PROCEEDINGS OF SOCIETIES

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences, January 12, 1922

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the president, Mr. Trudell, in the chair. Fifteen members were present.

Mr. Hilbiber described collecting experiences at Perkiomenville and Wilmington. Mr. Hoadley exhibited a slab of pink crystals measuring 1 cm. in length, from Franklin, N. J., alleged to be leucophoenicite. Optical examination showed the mineral to be rhodonite. Dr. Wills exhibited some sections of local minerals and rocks.

The following were elected to active membership: Mr. Frank J. Keeley, Mr. Arthur Low, and Mr. Walter Lapp.

SAMUEL G. GORDON, *Secretary.*

NEW YORK MINERALOGICAL CLUB

Regular Monthly Meeting of February 15, 1922

The regular monthly meeting of the New York Mineralogical Club was held in the American Museum of Natural History on the evening of February 15 at 8:00 P.M.

The President, Dr. George F. Kunz, presided and there was an attendance of 22 members. The minutes of the last meeting were read and approved. The Committee on Membership reported favorably on Mr. Rodney B. Miller, 149 Columbus Ave., Newark, who was declared elected to membership, the Secretary being instructed to cast a single vote for his election. The name of Mr. Edwin F. Gross of 1169 East 17th Street, Brooklyn, was referred to the Committee on Membership on the nomination of Mr. Grenzig.

Mr. Hoadley spoke of the lecture of Dr. Samuel G. Gordon before the Philadelphia Mineralogical Society and moved that Dr. Gordon be invited to give his lecture before the Club at the March or April meeting. The matter was referred to a Committee, consisting of Messrs. Hoadley, Stanton and Whitlock, with power.

The President introduced the speaker of the evening, Dr. Esper S. Larsen of the U. S. Geological Survey, who gave a highly interesting and valuable address on "The Microscopic Determination of Non-Opaque Minerals." Dr. Larsen spoke of the importance of the optical properties of minerals from a determinative standpoint emphasizing the special importance of index of refraction as a determinative factor. He stated that the fundamental optical characters of minerals are few in number and susceptible to tabulation which makes possible the accurate determination of an unknown mineral by this method. The added advantage of the method is that it can be applied to very small amounts of material. The speaker described the petrographic microscope and pointed out its function as a determinative instrument for this method. He showed how indices of refraction could be determined by comparing grains of the unknown mineral with embedding fluids of known index

and demonstrated the determination of pleochroism and index of refraction, using the projecting apparatus and a Leitz model petrographic microscope.

At the conclusion of his address a vote of thanks was tendered to Dr. Larsen for his highly valuable address. The meeting adjourned at 10 P. M.

HERBERT P. WHITLOCK, *Recording Secretary.*

BOOK REVIEW

A MANUAL OF DETERMINATIVE MINERALOGY, WITH TABLES FOR THE DETERMINATION OF MINERALS BY MEANS OF: I. THEIR PHYSICAL CHARACTERS; II. BLOWPIPE AND CHEMICAL PROPERTIES. J. VOLNEY LEWIS. 298 pages. John Wiley & Sons, Inc., New York, 1921.

While this is the third edition of a book by the same leading title, it is essentially a new work, for the former blowpipe tables have been, as stated in the preface, thoroly revised and recast, and new tables for identification by physical properties alone have been added. By way of introduction a list of the physical properties of minerals is given; it covers, however, only eleven pages, and could have been considerably enlarged to advantage. The data are up to date except that the imperfections which we now know to exist in the Mohs hardness scale (in which the numbers 4 and 5 are identical in hardness, and 8 not far different from 7), are not warned against.

The physical tables, which fill more pages than the blowpipe ones, and cover nearly 300 minerals, are unusually skilfully worked out. Luster, which is well known to be a stumbling block to students in many tables, is eliminated as the basis for the first subdivision, and streak which is decidedly easier for a beginner to ascertain definitely, is substituted. No use appears to be made, however, of the "rubbed streak"—i. e., the result of rubbing the ordinary streak with a bit of clean streak plate—altho it is very helpful in distinguishing such closely similar minerals as stibnite and bismuthinite, manganite and pyrolusite, etc. The second subdivision is based on color, and the third, where necessary, on cleavage. In the smallest divisions the minerals are arranged in the order of increasing hardness. Under each mineral, synonyms, composition, properties and occurrences are listed. No attempt is made to feature special properties as especially characteristic, altho this might be helpful in confirming certain minerals. For example, when the table brings together chondrodite and cassiterite, the mere lifting of the specimen would be enough to tell which was which; when fluorite and chabazite, gentle heating in a dark corner would distinguish them; vivianite and gypsum, the rubbing for a short time in a mortar would lead the former to turn blue. The least that might be done would be to in some way emphasize a few of the most characteristic of the properties listed, so as to make wading thru the whole list unnecessary. On the whole, however, the physical tables are well arranged, and should prove very useful in practical identification.

The part of the book devoted to the blowpipe methods is an improvement over the previous editions, excellent tho these were. The introductory descriptions of methods and tests are elaborate; and their completeness is evidenced by the fact that not only is the flame color of manganese chloride—omitted from most min-