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MEMORIAL OF OLIVER PERRY HAY

BY

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Oliver Perry Hay was born in Saluda Township, Jefferson County, Indiana, on the twenty-second of May, 1846, and died on the second of November, 1930, in his eighty-fifth year. Doctor Hay came of pioneer stock, for his grandfather and great-grandfather, of Scottish origin, had settled in Indiana shortly after the War of 1812. Oliver's mother, Margaret Crawford, was of New England lineage, coming by way of Virginia, North Carolina, and Kentucky, so that on both sides his heritage

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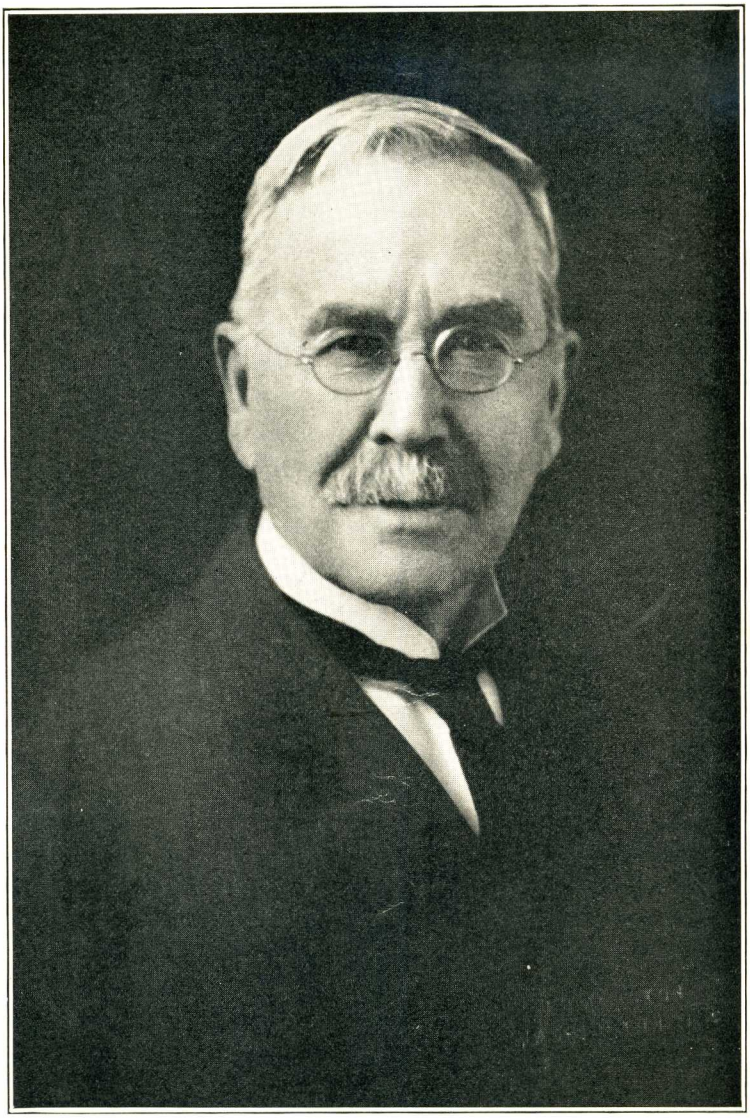

Oliver P. Hay

was rich in potentialities which were manifest in his vigorous character and great attainments. Eighty years ago the family migrated to central Illinois where young Hay began his education at a little country school. As he approached manhood he decided to enter the ministry and with this end in view entered Eureka College from which, though interrupted in his course owing to the necessity of self-support, he finally graduated in 1870. However, a strong love of nature overcame his earlier ambition, and after preaching but a single sermon Hay decided on a scientific career. He returned to Eureka College, where he served as professor of natural sciences from 1870 to 1872, also in like capacity at Oskaloosa College, in Iowa, from 1874 to 1876, at Abingdon College, Illinois, from 1877 to 1879, and as professor of biology and geology at Butler College, Indianapolis, from 1879 to 1892. The academic year 1876-77 Hay spent as a graduate student at Yale, but his degree of doctor of philosophy was granted by the University of Indiana in 1884.

Hay's interest in paleontology commenced when he was at Butler College, and he then began to work on a catalog of the literature which was destined to grow into one of his most important, if not the most valuable, contribution that he made to our science. His actual field work began with a trip to western Kansas in 1889 or 1890, from which he returned with a good collection of fossils. From this time on paleontology was his only line of research, although his first contribution to that science did not appear until 1895, when he was appointed assistant curator of zoology in the Field Museum of Natural History, Chicago. There he remained until 1897, joining the staff of the American Museum in 1900 as assistant curator of paleontology, and being promoted to associate curator of Chelonia in 1903, a position which he held until 1907, when he retired to do private research. In 1912 Doctor Hay received an appointment as research associate in the Carnegie Institution of Washington, which he held until his final retirement in 1926, at the age of eighty. Even this did not, however, end Hay's active career, for, aided by certain grants from the Institution, he labored on his second great catalog of the fossil vertebrates of North America, which was finally published the year of his death.

Doctor Hay was an indefatigable worker, toiling for long hours, seven days a week, during a life far beyond the proverbial three score years and ten, and the volume and quality of his work was in every way commensurate with his industry.

In spite of all this Doctor Hay found time for other pursuits, chiefly the study of languages, his only real hobby. Thus he had a reading

knowledge of German, French, and classic Greek and Latin, knew some Russian, and was learning Italian during the last three years of his life, all of which aided in the attainment of his vast knowledge of paleontological literature.

In character Oliver Hay was exemplary. His associates all speak of his warm friendliness, his unfailing kindliness of disposition, and his readiness to aid when advice was sought. His anatomical knowledge was vast and his mind analytical, capable of extraordinary concentration, while he exhausted every detail of his problem. Once his opinion was formed, however, he held to it tenaciously and was difficult to move from his final decision.

In 1870 Doctor Hay was married to Mary Emily Howsmon, of Eureka, Illinois, by whom he had four children: William Perry, who is head of the department of biology and chemistry of the high schools in Washington, D. C., Mrs. Mary Minnick, Frances Steele, and Robert Howsmon, all of whom survive him.

Doctor Hay was one of the founders, sometime secretary, and always an active member of the Society of Vertebrate Paleontologists, which afterward merged into the Paleontological Society affiliated with the Geological Society of America. He became a fellow of our Society in 1921. He was associate editor of the *American Geologist* from 1902 to 1905 and a member of several other scientific and learned societies. His work was not spectacular and rarely called for newspaper comment, which after all is not always indicative of highest values, especially in the present instance, for Doctor Hay's publications are always authoritative and accurate, and his colleagues feel that his judgment may be trusted as based on careful analytical thought. Even when on rare occasions one does not agree with his conclusions, one feels, nevertheless, that Doctor Hay's opinion is entitled to the highest respect.

Perhaps the most outstanding of his many contributions are those on the fossil turtles of North America, culminating in the large volume published in 1908, his work on the American Pleistocene, and above all the two catalogs of the fossil vertebrates of North America which together constitute the most valuable reference book in the library of the vertebrate paleontologist and without which his own research would be rendered much more arduous in view of the vast literature which has grown around our subject.

Doctor Hay's first paper on vertebrate paleontology appeared in 1895, but he had already published some 37 articles on recent animals, crustaceans, fishes, amphibians, reptiles, and birds, besides two on geological

subjects. Subsequent to that year, with rare exceptions, his articles were paleontological. Of Hay's published papers there were 24 on fishes, 36 on turtles, 7 on dinosaurs, 41 on mammals, and 6 on man. Of books and articles on the Pleistocene, including much mammalian description, there are 18; on geology and climatology, 7, and 10 of a general character, together with 9 more or less specific reviews, making a total of nearly 200 titles.

One of Hay's most extensive single works was "The Fossil Turtles of North America," published in 1908, a volume of 570 pages, 113 plates, and 704 text figures. This comprehensive work includes a chapter on the osteology of turtles, one on the amount of modification undergone by turtles since their earliest appearance, on the primary and secondary characters, a summary of classification with their time distribution, and the geographical distribution of living turtles. Then follows the systematic part with detailed descriptions of orders, families, genera, and species, critically considered. And here the value, not alone of clear, succinct description, but also of well drawn figures which further clarify the text is evident. The beautifully reproduced plates are from photographs of practically all the typical specimens known from the rocks of North America. Hay's work on the mammals culminated in three volumes on the Pleistocene mammalia. The first one, published in 1923, dealt with those from the States east of the Mississippi River and the Canadian provinces east of longitude 95; the second, in 1924, includes the middle region, and the third, in 1927, the western region with its vertebrated animals. Hay gives us his conclusions regarding the divisions of the Pleistocene, with the stratigraphical and time limits, and a discussion of the times of extinction of Pleistocene species. Then follows the distribution by States of the Xenarthra, Proboscidea, Equidae, Tagassuidae, musk oxen, bisons, and other notable species, together with maps on which are plotted the important localities of each group. The most extensive section treats of the Pleistocene geology of North America and its relation to its vertebrate fossils. The general plan of each of the several volumes is the same, and collectively they total 1,249 pages, 91 maps, 12 plates, and 49 text figures. Hay was greatly interested in the occurrence of man in America found in association with Pleistocene animals as shown by the bones found at Vero, Florida, and the artifacts of Texas, Oklahoma, and New Mexico.

All of these works, morphological, distributional, and systematical, have greatly enriched our knowledge of American paleontology, but by far the most valuable works from the standpoint of vertebrate research are the

"Catalogues of Fossil Vertebrata of North America." Of these the first appeared in 1902 and covered the literature of the eighteenth and nineteenth centuries, while the second in two volumes (1929 and 1930) included the first 28 years of the twentieth century. Collectively these three volumes total 2,858 pages of closely printed references, arranged first under author's titles and then systematically, with cross references. On extended acquaintance one is struck with the great freedom from error, even typographical, which gives a satisfying feeling of reliability. Not only is the actual recording necessary for such a work stupendous, but the careful sifting of synonyms and the logical classification entailing much fresh grouping and new ordinal and family names covering the entire vertebrate phylum are of the utmost importance to research students. The work implies voluminous detailed reading, understanding, and keen analytical thought. These volumes are immortal and will be used and cherished as long as paleontological research endures.

We are grieved at the passing of so useful and lovable a figure; but we rejoice that he was spared far beyond the accepted limit of life and that he used his time and energy to such advantage, with little thought of personal gain. In Oliver Hay pure science had one of its most valued servants.

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