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EDWARD HENRY KRAUS*

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This number of *The American Mineralogist* is dedicated by his colleagues and friends to Edward Henry Kraus on the occasion of his eightieth birthday in recognition of, and deep appreciation for, his numerous services to both the science of mineralogy that is his special field of scientific interest, and to the University of Michigan which he has served so faithfully for over forty years. In modern times there are few instances in which a single individual has been called upon to undertake so many varied and difficult tasks with such fruitful results.

His success in the various fields may be attributed to a rare combination of unusual personal characteristics by means of which he was able to translate desired goals into accomplished deeds. To those who have had the privilege of being closely associated with him, he will always be known as a stimulating teacher, a painstaking investigator, an able administrator and successful author of college texts that through the years have demonstrated lasting vitality. For one who was interested in so many worthwhile projects it is impossible in a short introduction to enumerate and evaluate all his numerous activities. Instead in the limited space available only a brief outline of some of the outstanding accomplishments will be recorded.

Edward H. Kraus was born in Syracuse, New York, Dec. 1, 1875, and received his early education in the schools and University of that city, receiving his B.S. in 1896 and M.S. in 1897. His alma mater on two occasions has paid tribute to his leadership in the fields of Science and Education through the granting of two honorary degrees, Doctor of Science in 1920 and Doctor of Laws in 1934. Shortly after completing his studies at Syracuse University he spent two years in Professor Paul Groth's laboratory at the University of Munich, Germany. Here he pursued advanced work in crystallography, optics and in the cognate subjects of geology and chemistry, and received the degree of Ph.D. in 1901. This degree was renewed by the University of Munich on Sept. 15,

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1952—an unusual procedure. He returned to Syracuse and served on the faculty of that University during 1901–1902, when he was chosen as Head of the Science Department of Syracuse Central High School, a position he retained until he came to the University of Michigan as assistant professor of mineralogy in 1904. His advancement from the start was exceedingly rapid for two years later he was made junior professor and was promoted to a full professorship and director of the mineralogical laboratory in 1908. Under his leadership the department grew rapidly because of his energy, enthusiasm and foresight. He became emeritus in 1945.

In addition to being a stimulating teacher Dr. Kraus possesses rare executive and administrative abilities. He has therefore been called upon frequently to serve the University in various additional capacities: as Secretary of the Administrative Council of the Graduate School from 1908–1912; from 1911 to 1915 he served as Acting Dean of the Summer Session and from 1915 to 1933 as Dean. During this period the Summer Session became one of the foremost institutions of its kind in the country. In the College of Pharmacy he was Acting Dean from 1920 to 1923 and Dean from 1923 until 1933. In 1933 he was appointed Dean of the College of Literature, Science and the Arts, the largest single administrative unit of the University with an enrollment at that time of approximately 5000 students. Because of his manifold duties in his new position he was relieved of all formal teaching, although he continued to keep in close touch with the advances in mineralogy and frequently returned to his private office in the department where undisturbed he continued his investigations and writings.

Some of the older members will recall that Dr. Kraus was a member of the organization committee and as chairman was largely responsible for the founding of The Mineralogical Society of America. At the Albany meeting of The Geological Society of America in 1916 a small group of six decided to take some formal action as it was felt such action would stimulate greater interest in mineralogy and at the same time offer a ready outlet for the ever-increasing number of papers in this field. This small group consisted of Edward H. Kraus, Alexander H. Phillips, Frank R. Van Horn, Thomas L. Walker, Edgar T. Wherry and Herbert P. Whitlock. After considerable correspondence an organization meeting was called for December 30, 1919. At this meeting, held in conjunction with the 32nd annual meeting of the G.S.A., a group of 28 mineralogists met in the Mineralogical Museum of Harvard University and organized a new Society. The first President of the newly formed Society was Dr. Kraus, a signal honor to the leader of this small group and formal

recognition by the Society that the goal of the organization committee had been achieved.

Dr. Kraus' interest in the activity and welfare of the Society has continued unabated throughout the years. It was his suggestion made at the 10th annual meeting that it would be very helpful if the Society had means to establish awards for research and noteworthy achievements in the field of mineralogy that ultimately led to the establishment of the Roebling Medal in 1930.

Dr. Kraus is a fellow of The Mineralogical Society of America (President in 1920 and recently appointed Honorary President by the Council), The Geological Society of America since 1902, and the American Association for the Advancement of Science. He also holds membership in the American Chemical Society, Optical Society of America, American Institute of Mining and Metallurgical Engineers, Michigan Academy of Science, Arts and Letters (President in 1920), American Pharmaceutical Association, American Association of Colleges of Pharmacy (President in 1926), and for ten years (1930–1940) served on the committee on the revision of the U.S. Pharmacopea. He is an honorary fellow of the American College of Dentists and honorary member of Die Deutsche Mineralogische Gesellschaft, Die Deutsche Gesellschaft für Edelsteinkunde, the Gemological Association of Great Britain, the Gemological Institute of America and is a certified gemologist of the American Gem Society.

Although burdened for a long period by many time-consuming administrative duties, he still found opportunity to contribute liberally to mineralogical literature. His list of about 100 publications covers a wide range of subjects relating to the occurrence and origin of minerals, crystallographic forms observed on crystals, new apparatus to determine specific properties of minerals and rocks, and papers and addresses dealing with educational trends and policies. He was one of the pioneers in the study of the variation of hardness in the diamond, a subject that in recent years has become of prime importance not only in diamond cutting but in diamond drilling explorations as well. In this connection it should be mentioned that Dr. Kraus was the organizer and chairman of three Symposiums on Diamonds in 1941, 1942 and 1945.

Dr. Kraus was largely instrumental in offering constructive suggestions that resulted in the design of the Roebling medal, and he also gave the presentation addresses of four Roebling medalists: Charles Palache (1937); Paul Niggli (1947); Fred. E. Wright (1952); and William F. Foshag (1953).

In addition to his long list of papers, he is the sole author of two and senior co-author with his colleagues of three texts on Crystallography,

Tables for the Determination of Minerals, Descriptive and General Mineralogy, and Gems and Gem Materials. The last two are in their fourth and fifth editions, respectively, indicating widespread adoptions.

One of the highest honors that can be conferred by the University of Michigan on a member of its faculty came to Dr. Kraus when he was chosen the Henry Russell Lecturer in 1945. The selection of the recipient of this lectureship is made each year by the University Research Club. It was in this same year that he received the Roebling Medal from The Mineralogical Society of America. In 1954 he was selected to give the Orton Lecture before the American Ceramic Society.

While the above citations record accomplishments in the scientific field, this introduction would be wholly inadequate if it did not mention his sterling character and genuine interest in civic, church and humane activities. Uncompromising in his attitude when a wrong or an unethical act has been committed he unhesitatingly refuses to compromise for the sake of expediency—attributes inherent in a true Christian gentleman.

For the past seven years he has been President of the Humane Society of Washtenaw County, Michigan, and has exercised the same energy, enthusiasm and foresight that have been shown in other endeavors and he was largely responsible for bringing into being a "shelter" for the protection and care of animals that has been acclaimed one of the best in the country.

I am sure his numerous friends will agree with the writer that in dedicating this issue to Dr. Kraus we are paying a well merited tribute to his long and varied service in many fields. This writing finds him hale, hearty and vigorous, which bespeaks continued interest in the welfare of the Society. It is the hope that the Society will continue to receive the benefits of his wise counsel for many years to come.

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