the first of which the following topics are discussed: History and Sources of the Mineral Collection, What is a Mineral, Nature's Mathematics, The Mimicry of Minerals, Water as a Maker of Minerals, and Change and Decay in Minerals. Part two contains very general descriptions of the more important minerals, constant reference being made to specimens in Morgan Memorial Hall. The book is well printed and illustrated. It should prove very serviceable to those seeking an elementary knowledge of minerals. E. H. KRAUS

A CONTRIBUTION TO THE MINERALOGY OF NEW SOUTH WALES. GEORGE SMITH. MINERAL RESOURCES NO. **34,** Department of Mines, Geological Survey, Sydney, Australia, 1926. (3s. 3d.) 145 pages, 31 plates, 9 text figures and 1 map.

The author of this bulletin has had unusual opportunities to observe first hand the mineral occurrences and associations in this region. These exceptional advantages were due to his long period of service in N.S.W.; first as ore buyer and assayer, then as mine manager and for the past twenty-one years as Inspector of Mines.

The major portion of this bulletin, namely 103 pages (Part 1), is devoted to Descriptive Mineralogy, in which about 147 mineral species are described. No mineral is included that has not been actually observed by the author during his thirty-seven years of mineralogical activity. The arrangement of the minerals is essentially that used by Dana in his System.

Part II discusses the Mineralogy of the Broken Hill and the A.B.H. Consols lodes. Here emphasis is placed upon the variations of mineral composition in the oxidized zone (especially in the Broken Hill lode) and the deposition of silver sulfides from descending solutions (Consols lode). Appendices contain chapters on the occurrence of cassiterite, molybdenite and wolframite. A map of the Barrier District is also included.

This bulletin represents the most comprehensive general treatise on the minerals and their associations of New South Wales that has appeared in recent years and should be of unusual interest to both mineralogist and engineer.

W.F.H.

NEW MINERAL NAMES

Buttgenbachite

ALFRED SCHOEP: Sur la buttgenbach, Nouveau Minéral. (Buttgenbach, a new mineral). *Compt. Rend.*, **181,** 421 (1925).

NAME: In honor of H. *Buttgenbach,* Professor of Mineralogy at the University of Liege.

CHEMICAL PROPERTIES: A hydrous chloro-nitrate of copper. Formula; 18 CuO. 3 Cl. N_2O_5. $19H_2O$. Analysis: H_2O 17.34, CuO 71.56, Cl 6.02, N_2O_5 5.40; Sum 100.32 − O = Cl 1.28; 99.04. Soluble in acids.

PHYSICAL AND OPTICAL PROPERTIES: Color azure blue, non-pleochroic. Streak blue. Extinction parallel, elongation negative. Birefringence very feeble. n along the needles = 1.747; across them slightly less. Sp. Gr. 3.33.

OCCURRENCE: Found as flat needles about 1 mm. in length in a cavity in cuprite associated with native silver at Likasi, Belgian Congo.

W. F. FOSHAG

Cornuite

F. V. v. Hahn: Cornuite, ein neues proteinartiges Mineral aus der Kieselguhr von Neu-Ohe). *Centr. Min. Geol.*, 353 (1925).

NAME: In honor of Felix *Cornu*, the Austrian mineralogist.

CHEMICAL PROPERTIES: A protein-like gel. Dry protein 3 percent, insol. 0.08, water 97. Gives protein reaction with Biuret, Heller, Abderhalden, Xantho-protein and Cystin tests.

PHYSICAL PROPERTIES: Color golden-yellow. Typically a gel in structure.

OCCURRENCE: Found in small cracks in the diatomaceous earth at Neu-Ohe, in the Lüneburger Heide, Prussia.

DISCUSSION: (The name cornuite has been given to the amorphous silicate of copper. Abstr.).

W. F. F.

Fluotaramite

(*See Taramite*)

J. MOROZEWICZ: *Tsch. Min. Pet. Mitt.*, **38**, 213–222 (1925).

NAME: In reference to its composition; a fluorine bearing taramite.

CHEMICAL PROPERTIES: A fluorine bearing iron-alkali amphibole. Analysis: SiO_2 52.59, TiO_2 0.91, Al_2O_3 1.64, Fe_2O_3 7.69, FeO 11.80, MnO 0.60, CaO 3.41, MgO 9.32, K_2O 2.06, Na_2O 6.79, F_2 2.05, H_2O (+105°) 1.44, H_2O (−105°) 0.34. Sum 100.64; $-O = F_2$ 0.86; 99.78. Two other analyses given. Insoluble in hydrochloric acid.

PHYSICAL AND OPTICAL PROPERTIES: Color black with tinge of green. Plane of the optic axes normal to (010). $c \wedge X = 12–15°$. Dispersion $\rho > \nu$. $\gamma > 1.657$, $\alpha = 1.657$. Pleochroism strong. X = bluish green; Y = yellowish; Z = dark green. Sp. Gr. 3.231–3.318.

OCCURRENCE: Found as long, needle-like crystals in pegmatites in the Walitarama Valley, near Mariupol, Ukraine.

W. F. F.

Magnetoplumbite

G. AMINOFF: Über ein neues oxydisches Mineral aus Långban (Magnetoplumbite). (A new oxide mineral from Långban: Magnetoplumbite). *Geol. För. Förh. Stockh.*, **47**, 283–289 (1925).

NAME: In allusion to its composition; a magnetic oxide of iron and lead.

CHEMICAL COMPOSITION: An oxide of iron, manganese and lead: $2RO.\ 3R_2O_3$. Analysis: PbO 19.74, TiO_2 4.84, Fe_2O_3, 54.65, Al_2O; 0.88, Cr_2O_3 0.05, MnO 17.33, CaO 0.35, MgO 0.47, K_2O 0.14, Na_2O 0.16, H_2O 0.26, SiO_2 0.15, insol. 0.52. Sum 99.52. Difficultly soluble in HCl with slight evolution of Cl_2.

CRYSTALLOGRAPHIC PROPERTIES: HEXAGONAL; $c = 3.91$. (0001): $(10\bar{1}1) = 77°31'$. Class D_{6h}. $c = 23.69$ Å; $a = 6.06$ Å.

PHYSICAL PROPERTIES: Color black, streak dark brown. Luster metallic. Cleavage basal, good. Strongly magnetic. Sp. Gr. 5.517.

OCCURRENCE: Found in the America stope in a manganophyllite skarn associated with kentrolite, a mineral similar to hedyphane and another similar to berzeliite.

DISCUSSION: Plumboferrite has the ratios $PbO.2Fe_2O_3$ and is non-magnetic and hence differs from magnetoplumbite.

W. F. F.

Pumpellyite

PUMPELLYITE, a new mineral. Charles Palache and Helen E. Vassar. *American Mineralogist*, **10**, 412–415 (1925).

The new mineral name Pumpellyite refers to a zoisite-like mineral of the composition $6CaO.\ 3Al_2O_3.\ 7SiO_2.\ 4H_2O$. According to the authors this mineral has previously been called "green earth" and was probably often mistaken for chlorite. It has been called to the abstracter's attention that in the early reports on the Keweenawan series of Michigan, A. C. Lane[1] briefly describes this mineral as zoisitic epidote.

W. F. F.

Quenselite

GUST. FLINK: Quenselite, ein neues Mineral von Långban. (Quenselite, a new mineral from Långban). *Geol. För. Förh. Stockh.*, **47**, 377–384 (1925).

NAME: In honor of Prof. Percy *Quensel*, Swedish mineralogist.

CHEMICAL COMPOSITION: A hydrous manganite of lead: 2 PbO. Mn_2O_3. H_2O. Analysis: PbO 69.51, Fe_2O_3 0.39, MnO 23.21, CaO 0.97, MgO 0.30, K_2O 0.17, Na_2O 0.28, CO_2 0.64, O 2.38, H_2O 3.02. Sum 100.87 (on sample contaminated with some calcite and iron oxide). Soluble in dilute acids including acetic acid. With HCl evolves Cl_2. Upon heating loses water.

CRYSTALLOGRAPHIC PROPERTIES: Monoclinic, $a : b : c = 0.9767 : 1 : 1.667$. $\beta = 93°6'$. (100) : (001) = 86°54′. (110) : (010) = 45°43′. (011) : (001) = 59°.

PHYSICAL PROPERTIES: Color pitch black. Luster metallic to adamantine. Opaque. Streak dark brownish gray. Cleavage basal, perfect; somewhat micaceous. Somewhat malleable. Hd 2.5 Sp. gr. 6.842.

OCCURRENCE: Found in the America Stope at Långban at a depth of 185 meters in iron ore associated with calcite and barite.

DISCUSSION: Quenselite is the only basic manganite now known.

W. F. F.

Reniforite

KEIKICHI KAWAI: A new mineral, Reniforite, from the Yunosawe Mine in the Province of Mutsu, Japan. (Japanese). *Jour. Geol. Soc. Tokyo*, **32**, 106–116 (1925). Abstract in Japanese. *Jour. Geol. Geog.*, **3**, 15 (1924).

CHEMICAL COMPOSITION: A sulpharsenide of lead: 5 PbS. As_2S_3. Analysis: S 19.44, As 10.32, Pb 69.56, Fe 0.45. Sum 99.77.

PHYSICAL PROPERTIES: Luster metallic, Sp. Gr. 6.451.

OCCURRENCE: As reniform aggregates associated with barite.

H. S. WASHINGTON

Silesite

(*See Bolivianite, Am. Mineral.*, **11**, p. 194)

ANTONIO PAULY: *Centr. Min. Geol.*, 44–45 (**1926**).

NAME: After the President of Bolivia. Hernando *Siles*.

CHEMICAL COMPOSITION: A silicate of tin. Sn about 55 percent.

PHYSICAL AND OPTICAL PROPERTIES: Color light yellow. Sp. Gr. 5 Hd 6.

[1] *Bull. Geol. Surv. Michigan*, Vol. **VI**, Pt. 1, pp. 166, 127 and 157 (1911).

OCCURRENCE: Found as fine grained, horny to fibrous aggregates similar to chalcedony in the upper portions of the tin veins of Bolivia. Probably a gel.

DISCUSSION: (Very probably an intimate mixture of wood, tin, and silica. Abstr.). W. F. F.

Taramite

(See Fluotaramite)

J. MOROZEWICZ: Über einige Eisenalkali-amphibole. (Concerning several iron-alkali amphiboles). *Tsch. Min. Pet. Mitt.*, **38**, 210–222 (1925).

NAME: From the locality Wali-*tarama* Valley near Mariupol, Russia (Ukraine).

CHEMICAL PROPERTIES: An amphibole rich in iron and alkalies. SiO_2 37.51, TiO_2 0.73, Al_2O_3 8.50, Fe_2O_3 11.41, FeO 23.21, MnO 1.70, CaO 7.91, MgO 0.56, K_2O 2.10, Na_2O 3.79, F_2 0.14, H_2O (+105°) 2.32, H_2O (−105°) 0.33. Sum 100.21; $-O=F_2$0.06 ; 100.15. An analysis of another sample is also given. Soluble in hydrochloric acid.

PHYSICAL AND OPTICAL PROPERTIES: Color black with a tinge of blue. Plane of the optic axes is normal to (010). Extinction on (010), $c \wedge Y = 14°$ (red), 15° (yellow), 18° (violet). Dispersion strong, $\rho > v$. n is greater than 1.656, 2V small, almost 0. Pleochroism strong, X=pale yellow; Y=bluish green; Z=dark green to black. Sp. Gr. 3.476.

OCCURRENCE: Found in alkali-syenite associated with granites as short prismatic crystals, at Wali-tarama, near Mariupol, Ukraine, Russia.

W. F. F.

Ulrichite

GERARD KIRSCH: Über die Zusammensetzung der Pechblenden. (Concerning the composition of pitchblende). *Tsch. Min. Pet. Mitt.*, **38**, 227 (1925).

NAME: In honor of C. *Ulrich*, Austrian mining engineer.

CHEMICAL PROPERTIES: Essentially an oxide of uranium, UO_2 but with some UO_3, PbO, etc., as a result of radio-active metamorphism.

CRYSTALLOGRAPHIC PROPERTIES: Isometric, with the forms (111), (100), and (110).

PHYSICAL AND OPTICAL PROPERTIES: Color pitch black to grayish black. Streak brownish black to black. Luster submetallic. Almost opaque, thin splinters brown on the edges under the microscope. Fracture uneven to smooth. Hd 6. Sp. Gr. 7.5-11.

DISCUSSION: Kirsch divides pitchblende into two classes: (1) Crystallized and characterized by a high UO_2 content and (2) non-crystallized and with a UO_2/UO_3 ratio about 1. Class 1 is considered an oxide, class 3, uranate. To class 1 belong cleveite and nivenite, rich in rare earths and bröggerite, rich in thoria. The name ulrichite is proposed for the essentially pure UO_2 but may carry considerable amounts of UO_3 and PbO as a result of radio active metamorphism. The Branchville Connecticut pitchblende is given as typical ulrichite.

W. F. F.

Warthaite

JÓZSEF KRENNER: Warthaite, a new mineral from Hungary. *Math. Termés. Ert.*, **42**, 4–5 (1926).

CHEMICAL PROPERTIES: A bismuth sulphosalt of lead 4 (Pb, Cu, Ag) S. Bi_2S_3. Analysis: Bi 28.18, As tr., Pb 54.53, Ag. 1.01, Cu 1.05, Fe 0.17, S 15.31.

PHYSICAL PROPERTIES: Color steel gray. Luster metallic.

OCCURRENCE: Found as radially fibrous bundles in crystalline limestone associated with sphalerite, pyrite and hematite.

DISCUSSION: (Apparently the same as goongarrite.) Cf. *Amer. Mineralogist* **10,** 39 (1925).

W. F. F.

NOTES AND NEWS

The Mineralogical Society sustained a severe loss in the death on July 21 of Colonel Washington A. Roebling of Trenton, New Jersey. While Col. Roebling had acquired an international reputation as an engineer, he had many accomplishments. He first became interested in mineralogy through a course in blowpipe analysis that he elected while a student at Rensselaer Polytechnical Institute. His interest in minerals and desire to possess them never waned and resulted in the acquisition of a very remarkable private collection that now numbers over 16,000 specimens. Col. Roebling was an honorary member of the New York Mineralogical Club, the Philadelphia Mineralogical Society, and a life fellow of the Mineralogical Society of America. Shortly before his death he gave the Society a substantial endowment, the income of which is being used for the publication of mineralogical research. A memorial sketch of the life of Colonel Roebling and a description of his unusual collection of minerals will appear in a later issue of The American Mineralogist.