

NOTES AND NEWS

FRANK WIGGLESWORTH CLARKE

Frank Wigglesworth Clarke died at his residence in Washington, D. C., on May 23, 1931, two months after he passed his eighty-fourth year. Retired from Government service on January 1, 1925, he had been Chief Chemist of the U. S. Geological Survey for a long span of time, having been appointed in 1883. During the same time he was honorary Curator of minerals in the United States National Museum but he took a much more active interest in his curatorship than would be inferred from that title, and the excellence and comprehensiveness of the mineral collection in the Museum are due in large measure to this active interest and to his painstaking efforts both in the collection and exhibition of specimens.



FRANK W. CLARKE, 1847-1931

The holder of many degrees and titles, he was known by his co-workers as "The Professor," a title inherited from his professorships at Howard University 1873-74, and at the University of Cincinnati 1874-83.

While primarily a chemist, his second love was for minerals, naturally along chemical lines. His first paper, published in 1868, several days before he was 21, bears the title: "On a new process in mineral analysis." His bibliography of over 300 papers covers a wide range of subjects from abstruse theoretical deductions (he was

the first to present a consistent theory of the evolution of the chemical elements) to poetry.

Possessor of a remarkably retentive memory, with ready command of all his accumulated information, Prof. Clarke never seemed able, as his 60 year long friend, Charles E. Munroe, has said, "to recall any but pleasant things of those of whom he speaks. . . . I have never known him to say a disagreeable thing of any person."

That wonderful compendium, "Data of Geochemistry," in its fifth edition, bears eloquent testimony to his natural ability to consider fully and appreciatively the views of others, at times not in accord with his own views, and to present what seemed to him to be the truest interpretation of the many natural phenomena in which he was so keenly interested, in a way that could give offense to none.

He was among the first to compile fundamental physical and chemical constants and his "Constants of Nature," published by the Smithsonian Institution in 1876, and his many papers on "Atomic Weights," were long standards of reference.

His connection with the Geological Survey in 1883 gave a definite stimulus to his mineralogical interests and thenceforward he contributed a steady stream of papers and larger reports on mineralogy and on what may be called chemical geology. In the analysis of a mineral he was never satisfied with only the analytical results but always wanted to know the associations, the alterations, and the syntheses of the mineral.

He tried to express the composition of minerals by a coordination of known facts so as to show their constitution, their structure, and their relations to other minerals. He began with the silicates as they are by far the most important constituents of the solid crust of the earth and published his first "Constitution of the silicates" in 1895. Clarke was always greatly interested in what he called the natural history of a mineral, especially its alteration products and pseudomorphs, for to him the alteration products were the records of chemical changes. No less important to him were the laboratory syntheses and artificial transformations which could be carried out experimentally. All these reactions afforded information as to the constitution of minerals. As he has said: "A good formula indicates the convergence of knowledge; if it fulfills that purpose it is useful, even though it may be supplanted at some later day by an expression of still greater generality."

A compiler par excellence one nevertheless wonders how he found time in addition to his administrative work, reports on atomic weights, chemical and physical data, and numerous shorter papers, to compile such more lengthy reports as "Analyses of rocks and minerals," "Water analyses," "Data of Geochemistry," "Inorganic Constituents of Marine Invertebrates," "The Composition of the Earth's Crust," "The Composition of the River and Lake Waters"—all published by the U. S. Geological Survey.

Several times in the past, at the suggestion that his name be given to a new mineral, he had modestly suggested other names which he considered more appropriate. However, the description of "Clarkeite, a New Uranium Mineral," appeared about a week before his death.

The lighter side of life always appealed to him. A guest at a Thanksgiving dinner, when the host had difficulty in carving the turkey, Clarke suggested that it might profit the carver to visit the National Museum, for a certain door therein bears on it the sign Division of Birds.

As one of the many who have served under him, the writer feels the loss keenly. Always kind and generous and very free of his immense store of knowledge, it was indeed a privilege to have been associated with and to have worked under the direction of so able a Chief Chemist.

W. T. SCHALLER

Dr. Arthur S. Eakle, professor emeritus of mineralogy at the University of California died in Honolulu July 5, after a brief illness. Professor Eakle was a former president of the Mineralogical Society of America and at the time of his death was actively engaged in making a mineral survey of the Hawaiian Islands.

Albert C. Burrage, a member of the Mineralogical Society of America, died at his summer home in West Manchester, Mass., June 29 at the age of 71. His interests were numerous and varied. Mr. Burrage was one of the organizers of the Amalgamated Copper Company and was largely responsible for the development of the Chilean copper deposits.

Albert C. Bates, an enthusiastic member of the Newark Mineralogical Society, died at his home on May 5 in the 75th year of his age. He was especially interested in collecting and examining crystals of quartz.

Mr. Rudolph G. Sohlberg of the University of Michigan has been appointed Teaching Fellow in Mineralogy at Stanford University.