FIFTH ANNUAL REPORT

OF THE TRUSTEES

OF THE

PEABODY MUSEUM

OF

AMERICAN ARCHAEOLOGY AND ETHNOLOGY,

PRESENTED TO THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE, MAY 15, 1872

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FIFTH ANNUAL REPORT.

TO THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE —

The Trustees of the Peabody Museum of American Archaeology and Ethnology herewith respectfully communicate to the President and Fellows of Harvard College, as their Fifth Annual Report, the Reports of their Curator and Treasurer for the year ending in January last.

ROBERT C WINTHROP
STEPHEN SALISBURY
ASA GRAY
JEFFRIES WYMAN
HENRY WHEATLAND

CAMBRIDGE, May 15, 1872

NOTE — Hon C. F. Adams and Geo Peabody Russell, Esq., were in Europe at the time of the annual meeting.
REPORT OF THE CURATOR.

To the Trustees of the Peabody Museum of American Archaeology and Ethnology —

The Curator respectfully presents to the Trustees of the Peabody Museum of American Archaeology and Ethnology the following report on the collections of the Museum.

As in previous years, the collections have been stored in Boylston Hall, but in consequence of the insufficient conveniences have not been exhibited to the public. With the exception of the collection of Dr. Clement, which has been too recently received to admit of it, all the objects have been catalogued, following the excellent plan devised by Prof. Bard, and adopted by the Smithsonian and many other Institutions. In the numerical catalogue are indicated the locality, the source, whether from gift or purchase, if the former, the donor's name, the name of the collector, and the times when collected and received. When any further information is to be recorded, or any remarks are needed in connection with the objects, they are entered against the corresponding number in the descriptive catalogue. Each specimen bears a number, and is entered against the same number in two catalogues. The whole number of entries at this time is 4833.

This, however, is not to be taken as an indication of the whole number of objects, for when there are duplicates from the same source and the same locality, all such duplicates bear the same number, which is all that is necessary to enable one to identify them, and to refer them to their histories. The number of duplicates is often large, and sometimes, as is the case with arrow heads, flint flakes, and several other kinds of objects, amounts from one to more than two hundred. To give each of these a separate number and entry would
expand the catalogue to an unnecessary and unwieldy size. A single series of numbers extends through the whole collection.

When collections are received which are already numbered and catalogued, the indications of the objects are transferred to our catalogue, the original number being entered against the number in our series. In this way there is a double clue to the identification of all such specimens, and in all cases the possibility of the confusion of objects is avoided.

The collections have been enlarged by additions from the following sources.

I. Clement Collection

In 1868 the Chairman of this Board, then in Europe, obtained by purchase for the Museum a part of the archaeological collection made by the late Dr Clement of St Aubin. As it was thought desirable by the Trustees to secure the remainder, negotiations for the purchase of it were completed during the past year, and the whole is now in our possession. On this, as on a former occasion, the Museum has been greatly aided by the eminent naturalist and archaeologist, Prof. Desor, and would hereby gratefully acknowledge its indebtedness to him for the interest he has taken in our behalf, and for the time and service he has given us.

Dr Clement devoted himself for many years to the study of the ancient dwellings of Lake Neuchatel, and especially to those at St Aubin and Concise. The zeal with which he gave himself to these investigations, and the consequent exposure, led to impaired health, and at last to the development of disease which has ended fatally since our last annual meeting.

The collection so laboriously and patiently brought together by Dr Clement, and obtained chiefly from Concise and St Aubin, — the objects from the last consist mainly of those belonging to the Age of Stone, — gives a nearly exhaustive series of objects relating to the modes of life of the ancient inhabitants of these two places. A portion of the collection comprising its more valuable objects, was exhibited in Paris during the great exposition of 1867, and attracted much attention from archaeologists. Many of the objects have been described by Keller, Desor and Mortillet, in their respective published works, especially in the Promenades Prehistoriques of de Mortillet and the Palafites, and Phalbauten of Desor.
Without entering too much into details, the following sketch will give a general idea of some of the more important kinds of objects Dr. Clement's collection contains.

The bones of animals, used as food, or hunted for their skins, exist in large numbers, in many cases more or less crushed and broken, either for the purpose of converting them into tools, or for adapting them to the process of cooking, as is everywhere observed in the refuse heaps of savage nations. The following nineteen species are represented, viz., the ox, hog, sheep, goat, dog, fox, cat, lynx, black bear, martin, weasel, badger, hedgehog, otter, squirrel, stag, fallow deer and the roe buck. The bones belong to animals in different stages of growth, from the fetal to the adult period, but none belong to the extinct species.

Tools of bone are very abundant and quite varied. Among these may be mentioned the different pointed kinds used as perforators, some rude made of splinters without further labor than that of sharpening the more slender portion and others carefully wrought from the metatarsal and metacarpal bones of the deer sawed lengthwise, and nicely finished throughout. Those made from the bones of the larger species were probably used as weapons. The ulna of the deer and of smaller animals, was converted into an awl by sharpening its more slender part, the articular portion serving as a handle. The ulna of the stag and ox, by a similar process, was converted into a dagger. The metatarsal and metacarpal bones were also converted into chisel and gauge-shaped tools. With the exception of the implement made from the ulna of the ox, most of the kinds mentioned above were made by the American Indian, and are met with in the shell heaps and mounds of the United States. Besides the above are many objects designated as "pins" and "needles," also combs made of fragments of ribs, pointed and polished, which are supposed to have served in the dressing of flax, and a great variety of other objects, the use of which is more or less uncertain.

Not less interesting than the preceding are many specimens showing the marks of tools in splitting, sawing, cutting, etc. A portion of the skull of a deer has the marks of the stone axe, made in the attempt to detach the bones of the face from the cranium, and many other portions of crania show the manner in which the antlers were cut off by hacking.
The antlers or horns of the different species of deer form a conspicuous, and the tools made from them an important part of the collection. Some of the horns of the stag are of gigantic size, much larger than any now commonly found in Europe. This difference is, however, probably due to the fact that in earlier periods these animals from being less hunted were allowed to reach a greater age, and their antlers consequently a more complete growth. It is worthy of notice that in this collection a large part of all the antlers in which the base remains, were not such as came from animals killed in the chase, but as had been dropped at the period when they were annually shed, as appears from the peculiar surface of the bone on the line of separation due to absorption. The horns of the deer seem to have been as great a mine of material to the lake dwellers for the manufacture of useful articles, as flint to the ancient inhabitants of Denmark, stone to the North American Indians, or bone to the Esquimo and the natives of the northwest coast of America.

Among the objects or implements made from antler, the following are the more important, and can be merely mentioned. viz., sections of various lengths which appear to be intended for further working, handles for awls and different kinds of chisels of stone or bone, sockets for setting stone axes in wooden handles, rings, pendants, boxes, drinking cups, handles for axes, hammers, harpoon, arrow and spear points, casse têtes, picks, etc. These different kinds of implements are represented in every variety and all together comprise several hundred objects.

Many instruments and ornaments are made of the teeth of animals. As with the North American Indians, the teeth of the bear were, if one may judge from the numbers of them, especially prized. They are drilled at the end of the root for suspension in the same manner as are other specimens in our collections, from the mounds of Tennessee, of Kentucky and other parts of the valley of the Mississippi. The teeth of the dog fox and some of the Viverine animals were also used, as they were by the Indians for similar purposes.

The incisors of the hog and ox set in handles of antler were used as cutting tools, and show marks of having been sharpened for the purpose. As with the North American Indians, the lower jaw of the beaver was converted into a cutting instrument by removing the processes of bone, grinding off the edges of the molar teeth to adapt the body of the bone for a handle, the incisor being reserved for use, which was also sharpened as occasion required. Similar instruments
have been found in the shell heaps of New England and Prof. Band
has found them in those on the St. Croix in New Brunswick.

The task of the wild bee, as with the Hawaiian Islanders, was
used for pendants and other personal ornaments, and also for various
boring tools, scrapers, and other implements of uncertain use—but
often very neatly wrought and polished.

Of stone implements there are many kinds, and many duplicates of
each kind. The axes are of the different forms found in the lakes;
many of them still in the antler sockets in which they were ori-
nally set, and a few are besides in the original handles of wood, which
in all cases are very much shrunken from drying after their long
immersion in water. Handles of the original form and size, when fresh
from their burial places, have been copied some in plaster and others
in wood and axes set in them in the original way. Double edged and
hammer axes, drilled for handles, are represented by very fine spec-
imens. Of the ordinary axes not drilled there are more than two
hundred specimens of every variety of form and finish.

The method of drilling is well illustrated in a variety of instances
some showing the action of a solid and others of a hollow rotary
drill. Some of the last were not finished but broken perhaps in the
act of making, and the place from which the core was detached is
quite obvious. A few of the cores are preserved. We thus have, as
Mr. Rau has pointed out, processes of drilling parallel to those used
by the Indians of this continent. A few specimens show unfinished
attempts at sawing stone, and traces of a similar process are visible
even in pieces of jade which have been worked into chisels and other
tools.

Hammer stones, which as the indented surfaces show, have been
by long use worked into a spherical form. Spindle weights, some un-
finished, the central opening not yet drilled through arrow points;
spur heads, flakes of flint used as knives, scrapers, saws, hoes,
weights for nets, etc., are all represented in large numbers. The
collection of grinding stones for forming and sharpening tools is very
complete and instructive.

There are several objects made of jade, such as small axes, chisels,
beads and pendants, which have attracted much attention among
archaeologists, and are described in the works already referred to.
There are too many modifications of the different kinds of cutting
instruments above mentioned to be described in detail, and we have
called attention only to some of the more important of them.
Of articles of pottery, there are thirty vases of various patterns and sizes, four of which, ruder and more primitive in their workmanship than the others, are assigned without doubt to the *Age of Stone*, and are highly prized. Two of these are figured by Desor in his *Phalbauten*, and by Montillet in his *Promenades Préhistoriques*. Besides the above are numerous fragments of vases, showing forms of lips and handles and styles of ornament, also spindle weights, rings or torches for supporting vessels on the fire, etc.

There are various objects made from wood, some of which, as the handles of axes and adzes, the heads of clubs, bows, shafts of arrows, net floats and other objects, are sufficiently well preserved to indicate their forms, but all very much shrunken in drying. Some of the clubs, and a paddle, have been restored from well preserved lacustrine oak.

Among various objects from the lake dwellings at Robenhauseu, are several kinds of carbonized fruits, including apples, beach nuts, etc., about fifteen different kinds of seeds, including wheat and barley, and a good collection of cords and woven fabrics. Among these last we have the ordinary fabrics, composed of a single warp and woof, one of identical texture with that of which we have casts on the surface of some of the earthen vessels from the mounds of Tennessee.

The collection of objects in bronze and iron though small, is of considerable value, but as it has no direct bearing on the study of American archaeology, it will not be necessary at this time to describe them.

The above sketch is of necessity very incomplete, as it is impossible in the space which can be given to it in a report like the present, to enter sufficiently into details to give an adequate view of the wealth of material which it contains.

The Museum may be considered fortunate in its acquisitions pertaining to European Archaeology. With that of Clement from the Swiss lakes, that given by the Museum of Comparative Zoology from the same source, and to be mentioned further on, that of de Mortillet from France, Switzerland and the Italian lakes, with the admirable and very complete collections by Wilmot J. Rose from Denmark, Schleswig and Holstein, and with that of Claus from the same countries, we now possess good means for the study of European Archaeology, and for the comparison of the implements and objects belonging to the early age of man in Europe, with the analogous ones of the new
world. In view of the fact that there exists a large demand for archaeological objects in the principal museums of Europe, that the Danish government prohibits the exportation of such, that the ancient dwelling places on the Swiss and Italian lakes, as also the caves and rock shelters of France, have been largely explored, and many of them exhausted, it is hardly probable that opportunities for obtaining collections, such as those above referred to, will be again offered to us.

While we have improved our opportunities for gathering archaeological materials from the old world, we have at the same time given attention to those of the new.

II Explorations in Tennessee

During the year the Rev. E. O. Dunning has continued his explorations in East Tennessee, under the direction of the Museum. They have been chiefly confined to Blakeboll Mound, at the junction of the Holston and French Broad River, and to Lick Creek Mound, situated at the union of Lick Creek and the Nollechucky River. Many objects were obtained from other sources than these mounds, viz., such as were ploughed up in the cultivated fields, but which for the most part had the same characteristics as those met with in the mounds. The collections obtained by Mr. Dunning in this and previous years, make very valuable additions to the resources of the Museum. The following letter from Mr. Dunning, gives some of the more important particulars of his labours, and especially of the examination of Lick Creek Mound.

Dear Sir

My explorations for the past year have been in Knox, Cocke and Green Counties, Tenn. Much time was spent in further examination of the Blakeboll Mound, from which you have received so many specimens. I collected many antiquities in Cocke County, where the cave skeleton was discovered of persons who had found them, and through my own labours. In Green and Hamlin I obtained many objects. The mound on Lick Creek afforded the greatest number, and the most valuable. It was originally cone-shaped and truncated, about thirty feet high and seventy-five feet in its longest diameter. Having been ploughed over for seventy years it had lost its primitive proportions. It is situated in "Lick Creek Bottom," fifty rods from the creek, near its junction with Nollechucky River, and from the first mentioned stream to a bend in the other a channel or sluice has been cut, the earth taken from it having been used in the composition of the mound.
I began my operations on the east side, nearest the 'dry creek,' as it is called, by digging a trench ten feet wide to the centre. The surface earth was composed of sand loam, with such an intermixture of clay as would come from the removal of the top alluvium of the surrounding plain with portions of the substratum. Charcoal and ashes were observed for six or eight feet, when we came to a layer of sand a foot in thickness and several yards square. Over this was one of burnt clay, upon which lay a mass of charcoal, ashes and animal bones. The last had been broken before they were cast upon the pile. Underneath the stratum of sand was a layer of decayed wood and bark covering a human skeleton. This rested on its side and was doubled up, the leg bones pressing upon the ribs—the usual position of such remains in all the mounds I have examined. Implements were deposited with the skeleton, commonly at the head, and if a vessel of earthen ware, at the back of a skull. In one instance four vessels were deposited together. In an excavation fifteen feet in length eight skeletons were observed, too much decayed to be removed in considerable portions, each one under a layer of wood and bark,—the common mode of sepulture throughout the structure. Near the centre were the remains of what appeared to have been a vault of cedar wood, indicated by rotted posts set in an upright position, describing a rectangular figure. Slabs or logs of the same material as the posts had evidently connected the frame of a rude coffin or vault. Two of these tombs were observed, one above the other, a few feet apart, within each space lay a skeleton, with some of the most valuable objects sent to you, including the copper implement.

I did not penetrate to the bottom of the mound because I judged after some examination, that it had been raised eight or ten feet before any burials had taken place. The earth at a certain depth seemed to be homogeneous, not packed or in layers, as in other parts of the structure. Other excavations were made from the circumference to the centre, revealing the remains of fifty skeletons lying like those before exhumed. I was able to remove but few skulls sufficiently well preserved to answer the purposes of comparison.

A small mound near the large one was examined, which rose only six feet above the plain. It has been reduced in dimensions by the plough and the harrow. It furnished, however, some of the most valuable articles of my collection. The mevitable wood and bark layer appeared over all the skeletons, but instead of blue clay from Lick Creek, or sand loam from "Clucky," a pavement a few yards square, of round or 'river rocks,' supported each frame. Whenever we struck one of these stone layers a rich deposit was sure to be our reward. I judge from the number and style of the works of art, such as carved pipes, beads and ornamental pins in shell, disks of caleedony, polished axes of green stone, serpentine and quartz, lance heads wrought from variegated silex and arrow points of fine work-
The objects obtained by Mr. Dunning may be classified under the different heads which follow.

**Stone Implements** The axes are mostly of one type, characterized by having the groove deeply cut, and this surrounded by a prominent raised ridge. The "chisels" or "fleshing tools" are of two types, one a compressed cone, giving a nearly transverse oval section, and the other with nearly flat sides and square edges. Both of these closely resemble analogous forms from the Swiss Lakes. With but few exceptions all are finely polished over their whole surface. The pestles are either cylindrical, like some of those met with in the Eastern States, or short and conical, forming a muller, the upper part being sufficiently contracted to serve as a handle. The discoidal stones vary from one to three and a half inches in diameter, some of them admirably wrought from quartz. The bi-concave discs are much larger, the largest five and a quarter inches in diameter, and very skilfully worked. Plates of mica, between forty and fifty, round and oval, are represented by two sizes, a few of them perforated, as if to be attached to a dress, or worn about the person. Of spear and arrow heads there is a great variety, but all of the common patterns. The most nicely wrought are quite small, triangular, with a thin, straight base, and no notches. One of the most remarkable implements is a cylindrical tube of soapstone, twenty-two inches long and two inches in diameter, tapering somewhat at either end. This had been drilled from opposite ends, but the two perforations not coinciding, they passed by each other, the bores communicating laterally. A fragment of another tabular instrument of the same material appears to have had a long cylindrical body, and ends in an enlarged and trumpet shaped mouth, and possibly was used as a horn. A large, flat, circular stone weighing ten pounds, of a natural form with an artificial conical pit on either side, is of uncertain use. This with some smaller ones having similar pits, have been supposed to be used for breaking nuts.
There are in addition to the above some pipes made of stone, one a calumet, of large size, plainly worked, with a square bowl, the portion for the insertion of the stem also square and of the same size as the bowl. A second pipe with the bowl and stem made of one piece, the stem short, flattened and curved, projecting beyond the bowl, which last is surrounded by a broad, thin rim. This pipe was ploughed up near an ancient mound in Cocke County, and is the only one of stone found, which in its style and finish approaches those of the mound builders, as described by Squier and Davis.

To the above should be added a flat, circular plate of stone, four and three quarter inches in diameter, which has engraved on one side near the edge three concentric circles, and the space surrounded by the inner circle, divided into four equal compartments, by two grooves intersecting each other at right angles. The circumference of the stone is divided into twelve nearly equal portions or scallops.

The whole number of stone implements collected by Mr. Dunning amounts to about three hundred and fifty.

Objects made of shell. These consist chiefly of beads, which are of several patterns and many varieties. Some are discoidal, others spherical, others hemispherical, with a concave surface on one side covered with nacre, and others more or less cylindrical. The most remarkable are beads of large size, made from the columella of a large marine species, probably Fasciolata, the spiral groove on the side being generally preserved. They are of variable sizes, from one half to two inches in length, the largest of them weighing between two and three ounces, and have a hole drilled through them lengthwise. The shells of a species of Oliva are converted into beads by grinding off the point of the spine and rounding the opening, and a small Marginella is perforated for the same purpose by rubbing the spine obliquely on a grinding surface. Specimens similar to these last from Big Mound, near St. Louis, were presented to the Museum last year by Prof. Nathaniel Holmes.

The number of beads found in Luck Creek Mound alone is truly surprising, and bearing in mind the statements of Squier and Davis, that shell beads were equally abundant in the mounds explored by them, and were found “in some instances by hundreds and thousands,” and that other explorers make similar statements, it would seem that the manufacture of, and traffic in, these objects must have been carried on on an immense scale. To this it should be added
that a large portion of them came from the Gulf of Mexico, and were distributed far and wide over the valley of the Mississippi. The amount of labour required for the manufacture of them cannot be easily estimated, as each bead appears to have been made separately. A natural supposition would be that much labour would be saved if they were made in long pieces and then cut into the required lengths. A few specimens with a groove cut around them, as if for the purpose of division give some support to this view. A careful examination, however, even of the smallest beads, shows that this is impossible. All the beads are drilled from opposite sides, the two pits meeting in the middle, each hole being neatly countersunk, therefore requiring to be separately wrought. This applies to beads not exceeding two millimeters in diameter, as well as to those of the largest dimensions. The instruments which served the Indians for such delicate work, not only in the drilling but even in the shaping of the smallest of these objects, are not known. That the smallest as well as the largest are really cut from shell is obvious from the microscopic structure of the material. The Indians do not in any case appear to have availed themselves of a natural form, except when the whole shell is used as in the case of Ohiou and Marquella.

Discs of shell from a half inch to an inch in diameter, and the larger ones a half an inch in thickness, are cut from the shell of Pyrula, have a hole drilled through the centre, and are probably wampum. A large quantity of these was found near the dead body, in one of the cave burial places in Cocke County as will be seen further on. Such disks are widely diffused through the valley of the Mississippi, as shown by Squier and Davis and others, and we have them also from the great Mound near St Louis, though of much smaller size, for which we are indebted to Prof Holmes.

Pins shaped implements. These curious objects appear to have been quite commonly buried with the dead, as we have thirty-six of them in Mr Dunning's collections. They are all made from the columella of Pyrula, and vary from two to six inches in length. The largest of them has a hemispherical head an inch and a quarter, and a shaft nearly a half inch in diameter. They end in a somewhat blunt point, the smaller ones are of the same shape and proportions. The use of them is unknown. They resemble the so-called hair pins made of metal from the various prehistorical collections of Europe, though of much stouter proportions.
The most remarkable objects, and the ones least known, taken from the mounds are the engraved shells. Such as these are not mentioned in the memoir of Squier and Davis, but are referred to, though not described, by Dr Jones in his account, in the American Naturalist, of the mounds of East Tennessee, examined by him. The following extract from one of Mr Dunning's letters gives an account of the circumstances under which they were found. They were obtained chiefly from the Brakebill and Lick Creek Mounds. Those from the first Mr Dunning states were found at a depth of eight feet under layers of charcoal and burned clay several yards square, and were deposited under the head of a human skeleton, which was doubled up in the usual manner. Implements of stone and shell ornaments accompanied the remains. The smallest of the engraved shells had been placed under the skull of a young person, the other near a man of mature age, and with it a large polished axe of greenstone, some delicately shaped flint arrow points and a carved representation in shell of a human face. Those from Lick Creek Mound were found under nearly the same circumstances.

These engraved shells may be arranged according to their forms in two groups, those of one pear-shaped, and of the other oval or nearly circular. They are also readily distinguished by the styles of work. The first are made from the most dilated portion of the Pyrula, and vary from four and a half to eight and a half inches in length and from four to six in breadth.

They are mostly perforated with two holes, apparently for strings, but which in some are surrounded by circles representing eyes, between these is a raised ridge of shell in the place of a nose, and below this a third hole, which in some of the pieces is surrounded by a raised portion, which takes the place of a mouth. A few have different devices upon them made by parallel lines forming a series of angles. These objects it is probable were worn about the person as gorgets.

Six of these are carved, with some variations, to represent a human face. three are without any ornament whatever excepting a slight marking of the edge. They may be unfinished pieces.

The other series of engraved shells comprises a larger number, and though some of them are rudely marked, they are mostly neatly and carefully made and have complex figures cut upon them. A single piece is without ornament, and may have been unfinished. Like the preceding they were made from the shell of the Pyrula, but are of a nearly...
circular form, from two to four and a half inches in diameter. As appears from two holes in the edge of each they were no doubt intended to be suspended about the person. The engraving is in every instance on the concave side. Of twenty-three pieces, fifteen bear essentially the same device. Two holes made for suspension, four long slits extending parallel to the edge in the four quadrants, two triangular and one elongated perforation in the central portion are cut or bored through each piece. In a single specimen the position of the openings, as compared with that of all the others, is reversed. The most conspicuous part of the engraving and which strikes the eye at once is a dot surrounded by two concentric circles, and outside of these a half circle with the ends prolonged to the left. To the right of the circles, which taken together represent an eye, and resemble those figures on some of the pyxiform plates, previously described, are two diverging portions of shell left by the openings just mentioned, representing jaws, on the edges of which are markings intended for teeth. This central figure was obviously intended to represent the head of an animal. From this head descends a band which nearly encircles it, extending parallel to the edge of the plate, and is ornamented with a series of crossed lines and dots, varied somewhat in different specimens. This band ends in a point over the head which in many is marked with lines en chevron but in others with only straight lines. All the parts, viz. the head, the encircling band and its terminal portion, taken together, leave no doubt that this portion of the engraving was intended to represent a rattlesnake.

The largest and most elaborately wrought plate differs wholly from the preceding, has only the two perforations for suspension the whole surface being filled up with concentric circles, parallel, angular, crossed and curved lines, and with dots, but for the understanding of the arrangement of which, as in the preceding case, a drawing is necessary.

A third form of engraved plate has a line cut parallel to its edge, and the central space divided into four parts by two sets of parallel grooves crossing each other, and leaving a square space in the middle. The quadrants are divided into small squares, the spaces between the parallel grooves have each three or four rudely drawn lines cut in them and the square in the middle has a curved line drawn from one of the angles to the other across the centre.

A fourth form has a dot surrounded by a circle in the centre, from which curved lines radiate rather irregularly toward the circumfer-
The edge of the plate is cut into compartments, but these are obscured by the imperfect condition of the shell, resulting from decay.

The significance of these engravings is uncertain, but the fact that the largest part of them, thirteen out of eighteen bear the same device, viz., that of a rattlesnake, makes it probable that they served as family or tribal symbols, and are therefore of the nature of totems.

The collection of fragments of pottery is quite large, and represents a great variety of forms of vessels, lips, handles and kinds of ornamentation, some of them quite rude, but most of them of superior workmanship. There are eight entire vases, chiefly of the akeel patterns, the largest a foot in diameter. One somewhat smaller than this is ornamented on four sides with a figure of a human face in relief, which was made by the addition of clay to the surface after the vessel had been otherwise completed, as is often seen in the pottery from Mexico and Central America.

A large proportion of all the vessels as well as fragments are in one way or another marked with the impressions of twisted cords. Similar markings have been observed on pottery from very distant parts of the United States, and have been observed on the earthen vessels of the prehistoric period of the old world. We have specimens from Maine, Massachusetts, Missouri, Illinois, Ohio, Tennessee and Florida.

It is an interesting fact that while every trace of the cords and woven textures made by the mound builders has perished, we have impressions or casts of the first left with sufficient distinctness on the earthen vessels to determine the style of twisting and the number of strands, and of the second to ascertain, in some cases, at least, the manner in which the cords were interwoven. By means described further on, the exact structure of the impressing surface has been reproduced.

The explanation usually given of these markings is that the vessels have been moulded in a net, which was used to support the soft clay while the process of manufacture was going on. That vessels, especially the larger ones, were moulded in baskets, and these destroyed in the burning, there is an abundance of evidence, as set forth in Mr. Rau’s interesting paper on the pottery making of the North American Indians in the Smithsonian Report for 1866. This is a point about which there is scarcely any liability to error. But there is a great difference between moulding a vase in a firm and steady structure like a basket, and a yielding, flexible one, like a net. None of the specimens
we have thus far received show that a net, if by net is understood a
structure formed of meshes made by knotted cord, was used in mould-
ing a vessel, for no impression of a knot is to be found anywhere.
It would have been if any existed, as we have shown experimentally. The impressions are, in all cases either of a woven texture or
else of cords neither knotted nor woven, but probably wound about
some body, and in this form used as a stamp. By making casts of
the surface of the cord marked vessels with gutta percha we have re-
produced the original details of the impressing surface, which show
very clearly the above differences. The textures are of two kinds,
one with and the other without open meshes. The first are formed
by a series of parallel cords or warps intersected by a second series
of parallel cords crossing the first at right angles, but including one
of these in every twist of its strands. The laborious process was
therefore required of passing the two strands of which the second
cord is made above and below the first cord, and then twisting them
before passing to the next. The texture with closed meshes is hand-
somely woven, and in one instance of threads not exceeding a thi-
tieth of an inch in diameter. Unfortunately none of the vessels bearing
markings of a woven texture are entire, so that it is impossible to as-
certain whether the impressions are distributed in a uniform manner
over the whole surface. It seems incredible that even an Indian
would be so prodigal of time and labor as to make the necessary
quantity of well twisted cord or thread and weave it into shape for
the mere purpose of serving as a mould, which must be destroyed in
the making of a single copy.

It must be remembered that the vessels are all made with bodies
more or less bulging or spherical, and that in consequence if formed
in a mould, this must either be made in sections capable of being
separated, or else it must be destroyed either by cutting off, as is more
commonly supposed, by burning, before the copy could be removed.
There appear to be no traces of sections, and the impressions show no
signs of a mould adapted to removal.

Possibly the vessels thus ornamented were intended only for spe-
cial purposes, as for religious ceremonies or the use of chiefs, and
were not made in very large numbers, and so an unusual amount of
labor might be accounted for.

The second form of cord marked pottery is more common, and is
very easily understood. The cords were arranged in the most part
parallel to each other, and not connected either by weaving or knot-
We have reproduced such impressions by winding a cord around a stick, and pressing this against the surface of the clay, stamping only a limited surface at one time. In order to cover the whole surface in this way it would be a matter of necessity that adjoining impressions would interfere with each other more or less, which they actually do on the surface of the vessel, one set partially obliterating another. Such impressions must therefore be regarded as finishing touches after the vessel was formed rather than as casts of a mould in which they were supposed to be made. This view is sustained by the fact that they often extend on to the handles, which are never added until the body of the vase is completed, and also by the fact that some of the impressions are but faintly made, as if the clay had already become somewhat hardened before the cords were applied. In one case the impressions were such as would be made by a ball of loosely wound cord, rolled over the surface. We are unable to say whether such markings had more than an ornamental significance, but it is worthy of notice that they were so largely used in widely different parts of the country. We saw similar markings on a vase in the Museum at Berlin, marked as to its origin undeklaimt, unknown, in which the cord marks were arranged in a few horizontal circles and vertical lines, obviously taking the place of the ornamental lines usually traced with a pointed instrument.

Sir John Lubbock mentions the existence of vases from ancient mounds in Scotland, ornamented with impressions from twisted thongs, and further states that in the stone age the most elegant ornaments of their vases are impressions of the finger nail, or of a cord wound round the soft clay. Smith Rep., 1862, p 320. In view of these facts the question arises whether the impressions of the finer woven fabrics may not have been also merely ornamental markings added after the vase was completed, and not impressions of a mould in which they were formed.

Under the head of carving we may mention several specimens of pipes, one of which has a sculptured human figure grasping the bowl, and approaches in skillful execution most of those figured by Squier and Davis.

There are a few pieces of worked bone, consisting of pointed implements, which may have been used as awls. In one instance some twenty of these were found in a single mass, all cemented together by lime derived from the percolation of water. Several specimens of a gouge shaped instrument closely resemble implements from the Lake
dwelling of Switzerland, and made of the same bone, viz a metatarsal or metacarpal bone of the deer, were found buried with the dead.

Of implements in metal there is a single tool, a chisel, made of native copper, seven inches and a half long, two and a half wide on the cutting edge and pounded into shape, and which was buried with the dead.

Two of the burial caves, which are not uncommon in Tennessee, and which Dr. Jones has described, were examined by Mr. Dunning. One of these is in Jasper County, and contained at least the remains of four individuals of different ages, one a child. The bones were very imperfect, were much broken previously to their exhumation, and in addition have been much gnawed by rodents. Portions of the tibia showed that this bone was considerably flattened. The remains were associated with bones of the deer, woodchuck, birds, shells, and fragments of pottery. No cranium accompanied the bones.

A second cave is situated near the mouth of the Big Polkton River, not far from Newport, in Cocke County. As described by Mr. Dunning, it is about eighty feet above the water and reached only by a steep, rocky path called the Devil's Gap. The tomb was found about two feet below the floor of the cave, covered with an artificial layer of clay about six inches in thickness, by which the joinings of the stone were completely closed. It was five feet long, two high and three and a half broad, and built of unhewn stones, fragments of the outcropping limestone ridge near by. The body was placed in a crouching position. Charcoal and ashes were present, indicating that fire had been kindled near the tomb. The only relics found buried with the skeleton were about five pounds of discs made from some large marine shell from an inch to an inch and a half in diameter, and perforated in the middle.

The skeleton found in this stone tomb, as appears from the imperfect ossification of the bones, was that of an individual not quite adult, having a height of nearly six feet, but with bones of rather slender make. The tibia are somewhat flattened, and the fore arms are much lengthened, in proportion to the upper arm, the radius being 0.81 and the ulna 0.87 of the length of the humerus.

The cranium was not quite perfect, but sufficiently so to determine its principal proportions. The most marked feature, and this is very striking, is the extreme artificial flattening of the occiput, and the consequent increase of the diameter of the head from side to side, so that the breadth somewhat exceeded the length, a degree of distortion
not often met with even in the extreme cases among the Peruvians. In many of the North American Indian tribes a comparatively slight amount of distortion is often met with, but among a few it was carried to an extreme condition, as in the Natchez, as recorded by Adair and Bartram, and more recently by Morton, among the Choctaws and Waxsaws, according to Lawson, and among the Catawbas, according to Morton.

III Exploration in Florida

During the last winter, February and March, 1871, the writer had an opportunity of re-examining some of the shell heaps on the St Johns River, East Florida, mentioned in the First Annual Report, and of exploring others not previously visited. Valuable additions to our previous collections were made, so that now we have a nearly complete series of objects from these sources, representing more than forty different stations, and which, for the present at least, be considered unique. The shell heaps on the above mentioned river differ from all others in being made of small convoluted fresh water shells, Ampullarius and Paludinus, the fresh water mussels, Unios, which almost exclusively form the shell heaps of other rivers, being here for the most part sparingly met with, and in some instances are almost wholly absent.

Among the shell heaps not previously visited, that of Silver Spring, on the western side of Lake George, is the most remarkable and probably the largest in the valley of the river, and is said to cover an area of twenty acres. It consists of two portions, one of which encircles the source or "boil" of Silver Creek, and extends along the right bank of the creek toward the shores of the lake. The second and larger occupies the right shore of the creek near its mouth, and also the adjoining shore of the lake. The height is variable, in some places not more than two or three feet, and in others more than twenty. The lake front of the mound is very abrupt, and bears unmistakable evidence of having been largely washed away by the waves driven in by the easterly winds, and of having had its materials distributed along the shore.

It seems incredible to one who searches the waters of the St Johns and its lakes at the present time, that the two small species of shells above mentioned could have been obtained in such vast quantities as
are seen brought together in these mounds, unless at the times of
their formation the shells existed more abundantly than now, or the
collection of them extended through very long periods of time. When it is borne in mind that the shell heaps afford the only suitable
surface for dwellings, being most commonly built up in swamps, or on
lands liable to be annually overflowed by the rise of the river, they
appear to be necessarily the result of the labours of a few living on a
limited area at any one time. At the present it would be a very diffi-
cult matter to bring together in a single day enough of these shells
for the daily meals of an ordinary family. That they formerly
existed in larger numbers than now is by no means improbable. It is
well known with regard to both animals and plants, that after flour-
rishing for considerable periods in given areas, they at length yield in
their struggle for existence against changed conditions. The oysters
of which the gigantic shell heaps on the Damariscotta River, in
Maine, are built, were, beyond doubt, obtained from the adjoining
waters, but to-day they are well nigh extinct, and the same is, in a
measure, true of some of the deposits on Cape Cod, as at Cotuit
Port. Analogous changes have been observed by European archae-
ologists. The oyster banks near the mouth of the Baltic, from which
many of the ancient shell heaps of Denmark were formed, have dis-
appeared, partly through increasing freshness of the water, and partly
through the ravages of the starfish. The last of them have disap-
peared from the Isef fjord during a century, so that none are found
further south than the northern end of the Island of Seeland, and in
large quantities only on the more northern shores of the Kattegat.
The water chestnut, Trapa natans, once very abundant in some of
the Swiss Lakes during the age of the Lake dwellers, has now be-

As the oysters of the ancient period were very much larger than
those now found on the coast of Maine, it is also the case that the
shells from the mounds of the St Johns surpass in size, though to a
less marked degree, those of the actual period.

The facts that the remains of other edible animals are compara-
tively scarce, and make an insignificant part of the whole kitchen
refuse, and that all the objects made by man associated with them
are of a very rude kind, go to show that the ancient inhabitants of
the St Johns were in a low state of savage life. Their pottery was
for the most part of the rudest kind. The figures on the vessels
being either rudely traced with a pointed instrument, impressed with
a stamp cut in squares, or with the end of a shell. Out of thousands of pieces which we have examined, not one has been seen bearing the marks of the skilfull workmanship, or having the elegance of ornament which those from the mounds of the valley of the Mississippi usually exhibit. We have sought in vain for anything approaching the style of the ornament seen in pieces figured by Schoolcraft, and described as coming from Florida, or which we have ourselves collected in the burial places at Cedar Keys, or in the coast or salt water shell heaps at Fernandina and St Johns Bluff. Though the precise source of those described by Schoolcraft is not stated, it is quite obvious they came from a people much more advanced in the art of pottery than those who built the mounds on the St Johns.

A re-examination of the mound at Horse Landing, on the right bank of the river above Pilatka, gave more satisfactory results than those before obtained. This mound has the appearance of greater age than any other. Formerly a piece of worked flint was taken from the sand beneath the deposit of shells, but, though the conditions for examination were very favorable, only a single article of man's work, a piece of drilled bone, was found in the shell heap itself. The presence of charcoal was also noticed. As this interesting mound is fast disappearing, and will at no very distant time be wholly destroyed, the following particulars will not be out of place. As now seen, it is a half oval structure, rising abruptly on all sides, the river front being perpendicular. The length is three hundred and seventy-five feet, the width one hundred and seventy-five, the height at the union of the western and middle third thirteen, and of the eastern with the same fifteen feet. At the eastern end it rises from a swamp, and to the west and south merges in a plain, covered with forest growths and saw palmetto. It has been largely destroyed by the action of the river, and as its destruction continually goes on from year to year, new sections are brought to view. It was originally built on a sand bank, which is seen underlying it, having a height of from three to five feet above the river in the middle and western portion, but as the mound was extended eastward it gradually encroached upon the swamp into which the shells descend. The lowest part of the shell deposit is cemented by lime into a solid mass, in which are enclosed the bones of edible animals and implements of shell and bone, in a manner analogous to what is seen in the deposits of the ancient caves of France. Several fire places indicated by char-
coal, ashes and calcined shells were examined, in the neighborhood of which the bones of edible animals were collected. These facts all point unmistakably to man as the builder of this mound. It differs, however, from many of the other mounds, in the entire absence of pottery, excepting a few pieces from the part beneath the surface in the vegetable loam, and which were, without doubt, of recent origin.

With regard to the age of different mounds there is little to be added to what was stated in a former report, except that the minimum age of some of them is found to be somewhat greater than supposed. There is to be seen at Silver Spring a grove of live oaks, a few survivors of a race of giants once common in the forests near the river, and to which my attention was called by my friend G. A. Peabody Esq. Six of these at five feet from the ground measured as follows: one thirteen feet, three fifteen, one nineteen, and one between twenty-six and twenty-seven feet in circumference. This last has been partially destroyed by fire an act of vandalism committed for the purpose of collecting the moss hanging from its branches. The circumference was estimated from one half of the trunk, all that now remains, but agrees closely with measurements made several years before by Mr. Peabody, when the trunk was still whole. These trees are not on the highest part of the mound, but on the slope farthest from the water. Excavations made beneath the largest of them showed that the tree was of more recent origin than the mound itself. If at the beginning of the second century of the life of the live oak there are twelve rings at least to the inch, then the above mentioned tree having a semidiameter of fifty inches would have an age of not less than six hundred years, and was near the beginning of the second century of its existence at the landing of Columbus. On the same basis of calculation, the leveage of the mound near Blue Spring, and at Old Town, would be about four hundred years. Though these estimates are to be regarded only as approximations to the truth, they, without doubt, carry back the origin of the mounds beyond the reach of history or tradition, and certainly one or two centuries before the discovery of America. Although they cannot be more recent than the trees growing upon them, they may have been, and probably were finished long before the life of the trees above mentioned began.
IV Purchase

The Museum has obtained by purchase a series of casts, made under the direction of Dr E. H. Davis, of the more important objects obtained by Squier and Davis, and described in their joint memoir in the Smithsonian Contributions, Vol. I. The originals of most of these are now the property of the celebrated Blackmore Museum at Salisbury, England.

In addition to the above are casts of idols, ornaments, charms, terra cottas of various kinds, etc., from Central America, Mexico and Peru.

The whole number of objects in this collection is one hundred and four.

A small collection of specimens of kapa cloth, wreaths of feathers, paddles and ornaments from the Hawaiian Islands, have also been purchased.

V Gifts

The Museum of Comparative Zoology has, with great liberality, transferred to this Museum all its ethnological and archaeological collections, consisting of more than three hundred and fifty specimens. Among them is a very valuable series from the Swiss Lakes, obtained by Prof. Agassiz while in Europe, in 1859, and were among the very first discovered after attention had been called to the Swiss lake-dwellings. It contains several implements not found either in the Mortillet or Clement collections. The different objects may be enumerated as follows: thirty pieces of antler more or less worked, eighty-seven pointed tools, such as awls, daggers, etc., fifty-one antler sockets, sixteen of which still retain their stone axes, various tools made of the teeth of the hog and ox set in antler, and a series of the bones of the different animals found on the sides of the dwellings. Besides the above are several well preserved vases, and other objects made of burned clay, axes of stone, grinding or polishing stones, and various specimens of carbonized seeds, bread, etc., from Robenhauen.

The specimens from other countries are as follows:

A perforated stone used to give weight to the Bushman's root digger, a Bushman fire stick, knife, and bow with eight arrows, three spears, an Ovampo snuff-box, drinking cup and beer ladle, and Ovampo clubs, one armed with an iron point, and an ornament for the waist. From S. Africa.
Four stone axes and one cranium, probably negro From Brazil

Eight ancient vases, one large and remarkably fine metal, elaborately sculptured in the form of an animal and four stone chisels From Central America

Three stone mortars, two pestles, three mauls, three spoons made of bone, one stone tub of trumpet, four chisels, a necklace, a sculptured pipe and two water tight baskets for cooking food with the aid of heated stone all from San Mateo From California

A club From the Fyn Islands

A spear head and fish hook From King-kill Islands

A stone adze with an elaborately wrought handle From the Havanian Islands

There are twenty-four human crania of various nationalities among them, four of Flathead Indians. The collection is a very valuable one

The Museum is indebted to the generosity of Dr Charles C Abbott of Trenton, New Jersey, for a very valuable gift of more than eight hundred specimens of implements of stone obtained from the immediate neighborhood of Trenton, by Mr Morgan and partly, also, by Dr Abbott. It consists of flakes and other fragments of stones used in the manufacture of implements of axes, pestles, boring tools scrapers, spear heads, arrow heads, and a few fragments of pottery. The collection of arrow heads is unusually rich, and comprising some fourteen or fifteen types. Besides these there is a large collection of broken arrow heads, found near together on what was evidently an arrow maker's working place, and as Dr Abbott suggests, were undoubtedly broken during the process of manufacture, showing a considerable per cent age of loss from breakage

There are also several implements which, as Dr Abbott states, very closely resemble the celest of the drift period of Europe, especially those found at St Acheul, two or three of which, except for their material, could hardly be distinguished from them.

The term scraper is applied to some of the implements just referred to, because of the close resemblance to such as bear the same name from the Danish collections belonging to the Museum. They are characterized by having a circular or semicircular flattened head, with a short projection which might serve as a handle, or for the purpose of attaching one. They differ from the Danish implements chiefly in their much smaller size.

1 The reader is referred to two articles in the 'American Naturalist' for March and April, 1872, on the Stone Age in New Jersey, by Charles C. Abbott M.D., for a very complete and instructive account of the Indian stone implements of that State.
The Museum has also received other gifts from the following sources:

**William S. Vaux, Esq.** Two stone implements from New Jersey

**Elias Smith.** Two spherical stones ploughed up near the supposed site of an Indian village in Lexington, Mass.

**E. M. Johnson.** A stone pestle and twenty-one arrow heads of stone from Oregon.

**Edward S. Wood, M.D.** Photograph of an Indian vase from Illinois.

**S. B. Sharples.** Three stone mauls used by the Indians in working copper from an ancient copper mine near Kewenaw Point, Lake Superior.

**Mrs. L. Agassiz.** Wreaths made of feathers, worn by the Munduwe Indians of the Madeira River, Brazil.

**Mrs. A. A. Gray.** An arrow head taken from a wild goose in Alaska, by Prof. J. T. Rotherock, and given by Prof. Rotherock to Mrs. Gray.

**A. T. Comfort, Asst. Surgeon U.S. Army.** Pieces of worked flint from the neighborhood of Fort Gully, Dakota Territory.

**Dr. Samuel A. Green.** A collection of the bones of deer and other animals from the shell heaps of Hog Island, Frenchman's Bay, Mt. Desert, Maine.

**Mrs. A. A. Gray.** A collection of stone chips from Groton, Mass. Eight specimens of common pottery from the Island of Malta, and one from Fajal.

**Samuel H. Russell.** Two stone implements, source unknown, a part of the Charles Hammond Collection noticed in the Fourth Annual Report.

**G. A. Peabody.** Two spear points and three stone implements found by him on the shores of Lake Monroe, E. Florida, where they were thrown up after a severe storm.

**Prof. L. Agassiz.** A sara-batiana or blow tube from Tefe on the Amazon, made and used by the Passe Indians. Three bows and nine arrows from the same source, all presented by a chief to Prof. Agassiz. Also, two head dresses of feathers, a small club made by the Tocantins Indians, and a robe from Bolivia made of the hide of the “short tree” presented to Prof. Agassiz by Senhor Davin, Chef de Police at Pana.

**P. D. Winship.** A photograph of a copper tom stated to have been dug up near Peoria, Illinois, at the depth of one hundred and twenty-five feet.

**Rev. B. F. Decosta.** A collection of unfinished stone implements and fragments of pottery from the shell heaps at Wellfleet, where they were obtained by the donor.

**Dr. H. J. Bigelow.** A wooden mortar hooped with iron, and a pestle, the last armed with stone at the end, and used by the Indians in Nantucket after the settlement of the island.

**Prof. James L. Cabell.** A collection of beads made of shell, from a mound on the Marlborough estate, Stafford Co., Virginia.
MUSEUM OF COMPARATIVE ZOOLOGY
Two smokers, a pestle, two gouges and a large axe, all of stone, from Old Town near Bangor, Maine
J. Wyman
Arrow heads and chips of stone from an Indian camping place near the border of Charles River, in the Cambridge City Cemetery.
A collection of implements of stone and shell, also fragments of pottery from the shell heaps of the St. Johns River, E. Florida.

ADDITIONS OF BOOKS

From the Hon. Robert C. Winthrop
Antiquairesk Tidsskrift, Udgivet af Det Kongelige Nordiske Oldskrift-Selskab 4 vols 8vo 1843-1863
Aarbøger for Nordisk Oldkyndighed og Historie, Udgivet af Det Kongelige Nordiske Oldskrift-Selskab 5 vols 8vo 1866-1870
Also No 1 of the above for 1871
Memories de la Société des Antiquaires du Nord 1 vol 8vo 1832
Antiquités de L'Orient, Monuments Archéographiques, Interprétés Par C. C. Rafn Copenhagen, 1856 1 vol 8vo
Vestiges d'Asierbo et de Soborg, Découverts Par Sa Majesté Frédéric VII, Roi de Danemark 1 vol 8vo Copenhagen, 1855
Souvenirs de Danemark Le Congrès Anthropologique de Copenhague, en 1869 Conference faite a la Société d'Utilité Publique de Neuchatel Par E. Desor 8vo. Bienne, 1870
Observations on a Collection of Calchihuits from Mexico and Central America By E. G. Squier Pamphlet 8vo New York, 1869
Matériaux pour l'Histoire Primitive et Philosophique de l'Homme Par Gabriel de Mortillet No 1 Paris, 1868
Quelques Rémarques sur la Géographie et les Monuments du Pérou Par E. G. Squier Pamphlet 8vo Paris, 1868
Sur Divers Aimés, Outils et Traces de l'Homme Amérique Par M. J. Marcou Pamphlet 8vo 1866
Sur la Constructions des Salles dites des Geants Par M le Roi Frédéric VII de Danemark Pamphlet 8vo Copenhagen, 1857
Report addressed by the Royal Secretary of Northern Antiquaries to its British and American Members 8vo Copenhagen, 1838
The Northmen in Iceland Extracts from the Memoria of the Royal Society of Antiquaries of the North 8vo Copenhagen, 1859
Congress Archeologique. International Anvers, 1866 Circular
Congress d'Archeologie et a Anthropologie Prehistoriques, Session de Bologne Discours d'Ouverture par M le Comte Gozzadini, President du Congres Bologne, 1871

Congrès International d'Anthropologie et d'Archéologie Préhistoriques. 5th Session. Circular 4th, Bologna, 1870.


From the Baron de Buren of St. Avin, Lake Neuchâtel. Photograph of the late Dr. Clement.


J. Wyman, Curator.
REPORT OF THE TREASURER.

To the Trustees of the Peabody Museum of American Archaeology and Ethnology in connection with Harvard University

The Treasurer respectfully presents his Fifth Annual Report in the following abstracts of account, and the cash account hereto annexed —

**The Collection Fund is charged with**

<table>
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<th>Description</th>
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<td>9 Massachusetts Five per cent Coast Defence Specie Notes, due July 1, 1883, each $5,000, number 46 to 54, registered, the gift of George Peabody, Esq</td>
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Collection Fund at par amounts to $45,746.21
Profesor Fund at par 47,000.00
Building Fund at par 81,855.21

STEVEN SALISBURY, Treasurer

Boston, Jan 11, 1872
<table>
<thead>
<tr>
<th>Date</th>
<th>Transaction Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 27</td>
<td>To received balance of Worcester and Nashua Railroad</td>
<td>$356.80</td>
</tr>
<tr>
<td>Feb 27</td>
<td>To received Interest on above</td>
<td>6.20</td>
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<tr>
<td>Mar 30</td>
<td>To received in part Worcester Note of Jan 4, 1871</td>
<td>$1,444.20</td>
</tr>
<tr>
<td>April 20</td>
<td>To received in part Worcester Note of Jan 4, 1871</td>
<td>450.00</td>
</tr>
<tr>
<td>July 1</td>
<td>To received Six Months' Interest on Massachusetts Five per cent Notes, Gold</td>
<td>1,125.00</td>
</tr>
<tr>
<td>July 1</td>
<td>To received on sale of above Gold, at 9% per cent</td>
<td>146.25</td>
</tr>
<tr>
<td>July 1</td>
<td>To received Six Months' Interest on Professor Fund, Massachusetts Five per cent Notes, Gold</td>
<td>1,125.00</td>
</tr>
<tr>
<td>July 1</td>
<td>To received on sale of above Gold</td>
<td>146.25</td>
</tr>
<tr>
<td>July 4</td>
<td>To received balance of Worcester Note, Jan 4, 1871</td>
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<tr>
<td>July 4</td>
<td>To received Interest on above</td>
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<td>Sept 6</td>
<td>To received in part Worcester Note, July 4, 1871</td>
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<tr>
<td>Sept 15</td>
<td>To received in part Worcester Note, July 4, 1871</td>
<td>83.22</td>
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<tr>
<td>Nov 4</td>
<td>To received in part Worcester Note, July 4, 1871</td>
<td>83.22</td>
</tr>
<tr>
<td>Nov 13</td>
<td>To received in part Worcester Note, July 1, 1871</td>
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<tr>
<td>Dec 4</td>
<td>To received balance Worcester Note, $2,542.00, July 4, 1871</td>
<td>582.70</td>
</tr>
<tr>
<td>Dec 4</td>
<td>To received in part Worcester Note, $3,264.65, July 4, 1871</td>
<td>1,272.10</td>
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<tr>
<td>Dec 19</td>
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<td>To received in part Worcester Note, $3,264.00, July 4, 1871</td>
<td>260.30</td>
</tr>
<tr>
<td>Jan 1</td>
<td>To received Six Months' Interest on Massachusetts Five per cent Notes, Gold</td>
<td>$1,125.00</td>
</tr>
<tr>
<td>Jan 1</td>
<td>To received on sale of above Gold, at 9½ per cent</td>
<td>102.66</td>
</tr>
<tr>
<td>Jan 1</td>
<td>To received Six Months' Interest on Professor Fund, Massachusetts Five per cent Notes, Gold</td>
<td>1,125.00</td>
</tr>
<tr>
<td>Jan 4</td>
<td>To received on sale of above Gold, at 9% per cent</td>
<td>102.65</td>
</tr>
<tr>
<td>Jan 4</td>
<td>To received Interest on balance Worcester Note, July 4, 1871</td>
<td>2,455.31</td>
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<tr>
<td>1871</td>
<td>For Building Fund</td>
<td>83.00</td>
</tr>
<tr>
<td>Jan 12</td>
<td>To balance of Account</td>
<td></td>
</tr>
<tr>
<td>June 15</td>
<td>To received Six Months' Interest on Worcester Water Bonds to 1st inst</td>
<td>$125.00</td>
</tr>
<tr>
<td>July 1</td>
<td>To received Six Months Interest on Massachusetts Five per cent Notes, in Gold</td>
<td>$1,750.00</td>
</tr>
<tr>
<td>July 1</td>
<td>To received on sale of above Gold, at 12 per cent</td>
<td>155.00</td>
</tr>
<tr>
<td>July 1</td>
<td>To received Six Months' Interest on United States Five-twenty Bonds for $2,050, Gold</td>
<td>61.50</td>
</tr>
<tr>
<td>July 1</td>
<td>To received on sale of above Gold, at 12 per cent</td>
<td>8.00</td>
</tr>
<tr>
<td>July 4</td>
<td>To received Amount of, Worcester Note, $2,144.05, Jan 8, 1871, Interest Seven per cent</td>
<td>2,218.76</td>
</tr>
<tr>
<td>July 4</td>
<td>To received Amount of, Worcester Note, $2,155.87, Jan 4, 1871, Interest Seven per cent, Gold</td>
<td>553.92</td>
</tr>
<tr>
<td>July 5</td>
<td>To received Six Months' Coupons on Worcester and Nashua Railroad Co seven per cent Bonds to 1st inst</td>
<td>210.00</td>
</tr>
<tr>
<td>Dec 4</td>
<td>To received Six Months' Interest on Worcester Water Bonds, to 15th inst</td>
<td>195.00</td>
</tr>
<tr>
<td>Dec 10</td>
<td>To received Six Months' Interest on Worcester Water Bonds, to 15th inst</td>
<td>63.00</td>
</tr>
<tr>
<td>1872</td>
<td>To received Six Months' Interest on Massachusetts Five per cent Notes, Gold</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Jan 1</td>
<td>To received on sale of above Gold, at 9½ per cent</td>
<td>136.88</td>
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<tr>
<td>Jan 1</td>
<td>To received Six Months' Coupons on United States Five-twenty Bonds for $2,050, Gold</td>
<td>61.50</td>
</tr>
<tr>
<td>Jan 1</td>
<td>To received on sale of above Gold, at 9½ per cent</td>
<td>5.61</td>
</tr>
<tr>
<td>Jan 2</td>
<td>To received Six Months' Coupons on Worcester and Nashua Railroad Co seven per cent Bonds</td>
<td>210.00</td>
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<tr>
<td>Jan 4</td>
<td>To received Six Months' Interest on Worcester Note for $2,145.68, at Six per cent (Seven per cent interest)</td>
<td>65.04</td>
</tr>
<tr>
<td>Jan 4</td>
<td>To received Six Months' Interest on Worcester Note for $2,752.28, at Six per cent (Seven per cent interest)</td>
<td>83.37</td>
</tr>
</tbody>
</table>

For Building Fund

Jan 12 To balance of Account

June 15 To received Six Months' Interest on Worcester Water Bonds to 1st inst

July 1 To received Six Months Interest on Massachusetts Five per cent Notes, in Gold

July 1 To received on sale of above Gold, at 12 per cent

July 1 To received Six Months' Interest on United States Five-twenty Bonds for $2,050, Gold

July 1 To received on sale of above Gold, at 12 per cent

July 4 To received Amount of, Worcester Note, $2,144.05, Jan 8, 1871, Interest Seven per cent

July 4 To received Amount of, Worcester Note, $2,155.87, Jan 4, 1871, Interest Seven per cent

July 5 To received Six Months' Coupons on Worcester and Nashua Railroad Co seven per cent Bonds to 1st inst

Dec 4 To received Six Months' Interest on Worcester Water Bonds, to 15th inst

Dec 10 To received Six Months' Interest on Worcester Water Bonds, to 15th inst

1872

Jan 1 To received Six Months' Interest on Massachusetts Five per cent Notes, Gold

Jan 1 To received on sale of above Gold, at 9½ per cent

Jan 1 To received Six Months' Coupons on United States Five-twenty Bonds, for $2,050, Gold

Jan 1 To received on sale of above Gold, at 9½ per cent

Jan 2 To received Six Months' Coupons on Worcester and Nashua Railroad Co seven per cent Bonds

Jan 4 To received Six Months' Interest on Worcester Note for $2,145.68, at Six per cent (Seven per cent interest)

Jan 4 To received Six Months' Interest on Worcester Note for $2,752.28, at Six per cent (Seven per cent interest)
<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 18</td>
<td>By paid Wm H Dall for services in obtaining Alaska Collection</td>
<td>$50.00</td>
</tr>
<tr>
<td>Jan 13</td>
<td>By paid Prof Wyman for three bills of freight paid</td>
<td>$3.00</td>
</tr>
<tr>
<td>Jan 13</td>
<td>By paid same for two bills of printing paid</td>
<td>$8.80</td>
</tr>
<tr>
<td>Feb 7</td>
<td>By paid rent of 4th deposit</td>
<td>$190.00</td>
</tr>
<tr>
<td>Feb 21</td>
<td>By paid Robert C Winthrop for Bill exchange, London, £225 sterling, to pay for Collection</td>
<td>1,225.51</td>
</tr>
<tr>
<td>Mar 19</td>
<td>By paid Rev E O Dunning on account of Explorations in Tennessee</td>
<td>170.00</td>
</tr>
<tr>
<td>Mar 27</td>
<td>By paid L H Davis for Gifts from Blackmore Museum</td>
<td>360.00</td>
</tr>
<tr>
<td>Apr 19</td>
<td>By paid Rev E O Dunning balance of Appropriation for Tennessee</td>
<td>170.40</td>
</tr>
<tr>
<td>July 4</td>
<td>By paid for Worcester Note on demand, Interest Six per cent</td>
<td>2,512.50</td>
</tr>
<tr>
<td>July 4</td>
<td>By paid for Worcester Note, on demand. Interest Six per cent</td>
<td>2,512.50</td>
</tr>
<tr>
<td>July 29</td>
<td>By paid Chas F Hartig for Explorations in Brazil</td>
<td>500.00</td>
</tr>
<tr>
<td>Aug 26</td>
<td>By paid Robert C Winthrop for freight Bills Clement Collection paid</td>
<td>90.00</td>
</tr>
<tr>
<td>Sept 14</td>
<td>By paid Robert C Winthrop for Bill Exchange London, £225 sterling, to pay for Collections</td>
<td>1,225.51</td>
</tr>
<tr>
<td>Oct 21</td>
<td>By paid Rev E O Dunning Appropriation for Exploration in Tennessee</td>
<td>300.00</td>
</tr>
<tr>
<td>Nov 13</td>
<td>By paid Prof Wyman for two bills of Catalogue, $43.50, bill of Express, $43.50</td>
<td>$87.00</td>
</tr>
<tr>
<td>Nov 13</td>
<td>By paid Prof Wyman for three bills of Boxes and Traps</td>
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<tr>
<td>Nov 14</td>
<td>By paid Prof Wyman for F A Lyman Bill Havanian Objects</td>
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<td>Dec 1</td>
<td>By paid Robert C Winthrop for Bill Exchange London, £400 sterling, to pay for Collections</td>
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<td>Dec 28</td>
<td>By paid Prof Wyman for Bill for Shaw Case paid</td>
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</tr>
<tr>
<td>Dec 28</td>
<td>By paid Prof Wyman for Huny Palaeontology Humane</td>
<td>4.80</td>
</tr>
<tr>
<td>Dec 28</td>
<td>By paid Prof Wyman for two bills of printing Report</td>
<td>134.50</td>
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<tr>
<td>1872</td>
<td></td>
<td>289.90</td>
</tr>
<tr>
<td>Jan 2</td>
<td>By paid for Worcester and Nashua Railroad Co's Note, on demand. Interest Seven per cent</td>
<td>2,462.49</td>
</tr>
<tr>
<td>Jan 2</td>
<td>By Cash balance to new account</td>
<td>90.00</td>
</tr>
<tr>
<td>1871</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 4</td>
<td>By paid for Worcester Note, on demand, at Six per cent</td>
<td>$2,188.08</td>
</tr>
<tr>
<td>July 4</td>
<td>By paid for Worcester Note, on demand, at Six per cent</td>
<td>2,752.25</td>
</tr>
<tr>
<td>Jan 2</td>
<td>By paid for Worcester and Nashua Railroad Co's Note, on demand, at Seven per cent</td>
<td>3,106.74</td>
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<td>Jan 6</td>
<td>By paid for Worcester and Nashua Railroad Co's Note, on demand, at Six per cent</td>
<td>178.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$22,211.49</td>
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</table>

Boston January 11, 1872

I have examined the above account of Hon. Stephen Salisbury, Treasurer, and find it correctly cast, with proper vouchers for the same. I have also examined and counted the Bonds and Notes held as securities, and find them as above stated.

HENRY WHEATLAND, Auditor
SIXTH ANNUAL REPORT

OF THE TRUSTEES

OF THE

PEABODY MUSEUM

OF

AMERICAN ARCHAEOLOGY AND ETHNOLOGY,

PRESENTED TO THE PRESIDENT AND FELLOWS OF
HARVARD COLLEGE, MAY 15, 1873.

CAMBRIDGE.
1873.
SIXTH ANNUAL REPORT.

TO THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE —

The Trustees of the Peabody Museum of American Archaeology and Ethnology herewith respectfully communicate to the President and Fellows of Harvard College, as their Sixth Annual Report, the Reports of their Curator and Treasurer for the year ending in January last.

ROBERT C. WINTHROP.
CHARLES FRANCIS ADAMS.
STEPHEN SALISBURY.
ASA GRAY.
JEFFRIES WYMAN.
HENRY WHEATLAND.
GEO. PEABODY RUSSELL.

CAMBRIDGE, MAY 15, 1873.
REPORT OF THE CURATOR.

To the Trustees of the Peabody Museum of American Archaeology and Ethnology —

The Curator respectfully submits the following Report on the condition of the collections in his charge —

The addition of a new story to Boylston Hall, since the last annual meeting, has enabled the Museum to obtain a room of sufficient size to allow of the exhibition in cases of the more important objects of the collection. These, as stated in the last annual report, have been kept heretofore in storage. The various objects from different parts of the world have been arranged in the following groups.—

I. Implements of stone and bone from North America, pieces of pottery showing various styles of ornamentation, and personal ornaments made of bone, shell, stone and copper, all at present or formerly used among the Indians of North America.

II. The very valuable collection made in Alaska by Capt. Edward G. Fass in 1866 and 1867, consisting of a great variety of tools, ornaments, weapons, household implements, dresses, carvings in wood, bone, etc., and also various other objects from the northwest coast of America. This collection is so complete that it was thought advisable to keep all the objects belonging to it in one series.

III. Objects from Mexico, consisting chiefly of the interesting collection of terracottas presented by the Hon. Caleb Cushing, and casts of various Mexican sculptures presented by the Smithsonian Institution.
IV Objects from Central and South America, including the valuable terra cotta obtained in Central America by Dr Berendt

V Stone implements from Denmark, chiefly selected from the Rose collection

VI Implements from the unpolished stone period in France, belonging to the gravels of the valley of the Somme, implements of the polished stone period, also a great variety of implements made of bone and of the horns of the deer and casts of such, ornamented with skilful engravings. These last are from the caves and rock shelters of Dordogne, and are chiefly from the Mortillet and Christy collections.

VII Pottery, and implements of stone, bone and wood from the lake-dwellings of Switzerland. These are mostly from the two stations at Concise and St Aubin on Lake Neuchatel, representing the ages of stone and bronze, and were nearly all collected by the late Dr Clement. To these have been recently added the collection made by Prof Agassiz and presented to this Museum by the Museum of Comparative Zoology.

VIII Fragments of pottery and implements of stone from the lake dwellings of northern Italy

IX The Nicolucci collection of prehistoric stone implements from middle and southern Italy, presented by Col Theodore Lyman, an account of which will be found farther on.

X A collection of ancient Etruscan vases presented by Augusto Castellam of Rome.

XI A collection of paddles and weapons from the Pacific Islands.

XII African implements and dresses.

XIII Human crania from different parts of the world, amounting in all to three hundred and thirty-four, comprising the valuable collection of Peruvian skulls presented by Hon E G. Squier, one hundred Italian skulls recently presented by Col Lyman, and other collections more or less complete from the Hawaiian Islands and from the Mounds of Kentucky, Tennessee, Michigan and Florida, and which have been noticed in previous reports. To these will soon be added a part of the large and very valuable collection of ancient Peruvian skulls, obtained by the Hassler Expedition and presented by the Museum of Comparative Zoology.

XIV A collection of bones of the aborigines from different
parts of the United States of a period anterior to the discovery of the country, and selections from these showing the effects of disease and accident.

XV. Spears, paddles and canoes from different parts of the world.

XVI Bows and arrows from different parts of America and the Pacific Islands.

In the last Annual Report an account was given of a very valuable collection of ethnological objects presented by the Museum of Comparative Zoology at the instance of Prof. Agassiz, but which, for want of space to store them, had not been transferred to our rooms. This collection has since been received and entered upon our catalogues.

Agreeably to a vote passed at the last meeting of the Trustees a selection from the duplicates of prehistoric remains from Denmark and the Swiss Lakes was sent to the Smithsonian Institution, and an acknowledgment of the same has been received. Another series was sent to the Peabody Academy of Science at Salem. Both the above were gifts from this Museum to these institutions.

A collection of American stone implements for Prof. Pigorini of Parma has been selected, and awaits an opportunity for forwarding.

**Nicolucci Collection**

The most important addition made to the Museum during the year is the archaeological and craniological collection of Dr. Giustino Nicolucci, of the Island of Sora, Naples. The Museum is indebted for this very valuable gift to the liberality of Col. Theodore Lyman, to whom on other occasions we have been under considerable obligations for gifts and good offices. It was purchased by Col. Lyman while in Italy during the year, and came into the possession of the Museum early in the last autumn.

The crania, one hundred in number, are mostly from the Italian peninsula, and are classified by Nicolucci in the catalogue which accompanies the collection, as follows —

I. Five skulls from an ancient tomb at Aquino (the ancient Aquunum) in the province of Terra di Lavoro, and belonging to the first century of the Christian era.
II. Three crania from Rome, belonging to the second century of the Christian era.

III. Six crania taken from a cemetery of the fifteenth century, in a church at Arpino (the ancient Arpinum) in the Terra di Lavoro.

IV. Twelve crania, taken from a cemetery which belonged to an old church at Aquino, the latter having been destroyed in the middle of the sixteenth century.

V. Thirty modern skulls from various places in southern Italy, viz.:—Naples, Capua, Benevento, Sora, Arpino, Aquila, Campobasso, Isernia and Bojano.

VI. Thirty-one skulls from central Italy, viz. from Rome, Tivoli, Albano, Velletta, Frosinone, Banno and Veroli.

VII. Five skulls from Modena and Udine in Northern Italy.

VIII. Four Albanian skulls, coming from the descendants of an Albanian colony established several centuries since at Uii in the province of Melise, southern Italy.

IX. Four Roumanian skulls.

The whole makes a very important addition to our anthropological series, and is valuable for the comparison of the normal variations in the form and features of the Italian cranium, and also for the study of certain anomalies of structure.

The collection of stone implements, comprising in all seven hundred and ninety pieces, consists chiefly of objects coming from the southern half of the Italian peninsula, and were found in several of the provinces, extending from those of Abruzzo to those of Calabria and Otranto.

Among the most fruitful in ancient remains are the provinces of Abruzzo, especially Abruzzo Ultra I, through which passes the valley of the Vibata. This valley, beginning in the Apennines, extends between hills of moderate height eastward to the Adriatic, and in it the Vibata has cut a deep bed into a diluvial deposit made of the débris of the mountains from which it rises. As late as 1867 the only stone implements from this region known to archæologists were two flint arrowheads discovered by Dr Guidobaldi. These discoveries were at once followed up by Dr C. Rosa, and now stone implements from this valley, of several kinds, have been collected by thousands. Working places for the making of them have also been found, and are indicated by large
quantities of chips and fragments similar to those which have been so often observed in analogous places in other parts of the world.

The Nicolucci collection contains about two hundred specimens from the valley of the Viborata, consisting of chips, cores, knives or regularly formed sharp-edged flakes, scrapers and arrowpoints. These are mostly of flint, a few of the knives being made of obsidian or volcanic glass.

The arrowheads are all of a triangular form and provided with a tang. This last varies much in its size, in some being very diminutive and in others nearly as large as the effective part of the head. A few have in addition to the tang well-formed barbs on each side. Some fine specimens of flint knives of the usual type come from the province of Abruzzo Citeriore.

From the province of Rome there are forty-seven specimens, and of these nearly thirty are from the alluvial gravel beds of the Tiber at Ponte Molle, near the city of Rome. They consist of fragments of flint which bear the usual marks of human workmanship, and have been subjected to long continued mechanical action of water and sand, whereby their angles have become rounded and their surfaces smooth. They are presumed to belong to the earliest stone age. Accompanying them is a fragment of the tooth of an elephant (*E. antiquus*) and a tooth of a rhinoceros (*R. megaphanus*), both extinct species, and both found in the same locality.

Besides the above there are from the same province, and of more recent date, chips and scrapers and a collection of many arrowpoints of flint. These last are referable to two types, similar to those found farther north, and having either simply a tang or a tang with barbs. There are casts of three others of a different shape and much longer, measuring three inches in length, with very regular, sharp, and well wrought edges and well pointed, a cast of a large knife and of a large spear point, seven inches long and of a handsome pattern.

The province of Terra di Lavoro is represented by two hundred and forty objects, consisting, as in the two other localities, of flakes, chips, scrapers and arrowheads. The large collection of chips and fragments which were found together indicates the site of an ancient working place.
The specimens from the Island of Elba, more than fifty in number, are in general of a ruder kind than those from the other regions. The most noticeable objects are the small and roughly chipped arrowheads, some of them not exceeding a half inch in length. There are several others of the ordinary size and usual form. A few cores and scrapers accompany them, the latter extremely rude.

From the island of Capri, which has yielded largely in stone implements, are twenty-three pieces, chiefly knives, resembling those from other prehistoric sites in northern Italy, Switzerland and France. A small arrowhead conforms to the more common type of the regions just mentioned. One of the most valuable objects from this island is a small axe-shaped implement of jade, well cut and polished.

From Telesa in the province of Benevento is a remarkably well formed arrowhead, long, handsomely pointed and having a tang at the base, the cast of another, and the cast of a remarkably well made spear point, nine inches long, in shape having the same elegant pattern as the arrowpoints, but with the tang notched, for the purpose of securing it to the shaft. Arrowpoints from Salerno show less skill in the making, but have the same general form.

The provinces of Otranto and Calabria are well represented, the former by the same kinds and variety of objects and of the same workmanship as the provinces already noticed. Two fine axes of chloromelanite, admirably wrought and polished, deserve especial mention, and there are a few fragments of knives made of obsidian. To these may be added a small collection of fossil sharks’ teeth, which appear to have been used for pointing spears and arrows. These same fossils are used at the present day by the inhabitants of this province as a protection against the maleficio or evil eye, for which purpose one specimen in the collection is silver mounted.

The province of Calabria has thus far, according to Nicolucci, yielded only a few flint implements, but many well wrought and polished axes made of sienite and other granitic rocks. Of these we have over thirty specimens, from fifteen different localities. As regards their form and finish they differ but little from those found in northern Italy and the Swiss Lakes. They are mostly in the form of a flattened cone, the broad end ground to an edge,
though this is sharp in a comparatively few. In the larger number it is more or less blunted, as if the instrument had been used for fraying and pounding rather than cutting. The only object in the collection from this province and not an axe is a discoidal stone, well polished, its sides concave and rough in the middle, as if it had been used as a hammer.

From this general statement of the kinds of objects and their distribution, it will be seen that the peninsula of Italy, one of the last regions to be explored for remains of the stone age, has yielded these very largely. They antedate all historical records, and until within a few years the existence of such does not appear to have been generally known by archaeologists. It is true that some of them, as the celts and arrowheads, were familiar to the common people, not, however, as works of man, but as objects supposed to have fallen from heaven, and as such were highly prized as charms and preserved as heirlooms. In the collections of the British Museum a stone arrowpoint set in gold forms the central ornament of an ancient Etruscan gold necklace. Only a few years since the eminent German historian, Mommsen, in his history of Rome, while discussing the origin of the early inhabitants of Italy, states that "nothing has as yet come to light which would justify us in concluding that the existence of man in Italy is of older date than the knowledge of agriculture and the smelting of metals, and if within the boundaries of Italy the human race was at one time in the condition we are in the habit of distinguishing as savage, every race, at all events, of such a state, has disappeared." The enumeration of objects which has just been made shows by itself that a savage people making use of stone implements were distributed over its different portions in considerable numbers, and it is quite probable that future explorations will give evidence of a much more numerous population than we now know of. If we may judge from the style of their works thus far known, these ancient inhabitants were not essentially different from those living near the Great Lakes. The ancient inhabitants of Italy were not, however, lake-dwellers, but occupied the valleys of the streams and the grottos of the hillsides, and consequently the same conditions did not exist for the preservation of the more perishable objects produced by them, and which would help us to form an idea of the progress they had.
made. The fact, however, that they made stone tools of various kinds is of itself satisfactory evidence that they wrought wood and other materials by their aid.

Besides the collection from Italy which has just been described, there is in the Nicolucci collection a small series from France, viz — from the Valley of the Somme, Poitou, Basin of Paris, and Dordogne, which are similar to those in the Mortillet collection, from Denmark, Belgium, England and Ireland. Those from England are especially welcome, since they come from the drift and are the works of the earliest inhabitants of England thus far brought to light, and of which we had previously but few representatives. They are of the same age as those from the valley of the Somme in France and resemble the implements from this last mentioned region. They come chiefly from the valley drained by the Ouse and its tributaries, which region has become almost classical from the large number of implements it has yielded, and the number of localities in which objects have been found.

**EXPLORATIONS**

A collection made by Mr Henry Gillman from a mound on the Detroit River, Michigan, explored by him, has been purchased. This consists of human remains and various objects buried with the dead. The latter are of the common kinds, such as stone chisels, one of much beauty made of diorite and highly polished, a spear point, arrow points, stone pendants, a stone boring tool, beads and ornaments made of shell and copper, an implement made of antler, a miniature vase of the size of a common thimble, and two large and perfect vases of the oval pattern and ornamented over the whole surface with cord marks. One of the skulls, that of a fully adult person, is worthy of notice for its diminutive size, and for a remarkable extension of the lines for the attachment of the temporal muscle towards the top of the head. The average capacity of the Indian cranium as given in the tables of Morton and Meigs is eighty-four cubic inches, and the minimum observed by them sixty-nine cubic inches. That from the Detroit River Mound measures only fifty-six cubic inches, or less than sixty-seven per cent of that of the average Indian. In ordinary skulls the ridges of the temporal muscles on the two
sides of the head are separated by a space of from three to four inches, seldom less than two, while in the Detroit mound skull this space measures only three-quarters of an inch, and in this respect presents about the same conditions as the skull of chimpanzee. As the two other crania from the same mound offered no such peculiarities, the skull which has just been described must be considered simply as an extreme case of individual variation from the ordinary form. There are no signs of artificial deformity.

The single tibia accompanying this collection is somewhat flattened.

EXPLORATIONS ON THE ST. CLAIR RIVER, MICHIGAN

Mr. Gillman, under an appropriation made by the Trustees, has explored a series of mounds at the head of St. Clair River, and the collections made by him have been received and were accompanied with the following report.

The mounds situated at the head of the St. Clair River extend from south of Fort Gratiot for one and one-half miles northward, along the west shore of the river and of Lake Huron. It is altogether probable that they reach much farther, both northward and southward, but I have traced, examined, and fully identified them for the distance mentioned. Similar works have been found on the opposite side of the river, in Canada. Isolated mounds in the interior also exist, an interesting example of which is seen on the west shore of the Black River (a tributary of the St. Clair) at a point about one and three-quarters miles southwest of Gratiot, the mound referred to having been exposed, some years ago, by the grading of a road through it, which, as usual, resulted in the loss of a large amount of valuable relics.

With few exceptions, all these mounds have a general resemblance, and bear the appearance of terrace-like embankments from ten to twenty and twenty-five feet in height, they are much longer than wide, and run nearly parallel to the general direction of the river and lake shore, which here does not vary much from north and south. They are mostly of the drift formation, subsequently modified or added to by man for the various objects for which they were occupied, whether for the purposes of interment, habitation, or the manufacture of the rude implements connected with the daily life of that period, and, from the topographical features and the geographical position, they must have formed favorite places of retreat in war time.

Mound No. 1 is composed chiefly of sand and gravel, is about
two hundred feet long by fifty feet wide, and is fifteen feet above
the level of the river. It has rather abruptly-curved sides, and
is built on a slope of the ridge, of drift formation, on which the
west end of the village of Giatiot stands.

A large excavation made about fifty feet from the south end of
the mound disclosed the remains of four human bodies, at a depth
of four feet from the surface. In an area of about ten feet square
the four crania, with a portion of the accompanying bones, were
taken out, but were in a decayed and tender condition that,
with the exception of a skull and a few of the long bones and ver-
tebræ, they mostly fell to pieces. The bodies evidently were
buried in a sitting or crouched posture. This was very apparent
in one case where the femora were found bent upon and above the
tibia, the vertebrae, etc., resting upon these, while the skull lay on
top, face downward, as though it had leaned forward originally,
and had finally fallen over into that position. This cranium is that
marked Skull No. 1, Mound No. 1, and the vertebrae and other
bones thereto belonging may be found correspondingly marked.
With these remains were associated fragments of pottery, the
bones of fishes and birds, flint chips, and some stone implements
of the rudest character. These last were mostly water-worn
boulders, apparently used as hammers, and almost invariably shat-
tered, and net sinkers, flattish, irregularly elliptical stones, notched
on the edges or partially grooved toward the centre. It is inter-
esting to notice that the tibiae present the peculiar compression
which I have found so marked a characteristic, and in such ex-
treme degree, in the tibiae from the mounds on the Detroit River
and the River Rouge, Michigan, establishing the fact that these,
too, were platynemic men.

After excavating to the depth of six feet the coarse gravel of
the drift was encountered; but no further objects of interest being
met with, the opening was extended in other directions to the west-
ward, so as to open a lateral trench through the mound. This
revealed several fireplaces, solid beds of black ashes from one
foot to eighteen inches thick, with fragments of pottery and bone,
flint chips, sinkers and broken hammers interspersed. The fire-
places were invariably at or near the surface of the mound, show-
ing it to have been occupied for habitation subsequently to being
used for burial purposes. Openings made at two points, about
fifty feet from the north end of the mound, and also at a third
point, half-way between these and the first excavation, added no
facts of special interest. Two excavations were then made at
twenty-five feet from the south end of the mound, showing fire-
places with the beds of black ashes two feet thick, and inter-
mingled relics similar to those of the fireplaces already mentioned.
Some of the fragments of pottery taken out here were uncom-
monly thick and coarse. Beneath were small pieces of the bones.
of man, but nothing further worthy of mention. The encroach-
ment of the town on this mound, and on those to the west of it, 
prevented a more satisfactory examination.

The oldest residents (some born and brought up here) knew 
nothing of the character of the mound, though they remember 
that, many years ago, it was covered with a large forest growth.

Mound No 2, which lies two hundred feet northeast of Mound 
No. 1, is over five hundred feet in length by from one hundred to 
one hundred and fifty feet wide, and of the general height of 
dozen feet above the level of the St Clair River. It is bounded 
on the north by a small stream known as McNeil's Creek, which 
also runs southwardly all along its eastern slope, as well as a part 
of the south end of the mound. The ordinary observer will 
scarcely fail to notice that this mound is something more than the 
work of nature. Its sides have a graceful, gradual slope, with the 
exception of the side fronting the river, which is abrupt and ter-
race-like, even where not washed by the creek. Between the creek 
and the River St Clair is some low land with ponds, where are a 
number of outlying mounds, small and of slight elevation. About two 
hundred feet of the south end of Mound No. 2 is clear of trees, 
except on the sides, and is covered with a smooth green turf.

Excavations were made in a number of places, showing that this 
total end of the mound was covered with a solid crust of black 
ashe from eighteen inches to two feet thick. So hard and solid 
was this crust that layers of it in large pieces several inches 
square and thick were taken up unbroken. Fragments of pottery 
showing a great variety of patterns, bones of animals, birds and 
fishes (some of the larger bones evidently smashed), flint flakes 
and chips, with stone implements, consisting principally of arrow-
heads, hammers and sinkers, were found intermixed with the ashes. 

The abundance of the sinkers and particularly of the broken 
hammers is a remarkable feature. Though such rude utensils, a 
selection from them is preserved, so as to give an idea of their 
character. I have not found elsewhere a similar condition of 
things, and believe that this end of the mound furnishes a nearer 
approach to the "refuse heaps" of the Atlantic coast than any-
thing I have seen elsewhere on the shores of the Great Lakes. 
The absence of the shell deposit, however, makes a marked differ-
ence. I cannot find that these ancient inhabitants of this region 
had much resort to shell-fish as an article of diet. The great 
abundance of fishes, and the ease with which they were captured, 
together with the multitude of land game, left them under no 
necessity to use the inferior fresh-water mussels for food.

From the large quantity of pottery fragments and broken ham-
mers, together with the thick bed of ashes covering so wide an 
area of this mound, I incline to think that this must have been a 
point where the manufacture of their pottery was carried on to an
unusual extent. The broken hammers may be accounted for by
their having been fractured in pounding the grums used as food,
and in cracking the bones of animals for the extraction of the
marrow, indications of which are not wanting. The pottery found
in both these mounds exhibits an unusual variety of patterns,
though not a single utensil was taken out entire.

From want of time the investigation of the northern part of
the mound, which is elevated at its centre from two to three feet
above the portion covered with the ash-bed, was confined to three
points. No additional information was obtained, however, further
than establishing for it a like origin with the other mounds.

All the northern portion of the mound and also the sides of the
southern portion are covered with a large second growth of trees.
These consist chiefly of White Pine (Pinus strobus L.), Scarlet
Oak (Quercus cocinea Wang), White Oak (Q alba L.), and Bass-
wood (Tilia Americana L.) The trunks of some of these trees
have a diameter of from eighteen inches to two and one-half feet.
A few decayed stumps of the original forest still remain. These
average four feet in diameter.

Mound No 3. After the exploration of four other mounds,
three lying northward, the fourth northwestward of Mound No 2,
which contributed no additional facts of particular value, other
than their identity of origin with the rest of the group, attention
was next directed to mound No. 3, which proved to be the most
interesting of the entire series. This mound is situated three-
quarters of a mile northeastward of mound No 1. It is about
five hundred feet in length, and in breadth varies from seventy to
ninety feet, while its height above the surface of Lake Huron is
twelve feet, or not more than five feet above the general level of
the surrounding land. In general direction it corresponds to the
other mounds, and there is little in its appearance to suggest its
character or call the attention of any other than a practised eye.

A large excavation was made at its widest part, and about its
centre. Within two feet of the surface the bones belonging to a
single body were unearthed, but in so tender a condition from age
that they mostly crumbled to pieces. A few bones of birds and
fishes were found with them. Some of the decayed roots of an
oak tree stump, ten feet to the westward (and which will be fur-
ther alluded to), had grown over and around these bones. The
excavation was deepened, widened and carried farther to the east-
ward, opening a trench to the depth of six feet, but only small
fragments of human bones resulted. The trench was then opened
to the westward, toward the stump of the oak. When at the
depth of five feet we came to a skull (No. 1, mound 3). Some of
the bones first taken out overlay this, and decayed roots of the
oak, as thick as a man's arm, stretched above it. The other bones
belonging to the body appear dwarfish. It was buried with the
head to the east, and the legs seemed to have been drawn up, and not stretched out at full length. On removing these remains, we found, immediately underneath, a third body, placed so closely that the skull of the upper rested on that of the lower. At the head was a large quantity of the bones of birds and fishes, in a compact mass, as though once held in some wrapping or vessel which had decayed. These were pressed against the skulls, so that in some cases they adhered to them, and are, no doubt, the remains of the food placed with the dead. Such of the bones as could be removed are preserved, but a great portion crumbled to pieces. This body was buried with the head to the eastward. The roots of the oak tree had penetrated the bones in many cases, the long bones presenting some interesting examples of this, as the roots in their natural growth had first filled, then burst, the bones, so that in several instances the parts of the bone surrounded the now decayed root, imbedded in it. Such pieces as held together are forwarded. This tree, which evidently belonged to the second growth of timber, was, I think, a scarlet oak (Quercus cocchinea Wang), as the majority of the wood covering the southern half of the mound is of this species, together with the white pine. The decayed stump was two feet in diameter at the base, and at one foot above the ground divided into three trunks or main branches, each nine inches in diameter. These had been cut down, apparently, many years ago, and as between the first and two subsequent burials must have occurred, in all probability, some lapse of time, and the oak must have sprung up, reached its growth, been cut down, and its stump finally have decayed long afterwards, some slight idea may be had as to the age of the first burial.

The trench was now opened to the oak stump, when, from directly beneath it, skull No 3 was taken out with the accompanying bones. Upon this skull lay a plate of mica, five by four inches, of a quadrilateral shape, the corners worn off. A pebble of water-worn coral rested upon the mica, as if to keep it in place. About the neck of the deceased a necklace of remarkable construction had apparently been hung. This uncommon ornament was composed of the teeth of the moose, finely perforated at the roots, alternating with wrought beads of copper of different lengths, and the perforated bones of birds stained a fine green color, the stain, in the few pieces preserved, being wonderfully fresh. Small portions of the cord to which they had been attached are still partially preserved and remain in the apertures of the copper beads. I suppose that the teeth alternated with the copper beads and the stained bones. One copper bead, which adheres by its oxidation to the perforated part of a tooth, sustains this conclusion. A rude stone axe, partially polished, lay beside these remains. All indicated that the dead had been peculiarly
honored in his burial, and that he had been, perhaps, a noted per-
sonage

Immediately to the northward of this body another was taken 
out, skull No. 4, with the remaining bones. These were under 
the edge of the oak stump, and, as well as the remains No. 3, 
were surrounded with masses of roots. Both bodies lay nearly 
side by side, and at the same vertical plane, five feet below the 
surface. As in the other cases, the bones of birds and fishes were 
found with the remains, but in small quantity.

The excavation was next carried southward, through the centre 
of the mound, for a short distance, but no relics being met with 
other than a few fragments of broken hammers and flint chips, it 
was next opened in the opposite direction, northward, thus giving 
it the form of an irregular Latin cross. When a few feet to the 
northward of the remains last taken out (No. 4), we came upon 
skull No. 5, and following up the indications recovered such of 
the remaining bones as could be preserved. With this body a 
flint arrowhead and some other rude stone implements were found, 
also a number of small shells, the species of which I have not 
determined, but which appear to have been used for some special 
purpose, perhaps as ornaments, as they were ground smooth at 
the base. About twelve of these were recovered, but there must 
have been many more originally, as a large number of them 
crumbled to dust, and also some of them might easily have been 
overlooked. A short distance westward of the last relics, skull 
No. 6 was taken out. The accompanying bones, as in the cases of 
the others, were very tender, and it was with extreme difficulty 
that any of them were recovered. The tribe exhibited the compres-
sion previously referred to in a marked degree. A large mass 
of fish bones lay in front of this body, which, like the previous 
remains (skull No. 5, etc.), was buried placed on its right side 
with the head towards the east, and the limbs drawn up closely to 
the chest. It is possible that they may have been buried in a sit-
ting or crouched position, and have afterward fallen over, but I 
think they were buried as first mentioned. The absence of pottery 
with the interments in this mound is worthy of note, only two 
fragments being found in any part of the mound, and these appa-
rently accidentally dropped

Isolated excavations in different places throughout the extent 
of Mound No. 3, as also in a mound sixty feet to the west of it, 
contributed nothing specially entitled to record.

Mounds Nos. 4, 5, etc. Mound No. 4 is eight hundred feet 
 northeast of Mound No. 3. It is three hundred feet long by from 
 thirty to fifty feet wide, and is a low sandy ridge with a series of 
ine conical elevations running along its length, and rising two 
or three feet above its general level, they having a diameter of 
from twenty-five to thirty feet.
Mound No. 5 is fifty feet to the westward of Mound No. 4, and is of a conical shape, forty feet in diameter, and nearly twelve feet above the level of Lake Huron, being between three and four feet higher than No. 4. Two other mounds of a smaller size but similar shape lie to the north of it.

From Nos. 4 and 5 were obtained a few stone implements, fragments of bones and pottery, with flint chips and the usual bowlder-hammers mostly fractured. Our limited time prevented as thorough an investigation of these mounds as then appearance certainly warrants. I believe the removal of those conical elevations in Mound No. 4 would be rewarded with interesting discoveries.

Other mounds to the northward and westward, belonging to the series, were also examined to the extent of confirming their claims to a like origin with those more thoroughly explored. A mound south of Mound No. 1 (the first investigated) contributed a few stone implements, which are forwarded. The large implement appears to me to resemble a spade, but may have been designed for some other use than that apparently indicated.

In conclusion I would say that the facts observed fully prove this extensive group of mounds a rich field for more exhaustive research. And here I repeat the interesting fact that all the tribe unearthed invariably exhibited the compression or flattening characteristic platyeneume men. Unfortunately the bones generally crumbling to pieces prevented satisfactory measurements. But sufficient evidence was obtained (in connection with my discoveries in other parts of Michigan) to establish the point that this race, from the Detroit River to the St. Clair and Lake Huron, was marked with platyeneumeism to an extreme hitherto unobserved in any other part of this country, or perhaps any other country in the world. I cannot but believe, from what I have seen, that future investigation will extend the area in which this type of bone is predominant to the entire region of the Great Lakes, if not of the Great West, or, in other words, that at least on our northern "mound-builders" will be found to have possessed this trait in the degree and to the extent denoted. I am unable to say whether this peculiarity prevails in our modern Indian or not.

With the exception of the rude stone hammers and the sinkers, the number of perfect stone implements seems to me unusually small throughout this entire series of mounds. The question arises, Did this people the habit of sometimes breaking the stone implements cast into the burial mounds? Or were broken ones selected for this purpose as being of little other use?
Prof. C. F. Hartt, having organized a geological exploration in Brazil in 1871, kindly offered to aid the Museum in making archaeological collections, and for carrying out his plans an appropriation was made by the trustees. The results of this exploration have been received, and are valuable. The collection of articles of pottery is very extensive, and was mostly made on the island of Pacoval Marajo and at Taperinha on the Rio Tapajos. Though there are many broken pieces, these are chiefly of sufficiently large size to enable us to obtain a good idea of the forms of the articles used by the aborigines and of the style of ornaments. The last consist either of complicated figures traced on the vase when the clay was soft, of lines engraved after the clay was dry but before it was burned, or of figures painted in colors, which in some cases are combined with the traced and engraved kinds. The handles exhibit a great variety of shapes, as ornamented knobs, grotesque imitations of animals and of the human figure or parts of it, all showing great fertility of resources in inventing and executing patterns.

The most valuable of the earthen vessels is one of the large "face-urns" which of late have attracted much attention among archaeologists. It is two feet and a half high, somewhat over four feet in circumference, and rudely represents the human body, the head and trunk forming nearly the whole of it. The features of the face are represented in relief, and the whole surface is elaborately, though not very skilfully, ornamented with complicated figures, those of the right and left sides being for the most part symmetrical. In some instances these vases have been found to contain human bones.

The collection of stone implements comprises all sixty-two pieces, mostly obtained at Itutuba and Cafezal on the Tapajos, from the vicinity of Santarem and the Island of Marajo. The axes are quite characteristic, those of the different localities resembling each other, and are mostly flat, quadrangular, the edges rounded or sometimes squared, and often highly polished. A few are thick and nearly cylindrical. Instead of the groove extending around the whole axe, as in North America, there is
simply a narrow notch on each edge. In a single specimen, a small one, a groove completely surrounds it. In some of these axes it is quite obvious, from the small rounded grooves seen at the bottom of the notches, that they were cut by means of sand and cord, a method known to have been practised within historical times. It was by a similar means, according to Oviedo, that some Indian prisoners sawed off their iron fetters, and Mr. Evans succeeded in cutting in two a Swiss stone axe by the same process. The deep grooves in the stone curbs around the wells at Pompeii and Venice show very clearly how much may be done by the continued action of a cord alone. There is a variety of other stone implements, among them a remarkable lip ornament made of quartz consisting of a cylinder a half inch in diameter and five inches long, with a button-shaped enlargement at one end and a crescentic one at the other, the whole very skilfully and handsomely wrought.

At Taperinha near Santarem, Prof. Hartt discovered an ancient kitchen-midden or shell-heap, consisting exclusively of freshwater species, but in which fragments of pottery, ashes, and the bones of animals were imbedded. Some of the masses of shells have the appearance of great age, and are consolidated by means of lime deposited by percolation, as in the more ancient of the shell-mounds of Florida.

Besides the prehistoric objects mentioned above, brought by Prof. Hartt from Brazil, there are several articles used by the Indians and negroes on the Amazons at the present time, among them a bundle of hashish wrapped in husks of corn, a snuff box made of the shell of a large Ampullaria with a tube of bird's bone attached forming the mouth piece, two snuff tubes made of right and left bones from the forearm of a bird, joined at one end so as to allow of sufficient motion at the other to permit of their being readily inserted into the nostrils and the simultaneous introduction of two charges of snuff being thereby secured; a mass of guarana and two palatine bones of the great Sula for grating the same, an Amazonian syringe, pieces of the bark of the pottery tree, etc.

*Evans Ancient Stone Implements of Great Britain New York, 1872, p 40
Gifts


Mrs. Romeo Elton, of Dorchester, Mass. Three stone gouges, two stone chisels, a spherical stone, a stone spear point, a tool made of bone, six beads made of shell and an arrowhead, all from the farm of the late Fredric Allen, Gardiner, Me., also some arrowheads from the valley of Wyoming, Pa.

Dr. S. A. Greene. Nine specimens of the common kinds of pottery from Malta, and a tinder box.

Miss M. S. Felton. Three pieces of common pottery from Faya.

Smithsonian Institution. A collection of twenty-four casts, consisting of casts of idols from Mexico, and of pipes, axes, chisels, agricultural tools, etc., from the United States. Three of these being duplicates of objects previously sent were in accordance with the request of the Secretary of the Smithsonian Institution sent to the Peabody Academy of Science in Salem.

Col. Babbitt. A perforated quartz implement found at Magnolia, E. Florida.

Col. Theodore Lyman. Photographs of an ancient Etruscan cranium, also various objects, consisting of bones, and teeth of animals and a fragment of a glass vessel found at a depth of fifteen feet in making recent excavations near the Roman Forum. A fragment of a fresh water mussel was obtained at a depth of from twenty-five to thirty feet.

Prof. Luigi Pigorini. A collection of crescent-shaped handles found in the palafittes or lake dwellings uncovered near the city of Parma.

Edmund Bailey, Esq. Copy of the inscription on Dighton Rock.

A. M. Harrison, U. S. Coast Survey. Four pieces of terra cotta, two representing human heads and two the heads of animals. One of them, 6109, was taken from a small shell mound on the shore near East Pasagoula, Miss., 1849, one, 6111, from an Indian shell mound on Dauphin Island, and two, 6110, 6112, from an ancient mound near Bayou Casotte, Mississippi Sound, Alabama.

Dr. Zenas E. Crowell. An ancient Parian vase.

George H. A. Fiske. A pair of Indian snow shoes and moccasins from Aroostook, Me.

Dr. S. A. Greene. A collection of stone chips from Groton, Mass.
MUSEUM OF COMPARATIVE ZOOLOGY. Four bows, forty-five arrows and two spears from Islands of the Pacific

Count L Pourtales A bone spear point from a shell heap at Elizabeth Island, in Terra del Fuego

Hassler Expedition Two bows and eight arrows from Terra del Fuego. The arrows are pointed with glass chipped into the shape of an ordinary stone point. Also from the same source a Fuegan bucket made of bark and used in collecting shell-fish, some of the shells of mussels and limpets commonly used as food, two spear points made of bone and a rib of a seal showing the marks of a cutting tool.

Don Henrique Stimpson, of the Chilian Navy A perforated spherical stone of aboriginal make, from Chili, presented through Count Pourtales.

Jules Marcou, Esq Two discoidal stones and some fragments of Indian pottery found between the Missouri and Yellowstone Rivers during Gen. Stanley's expedition, 1872. Also a Mojave Indian Idol made of terra cotta and an apron made of strips of bark, worn by the Mojave women, obtained of the Indians by Mr. Marcou during Capt. Whipple's expedition to the Colorado in 1854.

W. H. Dall, U. S. Coast Survey. The skull and most of the rest of the skeleton of an Aleutian Islander. From a memorandum sent by Mr. Dall it appears that "the skeleton is that of an Aleutian antedating the Russian discovery in 1760, and very possibly much older, but certainly before that date. It was taken out of a compartment in the stone wall of an old yont, one of several forming a prehistoric village on the north end of Ulakhta Spit, Anakanak Island, Captain's Bay Unalaska. It was lying on the right side, facing the southeast, with the knees brought up to the chin. There were no ornaments or utensils with it. Two other skeletons were found in the same yont built into the wall in a little compartment." A stone lamp, a fire flint, with various bones of seals and other animals from a refuse heap outside of the yont accompany the skeleton.

MUSEUM OF COMPARATIVE ZOOLOGY A collection of spear points made of bone and shell. A spear with a movable head, also the line and seal skin float used in catching seals and, it is said, whales, a wooden fishhook, all from the Northwest Coast.

A birch bark Indian canoe from Eastport, Me., with spears and paddles has been purchased, in procuring which the Museum is indebted to G. A. Peabody, Esq., of Eastport.
REPORT OF THE TREASURER.

To the Trustees of the Peabody Museum of American Archaeology and Ethnology in connection with Harvard University.

The Treasurer respectfully presents his Sixth Annual Report in the following abstract of accounts, and the cash account hereto annexed —

The Collection Account is charged with

9 Massachusetts Five per cent Coast Defence Specie Notes due July 1, 1872, each $3,000, numbers 66 to 81 registered, the gift of George Peabody, Esq. $15,000 00
Income from above Notes in currency 2,550 48
Income from 9 Massachusetts Five per cent Coast Defence Specie Notes 1 Professor Fund 2,349 67
Income from Investments 176 41
Balance of Worcester Note of $5,000 00, July 4, 1871, Interest seven per cent 119 26
Worcester & Nashua Railroad Co.'s Note, Jan. 2, 1872, Interest seven per cent 2,463 98
Balance of Account settled Jan. 12, 1872 90 00
Balance due to the Treasurer 119 26

$54,194 09

And Collection Account is credited with

9 Massachusetts Five per cent Specie Notes as above $45,000 00
Balance of Worcester & Nashua Railroad Co.'s Note, $2,500 28, Jan. 2, 1872 Interest seven per cent 1,082 11
Worcester & Nashua Railroad Co.'s Note, Jan. 1, 1873, Interest seven per cent 2,717 97
Worcester & Nashua Railroad Co.'s Note, Jan. 4, 1874, Interest seven per cent 2,517 37
Payments for Cases in New Hall 2,184 00
Payments for Collections and Explorations 221 64
Payments for Incidental Expenses 110 50

$54,194 09

The Professor Fund consists of

9 Massachusetts Five per cent Specie Notes as above each $5,000, numbers 55 to 64 registered, the gift of Geo. Peabody, Esq., of which the Income is appropriated to Collection Fund, as the Professorship is not yet filled $45,000 00

The Building Fund is charged with

12 Massachusetts Five per cent Specie Notes as above, each $5,000, numbered 66 to 77, registered the gift of Geo. Peabody, Esq. $60,000 00
Income from above Notes in Currency 2,500 28
Income from Investments by Treasurer 1,780 99
United States Five-twenty Notes of July 1, 1867, 2 of $1,000, 1 of $50 2,050 00
Worcester Water Bonds due June 1, 1877, Interest Six per cent 4,500 00
Worcester Sewer Bonds, due June 15, 1877, Interest Six per cent 2,100 00
Worcester & Nashua Railroad Co.'s Five-tenths Seven per cent Bonds due Dec. 11, 1879 6,000 00
Worcester Note, July 4, 1871, on demand at Seven per cent 2,184 00
Worcester Note, July 4, 1871, on demand at Seven per cent 2,752 28
Worcester & Nashua Railroad Co.'s Note, Jan. 2, 1872, on demand, Interest Seven per cent 2,106 74
Worcester & Nashua Railroad Co.'s Note, Jan. 6, 1872, on demand, Interest Seven per cent 18 11

$87,111 38

(24)
And Building Fund is credited with

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<td>8 Worcester Sewer Bonds due June 15, 1877 at Six per cent, S A</td>
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<td>6 Worcester &amp; Nashua Railroad Co’s Five per cent Bonds of Dec 31, 1870</td>
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<td>Worcester Note, July 4, 1871, on demand, Interest at Seven per cent, S A</td>
<td>2,168.08</td>
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<td>Worcester Note, July 4, 1871, on demand, Interest at Seven per cent, S A</td>
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<td>Worcester &amp; Nashua Railroad Co’s Note, Aug 6, 1872, Interest Six per cent, S A</td>
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<td>Worcester &amp; Nashua Railroad Co’s Note, Jan 2, 1873, Interest Seven per cent, S A</td>
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Investments of the

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<td>Professors Fund, at par</td>
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<td>Building Fund, at par</td>
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STEPHEN SALISBURY, Treasurer

Boston, Jan 15, 1873.
<table>
<thead>
<tr>
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<th>Transaction</th>
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<tr>
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<td>To Balance of Account</td>
<td>$ 90 00</td>
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<td>Mar 20</td>
<td>To received balance of Worcester Note of July 4, 1871 for $1,193 20</td>
<td>$1,193 20</td>
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<tr>
<td>Mar 20</td>
<td>To read Interest on above Note, at 7% per annum</td>
<td>17 62</td>
</tr>
<tr>
<td>Mar 26</td>
<td>To received in part Worcester and Nashua Railroad Co.'s Note of Jan 2 1872 Interest 7% per annum</td>
<td>1,210 88</td>
</tr>
<tr>
<td>Apr 20</td>
<td>To received in part of above Note</td>
<td>1,159 12</td>
</tr>
<tr>
<td>July 1</td>
<td>To received Monthly' Interest on Massachusetts Five per cent Notes to Interest in Gold</td>
<td>1,125 00</td>
</tr>
<tr>
<td>July 1</td>
<td>To received on sale of above Gold, at 17% per cent</td>
<td>156 69</td>
</tr>
<tr>
<td>July 1</td>
<td>To received Six Months' Interest on Massachusetts Five per cent Notes of Professor Fund in Gold</td>
<td>1,125 00</td>
</tr>
<tr>
<td>July 1</td>
<td>To received on sale of above Gold, at 17% per cent</td>
<td>156 69</td>
</tr>
<tr>
<td>July 5</td>
<td>To received Interest on Worcester and Nashua Railroad Co.'s Note of Jan 2, to 1st inst</td>
<td>64 38</td>
</tr>
<tr>
<td>Aug 22</td>
<td>To received in part Worcester and Nashua Railroad Co.'s Note of January 2, 1872</td>
<td>2,625 56</td>
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<tr>
<td>1873</td>
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<tr>
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<td>To received Principal of Worcester and Nashua Railroad Co.'s Note of July 2, 1872</td>
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</tr>
<tr>
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<tr>
<td>Jan 2</td>
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</tr>
<tr>
<td>Jan 2</td>
<td>To received on sale of above Gold, at 17% per cent</td>
<td>156 69</td>
</tr>
<tr>
<td>Jan 2</td>
<td>To received Six Months' Interest on Massachusetts Five per cent Notes of Professor Fund in Gold</td>
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</tr>
<tr>
<td>Jan 2</td>
<td>To received on sale of above Gold, at 17% per cent</td>
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<tr>
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<td>To received Interest on Worcester Note, July 4, 1871, $2,109 08 to 1st inst at Seven per cent per annum</td>
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<tr>
<td>July 5</td>
<td>To received Six Months' Coupons on Worcester &amp; Nashua R &amp; R Co.'s Bonds to 1st inst at 7% per annum</td>
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<tr>
<td>July 5</td>
<td>To received Six Months' Interest on Worcester &amp; Nashua R &amp; R Co.'s Note, Jan 2, 1872 $2,106 74 at 7% per annum</td>
<td>73 73</td>
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<td>July 5</td>
<td>To received Six Months' Interest on Worcester &amp; Nashua R &amp; R Co.'s Note, Jan 6, 1872, $1,562 41 at 6% per annum</td>
<td>4 63</td>
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<tr>
<td>Aug 6</td>
<td>To received on sale of United States Five-twenty Bonds of 1875, 2 of $1,000, I of $900, Gold $2,000, at 15% per annum</td>
<td>2,433 35</td>
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<tr>
<td>Dec 20</td>
<td>To received 6 Months' Interest on Massachusetts Five per cent Notes to Interest in Gold</td>
<td>175 00</td>
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<tr>
<td>Dec 20</td>
<td>To received 6 Months' Interest on Worcester &amp; Nashua Railroad Co.'s Note of Jan 6, 1872</td>
<td>61 00</td>
</tr>
<tr>
<td>1873</td>
<td></td>
<td>138 00</td>
</tr>
<tr>
<td>Jan 2</td>
<td>To received Principal of Worcester &amp; Nashua Railroad Co.'s Note of Jan 2, 1872</td>
<td>2,106 74</td>
</tr>
<tr>
<td>Jan 2</td>
<td>To received 6 Months' Interest on the above at 7% per annum</td>
<td>73 73</td>
</tr>
<tr>
<td>Jan 2</td>
<td>To received Principal of Worcester &amp; Nashua Railroad Co.'s Note of Jan 6, 1872</td>
<td>158 11</td>
</tr>
<tr>
<td>Jan 2</td>
<td>To received 6 Months' Interest on the above at 7% per annum</td>
<td>4 74</td>
</tr>
<tr>
<td>Jan 2</td>
<td>To received Six Months' Interest on Worcester &amp; Nashua R &amp; R Co.'s Note $2,433 35 to date at 7% per annum</td>
<td>85 18</td>
</tr>
<tr>
<td>Jan 1</td>
<td>To received Six Months' Interest on Worcester Note, $2,752 28 July 4, 1871 at 7% per annum</td>
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</tr>
<tr>
<td>Jan 1</td>
<td>To received Six Months' Interest on Worcester Note, $2,106 08 July 4, 1871 at 7% per annum</td>
<td>75 88</td>
</tr>
<tr>
<td>Jan 2</td>
<td>To received 6 Months' Interest on Massachusetts Five per cent Gold Bonds, 1,500 00</td>
<td>2,600 70</td>
</tr>
<tr>
<td>Jan 2</td>
<td>To received on sale of above Gold, at 17% per annum</td>
<td>156 69</td>
</tr>
<tr>
<td>Jan 2</td>
<td>To received Six Months' Coupons on Worcester &amp; Nashua Railroad Co.'s Seven per cent Bonds</td>
<td>210 00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,988 15</td>
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**For Building Fund**
etc., in connection with Harvard University, in Annual Cash Account, Jan 15, 1873

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Jan 27</td>
<td>By paid Ryder &amp; Harris for Plans for cases in Museum</td>
<td>$30 00</td>
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<tr>
<td>Mar 26</td>
<td>By paid Judah Sears &amp; Son balance for above Cases</td>
<td>$1,200 00</td>
</tr>
<tr>
<td>Apr 26</td>
<td>By paid Henry Gillman for Collection near Detroit, Michigan</td>
<td>$50 00</td>
</tr>
<tr>
<td>July 8</td>
<td>By paid H. Morley for painting Cases, Sawin's</td>
<td>$2,226 66</td>
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<tr>
<td>Aug 17</td>
<td>By paid H. Gillman for work on Mounds in Michigan</td>
<td>$22 00</td>
</tr>
<tr>
<td>Aug 21</td>
<td>By paid A. A. Kingman for printing Report</td>
<td>$12 00</td>
</tr>
<tr>
<td>Dec 21</td>
<td>By paid Geo. A. Peabody for Indian Objects, Express, $17 34</td>
<td>$22 00</td>
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<tr>
<td>Dec 27</td>
<td>By paid N. S. Shaler for paid for opening Mounds in Tennessee</td>
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<td>Dec 27</td>
<td>By paid John Ford for painting, $4, Thomas Morley</td>
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<td>Dec 27</td>
<td>By paid A. J. Marcus for Freight of Nicolletia Collection</td>
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<td>By paid for Worcester &amp; Nashua Railroad Co's Note, on demand, Interest Seven per cent</td>
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<tr>
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<td>By paid for Worcester &amp; Nashua Railroad Co's Note, on demand, Interest Seven per cent</td>
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</tr>
<tr>
<td>July 2</td>
<td>By paid for Worcester &amp; Nashua Railroad Co's Note, on demand, Interest Seven per cent</td>
<td>$2,432 85</td>
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<tr>
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<td>By paid for Worcester &amp; Nashua Railroad Co's Note, on demand, Interest Six per cent</td>
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<tr>
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</tr>
<tr>
<td>Jan 3</td>
<td>By paid for Worcester &amp; Nashua Railroad Co's Note, on demand, Interest Seven per cent</td>
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<td>Jan 4</td>
<td>By paid for Worcester &amp; Nashua Railroad Co's Note, on demand, Interest Six per cent</td>
<td>$198 00</td>
</tr>
</tbody>
</table>

Worcester, Jan 17, 1873

I have examined the securities and vouchers named in the above account, and find the statements to be correct and the account to be accurate.

SAMUEL HAVEN, Auditor
SALEM PRESS,
F W Putnam & Co, Proprietors,
SALEM, MASS.
SEVENTH ANNUAL REPORT.

TO THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE —

The Trustees of the Peabody Museum of American Archaeology and Ethnology herewith respectfully communicate to the President and Fellows of Harvard College, as their Seventh Annual Report, the Reports of their Curator and Treasurer for the year ending in January last.

ROBERT C WINTHROP.
CHAS FRANCIS ADAMS.
STEPHEN SALISBURY.
ASA GRAY.
JEFFRIES WYMAN.
HENRY WHEATLAND.
GEO PEABODY RUSSELL.

CAMBRIDGE, May 15, 1874.
At the Annual Meeting of the Trustees of the Peabody Museum of American Archaeology and Ethnology, January 15, 1874, the following resolution, offered by the Chairman, Mr. Winthrop, and seconded by Dr. Wheatland, was unanimously adopted:

Resolved, That the Trustees cannot forget that their first duty, on this occasion, would have been to return their grateful acknowledgments to Professor Louis Agassiz for the large and valuable contribution which he had recently made to our Museum from his collections during the late Hassler Expedition, and to offer him a renewed assurance of our gratitude for the active interest he had taken in the rise and progress of the Institution committed to our charge, and that we deeply lament that nothing is left for us now but to express the sorrow we feel, in common with the friends of Science everywhere, at the loss of one, whom we have all so loved and honored, whose scientific labors and accomplishments have justly secured him a world-wide fame, and whose memory will ever be affectionately cherished by all who knew him.
REPORT OF THE CURATOR.

The Curator respectfully submits to the Trustees of the Peabody Museum of American Archaeology and Ethnology the following Report on the additions to its collections since the last Annual Meeting, also some remarks on the practice of cannibalism among the American aborigines.

I. AGASSIZ COLLECTION

This collection consists of a large and very valuable series of objects obtained by Professor Agassiz during the voyage of the Hassler. This vessel, in the service of the United States Coast Survey, sailed from Boston to San Francisco, by the way of the Straits of Magellan in the latter part of 1871 and the first half of 1872, stopping at many ports on the Atlantic and Pacific coasts. At all of these points Prof. Agassiz interested himself in behalf of this Museum and collected as far as practicable specimens pertaining to Archaeology and Ethnology. By reference to former reports it will be seen that we were already indebted to him for many important gifts transferred, at his suggestion, from the Museum of Comparative Zoology to our collections. These, with the recent contributions, will remain a memorial of the broad interests and generous sympathies of the great master whose recent death the scientific world so deeply laments.

A large part of the series was collected at Ancon near Callao, in Peru, chiefly by T. J. Hutchinson, Esq., the British Consul at that place, and by him generously presented to Prof. Agassiz. There are other objects from Brazil, Tierra del Fuego, the Chinchas Islands, Easter Island and Central America. The whole com-
prises collections of crania, earthen vessels, ornaments of gold and silver, textile fabrics, spindles, needles, yarns and weapons of aboriginal make.

_Crania._ The collection of Peruvian skulls exhumed from the burial places, or *huacas*, of Ancon and its neighborhood, is one of the largest which has been made from any single locality, the whole number obtained exceeding 330 specimens of different ages and conditions.* From these the curator was authorized to select such as might be thought desirable for rendering more complete the valuable series we already have, chiefly presented by the Hon. E. G. Squier. Seventy crania were taken for this purpose. Without going into a full account of these at present, a few observations will be offered on points which deserve special notice.

One of the chief characteristics of Peruvian skulls is, as is well known, artificial deformity, resulting either from compression applied from before backwards, shortening the cranial portion and increasing its breadth to a corresponding degree, or applied in a circular manner so as to diminish its transverse and increase its longitudinal diameter, as is seen in the crania from the chulpas near the great lake of Titicaca and from other burial places. With a single exception all the crania in the collection we are speaking of belong to the first group, and are more or less flattened from before backwards, showing an uniformity of habit in the region about Ancon. In seven of the series the flattening is carried to such an extent that the breadth of the cranium considerably exceeds the length, but between these and the normal skull are so many gradations that it is hardly possible to decide where one begins and the other ends.

The distorted crania are mostly unsymmetrical, and in a few cases the absence of symmetry involves not only the occiput, the part almost exclusively the seat of it, but also the face, so that the jaw and cheek bones of one side of the face are thrown back of their usual position.

Several of the crania, eleven in all, are not flattened or in any

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*For an account of other crania, as well as of earthen vessels collected by Mr. Hutchinson at the same time with those here noticed the reader is referred to communications made by Mr. George Busk and Dr. J. Barnard Davis in the "Journal of the Anthropological Institute of Great Britain and Ireland," April 1, 1873*
way distorted, and their measurements are given in the following table —

<table>
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<tr>
<th>Catalogue Number</th>
<th>Caliber Cent</th>
<th>Length MM</th>
<th>Balance MM</th>
<th>Height MM</th>
<th>Index</th>
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<td>1100</td>
<td>162</td>
<td>134</td>
<td>117</td>
<td>0.827</td>
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<tr>
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<tr>
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<tr>
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<td>135</td>
<td>123</td>
<td>0.813</td>
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<tr>
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<td>138</td>
<td>121</td>
<td>0.873</td>
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<tr>
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<td>0.812</td>
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<tr>
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<td>1200</td>
<td>164</td>
<td>128</td>
<td>119</td>
<td>0.737</td>
</tr>
</tbody>
</table>

| Maximum          | 1160         | 169       | 138        | 128       | 0.873 |
| Minimum          | 1040         | 154       | 127        | 112       | 0.737 |
| Mean             | 1129         | 161       | 132        | 119       | 0.819 |

These crania are of considerable value, for if they belong to the same race as the others and there is nothing to suggest the contrary, as they were found buried with them, they may be regarded as having the natural shape the skull took in this region when no attempts at distortion were made. They are quite symmetrical, and the occiput instead of being flat or assuming a more or less vertical direction, as in the distorted crania, has the ordinary natural curves and in some of them is prominent. The forehead is moderately developed in all except two, where it is quite low and receding. As will be seen by the table they are all small, the average capacity of ten of them being 1129 cub cent, or 69 cubic inches, 6 inches less than the average Peruvian, and the largest of them 1200 cub cent, or a little less than 74 cubic inches. As more than half appear to be the skulls of

* Refers to the number of the specimen in the Catalogue of the Peabody Museum.
women, we have in this an explanation in part at least of their small size. They are all short (brachycephalic), the average proportion of the breadth to the length, the last being taken as 1:00, is 0.82. There is nothing in either of them which suggests the form of which the distorted crania might be considered an exaggeration, as has often been supposed with regard to Peruvian crania in general. There are among the distorted specimens a few in which the change of form is very slight. The undistorted crania above noticed, as far as they go, sustain the conclusion that the prevailing natural form of the crania was brachycephalic but of regular outline, and that wherever a considerable deviation from the natural form exists, it is artificial.

The average capacity obtained from the whole collection, including those having the distorted as well as the natural shape, varies but little from that of previous measurements of ancient Peruvian crania by Morton and Meigs, or from that obtained from the Squier collection and given in the Fourth Annual Report of this Museum. The largest cranium measured 1550 cub cent, or about 95 cub. inches, and is a little larger than that of the average European, and the smallest 1020 cub cent, or 62 cub inches, which is 13 inches less than that of the average Australian. There exists, therefore, between the largest and smallest a range of 33 cubic inches, in other words, the smallest has a capacity of only 66 per cent of the largest. These results agree with all previous conclusions with regard to the diminutive size of the ancient Peruvian brain.

7179 is a cranium from Pacocha, Ilo, Peru, and is exceedingly distorted in the reverse direction of the crania just described, viz., lengthwise. Two large grooves or depressions on the surface show that pressure has been applied in two directions, viz., by a band passing in a circular manner over the forehead and around and beneath the occiput, and the other nearly at right angles to it, passing from side to side over the top of the head, just behind the coronal suture. This arrangement of the pressure would leave two regions where the brain would be free to enlarge, viz., the upper part of the frontal, and the hinder parietal and upper occipital portions. The latter are the seat of the chief enlargement, and are protruded backwards so as largely to over-

* Mr. Squier says "I found no skulls exhibiting artificial compression in or around Cuzco." (See *Thesaurus Craniorum* by Dr. J. Barnard Davis, p. 243, specimen 1442.)
hang the occipital protuberance. The crania from the chulpas in our collection, six in all, show but one line of pressure, viz., that first described, and the protrusion is consequently more upwards. They are all symmetrical.

Two of the crania have an especial interest as showing recovery from extensive fractures, involving injury to the brain, and in neither of which are there signs of any attempt having been made to remove the fragments, or to restore them to their natural position, by mechanical means.

7206 is the skull of an individual past the adult age. On the left side, in the middle of the fore part of the parietal bone, and extending somewhat into the frontal, is an elliptical depression one-third of an inch deep, two inches and a half long, and one inch and a quarter wide, the result of an old fracture. Four fragments of skull were driven in, wedged into their places, and are now firmly consolidated with each other and the adjoining bone. On the outside the rough edges and the angles have all been rounded off by absorption. On the inside the projection does not correspond with the depression on the outside, as the absorption has become much more complete. The scales and spiculae, which no doubt existed at the time of the accident, have been consolidated and completely smoothed off so as to give a rounded instead of a sharp angular projection into the cranial cavity. This injury could not have taken place without considerable laceration and perhaps loss of brain substance. The recovery was complete.

7165 belonged to a fully adult person and has a very extensive fracture of the frontal bone, involving most of the right and a part of the left half, and breaking it into five or six large fragments. The extreme length of the injury from side to side is four inches and a half, and its breadth somewhat over two. The whole has the appearance of having been produced by a heavy blow as with a club, crushing in the middle portion of the forehead and at the same time causing the fragments on the right side to decidedly bulge out. The displacement of the fragments must have been

*This would indicate a somewhat different manner of distributing the bandages than that described by Morton. According to him, one and the same bandage passed around the forehead and under the occiput and thence over the vertex of the head (see his Catalogue of Skulls specimen 1277). The skull from 110 shows that the bandage going over the top of the head must either have been fastened to the horizontal one, or have passed under the chin, otherwise it would be impossible to keep it in place.
attended with pressure on, and probably laceration of, the membranes and brain. As in the instance just described there was complete union of the fragments and removal by absorption of the points and rough edges. Inflammation, consequent upon the injury, has left its traces in the form of a thin deposit of porous bone, extending over the adjoining surfaces and especially downwards, where it reaches the orbits of the eyes.

The appearances in both cases show that these individuals must have survived these grave accidents some months, perhaps years, though as far as appearances go, nothing was effected in the way of removing fragments, or of restoring them to their original places so as to relieve the brain, as would be the case in ordinary surgery.

In contrast with the preceding, if the views we give are correct may be placed the instance which follows. 7198 is the skull of an adult and shows the effect of an injury of long standing in the outer portion of the frontal bone on the right side and near the coronal suture. Beginning three or four millimetres from this suture at a point 25 mm. above the wing of the sphenoid is an irregular lozenge-shaped opening measuring 40 mm. in length and 23 mm. in its widest part, and extending obliquely upwards and forwards. The edges of the opening are regular, smooth and strongly bevelled, and the angles between these and the outer table somewhat rounded. At the outer angle the sides have a deep groove between them and the perforation is here partially closed by a thin plate, which appears to be a fragment of the inner table of the skull considerably wider than the part of the opening it underlies, and which had been detached at the time of the injury but afterwards coalesced with the parts from which it had been separated. In its present condition the perforation of the walls is considerably smaller than at first, and the actual opening is pentagonal instead of lozenge-shaped. In the neighborhood of the injury there are to be seen traces of inflammation with a deposit of porous bone both on the inner and outer tables of the skull. With the exception of the scale of the inner table already described, the piece or pieces resulting from the injury have disappeared. The attachment of the scale of bone above referred to, the rounding of the edges and the deposit of porous bone all show that the individual survived the injury for a long time.

The appearances of this opening are such as to lead to the sup-
position that it was not made in its present form by a blow from a penetrative instrument. In this case the edges would be bevelled in the opposite direction, that is, the opening increasing in size from without inwards, instead of diminishing in this direction as is actually the case. The edges clearly suggest that they were formed by a process of either rasping or cutting. The view of the case which we are led to take is that an opening had been made by mechanical violence and that it had been enlarged and the fragments removed by artificial means. If this be correct it affords additional evidence of the extent to which the ancient Peruvians had carried the art of surgery.

Among the crania brought from Peru, by the Hon. E. G. Squier, was one from which a regularly lozenge-shaped piece had been sawed from the frontal bone by means of cutting four grooves intersecting each other so as to liberate the included portion. This operation was believed by the very high surgical authorities in Paris who examined it, among them Broca and Nélaton, as having been done during the life of the individual, as the bone adjoining the opening thus formed showed signs of inflammation.

The instance we are describing differs from the preceding in the absence of distinct grooves, excepting at the outer angle of the opening, a difference which may be, in part at least, ascribed to the fact that in one case death followed soon after the operation, and in the other at a very much later period and after the parts involved had undergone considerable changes from the effects of inflammation and absorption. As already suggested we are inclined to the view, even if the bone had been sawed, that the opening had at least been enlarged by a process of rasping and scraping.

There are two crania which show the marks of blows from a round or blunt pointed instrument, probably of some kind of hammer, and which were, it may be presumed, the cause of immediate death. The effect of these blows has been to punch clean round holes through the skull without radiating fractures, or, when delivered with less force, as was the case in some of them, simply to indent the outer and at the same time scale off the corresponding portion of the inner table, without displacing the spongy substance, diploe, between the two. In specimen 7177 there are marks of seven blows, in which these two varieties may be seen. A single hole made in a similar way to the preceding exists in
one of the crania presented by Mr. Squier, and in which the de-
struction of the walls is complete. This kind of injury is not
unfrequent in Peruvian crania.

It is not improbable that in some cases like those just described,
a surgical operation either of sawing or rasping was resorted to
to facilitate the removal of fragments and thus relieve the brain.

Peruvian Macrocephalic Skull Specimen 7200 came from An-
con, and belonged to an individual not quite adult, as the non-
umen of the basilar and sphenoid bones shows. All the teeth are
protruded except the third molars, which appear to have aborted
as there are no signs of them in the alveolar margin of the jaw.
The crowns of the molars are much worn.

The general form of the skull is not unlike that of some of the
other crania which have been flattened from before backwards, but
otherwise is not remarkable for its unnatural shape. The frontal
bone is much slanted backwards, has a decided ridge correspond-
ing with the position of frontal suture, and is slightly concave on
each side of it. The length of the head is 127, breadth 109,
height 111 mm. The frontal diameter is 80 and the zygomatic
112 mm. The breadth is 0.85 of the length. The thickness of the
skull measures from 4 to 8 mm. The internal capacity is 530 cub.
cent, or 33 cubic inches, which is 0.44 of the size of the average
Peruvian cranium.*

The jaws, bones of the face and teeth, are all well formed and
there are no marked signs of idiocy so common in crania which are
much under the usual dimensions. It is very probable, however,
in view of the diminutive brain, that idiocy must have existed†.

The frequent occurrence of two other abnormal conditions, rare
in the crania of most races, deserves mention. One of these is
the third occipital condyle, first noticed by Meckel and more
recently studied with care by Halbertsma. Of seven cases ob-
served by this anatomist six were from the Indian Archipelago,
and only one was European. There are two instances in the one
hundred Italian crania of the Nicollucci collection presented to
the Museum by Col. Theodore Lyman. Dr. J. Barnard Davis has
also called attention to this subject in his "Thesaurus Craniorum."

* Notwithstanding being nearly adult, it is very much smaller than the crania of
some Peruvian children not over seven years of age, one of which has a capacity of
550, another 980, and a third 810 cubic centimeters.
† See Macrocephalic skull from Mauritius, p. 21.
Of the 330 Peruvian crania, brought from Ancon by Prof. Agassiz, seven had a third condyle, which is a much larger proportion than was observed by Halbertsma. This condyle varies much in size, the smallest occupying about one-third and the largest nearly the whole of the space between the normal condyles. Six of them are on the median line, and one is to one side and joins the left occipital condyle. In two the articular surface is broad and rough as if it had been covered with intervertebral substance, but in the others smooth as if it formed an ordinary movable articulation, with the odontoid process of the axis. With the exception mentioned the appearances are as if this condyle had been developed from a single median process, there being no signs of primary division. As the atlas and axis are in all cases absent, it is impossible to show with certainty what the relation of this third condyle was to either of them and especially to the axis. There can be no doubt, however, that it articulates directly with the odontoid process.

The second anomaly is the presence of a bony tumor in the outer ear opening. This has been already observed by Welcker in Peruvians, and we have noticed it in crania from the Hawaiian Islanders. In the collection brought by Prof. Agassiz from Ancon it is found in eight crania, or one in 41.25. This is a very much larger proportion than in Europeans in whom it is rare, averaging, as I am informed by Dr. C. J. Blake, who has devoted himself to the diseases of the ear, only about five in a thousand of the cases treated for diseases of this organ, but as they rarely produce much inconvenience they are not always offered for treatment, and consequently the average just given is probably too low. The tumors are almost exclusively attached to the tympanic ring, generally two in number, one on the front and the other on the back of the meatus, but sometimes there are three or four. They vary in size from a pin's head to that of the whole caliber of the canal, which in one instance they completely filled. In most of them when the integuments were in place the meatus was without doubt completely obstructed.

Earthen vessels. There are fifty-one pieces of earthen-ware showing considerable variety in the kinds and various degrees of skill used in the manufacture. Many are of the ordinary and well-known forms, and a few only require especial notice. Three of
these are of large size and while preserving the form of a vase, are made to rudely represent the human body by the more or less complete indications of limbs and features. They are of the following sizes:

- 7224 is 15.00 inches high and 8.75 inches broad
- 7225 is 17.75 inches high and 9.50 inches broad
- 7226 is 18.50 inches high and 8.00 inches broad

The body of the vases is egg-shaped and consequently incapable of being maintained in a vertical position without support. The arms and legs are very rudely represented by ridges slightly raised above the surface, and the feet by slight projections. The hands project more freely, have the fingers indicated, and grasp a cup of a conical shape and resembling specimens 7254–56. The neck of the vase is either cylindrical or slightly bulging, and by the addition of features is made to represent the human head, but between it and the body there is no proper neck. The mouth part of the vase is somewhat flaring, or tunnel-shaped, has ornaments raised upon the surface and is painted, the whole representing a cap. The different parts of the face are more or less colored, and the lower part of the cheek is painted as if to represent a beard.

7223 is also an egg-shaped vase, in general resembling the preceding but more carefully ornamented. Instead of grasping a cup in the hands, these support, by means of bands passing over the shoulders, two small vases resting upon the upper part of the back.

The above are all so nearly alike that there seems no doubt they were intended for the same purpose, probably holding water. As the largest has a capacity of but little over two gallons, they cannot be classed as burial urns unless they were intended to hold simply calcined bones, or small portions only of the body.

7227 and 7247 are jugs with handles, have depressed spherical bodies, and the necks bear the features of the human face. In 7227 there are no limbs, though the hands are rudely represented, as if to suggest the idea of arms. The same is the case with 7247, but the arms are in addition painted.

7229 is a large egg-shaped vase, and has four broad grooves descending on the sides like the grooves of a melon, and between these are broad dark stripes. It has a capacity of about three
gallons, and is surmounted by a small neck with four handles at regular intervals, the handles imitating the legs of an animal. On one side is an animal's head with large ears, not unlike those of a bat, and on the opposite a short tail.

7254-56 are cups bearing the shape of a truncated cone, one of them with an ornamental band painted around the lip.

7257-72 comprise a series of sixteen flat vessels or dishes, of the size of, but somewhat deeper than, a common saucer. They appear to have been made in sets, as several of them bear the same device painted on the surface. These will be referred to again in connection with the mode of manufacture.

7251 may be compared to a tall beaker, is neatly made and has a graceful form. The body is cylindrical, a little less than eight inches high and three and three-quarter inches in diameter, it is slightly contracted near the bottom, but enlarges again into a well made base. The lower third is painted black and the rest with long, narrow, vertical stripes on one side, and four transverse rows of short, vertical, alternating stripes on the other. Two small handles of different patterns are attached near the lip. One is in the form of a loop and the other of three small spheres one above the other.

7244 is a small vase with a pointed bottom, flaring neck and handles on the sides. Two serpents are represented in relief on opposite sides of the upper part of the body.

There are several other vases of different patterns but do not require especial mention.

The only further remarks which seem necessary relate to some of the methods of manufacture.

It is conceded by all who have examined into the subject, that the potter's wheel was wholly unknown to the aborigines of either North or South America. The art of pottery was, therefore, necessarily a laborious one, for each piece, in most cases, was modelled throughout exclusively by hand, shaping tools being occasionally used. The amount of labor required would necessarily increase with the complication of form and the degree of ornamentation of a given article. The difficulty growing out of this slowness of production and the time required for each piece was, however, met in several ways by the use of natural or artificial forms as moulds. Gourds are said to have served for this purpose, but as the pot could not be removed, the mould would necessarily be destroyed.
in the burning, each gourd yielding but a single vessel, but as
grounds could be had in considerable numbers, the reduction of
labor would be large. Other vases especially the larger ones were
sometimes moulded to the interior of a basket, which last served
as a scaffolding until the clay was dry, and was destroyed when
the vase was burned, leaving its imprint on the surface. In
these cases too, the production of articles would be quite limited
as a new basket must be made for each.

In the art of pottery as practised among civilized people, the
two means of giving shape, which have vastly reduced the labor
and rendered the production of copies almost unlimited, are the
potter's wheel which enables the artisan to work much more rap-

didly and at the same time renders finer and more graceful forms
possible, and the mould so constructed that large numbers of
pieces can be made having identical size and shape. Where arti-
cles are reproduced in great numbers, as in those of common
household use, the mould replaces the wheel and renders the pro-
duction of them almost unlimited.

It appears from the specimens in the collection that the inven-
tive faculty of the Peruvians enabled them to devise this last
process which so largely facilitates the production of modern
earthen-ware. How extensively it was used it will be impossible
to say from the examination of so small a number of specimens
as those we are now describing. The device adopted by them as
indicated by the vases we have was to construct the mould in two
parts, make each half of the vessel separately, and then join them
together by a welding process while still in the soft state, just as
is done in the modern potteries. This process has been practised
in specimens 7232, 33, 34, 35, which are vases with pear-shaped
bodies and narrow necks. The outer surface is remarkably
smooth, and the curves extremely regular in each, especially in
7232, 33, 34. A ridge, readily seen, extends from the neck down
the sides and across the base, dividing it into two equal parts,
and which is evidently the result of the pressing together of the
two halves of the vase which have been welded along this line.
In 7232 the welding has not been quite complete and a crack has
followed its course on one side from the neck nearly to the base.
In two or three instances in consequence of an incorrect exposi-
tion of parts, the edge of one-half at several points projects
beyond the other. 7232, 34 and 35 are decidedly flattened and

the surface is thus divided into two faces, a front and back, and these unite along the ridge just mentioned. We have not here, as in other cases to be described farther on, repeated copies from the same mould. To find such would be a mere matter of chance, but there can be little doubt that the moulds giving these forms would have been permanent ones from which large numbers of copies might be made.

In the instances just described the surfaces are smooth and have no other than painted ornaments. In 7228 we have evidence of still further progress in the potter's art. This may be described as a mug rudely fashioned in the form of the human body, not unlike some of the grotesque forms seen in the common crockery stores. The head forms the upper and the body the lower half and the two are nearly of the same size with only a slight construction for the neck. The limbs are represented by ridges raised upon the surface, the hands project free and grasp a cup somewhat resembling a dice box. The nose, eyes, mouth and chin are all represented in relief. The ears are provided with large conical ear ornaments, the former being represented by slender bands forming loops which hold the ornaments in place and through which these are thrust. A strongly marked ridge, showing the line of welding, extends as in the other cases around the sides and base, and which corresponds with the union of the fore and hinder parts of the body. All the details, except the hands and the cup they grasp (there are signs that these parts were subsequently added as handles are added to pitchers), were given by the mould.

Of the saucer-shaped vessels previously referred to, the large portion have a foot which was evidently made in a mould. Two of them have a device within the circular ridge forming the foot which is obviously made in this way. Three pieces, viz. 7263, 7264 and 7270, are all repetitions from the same mould. The ridge of foot is of exactly the same size and shape in all, and it may be added that the three pieces bear the same device painted on the exterior.

We have thus evidence to show that the art of pottery was sufficiently perfect to allow the Peruvians to repeat copies of their works with either simple or complex surfaces without the necessity of modelling them anew each time. Where ornaments in relief exist they were made in the same way that similar kinds
of ornaments are at the present time in the potteries of different parts of the world *

It may also be mentioned that some of the vases in this collection as was shown in repairing 7228, the neck and mouth portions and which represent a head were made separately and afterwards joined. Similar methods were used in Central America.

A fact worthy of notice is the existence of a conical ornament thrust through the ears, in specimens 7224, 7225, 7226, 7228. These resemble ornaments to be seen in several of the terra cottas from Central America obtained by Dr Berendt and now in our collections. In the Central American specimens the ornament is of a globular form in some and conical in others.

7240 is a small vase, the lower half of which, was made in a mould as is readily seen by the regularity and smoothness of the surface and the upper portion built upon it by hand. The line of union of the two is easily seen both on the inner and the outer surface.

7380 is the figure of a man in terra cotta, without clothing except a belt and apron and with a heavy weight or perhaps ornament suspended from the neck by a cord.

7388 represents a monkey, in the same material, probably a Cebus, in a sitting attitude, one hand applied to the back of the head, and the other holding to the mouth what appears to be some kind of fruit. An ornamented belt surrounds the waist, indicating that it was intended to represent a domesticated animal. This figure evidently was an ornament to a jar and has still attached to it a portion of the walls. Though rudely executed it represents the general features of the animal correctly.

Ornaments of Gold and Silver. There are twenty ornaments made of gold and were all obtained from the Chincha Islands. Four of these are made of very thin sheets of which two, 7275 and 7290, are in the form of parallelograms from seven to eight inches long and three and four wide with the surface crossed by

* Since writing the above we have seen a communication made by Dr. J. Barnard Davis, to the Anthropological Institute of Great Britain and Ireland, April 1, 1874, in relation to some earthen vases brought by Mr. Hutchinson from Peru. Dr. Davis expresses the belief that one of the vessels (No 2), in the form of a gourd, was “cast from a clay mould taken from a natural specimen, as there is the appearance of a seam along the middle of the bottom.” Of No 4 he says, “from the marks of seams at the sides, it is probable that the body of this vessel has been made in two halves.” See also the remarks of John E. Price, F. S. A., at the same meeting.
lines extending obliquely from side to side, forming lozenge-shaped spaces. The edges and corners are perforated as if to attach them to the dress.

7273 is about two and one-half inches square with the angles prolonged and 7274 is of a trapezoidal shape and has a series of small but similar shaped pieces suspended by threads from its lower border.

7291, 92 are made of thick plates of gold nine to ten inches long and rudely represent a female figure of which the general outline only is cut out, the arms, legs and features of the face are represented in relief by ridges hammered up from the opposite side. 7289 is a smaller figure, with the different parts similarly represented. 7281 is a cylinder of gold made by rolling up a strip and bringing the ends together, but they are not joined. 7280 is a thin concavo-convex disk of gold, an inch and a half in diameter. 7279 is made of two such disks, the edge of one turned over that of the other, the two forming a lens-shaped ornament, a portion is cut out from the edge for the purpose of admitting a handle, and a hole drilled for securing this in its place by means of a pin. 7282 and 7283 are ornaments, probably, and show that the existence of the art of soldering was known to the Peruvians. They are made of a disk of gold like 7280 but each has attached to its concave side a cylinder of silver. This is made of a strip rolled up, the edges neatly soldered and the free end of the cylinder covered by a silver plate or cap also soldered in its place, and the cylinder thus formed is in turn soldered by the open end to the concave side of the gold disk. This illustration of the art of soldering different metals by the Peruvians is worthy of notice. 7278 is a strip of thick gold five and a quarter inches long and nearly two wide, from a part of which triangular pieces have been punched.

7288 is a pin an inch long surmounted by an ornament cut from thin gold.

The remainder of the gold pieces are rudely made, and are of uncertain use, but appear to have been intended to be attached to the dress as ornaments.

There are twenty-three pieces of silver some made of thin sheets crossed with oblique lines as in the case of the first mentioned gold ornaments. There is a single figure of the human body, eight inches long, but neither limbs nor features are represented.
A portion of the head has been destroyed by oxidation. It is slightly convex on one side and concave on the other where the marks of the hammer can be distinctly seen. 7317 is a thin strip of silver nearly fourteen inches long and two wide, with four stripes of vermilion red painted on one side. There are three disks from one and a half to two inches in diameter and which resemble those made of gold. One of them evidently formed a part of an ornament like 7279. 7315 is a disk three inches in diameter, but partly destroyed with a curcular ridge about midway from the centre to the edge, the included portion being painted with vermilion.

7309 is a cup shaped piece of silver an inch and a half in diameter, but partially destroyed, there are two slits perforated in one of the sides.

7316 is a large sheet of silver much oxidized. On each side are attached strips of silver, which have also been partially destroyed by oxidation. These are attached to the central piece by means of short wires passed through the edges of the adjoining portions and both the ends clinched upon the same side of the plate. The whole measures thirteen by eighteen inches and is of the thickness of a playing card. 7318 is a narrow strip two feet and seven inches long made of thin gold with an oval enlargement in the middle, covered with marks resembling hieroglyphics, probably worn as a band or fillet.

Among the objects of interest exhumed with human remains from the huacos are, a woman's work-basket neatly made with a hinged cover and containing various articles of use, such as spindles with neatly ornamented weights, some of them still holding the yarn as it was spun, balls of yarn, needles made of slender pieces of wood the eye finely drilled, combs, wooden implements of uncertain use, etc.

There is also a large collection of textile fabrics of some finely woven cotton and printed with color, fragments of nets for fish, also coarse rope netting used for covering the mummies, cordage of various sizes, matting, a cup made of a gourd and holding ears of corn, etc.

Besides the articles taken from graves is a collection of yarns of different colors made by the modern Indians.

Weapons from the Amazons. These consist of a spear 8½ feet
long made of palm wood and ending in a long and broad head, a bundle of seven slender spears of about the same length as the preceding with slender points, poisoned these last are neatly sheathed, each in its own case and all the cases bound together, the seven making a compact bundle, a bow handsomely bound with cotton twine, and bundles of arrows These are between five and six feet long, the shafts are feathered and made of a long unpointed stem and pointed with broad, long, leaf-shaped heads made of bamboo. The latter are more or less pointed and barbed. Others have slender points of palm wood with simple barbs cut on the sides or have in addition a barb at the point made of bone neatly received in its place. Some of these last appear to be poisoned with woodara. There are two good specimens of the sarabatana one six and the other seven feet long. These are made from some species of palm wood, neatly bound with strips of vegetable fiber called by the natives jaentara, spirally coiled from one end to the other and the whole covered with kumamani wax—a cement made of black wax and pitch. The bore of these simple but effective instruments is remarkably true.

From Central America are five pieces of earthen-ware. One of these, intended for a vessel, is fifteen inches long, represents a quadruped with a long snout, probably a coati. The body is hollow and on the back is an opening two inches in diameter and surrounded by a neck. A second is a whistle and is in the form of a cat and corresponding almost exactly with those seen figured in accounts of Central American objects. Three other pieces are quite similar to each other in their general features but of different sizes and rudest represent a female figure sitting, holding a child on one arm. The head in all is somewhat remarkable, that portion above the eyes being low and flat, while the nose is of large size and extremely prominent. The mouth and jaws recede so as to be inconspicuous, giving the features an idiotic look. The profile reminds one, though exaggerated, of the figures seen in Central American sculptures. The head of the child is distinctly represented and has the same large nose, low forehead, and receding lower parts of the face, as the parent, but the arms are only imperfectly indicated and the legs and lower part of the body not at all. The arms of the mother are represented by
arches projecting from the sides, and the legs by cones at right angles to the trunk but not divided into the different parts nor are the feet at all represented. They are supposed to be idols.

7395 is a remarkably well wrought metal from Central America. It is made of lava, is circular, nearly fifteen inches in diameter and eight and a quarter high. The top forms a slightly concave dish an inch thick, and has just beneath its edge a series of eleven heads of an animal, probably of the panther or jaguar, well chiselled. It is supported by a hollow conical pedestal spreading out at the base and perforated by four equally distant narrow vertical openings or slits. The whole is remarkable for its symmetry and neatness of execution.

Microcephalic skull from Mauritius. We have no history of this skull beyond the fact that it was obtained at Mauritius by Nicolas Pike, Esq., late U.S. Consul at this island, and by him presented to Prof. Agassiz. This remarkably small skull has the general features of the negro type to an exaggerated degree.

Its length is 192, breadth 91, height 90, and breadth of frontal 70 mm. The breadth is 0.68 of the length. The internal capacity is 400 cubic centimetres or about 25 cubic inches, a little more than one-third of the average negro, and about the same as that of the chimpanzee. The jaws are extremely prognathous, the forehead very low, narrow and receding, and has a ridge corresponding with the former frontal suture, but none of the normal sutures of an adult are closed. The ossification is complete in all respects and the teeth are all fully developed and somewhat worn. The third molar of the lower jaw have disappeared and then alveoli are partly filled up. Both jaws are regularly arched. The nasal opening is low, the height and breadth being equal. The edge of the squamous portion of the temporal bone is but very slightly arched and articulates with the frontal for the space of 15 mm on the right side and 8 on the left, instead of being separated from it by an intervening parietal as in ordinary crania. The temporal ridges reach the upper part of the head and are separated from each other by a space an inch and a quarter wide. As will be seen by the measurements, the cranium is remarkably long and the fore part of it is very narrow. There is a strong projection of the occiput above the protuberance and the fossae which correspond with the hinder cerebral lobes are pronounced to a
corresponding degree. The texture of the bone is dense and the cranium without the lower jaw weighs 342 grams. The zygomatic arches stand out free and leave a large interval between them and the sides of the head. The lower jaw is well formed, but the incisive alveoli have a strong inclination forwards.

Taking together the high temporal ridges, the union of the temporals with the frontals, the projection of the jaws, the narrow and retreating forehead, the small capacity, and the form and proportions of the nasal opening, the general resemblance of the skull to that of an ape is most striking and seems to justify Vogt's expression of "man-ape," it being understood that the skull we are describing is not of a natural but an anomalous formation.

II. Hartt Collection

Sixty specimens of objects made chiefly by the modern Indians of Brazil have been received from Prof. Hartt and are a part of the collection described in the last annual report. They consist of bows, different kinds of arrows used in catching fish and turtles, spears for capturing the great "Pirarucu" (Sudis gigas), stems used in making the shafts of arrows, two specimens of the zarabatana or blow-gun and two quivers for poisoned arrows all from the upper Amazons. There are earthen vessels of various forms and sizes from Santarem and Itaituba, earthen lamps of ancient pattern, a series of cups in the form of buds painted in colors, and a collection of dishes made of the calabash. A lip ornament made of quartz, remarkable for the neatness of the work, resembles that noticed in the last report. It is cylindrical, four and one-half inches long, a half inch in diameter, and is enlarged at one end in the form of a button, a little more than an inch in diameter, and at the other has a cross bar an inch long. Besides the above are specimens of copal, of a resin used in glazing earthen vessels, earth and fragments of bones from an Indian burial vase, etc.

III. Other Additions to the Collections.

Gifts have been received from the following sources—Rev B. F. Decosta, two stone pestles and a stone gouge from the Island of Grand Menan, also a stone chisel and a collection of arrow heads from other sources.

Prof. Edward Desor, of Neuchatel, a very beautifully wrought
and polished stone chisel, found nearly opposite St. Louis at Monk Mound in Illinois

Henry Gillman, Esq., a collection of human bones and stone implements, obtained by Mr. Gillman from an Indian mound at the head of the St. Clair River, Michigan, a pair of silver plated bracelets worn by an Indian chief at Lake Superior, human bones and fragments of pottery from a mound on River Rouge, Michigan, pieces of matting and bask made by Indians on Eagle River, Lake Superior, also pieces of inner bark of the white cedar used by the same for various domestic purposes.

Smithsonian Institution, human bones from Sarasota Bay, Florida. These are remarkable for their weight, a thigh bone weighs 491 grams, while a recent bone of the same length, but somewhat stouter, weighed 353 grams. The increase of weight is due to the infiltration of the bones with an oxide of iron.

Dr. George A. Otis, U. S. Army, two photographs of Indian vases from Camp McDowell, Arizona.

Dr. Josiah Curtis, a hat made of hide and worn by Pagawitie, an Indian chief in Idaho.

Boston Society of Natural History, a hat worn by the natives of Amboyna, a grotesque figure of an animal carved in wood, probably from the North West Coast, three stone pestles, a small stone mortar, and a stone sinker made by N American Indians, "a sinker for catching squid" from the Pacific Islands, a painted earthen vase from Central America, a musical instrument made of reeds resembling a Chinese "mouth organ," an apron made of slender strips of leather attached to a girdle and ornamented with beads.

A valuable collection of human remains and of stone implements, from East Tennessee, made by Mr. Caudill under the direction of Prof. N. S. Shaler has been received.

IV. Human Remains in the Shell Heaps of the St John's River, East Florida. Cannibalism.

After repeated examinations of the more important shell heaps on the St John's, we have failed to find any evidence that they were used for the burial of the dead, or for any other purpose than dwelling places. Human bones have, however, been discovered in them, from time to time, under peculiar circumstances,
and as their presence opens a question of much interest, it will be desirable to describe in detail each of the instances in which they have been detected, especially where the bones have been found in considerable numbers.

1. The first which came under the notice of the writer, was at Old Enterprise, on Lake Monroe, in 1861, a few rods above the high bluff and near the shore of the lake. The deposit of shells where the bones were found, is about four feet thick, and has been much washed away by the waves during the great storms. While making an excavation near the roots of a large palmetto tree which had been partially uncovered by the action of the water, human bones were found about two feet below the surface. A foot above them, where a fire had been made, were ashes and large pieces of oak charcoal. The bones were not burned, however, and did not appear to have been connected with the fire in any way. They were broken into pieces a few inches long, just as was the case with the bones of the deer from the same deposit, or from the adjoining bluff, and like them had lost their organic matter, were incrustated with lime, and had become cemented together, so as in all respects to have the appearance of the same age as the bones of the animals associated with them.

The fragments consisted of the head of a femur broken off just below the lesser trochanter, two fragments of the shaft of this bone, one fragment each of the shaft of the tibia, fibula, and humerus, a part of a scapula, including the glenoid portion, two metatarsal bones, and one phalanx of a thumb. It is quite probable that there were originally a larger number of pieces and that many had been carried away by the action of the water in its encroachments on the shore.

Two important and more complete discoveries were made in the neighborhood of Blue Spring, though the localities were somewhat over two miles apart.

2. One of these was on the left bank of the creek through which the spring discharges, and about thirty feet from its union with the river. The bones were found about two feet below the surface, embedded in the shells, and represented a large part of the bones of the skeleton. They were nearly all more or less broken, and were scattered about without any definite order. Many fragments of the skull, however, were found near together. Besides the pieces of the cranium, there were fragments of the
following bones viz., the lower jaw, right and left clavicle, right humerus, right and left scapula, ulna of both sides, right radius, right and left femur, right tibia, the two patellæ, upper end of the sternum, one fragment of pelvis, many fragments of ribs and a few bones of hands and feet. The humerus, radius and tibia of the left side were not found.

3 The other collection is from a low oval mound, in the swamp or meadow, two miles in a northerly direction from Blue Spring. Here, again, portions of many parts of the skeleton were present. Notwithstanding careful search beyond the limits where the bones were discovered, not a single piece of the head was found. Of eleven vertebræ found, all except one (the fifth lumbar), had their arches detached, as if for removing the spinal cord. The right innominate bone was broken into four pieces, of the left only one large, including the acetabulum, and a few small pieces remained. The right femur was broken into three and the left into five pieces; the left radius and left ulna each into three pieces, the left humerus into two, and the head of it was missing. All the bones of the right arm and right leg below the knee were missing. There were many fragments of ribs. The different pieces were scattered about over a surface of four or five square yards and promiscuously mingled. The bones had not been previously disturbed.

Near these remains were found some fragments of a large earthen vessel, apparently capable of holding several gallons, and varying from a half to three-quarters of an inch in thickness. The bones had lost all their organic matter, and when struck against each other have a decided ring.

4 A small collection of human bones was found in a shell field a few hundred feet south of the mouth of the creek at Blue Spring, and near the river. They consisted of fragments of the humeri, tibia, lower jaw, scapula and ulna, broken in the same manner as those just described, and also bones of the hands and feet. As the field in which they were discovered had been ploughed, it is uncertain to what extent the breaking of them may have been accidental. The appearances were the same as in the bones already described. There were no signs of a burial place.

5 Many fragments of an imperfect human skeleton were found in the mound on Huntoon Island, and near Huntoon creek. They were covered with shells to the depth of eighteen inches, and
though the place was completely explored, only the following were discovered, viz., fragments of a skull, an imperfect lower jaw, pieces of the right and left thigh bones, a piece of an upper arm bone, some fragments of the forearm and leg, and a few joints of fingers and toes. The bones were all of a diminutive size, evidently those of a dwarf. Basing an estimate on the proportions of the thigh bones to the whole skeleton, the individual is supposed to have been about three feet and a half high. The angles and articular processes of the lower jaw were broken off and the molar teeth had nearly all disappeared during life, and their alveoli had been absorbed. These facts indicate an individual which was, at the least, adult. Forty feet from the place where these bones were found, a large tree had been overturned, and among the shells carried up by the roots, was found a human ankle bone (an astragalus), but a careful search brought to light nothing else, in this direction, belonging to man.

6. A single fragment of a human upper jaw of the right side, was found in the large shell heap on the same island and near the river buried to the depth of six or seven feet, and could have been deposited there only at the time the mound was built. An upper arm bone, whole, parts of the lower jaw, and a few fragments of other bones, were discovered in the débris at the base of the same mound where it had been undermined, but the precise place from which they had fallen is uncertain.

7. In the remnant of a mound, three-quarters of a mile below Hawkinsville and on the left bank, human bones were found, about a foot deep, in a layer of shells not more than two feet thick. They appeared to be of the same age as the shells in which they were imbedded, and were all broken, and much scattered, a proof that they had not been buried. A second deposit was found twenty-five feet from the preceding, the bones were somewhat incrusted with lime, and were more decomposed. There were from the first locality seven fragments of cranium, two of the left humerus, two of the left clavicle, one of the right ulna, one fragment each of the right and left tibia and several small pieces of other bones. The shore where both these sets were found had been undermined and it is probable that many pieces had been washed away.

8. Excavations made on the side of Bartram's Mound near the river, and where it had been undermined, brought to light numer-
ous pieces of human bones all belonging to one skeleton. There were eighteen fragments of cranium, the right half of the lower jaw, the teeth of which had nearly all been lost and then alveoli absobed, and thirty fragments of other bones including those of a femur, humerus, radius, tibia, fibula, and a patella. All of these appeared to have been covered for a long time, had lost nearly all their organic matter and were incrusted with a thin layer of calcareous deposit. It is quite likely that here too some of the bones originally deposited had been washed away by the river, as the mound at this point had been largely destroyed. In several instances the cranial bones were broken into small fragments and were irregularly cemented together by the deposit of lime.

9. A large block of consolidated shells split from the front of Osceola Mound left exposed a portion of a human skull. In detaching this, other bones were brought to view and excavations were continued until no further traces could be discovered. The chief part of the bones were removed in a mass of conglomerate and subsequently exposed by chiselling away the matrix, but from which they have not been wholly detached. The organic matter has entirely disappeared and the matrix adheres so firmly to the bones, that it is very difficult to separate it without at the same time breaking off pieces of bony structure.

Of all the human remains we have met with in the shell mounds these last are the most interesting, both on account of their greater age and of their being almost the only ones which can, with any certainty, be referred to the earliest period of the mounds. Osceola mound is one of the series in which pottery is not found, and its materials, as well as the mound as a whole, have undergone great changes.

There are certainly bones from two individuals, mingled. Two thigh bones, which are mates, lie side by side, but in reversed positions, the upper part of one corresponding with the lower of the other. The articular portions are gone. Parts of at least two others were found, one of which was removed nearly whole. Of the other there are two cylindrical portions, one 55 and the other 90mm long. The exposed ends of the shorter one show the interesting fact that the bone had been artificially divided, by cutting a groove around the circumference of the bone and thus weakening it and then breaking the remainder. This is a common method of
dividing bones used by Indians. The broken surface and the marks of the cutting instrument are quite obvious. In the longer piece these marks are present but less distinct. As further evidence of the presence of bones from two individuals, may be mentioned the lower ends of two upper arm bones, both from the right side and of different sizes, and both cemented together. There are three tibiae, two of which are decidedly flattened and belonged to the same individual, the third having more nearly the triangular section, but only slightly flattened.

Besides the above there are fragments of a scapula, pelvis, humerus, radius, tibia, ribs, tarsal and carpal bones and phalanges. There are but few pieces of ribs, and but a single vertebra has been recognized.

The different bones were artificially broken in a few cases only, and contrasted very strongly in this respect with those previously noticed.

We have met with but a single other instance where human bones have shown signs of having been wrought by the aborigines. This was in the coast shell heap at Ipswich, Massachusetts, where Mr Elliot Cabot discovered a human upper arm bone, which, as shown by the lines and marks on the surface had been ground or scraped. The nature of this instrument found is uncertain, as the end has been broken off. It is preserved in the Peabody Museum.

10. At Huntoon Island, and in the rear of the shell mound on the St John’s, are two conical mounds, and are supposed to be burial mounds, one fifteen and the other twenty-five feet high. Excavations carried to the depth of six feet, but arrested at this depth on account of our inability to get the necessary labor, did not, however, reveal any evidence of burial in either of them. A collection of human bones was obtained from the top of the larger of them at the depth of about a foot below the surface, which in all respects correspond with those previously described. They were scattered over an area of several square yards and belonged to a young individual as shown by the size of the bones and the condition of the epiphyses. Each of the long bones was broken into two or more, and the skull into many, fragments. Pieces were found from all the principal divisions of the skeleton. There can be no doubt that the bones were intentionally broken, as the upper ends of two humeri show precisely similar marks of violence. In each case the bone is broken off an inch below the head, by an
instrument which crushed the bone, the fragments of which, flattened down, are retained in opposition, not having been originally completely separated. The bones are all incrusted with a calcareous deposit, which in some cases cements the fragments, and others the smaller bones, as of the hands, together. Their condition is similar to that of the bones from Bartram's Mound already described.

The above are the chief instances of the presence of human remains in the shell mounds which have fallen under our notice. They are not supposed to be the only ones which existed, for they were all but one chance discoveries. In all but a single instance there was nothing to direct attention to one place rather than another in making excavations, and as these were begun at random it is all but certain that many others escaped detection.

It would perhaps be going too far to say that the presence of human bones, under the circumstances above described, amounted to absolute proof of cannibalism. The testimony of eye-witnesses would be the only sure evidence of it. There is, however, nothing with regard to them which is inconsistent with this practice, nor does any other explanation occur to us which accounts for their presence so well.

If there were any eye-witnesses of cannibalism among the Europeans who explored Florida in the earliest days of its history, they have left no records of the fact. In later times Jonathan Dickinson, a Pennsylvania quaker, who was wrecked on the coast near St. Lucia in 1699, in the narrative of his sufferings, calls the inhabitants cannibals, but nowhere saw human flesh eaten by them. The most direct statement he makes is as follows: "At this town about a twelve month before a parcel of Dutch men were killed, who having been cast away on the Bohemia (Bahama) Shoals, they, in a flath which they built, escaped hither and were

* A statement by Le Moyne would at first sight seem to suggest another explanation. The natives when first seen by the French had the habit of dismembering the bodies of their slain enemies and carrying off the scalps and limbs as trophies. Plate XVI represents a celebration in which these are hung up on stakes and around which a ceremony is going on. While such a custom might account for the presence of human bones in the shell heaps, it would not for the fragmentary condition in which these are found, nor for the systematic manner in which all the bones of the limbs, as well as of other parts of the skeleton, are broken up. In addition it may be stated that for reasons we have given elsewhere there is some doubt whether the Indians who built the shell mounds were the same as those found when the Europeans arrived in Florida, and consequently a practice prevailing among the latter might not exist among the former."
devoured by these cannibals, as we understand by the Spaniards.”* I am indebted to Dr. C. F. Winslow for a statement in the records of Nantucket that Capt. Christopher Hussey “was cast away on the Florida coast and devoured by cannibals.” This event was also in the latter part of the seventeenth century †

The reasons derived from our own observations for believing that the ancient inhabitants of the St. John’s were cannibals may be stated as follows:

1. The bones, an account of which has just been given, were not deposited there at an ordinary burial of a dead body. In this case after the decay of the flesh there would have remained a certain order in the position of the parts of the skeleton, especially in the pelvis, the long bones of the limbs, the vertebral column and the head. The bones would be entire as in other burials. In the cases here described, they were, on the contrary, scattered in a disorderly manner, broken into many fragments, and often some important portions were missing, as the head at one of the mounds near Blue Spring, the bones of an arm and leg at the other, and in other mounds a still larger number of bones. The fractures as well as the disorder in which the bones were found evidently existed at the time they were covered up, as is shown by the condition of the broken ends, which had the same discoloration as the natural surfaces.

2. The bones were broken as in the case of those of edible animals, as the deer, alligator, etc. This would be necessary to reduce the parts to a size corresponding with the vessels in which they were cooked, or suitable for roasting, or even for eating raw.

3. The breaking up of the bones had a certain amount of method, the heads of the humerus and femur were detached as if to avoid the trouble, or from ignorance as to the way, of disarticulating the joints. The shafts of these bones, as also those of the forearm and leg, were regularly broken through the middle. The olecranon process of the ulna, was in some cases detached in the same manner as the corresponding part has been found to be in the deer.

4. There is no evidence that the bones were broken up while lying exposed upon the ground by wild animals, as the

* God’s Protecting Providence, Man’s direct Help and Defence, etc., p. 60, 8vo London, 1700
† See doings of the Nantucket Historical genealogical Society, in Nantucket Inquirer and Mirror Nov 22, 1873
wolves and bears. If they were thus broken one might reasonably expect to find the marks of teeth, but after a careful examination of hundreds of pieces they have not been seen in a single instance. As a general rule dogs, and the same is true of wolves, gnaw chiefly the ends of the bones, which are of a soft and spongy texture, leaving the shaft, which is solid and unyielding almost intact, or at any rate to the last. This is the case even with the bones of birds, which are so much smaller. In the bones from the mounds the spongy ends show no marks of teeth and are well preserved though detached from the shaft.

The conclusion we have given is strengthened by the fact that cannibalism prevailed largely in both North and South America, and that the natives of America were led to it by the same motives as were those of other parts of the world. In general this practice may be said to commend itself to the savage mind from the following considerations —

With some it was a matter of choice, depending upon a liking for human flesh as an article of food, as with the Fujians, who had not even the excuse growing out of a scarcity, for food of all kinds existed with them in greatest abundance. With others, and these are by far the most numerous, it was practised as an act of vengeance or triumph over a fallen foe, and with still others it may be said to have been of the nature of a superstitious rite or ceremony, as with the ancient Mexicans, the Miami, and others. To the above should be added the pressure of extreme hunger, which drives both savage and civilized man to this terrible alternative.

Of starvation nothing need be said, except that it is not improbable that the idea of eating human flesh as ordinary food, may, perhaps, have had its origin in eating it as a necessity. Once tasted and found to be good, as all cannibals aver that it is, under the influence of savage instincts and passions, the conversion of an enemy's flesh into meat to eat, would be very natural.

Of course the above motives, excluding the last, may be more or less combined, and a savage by eating his enemy may get his revenge and satisfy his appetite at the same time. Or, as with the New Zealander, who loves human flesh as a choice food, and who also eats it under the superstitious belief that he thus not only incorporates the body of his enemy with his own, but absorbs also his enemy's soul, so that ever after the two are one. To the victor this had an especial significance, for believing in a future
state and the presence of his enemy there, if he eats him in this life he makes sure of it that there will be no trouble with him hereafter, for he possesses him body and soul already.

In the cannibalism as practised in the two Americas, one recognizes the same motives and tendencies and often combined with them, in addition, a degree of cruelty to their victims unsurpassed in other parts of the world.

The degraded and brutal inhabitants of Tierra del Fuego, in their fearful struggle for existence, with the elements on the one hand, and savage foes and scarcity of food on the other, would seem to be almost naturally led to the practice of eating human flesh. Capt. Fitzroy has given a sad picture of these poor, wretched creatures, living on the very verge of regions just capable of sustaining life. They habitually eat then prisoners of war; and in severe winters, when snow and ice cut off their usual supply of food, the old women are sacrificed without hesitation. Having choked and smothered them over a dense smoke, they eat them to the last scrap. The life of the dog, however, is spared under these circumstances, as he can render efficient aid in hunting, which the old women cannot.

Of the prevalence of cannibalism in Guiana, there is evidence from various sources. The histories printed by De Bry are full of particulars of the manner in which the bodies of victims are prepared, cooked and eaten. Pizarro and his companions in their first but fruitless attempts to reach Peru from Panama, came suddenly upon an Indian village, when the inhabitants instantly fled leaving human flesh cooking before the fire. We have the authority of Humboldt for its existence on the Orinoco at the time he travelled there. Brett found what he was undoubtedly correct in considering the remains of a cannibal feast in an ancient shell heap. The Mexicans practised cannibalism on a most extensive scale on certain occasions. A prisoner was delivered to the warriors who had taken him in battle, and by him after being dressed was served as an entertainment of his friends. "This," says Prescott, "was not the coarse repast of famished cannibals,

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*Voyage of Adventure and Beagle, Vol. II, pp. 183 and 189.
†See De Bry's narratives—Brazil. Voyage of Joannes Stedum, Hesens, pp. 71, 81, 89, 126 and 127, also Voyage of Joannes Lemus, Burgundus, p. 217.
but a banquet teeming with delicious beverages and delicate viands, prepared with art and attended by both sexes, who conducted themselves with all the decorum of civilized life” 

There were other kinds of victims. As is well known, human sacrifices formed a very important part of the religion of the ancient Mexicans. Their war god was constantly honored with them, and the companions of Cortez saw large piles of the skulls of those who had been sacrificed. On such occasions, after the heart had been cut with an obsidian knife from the living victim, it was offered to the sun and then to the god, the body was thrown down the teocalli and afterwards divided and eaten. The native allies of the Spaniards, in the siege of Mexico, ate the bodies of their dead enemy. In the city of Mexico itself, as the siege was prolonged and food became scarce, the number of victims first sacrificed to propitiate the god of war in hope of relief, then served out as food to the starving people, was very large. These sacrifices were often made in the sight of the Spaniards, who sometimes recognized the lighter skin of their countrymen as they wound their way up to the sacrificial stone to be in turn distributed as food among the besieged.

Of all the American cannibals the Caribs undoubtedly had a stronger love for human flesh than any others, and not only ate their enemies taken in battle as a matter of revenge as well as gratification, but, like the Fijians, even fattened their prisoners for the cook-house that they might make better and more palatable food. It was also practiced among the Iroquois, Algonquins, Mamis and Kickapoos, as it existed in Louisiana, Illinois, and on the northwest coast. The most precise narratives we have of this practice are, however, to be found among the ‘relations’ of the Jesuits who were often eye-witnesses of the feasts of human flesh held by the Iroquois and Algonquin tribes.

One shudders with horror at the prolonged tortures which preceded death and the feast among these savage people. Every device cruelty could suggest was practiced. Long before death, sometimes days, torture began. Burning brands were applied to...
the naked skin, nails were bitten from the fingers, and flesh from the limbs, gashes were cut in the arms and legs and hot brands thrust into them, the scalp was stripped from the head and live coals and hot ashes poured upon the bleeding surface. Women and children joined in these fiendish atrocities, and when at length the victim yielded up his life, his heart, if he were brave, was ripped from his body, cut in pieces, broiled, and given to the young men under the belief that it would increase their courage, they drank his blood, thinking it would make them more wary, and finally his body was divided limb from limb, roasted or thrown into the seething pot, and hands and feet, arms and legs, head and trunk, were all stewed into a horrid mess, and eaten amidst yells, songs and dances.*

Much more might be added but enough has been said for our purpose, viz. to show that cannibalism being so common in other parts of America, there would be no improbability of its existence in Florida. We have entered more into details than we otherwise should because the subject of American cannibalism has not received the attention it deserves. Mr. Francis Parkman is almost the only one who has taken the trouble to call attention to the documentary evidence which exists bearing upon it, and I am largely indebted to his writings and to himself personally for references to original statements.

To the Trustees of the Peabody Museum of American Archaeology and Ethnology in connection with Harvard University

The Treasurer respectfully presents his Seventh Annual Report in the following abstract of accounts, and the cash account hereto annexed —

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<th>Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>12 Massachusetts Five per cent Specie Notes, as above</td>
<td>$60,000</td>
</tr>
<tr>
<td>9 Worcester Water Bonds, due June 1, 1877, Interest five per cent</td>
<td>1,200.00</td>
</tr>
<tr>
<td>3 Worcester Water Bonds, due June 1, 1877, Six per cent</td>
<td>1,210.00</td>
</tr>
<tr>
<td>6 Worcester &amp; Nashua Railroad Co's 5-10's and Seven per cent Bonds of Dec 31, 1870</td>
<td>6,600.00</td>
</tr>
<tr>
<td>11 Worcester &amp; Nashua Railroad Co's 20 yr Seven per cent Bonds of April 1, 1871</td>
<td>11,000.00</td>
</tr>
<tr>
<td>Worcester Note Jun 1, 1874, Interest Seven per cent, S A</td>
<td>8,000.00</td>
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<tr>
<td>Worcester &amp; Nashua Railroad Co's Note Jan 3, 1871, Interest seven per cent</td>
<td>570.80</td>
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<tr>
<td>Payment of accrued Interest on Bond bought Jun 3, 1873</td>
<td>18.28</td>
</tr>
<tr>
<td>Total</td>
<td>$292,160.14</td>
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The Investments of the

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Collection Fund, at par, amount to</td>
<td>$51,992</td>
</tr>
<tr>
<td>Professor Fund at par</td>
<td>45,000</td>
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<tr>
<td>Building Fund at par</td>
<td>192,161</td>
</tr>
<tr>
<td>Total</td>
<td>$192,161</td>
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</table>

STEPHEN SALISBURY, Treasurer

Jan 15 1874
Dr.

STEPHEN SALISBURY, Treasurer of the Peabody Museum of American Archaeology

1873

For Collect in Fund

Feb 1  To rec'd in part of Worcester and Nashua Railroad Co's Note for $2,452 98, Jan 2, 1872, $ 975 09
July 5  To rec'd in part of Worcester and Nashua Railroad Co's Note for $2,717 97, Jan 1, 1873, 576 00
July 5  To rec'd balance of principal of Worcester & Nashua Railroad Co's Note for $2,717 97, Jan 1, 1873, 2,141 97
July 5  To rec'd Int on above Note 6 m 4 days at 7 ct & an 97 24
July 5  To rec'd balance of Principal of Worcester and Nashua Railroad Co's Note $2,463 98, Jan 2, 1872, 2,815 21
July 5  To rec'd Int on above from July 2, '72, at 7 & ve & an 47 87
July 5  To rec'd 6 Months' Interest on Mass Five per cent Notes to 1st inst in Gold, 1,125 00
July 3  To rec'd for sale of above $1,125 00 Gold at 15 per ct, 1,125 00
July 3  To rec'd 6 Months' Interest on Mass Five per cent Notes of Professor Fund to 1st inst Gold, 1,125 00
July 3  To rec'd for sale of above $1,125 00 Gold at 15 per ct 1,125 00
July 5  To rec'd Principal of Worcester and Nashua Railroad Co's Note, Jan 3, 1873, 2,517 17
July 5  To rec'd Int on above, 6 mos 2 days at 1 per cent, 89 08
Dec 20. To rec'd Dividend on Failed Policy from Fuemen's Insurance Company, 2,606 25

1874
Jan 1  To rec'd for Principal of Worcester Note July 5, 1873, 2,587 50
Jan 1  To rec'd Interest on above 6 mos less 2 days, 89 65
Jan 2  To rec'd 6 Months' Interest on Mass Five per cent Notes to 1st inst in Gold, 2,676 55
Jan 2  To rec'd for sale of above $1,125 00 Gold at 15 per ct, 1,125 00
Jan. 2  To rec'd 6 Months' Interest on Mass Five per cent Notes of Professor Fund to 1st inst Gold, 1,125 00
Jan 2  To rec'd for sale of above $1,125 00 Gold at 15 per ct, 1,125 00
Jan 3  To rec'd Interest on Worcester and Nashua Railroad Co's Note for $5,000 35 July 5, 1873, to date, 173 06

1873
June 27  To rec'd 6 Mos' Coupons on Worcester Water Bonds to 1st inst, 125 00
June 27  To rec'd 6 Mos' Coupons on Worcester Sewer Bonds to 15th inst, 63 00
July 5  To rec'd 6 Mos' Int on Mass Five per cent Notes to 1st inst Gold, 198 00
July 5  To rec'd on Sale of above $1,500 00 Gold at 15 per ct, 225 00
July 5  To rec'd for Worcester Note, July 4, 1872, $2,752 28, Interest 7 per cent $90 00, 1,725 00
July 5  To rec'd for Worcester Note, July 4, 1872, $2,166 08, Int 7 per cent $77 55, 2,246 06

Amount carried forward $21,504 30
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<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Cr.</th>
</tr>
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<tbody>
<tr>
<td>1874</td>
<td>By balance of Account due to Treasurer.</td>
<td>195 00</td>
</tr>
<tr>
<td></td>
<td>By paid Harvard College one year's Rent of Museum Hall.</td>
<td>750 00</td>
</tr>
<tr>
<td>Feb</td>
<td>By paid Rent of Safe Deposit to Feb 1 1874,</td>
<td>50 00</td>
</tr>
<tr>
<td>March</td>
<td>By paid Mercantile Marine Ins Co for Policy $3,000 to one year in Collection.</td>
<td>77 50</td>
</tr>
<tr>
<td>May</td>
<td>By paid Henry Gillin in for Executrons in Michigan,</td>
<td>38 50</td>
</tr>
<tr>
<td>June</td>
<td>By paid Prof. Wyman one year's Salary as Curator to Jan 1 1874</td>
<td>500 00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>776 00</td>
</tr>
<tr>
<td>July</td>
<td>By paid for Worcester Note on demand Int 7 per ct</td>
<td>2,587 90</td>
</tr>
<tr>
<td>July</td>
<td>By paid for Worcester and Nashua R R Co's Note on demand Interest 7 per cent</td>
<td>4,000 35</td>
</tr>
<tr>
<td>Aug</td>
<td>By paid John P. Wild on account of Curtain Fixtures</td>
<td>77 00</td>
</tr>
<tr>
<td>Aug</td>
<td>By paid Thomas Morley for Deterpening Tablets</td>
<td>10 00</td>
</tr>
<tr>
<td>Sept</td>
<td>By paid F W. Putnam and Co for printing Report</td>
<td>118 25</td>
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<tr>
<td>Dec</td>
<td>By paid Mercantile Marine Ins Co for Policy $5,000, five years on Collection</td>
<td>203 25</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1874</td>
<td>By paid for Worcester Note on demand Int 7 per ct</td>
<td>3,000 00</td>
</tr>
<tr>
<td>Jan</td>
<td>By paid for Worcester and Nashua Railroad Co's Note on demand Interest 7 per cent</td>
<td>1,901 77</td>
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**Amount carried forward:** $14,483 96
Dr.

Amount brought forward, $31,704 30

July 5 To rec'd for Worcester and Nashua Railroad Co's Note, July 2, 1873, $2,433 85, Int 7 per cent $86 59 2,520 44
July 5 To rec'd for Worcester and Nashua Railroad Co's Note, Aug 6, 1872, $2,370 32, Int 6 per cent $120 97 2,500 29
July 5 To rec'd for Worcester and Nashua Railroad Co's Note, Jan 2, 1874, $2,600 70, Int 7 per cent $192 53 2,693 23
July 5 To rec'd for Worcester and Nashua Railroad Co's Note, Jan 4, 1874, $1,858 13, Int 7 per cent $136 94 1,994 07
July 5 To rec'd for Worcester and Nashua Railroad Co's Note, Jan 4, 1873, $1,000 00, Int 6 per cent $59 77 208 87

July 5 To rec'd 6 Mos' Coupons on Worcester and Nashua Railroad Co's Bonds to 1st

Oct 4 To rec'd 6 Mos' Coupons on Worcester and Nashua Railroad Co's 20 yr Bonds acc'd to July 6 186 67
Oct 4 To rec'd 6 Mos' Coupons on Worcester and Nashua Railroad Co's 20 yrs' Bonds balance to 1st inst, 163 33 350 00
Dec 20 To rec'd 6 Mos' Coupons on Worcester Water Bonds to 1st inst 136 00
Dec 20 To rec'd 6 Mos' Coupons on Worcester Sewer Bonds to 15th inst 63 00 198 00

1874

Jan 1 To rec'd for Worcester Note, July 5, 1873, $6,822 34, Interest 7 per cent $474 89, 7,097 14
Jan 2 To rec'd 6 Mos' Coupons on Mass Five per cent Notes to 1st inst Gold 1,500 00
Jan 2 To rec'd for sale of above $1,500 00 Gold at 103 per c.t., 153 75 1,653 75
Jan 3 To rec'd 6 Mos' Coupons on Worcester and Nashua Railroad Co's Bonds to 1st, 210 00
Jan 3 To rec'd for Worcester and Nashua Railroad Co's Note, Oct 4, 1874, $550 00, Int 7 per cent $30 05, 380 05 306 05

$41,412 11
<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>July</td>
<td>By paid for Worcester Note on demand, Int 7 per cent, 20 yrs from Apr 1, 1873</td>
<td>6,822.34</td>
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<tr>
<td>July</td>
<td>By paid for Worcester and Nashua R R Co's Bond 7 per cent $5,000.00</td>
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<tr>
<td>July</td>
<td>By paid accrued Interest on above from Apr 1, 1873 180.47</td>
<td>180.47</td>
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<tr>
<td>Oct</td>
<td>By paid for Worcester and Nashua Railroad Co's Note on demand, Int 7 per cent</td>
<td>10,186.07</td>
</tr>
<tr>
<td>1874</td>
<td></td>
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<tr>
<td>Jan</td>
<td>By paid for Worcester Note on demand, Int 7 per cent</td>
<td>8,000.00</td>
</tr>
<tr>
<td>Jan</td>
<td>By paid for Worcester and Nashua R R Co's 20 yrs Bond 7 per cent Interest A</td>
<td>1,000.00</td>
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<tr>
<td>Jan</td>
<td>By paid accrued Interest on above from Oct 1, 1873 18 23</td>
<td>18.23</td>
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<tr>
<td>Jan</td>
<td>By paid for Worcester and Nashua Railroad Co's Note on demand, Interest 7 per cent</td>
<td>750.80</td>
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<td>1,569.74</td>
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</tbody>
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WORCESTER, Jan 13 1874

I have examined the securities and vouchers named in the above account, and find the statements to be correct, and the account to be accurate.

SAMPL F HAVEN, Auditor