

Part II considers the occurrences of various metallic mineral deposits and follows the customary arrangement of Precious Metals, Nonferrous Metals, Iron and Ferroalloy Metals, and Minor Metals. Most of the discussions are general and include (1) history, (2) production and distribution, (3) mineralogy, tenor, treatment, and uses, (4) kinds of deposits and origin, (5) examples of deposits in the United States, and (6) important deposits in other countries.

Part III concerns non-metallic mineral deposits and consists of brief discussions which include: (1) properties and uses, (2) production and distribution, (3) occurrence and origin, (4) extraction and preparation, and (5) examples of deposits. This part is subdivided into ten chapters on the basis of the principal uses in order to lend emphasis to the recent utilizations of these resources. Ceramic Materials, Metallurgical and Refractory Material, Industrial and Manufacturing Materials, and Ground Water Supplies are chapter headings which indicate the character of some of the trends. The other chapters are those which one would expect, such as Structural and Building Materials, Fertilizers, Abrasives, etc. Most of the chapters in Part III are 15-20 pages in length, but the one on Mineral Fuels contains 20 pages on coal and 40 pages on petroleum.

Selected references follow the discussion of each mineral resource and although the lists are not lengthy, they appear to be adequate for general purposes.

There are about 300 illustrations which include diagrams, cross-sections, and a few maps. Most of them have been well chosen and a number are new to the textbook field.

The text of the book proper contains 860 pages and the preface states that "Its chief purpose is as an elementary textbook, but it could be adapted almost equally well to more advanced courses. . . . The use of this book presupposes some knowledge of general geology and mineralogy." Difficulties may arise, however, in using it for elementary work, unless the students have had good preparation in mineralogy and petrology.

Economic Mineral Deposits adds to the variety of textbooks on economic geology by placing a new emphasis on principles and processes rather than by innovations concerning the geologic description of various districts and deposits.

CARL E. DUTTON

PROCEEDINGS OF SOCIETIES

NEW YORK MINERALOGICAL CLUB, INC.

Minutes of meeting held on Oct. 21, 1942

Professor William Lawrence Bragg, Dr. Leonard James Spencer, and Mr. Herbert P. Whitlock were elected to honorary membership by a unanimous vote of the members attending. Brief biographies of each of these men were read by Dr. Pough.

After the reading of annual committee reports, the balance of the meeting was devoted to talks by the members on their summer collecting experiences. The speakers were: Messrs. Morgan, Sampter, Northup, McKeown, Maynard, Marcin, and Trainer. One of the more outstanding specimens exhibited was Mr. Trainer's pseudomorph of quartz and epidote after large garnet crystals.

Meeting of Nov. 18, 1942

Miss Elizabeth Armstrong of the Department of Geology of Columbia University addressed the meeting on "Crystal Quartz in the Eastern United States." The crystallography of quartz was reviewed with special reference to the distinction between right- and left-handed crystals and the various types of twins. She then described the manner of occurrence of quartz crystals at Ellenville, N. Y., Herkimer and Montgomery Counties,

N. Y., Allegheny, Alexander, and Iredell Counties, N. C. and the Hot Springs, Arkansas, district. The descriptions were illustrated with colored slides taken during the course of her study of these localities.

Meeting of Dec. 18, 1942

The meeting was addressed by Dr. A. F. Buddington whose subject was "The Rate of Progress in Mineralogy and Its Significance." Based on the rate of progress in mineralogy during the last 40 years, Dr. Buddington predicted that at least one new field of mineralogical science may be expected to develop on the average every 10 years. The average length of time for a major new technique or theory to have its body of data developed and incorporated into a textbook, adequate for routine use, is from 20 to 25 years. There has been as much progress in the mineralogical sciences in the past 50 years as in all previous time, and there is no indication of any decrease in the present rate of expansion. Perhaps at least half of our progress in the United States has been through the importation of new ideas and techniques, often with considerable delay due to language barriers. The proposal was made that some organization should select the best foreign papers each year, translate them into English, and republish them.

Meeting of Jan. 27, 1943

Dr. Pough announced for the Education Committee that a course of 6 classes in mineral identification would be given on Saturday afternoons at the museum.

Letters of thanks for their having been elected to honorary membership were read from Prof. W. L. Bragg, Dr. L. J. Spencer, and Mr. H. P. Whitlock.

Dr. Alonzo Quinn of Brown University then spoke on "The Origin of Rhode Island Minerals." There are three major rock types in the state, the oldest being a set of metamorphics, then a younger set of igneous intrusives, mostly granites, and a still younger series of sedimentaries. Dr. Quinn discussed various localities with respect to the types of rock in which the minerals are found and its influence on paragenesis. The localities described included: South Foster, the Manton Ave. quarry in Providence, the Harris and Dexter quarries, Copper Mine Hill, Iron Mine Hill, and Cranston. Numerous specimens were exhibited, among them being: bowenite from the Harris quarry, flattened quartz crystals from the Dexter quarry, and some notable greenish sphene crystals from the Manton Ave. quarry.

Meeting of Feb. 17, 1943

Dr. Harry Berman of Harvard University spoke on the "New Classification of Minerals." After discussing the general aspects of setting up any classification and the criteria used to test its adequacy, Dr. Berman went on to describe the classification adopted for the new edition of *A System of Mineralogy*.

The principal units of classification, called classes, are chemical and were introduced mainly for mineralogical reasons. They include sulfides, sulfo salts, simple oxides, uranium oxides, etc. These classes are then divided into types based on the ratio of total positive elements to negative elements or groups, with the higher ratios first. Types are further divided into groups, as, the galena groups, and the sphalerite group of the type AX in the class of sulfides. These groups are further divided into series and species.

An attempt has been made to reduce the number of mineral names by dropping separate names for varieties, except such terms as ruby, sapphire, etc. of exceedingly long standing. Wherever possible descriptive terms are preferred for varieties instead of separate names. Thus, "ferroan spinel" instead of "ceylonite" etc.

Dr. Berman stated that arrangements have been completed for the publication of the first volume within the next few months.

M. ALLEN NORTHUP, *Secretary*.