

ducted by Professor Harris of Cornell. This company, which included professors, doctors of philosophy, graduate students, school teachers and a few advanced undergraduates concentrating in geology, was admirably adapted for mutual instruction. It was particularly inspiring to the present writer, whose previous contact with geology had been confined to the reading of such out-of-date text-books as were to be found in a small-town library. That ten weeks was the equivalent of the ordinary undergraduate training in the subject, for there were no soon-forgotten lectures. Everything which was said applied to objects before the eyes of the party at the moment. Thus we were taught not only to reason backward from result to cause, but, through the multiplicity of teachers, were made to realize that most phenomena have more than one plausible explanation.

The writer owes much to all members of that party, but most to Cleland, for despite the fact that he was denominated Doctor, and that I was a prospective junior turning to geology after two years in the College of Engineering, he undertook the task of seeing that I understood the results of every discussion. He was always ready to answer questions, and, best of all, he was equally ready to admit that certain questions could not be answered by him or had as yet no answers. No greater stimulus for further study or original research is possible.

Cleland spent the ensuing year at Cornell, engaged in research and teaching. During Professor Harris's absence in the winter term, which he then devoted to his duties as state geologist of Louisiana, Cleland gave the courses, one of which was devoted to a detailed discussion of the fossil Brachiopoda.

In the autumn of 1901, he was called to Williams College, where he was instructor in geology and botany till 1904, assistant professor till 1907, when he became professor of geology and mineralogy. After teaching all the sciences, he was at last in a position to teach one. Even so his task was not simple. He had to build up a department and a museum. He succeeded in doing both.

Cleland's early researches were in the realms of paleontology and stratigraphy. His doctoral dissertation, published as a Bulletin of the U. S. Geological Survey, was a very detailed study of the distribution of the fossils in the Hamilton formations exposed along Cayuga Lake. He later described the fauna of the Mid-Devonian strata at Milwaukee, Wisconsin, and also published two important papers descriptive of the Beekmantown fossils of the Mohawk Valley. He subsequently withdrew almost entirely from this field, devoting himself to his first text-book, "Physical and Historical Geology" (American Book Company,

New York, 1916), and to other geological subjects, particularly the origin of natural bridges. His "Practical Applications of Geology and Physiography" (Excelsior Press, North Adams) appeared in 1920.

Later in his life his interests changed again. Numerous trips to Europe, some of them prolonged, brought him in contact with the vestiges of prehistoric civilizations. He took up particularly the study of the Neolithic and later ages, a part of the story of ancient man commonly considered to be outside the province of the geologist. This led to his interesting book, "Our Prehistoric Ancestors" (Coward-McCann, Inc., New York, 1928). His last work was a little volume entitled, "Why be an Evolutionist?", 1930.

Cleland was a fellow of the American Association for the Advancement of Science, American Academy of Arts and Sciences, Geological Society of America (councilor, 1928-31), Paleontological Society (secretary, 1909), American Geographical Society, member Seismological Society, American Institute of Mining and Metallurgical Engineers, American Archeological Society, New York Academy of Science, Phi Gamma Delta, Sigma Xi and Phi Beta Kappa (honorary member).

He was married twice, first to Helen Williams Davison, and, after her death, to Emily Leonard Wadsworth. His widow, four daughters, a brother and a twin sister, Elizabeth, who has ever been his help in time of trouble, survive him.

A man of high ideals, broad culture, wide interests and an unusual personality has suddenly been taken from us. A host of former students and colleagues mourn him.

PERCY E. RAYMOND

## RECENT DEATHS

PROFESSOR WILLIAM JOHN SINCLAIR, for thirty years a member of the department of geology of Princeton University, died on March 25. He was fifty-seven years old.

SIR EDWARD SHARPEY-SCHAFFER, professor emeritus of physiology at the University of Edinburgh, died on March 29 at the age of eighty-four years. The council of the University of Edinburgh had approved on March 19 the establishment of a Sharpey-Schafer Lectureship in physiology, a fund for its endowment having been contributed by his pupils and friends.

AKIRA FUJINAMI, professor emeritus of the Kyoto Imperial University, died on November 18, 1934. To workers in cancer research the late Professor Fujinami is known for his first discovery of a transplantable chicken sarcoma and for his work on a neoplasm of this type.