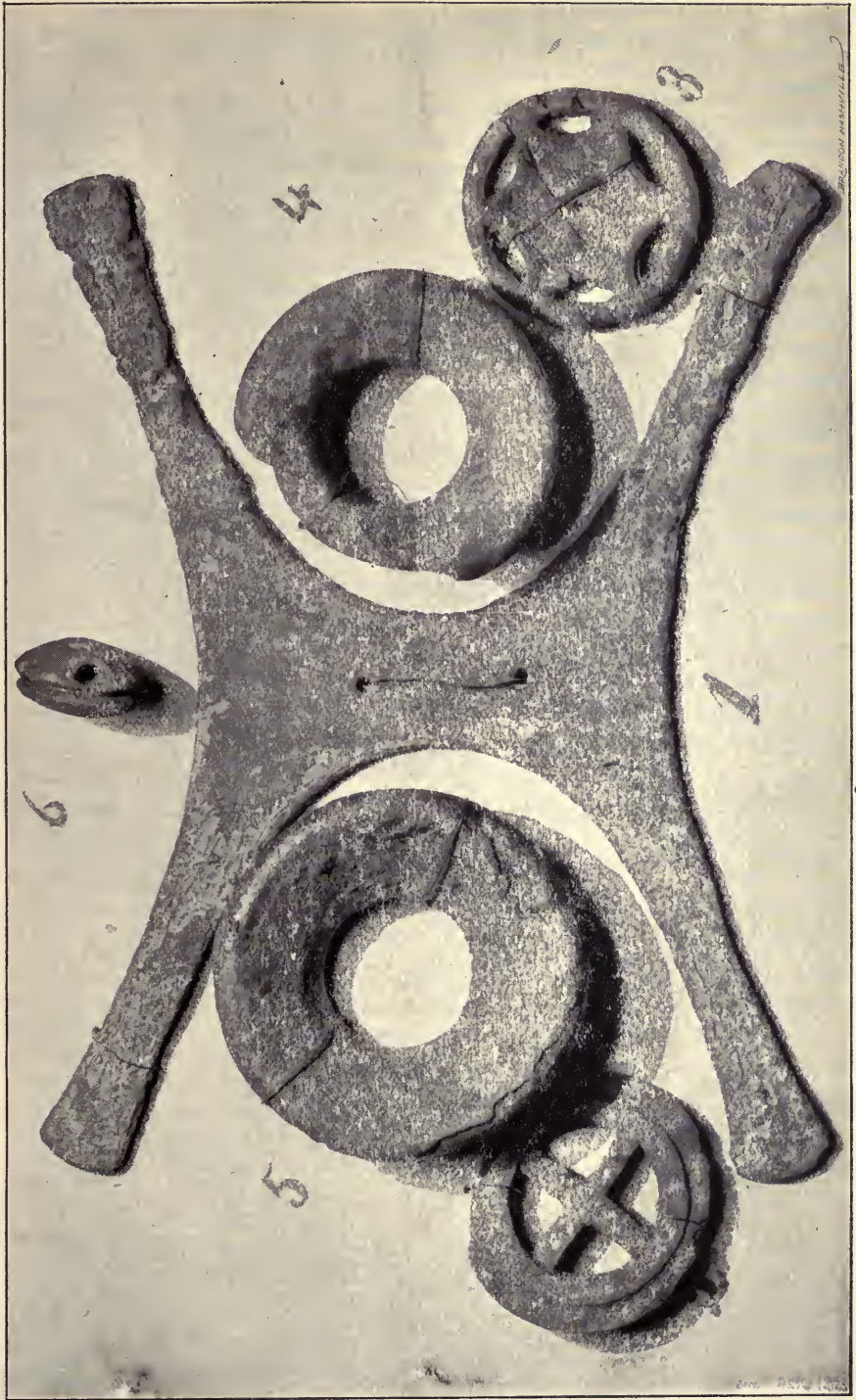


PLATE IX. COPPER PENDANT AND COPPER PLATED EAR ORNAMENTS.

ably to melt together the small pieces of native copper rather than to smelt it from its ores.

There are a number of conical pieces of hematite, each well rounded and smoothed and each no doubt used as the source of the red paint with which they decorated their warriors' faces when at war, and their vases and other pottery when at peace. A small bottle contains a quantity of ground paint that could quickly be made ready for use by mixing with a little bear's grease or other fat or oil.

The collection of pipes in this case is very large and of such varied shapes that it is impossible to mention more than a few here. They range up to twelve inches or more in length and several pounds in weight, while the bowls of the larger ones would hold enough tobacco to give the largest council gathering or peace party an ample smoke. Most of them are carved of steatite or other stone, though some are of molded clay. A few are of simple rectangular or rounded L-shaped outline, but most are carved into either faithful or fanciful designs of living things.

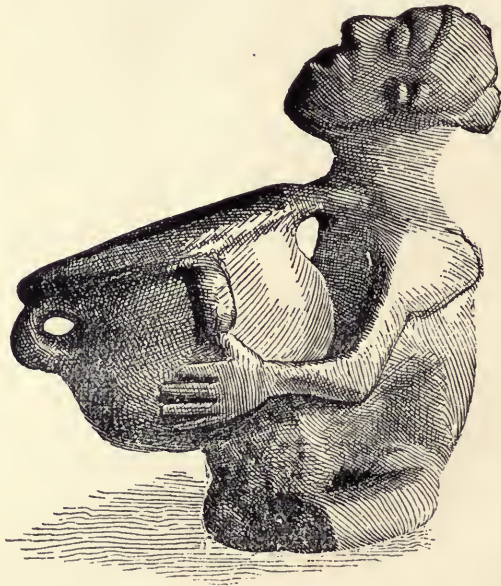


FIG. 3. STEATITE PIPE, ETOWAH MOUND, GEORGIA.
(Three-fourths size.)

Some represent the human head, others the human body. Others represent ducks, whippoorwills, alligators, or some lionlike or other strange beast. When one considers the high esteem in which the Indians held tobacco and the important rôle smoking played in their daily life, in their councils, and in their treaties, it is not surprising to see such a variety of pipes or so much loving labor expended in their making and decoration.

In the same case there is a great variety of discoidal stones, varying in diameter from an inch or less to six or eight inches. Many of the smaller ones are pierced through the center and were probably used for spinning whorls; others have smoothed sides and are not pierced, while some of the smaller and all of the larger have been hollowed out on either side until they are deeply biconcave. The largest ones are of vein quartz or other very hard material, and yet they have been cut into beautifully symmetrical forms. Cutting and polishing such material must have been exceedingly slow and laborious, and required no little skill and patience. The concave side may have been used to grind paint in, but it is probable that the main use of these discoids was for playing a game the modern Indian was very fond of and which he used for gambling.

With these are a number of implements whose use is not perfectly evident and whose shapes are so varied as to preclude their description here. They give room for speculation and study as to their use.

Some drilled or smooth stones may have been used for sinkers for the nets used in fishing. There are chipped flints to be used for scrapers in preparing hides. There is a tray of terra-cotta marbles probably used by the smaller boys, and diminutive flint arrowheads with which they were taught to use the bow.

Another implement of circular outline some six or eight inches in diameter, with a flat face and a handle somewhat like that of a smoothing iron, is thought to have been used as a plasterer's trowel. The inside of their huts, and especially of their sweat-houses for the treatment of the sick, were probably plastered with clay. Some of the smaller trowels may have been used for working the clay and fashioning their earthenware vessels. From one stone box grave General Thruston obtained five of these trowels

of varying size and shape. They must have been the outfit of an old plasterer who designed to take these implements of his trade with him.

The third case is largely devoted to chipped-stone implements. Flint arrowheads are represented in great variety of size and shape, a number of cards being mounted with specimens to show typical examples of their different kinds. There are many flint spearheads of the same type as those used by the modern Indians. A type of implement that was unusual is the long, broad, flat, sharp-pointed stone hoe, an implement supposed to be fastened to a stick or handle and used for cultivating maize. There are a number of excellent examples of these hoes. They exhibit considerable variety in shape, and some are of unusually large size, being twelve to fourteen inches in length and six or eight inches wide. Some of these are new, while others are smooth at the point or blade and show considerable use.

Other chipped-stone implements are shaped like chisels, with the blade square cornered and chipped to a sharp, cutting edge. These chisels are numerous in the stone graves, and generally show that they have been much used. Some fine examples of them are exhibited.

Another form shaped much like the chisel, but usually with a sharp, carefully ground edge, was used as a knife, and numerous specimens are shown, some still mounted in deer horns for handles. Others most probably when interred with their owner's remains were inserted in wooden handles which have since disappeared by decay.

The stone axes are of two classes. One is long and thin with flat sides, and is made of chipped flint. The other is larger and thicker, and has a groove with which to fasten it in its handle. These latter are of smoothed stone of almost any hard crystalline variety. The material for most of them must have been brought either from the Southern Appalachian Mountains or from the glacial region of the North. In either case, either the crude stone or the finished ax must have been an article of commerce like so many other articles found in the graves, the material of which could not have been of local origin. These people must have also traded with the Carolina mountain people for



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soapstone and mica at least, with Lake Superior for copper, and with the Atlantic or Gulf Coast for conch and other seashells.

Another implement of smoothed stone that must have been of great usefulness was the stone pestle with which the raw or parched corn was beaten or ground up. These are some six or eight inches long, with a handle not unlike a modern pestle, and an enlarged and flattened end for grinding. They are also generally of some hard variety of rock, and are not uncommon. The collection contains a good number of typical examples of them.

In North Nashville there is a fissure or fault in the limestone up through which salt water has escaped to the surface for ages past, forming a salt lick or spring. The wild animals of this region had long known of the lick and resorted there in great numbers to drink the salt waters or lick the salty earth. The Indians resorted there also, perhaps at first to kill the buffalo, bear, or deer as they crowded around the lick. They doubtless soon found the salt pleasant to their palates also, and in some way found that crystals of salt might be gotten by evaporating the water. Immense earthenware salt pans were made, and in these the water was boiled and the salt obtained. Near this French Salt Lick Spring, situated near the present baseball park, General Thruston obtained a number of large pieces of these broken salt pans. They must have been a yard or more in diameter and something like a foot deep. The broken pieces are about an inch thick, and the ornamentation on the exterior shows that they were molded on the inside of a large, flat basket or hamper-shaped form made of fine matting or other woven fabric, the impression of whose surface has been faithfully preserved in the baked clay fragments in the collection. Pieces of these large pans, or boilers, are also found at other places besides the salt springs, and were doubtless used to boil the sap of the sugar maple, or perhaps at times prepare large quantities of meat or other food to be divided out later in small vessels for individual or family use.

In the same case are some modern Indian children's rattles made of the carapace of the box tortoise. These remind one of the small earthenware rattle found in a child's grave in the stone-box cemetery and contained in the front case.

Some Mexican figureheads, both human and others, are included for comparison with our Tennessee specimens. Many of them are strikingly similar to our local types; and, indeed, throughout the collection many of the objects remind one strongly of Pueblo or Mexican types, a fact that General Thruston has brought out clearly in his book on the subject.

In the tall case against the south wall of the room are three elaborately carved examples of Mexican idols standing from ten to sixteen inches high, one of which has a striking resemblance to the figures carved on ancient Egyptian monuments.

On the shelf above them is a small but very interesting collection of Pompeiian relics. There are pieces of tessellated flooring; glass from a window of one of the baths; polished marbles used for interior decoration; plastering, with its decorative coloring scarce dimmed by its centuries of burial; small, fragile glass bottles; lamps; and vases of earthenware, copper, or bronze; small bronze figurines—the Lares and Penates of some ancient Roman household—and urns and cups and swinging censers; and with them all a mass of the now hardened ashes that on the 24th day of August, 69 B.C., swept down from Vesuvius and entombed the fated city. In this mass of hardened ashes there are leaf impressions, perhaps of the olive tree, with their delicate veining still preserved just as the ashes enwrapped and preserved so much else that is of intense interest.

Near by lies an ancient Babylon clay tablet covered with cuneiform writing and a cylinder seal used by some Chaldean to attest or affix his signature back some three, four, or five thousand years ago; for who knows just how old it is?

From what has been said concerning the archæological collection it should be evident that it is one of unusual variety and value. It might be added that in his "Guide to the United States," Baedeker, who rarely wastes words of praise on anything in this country, calls attention to this Thruston collection as including "rare and excellent examples of prehistoric American pottery, many of them found near Nashville."

Although the unique importance and value of the Thruston collection consists in its archæological specimens, yet the collec-

tion of fossils, gems, natural crystals, and other attractive minerals is also a noteworthy one.

Among the gems there are specimens of the diamond as dug from the South African mines, and crystals of ruby, sapphire, topaz, emerald, beryl, hiddenite, amethyst, opal, tourmaline, garnet, turquoise, jade, jet, and other polished specimens of semi-precious or other minerals highly prized for their beauty, such as moss agates, agates, sards, onyx, sardonyx, malachite, lapis lazuli, moonstones, cat's-eyes, bloodstones, and jaspers.

With them are beautiful crystals of many kinds, illustrating in excellent fashion the many kinds of crystallization found in nature. There are crystals of quartz and of all its varieties in great profusion; a beautiful lot of calcites; fine sulphur crystals from Sicily; amber from the Baltic, some of it with beetles inclosed with all their brilliancy of coloring preserved; and chiastolite and fluorite, pyrite and marcasite, barite and celestite, azurite and malachite, sphalerite and apatite, and others too numerous to mention. A detailed description of these will not be attempted, as to give such would be to write a lengthy article on mineralogy. The specimens are many in number, and are both beautiful to the eye of the casual visitor and interesting to the student of crystal forms and properties.

With the minerals are numerous specimens of coral, both common and precious, and a good number of the shells of the pearl oyster and mussel and some of the baroques obtained from them. With these are agatized wood, fossilized brachiopods, trilobites, ammonites, and other representatives of the life of the past.

The collection will amply repay either visitor or student for any time that may be spent in its study. It is one that it is an honor to have gathered together and to have given, and an honor to have received and to own.

L. C. GLENN.

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