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ART. XII.—Archæologia Americana.—Transactions and Collections of the American Antiquarian Society. Vol. I. Worcester, 8vo, pp. 436. 1820.

It may at first seem singular, that an association should be formed for exploring the antiquities of a country, the discovery of which, in a wilderness state, and inhabited only by savage tribes, is an event so recent, that the appellation of 6 the New World,' which was then given it, is still retained as appropriate; and which possesses no architectural ruins, no statues, sculptures, and inscriptions, like those of the Old World. Destitute, however, as North America may be of any such monuments of art, and of former grandeur, there are topics, connected with its original population and unwritten history, to excite the inquiries and occupy the researches of Notwithstanding the ingenious hypotheses of the learned. D'Acosta, Hornius, De Laet, and Grotius, and the opinions of Robertson, Pennant, and Clavigero, the question, whence America was first peopled, has never been satisfactorily an-The subject has acquired increased interest by the discovery of ancient mounds and works of vast extent on the borders of the rivers west of the Alleghany mountains, indicative of an immense population in a region since overgrown with forests; and of being erected by a people who had made greater advances in the arts and in improvement, than the present race of Indians, or than their ancestors, since the Europeans have been acquainted with them. The savage nations of the wilds possess no tradition concerning their

origin, their use, or the people by whom they were constructed; and view them with the same curiosity and wonder, as do the new settlers of the country where they are situated. To obtain accurate surveys and descriptions of these ancient remains, appears to have engaged the earliest cares of the society, the first volume of whose transactions is now before us.

Another evidence, that new as America is among the nations, it furnishes subjects for antiquarian investigation, arises from the languages spoken by the natives. This subject has lately excited considerable attention. The 'New views of the origin of the tribes and nations of America,' by Dr. Barton, illustrated by 'Comparative vocabularies;'—the 'Historical account of the Indian nations,' by the venerable Heckewelder;—the ingenious discussions of Mr. Du Ponceau;—and the learned 'Essay on a uniform orthography of the Indian languages of North America,' by Mr. Pickering, are likely to furnish important aid, in ascertaining from what stock of the Old World the New was originally peopled.

The aid which is furnished by the volume before us to these interesting topics of investigation is ample, and will be received by the public with grateful acknowledgments. The American Antiquarian Society owes its origin and much of its success to the exertions and the munificence of the individual, who sustains the office of its president, Isaiah Thomas Esq. of Worcester. It obtained an act of incorporation October 24, 1812. Its immediate and peculiar design is to discover the antiquities of our own continent; to preserve relics and implements of the Aborigines; and to collect manuscript and printed documents and books, relating to the early settlement and subsequent history of the country. To further these objects, its founder, at its first organization, made a donation to the society of a large collection of books: and in 1819 its library contained about 5000 volumes, including the remains of the library formerly belonging to Drs. Increase and Cotton Mather, the most ancient in Massachusetts, if not in the United States, which was presented by Mrs. Hannah Mather Crocker. A valuable addition of above 900 volumes has lately been made by the bequest of the Rev. William Bentley D. D. of Salem. The society also possesses a museum and cabinet, which contain many curious articles collected in various parts of the United States. For the deposit of these. for the public meetings of the members, and for the accommodation of those who wish to consult the sources of our history, a handsome edifice has been erected in the town of Worcester at the expense of the president, and by him given to the society.

Assiduous in accomplishing the objects of its institution, the society has given to the public a volume of its 'Transactions and Collections.' It is introduced by several articles relative to the formation of the society, its progress, and present state; followed by an extract from Hennepin's 'Account of the discovery of the river Mississippi and the adjacent country by the lakes,' and of 'La Salle's undertaking to discover the same river by way of the gulf of Mexico.' Though the public have long been in possession of these last documents, yet they were deemed worthy of being reprinted here, as comprising the first information obtained by Europeans of a region, which contains the most curious monuments of antiquity in North America.

The greater portion of the original articles contained in these memoirs consists of descriptions of those ancient works by Caleb Atwater Esq. of Circleville, Ohio, communicated in an epistolary correspondence with the president of the society. By the publishing committee they have been arranged, and somewhat abridged. They are preceded by a large and excellent map of the state of Ohio; and are illustrated by drawings of the principal antiquities, which make the description more intelligible and satisfactory.

Mr. Atwater remarks,

'Our antiquities belong not only to different eras, in point of time, but to several nations; and those articles, belonging to the same era and the same people, were intended by their authors to be applied to many different uses.

'We shall divide these antiquities into three classes. 1. Those belonging to Indians. 2. To people of European origin; and 3. Those of that people who raised our ancient forts and tumuli.

'Those antiquities, which, in the strict sense of the term, belong to the. North American Indians, are neither numerous nor very interesting. They consist of rude stone axes and knives, of pestles used in preparing maize for food, of arrow-heads, and a few other articles, so exactly similar to those found in all the Atlantic states, that a description of them is deemed quite useless.' p. 111.

The antiquities, belonging to people of European origin, con-

sist principally of articles left by some of the first travellers in these parts of the country, or buried with Indians who had obtained them, perhaps, from the early settlers of Canada. It was necessary to account for these, because, when found, they have sometimes been taken for implements of native inhabitants, and referred to as evidence that the country was formerly occupied by those who possessed the arts of civilized life.

The third and most highly interesting class of antiquities comprehends those belonging to that people who erected our ancient forts and tumuli; those military works, whose walls and ditches cost so much labour in their structure; those numerous and sometimes lofty mounds, which owe their origin to a people far more civilized than our Indians, but far less so than Europeans. These works are interesting, on many accounts, to the antiquarian, the philosopher, and the divine; especially when we consider the immense extent of country, which they cover, the great labour which they cost their authors, the acquaintance with the useful arts which that people had, when compared with our present race of Indians, the grandeur of many of the works themselves, the total absence of all historical records or even traditionary accounts respecting them, the great interest which the learned have taken in them, to which we may add the destruction of them, which is going on in almost every place where they are found in this whole country.' p. 120.

'They abound most in the vicinity of good streams, and are never, or rarely, found, except in a fertile soil. They are not found in the prairies of Ohio, and rarely in the barrens, and there they are small, and situated on the edge of them, and on dry

ground.' p. 124.

These ancient works consist, 1. of mounds, or tumuli, of a conical form, from five feet to more than a hundred in height: 2. of elevated squares, supposed to be high places for sacred purposes, or the foundations of temples; and these are of various dimensions and heights: 3. of walls of earth, from five to twenty feet high, and enclosing from one acre to more than a hundred; some laid out in regular squares, some made exactly circular, and some of irregular construction. The principal of these seem to have been intended for fortifications, or as the means of fencing in large towns: and 4. of parallel walls of earth, extending sometimes several miles; believed to be designed for covered ways, for race

grounds, and for places of amusement. They all appear to have been built with 'earth taken up uniformly from the surface of the plain on which they are erected, so as not to leave any traces by which we perceive from whence it was collected, and are as nearly perpendicular as the earth could be made to lie.' That these are works of great antiquity appears from this declaration of our author;

'Trees of the largest size, whose concentric annular rings have been counted, have in many instances as many as four hundred, and they appear to be at least the third growth since the works were occupied.' p. 2:9.

'Along the Ohio, where the river is in many places washing away its banks, hearths and fire places are brought to light, two, four, and even six feet below the surface. A long time must have elapsed since the earth was deposited over them. Around them are spread immense quantities of muscle shells, bones of animals, &c. From the depth of many of these remains of chimneys below the present surface of the earth, on which, at the settlement of this country by its present inhabitants, grew as large trees as any in the surrounding forest, the conclusion is, that a long period, perhaps a thousand years, has elapsed since these hearths were deserted.' pp. 225, 226.

The first of these mounds and 'forts,' as they are usually called, in a north-eastern direction, is on the south side of Ontario, not far from Black river. One on the Cherango river, at Oxford, is the farthest south, on the eastern side of the Alleghanies.

'These works are small, very ancient, and appear to mark the utmost extent of the settlement of the people who erected them in that direction. In travelling towards Lake Erie, in a western direction from the works above mentioned, a few small works are occasionally found, especially in the Genessee country. But they are few and small, until we arrive at the mouth of Cataraugus creek, a water of Lake Erie, in Cataraugus county, in the state of New York; where Governor Clinton, in his Memoir, says, a line of forts commences, extending south upwards of fifty miles, and not more than four or five miles apart. There is said to be another line of them parallel to these, which generally contain a few acres of ground only, whose walls are only a few feet in height. Travelling towards the south-west, these works are frequently seen, but, like those already mentioned, they are comparatively small, until we arrive on the Licking, near Newark, where are some of

the most extensive and intricate of any in this state, perhaps in the world. Leaving these, still proceeding in a south-western direction, we find some very extensive ones at Circleville. At Chillicothe there were some, but the destroying hand of man has despoiled them of their contents, and entirely removed them. On Paint Creek are some, far exceeding all others in some respects, where probably was once an ancient city of great extent. At the mouth of the Scioto are some very extensive ones, as well as at the mouth of the Muskingum. In fine, these works are thickly scattered over the vast plain from the southern shore of Lake Erie to the Mexican gulf, increasing in number, size, and grandeur, as we proceed towards the south. They may be traced around the gulf, across the province of Texas into New Mexico, and all the way into South America. pp. 122—124.

Mr. Atwater, professing 'to examine with care and describe with fidelity those antiquities which are found in the state of Ohio,' proceeds to give an account of several of the most considerable and curious, from actual measurement and survey. We shall endeavour, by abridging some of his descriptions, and by a few extracts, to enable our readers to form an idea of the structure and dimensions of these very remarkable works.

The ancient works near Newark, in Licking county, are of great extent. A fort, nearly in the form of an octagon. enclosing about forty acres, constructed of walls ten feet high. is connected with a round fort of twenty-two acres, by parallel walls of equal height. Similar walls form a passage to the Licking river northerly, and run in a southerly direction to an unexplored distance. A like guarded pass-way, 500 chains in length, leads to a square fort containing twenty acres, which is in the same manner connected with a round one containing twenty-six acres. At the extremities of the outer passes, are what may be called 'round towers;' and adjacent to one of the forts is 'an observatory, partly of stone, thirty feet high.' 'It commanded a full view of a considerable part, if not all of the plain on which these ancient works stand; and would do so now, were the thick growth of aged forest trees which clothe this tract cleared away. Under this observatory was a passage, from appearances, and a secret one probably, to the water course which once run near this spot, but has since moved further off.

'A few miles below Newark, on the south side of the Licking, are some extraordinary holes dug in the earth. In popular language they are called "wells," but were not dug for the purpose of procuring water, either fresh or salt. There are at least a thousand of these wells; many of them are more than twenty feet in depth. A great deal of curiosity has been excited as to the objects sought for by the people who dug these holes.' p. 130.

In Perry county is a large stone work, of a triangular form, enclosing upwards of forty acres. This Mr. Atwater describes and then remarks,

'It is on high ground, and of course could not have been a place of habitation for any length of time. It might have been the place where some solemn feast was annually held by the tribe by which it was formed. The place has now become a forest, and the soil is too poor to have ever been cultivated by a people who invariably chose to dwell on a fertile spot.' p. 132.

There is next given a very particular description of the works at Marietta, extracted, with handsome acknowledgments, from a volume which contains some elaborate discussions upon the Western antiquities, but which can hardly be said to have been published, as copies enough were not sold to pay the engraver's bill, and most of the edition now remains on the shelves of the author.\*

The works at Circleville are among the most perfect and curious in the whole region.

'There are two forts, one being an exact circle, the other an exact square. The former is surrounded by two walls, with a deep ditch between them. The latter is encompassed by one wall without any ditch. The former was sixty-nine feet in diameter, measuring from outside to outside of the circular outer wall; the latter is exactly fifty-five rods square, measuring the same way. The walls of the circular fort were at least twenty feet in height, measuring from the bottom of the ditch, before the town of Circleville was built. The inner wall was of clay, taken up probably in the northern part of the fort, where was a low place, and is still considerably lower than any other part of the work. The outside wall was taken from the ditch which is between these walls, and is alluvial, consisting of pebbles worn

<sup>\*</sup> We refer to the 'Tour in Ohio,' by the author of a 'Poem on American Patronage.'

smooth in water, and sand, to a very considerable depth, more than fifty feet at least. The outside of the walls is about five or six feet in height now; on the inside, the ditch is at present generally not more than fifteen feet. They are disappearing before us daily, and will soon be gone. The walls of the square fort are, at this time, where left standing, about ten feet in height. There were eight gate-ways, or openings, leading into the square fort, and only one into the circular fort. Before each of these openings was a mound of earth, perhaps four feet high, forty feet perhaps in diameter at the base, and twenty or upwards at the summit. These mounds, for two rods or more, are exactly in front of the gate-ways, and were intended for the defence of these openings. As this work was a perfect square, so the gate-ways and their watch towers, were equidistant from each other. These mounds were in a perfectly straight line, and exactly parallel with the wall, p. 141, 142.

'The extreme care of the authors of these works to protect and defend every part of the circle is no where visible about this square fort. The former is defended by two high walls; the latter by one. The former has a deep ditch encircling it; this has none. The former could be entered at one place only; this at eight, and those about twenty feet broad. The present town of Circleville covers all the round and the western half of the

square fort.' p. 143.

'The walls of this work vary a few degrees from north and south, east and west; but not more than the needle varies, and not a few surveyors have, from this circumstance, been impressed with the belief that the authors of these works were acquainted with astronomy. What surprised me on measuring these forts, was the exact manner in which they had laid down their circle and square; so that after every effort, by the most careful survey to detect some error in their measurement, we found that it was impossible, and that the measurement was much more correct than it would have been in all probability, had the present inhabitants undertaken to construct such a work. Let those consider this circumstance, who affect to believe that these antiquities were raised by the ancestors of the present race of Indians.<sup>2</sup> p. 144.

Our author describes also the works at Paint Creek, which are less regular in their structure, and enclose elevations of an elliptical, a triangular, and a crescept form; those at Portsmouth; those on the Liule Miami; and those at Cincinnati; but, as a just idea of them, and indeed of those which we have mentioned above, is dependent upon the draw-

ings to which a constant reference is made, we must refer our readers to the book itself, assuring them that it will highly gratify their curiosity and reward their examination.

We have next a description of the mounds, which are of three kinds: 1. tumuli of earth; which appear to be cemeteries, or monuments in honour of the illustrious dead: 2. conical piles, principally of stone; which might have been altars, or formed for sacred purposes: and 3. pyramidical mounds; which are supposed to have been observatories, or watch-towers.

'The mounds, or tumuli of earth, are of various altitudes and dimensions, some being only four or five feet in height, and ten or twelve feet in diameter at their base; whilst others, as we travel to the south, rise to the height of eighty and ninety feet.

'They are generally, when completed, in the form of a cone. Those in the north part of Ohio are inferior in size, and fewer in number, than those along the river. The mounds are believed to exist from the kocky Mountains in the west to the Alleghanies in the east; from the southern shore of lake Erie to the Mexican gulf; and though few and small in the north, numerous and lofty in the south, yet exhibit proofs of a common origin.' p. 167.

In the subsequent pages, Mr. Atwater describes a variety of articles found in the mounds, and accompanies his description with drawings; and they clearly prove that the constructors of these works possessed a knowledge of some of the arts, particularly of making 'vases of calcarious breccia,' of forming what seems to have been armour of copper, and of fabricating various implements of materials, of forms, and for purposes unknown to any tribe of the Indians who have inhabited that region for at least the three last centuries. We think it highly important that all such relics should be carefully preserved in some public museum; as a comparison of them with those taken from the northern Asiatic mounds, and those from the Teocalli at Mexico, will show whether those who constructed the works on the Ohio and the Mississippi were descendants of the Tartay or Scythians and progenitors of the Mexicans, or rather of their predecessors, the original inhabitants of Peru.

Mentioning the mounds of stone, Mr. Atwater says,

'These works are, like those of earth, in form of a cone, composed of small stones, on which no marks of tools are visible. In New Series. No. 6.

them some of the most interesting articles are found, as urns, ornaments of copper, heads of spears, &c. of the same metal, as well as medals of copper, and pickaxes of hornblend; several drawings of which may be seen in this volume.' p. 184.

This department of his investigations our author closes with the following remarks:

'A careful survey of the abovementioned works would probably show that they were all connected, and formed but parts of a whole, laid out with taste.

'Following the river Ohio downwards, the mounds appear on both sides, erected uniformly on the highest alluvions along that stream. Those at Marietta, Portsmouth, and Cincinnati, are noticed elsewhere. Their numbers increase all the way to the

Mississippi, on which river they assume the largest size.

'These tumuli, as well as the fortifications, are to be found at the junction of all the rivers along the Mississippi in the most eligible positions for towns, and in the most extensive bodies of fertile lands. Their number exceeds, perhaps, three thousand; the smallest not less than twenty feet in height, and one hundred in diameter at the base. Their great number, and the astonishing size of some of them, may be regarded as furnishing, with other circumstances, evidence of their antiquity.' p. 188.

One of the mounds, nearly opposite St. Louis, is eight hundred yards in circumference at the base, and one hundred feet in height. Mr. Brackenridge noticed a mound at New Madrid of three hundred and fifty feet in diameter at the base. Other large ones are in the following places, viz. at St. Louis, one with two stages, another with three; at the mouth of the Missouri; at the mouth of Cahokia river in two groups; twenty miles below, two groups also, but the mounds of a smaller size; on the bank of a lake, formerly the bed of a river, at the mouth of Marameck, St. Genevieve; one near Washington, Mississippi state, of one hundred and forty-six feet in height; at Baton Rouge, and on the bayou Manchac; one of the mounds near the lake is composed chiefly of shells: the inhabitants have taken great quantities of them for lime.

'The mound on Black river has two stages and a group around. At each of the above places there are groups of mounds, and there was probably once a city. Mr. Brackenridge thinks that the largest city belonging to this people was situated between the Ohio, Mississippi, Missouri, and Illinois. On the plains between the Arkansas and St. Francis, there are several very large mounds.

'Thus it will be seen, that these remains, which were so few and small along the northern lakes, are more and more numerous as we travel in a southwestern direction, until we reach the Mississippi, where they are lofty and magnificent' p. 189.

— We see a line of ancient works, reaching from the south side of lake Ontario across this state, to the banks of the Mississippi, along the banks of that river, through the upper part of the province of Texas, around the Mexican gulf, quite into Mexico:—increasing in number, improving in every respect as we have followed them; and showing the increased numbers and improved condition of their authors, as they migrated towards the country where they finally settled.

'It is true, that no historian has told us the names of the mighty chieftains, whose ashes are inurned in our tumuli; no poet's song has been handed down to us, in which their exploits are noticed. History has not informed us who were their priests, their orators, their ablest statesmen, or their greatest warriors. But we find idols that shew that the same gods were worshipped here as in Mexico.—The works left behind them are exactly similar to those in Mexico and Peru; and our works are continued quite

into that country.' p. 248.

In some of the nitrous caves in Kentucky exsiccated bodies have been found, which are called 'mummies,' though it does not appear that they were ever embalmed. Of these the following account is given;

'The mummies have generally been found enveloped in three coverings; first in a coarse species of linen cloth, of about the consistency and texture of cotton bagging. It was evidently woven by the same kind of process, which is still practised in the interior part of Africa. The warp being extended by some slight kind of machinery, the woof was passed across it, and then twisted every two threads of the warp together, before the second passage of the filling. This seems to have been the first rude method of weaving in Asia, Africa, and America. The second envelope of the mummies is a kind of net work, of coarse threads. formed of very small loose meshes, in which were fixed the feathers of various kinds of birds, so as to make a perfectly smooth surface, lying all in one direction. The art of this tedious, but beautiful manufacture, was well understood in Mexico, and still exists on the northwest coast of America, and in the islands of the Pacific Ocean. In those isles it is the state or court dress. The third and outer envelope of these mummies is either like the one first described, or it consists of leather sewed together.' p. 231.

It is but justice to say, that the active, zealous, and indefatigable exertions of Mr. Atwater in collecting the materials which compose the principal part of the volume before us, and in obtaining such accurate measurements and delineations, do him much honour. He has furnished information respecting these wonderful structures, which is more satisfactory than has ever before been given to the public; and his labours are particularly valuable and meritorious, because the antiquities which he has so minutely and accurately described are constantly mouldering away, and every year becoming more and more indistinct; and, as the forests are cleared, settlements made, and the land cultivated, they will one after another be levelled and obliterated.

The latter part of the volume consists of 'an account of the present state of the Indian tribes inhabiting the Ohio,' by John Johnston Esq. United States agent for Indian affairs; 'Conjectures respecting the ancient inhabitants of North America,' by Moses Fiske Esq.; 'Antiquities and Curiosities of Western Pennsylvania,' by President Alden; 'Communications,' by Dr. S. Mitchill; 'Description of a remarkable cave in Kentucky,' by J. H. Farnham; 'An account of the exsiccated body, or mummy, found in a cave,' by Charles Wilkins Esq.; and a very interesting 'account of the Caraibs who inhabited the Antilles,' by William Sheldon Esq. of Jamaica.

ART. XIII.—Memoires Historiques sur la vie de M. Suard, sur ses écrits, et sur le 18<sup>me</sup> Siècle, par Dominique Joseph Garat. Paris, 8vo, 2 vols. 1820.

This, we are sorry to say, is a very indifferent work. The plan is bad, and the execution not much better. We cannot, in conscience, recommend it to our readers; but having taken the trouble to go through it ourselves, we hope to be able to turn the time and labour employed upon it to some account, by extracting a part of the more instructive and amusing passages. The least valuable book generally contains something worth attention, as it has been observed, that some fruit may be gathered from the conversation of the dullest companion.

The author of this work sustained a conspicuous part in