FAMILY 7. PHOSPHATES, ARSENATES, ETC. DOUBTFUL SPECIES.

Xanthoxenite

LAUBMANN and STEINMETZ, *op. cit.*, 579–580. ("Xanthoxen").

NAME: From the yellow color (Gk. *Xanthos,*) and the close relationship to cac*oxenite*.

CRYSTALLOGRAPHIC AND OPTICAL PROPERTIES

In thin plates, under the microscope, seen to be monoclinic. Extinction angle 36°; pleochroism strong. Birefr. about like that in cacoxenite, (n = 1.61) but n higher. Axial angle, 2E, about 115°. Sp. gr. 2.844.

CHEMICAL PROPERTIES

Dissolves in acid readily. Could not be sufficiently separated from intergrown minerals for quantitative analysis. The P_2O_5 content is 32.61%, and qualitative examination shows also Fe, chiefly ferric, also less Mn and Ca, with a little Al and Mg. There is 16.10% H_2O, which is lost only at a high temperature.

OCCURRENCE

Intimately intergrown with dufrenite, and especially with cacoxenite in the mass of secondary phosphates, to some extent at Habendorf (see above under phosphophyllite) but especially at the quartz quarry at Hühnerkobel, Rabenstein. Here occur beryl, muscovite, "pseudo-triplite," columbite, abundant accessory triphylite, in part altered into dufrenite, etc. Another type of alteration is into heterosite and some purpurite. Apatite is present, also its alteration products; some autunite and uranocher. Tourmaline is rare. The secondary phosphates comprise dufrenite, cacoxenite, vivianite, rarely secondary apatite, and fairfieldite, (once called "leucomanganite"). This is determinable by its optical properties, and is probably what has been reported as "wavellite." Phosphosiderite, strengite, and beraunite are prominent.

DISCUSSION

[The data are inadequate to establish this as a species. It approaches beraunite (P_2O_5, 31, H_2O 16%) and may be a variety.] E. T. W.

ABSTRACTS—MINERALOGY

THE MINERALS OF GLAMORGAN. F. J. NORTH. *Trans Cardiff Nat. Soc.* **49**, 18–51, 1916–7.

An account of 31 species found in the county. Rare minerals reported include gold, millerite, linneite, minium, and barytocalcite. S. G. G.

STUDIES ON THE MINERALS, THE GENESIS, AND THE GEOLOGY OF DEPOSITS OF NITER. P. N. CHIRVINSKY. *Izv. Polyt. Inst. Novocherkassk*, **5**, 36–64, 1916. [Russian with French abstract.]

A summary of data on the nitrate minerals, with descriptions of their occurrence, especially in Russia. KNO_3, $NaNO_3$, $Mg(NO_3)_2$ and NH_4NO_3 occur in Turkestan. W. F. H.

NOTE ON A CORUNDUM FROM A NEW LOCALITY IN MEXICO. CARLOS CASTRO. *An. Inst. Geol. Mexico*, **4**, 31–36, 1916–1917.

A report of an occurrence of emery at Fresnillo, Zacatecas, Mexico.

E. T. W.

NICTAUX–TORBROOK IRON ORES, NOVA SCOTIA. A. O. HAYES. *Can. Dept. Mines Summary Rept.* **1916**, 273–275, 1917.

A green iron silicate occurs in these ores both as spherules and as a cement. The magnetite seems to have resulted from alteration of the silicate.

E. V. Shannon.

IRON PROSPECT AT PIEDMONT, PICTOU COUNTY, NOVA SCOTIA. A. O. HAYES. *Can. Dept. Mines Summary Rept.* **1916**, 276, 1917.

A green iron silicate occurs largely as spherules built around quartz grains as a nucleus. The silicate is probably sedimentary. E. V. Shannon.

MAGNESITE AT ORANGEDALE, INVERNESS CO., NOVA SCOTIA. A O. HAYES. *Can. Dept. Mines Summary Rept.* **1916**, 217–18, 1917.

Friable weathered magnesite occurs as brown hexagonal prisms terminated by scalenohedra, associated with dolomitic limestone. E. V. Shannon.

NASONITE FROM LANGBANSHYTTAN. G. AMINOFF. *Geol. Fören. Förh.* **38**, 473–476, 1916.

This mineral has been known hitherto only at Franklin Furnace, but is now recognized in the secondary calcite veins at Langban. It occurs as hexagonal prisms with rounded faces, and in white to gray lamellar masses. Analysis showed its composition to agree with that of the Franklin Furnace mineral, $Pb_6Ca_4Cl_2(Si_2O_7)_3$. Its $\omega = 1.945$ and $\epsilon = 1.971$. E. T. W.

THE AGE OF THORIUM MINERALS. R. W. LAWSON. *Sitzb. Akad. Wiss. Wien*, **126**, IIa, 721–739, 1917; thru *Sci. Abstr.* **22A**, 165–166, 1919.

The age of some rare-earth minerals from Devon, England, and Brevik, Norway, as determined from the ratio between thorium and uranium, and uranium and lead, comes out between 8 and 300 million years. Thorianite from Ceylon gave 138–506 million years. E. T. W.

THE FEDOROV METHOD AND ITS APPLICATION TO THE DETERMINATION OF THE FELDSPARS. R. SABOT. *Arch. sci. phys. nat.* **46**, suppl., 72–76, 1918; thru *Chem. Abstr.* **14**, 163–164, 1920.

Plotting the properties of the feldspars leads to the conclusions: that a triclinic form of $KAlSi_3O_8$ enters into the plagioclases; albite and Carlsbad twins predominate in deep-seated acid rocks; pericline twins predominate in deep-seated basic rocks; and in effusive rocks and veins, no matter what the composition of the magma, the Manebach, Esterel-Ala, and Baveno twins are most frequent. E. T. W.

THE ALKALI FELDSPARS. EERO MÄKINEN. *Geol. Fören. Förh.*, **39**, 121-185, 1917.

A detailed study of the relation between temperature and the crystal form of potassium and sodium feldspars. At the lowest temps. the K feldspar is monoclinic, and at high temps. also monoclinic if over 30% of the K compound is present. The miscibility of K and Na feldspars is greater at high temps.

W. F. F.

THE EXISTENCE OF PSEUDOBROOKITE IN THE CAVITIES OF THE BASALTIC STALACTITES OF RÉUNION. A. LACROIX. *Bull. soc. franc. min.* **41**, 183–186, 1918.

Pseudobrookite was identified by its crystallographic-optical properties. It is of pneumatolytic origin. E. T. W.

THE IDENTITY OF IOCHROITE WITH TOURMALINE. A. LACROIX. *Bull. soc. franc. min.* **41**, 130–131, 1918.

The supposed distinct mineral "iochroite" from Finland proves to be optically identical with tourmaline, and it is thought that its analysis was erroneous. E. T. W.

PREHNITE FROM THE TATRA MOUNTAINS. W. PAWLICA. *Bull. Acad. Sci. Cracow, A,* **1916**, 54–59; thru *Neues Jahrb. Min. Geol.*, **1919**, I, Ref. 275–276.

Massive white prehnite occurs in veins in a granite on Mengesdorf Mt. Two analyses show its composition to be normal. It is of hydrothermal origin, and is in part altered to sericite and quartz. E. T. W.

DOLOMITE FROM LEOGANG, SALZBURG. O. GROSSPIETSCH. *Min. petr. Mitt.*, **34**, 68–70, 1917; thru *Neues Jahrb. Min. Geol.*, **1919**, I, Ref. 274.

An analysis of blackish gray acute rhombohedrons is given. E. T. W.

PRE-CAMBRIAN SEDIMENTARY ROCKS IN THE HIGHLANDS OF EASTERN PENNSYLVANIA. EDGAR T. WHERRY. *Bull. Geol. Soc. Am.* **29**, 375–392, 1918.

This petrographic paper includes mention of the occurrence of crystals of sillimanite up to 1 cm. in diameter, formed by recrystallization from a pegmatite magma. E. T. W.

FIELD RELATIONS OF LITCHFIELDITE AND SODA-SYENITES OF LITCHFIELD, MAINE. REGINALD A. DALY. *Bull. Geol. Soc. Am.* **29**, 463–470, 1918.

A report of the discovery in place of the famous sodalite-cancrinite rock, by which the latter mineral is represented in all collections; it had heretofore been found only in glacial boulders. The formation of these alkali-rich minerals was evidently connected with the action of magmatic gases. E. T. W.

FLUORSPAR IN THE ORDOVICIAN LIMESTONE OF WISCONSIN. RUFUS M. BAGG. *Bull. Geol. Soc. Am.* **29**, 393–398, 1918.

Purple fluorite occurs in limestone at Neenah. Its deposition was relatively recent. E. T. W.

MAX BAUER. R. BRAUNS. *Centr. Min. Geol.*, **1918**, 73–84, 1918.

An obituary notice, with an extended bibliography. E. T. W.

RECENT ADVANCES IN SCIENCE—MINERALOGY AND CRYSTALLOGRAPHY. ALEXANDER SCOTT. *Science Progress*, **12**, 399–405; **13**, 38–43, 1918.