

gonal prisms with base and first order pyramidal faces well developed. The mineral was identified by qualitative wet methods. The Iron Mask Mine is owned by William Clark, of Gilmore, Idaho, and was at one time in operation for its lead-silver values. The rocks of the Spring Mountain Mining District are described by Umpleby² as being late Devonian or early Carboniferous sedimentary rocks which were mineralized in late Cretaceous or early Eocene time. The vein of the Iron Mask Mine is in blue-gray limestone and is probably a contact phenomenon caused by one of the numerous quartz diorite intrusions.

PROCEEDINGS OF SOCIETIES

NEW YORK MINERALOGICAL CLUB

Regular Monthly Meeting of March 21, 1923

A regular meeting of the New York Mineralogical Club was held in the Assembly Room of the American Museum of Natural History on the evening of March 21, at 8 P.M. The President, Dr. George F. Kunz, presided. Because of the illness of the Recording Secretary a secretary *pro tem* was appointed by the Chairman.

Mr. Wintringham announced that the Recording Secretary proposed the following for membership: Dr. W. B. Short, 342 Madison Ave.; and Dr. C. A. Smith, 342 Madison Ave. Upon motion this was referred to the Membership Committee.

The President announced the appointment of Messrs. F. I. Allen, J. P. Wintringham, and P. Walther as a Nominating Committee to report at the April annual meeting.

Dr. Kunz then introduced Dr. J. Volney Lewis, who addressed the Club on "*The Copper Minerals of New Jersey.*" Dr. Lewis pointed out that the copper minerals were found in the trap, the shales and the sandstones of the State at many localities. In the trap, notably at Chimney Rock and Bound Brook, chalcocite was the most prevalent, with some native copper and a little bornite, chalcopyrite, cuprite and stains of chrysocolla. In the shales and sandstones north of Somerville native copper, cuprite and hydrocuprite may be found in brecciated zones along fault planes. There is a resemblance, on a small scale, of this and other New Jersey occurrences with those of the Lake Superior region. With the secondary cuprite there is also a little chrysocolla, azurite and malachite. The intensely metamorphosed shale at Griggstown contains a great deal of chalcocite. At Rocky Hill mine the black shale is spotted with chlorite pseudomorphs after iolite. The slightly metamorphosed sandstone and shales, at Arlington and Flemington, contain ore in proximity to dikes and a limited amount also occurs near and under the first lava flow. At the Bridgewater Mine native copper and occasionally native silver are found at the bottom and under the trap sheet. At New Brunswick

² Umpleby, J. B., Geologic and ore deposits of Lemhi County, Idaho; *U. S. Geol. Survey, Bull.* 528, p. 87.

native copper is found in sheets and masses weighing up to 30 pounds. The copper is considered earlier than the zeolites but later than the First Mountain flow.

After viewing slides illustrating the subject, a vote of thanks was given to Dr. Lewis. Mr. F. I. Allen inquired if the bleached spots in the shales mentioned as indicating the presence of copper, were due to the removal of or a chemical change in the iron. Mr. Van Esbroeck of Belgium, a visitor, made some interesting comparisons with the occurrences at Ducktown, Tenn. Mr. Oliver P. Medsger exhibited a 12 lb. specimen of chalcocite with traces of chrysocolla dug up in the cemetery south of the Arlington Mine. He stated that such masses were frequently found and that he had one in his possession weighing 30 pounds. He presented the specimen to Dr. Lewis for the Rutgers' Museum. The meeting adjourned at 10:15 P.M.

GILMAN S. STANTON, *Secretary pro tem.*

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences, May 10, 1923

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the president, Mr. Vaux, in the chair. Twenty members and three visitors were present.

Dr. Henry S. Washington of the Geophysical Laboratory, Washington, D. C., addressed the society on "*Jadeite and Acmite*," in which the results of recent investigations of the pyroxenes by Merwin and Washington were described. Jade comprises essentially two minerals: nephrite and a pyroxene. The latter is a rock composed of varying proportions of jadeite, diopside, and albite. The Burma jade is practically pure jadeite; other jades contain prominent amounts of the diopside molecule, and sometimes up to 80% albite. Up to 8%, the albite occurs in solid solution, in higher percentages it crystallizes out. The physical and chemical characters of pyroxenic jades were described, and a number of specimens exhibited. They probably represent metamorphosed nepheline syenites. Particular mention was made of American jades found in Yucatan and Mexico. They are chemically and physically distinct from Asiatic jades, and from petrographic considerations are believed to have originally been found at an unknown locality in Southwestern Mexico, Costa Rica, or Guatemala. The pyroxenes are regarded chiefly as mixtures of jadeite ($\text{Na}_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 4\text{SiO}_2$), acmite ($\text{Na}_2\text{O} \cdot \text{Fe}_2\text{O}_3 \cdot 4\text{SiO}_2$), and diopside ($\text{CaO} \cdot (\text{Mg}, \text{Fe})\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$) molecules. There is no evidence of the existence of the hypothetical Tschermak molecule. Augite is essentially composed of the diopside and acmite molecules, with Fe_2O_3 and Al_2O_3 in solid solution. Aegirite is composed of the acmite and diopside molecules. The color of the pyroxenes seems to depend on the relative amounts of FeO and Fe_2O_3 .

A letter was read from Mr. Harry A. Warford tendering his resignation as treasurer. At Mr. Warford's request the president appointed Messrs. Hallowell, Biernbaum, and Oldach to audit the books. Mr. Millson was elected treasurer to fill the unexpired term.

The secretary exhibited a Babinet goniometer, originally the property of Frederick A. Genth, which was presented to the Academy by Mr. Edward Goldsmith.

SAMUEL G. GORDON, *Secretary.*

MINERALOGICAL SOCIETY OF WASHINGTON, D. C.

The second meeting of the Washington Mineralogical Society was held as a field party on April 28, 1923. Several mineral localities near Leesburg, Virginia were visited. Ten members, W. S. Burbank, W. F. Foshag, F. L. Hess, E. S. Larsen, C. L. Ross, E. Samson, W. T. Schaller, E. V. Shannon, E. T. Wherry and R. W. G. Wyckhoff, took part. At a quarry in Leesburg a vein of datolite cut the limestone conglomerate of the Newark formation. Crystallized specimens of datolite associated with calcite and barite and an unidentified mineral were obtained together with specimens of xonotlite from the adjoining limestone. At Goose Creek the quarry is cut by a diabase sill. Shear planes carry prehnite, apophyllite, laumontite and calcite. Numerous diabase pegmatites of varying types occur and brought forth much discussion from the members of the society. They are largely plagioclase feldspar with diallage, often in plumose groups several inches long. Miarolitic cavities are abundant in the lighter colored pegmatites and carry albite, byssolite, green pyroxene, epidote and titanite. The material collected is now under investigation by Mr. E. V. Shannon of the National Museum.

W. F. FOSHAG, *Secretary.*

NOTES AND NEWS

NOTES ON MASSACHUSETTS MINERALS. ERNEST E. FAIRBANKS, *Harvard University.*

WOLLASTONITE. The "nephrite"¹ from the old limestone quarries of Stoneham proved to be a very pure wollastonite sometimes stained by epidote. The green stained fibrous material is the only mineral present which could have been mistaken for nephrite.

SHERIDANITE. A white chlorite occurs as an alteration product of diallage in a coarse grained segregation in the norite of Loon Hill, Dracut. This chlorite was found to be optically positive with 2V very small and α and β approximately 1.565.

POLYDYMITE. This nickel mineral occurs replacing the pentlandite in the ore from the Old Nickel Mine, Dracut. The microchemical tests made on polished sections of this mineral agree very well with those given by Davy and Farnham.²

PREHNITE and other zeolites occur in the contact zone between the Merrimac quartzite and norite, near the Nickel Mine in Dracut.

GLAUCOPHANE occurs as the chief constituent of a glaucophane-oligoclase schist along the Merrimac River in Lowell. The field relations and microscopic character are such as to leave little doubt to the writer of the igneous origin of the schist.

ANORTHOCLASE occurs as phenocrysts measuring as much as 2 cm. x 1 cm. in an alkali syenite porphyry near the water tower at Arlington Heights. An alteration product of hedenbergite in a quartz alkali syenite from Wakefield, believed to be ferroanthophyllite, was observed but was not positively identified.

¹ Dana, E. S., *The system of mineralogy of James Dwight Dana*. Sixth edition (*New York* 1920) p. 1059.

² *Microscopic examination of the ore minerals* (*New York* 1920) p. 57.