

PROCEEDINGS.

ANNUAL MEETING, OCTOBER 22, 1883, AT THE HALL OF THE
SOCIETY IN WORCESTER.

THE President, Hon. STEPHEN SALISBURY, LL.D., in the
chair.

The following members were present (the names being
arranged in order of seniority of membership): George
E. Ellis, Edward E. Hale, Charles Deane, George F.
Hoar, J. Hammond Trumbull, Andrew P. Peabody,
George Chandler, Nathaniel Paine, Joseph Sargent,
Stephen Salisbury, Jr., P. Emory Aldrich, Samuel A.
Green, Elijah B. Stoddard, Rufus Woodward, George S.
Paine, William A. Smith, Henry M. Dexter, Francis H.
Dewey, James F. Hunnewell, Egbert C. Smyth, John D.
Washburn, George H. Preble, Ben: Perley Poore, Edward
H. Hall, Edward G. Porter, Reuben A. Guild, Charles C.
Smith, Edmund M. Barton, Charles Devens, Thomas L.
Nelson, Lucius R. Paige, Charles A. Chase, Samuel S.
Green, Justin Winsor, Henry W. Haynes, Edward I.
Thomas, Horatio Rogers, Frederick W. Putnam.

The Recording Secretary read the records of the semi-
annual meeting. He also reported from the Council the
following names of gentlemen proposed for membership,
who were by separate ballot on each name unanimously
elected:

HENRY STEDMAN NOURSE, A.M., of Lancaster.

JEREMIAH EVARTS GREENE, Esq., of Worcester.

Rev. CHARLES MARION LAMSON, of Worcester.

The Report of the Council was prepared by a committee consisting of Hon. GEORGE BANCROFT, LL.D., and the Hon. STEPHEN SALISBURY, LL.D. Mr. BANCROFT, the chairman, being unable to attend the meeting, as he had intended to do, the report was read by Col. JOHN D. WASHBURN.

NATHANIEL PAINE, Esq., Treasurer, and EDMUND M. BARTON, Esq., Librarian, read their annual reports.

All the above reports, as together constituting the report of the Council, were adopted and referred to the Committee of Publication, on motion of SAMUEL A. GREEN, M.D.

In seconding Dr. GREEN'S motion Rev. EDWARD E. HALE, D.D., said that it was only at such a meeting as this and not often at our meetings that one short paper brought together such names as we have heard. It was a rare pleasure, indeed, to hear the bit of original history of what passed between Washington and Hamilton, from the pen of Mr. BANCROFT, describing what Lafayette had said to Sparks. We do not often expect to meet five such characters at one moment. The incident described gives all the more dignity and tenderness to Washington's after relations with Hamilton. To the very last they seem to have been perfectly kind, and he would not permit the breeze which had passed over them, in the incident described by Mr. BANCROFT, to affect in the least his opinion of Hamilton's fitness for the public service. When in John Adams's administration Hamilton pressed his claims to outrank officers who had served above him in the Revolution, Washington maintained the claim fairly. Indeed, that matter was not settled in the cabinet in Hamilton's favor, until Washington wrote a decided letter, saying that he would himself withdraw from the chief command of the new army if Hamilton had not the first rank under him.

In this connection Dr. HALE spoke incidentally of the plans of John Adams's administration for what is popularly called the French War, and of the place that Hamilton

would have filled had those plans been carried out. He alluded to a collection of the papers of Gen. Wilkinson, now preserved by his grandson in Louisville, to which he called the attention of gentlemen interested in autographs.

Hon. CHARLES DEVENS, LL.D., spoke briefly of a portrait of Hamilton in the uniform of a major-general of the proposed army of the Mississippi, now in the possession of one of his descendants.

The Society proceeded to the annual election of officers. Hon. E. B. STODDARD and J. F. HUNNEWELL, Esq., were appointed to receive the ballots for President, all of which were for Hon. STEPHEN SALISBURY, LL.D., who accepted the office.

Rev. HENRY M. DEXTER, D.D., Major BEN: PERLEY POORE, and SAMUEL A. GREEN, M.D., were appointed a committee to nominate the remainder of the list of officers. They made the following report of nominations, which was accepted, and the gentlemen nominated were, by ballot, unanimously elected:

Vice-Presidents:

Hon. GEORGE F. HOAR, LL.D., of Worcester.

Hon. GEORGE BANCROFT, LL.D., of Washington.

Councillors:

Rev. EDWARD E. HALE, D.D., of Boston.

JOSEPH SARGENT, M.D., of Worcester.

Hon. SAMUEL A. GREEN, M.D., of Boston.

STEPHEN SALISBURY, JR., A.M., of Worcester.

Hon. P. EMORY ALDRICH, of Worcester.

Hon. DWIGHT FOSTER, LL.D., of Boston.

Rev. EGBERT C. SMYTH, D.D., of Andover.

Rev. WILLIAM R. HUNTINGTON, D.D., of Worcester.

SAMUEL S. GREEN, A.M., of Worcester.

Secretary of Foreign Correspondence:

HON. J. HAMMOND TRUMBULL, LL.D., of Hartford.

Secretary of Domestic Correspondence:

CHARLES DEANE, LL.D., of Cambridge.

Recording Secretary:

JOHN D. WASHBURN, LL.B., of Worcester.

Treasurer:

NATHANIEL PAINE, Esq., of Worcester.

Committee of Publication:

REV. EDWARD E. HALE, D.D., of Boston.

CHARLES DEANE, LL.D., of Cambridge.

NATHANIEL PAINE, Esq., of Worcester.

CHARLES A. CHASE, A.M., of Worcester.

Auditors:

HON. EDWARD L. DAVIS, of Worcester.

CHARLES A. CHASE, A.M., of Worcester.

Prof. FREDERICK W. PUTNAM gave an account of his recent excursions in Wisconsin and Ohio. His paper, on motion of Dr. GREEN, was referred to the committee of publication, but as the author wishes to make further researches in both regions before publishing a detailed account of the ancient earthworks which he examined, a brief abstract only of his remarks is given here.

During the excursion Mr. PUTNAM was accompanied by his friend and pupil, Mr. John Cone Kimball, who took photographs of many of the works. Sketches of several were also made and were shown at the meeting.

For a portion of the time in Wisconsin the Rev. Stephen D. Peet, of Clinton, Wisconsin, was of the party, and to

his knowledge of the singular earthworks of that State Mr. PUTNAM expressed his indebtedness.

It is well known that the earthworks of Wisconsin, between Lake Michigan and the Mississippi river, are remarkable from the fact that a large proportion are in the forms of animals and men, a fact which is of great ethnical importance when we remember that such effigy mounds have not been found in the adjoining regions. The only works in North America with which they are at all comparable are three in Ohio, known as the "serpent-mound," the "alligator-mound," and "Whittlesey's effigy-mound," and the two "bird-mounds" in Georgia.

In Wisconsin the effigies of animals and men are very numerous, and there is hardly a lake or a river from Lake Michigan to the Mississippi, on the borders of which they cannot be traced in large or small groups. They are made entirely of earth and stand out in low relief; those visited being from two to four or five feet high, though generally they were of great linear extent.

Many of these groups of effigies are associated with long narrow mounds of about the same height, and in nearly all the groups which he examined, conical mounds, varying from four to twenty feet or more in height, were found in close proximity to the effigies. These conical mounds are, in general, believed to be burial mounds, and many have been proved to be such, while the effigy mounds and the long low earthworks associated with them are generally believed not to contain human remains. Mr. PUTNAM, however, thought that the examinations had not yet been made with sufficient care and thoroughness as to enable correct conclusions to be drawn in relation to the exact character of the Wisconsin mounds. Many of the groups have been surveyed, and others have been sketched, but as yet only very unsatisfactory explorations have been made. Excavations at random have been made in hundreds of the mounds, either in search of relics or from mere curiosity,

but the results of such unscientific work are seldom recorded, and our knowledge of the contents of the mounds has not been thereby increased.

What should be done before conclusions of importance can be drawn, is to make careful and thorough explorations of several of the groups. Not only should the effigy and other low mounds of a group be thoroughly explored by cutting trenches their whole length and width, and digging at least two feet below the surface on which the mound rests, but the land between and about the mounds should be trenched and carefully examined in order to see if there be any signs of a former village site or of a burial place. Of course the associated conical mounds should also be systematically examined, by a series of trenches through each mound, and not simply by sinking a shaft in its centre. This latter method as it is pursued by the relic hunter, who, caring only for the relics he may find, wishes to obtain them with the least possible amount of labor, is vandalism, not exploration.

When several such thorough explorations shall have been made by competent men under the auspices of the State or of some well established institution, so that the results will be secured to science by publication, we shall be able to draw conclusions of importance. The author, however, did not intend to imply that a study and survey of the groups themselves was not of importance. That should precede exploration in every case, but the true character of the earthworks would never be understood until such a series of careful investigations had been made. From the absence of such explorations Mr. PUTNAM expressed himself unable to answer many of the questions asked by members of the Society, but he admitted that the examinations he had made of a few of the groups gave some indications that the effigy mounds marked burial places, although he did not at all feel sure that such would prove to be the object for which they were erected. The fact that in one

large group containing several effigy mounds there were a large number of conical mounds, in nearly all of which human skeletons had been found, was the best evidence he could offer in support of this view.

Many of the effigy mounds, rudely but characteristically represent the animals formerly abundant in the country, as the bear and panther, and also birds and men. A form usually called "turtle-mounds" may be intended to represent the stretched skin of a deer or a buffalo as it would appear when pegged out on the ground for scraping, as done by the Indians. A drawing was shown of such a mound in the group explored by the author in the city park at LaCrosse.

In the centre of this mound remains of a human skeleton were found and with it were fragments of a pottery vessel, a chipped stone implement and several flint flakes. This mound was only slightly over two feet in height, but it had been evidently reduced by long-continued trampling of beasts and men, and it may have been dug into in the past, as only a portion of the bones of the skeleton were found, although the mound was thoroughly examined. Three small conical mounds are near this effigy mound, but they had been previously disturbed, holes having been dug on their summits, and it was understood that human bones had been found. In the largest of the three the author found, near the surface, a few potsherds and fragments of human bones. In this case the burial had been made on the summit of the mound and was of the class called "intrusive," that is, it had no connection with the object for which the mound was raised, the mound simply having been used as a convenient place for the burial of an Indian in recent times.

In the smallest of the three conical mounds a fragment of a human bone was found, which probably belonged to a skeleton removed by some former digger. Near the bottom of this mound several bones of domestic animals

were found, and at first they were supposed to prove that the mound had been erected since the occupation of the country by the whites; farther examination, however, soon showed that a fox or some other carnivorous animal had made its burrow in the mound and had brought in leaves and grass, as well as several animal bones, including those of the sheep, ox and pig. Had this mound remained unexplored for a considerable time longer, until the vegetable matter had decayed and the earth become compact in the centre of the burrow, as it already had for most of its length, these animal bones would have been taken as a sure sign that the mound was of recent origin.¹

Two extensive groups were traced on either side of the Baraboo river. The one on the south side of the river contains the only human effigy met with, although several have been recorded. In this case the form of a man, extended at full length on his back, was well defined to the knees. The portion below them had been destroyed by ploughing. From the top of the head to the knees the length is eighty-three feet, across the hips the width is twenty-three and one-half feet, and from shoulder to shoulder thirty-seven feet. The neck is ten feet wide. The head is seventeen feet wide and ten feet long on a line from the side of the neck to a point opposite. The arms are slightly curved and about thirty-five feet in length measured from the arm-pit. They terminate just below the projecting portion representing the hips.

This "man-mound" is at the foot of a hill. The head is to the north, up the hill, and directly north of it there is a line of several conical mounds extending over the hill.

On the opposite side of the river there is a still larger group comprising nearly thirty conical mounds, two long mounds, three "bird-mounds" and a "bear-mound," besides

¹It was a great satisfaction to the author to find that the city authorities of La Crosse were willing to re-sod and preserve this group of mounds, hence great care was taken to preserve their outlines during the exploration and to carefully fill the trenches when the work was done.

one or two others the form of which cannot now be made out.

Several other groups were visited in the vicinity of Baraboo, and one, in which there were three large bird-mounds, was seen on the Wisconsin river, near the Lower Dells. Several groups were also visited at Madison, one of which is on the Observatory grounds. A group over the stone quarry was carefully examined and of this a survey has since been made under the direction of Prof. Holden, for the Peabody Museum. This group contains among other forms a "panther-mound" two hundred and thirty feet long; a "bird-mound" seventy-one feet long, with wings nearly eighty feet in extent stretched at right angles from the body; a "bear-mound," about eighty feet in length from head to tail, is a good representation of the animal seen in profile.

To one inclined to the theory of the south-western origin of the mound-building nations on this continent, Mr. PUTNAM thought the study of the effigy mounds of Wisconsin in connection with their descent from a higher type of work, would prove as interesting as the supposed decadence of architecture towards the east and north. It was, he said, of interest to note, whatever the true meaning of the facts may be, that while the animal and human forms are represented in Wisconsin by low mounds made by scraping up the earth about the spot, in Ohio the three effigy mounds are made of clay placed over a foundation of stones, and that the two bird-mounds in Georgia were made entirely of stones which were selected with more or less care. Next to these stone-built effigies of Georgia we must consider the "pumas" cut from stone, mentioned by Bandelier as found on a hill in New Mexico, which are connected with the ceremonies of the Pueblo Indians. With these the comparison can be made with the animal and human forms, both of small and large size, cut in stone, and found in portions of Mexico, and from these

the transition is easy to the combination of similar forms with the architectural ornaments of the large buildings of Yucatan, where pumas, serpents, birds and human forms, both simple and in combinations of many kinds, abound.

It would also be of further interest in this connection to trace the pictographs, the potter's art, and the carvings in stone, bone, shell and wood, found in various parts of North America, representing both animals and man.

Such a survey of these arts would show many points of similarity between widely separated portions of the country and would help either to confirm, or disprove, the conclusions which have been drawn as to the supposed close connection of all the American nations.

The excursion in Ohio took place in September. After an examination of several places in the Little Miami Valley, where explorations were being carried on for the Peabody Museum, under the personal supervision of Dr. Metz, during which Mr. Kimball took several photographs of mounds, a party consisting of Dr. C. L. Metz, Mr. C. F. Low, Judge Cox, Mr. Kimball and the speaker took the cars to Hillsboro. At this place a large mule wagon was secured and the trip made to Brush Creek, on which stream and its east branch are found the famous Serpent Mound and the ancient fortification known as Fort Hill. Thence to Bainbridge and down the Paint Creek valley to Chillicothe, on the Scioto. From this city excursions were made to the Hopeton, High Bank and other earthworks and mounds in the vicinity. It will be seen that the route was through a portion of Ohio containing some of the most noted earthworks described by Atwater and published in the first volume of the Transactions of this Society in 1820, also many of the works which about a quarter of a century afterwards received the attention of Squier and Davis and have been illustrated in the important volume published by the Smithsonian Institution in 1848.

The first point visited was the ancient work designated by Squier and Davis as the "Great Serpent." This is on the land of Mr. John J. Lovett, Bratton Township in Adams county. The singular structure is on a high ridge of land, along the western side of which the east fork of Brush Creek flows to the southward. This ridge ends at the north in a narrow precipitous ledge about eighty feet high. On the eastern side, except at its northern portion, the ridge is not as precipitous as on the western, and towards the southeast it rounds off to the cultivated fields. The ridge has several deep gullies on the western side and one or two on the eastern. It curves somewhat to the southwest, and there is a considerable depression in the central portion.

The outer edge of the oval figure in front of the "mouth of the serpent," is eighty-five feet from the edge of the precipice forming the northern boundary of the ridge. This figure is made by a low embankment, now about two to three feet high and from sixteen to eighteen feet wide, enclosing an oval space eighty-six feet in length and about thirty feet in width at the widest part of the figure towards its southern end. Just north of the centre of this oval figure there are the remains of a small pile of stones, which Squier and Davis mention as having been thrown down when they surveyed the work in 1846. The ridge was cleared of its forest many years ago and for a time was ploughed and cultivated, so that the height of the earthwork has been considerably reduced. It is probable that it was never much over four feet high in any part, which is the height stated by Mr. Lovett's father who remembers it before it was ploughed over.

Between the oval figure and the edge of the ledge there is a slightly raised circular ridge of earth, from either side of which a curved ridge extends towards the sides of the oval figure. This is not noticed by Squier and Davis and it may have been formed by sheep or cattle approaching

the edge of the cliff around the oval figure, but its symmetry and position in relation to the oval figure makes it necessary to call attention to it.

A curved embankment, about two feet high and eighteen feet wide in its central portion, following the outline of the southern end of the oval, but seventeen feet from it, measuring eighty-four feet from east to west, forms the "mouth of the serpent." From each end of this curved portion an embankment fourteen feet wide extends southward about ninety feet, uniting and forming one forty feet wide, which makes the "neck of the serpent." On each side of the "head" thus formed, and near the centre, there is a projecting portion of the embankment which curves outward and downward for about thirty feet in length. In the figure given by Squier and Davis these projections are represented as at right angles to the embankment and as if projecting from the "neck." In this and in a few other details the figure mentioned does not agree with the diagram exhibited, and the several discrepancies were noticed by all the party. From the wide portion forming the "neck" the embankment gradually narrows to about fifteen feet and curves to the eastward. Then it makes a sharp curve to the southwest and south. The second curve is a sharp one to the eastward; thence the embankment extends southward and curves to the west, then south down the depression which divides the northern from the southern portion of the ridge, and, again, in a long stretch to the southeast, then south, making a shorter curve to the west, then extending up the slight declivity of the depression to the southeast, thence it sweeps to the westward and again turns slightly to the eastward, from which point the triple coil of the "tail" begins. At the end of the "tail" the width of the embankment is not over five feet, and its height is about one foot. The total length of the "serpent" following all the curves, and starting from the extreme point of the curved part forming the "mouth"

is thirteen hundred and thirty-five feet. Measured from the northern end of the oval figure, on a line drawn through the centre of the "head" and following the curves from this point to the end of the "tail of the serpent," the total length of the work is fourteen hundred and fifteen feet.

In respect to its structure this work differs from the effigy mounds of Wisconsin in having its base formed in great part of small stones upon which the earth was placed. That the work was intended in a general way to represent a serpent, or snake, the speaker thought could not be doubted, and also that the oval figure in front of it was part of the general design; but that the oval figure was intended to represent an egg either about to be swallowed by the serpent, or ejected by it, he thought might be questioned. The serpent has always played an important part in the mythology of the new as well as in that of the old world; but in instituting a comparison between the two the speaker said we must not go too fast or too far. On the ancient pottery of Peru and on the burial jars from Pacoval, Brazil, the serpent is represented in various ways. On some vessels it is painted in color, on others it is moulded or carved in relief. Among the gold ornaments found in ancient graves all the way from Peru to the Isthmus, the serpent is often found. On a large number of the ancient burial jars of Nicaragua, now in the Peabody Museum at Cambridge, it is represented either in a realistic or conventional manner, and in this connection has, presumably, a mythological or symbolical meaning. In Yucatan it appears carved in stone on the front of one of the large ruined buildings. Farther north in Mexico it is common among the Terra-cotta figures and pictographs. On the pottery from the mounds in Missouri it is known as an ornament on at least two specimens which are figured in the Transactions of the St. Louis Academy of Science. In Tennessee, particularly in the mounds in the eastern portion, it appears on the carved shells, as shown by the numerous specimens

in the Cambridge Museum, and in that Museum there is also a carving on a piece of antler, recently found by Dr. Metz in a mound in the Little Miami Valley, which represents the rattlesnake in a conventionalized manner. These were some of the prominent instances, but with them should be remembered the serpent gens of several Indian tribes, and the myths and stories in which the serpent often has a prominent part. Bearing these facts in mind, the speaker said it was not at all surprising to find the serpent of gigantic size represented back of the imposing precipice in the beautiful valley of Brush Creek, and he thought it might be regarded either as a symbol, a monument to mark a sacred place, or possibly as a place of worship.

About two hundred feet to the southeast of the serpent-mound, the earth in the ploughed field, for an acre or more, is darker than the surrounding soil, and contains many fragments of pottery, flint chips, arrowheads, hammer-stones, and other stone implements, which were in vain sought for in the light colored soil adjoining. This would indicate either a village site or an ancient burial place, but the long-continued cultivation of the spot precludes any definite conclusions until an extended exploration of the region is made.

Further to the southeast, or about five hundred feet from the "tail of the serpent," there is a conical mound which has never been excavated. It is now about fifteen feet high and sixty in diameter, but it has been ploughed over for many years and is consequently considerably lower than when first known to the Lovett family whose house is near by.

"Fort Hill" in Highland county was the next place visited and was found to be in every way the remarkable fortification described by Squier and Davis. The immense stone wall, built on the very edge of the hill and even extending down its steep sides, the ditch inside the wall,

from which the stones were taken, and the almost inaccessible level area of nearly fifty acres covered with a forest growth of great age, all tend to render this one of the most remarkable of the ancient works of the country, and probably no other work in the United States has the impress of antiquity so strongly stamped upon it as this. The growth of vegetation has almost incorporated the artificial wall, twenty to thirty feet or more in width and from eight to fifteen feet in height, with the natural hillside, and immense trees have grown and decayed on the very summit of the wall. One decayed oak stump on the wall still measures over nine feet by seven in its two diameters,¹ and there are several others of six and seven feet in diameter. The accurate description and plan given by Squier and Davis render a detailed account of this work unnecessary, the speaker said, but he thought that it should be visited by every one inclined to doubt the antiquity of the great works of the State of Ohio. The much larger and in some respects more scientific structure known as Fort Ancient, although probably as old, did not make such an impression upon him as did this old Fort on the isolated hill, rising some five hundred feet above the bottom lands of Brush Creek.

On the drive down Paint Creek the several earthworks described by Atwater were visited, but they were found to be nearly obliterated, and walls once eight or ten feet high are now barely traceable. This rapid yielding to the levelling hand of man is due to the fact that the earth of which they were composed was principally of surface soil and could be easily levelled or greatly reduced by the plough. The large tumulus near the earthwork marked A on Atwater's map is probably but little changed since his time, and fine photographs were taken of it. The stone

¹This is probably the decayed stump recorded by Squier and Davis thirty-seven years ago as twenty-three feet in circumference. The diameters given above were taken across the top of the stump which is still nearly three feet high.

fort on the hill near Bainbridge is said to be nearly destroyed and was not visited.

During the drive down the valley from Bainbridge to Chillicothe, eighteen mounds, all of considerable size, were seen from the wagon. At Chillicothe the party were joined by Mr. Albert Douglas, jr., and Dr. B. F. Miesse, with whom several excursions were made to ancient works in the vicinity.

About four miles to the northwest of the city, near the fair grounds, there is a large conical mound nearly thirty feet high, from the top of which can be seen three other large mounds, all of which are conspicuous objects in the valley, as is shown by the photographs taken.

The Hopeton Works and the adjoining group, designated as Cedar Bank Works by Squier and Davis, were found to be the best preserved and in several respects the most interesting of the large earthworks in the Scioto valley. The description and figures given of these groups by Squier and Davis leave little to be said. Of course the constant cultivation of the land has greatly reduced the embankment of the large circle, which was probably never more than five feet in height, but it, as well as the two small circles on the east side of the square, can still be traced. The eleven higher and harder clay walls forming the square have proved a greater obstacle to the plough and portions of them are probably now of about their original height, or nearly twelve feet. In fact these clay walls are so hard and compact that their cultivation is too difficult a matter to be undertaken without going to great labor and expense, as was stated by Squire J. Smith who has given much attention to their structure. To Squire Smith the party were under great obligations for his guidance over the works and to the group a mile above. He has also kindly promised to send to the Peabody Museum a survey of the two groups, with accurate measurements of the walls. Many stone implements and

flint chips have been found in and about the enclosures, several of which were given to the speaker, and others were found by the party.

The earthworks at High Bank, about five miles below Chillicothe, on the Scioto river, were visited, and it was found that great changes had taken place since they were surveyed by Squier and Davis in 1846. All the smaller works adjoining the large circle and octagon have nearly disappeared, and the wall of the large circle is nearly obliterated. Even the seven¹ embankments forming the octagon have been reduced and spread by successive ploughings and cultivation, so that they are now not over four to six feet high, and are about sixty feet wide on top. They seem to have been made of the subsoil of the region, but are not so hard and compact as the embankments at Hopeton. Mr. Milton Jones, on whose land a portion of the work is situated, informed the speaker that a number of human bones had been ploughed up in the large circle, and that numerous stone implements had been found within the works; and he kindly gave the Peabody Museum two polished celts obtained during the present year. He also stated that whenever the walls of the octagon had been ploughed over his attention had not been attracted by any particular objects in the clay.

In relation to Mr. Morgan's theory that these high walls were erected for the purpose of building the dwelling places of the people upon them, the speaker stated that he thought the general character of works of this class was against the theory. There are many such in Ohio in which the circle is combined with a square or an octagon, and they are all so nearly alike and have so many accessories in common that it is probable they were made by one great people for the same purpose.²

¹The wall on one side is so built as to correspond with the two on the opposite side.

²The following gives the size of a few of the earthworks to be considered in this connection with the heights of their walls:—

High Bank Works. The octagon contains twenty acres. Its walls were

While such houses as Mr. Morgan has suggested could have been erected on some of the earthworks, on others of a similar character except in the size of the walls, it would have been useless if not impossible to have built the houses so as to form a means of defense, as he has suggested. It seems far more probable, if such works were defensive villages, that the high walls were simply a substitute for lower walls which had palisades on their summits. In such walled towns as have been protected from cultivation unquestionable sites of the houses of the people have been found within the walls or embankments, as in Tennessee and Missouri, and in these cases there can be but little doubt that the low embankments were surmounted by palisades.

Within the Ohio squares and octagons, a large quantity of refuse material and many implements and ornaments have been found, such as would be expected in and around the houses of the people, while nothing of the kind, not even the ashes and charcoal of fires, had been traced on the top or sides of the high embankments. In answer to this it might be said that all signs of the houses, fires and refuse from the dwellings would have been washed from the tops and sides of the walls in the long period of time which has elapsed since they were destroyed. The speaker would say in response that this refuse material would be somewhere, it could not all decay, and he knew twelve feet high. The circle contains eighteen acres. Its walls were five feet high.

Hopeton Works. Square twenty acres; walls twelve feet; circle twenty acres; walls five feet.

Newark Works. Octagon fifty acres; walls five to six feet; circle twenty acres; walls twelve feet high in one portion, rest six feet. Square twenty acres; walls five to six feet.

Liberty Works. Square twenty-seven acres; walls four feet. Large circle forty acres; walls three feet.

Marietta Works. Large square fifty acres; walls five to six feet. Small square twenty-seven acres and walls of less height than other. The elevated platforms of earth inside and near the walls of these squares are two to three feet higher than the walls.

Portsmouth Works. The eastern wall of the square is ten feet and the western, part of which is natural, is forty feet high.

from long experience in making explorations that it was always found on the immediate site of the house or in a refuse pile near by. The speaker claimed that we had no right to theorize about what might be done, but by careful examination with spade and pick we should endeavor to find out what had been done, and this not in one place but in many, as it was by the accumulation of a hundred little facts found under similar conditions that we are led to the proper determination of the whole. As to the supposed wash of the walls and their spreading from that cause, the speaker stated that there was much misconception in that connection. Of course grass and other vegetation would soon begin to grow on an embankment and if the embankment was made smooth and compact and was cared for, as these ancient embankments must have been, the wash and spreading of the walls would be very slight indeed, and the greater part would take place during the first years of their existence. After such a place was left to nature the vegetable growth would at once encroach upon it and protect it from the elements. In fact, he felt convinced, from many examinations of the ancient mounds of earth, that of all the monuments erected by man none were so enduring; but as soon as man started their destruction by removing the vegetation and exposing the unprotected soil to the winds and rains, disintegration began and would continue until vegetation again spread its protecting arms over the spot.

The speaker also thought that we must take other things into consideration in relation to Mr. Morgan's theory that the people who built these earthworks in the Ohio valley were closely connected with the pueblo people west of the Rio Grande, that they were, in fact, an offshoot from them, and hence the peculiar method of architecture.

In this connection it was only necessary to call attention to several of the arts of the people of the two regions to show that they had nothing in common either in ceramic

or decorative art; and from the little we know of their osteological remains it could only be said that there was a general resemblance in their physical characters such as would probably prove to be common to all the great Mongolian stock to which both probably belonged.

In the discussion which ensued, Prof. HENRY W. HAYNES said:—

Mr. PRESIDENT.—In the course of the very interesting account, which Mr. PUTNAM has just given us, of his visit to the scenes of ancient earthworks in the Scioto valley, Ohio, and particularly in his description of the so-called “High-Bank” work, he has taken occasion to express his dissent from the view which, it is well known, the late Mr. Lewis H. Morgan has advocated in regard to the object for which earthworks of this character were erected. The grounds for this difference of opinion, so far as I was able to gather them, seem to be three. *First*, the very slight elevation of the work, at present amounting to no more than four or five feet; *second*, the absence of any trace of organic materials upon the surface of the mounds, which the decay of wooden structures of the character and size supposed to have been erected upon it would not have failed to leave; and *third*, the fact that the most diligent search also failed to discover there any relics of human occupancy. Stone implements, flakes and fragments he finds in abundance within the enclosed oven, but never upon the mounds themselves; whereas in other localities he has found such objects among the very remains of the dwelling itself, as well as traces of wooden materials. I must confess, Mr. PRESIDENT, that it seems to me, unless stronger objections than these can be brought against Mr. Morgan’s theory, it is likely to stand. Where would you expect to find implements and fragments of stones, if not in the enclosed area into which they have been washed by the rains and waste of centuries, and how many hundreds of years, pray, are the *débris* of the slight wooden struct-

ures erected by the mound-builders likely to endure? That Mr. PUTNAM has found such traces of human occupation among other remains of ancient habitations, only goes to prove how much later in date they must be than the mounds.

But in regard to the actual elevation of the earthwork there is a decided conflict of testimony between Mr. Morgan and Mr. PUTNAM, which, as I have never seen the work myself, I cannot undertake to explain. Mr. Morgan in his "Studies of the Houses of the American Aborigines" (published in the First Ann. Rept. of the Archæol. Inst. of America), p. 54, quoting from Messrs. Squier and Davis, states that "the walls of the octagon [of the High-Bank Pueblo] are very bold, and where they have been least subject to cultivation are now between eleven and twelve feet in height, by about fifty feet base." He then proceeds to argue that, "if the embankments of the High-Bank Pueblo were re-formed with the materials washed down, and now spread over a base of fifty feet, with sloping sides and a level summit, they would form new embankments thirty-seven feet wide at the base, ten feet high, and with a summit platform twenty-two feet wide. . . . Such embankment would provide ample site for long joint-tenement houses. . . . The embankment, indeed, answered as a substitute for the first story of the house, which was usually from ten to twelve feet high, and closed up solid externally. . . . The Pueblo externally would present a continuous rampart of earth, about ten feet high, around the inclosed area; upon this rampart the timber-framed houses, ten or twelve feet in height, with the walls coated thickly with earth or gravel, and sloping with a continuous line with the embankment, would form with it an unbroken wall of not less than twenty feet high. . . . Among the Mound-Builders a rampart of earth ten feet high around a village would afford no protection; but surmounted with Long-Houses, the walls of which ran continuous with the

embankment, the strength of these walls, though of timber coated with earth, would render a rampart thus surmounted and doubled in height a formidable barrier against Indian assault." Precisely the same figures are repeated, and the argument is stated, if possible, with even greater force by Mr. Morgan in his posthumous work, "Houses and House-Life of the American Aborigines." (Contrib. to N. A. Ethnology, vol. iv.), pp. 204-214.

It is admitted that the strength of Mr. Morgan's argument consists in its cumulative character, by which all the various styles of building found among the aborigines of this continent are brought into harmony and accounted for, and in the course of it he had occasion to give a probable and reasonable explanation of the object for which the mounds were erected. This I still think he has done in face of the criticisms that have been placed upon his theory.

GEORGE E. ELLIS, D.D., in continuing the discussion, spoke in approval of Prof. PUTNAM's caution in advancing any theory, and said substantially :

In listening to the paper read and illustrated to us by Prof. PUTNAM, with its statements authenticated by his own local observations and measurements, I was pleasantly impressed by the caution and moderation of the writer as to the inferences or deductions he would draw in the support of any theory about the phenomena of which he has spoken. It is a current, and I may say an intelligent opinion held by many who are greatly interested, though not experts, in our Archæological science, that there is apt to be haste, if not rashness, in drawing positive inferences and basing theoretical conclusions when the facts and phenomena passing under notice are not sufficient to warrant them. In the lack of records and even of traditions concerning prehistoric times we have to deal largely with physical tokens, with rocks and soil, with natural features and phenomena. The point of interest for us is to detect and define in connection with these any signs or

relics of humanity, the proofs of the presence and the work of men. It is not at all strange that many relics and phenomena, many appearances and disposals of material elements, should puzzle us, as we observe and study them, with doubts as to whether, so to speak, nature alone or man and nature together were represented in the scenes and objects before us. The old legend kept in remembrance by the familiar name given to that marvellous massing of basaltic columns on the coast of Ireland, "The Giants' Causeway," does not appear so wholly without reason for itself when we stand, or climb, or float, amazed and bewildered at the objects before us. Those piled-up tiers and layers of huge pentagonal or hexagonal blocks, regularly and with mathematical accuracy adjusted to each other, with mortise and tenon, exploding like a gun when pried apart at their interstices—might well represent to us the toil or play of a race of herculean men, shown in other trials of strength and ingenuity than were spent upon the gigantic monuments of Egypt. But as we yield to nature that imposing architectural wonder, we may well learn the lesson of allowing as to many baffling phenomena, where oblivion has settled, and the earth, and stones and mounds are mute, that the regular or phenomenal processes of nature, especially its convulsions and catastrophes, its floods and tidal waves and shakings, may have left objects which suggest the presence and hand of man. There is an alternative on the side of nature for many of the archæological phenomena which are designated as tokens of a human agency. The acres of shell-heaps,—were they heaved and piled from fecund watery beds, or do they represent the kitchen relics of men who year after year for long spaces, gathered at the same spot for the same meal, and threw the empty valves on the same mound?

Sir Charles Lyell, standing before the cataract of Niagara, with a happy facility of estimate on the spot, and a generous draft upon unrecorded epochs, calculated that nature

had been just about 40,000 years in wearing through that chasm. What hinders that a convulsion of nature should have wrought the result in a week, or in a night? That tidal wave which a few years ago carried vessels miles up into the country on the South American coast and buried them with their contents, while it exposed the long interred corpses in old cemeteries, may have provided some rich finds for future archaeologists. Implements found in caves of alluvial materials will not always serve as substitutes for trustworthy calendars or chronometers. The masses of rocks, poised or rolling, strewn about our fields, may have dropped out of passing icebergs; but some of them, as they rest upon solid ledges of the same formation, unless they are marvellous illustrations of "Elective Affinities," suggest that they may have been indigenous in the spots where they appear, like the bones in our bodies, the soil having washed away around them. I have never been able to account to myself for the reason of the theory by which our archaeologists interpolate the bronze between the stone and the iron ages for disposing of the implements which record for us the succession of prehistoric epochs. We may all of us see localities on the banks of our Western rivers where the iron ore crops out so handily that a smart fire built by some wild human bivouackers would cause the metal to flow down, available for hatchets, spear and arrow heads—a great advance upon the stone implements. But why should this ready product of nature for primitive men, be deferred for recognized use till an artificial compound of two smelted metals—copper and tin—should have been the result of a manufacture? I must crave some indulgence as a sceptic in these matters—for I am not an expert. And now as I look upon some of those diagrams which Prof. PUTNAM has drawn for us—those earthen traceries in the forms of winged birds, and the serpent with its abundance of spirals, while the Professor without dictating to us, allows us to speculate whether men, and what sort of men,

and when, and for what purpose, wrought out those curious forms, I find myself thinking about Noah's flood, or some other flood, and wondering whether natural elements and forces have not had some agency there. If nature could make the Giants' Causeway, she can do many other things, strange and rare and very puzzling to us. Go at low tide to one of our extensive ocean beaches, like that for instance at York, Maine, after a week of severe easterly storm, you may trace in the sand, that has been lashed and gullied and cut by crevasses, many very curious birdlike and serpentine fashionings. The tearing deluges of rain upon our rough hill and mountain sides leave vestiges in the broad valleys which would surely tell in their effects upon any mounds or earthworks, which were originally either the freaks of nature or the unexplained devices of men for habitation or defence. The reports of the United States geologist Hayden, and other government explorers, of the wonders and beauties of the once so-called Great American Desert, with their rich colored illustrations, show to us in pictured rocks, in towered and castellated shafts, and isolated columns—works which have so much of the semblance of human sportiveness and ingenuity, that only their extent and scale and abundance utterly preclude any recognition among them of the agency of man.

Meanwhile, what are we to say or to think about those prehistoric races of men which our archæologists are seeking to trace through these grotesque earthworks? Agassiz has told us that this continent, through its geological conditions, was the first region of the earth fitted for sustaining human life. An assertion, originally ventured as an hypothesis, is now finding an accepted, or not often challenged, repetition in our archæological literature, that this continent had been the home of several successive races of advanced, though unequal, stages in civilization, long previous to the occupancy here of those known to the first European explorers as our aborigines. Has any positive

evidence as yet been presented in relic or mound of that pristine civilization? Among all the curious gatherings in our museums is there a single certified object in composition, material or fabric, an implement or a device, which can be proved to have involved resources or exercises of ingenuity surpassing those which were in contemporaneous existence among the natives, as known to the Spanish invaders and the subsequent European colonists? I am a firm believer in some august truths and mysteries, but have strong sceptical tendencies about many modern scientific theories.

The PRESIDENT then called upon Mr. CHARLES DEANE, who said:—

I have but a brief communication to make, Mr. PRESIDENT; it consists of a few extracts from a small geographical work by Johann Schöner of Nuremburg, written in Latin about forty years after the discovery of the new world by Columbus, and entitled “Opusculum Geographicum,” &c., printed at Nuremburg (*Ex urbe Norica*), in 1533.¹

I will premise here that the author was a distinguished mathematician and astronomer, of the school of the famous Regiomontanus, whose disciples, in the beginning of the sixteenth century, assembled in that city, “and there exercised by their writings, maps and globes a great influence on American discovery and geography.” (Kohl, *Hist. Discovery of Maine*, 158.) Schöner made several globes, only one of which I have seen. That of 1520 is interesting as showing the new lands of America broken up into islands, and wholly separated from Asia. South America is wholly separated from the northern portion by a broad strait, for which Columbus in his later voyages had made search, and on this southern portion is inscribed,

¹ “Joannis Schoneri Carolostadii opusculum geographicum ex diversorum libris ac cartis summa cura & diligentia collectum, accommodatum ad recenter elaboratum ab eodem globum descriptionis terrenæ.” This book was written to elucidate his globe of 1533, in the Militär-Bibliothek at Weimar.

“*America vel Brasilia sive papagalli terra.*” I have here an original copy of the map of Peter Apian, belonging to the American Antiquarian Society, which was first issued in Camer’s Solinus, published in 1520. The new lands and islands are here separated from Asia, and a large southern continent is inscribed “*America Puincia.*” This has been regarded as the earliest published map yet known bearing the name of America.¹ Schöner’s globe of 1520 was made substantially on the model of Behaim’s globe of 1492, also at Nuremburg, with the addition of the newly discovered islands. Copies of each were included in the collection of maps published by Ghillany at Nuremburg in 1853.

The early discoverers believed that the new lands were parts of Asia—either headlands or out-lying islands—and Columbus and Vesputius died in that belief. The wish was father to the thought. They were not in search of a new world, but of the wealth of the old world, as described in such glowing colors by Marco Polo; and the early map makers so delineated these discoveries. But some of these geographers, notably Stobnicza, in his map published in his introduction to Ptolemy, Cracow, 1512, seem in their guesses to have come near the truth. A close investigation, however, of these will usually show that their delineations of the western coast were intended to express their ignorance of its termination, and an inscription denoting that *all beyond is unknown* will often be found there. Such an one will be seen on the globe of Schöner.

The early maps were made under such different circumstances, and by geographers of so many different schools,

¹I do not forget that there has turned up within two years a copy of an edition of the “*Cosmographiæ Introductio*,” printed at Lyons (*Lugdunum*), France, with the alleged date on it of 1514, containing a map representing the newly discovered lands, with a large detached island or continent at the south, on which is inscribed, “*America noviter reperta.*” This of course antedates the inscriptions on the map of Apian and on the globe of Schöner. There may be an error in the date. But see Winsor’s *Bibliography of Ptolemy’s Geography*, in H. U. Bulletin, No. 25, p. 112, and No. 26, p. 164. The book, with a copy of the map, was advertised by Tross in his catalogue No. XIV. for 1881, Lot 4924, and, it is understood, has found a purchaser in New York.

isolated from each other, and often shut out from the best sources of information, that it becomes difficult in the study of maps to trace from them any regular progress towards the truth for many years after the discovery of the new world; and maps are found made in the latter half of the sixteenth century no nearer the truth than some of those made during the twenty years following the first voyage of Columbus.

We shall see in this little geography of Schöner of 1533, that he has made no progress from the ideas he expressed on his globe of 1520, if indeed there is not a retrogression. The new lands are described as a part of Asia.

Part II. Chap. I. *Of the general division of the earth.*

Although the mass of the earth is surrounded by the ocean like some great island, and is one mass, yet older authorities have divided it into three parts, the first of which they called Europe, to the north, our country; the second, Africa, to the south from us; while the third they called Asia, more to the east from us. Europe is separated from Asia by the river Don (Tanais) the sea of Azof (Meotides) and the Euxine sea. Africa is separated from Europe by the Mediterranean sea, while Asia is separated from Europe by the boundaries before mentioned, and from Africa by the Isthmus of Suez (Judiaco) and the Red sea. Europe is bounded on the west by the Atlantic Ocean, on the north by the British Ocean, on the east by the river Don, the Sea of Azof and the Pontine or Euxine Sea, and on the south by the Mediterranean Sea, which is our Sea. Africa is bounded on the west by the Atlantic Ocean, on the south by the Aetheopian Sea, on the north by the Mediterranean Sea, and on the east by the Isthmus of Suez and the Arabian Gulf. Asia, which excels the others in size and wealth, has on the west the same boundaries as Europe and Africa, on the north it is bounded by the Scythian Ocean, on the east by the Eastern Indian Ocean, and on the south by the Southern Indian Ocean, and the Red Sea.

But not only have the three parts mentioned been now more widely explored, but also another fourth part has

been seen and partly explored, which later writers have called Brasil, situated towards the south pole, a long distance beyond the tropic of Capricorn, and not as yet fully known. Nevertheless, Americus Vesputius sailing to the west from Spain along the coast of upper India believed that part which belongs to upper India to be an island, which he resolved should be called from his own name. But now other later hydrographers have found that land farther on, on the other side, to be continuous with Asia, for so they have come even to the Molucca Islands of upper India.

We read that this portion bordering upon upper Asia was explored before our times, besides Ptolemy, by Marco Polo a Venetian, and very many others. Petrus Cardinalis Cameracensis (Pierre d'Ailly, Bishop of Cambrai and Cardinal) also in that book which he wrote, *De Imagine Mundi*, lays it down in Chap. 19, that the ocean which extends between the boundaries of farther Spain, i. e. of Africa on the west and the beginning of India on the east is of no great breadth, for it has been found that this sea is navigable in a very few days, if the wind is fair, and therefore that that beginning of India on the east cannot be far distant from the end of Africa. So much for him.

Concerning the regions not described by Ptolemy.

Chap. XX.

The regions which are beyond the descriptions of Ptolemy have not as yet been handed down by any positive authors, nor described even with as great care. From the east whatever is beyond the Sinæ and Seræ and beyond 180° of longitude, remained wholly unknown to Ptolemy. But after Ptolemy beyond 180° east, many regions were discovered by a certain Marco Polo, a Venetian, and others; but now by Columbus the Genoese and Americus Vesputius [who] explored merely the coast; sailing thither from Spain through the western ocean [and] deeming that part of the earth an island, called it America, a fourth part of the globe. But now through the most recent navigations made in the year after Christ, 1519, by Magellan, admiral (or commander) of the ships of the most invincible Cæsar, the Emperor Charles, &c., towards the Molucca Isles,

which others call Maluquas, situated in the extreme east, they have discovered that land to be continuous with upper India, which is part of Asia; in which are immense kingdoms, large rivers and many other wonderful things concerning which we made mention in part before. But there are the regions of this portion of the earth, namely Bachalaos, called from a new kind of fish there, &c.

I may add that Schöner not only here expresses the belief that the whole of the new world was a part of Asia (*superioris Indiæ*), but that the city of Mexico (Temistitan) conquered by Cortes, was no other than the Chinese commercial city of Quinsay, so excessively extolled by Marco Polo. (See also Humboldt, *Cosmos*, II., 613.)

I may also add that Schöner's geography, so far as it relates to the new world, is a good description or interpretation of the map or globe of Oronce Fine of 1531, published at Paris in 1532, in the *Novus Orbis*.

I am glad to see hanging on the wall of the room in which we are now assembled, a copy of a map known as the map of Sebastian Cabot—one of a very few copies taken last year from the only original extant, in the National Library in Paris. This map, made in the year 1544, has a special interest for us here, as it well represents the progress made in the right direction by the most advanced and best informed cartographers at this period. We see the continent of America accurately laid down, with the isthmus connecting the two main portions, while the western coast on the Pacific is carried up as far as the discoveries made in that quarter by Alarcon and Castillo in 1541, that is about 35° N.,—of course all beyond this was unknown, and is so represented. The problem whether the continents of America and Asia were connected far north by one continuous mass of land, or were separated by a strait, was not solved till 1728, when Behring discovered the strait which bears his name; though the fabulous Anian Strait found a place on some maps in that region before that time.

You will have noticed, Mr. PRESIDENT, that Schöner here says that Americus Vesputius resolved that the new country by which he sailed should be named after his own name, "America." This charge against Vesputius is here made in print for the first time, and from that period down to recent date obloquy has been heaped upon him for robbing Columbus of his rightful dues. We all know to-day that there is no evidence on which to found such a charge; indeed, we know all the circumstances under which the name was proposed and the gradual steps by which it gained currency. The suggestion first appeared in a little book I now hold in my hand, containing a narrative of the four alleged voyages of Vesputius, with an introduction by the editor, Waltze-Müller (Martinus Hylacomylus), of Freiburg, the director of a printing establishment at St. Dié in Lorraine, where this book was printed in 1507, under the title of "*Cosmographiæ Introductio*," &c. The editor here, after describing various parts of the old world, says:—

"But now that those parts have been more extensively examined and another fourth part has been discovered by Americus Vesputius (as will be seen in the sequel) I do not see why we should rightly refuse to name it America, namely, the land of Americus, or America, after its discoverer Americus, a man of sagacious mind, since both Europe and Asia took their names from women."

This name, as is well known, was applied to South America, which Vesputius visited. I can barely allude here to these points, as a critical history of this book of Hylacomylus would require a large space, and is beyond my present purpose. There is no evidence that Vesputius previously knew of the suggestion of his name; Humboldt, who has examined at length the charge against him, says, "it is devoid of foundation." (*Cosmos*, ed. Otté, II., 676, 680. London, 1849; see also D'Avezac, *Martin Hylacomylus Waltzemüller ses ouvrages et ses collaborateurs*, Paris, 1867).

JUSTIN WINSOR, Esq., referring to Mr. DEANE'S statement that the Cabot map of 1544 was a very early representation of the continental character of America, mentioned the diverse views which were entertained by the early geographers regarding the regions discovered by the Spaniards. There was of course the notion that these regions were islands lying off the coast of Marco Polo's Asia, and this view we find expressed in the La Cosa (1500) and the Ruysch (1508) maps. Then in the order of time came a belief that while South America was of continental proportions, North America was an archipelago, of somewhat uncertain character. This was the opinion expressed by the maker of the Lenox globe, by Da Vinci (if he were the draughtsman) in the MS. map in the Queen's Collection at Windsor, and by Sylvanus in the 1511 edition of Ptolemy. Others made North America a part of Asia, while South America stood distinct. This is the view taken by the Monk Franciscus (1526), by the maker of the map in the Sloane collection (1530), by Orontius Finæus (1532), and shown in the Nancy Globe, and accepted even by a few geographers down to the very close of that century. Another class of cartographers avoided the question of the connection of North America with Asia, by cutting off the westerly extension by the edge of the paper, as in the Portuguese chart at Munich and in the St. Die map of 1513. Thirty years before Cabot hesitated as to the continental character of North America, Stobnicza boldly put North America down as a distinct barrier. What the St. Dié geographers had concealed by the edge of their paper, this Polish cartographer emphatically proclaimed, not indeed with a precision of outline westwardly, but his rendering of the problem can scarcely admit of any but a continental interpretation to the new lands. The type which he thus conceived at Cracow was implicitly followed by Reisch (1515), the maker of the Tross gores, Apian in Camer's Solinus (1520), Schönér in his globes (1515 and 1520), Münster

(1532), and Honter (1542)—not to name others. This boldness was accompanied by a cautionary reaction in some, as shown in such maps as those of Verrazzano, Thorne, Ribero, Homem, Agnese and many others, who while insisting on a distinct continental condition for the new world, left vague its western extension. It was not till 1540 and 1541 that Münster and Mercator respectively begun to indicate with something like definiteness a western coast, separate throughout from Asia. Cabot was not willing to go so far; and in his 1544 map, he leaves the geography wholly uncertain above the peninsula of California. Cabot's caution was probably justified by the want of positive knowledge. At least no testimony is known to us which authorized Münster and Mercator to draw the western coast as they did. It would be unsafe to say that no testimony was known to them to warrant such drafts.

Rev. Dr. HALE at this point, spoke of the great map recently brought to light by Mr. HARRISSE, which will be published in his new life of Cortereal. This map appears to be the basis on which the coast shore of the United States is drawn, for instance, in the early editions of Ptolemy, long before the pretended voyage of Verrazzano. The coast line here given is probably derived from accounts of Portuguese navigators, who knew that they were passing beyond the meridian of demarcation which parted the rights of their sovereign from those of the King of Spain.

Mr. WINSOR said he doubted if the map of which Mr. HARRISSE had announced the publication in Paris was going to yield anything new. He supposed it to be the same map which HARRISSE had described in his recent book on the Cabots, as found in the Biblioteca Estense in Modena, and the same which Ongania in Venice had announced for publication a year or two ago, under the editing of Prof. Fischer of Kiel. If the map is what Mr. WINSOR supposed it to be, it may be safely affirmed it yields nothing that was not already known to students of our early cartography,

unless some importance attaches to the date 1502, said to be upon it. The type of map which it is supposed to represent, is well known, and is shown more or less completely both in the Portuguese chart in the Munich library, of which Kunstmann has given a reproduction, and in the so-called "Admiral's map," which, engraved as early as 1507, was perhaps published separately not long after, and again in the 1513 edition of Ptolemy. There has been no doubt among students of this department, that both the Munich and the Admiral's map represented Portuguese explorations variously fixed between 1501 and 1504. Lelewel explicitly so represented it thirty years ago. At the most the date which scholars have long ago reached by deduction, this new map shows marked upon it. That seems to be its only sign of importance,—at least so far as one can judge by the description, for the book on the Cortereals, which is to contain it, has not yet reached this country.

Mr. DEANE said he had no doubt that the result of Mr. WINSOR's studies of the early maps would confirm the views he had here expressed.

REV. EDWARD G. PORTER described briefly a visit he had made during the past summer to Castine, Maine, which he referred to as the scene of the ill-fated Penobscot expedition of Massachusetts in 1779. He presented a four-pound shot, which was lately found on Nautilus island opposite Castine; also a photographic likeness of Israel Trask who stood behind "Trask's Rock," a large boulder on the beach, near Dice's Head, and played the fife during the landing of the troops under General Lovell, July 28, 1779. Mr. PORTER spoke of the numerous earthworks on the promontory of Castine as being in a state of excellent preservation. In conclusion he presented a photograph of the copper-plate found in 1864 in the old French Fort near the town.¹

¹ For a description of this plate with its Latin inscription, dated 1648, see Proceedings Am. Antiq. Soc. for April, 1864.

Rev. LUCIUS R. PAIGE, D.D., said he had in his possession a cannon ball he had picked up on Bunker Hill in 1834, which he would be glad to present to the Society, and Dr. ELLIS related the finding by himself of two such balls, and a large number of army buttons, mostly of the 32d Regiment. These were found between Breed's and Bunker's Hills, where as he supposed the British dead were buried.

The Society voted thanks to each and all of the gentlemen who had contributed papers, or made remarks thereon, or added interesting articles to its collections; and the papers were referred to the Committee of Publication.

The meeting was then dissolved.

JOHN D. WASHBURN,

Recording Secretary.

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