OBITUARY

DAVID WHITE

DR. DAVID WHITE died at his home in Washington, D. C., on February 7, 1935.

Born in Palmyra Township, Wayne County, N. Y., on July 1, 1862, of early pre-Revolutionary stock, the youngest of a family of eight, he attended the country schools, prepared for college at Marion Collegiate Institute and entered Cornell with the class of 1886.

Botany was an early interest, stimulated by an inspiring teacher at Marion and maintained throughout his college career and later life. In his sophomore year he came under the influence of Samuel Gardner Williams, Charles S. Prosser and Henry S. Williams and thus acquired a sound training in general geology and paleontology. In the course of the field work of the classes in geology he made substantial collections of Devonian plant fragments in the vicinity of Ithaca. Because of his training in both systematic botany and paleontology, these fossils intrigued him and became the basis for the thesis then required for the B.S. degree at Cornell.

In the spring of 1886 Professor Lester F. Ward, in charge of paleobotanic investigations for the U. S. Geological Survey, appealed to Professor Williams for an assistant with training in paleontology and capacity for illustrative work. White, who had had some training as a draftsman and had illustrated his bachelor's thesis by new figures of much merit, was promptly recommended and as promptly invited to Washington to undertake, for the Geological Survey, the task of preparing illustrations for the use of Professor Ward. Thus began, in May, 1886, an official connection that was maintained with few interruptions until Dr. White's death, nearly 49 years later.

Ward's own interest, although very broad, was primarily in the fossil plants of the Mesozoic, and White early came to specialize in the practically unoccupied field of the Paleozoic. This field he soon made his own. His high reputation as a stratigraphic paleontologist rests primarily upon his studies of the Pottsville floras of the Appalachian province.

He revolutionized the preexisting concepts of the stratigraphic position of large portions of the Pennsylvanian section, particularly in the southern Appalachian region, and demonstrated that thousands of feet of beds in Alabama, Tennessee and Kentucky particularly, which had been regarded as much younger, were of Pottsville age. These conclusions, at variance with the positions then held by such authorities as I. C. White and J. J. Stevenson, nevertheless quickly won general acceptance, owing no doubt in large measure to the tactful, considerate and reserved but convincing way in which the young paleontologist presented his evidence.

So thorough and so detailed was White's work that he soon came to be the main dependence of the stratigraphers of the Federal and State Surveys who were working on the Pennsylvanian rocks of the Appalachian province—not only for the correlation of major divisions of the rock groups but even for the identification of individual coal beds from point to point.

It is difficult for any organization to keep its able specialists out of administrative activities, particularly if their interests are broad and their judgments sound. White suffered the usual fate and about 1907 was drawn into Survey administrative work, first as head of the Section of Eastern Coal Fields and later as chief geologist. He served in the latter capacity during the decade 1912–22. When at the end of this period, in response to his own repeated urgings, he was relieved of direct administrative responsibility, it was with the expectation that his personal research work could be immediately resumed, but there intervened a period of 3 years as chairman of the Division of Geology and Geography for the National Research Council before his desire could be realized. Meanwhile there had developed many calls upon his energies through various committee and advisory relations, formal and informal, with the National Academy of Sciences, which he served for 4 years as home secretary and for 2 years as vice-president, so that even his return to research in 1925 was, in a measure, nominal.

Early in 1931 there came a serious physical breakdown, from which a partial recovery left his mental powers entirely unimpaired, although physical endurance was diminished. The last years have been dedicated, without diminution in either enthusiasm or ability, to work on deferred problems within his selected fields. Just a few days before the end he completed a manuscript on "Metamorphism of the Organic Sediments and Derived Oils," in which his great carbon-ratio theory of a generation ago is reviewed and modernized.

To his close associates in the Geological Survey and the scientific organizations of which he was a member, Dr. White was always an inspiration. His enthusiasm and industry were unflagging, his knowledge encyclopedic. His personal and professional generosity knew no limits, and to the earnest younger student who sought his counsel he would devote time without stint, pouring out for the benefit of the neophyte a wealth of information and inspiration, of suggestion and advice, which constituted both a program for a scientific career and a guide to its attainment. Always generous in his judgments, his rare displays of impatience were reserved for the slacker or the careless and particularly for lapses in ethical standards. For these

he had no tolerance. But even his condemnations, although expressed picturesquely and with fervor, were couched in terms so humorous and so kindly as to convey the impression that their object was to be pitied rather than blamed.

He never lost hope for any man, and, indeed, within the sphere of his influence it was difficult for an associate to do less than his best, because it was so obvious that no less was expected of him.

Along his pathway through life are hundreds of fellow men and women who have been helped to bear or to forget the burdens of life by his cheerful but adamant refusal to admit that there are any. In his philosophy life consisted wholly of opportunities to be made the most of, never of limitations to mourn over. How interesting and what fun it all was, and how particularly fascinating the career of science, constantly opening as it does new vistas of comprehension and understanding! His was the quenchless spirit of the inveterate explorer, as every leader in science must be, always eager to see what lay beyond the visible horizon and tremendously pleased as the new vistas opened. He was too enthusiastically busy to waste time on anything so fruitless as introspection. Given neither to underappreciation nor to overappreciation of self, he was wholesomely lacking in self-consciousness and always looked outward and forward, never inward or back. There was no resisting the infectiousness of his spirit.

Both by the example of his own great and sound accomplishments and by his eagerness to see others attack the innumerable problems awaiting solution, he became an inspiration and a power in his generation.

His was a proud spirit, but proud of simplicity, proud of integrity, proud of genuineness and independence and tolerance, never of place or power or trappings; and proud of reputation only as evidence that his own well-based but unassertive self-respect found support in the opinions of men.

Despite an openness of character really possible only to those who have nothing to conceal, there were things about which he was disingenuous. No one will ever know how many he has aided with funds—not easily, as the wealthy can, but only by the exercise of a generosity that was real because it meant personal sacrifice. Still less will we know about the hundreds of younger associates whom he has counseled and encouraged and in whose way he has placed opportunities at the price of a limitless outpouring of his own energies.

Like many geologists of his generation, Dr. White did not lack opportunities to capitalize his abilities and his unique knowledge. Although he never sought them, offers came to him to enter the commercial field at several times the modest salary which the government pays its scientific leaders. These offers never tempted him. Although he realized that there are men of vision in the modern industrial world who know that an untrammeled research staff is a wise investment, even measured by the profit standards that determine success or failure in business, he yet was unwilling to enter an environment motivated by profit as a main objective. Although some of his own work had great economic significance, that was incidental to his research, and he preferred it so. The choice lay between applying his talents at a large salary, primarily to profits for a restricted group, with research as an incidental by-product, and applying them broadly, at a small salary, to the general service of mankind, with the economic results incidental. There was never any hesitation on his part about the choice to be made. He remained a government geologist until the end.

As a geologist, Dr. White is to be judged not of course primarily by the length of his bibliography, which may contain 200 titles, but by the diversity of the fields that he occupied and in which he wrote with authority. He has long been the foremost Paleozoic paleobotanist on this continent and perhaps in the world. His work in this field was not merely soundly systematic and descriptive but was interpretative from the beginning. He was a stratigraphic paleontologist of the highest rank. He was our foremost authority on the origin and evolution of coal. His great generalization, known widely as the carbon-ratio theory, was an outgrowth of his studies on the origin and evolution of both coal and petroleum. It established a "dead line" beyond which oil pools will not be found and thus has great economic significance. It alone stamps him as a rare original investigator and thinker. He contributed significantly in the field of isostasy, and during the world war he administered an important unit of government in such fashion as to make it most useful in the crisis.

Happily Dr. White received during his lifetime gratifying recognition of the high place that he held in the esteem of his fellows. He became vice-president of the National Academy of Sciences after long service as its home secretary. He was president of the Geological Society of America. Three of our leading universities honored him with doctorates. Two of the principal medals of the National Academy were bestowed upon him. He received the Penrose Medal of the Society of Economic Geologists and the Boverton Redwood Medal of the Institute of Petroleum Technologists of London. He was an honorary member of the geological societies of Belgium and China.

Thus his years were as full of honors as were his days of activity. His was a career that came to full

and happy fruition. His last day was a busy and a cheerful one. Before the dawn of the next he went quietly to sleep.

W. C. MENDENHALL

RECENT DEATHS

DWIGHT PORTER, emeritus professor of hydraulic engineering at the Massachusetts Institute of Technology, died on February 26. He was in his eightieth year.

WILLIAM HALE HERRICK, retired professor of chemistry at Pennsylvania State College, died on February 26. He was eighty-five years old.

DR. CLEOPHAS C. O'HARRA, professor of geology and president of the South Dakota State School of Mines, died on February 21, at sixty-eight years of age.

HENRY EDISON PHELPS, research engineer with the American Telephone and Telegraph Company from 1917 to 1934 and with the Bell Telephone Laboratories since March, 1934, died on February 21, at the age of forty-one years.

DR. HERBERT A. PULLEN, past president of the American Society of Orthodontists and a former dean of the University of Buffalo, died on February 17.

DR. ARTHUR THOMSON, emeritus Dr. Lees professor of anatomy at the University of Oxford, died on February 7 at the age of seventy-six years. He was distinguished for his work as an anatomist and as a physical anthropologist.

PROFESSOR WALTHER SPIELMEYER, chief of the division of neuropathology in the Forschungsanstalt für Psychiatrie in Munich, died on February 8.

SCIENTIFIC EVENTS

THE THREE HUNDREDTH ANNIVERSARY OF THE FOUNDING OF CHEMICAL INDUSTRIES IN AMERICA

APPOINTMENT by the Manufacturing Chemists Association of a committee to cooperate with the American Chemical Society in celebrating in New York during the week of April 22 the three hundredth anniversary of the founding of the chemical industries in America has been announced.

The members are: E. M. Allen, president of the Mathieson Alkali Works; Lammot du Pont, president of E. I. du Pont de Nemours and Company, and George W. Merck, president of Merck and Company.

Science and industry will join in an exposition of chemistry's development since John Winthrop, Jr., first colonial governor of Connecticut, in 1635 mapped out a far-reaching program for the production of salt, iron, glass, potash, tar, black lead, saltpeter, medicines, copper, alum and other chemicals.

Dr. Arthur W. Hixson, professor of chemistry at Columbia University and chairman of the general committee of arrangements, reports that at the tercentenary assembly, to be attended by more than 10,000 representatives of chemistry and allied sciences, Winthrop will be heralded as the real founder of the nation's chemical industries.

Inventions, discoveries and explorations in chemistry over the span of 300 years will be traced to show how infant industries have become the bulwark of national defense, the basis of modern industrial progress and the source of a large and growing percentage of national wealth.

Senator Pat Harrison of Mississippi and Representative James W. Wadsworth of New York will be among the speakers at a dinner meeting on Wednesday evening, April 24. On the same day a chemical industries symposium, planned to interpret the close relationship between the chemical industries and the national welfare, will be held. Thomas Midgley, vice-president of the Ethyl Gasoline Corporation, will deliver an address on "Chemical Developments in the Next One Hundred Years." William B. Bell, chairman of the board of directors of the American Cyanamid Company, will speak on "National Planning and the Chemical Industries."

Other themes at this symposium include: "What the American Chemical Industries Have Done and Are Doing for the Nation"; "New Foreign Problems Confronting the American Chemical Industries"; "Scientific Foundations of the American Chemical Industries."

On Thursday, April 25, there will be a symposium on the economic problems of the chemical industry, with R. P. Soule, chemical economist of the Tri-Continental Corporation, as chairman. "Machine Age or Material Age?" is one of the topics to be discussed.

The rise of the process industries in the post-war decade will be described, the discussion centering around synthetic fuels, building materials, rubber wrappings; the encroachment upon agriculture and the products of the farm; the realignment of industries and the outlook for the future.

Depreciation and obsolescence charges under the New Deal will be another theme of this symposium. The chemical industry, according to the announcement, is outstanding in high charges for depreciation and obsolescence. The chemists will discuss federal policy toward reducing corporate surpluses and increasing tax revenues, and will explain their attitude