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A D V E R T I S E M E N T.

TO accommodate the purchaser; and to invite communications, the Academy has thought it expedient to publish its Memoirs in the present form. In the choice of papers, the Committee, to whom the selection was entrusted, have studied utility, variety, and entertainment. As communications increase, new publications will appear. And it is to be hoped, that a regular series of numbers will call the attention to philosophical inquiries; and shew, that the Academy does not overlook the end of its institution. The reader will remember, that the Society is not responsible for any communications, which may be selected and published. They must stand or fall by their own merit. The mathematician must answer for his own reasonings, the philosopher for his experiments, and the theorist for his conjectures.

NOTES

The Academy of Sciences and Arts of Cambridge
has resolved to reprint the first series of memoirs
of the first volume of the second series of the
Annals of the Academy of Sciences and Arts of
Cambridge, in order to make good complete
sets of the first series of memoirs.

MEMOIRS OF THE ACADEMY OF SCIENCES AND ARTS
OF CAMBRIDGE

Cambridge, November, 1859.

It was voted by the Academy at the last Annual Meeting, that
Part I. of Volume II. be reprinted, in order to make good complete
sets of the First Series of Memoirs.

JOSEPH LOVERING, } Committee
C. C. FELTON, } of
JEFFRIES WYMAN, } Publication.

CAMBRIDGE:
ALLEN AND FARNHAM, PRINTERS.

XXII. *Account of a Skeleton of a Large Animal, found near Hudson's River. By the Rev. Mr. ROBERT ANNAN.*

Boston, December, 1785.

S I R,

The following Narration was drawn up, soon after the discovery therein mentioned, was made. But my removal from the State of New-York to this town had so deranged my papers, that, for a long time, I was afraid it had been lost. If you think it worthy a place in your curious collections, it is at your service.

ROBERT ANNAN.

IN the fall of the year 1780, whilst I resided in the state of New-York, on the banks of a small river, named the Walkill, about seventy miles from the city of New-York, and fifteen miles in a perpendicular line on the west side of Hudson's river, a young man, whom I had employed to drain a deep and wet swamp on my farm, dugged up the remains of a very surprising animal, without taking notice of any thing except the grinders. The bones were become so soft, that the spade cut them almost as easily as the clay. After breaking one of the grinders, he threw them on the side of the ditch; and being a stranger to contemplation, took no further notice of the matter, only on coming home at night, said among the servants, that he had found some strange stones in the ditch. I heard nothing of the affair at that time: but within a day or two after, went out to see
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the work, and discovered the grinders. I brought them home, ordered them to be washed; and, placing them in the order in which I fancied them to have stood in the animal's jaw, sat down astonished, musing over them for a considerable time. That same day I sent for a gentleman in the neighbourhood, a native of this country, and who had travelled much through it, to know whether ever he had seen any similar to them. He was as much astonished as myself. We went to the spot, and fell eagerly to digging. We found a large number of bones, but mutilated, rotten, and broken. It was impossible to handle many of them, without breaking them. We found the vertebræ or joints of the back, lying in a row, as they had been when the animal was alive: but the line, in which they lay, run out into the ditch, when all was marred; and in lifting them up they broke. We then discovered on one side of them, near to where they began, what we supposed to be the loin joint. We worked very carefully about it; and got it up; but it also fell in two pieces. On putting the pieces together, it measured twelve inches in diameter. A part of the tibia of this remained; from the cavity of which I extracted some thick viscid matter, resembling tar mixed with blood. We found another bone of a spherical form on one side. And though cut through by the spade, so as the cut encroached on the spherical part, its diameter measured six inches. It appeared to be the convex part of a joint; though more oblate than is common in other animals. The grinders were four in number. All belonged, it is probable, to one jaw; two to one side of the mouth, and two to the other.

The two innermost were exactly alike, and also the two outermost, or those which had been placed next the fore teeth. Each of the innermost measured three inches and a half in breadth, and four and a half inches in length. Each of the two outermost measured in length, rather more than seven inches, and in breadth, somewhat more than three and an half inches: but declined in breadth towards the fore-teeth. Two of these grinders had lost the cor, and nothing remained but the hard hollow ivory case. The other two retained each so much of the cor as was above the gums, in which were apertures for the insertion of the nerves; the largest of these apertures with difficulty admitted the point of my little finger. These grinders are exceedingly indented. One deep furrow runs the whole length of them; and, when placed two and two, as they must have stood in the jaw, there were four indentures, or furrows across that long line, which divided the surface of each pair into ten protuberances, rising in a pyramidical form, the perpendicular height of the highest of which was about an inch and one tenth. I should here remark, that each of the innermost grinders had four of these protuberances, and each of the outermost six: but some of them were considerably worn down by the animal's grinding its food; and it was easy to perceive, not only on the superficies, but also on the sides of some of them, evident marks of friction; the innermost chiefly bore these marks. The protuberances are rough, and of a dark grey colour; but when smoothed, by friction, appeared white and polished, as the finest ivory. What could this animal be? Certainly not a marine monster, for
it

it lay above a hundred miles from the sea: unless we can suppose, that not many centuries ago, that part of the country was covered by the sea. From the appearance of its monstrous grinders, it would seem as if it had been of the carnivorous kind. A gentleman who came to see the remains of it, told me, he had seen the skeleton of an elephant; but the biggest joint in it was much inferior to what I have described as the loin joint; though it is probable, it had lost much of its magnitude. Doctor Michealis, physician general of the Hessian troops, who, with some other gentlemen, came to my house, after the peace, and before New-York was evacuated, in order to make further search (in which however, he was frustrated, by heavy rains having fallen) said he could not think it had been an elephant, as being in his opinion, much larger. He carried some of the bones to Germany with him. And others were sent to the museum in Philadelphia, kept by Mr. Semittien; and some were destroyed by careless country people, whilst I was abroad. Shall we, sir, suppose the species to be extinct over the face of the globe? If so, what could be the cause? It is next to incredible, that the remains of this animal could have lain there since the flood. May there not be some of the kind yet surviving, in some of the interior parts of the continent? Comparatively little of it has yet been explored. Some gentlemen, with whom I have conversed, have supposed that their extinction (as it is probable they are extinct) is owing to some amazing convulsion, concussion, or catastrophe, endured by the globe. But I know of none that could produce such an effect, except the flood. Earth-
quakes

quakes might destroy some of them, but not all. And the remains of them have been discovered in different parts of the world. His Excellency, General Washington, came to my house to see these relicts. He told me, he had in his house a grinder which was found on the Ohio, much resembling these. And in the American Magazine of December 1746, there is an account of a tooth and bones, of what the author calls an elephant, discovered in England, which, I am persuaded, must have been of the same species. I shall conclude this narrative with the devout and rapturous exclamation of the Psalmist "Great and marvellous are thy works, Lord God Almighty!"

I am Sir, with much respect, your most
obedient, and humble servant,

ROBERT ANNAN.

To the PRESIDENT of the AMERICAN }
ACADEMY of ARTS and SCIENCES. }



XXIII. *A Description of a Horn or Bone, lately found in the River Chemung, or Tyoga, a western Branch of the Susquehanna, about twelve miles from Tyoga Point: Communicated by the Hon. TIMOTHY EDWARDS, of Stockbridge, Esq.; in a Letter to the Rev. JOSEPH WILLARD, D. D.*

January, 1788.

"IT is six feet nine inches long, twenty one inches round, at the large end, and fifteen inches, at the small end. In the large end is a cavity, two and an half inches in diameter,