

NEW MINERAL NAMES

Idaite

GERHARD FRENZEL. Ein neues Mineral: Idait. *Neues Jahrb. Mineral., Monatsh.*, 1958, No. 6, 142.

A preliminary note. Chemical composition Cu_3FeS_6 (in part with a small excess of Cu). Hexagonal, in very fine plates, D_{6h} (?), a_0 3.90, c_0 16.95A, $Z=1$. Closely related crystallographically to covellite. H. $2\frac{1}{2}$, G. (x-ray) 4.21. Luster metallic, color similar to that of bornite, but not tarnished. Strongly birefringent. In reflected light resembles freshly polished bornite. In air, R_0 reddish-orange to reddish-brown, R_e yellowish bright gray.

A lamellar decomposition product of bornite, commonly associated with fine spindles of chalcopyrite. Apparently the first product of weathering. Apparently widely distributed; noted from the Ida Mine, Khan, S. W. Africa and 30 other localities.

The name is for the Ida Mine.

MICHAEL FLEISCHER

Gelbertrandite, Spherobertrandite

E. I. SEMENOV. New hydrous silicates of beryllium-gelbertrandite and spherobertrandite. *Inst. mineral., geokhim., and crystallokhim. redkikh elementov, Trudy*, 1, 64-66 (1957) (in Russian).

Gelbertrandite

Occurs in irregular masses in fibrous beryllite. Color pale violet (fades to yellowish-white), luster vitreous, H. 4, G. 2.176 (by hydrostatic suspension). Optically isotropic, n 1.525 (range 1.511-1.530). Analysis by M. E. Kazakova gave SiO_2 38.70, Al_2O_3 1.20, BeO 34.16, CaO 1.93, $(\text{Na}, \text{K})_2\text{O}$ 0.33, H_2O^+ 15.62, H_2O^- 8.17, sum 100.11%, corresponding to $\text{Be}_3\text{Si}_2\text{O}_7(\text{OH})_2 \cdot 3\text{H}_2\text{O}$ (i.e. a hydrated bertrandite). Spectrographic analysis by N. V. Lizunov showed the presence of Mn, Pb, Zn, Mg, Cu, and Ba (weak lines). A dehydration curve by A. S. Skripkin showed continual loss of weight to 700°.

X-ray powder data by N. N. Sludsko are given. Fifteen lines are given; the strongest are 4.31 (10), 3.15 (10), 2.53 (10), 2.31 and 2.20 (8), 1.467 (6).

Occurs in pegmatites in nepheline syenites at Mt. Karnasurt and Mt. Mannepakhk, Lovozero massif, Kola Peninsula; formed by the epithermal alteration of epididymite.

DISCUSSION.—Each of the x-ray lines corresponds closely to a line of bertrandite, but with lower intensity, and many lines of bertrandite are missing. This therefore seems to be a poorly crystallized bertrandite, and the name is unnecessary.

Spherobertrandite

The mineral occurs in spherulites in drusy cavities in epididymite in pegmatite at Mt. Mannepakhk, also at Kuftny and Sengischorr, Lovozero massif, and Yukspor, Khibina massif. The mineral is yellow to colorless, luster vitreous, H. 5, G about 2.5. Optically biaxial, neg., 2V about 70°, α 1.595, γ 1.612, $Y=c$. The colored variety is weakly pleochroic with X yellow, Z colorless. Absorption $X>Z$.

Analysis by M. E. Kazakova gave SiO_2 41.03, Al_2O_3 1.40, Fe_2O_3 0.07, BeO 45.20, H_2O^+ 11.70, H_2O^- 0.30, sum 99.70%, corresponding to $\text{Be}_3\text{Si}_2\text{O}_7(\text{OH})_4$, whereas bertrandite is $\text{Be}_3\text{Si}_2\text{O}_7(\text{OH})_2$. Spectrographic analysis showed Na, Ca, and Ba (weak lines). A dehydration curve showed that all the water is lost between 600° and 800°.

X-ray powder data (38 lines) are given. The strongest lines (and in parentheses the nearest line of bertrandite) are: 3.15-10 (3.14-10), 2.32-10 (2.28-9), 2.17-10 (2.20-9), 4.89-9 (4.81-3), 1.250-9 (1.250-8), 3.80-8 (3.81-3), 2.73-8 (2.78-4), 1.352-8 (1.362-2), 1.140-8 (1.150-2), 1.970-7 (1.973-8), 1.525-7 (1.495-1), 1.411-7 (———).

DISCUSSION.—The close correspondence of the optical properties (except the orientation) and of the x-ray powder diagram (despite a few missing lines and differences in intensities) makes one wonder whether the analysis can be correct. Could beryllite have been present? The mineral cannot be accepted as a valid species without further study.

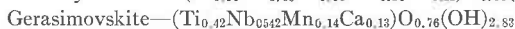
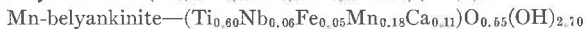
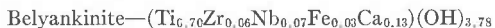
M.F.

Gerasimovskite (Niobobelyankinite), Mangano-belyankinite

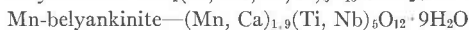
E. I. SEMENOV. Oxides and hydroxides of titanium and niobium in the Lovozero alkaline massif. *Inst. mineral., geokhim., and crystallokhim. redkikh elementov, Trudy*, **1**, 41–59 (1957) (in Russian).

The mineral belyankinite was described in 1950 (see *Am. Mineral.*, **37**, 882 (1952)). New data are now given for it, for its Mn-analogue (Mn-belyankinite), and for its Nb analogue (gerasimovskite). New analyses are given of gerasimovskite (1 and 2) and of Mn-belyankinite (3).

The minerals are considered to be substituted $Ti(OH)_4$ ranging to the end member $Nb(OH)_5$ (gerasimovskite), and the formulas are calculated to be:



(Note—The atomic ratios of gerasimovskites no. 1 and no. 2 are Nb 0.33, Ti 0.305; Nb 0.34, Ti 0.29. A different method of calculation gives:



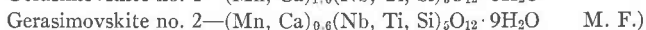
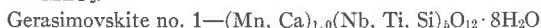
Analyses

	(1)	(2)	(3)
Nb_2O_5	43.91	44.90	7.42
Ta_2O_5	0.38	0.50	—
TiO_2	24.37	23.44	44.30
SiO_2	1.83	2.30	1.51
Fe_2O_3	tr.	0.21	3.77
Al_2O_3	—	0.65	—
MnO	7.85	2.65	14.03 ^c
MgO	—	0.30	—
CaO	1.37	1.95	5.77
Na_2O	—	0.10	—
K_2O	—	0.21	—
CO_2	—	0.20	—
H_2O^+	3.95	3.78	22.36
H_2O^-	16.55	14.77 ^b	—
Total	100.21 ^a	95.96 ^b	99.16
Analyst	T. A. Burova	M. E. Kazakova	T. A. Kapitonova

^a Given as 100.11 in original.

^b Sum given as 99.91 in original, but the atomic ratio given for total H_2O is exactly that obtained by taking H_2O^+ as 18.77%.

^c = MnO_2 .



The minerals are amorphous and give no x -ray lines except that gerasimovskite gives diffuse lines at 2.60, 1.85, and 1.64 Å. When heated at 900°, all give sharp patterns that resemble that of rutile or the high-temperature modification of Nb₂O₅. Belyankinite gave (d and I): 3.21 (8), 2.90 (3), 2.48 (6), 2.18 (3), 1.690 (10), 1.633 (2), 1.361 (5), 1.259 (2). Mn-belyankinite gave 3.21 (2), 2.89 (2), 2.48 (3), 2.17 (1), 1.880 (1), 1.692 (4). Gerasimovskite gave lines at 3.04, 2.49, 2.05, 1.736, 1.706, 1.666 Å.

D.T.A. curves are given. Belyankinite has a large endothermal break at 170°, a small exothermal break at about 410°, and a larger exothermic break at 740°. Gerasimovskite shows an endothermal break at about 150° and an exothermal one at about 730°.

Gerasimovskite is brown to gray or light gray, luster pearly. Perfect cleavage in one direction. H , 2, G , 2.52–2.58. Optically biaxial, negative, $2V$ 18°, α about 1.74, $\beta \sim \gamma$ about 1.81. Extinction parallel, elongation positive. Manganobelyankinite is brownish-black, luster resinous, color and pleochroism "more intense than those of belyankinite," optically biaxial, neg., $2V$ 29°.

Gerasimovskite occurs in platy masses up to 1.5×1×0.3 cm. in ussingite-bearing pegmatites of Punkarua Mt., Mt. Nepkha, and Mt. Allua, Lovozero, Kola Peninsula. It is believed to have formed by the hydrothermal alteration of minerals of the murmanite-lomonosovite series. Manganobelyankinite occurs in pegmatite at Mt. Kedykverpakh.

The name is for V. I. Gerasimovskii, Russian mineralogist.

M.F.

D'Ansite

H. AUTENRIETH AND G. BRAUNE. Ein neues Salzmineral, seine Eigenschaften, Sein Auftreten und seine Existenzbedingungen im System der Salze ozeanischer Salzablagerungen. *Naturwissenschaften*, **45**, No. 15, 362–363 (1958).

Study of the system Na-Mg-SO₄-Cl-H₂O shows the existence of a new phase MgSO₄·3NaCl·9Na₂SO₄, which may be written as MgNa₂₁(Cl₃SO₄)(SO₄)₉ for comparison with hanksite KNa₂₂(Cl(CO₃)₂)(SO₄)₉. At 46°, the lower limit of stability, it co-exists with thenardite and bloedite; at higher temperatures its field is between those of thenardite and vanthoffite. Crystals are tetrahedral with {211} dominant, and {2 $\bar{1}$ 1} and {110} noted. G , 2.655. Isotropic, n Na 1.489. Melts in the Bunsen burner flame. An x -ray diagram, with no measurements of lines is given. a_0 15.90 Å, $Z=4$.

The compound would be expected to be formed in close association with vanthoffite. No such material was found by the authors, but they believe that it was probably the mineral described by Görgy, *Mineralog. petrog. Mitt.*, **28**, 341 (1909), from Hall, Tyrol. Görgy described the material as closely associated with vanthoffite, enclosed in bloedite, isotropic with n (Na) 1.503, G , 2.590, contains Mg, Na, Cl, SO₃, melts easily without giving water.

The name is for Professor Jean D'Ans, Kali-forschungsanstalt, Berlin, who has published many papers on equilibrium in salt systems.

M.F.

Bonchevite

IVAN KOSTOV. Bonchevite, PbBi₄S₇, a new mineral. *Mineralog. Mag.*, **31**, 821–828 (1958).

Analysis by N. Yordanov gave Bi 66.62, Pb 15.50, Cu 0.85, S 16.71, sum 99.68%, corresponding closely to PbBi₄S₇. Spectrographic tests detected also Ag, Zn, Cd, Sb, and Te.

The mineral occurs in acicular or long prismatic, apparently orthorhombic crystals up to 2 cm. The forms $m\{110\}$ (dominant), $e\{011\}$, $a\{100\}$, and $b\{010\}$ were observed. Goniometric measurements on 4 crystals gave $a:b:c=0.9004:1:0.3249$, intermediate between the ratios for bismuthinite and galenobismutite. The {110} faces are commonly striated along

the *c*-axis. Cleavage {100} perfect, fracture uneven to subconchoidal, very brittle. Luster metallic, color lead- to steel-gray. In polished section homogeneous with rare minute inclusions, perhaps native bismuth. Weakly pleochroic, distinctly to strongly anisotropic. H. 2½, G. (av. of 5) 6.92.

X-ray powder data are given for bonchevite, 2 samples of bismuthinite, and galenobismutite. The strongest lines of bonchevite are 3.50 (10), 3.08 (8), 1.939 (8), 2.78 (6), 1.733 (6), 2.50 (5). The bismuthinites gave 3.44, 3.46 (10), 3.03, 3.06 (5), 1.910, 1.915 (8), 2.76, 2.76 (3), 1.722 (4) and 1.726 (2), and 2.48, 2.47 (7). The galenobismutite gave 3.48 (10), 3.05 (3), 1.929 (5), 2.77 (4), 1.726 (3), and 2.49 (8).

The mineral occurs in quartz veins cutting gneisses and amphibolites close to the so-called Yugovo granite, Central Rhodopian Mts. Associated minerals are scheelite, pyrite, and sparse sphalerite and molybdenite. The gangue is milky quartz, locally enriched in calcite.

The name is for Georghi Bonchev, former professor and founder of the Institute of Mineralogy and Petrography, University of Sofia.

DISCUSSION.—The differences in the x-ray patterns given for bonchevite, bismuthinite, and galenobismutite are not convincing, and the validity of the mineral must be substantiated by single crystal x-ray study.

M. F.

Ordite

YU. M. AMBRAMOVICH. Pseudomorphism in sedimentary mineral formation. *Voprosy Mineral. Osadoch. Obrazovaniï Lvov Univ.* 1956, No. 3-4, 80-86; *Chem. Abstracts* 52, 13549 (1958).

The name ordite, for the locality Orda village, Molotov Oblast, is given to pseudomorphs of crystalline gypsum after fibrous gypsum.

DISCUSSION.—There is no excuse for naming such material.

M. F.

Hydroparagonite

J. ERDELYI, V. KOBLENCZ, AND V. TOLNAY. Über hydroparagonit, ein neues Glimmermineral, sowie über Beziehungen zum Hydromuskovit, Natronillit, und Brammallit. *Acta Geol. Sci. Hung.* 5, 169-186 (1958).

In this paper new analyses are given of hydromuscovite from Nagybörzsöny. The analysis, x-ray, and optical data are essentially identical with those of illites, but the authors consider hydromuscovite to be a distinct mineral on the basis of (1) grain size (b) the DTA curve shows the main endothermic break at a temperature 100° higher than illite does. For the same reasons, plus the fact that the x-ray pattern does not change when the mineral is heated, the authors consider that brammallite, described by Bannister (*Am. Mineral.* 29, 73 (1944) as a sodium-illite, is actually a hydroparagonite, and suggest this name.

DISCUSSION.—The name hydroparagonite (=brammallite) was used by Strunz (*Mineralogische Tabellen*, 3rd Ed., 1957), but there is no valid reason for discarding brammallite, which has priority. Grain size is not a valid criterion for giving a new name to the same mineral.

M. F.

Kësterite (Kosterite)

Z. V. ORLOVA. *Trudy Vses. Magadansk Nauchno-Issled. Inst. Magadan*, 2, 76 (1956), from an abstract by E. M. Bonshtedt-Kupletskaia in *Zapiski Vses. Mineral. Obshch.*, 87, 76 (1958).

The name kësterite (pronunciation nearly that of German form kösterite) is given,

with no description, to a mineral, analysis of which gave Cu 30.56, Ag 0.005, Zn 11.16, Mn 0.09, Fe 1.68, Ni tr., Sn. 25.25, Sb 0.90, S 28.40, Se 0.01, sum 98.05%, corresponding to (Cu, Sn, Zn) S with ratio Cu:Sn:Zn about 54:24:19:3. Occurs in quartz-sulfide veinlets in the Késter deposit in the Yano-Adychansk region. (The name is for the locality.)

DISCUSSION.—A name should not be given without proof of homogeneity. This name also is easily confused with custerite.

M. F.

Giulekhite

CH. M. KHALIFA-ZADE, *Doklady Akad. Nauk Azerbaidjan S.S.R.*, **13**, 647–653 (1957), from an abstract by E. M. Bonshtedt-Kupletskaya in *Zapiski Vses. Mineral Obshch.*, **87**, 83 (1958).

The mineral is a hydromica occurring in the fraction <0.001 mm. in argillites of south-eastern Caucasus. Analysis of the entire dispersed fraction gave SiO₂ 31.14, Al₂O₃ 14.50, Fe₂O₃ 29.88, FeO 3.52, MgO 4.00, K₂O 3.71, Na₂O 0.15, H₂O⁺ 8.07, H₂O⁻ 3.31, sum 98.28%. The D.T.A. curve shows endothermic breaks at 130°, 390°, and 560°. Gives no reaction with benzidine, turns blue with methylene blue, gives a yellow color with brownish tint with chrysoidine. Elongation positive, n'_v 1.543, n'_g 1.552. The strongest x-ray lines are 1.699 (9, broad), 4.32, 3.59, 2.50 (8), 4.93, 1.52 (7).

The name is for the locality near the village of Giulekh (suggested transliterations in the abstract are Gewlekhite for English, Gülechte for German).

DISCUSSION.—The abstractor states, "The mineral is insufficiently characterized and the name was given prematurely." I agree.

M. F.

Bismutomicrolite

N. E. ZALASHKOVA AND M. V. KUKHARCHIK, Bismutomicrolite—a new variety of microlite. *Akad. Nauk S.S.S.R., Inst. mineral, geokhim., and Kristalokhim. redkikh elementov, Trudy*, **1**, 77–79 (1957).

Analysis by M. V. K. gave Ta₂O₅ 79.72, Nb₂O₅ 0.08, TiO₂ 0.05, Al₂O₃ 0.45, Fe₂O₃ 0.32, MnO 0.08, CaO 8.60, K₂ 0.08, Na₂O 5.27, rare earth oxides 0.18, Bi₂O₃ 3.25, H₂O 0.60, F 2.00, sum 100.68% (given as 100.70)—(O=F₂) 0.84=99.84 (given as 99.92). Isotropic with n 2.044, G. 6.426, a_0 10.51Å. The formula is (Na, Ca, Bi)₂Ta₂O₆(O, OH, F).

DISCUSSION.—Unnecessary name for bismuthian microlite.

M. F.

Stibiotellurobismuthite

I. G. MAGAK'YAN. *Zapiski Vses. Mineral Obshch.* **86**, 343–346 (1957).

The name is given to a tellurobismuthite containing Sb 2.7%.

DISCUSSION.—Unnecessary name for antimonian tellurobismuthite.

M. F.

NEW DATA

Stainierite

JEAN ORCEL, STÉPHANE HÉNIN, AND SIMONNE CAILLÈRE. Sur la présence de stainierite à Bou Azzer et les propriétés de cet hydroxyde. *Compt. rend.*, **246**, No. 5, 792–795 (1958).

Stainierite (heterogenite) has been considered to be Co₂O₃·H₂O or CoO(OH), analogous to goethite. (See Dana's System, 7th Ed., Vol. I, p. 650–653). Material from a new locality, Bou Azzer, Morocco, gave CoO 70.00, SiO₂ 1.35, Al₂O₃ 1.0, Fe₂O₃ 3.30, Cr₂O₃ 0.20, MnO 0.35, TiO₂ 0.05, CuO 0.10, MgO 1.40, CaO 0.85, H₂O⁻ 4.00, H₂O⁺ 17.00, sum 99.60%. A dehydration curve showed a loss in weight, corrected for impurities, of about 13.5% at

250–275° and another loss in weight of about 3.5% at about 900°. The DTA curves (not given) of the Bou Azzer and Katanga material showed endothermal breaks at 260–300° and a very intense one at 900–960°.

X-ray study of the two samples gave very similar patterns (no data given) which are similar to those of brucite and pyrochroite. The x-ray pattern of a sample heated at 550° is of the spinel type (Co_3O_4 ?), that obtained at 1000° and cooled in air was similar, but that of material heated at 1000° and cooled in a closed container resembles the pattern of periclase. It is concluded that stainerite is $\text{Co}(\text{OH})_2$.

M.F.

Coeruleolactite (=Ca analogue of Turquoise)
Planerite (=cuprian Coeruleolactite and calcian Turquoise)
Alumochalcosiderite (=aluminian Chalcosiderite)

EMIL FISCHER. Über die Beziehungen zwischen Coeruleolactit, Planerit, Turkis, Alumochalkosiderit, und Chalkosiderit. *Beitr. Mineral. u. Petrog.*, 6, 182–189 (1958).

New microchemical analyses and x-ray powder data are given for 2 samples of turquoise and one of "alumochalcosiderite." These show that there is a continuous series from turquoise to chalcosiderite with a corresponding change in *d*-spacings. Microchemical analyses are also given of coeruleolactite from the Rindsberg mine, Nassau, Germany (type locality) (no. 1) and for 2 samples of planerite labelled Tschornaya River near Sysstert, Urals, (no. 2) and Mt. Tschernovskaya near Sysstert (no. 3); these probably represent type material. The analyses gave:

	CaO	CuO	FeO	MgO	Al ₂ O ₃	Fe ₂ O ₃	P ₂ O ₅	H ₂ O	Sum
1.	5.09	0.24	—	0.40	40.3	—	30.1	23.4	99.5
2.	2.88	3.48	0.8	—	37.1	—	35.5	20.4	100.2
3.	1.15	6.31	tr.	0.09	37.7	—	35.0	19.4	99.7

X-ray powder data are given for these samples; they agree closely with those for turquoise, but some differences in spacing and intensities are noted. The minerals are considered to be members of the same group with the general formula $(\text{Cu}, \text{Ca}, \text{Fe}''', \text{Mg})(\text{Al}, \text{Fe}''')_6((\text{P}, \text{As})\text{O}_4)_4 \cdot 4-5\text{H}_2\text{O}$. The analyses of planerite show a deficiency in the RO group, that of coeruleolactite an excess of Al_2O_3 , ascribed to the presence of an unidentified aluminum hydroxide. No optical data are given and much of the pertinent literature is not mentioned.

DISCUSSION.—The data indicate that coeruleolactite is a member of the turquoise group, but the isomorphous relationships and possible substitutions have not yet been worked out satisfactorily. The names planerite and alumochalcosiderite are superfluous and should be dropped.

M.F.

DISCREDITED MINERALS

Ptilolite, Flokite, Arduinite (all = Mordenite)

R. J. DAVIS. Mordenite, ptilolite, flokite, and arduinite. *Mineralog. Mag.*, 31, 887–888 (1958).

These minerals had previously been considered by various investigators to be identical, but mordenite and ptilolite from the type localities had not been re-examined. X-ray powder diagrams of the four minerals, each from the type locality, show them to be identical.

M.F.

Comuccite (= Jamesonite)

CARLO GARAVELLI. Identita fra "comuccite" e jamesonite. *Periodico Mineralogia*, **27**, 207-210 (1958).

Comuccite was described as a lead antimony sulfide from San Giorgio, Sardinia, by Comucci in 1916 and was named by Doelter in 1926. Short (1931) and Rodolico (1940) believed it to be jamesonite from optical data. X-ray powder data on type material proves the identity.

M. F.

Alumian (= Natroalunite)

A. A. Moss. Alumian and natroalunite. *Mineralog. Mag.*, **31**, 884-885 (1958).

Alumian, described by Breithaupt in 1858 as $Al_2(SO_4)_2O$, has been guessed to be alunite or natroalunite (Dana's System, 7th Ed., Vol. II, p. 560). A complete analysis and x-ray study of type material from the Sierra Almagrera, Spain, show it to be nearly the natroalunite end member (Na_2O 7.6, K_2O 0.1%), with ω 1.574, ϵ 1.590, G. 2.78.

M.F.

Arsenolamprite (= Arsenic + Arsenolite)

KAREL PADERA AND EMIL FISCHER. Does the modification of arsenic, arsenolamprite, exist as a mineral? *Mineralog. Sbornik Lvov Geol. Obshch.* No. 10, 160-167 (1956) (in Russian).

X-ray powder data on arsenolamprite from Copiapo, Chile, show it to be a mixture of rhombohedral arsenic with arsenolite. The type material from Marienberg, Saxony, had previously been reported to have the same x-ray pattern as the Copiapo material (see Dana's System, 7th Ed., Vol. I, p. 130).

M.F.