

OBITUARY NOTICE

OF THE

LATE PRINCIPAL GEOLOGIST OF KENTUCKY,

DAVID DALE OWEN, M. D.

The decease of our late distinguished chief in the Geological Survey of Kentucky, which occurred in the afternoon of November 13th, 1860, at his residence in New Harmony, Indiana, at the age of 53, will be deeply deplored throughout the wide circle, in this country and in Europe, in which he had, by his great industry and eminent services in the field of exploration of American Geology, deservedly acquired a reputation as elevated as it is extensive.

Dr. Owen was born June 24th, 1807, at Braxfield House, Lanarkshire, Scotland; and surrounded by the picturesque scenery of that locality, and witness of the stirring events connected with the great social experiment of his father, Robert Owen, the distinguished philanthropist and large mill owner, whose efforts were directed to ameliorating the condition of the laboring classes, Dr. Owen was early led to admire the works of nature and taught to examine and think for himself; inducing habits of self-reliance, which he retained throughout life.

On leaving home, with a younger brother, to receive instruction in the celebrated educational establishment of Emanuel Fellenberg, at Hofwyl, Switzerland, their father's parting advice was to devote a large share of attention to the science of chemistry, so practically useful in its bearings on the other branches of science as well as on the arts and manufactures. This judicious advice was faithfully followed at this institution, during the years 1824-5-6, as well as afterwards under the distinguished Dr. Andrew Ure, in Glasgow, in 1827, and subsequently with Dr. Turner, in London, whilst on a visit of two years made after his removal to America.

In the fall of 1827 Dr. Owen accompanied his father to this country, settling in New Harmony; of which town the latter had purchased a large part, for testing his philanthropic and educational plans. Dr. O. landed in New Orleans January, 1828, and with the exception of some time spent in Paris, France, to improve himself in drawing, for which he had considerable talent, as exhibited in the numerous sketches in his various Geological Reports, and the courses of lectures on chemistry and geology in London, the remainder of his life was spent in this region, devoted to study and to practical geological and chemical pursuits connected with the development of our mineral and agricultural resources in the western, northwestern, and southwestern States.

In 1833 he was associated, as a volunteer explorer, with the late Dr. Gerard Troost, then engaged on a geological reconnoissance of Tennessee; and, after two years assiduous devotion to medical studies, received the degree of Doctor of Medicine from the Ohio Medical College, Cincinnati, O., in 1835. In 1837 he married Miss Catherine Neef, daughter of Joseph Neef, the former associate of Pestalozzi in

Switzerland, and later in New Harmony with that distinguished early promoter of American geology, Mr. William Maclure, a considerable portion of whose geological and mineralogical collections form the basis of the truly immense cabinet which has been accumulated by Dr. Owen during his active life, by purchases, exchanges, and in his numerous geological explorations. A collection which is itself a vast monument to his industry and zeal in the pursuit of science, and which, recently offered by his executors to the State of Indiana, it is hoped will be purchased by that Commonwealth to be preserved entire for the purposes of future reference and instruction, in accordance with the feelings of the late owner.

In 1837 Dr. Owen was appointed Geologist of Indiana, and began his active life as an independent explorer in the extensive field of American geology and mineralogy by a general reconnoissance of Indiana; the report of which formed a small octavo volume, which was reprinted by the Legislature in 1859, when he was again appointed Chief Geologist of that State, under the auspices of the State Agricultural Society, and with the active co-operation of his brother, Col. Richard Owen, who has recently been appointed his successor as State Geologist, and who, by agreement, was to perform the field work. With this assistance, and the co-operation of others in the field and in the laboratory, the Geologico-Agricultural Survey was carried over a considerable portion of the State; the report of which, constituting a very valuable contribution to geological and agricultural science, is now passing through the press at Indianapolis, under the charge of his brother and successor in the survey.

On the 31st of July, 1839, Dr. Owen was appointed by the General Government to explore the mineral lands of Iowa, Wisconsin, and Illinois, and required to complete the

survey before winter set in. The notification of his appointment and his instructions reached him in New Harmony August 17th following, yet, by the exertion of unusual energy, and by the aid of one hundred and thirty-nine sub-agents and servants, whom he had employed in an incredibly short space of time, provided with tents, provisions, chemical tests, &c., &c., and organized into twenty-four working corps, each furnished with skeleton maps of the townships assigned them—each to examine thirty quarter sections daily, and report to him at appointed stations—he was enabled to make a satisfactory exploration, in every quarter section, of about eleven thousand square miles of territory, mostly wild and uncultivated, within the limited time allotted, and to forward his report to the Land Office in the month of January following. During the course of this almost incredible labor he crossed the district under examination, in an oblique direction, eleven several times. The report of this survey, published in the documents of the 1st session of 28th Congress, with its accompanying diagrams, maps, and plates from beautiful sketches of scenery by his own pencil, forms an enduring memorial of his great executive abilities and untiring zeal and industry.

During the years 1847-8-9-50, again under the appointment of the General Government, he, with his several corps, surveyed, in Wisconsin, Iowa, Minnesota, and part of Nebraska Territory, an extent of country in area exceeding two hundred thousand square miles, or four times greater than the State of New York. The report of this survey, published by Congress in 1852, forms a very large and elegant quarto volume, containing more than 600 pages of text, and numerous wood cuts, maps, diagrams, and other engravings; amongst which are some of fossils which were medal-ruled on

steel, a process never before applied to the illustration of organic remains. Another report by him, of his survey of the Chippewa Land District of Wisconsin, was published by the General Government in 1849-50.

Early in 1854 Dr. Owen, as Principal Geologist, began the Geological Survey of Kentucky, of which he personally made a complete general reconnoissance, and to which he devoted most of his attention up to the time of the commencement of his labors in Arkansas. His "General Report," which forms the beginning of this volume, is his last contribution to this work, and was written whilst suffering under general ill health which preceded his dissolution.

Appointed, in April, 1857, State Geologist of Arkansas, he commenced in October of that year, as soon as his engagement in Kentucky was ended, under the then existing appropriation, a general reconnoissance of Arkansas, which he carried on successfully up to the time of his death. His last efforts, in that way, even after disease had so far mastered his corporeal frame as to render necessary the aid of an amanuensis, were in the daily dictation, *up to three days only before his death*, of the second volume of his Report on the Geology of that State. His first "Report of a General Reconnoissance of the Northern Counties of Arkansas," a handsome octavo volume, with plates from his own drawings, was published at Little Rock, Arkansas, in 1858; and the second volume, to the completion of which he devoted his dying energies, is now passing through the press under the supervision of his brother, Col. Richard Owen.

During the last two years of the prosecution of the Geological Survey in Kentucky, the practical labor, in the field and in the laboratory, was carried on by Messrs. Lyon, Lesley, Lesquereux, and Peter, under the immediate direction of

Dr. Owen. He, by the terms of his continuance in the office of Principal Geologist of Kentucky, being allowed to devote a considerable portion of his time to the *General Reconnoissance* of Arkansas; that of Kentucky having been completed by him, and the condition of the survey and the experience of his assistants in that State being such that it was no longer necessary for him to devote to it his exclusive personal attention.

In addition to these labors, under public patronage, Dr. Owen made many geological explorations for individuals and corporations, and contributed by his pen to various scientific journals and other periodicals. His wide-spread reputation, in this country and in Europe, secured him an extensive correspondence; and whilst it brought him into reciprocal intercourse with such men as Murchison, Lyell, Mantell, Verneuil, and others, and kept up agreeable associations with the leading scientific minds of this country, levied a heavy tax upon his time and industry. Often the claims for rest, absolutely requisite to the daily recuperation of his over-wrought powers, were set aside for the pleasures of science or the calls of duty or of friendship; and the light in his laboratory, shining far into the "small hours" of the night, might indicate to his solicitous friends the too rapid consumption by him of that taper of life which he so freely sacrificed to his favorite and engrossing pursuits.

The disease, which was the immediate cause of the death of Dr. Owen, was rheumatism, determining finally to the heart, and induced, doubtless, by his severe labors and exposure in his field explorations.

The bent of Dr. Owen's mind was decidedly to *practical* results. Hence his great fondness for the applications of chemical research to the purposes of every-day life. Hence

his efforts to discover the cause of milk-sickness, and his great desire to develop and improve agriculture in this country. To the eminently useful information conveyed to the enlightened farmer by accurate soil analyses he always devoted special attention, and we are gratified to state that the practical results thus obtained have been extensively and repeatedly acknowledged. We learn that, besides the valuable articles on agriculture which he contributed to the several volumes of these reports, he had also partly written out some important suggestions on the best means of preserving the fertility of the soil unimpaired.

The labors of our lamented friend were peaceful and unpretending, but they will connect his name forever with the history of science at large and the improvement of this country in particular. For whilst the political storms which periodically sweep over the country may leave no other remembrances but of confusion and disaster, the quiet record of the discoveries of the man of science yield a perennial harvest of beneficial application.

As a man Dr. Owen was modest and undemonstrative, yet firm, independent, and self-reliant. A gentleman of the strictest honor, and of the most child-like honesty in his dealings with the world. Wholly absorbed in his much loved science, his money, his time, even his life, were freely and exclusively spent in its pursuit. Unselfish and ever careful to give every one his due on all occasions, he always awarded to all his various associates, in his reports of his numerous explorations, their just share of honor and responsibility.

The loss which is sustained in his death is very great. In the language of an obituary notice of him in Silliman's American Journal of Science, "In view of his great executive and scientific abilities, rich experience, and comparative

age, science had much to hope for in the continued life of Dr. Owen, and his loss is great in proportion to these hopes."

The monument which he was erecting to his genius and labors, in the four volumes of the Reports of the Geological Survey of Kentucky, is left incomplete; first, by the failure of the last General Assembly to appropriate funds for the continuance of the survey, and secondly, by his decease; but the work thus commenced by him, and so ably carried on by the aid of a liberal policy, will not certainly be suffered to lose a great part of its utility by being arrested before reaching the point most favorable for practical application. Its completion at an early day is at once necessary to the full development of the immense mineral and agricultural resources of the State, as it would be gratifying to the numerous friends of the deceased and to the world of science in general. Kentucky will yet redeem, to her intelligent citizens and to the civilized world, the pledges she gave in the commencement of our great Geological and Agricultural Survey; and the results of the latest labors of our lamented associate will be crowned, by completion, a perennial monument of her enterprise and liberality in the advancement of improvement, a land-mark in the world of science, and a sacred depository of the honored name of her late distinguished Chief Geologist.