Mr. H. E. Millson then demonstrated a number of simple chemical tests by which various minerals can be distinguished in the field. With but few reagents and little apparatus a number of minerals similar in appearance may be readily identified. Mr. H. R. Blank concluded the program with a discussion of the use of the flame colorations given by various elements as an aid to the identification of minerals containing them. HORACE R. BLANK, *Secretary.*

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences of Philadelphia, May 14, 1925

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

Mr. Oscar Schuck of Philadelphia was elected a junior member, and Messrs. George Urban and Charles R. Lorimer were proposed for junior membership. A trip to view the collection of Mr. Canfield, of Dover, N. J., was announced for May 24th.

Mr. Keeley announced the death, on April 19, 1925, of Mr. George W. Fiss, of Philadelphia. Mr. Fiss was a pioneer in the collection of mineral specimens for study under the microscope, and his enthusiasm in this direction was of great influence in promoting the use of this instrument among mineral collectors.

Mr. M. J. Biernbaum addressed the society on "*Crystal Twinning.*" The different types were defined, and the distinctions between contact and penetration twins were illustrated. Some of the common laws of twinning in the different crystal systems were illustrated by means of drawings and models.

Mr. J. C. Boyle then discussed "*Methods of Mineral Study,*" and pointed out the advantages of correlating minerals according to their occurrence and manner of formation. A knowledge of mineralogy from this standpoint is of great value to the collector in the field.

Mr. George Vaux, Jr., described his recent visit to the gem mineral localities of southern California. Very fine pink and green tourmaline and colorless beryl crystals from the Pala district were exhibited; also very beautiful transparent lilac crystals of kunzite over 10 cms. long. California garnet, lepidolite, topaz, benitoite, and neptunite were also shown.

HORACE R. BLANK, *Secretary.*

DOUBTFUL SPECIES.

CLASS: SULFO-SALTS. DIVISION: RS:Bi_2S_3 = 5 : 3.

Wittite

K. JOHANSSON: Ett par selenförande mineral från Falu Gruva. (Two selenium bearing minerals from the Falun Mine.) *Arkiv Kemi, Mineral., Geol.*, **9**, No. 9, p. 2 (1924).

NAME: In honor of the Swedish mining engineer, Th. *Witt.*

CHEMICAL PROPERTIES: A sulfo-bismuthide of lead. FORMULA, 5PbS. $3Bi_2(S, Se)_3$. Analysis: Ag 0.19, Pb 33.85, Cu 0.08, Fe 0.28, Zn 0.26, Bi 43.33, S 12.14, Se 8.46, insol. 0.54; sum 99.13.

CRYSTALLOGRAPHIC PROPERTIES: X-ray diagrams of this mineral indicate an orthorhombic or monoclinic symmetry.

PHYSICAL PROPERTIES: Color light lead-gray. Streak black. Cleavage good. Luster metallic. H=2-2.5. Sp. gr. 7.12.

OCCURRENCE: Found at the Falun Mine with dark gray quartz and magnetite in a cordierite-bearing amphibole rock.

DISCUSSION: Apparently a new mineral but lack of metallographic examination of the analized material makes it uncertain if the selenium belongs to this mineral or is intermixed as has been found to be case with other Falun minerals.

W. F. FOSHAG.

CLASS: SULFIDES, ETC. DIVISION: R : S=1 : 2.

Cobaltpyrite

K. JOHANSSON: *Op. cit.*; this mineral p. 2.

NAME: In allusion to its composition, a *cobalt* bearing *pyrite*.

CHEMICAL PROPERTIES: A sulfide of iron and cobalt. FORMULA, $(Fe, Co)S_2$. Analysis: Fe 33.32, Co 13.90, Ni 0.19, S 52.45; sum 99.86. Ratio of Fe:Co=0.597: 0.236.

CRYSTALLOGRAPHIC PROPERTIES: Isometric, octahedrons.

PHYSICAL PROPERTIES: Color like pyrite but tending toward brown. Luster metallic. Cleavage octahedral. Fracture conchoidal to splintery. H. 6. Sp. gr. 4.965.

OCCURRENCE: Found in cavities with quartz in crystals up to 3 cm. across.

DISCUSSION: The ratio of iron to cobalt is high and the mineral should therefore be considered a cobaltiferous pyrite. This term would be more appropriate than cobaltpyrite.

W. F. F.

"Borgstroemite"

MARTTI SAXÉN: The Petrology of the Otravaara Region of Eastern Finland. *Bull. Com. Geol. Finland*, No. 65, p. 50-55, **1923.**

NAME. In honor of the mineralogist, L. H. *Borgstroem.*

CHEMICAL COMPOSITION: A basic sulfate of iron, $3Fe_2O_3 \cdot 4SO_3 \cdot 9H_2O$. Analysis: Fe_2O_3 50.55-51.83; SO_3 28.73-29.41; H_2O 19.44-20.04. Insoluble in water, soluble in acids.

PHYSICAL PROPERTIES: Color yellow. Earthy.

OCCURRENCE: Forms a zone between the limonite capping and the pyrite ore bodies at Otravaara, Finland.

DISCUSSION: The general description and occurrence suggests a member of the jarosite group, especially the member carphosiderite. The formula assigned is that of a compound found by Posnjak and Merwin (*Jour. Am. Chem. Soc.*, **44**, 1977, 1922). The agreement with the theoretical composition, however, is not good. The mineral should tentatively be referred to carphosiderite.

W. F. F.