NEW MINERALS: DOUBTFUL SPECIES

CLASS: SULFIDES, ETC. DIVISION: R": R"": S=3:8:15?

"Keeleyite"


Name: In honor of Mr. Frank J. Keeley, Curator of the William S. Vaux collection.

Chemical properties: Formula, considered to be 2PbS.3Sb2S3 or Pb2Sb4S11. This is based on analysis by J. E. Whitfield of a rather impure specimen, which showed: Pb 25.80, Sb 43.46, Cu 2.25, Fe 2.77, S 24.54, quartz by difference 1.18%; (some Sn probably weighed with the Sb). From this 8.15% of "sulfides" (presumably calculated as chalcopyrite) were deducted, giving on recalculation Pb 28.43, Sb 47.88, S 23.69, sum 100.00%. This lies about equally distant between the theories for 2PbS.3Sb2S3 and 3PbS.4Sb2S3. However, the uncertainty connected with the subtraction of the constituents of the indeterminate sulfides renders it impracticable to decide between these two formulas. In this connection it is noteworthy that some analyses of the mineral zinkenite (including that from the type locality) show more antimony and less lead than the usually assigned formula (PbS.Sb2S3) requires, and approach 3PbS.4Sb2S3. The chemical data are therefore insufficient to distinguish "keeleyite" from zinkenite. Before the blowpipe gives the usual lead sulfantimonite reactions.

Crystallographic and physical properties: Form, radiating acicular crystals, probably orthorhombic. Color, dark gray; streak, grayish black. H. = 2; sp. gr. = 5.21. No mineragraphic data given. These properties do not differentiate "keeleyite" from zinkenite.

Occurrence: In cavernous quartz with pyrite, stannite, and other sulfides in the silver-tin mines at Oruro, Bolivia.

Discussion: The data seem inadequate to establish this as a species distinct from zinkenite, although the composition of the latter is not settled. Zinkenite may comprise two species, the original one having the same formula as "keeleyite," and another being PbS.Sb2S3 which would require a new name.

E. V. Shannon

CLASS: PHOSPHATES, ETC. DIVISION: R": As : (H2O) = 5:2:6(?)

"Acrochordite"


Name: From the Greek akrochordon, a wart, referring to the aspect of aggregates of the mineral.

Chemical properties: Formula 5(Mn, Mg)O.As2O6.H2O or (Mn, Mg)5(OH)4(AsO4)2(H2O)4. Theory, for Mn:Mg=4:1 (as approximately found), MnO 42.8, MgO 6.1, As2O3 34.7, H2O 10.4, sum 100.0%. Analysis by G. K. Almström gave: MnO 38.98, Mn2O3 0.50, FeO 0.46, CaO 0.99, MgO 6.94, K2O 0.55, Na2O 1.18, As2O5 33.51, P2O5 0.42, H2O 16.78, sum 100.31%. These figures were obtained on several small amounts of material.

Dissolves readily in dilute H2SO4, the solution showing a purple color owing to
the presence of manganic Mn, which indicates moreover that the As must be in the
arsenic state. On heating the mineral loses water and becomes grayish black.

Cry~stallographic and Optical Properties (determined by P. Quensel):
System monoclinic, altho the angles are not measurable with sufficient accuracy to
yield the constants. Optic axial plane perpendicular to the symmetry plane, with
X = b and \( \gamma = 40^\circ \); dispersion, red less than violet. Nearly colorless in thin
section without pleochroism. [Unfortunately the refractive indices are not
recorded.]

Physical Properties: Color red brown with a peculiar yellowish tint; sub-
translucent. Form, aggregates of minute sub-parallel crystals. H. = 4.5, sp. gr =
3.194.

Occurrence: In small amount in druses lined with unusually stable pyrochroite
crystals and barite crystals. Found several years ago in the “Japan” workings of the
Långban mines, at a depth of about 100 meters.

Discussion: This analysis is rather close to those recorded for “chondrarsenite”
and “xantharsenite”; the former of these was later found to be identical with sar-
kinite, but the latter has not been studied by modern methods. In the absence
of a chemical analysis made on adequate material, of definite crystallographic
data and of refractive index determinations, the distinctness of the present mineral
can hardly be regarded as satisfactorily established.

E. T. W.

Acrochordite

G. Karl Almström: Om akrochorditens kemiska sammansättning. (The

Chemical Properties: It is believed that the material analyzed by Flink
in announcing this new species (see abstract above) was impure, containing
central nuclei of pyrochroite. The formula is accordingly probably simply
\( \text{Mn,Mg(AsO}_4\text{)}_2\cdot6\text{H}_2\text{O} \). It appears to be analogous to tyrolite and other copper
arsenates, which have the same base-acid ratios but range widely in water content.

E. T. W.

CLASS: SILICATES. DIVISION: \( \text{R}'':\text{R}':\text{SiO}_2\cdot(F,OH)=1:1:2:X \).

Mansjoelite

Harry von Eckermann: The rocks and contact minerals of the Mansjö Mountain.

Name: From the locality, Mansjö. [The English equivalent should be spelled
mansjoelite.]

Chemical Properties: Analysis by Sahlbom gave: \( \text{SiO}_2 \) 50.14, \( \text{TiO}_2 \) none,
\( \text{Al}_2\text{O}_3 \) 0.95, \( \text{Fe}_2\text{O}_3 \) 0.91, \( \text{FeO} \) 7.45, \( \text{MnO} \) 0.08, \( \text{CaO} \) 21.26, \( \text{MgO} \) 17.10, \( \text{K}_2\text{O} \) 0.07,
\( \text{Na}_2\text{O} \) 0.24, \( \text{P}_2\text{O}_5 \) 0.03, F 0.63, \( \text{H}_2\text{O} + x \) 0.76, sum 99.62 or less \( O + F = 0.26 \), sum
99.46%. Recalculation according to the usual plan shows about 58% diopside, 26
hedenbergite, 2 each “acmite” and “augite” (Tschermak) and a remainder of 12%
with the approximate ratios of chondrodite. [The simplest formula which can be
written for it is \( \text{Ca}(\text{Mg, Fe}) (\text{SiO}_4)_2+x \text{Mg}(\text{OH}, F)_2 \) with \( x \approx 0.5 \); the evidence
that a chondrodite molecule is present is not considered by the abstractor to be
adequate, because the rôle of the Al, Fe””, etc. is not really known.]

Physical Properties: Color grayish green; in thin section colorless. Luster
vitreous; structure granular; cleavage prismatic; sp. gr. 3.236. Shows some gas-
filled inclusions.
Optical properties: Biaxial, +; \(a = 1.675, \beta = 1.682, \gamma = 1.704, \gamma - \alpha = 0.029; 2V = 58^\circ 20'\). Dispersion strong. The orientation shows the crystallization to be monoclinic, the maximum extinction angle \(c : \gamma\) being 35°.

Occurrence: In contact metamorphic limestone, probably formed by the action of fluorine-bearing residual solutions from the magma. Many so-called coccolites are probably similar in origin, and may also contain fluorine or chlorine which have been overlooked. The mineral associates are: calcite, pargasite, prehnite, phlogopite, titanite, and apatite.

Discussion: Whether this mineral deserves a species name is doubtful; the abstractor would prefer to call it fluoriferous diopside, until further data are obtained.

E. T. W.

REDEFINITION OF SPECIES

CLASS: SILICATES. DIVISION: ACID ZEOLITES

"Flokite" (Callisen, 1917) = Mordenite (How, 1864).

Ptilolite (Cross and Eakins, 1886) is distinct from Mordenite.

Clinoptilolite, new name for "crystallized mordenite."


Discussion: Disregarding the inclined extinction and differences in composition, Bøggild considers "flokite" identical with ptilolite; Schaller finds it to agree in composition and optics with mordenite. Walker suggests that ptilolite is "probably identical with mordenite"; the new data cited by Schaller do not bear this out. Schaller shows clearly that on chemical and optical grounds three species are comprised in this group: Mordenite, ptilolite and clinoptilolite.

E. T. W.

ABSTRACTS: CRYSTALLOGRAPHY


The phenacite crystals occur either attached to iron-stained quartz prisms or are embedded in a partially altered chlorite, associated with crystals of scheelite, cassiterite and orthoclase. The following forms were observed on the phenacite: (1i20), (10ɨ0), (10i1), (0i12), (1i23), (3ɨ21), (1322). In an early British Mineralogy (J. Sowerby, 1809, Vol. 4, pp. 53-54) phenacite crystals from this locality were erroneously described as "white tourmaline." The crystals of scheelite occurring with the phenacite measure at times 1½ cm in length and are of the simple bipyramidal habit, consisting of but two forms, (101) and (001).

W. F. H.


The identity of the dyakisdodecahedron, (641), on pyrite, observed on only two previous occasions, is now firmly established by measurements on three addi-