

**FIRST ANNIVERSARY ADDRESS
BEFORE THE ASSOCIATION OF
AMERICAN GEOLOGISTS: AT
THEIR SECOND ANNUAL MEETING
IN PHILADELPHIA, APRIL 5, 1841**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649299744

First Anniversary Address Before the Association of American Geologists: At Their Second Annual meeting in Philadelphia, april 5, 1841 by Edward Hitchcock

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Cover @ 2017

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EDWARD HITCHCOCK

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ASSOCIATION OF AMERICAN GEOLOGISTS,
AT THEIR
SECOND ANNUAL MEETING

IN
PHILADELPHIA, APRIL 5, 1841.

BY EDWARD HITCHCOCK, LL. D.

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Chairman of the Association for 1840.

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PRINTED BY B. L. HANLEN.

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ADDRESS.

GENTLEMEN OF THE ASSOCIATION :—It may be expected on this occasion, that I should give some account of the origin and progress of this society. The history is short. A number of geologists had for years been employed in prosecuting geological surveys in many widely separated states of the Union, and as they were bringing their labors towards a close, they felt a strong desire to compare notes with one another, that they might clear up points obscure in the districts which they had examined, but which might perhaps be fully developed in others, and that more uniformity might be secured in the final results. The gentlemen of the New York survey at length issued a circular, inviting those engaged in similar surveys in the other states, to a meeting in this city a year ago. The number that responded to the invitation by their attendance, was not large. But I am sure that I shall speak the unanimous opinion of all present, when I say that the meeting was most pleasant and profitable. It was highly gratifying for those, who had long been engaged in the same work in widely separated fields, and who knew one another only by reputation, to be able to exchange salutations, and hear one another's voices, and share one another's sympathies. Particularly important was it for those of us who are very much insulated from geological society and counsel, to meet those who could solve our difficulties, and by detailing the phenomena of their own districts, could throw light upon obscurities that hung over our own.

Under these circumstances, it is not strange that the present meeting should have been appointed; nor that we should have ventured to invite others to join us, who are engaged in similar pursuits, although not in the state surveys; and some of whom are our seniors in cultivating the noble science of geology.

As to the ulterior plans of this Association, I am not aware that any have been concerted, whatever may be in the minds of

individual members. It will be seen that their grand object is to develop American geology in a quiet and unostentatious manner. Whatever measures will promote this object, will meet, I presume, the support of the members;—and whoever has it so much at heart, that he is willing to engage in active and energetic labors to promote its advancement, will doubtless be welcomed to their fraternity. While they acknowledge their indebtedness to similar associations in Europe, for the example which they have set, and especially to the London Geological Society, the noble mother of them all; they do not aspire to be compared to any of them, until the fruits of their labors shall make such comparisons involuntary. They wish to be known only as an association of geologists, who love their favorite science so well, that they will pursue it with almost equal ardor, whether they are noticed or unnoticed, whether patronized or neglected. It is their motto,

Hoc opus, hoc studium, parvi properamus et ampli.

I propose, gentlemen, at this time, to sketch briefly the most important points in American geology, that require your special attention. In doing this, I must of course give some account of what has been already done in this wide field. And as far as possible, I shall treat both of these subjects together.

Until the commencement of the present century, almost nothing had been done by Americans to develop our mineralogy or geology. And until the year 1807, although mineralogy had begun to excite some interest, yet no effort worthy of notice had been made in geology. In that year, William Maclure commenced, single-handed, the Herculean task of tracing out and delineating the great features of our rock formations. This he at length accomplished; after crossing the Alleghany mountains in fifty places! This was certainly a most remarkable example of persevering devotedness to a favorite pursuit; and cannot but embalm his memory in the heart of every American geologist.

We must not presume from this isolated instance, that any correspondent knowledge of this subject existed at that time in our country. On this point we have the striking testimony of one, who is still among us in the vigor of ripe manhood, to witness the wondrous change which his own labors and those of others have produced. "We speak from experience," says Prof. Silliman, "and well remember with what impatient but almost despairing

curiosity we eyed the bleak, naked ridges which impended over the valleys that were the scenes of our youthful excursions. In vain did we doubt that the glittering spangles of mica, and the still more alluring brilliancy of pyrites, gave assurance of the existence of the precious metals in these substances; or that the cutting of glass by the garnet, and by quartz, proved that these minerals were the diamond; but if they were not precious metals, and if they were not diamonds, we in vain enquired of our companions, and even of our teachers, what they were."—*Am. Journal of Science, Vol. I, p. 36.*

I cannot, on this occasion, go into minute details of the labors, or even of the names of those, by whom this state of things in a few years was entirely changed. In 1810, appeared the *Mineralogical Journal* of Dr. Bruce: in 1816, the work of Prof. Cleaveland on *Mineralogy and Geology*: in 1818, the *American Journal of Science* was commenced by Prof. Silliman: a work which has always been an efficient instrument in promoting a knowledge of geology as well as other sciences; and which, by great efforts, has now reached its forty first volume. In this connection, the *Monthly American Journal of Geology and Natural Science*, by Mr. Featherstonhaugh, which reached only its first volume, should not be forgotten. The transactions of several of our scientific societies, especially of the *Academy of Natural Sciences* in this city, of the *Lyceum of Natural History* in New York, and of the *American Academy of Arts and Sciences* at Boston, have contained many most valuable papers illustrative of the geological features of this continent. An *American Geological Society* was formed in 1818: but it has accomplished little, except that it has a valuable collection of specimens and books, chiefly through the liberality of its president, William Maclure. The *Pennsylvania Geological Society* was organized in 1832, and published two volumes of its transactions. Several other societies in the country, of a more local character, have contributed essentially to the promotion of geology; and the recent organization of the *National Institution for the promotion of science* at Washington, and its vigorous commencement, promise much for this branch of knowledge.

But the feature in the history of American geology, to which I feel bound to call special attention, is the institution of state geological surveys by the civil authorities. I regard this feature

as peculiarly American, for I am not aware that any general survey of a large district, had been ordered in any other part of the world, till after it had been done in this country. At any rate, sure I am, that it was entirely original with those who introduced it here. North Carolina has the honor of having first directed a survey of her territory. This duty was committed to Prof. Olmsted, who made a report of one hundred and forty one pages, in 1824 and 1825, upon the economical geology of the state. The year following, South Carolina gave a similar commission to Prof. Vanuxem, whose report was published only in the newspapers. An interval of five or six years succeeded, before Massachusetts engaged in the work. In 1830, she ordered a survey;—in 1832, an annual report of seventy pages, and in 1833, one of seven hundred pages, with a second edition in 1835, were published. In 1837, a re-survey was directed; in 1838, an annual report of one hundred and thirty nine pages was printed, and the final report of eight hundred and forty quarto pages with fifty five plates, is just completed. Tennessee began the work only two or three years after Massachusetts, and committed it to Prof. Troost, who has published five annual reports in pamphlets of thirty to eighty pages, with a geological map of the state. In Maryland, the work was begun in 1834, and Prof. Ducatel was appointed to execute it, who has made seven annual reports of about fifty pages each, with numerous maps and sections. The survey of New Jersey was ordered in 1835; in 1836, Prof. Henry D. Rogers, the commissioned geologist, made a report of one hundred and eighty eight pages, with extensive sections; and in 1840, his final report of three hundred and one pages, with a geological map of the state and sections. The state of New York was divided into four sections; and Profs. Vanuxem, Mather, and Emmons, with Mr. James Hall, as geologists, Mr. Conrad as paleontologist, and Prof. L. C. Beck as chemist, were appointed in 1836, to survey them. Up to the present time, they have made five reports; the first of two hundred and twelve pages, the second of three hundred and eighty four pages, the third of three hundred and fifty one pages, the fourth of four hundred and eighty four pages, and the fifth of one hundred and eighty four pages. The work is now nearly completed; and the gentlemen are engaged in preparing their final report. The survey of Virginia was committed to Prof. William B. Rogers, who, since 1835,

has made six reports: the first of thirty six pages, the second of thirty pages, the third of fifty four pages, the fourth of thirty two pages, the fifth of one hundred and sixty one pages, and the sixth of one hundred and thirty two pages.

Dr. Charles T. Jackson was appointed state geologist of Maine, in 1836, and he has since made three reports; the first of one hundred and twenty eight pages, the second of one hundred and sixty eight pages, and the third of three hundred and forty pages. He has also surveyed the public lands of Maine and Massachusetts, and made two reports. In 1839, the same gentleman was appointed to survey Rhode Island; and his final report, of three hundred and twelve pages, with a geological map and sections, appeared in 1840. In 1840, he was commissioned to survey New Hampshire, and his first annual report will soon appear. The survey of Connecticut has been made by Dr. J. G. Percival and Prof. Charles U. Shepard. The latter made a report in 1837, of one hundred and eighty eight pages, upon the economical mineralogy of the state. The report of the former gentleman has not yet been published, but is expected in the course of the ensuing year. The survey of Pennsylvania was begun in 1836, by Prof. Henry D. Rogers, who has made five annual reports; the first of twenty two pages, the second of ninety three pages, the third of one hundred and nineteen pages, the fourth of two hundred and fifty two pages, and the fifth of one hundred and seventy nine pages. The survey of Ohio was committed to Prof. Mather, as principal geologist, assisted by Dr. S. P. Hildreth, Prof. John Locke and J. C. Briggs, and J. W. Foster. Their first report of one hundred and thirty four pages, was made in 1837, and their second of two hundred and eighty six pages, with numerous drawings, in 1838. Delaware commenced this work in 1837, under the direction of James C. Booth, Esq., who has made two annual reports of a few pages, and his final report of one hundred and eighty pages, is nearly through the press. In Michigan, the survey was committed to Douglass Houghton, Esq., with assistants. His first report of thirty seven pages, was made in 1838, and his three subsequent ones of one hundred and twenty three, one hundred and twenty four, and one hundred and eighty four pages, in successive years. In 1837, Dr. D. D. Owen commenced a survey of Indiana, and he has since published two reports of thirty four and fifty four pages. In Kentucky, the