

more than a dozen are books and many others are complete volumes of investigations published by the Geological Commission of Switzerland.

This memorable tribute to the scientific endeavors and achievements of Professor Niggli comes at a fitting time. Long widely known in Europe as an outstanding scholar of the earth sciences and allied fields, and as an inspiring teacher who has personally guided the doctoral dissertations of forty-two students from all over the world, Professor Niggli received formal recognition of the esteem of American mineralogists in 1947 when he was awarded the Col. Washington A. Roebling medal of the Mineralogical Society of America. On this occasion, the sixtieth year of Paul Niggli and the fortieth of his career, his American friends join in expressing their congratulations and well wishes.

E. WM. HEINRICH,  
*University of Michigan*

## NEW MINERAL NAMES

### Bredigite

C. E. TILLEY AND H. C. G. VINCENT, The occurrence of an orthorhombic high-temperature form of  $\text{Ca}_2\text{SiO}_4$  (bredigite) in the Scawt Hill contact-zone and as a constituent of slags: *Mineralog. Mag.*, **28**, 255-271 (1948).

The pseudo-hexagonal orthorhombic form of  $\text{Ca}_2\text{SiO}_4$ , designated as  $\alpha^1\text{-Ca}_2\text{SiO}_4$ , has been found at Scawt Hill, Antrim Co., Ireland, associated with larnite, gehlenite, and spurrite in one assemblage, with melilite, larnite, perovskite, and magnetite in another. Also observed in the limestone contact zone of the island of Muck, Inverness-shire, and in a spiegeleisen slag that contained melilite, monticellite solid solution, CaS, and glass. An analysis of a sample separated from the slag is given. It contained a little sulfide and glass and had G. 3.42. The analysis, recalculated after deducting impurities, shows good agreement with  $\text{Ca}_2\text{SiO}_4$ , with 3.4% MnO, 6.9% BaO, and 6.8% MgO. Bredigite is optically positive with  $\gamma=c$ ,  $\alpha=b$ ,  $\beta=a$ ,  $2V$   $30^\circ$ , but variable down to  $10^\circ$ ; indices:  $\alpha=1.712$ ,  $\beta=1.716$ ,  $\gamma=1.725$ ;  $\alpha=1.725$ ,  $\beta=1.728$ ,  $\gamma=1.740$  (from melilite-magnetite assemblage, probably contains Fe);  $\alpha=1.713$ ,  $\beta=1.717$ ,  $\gamma=1.732$  (from slag). Basal sections have hexagonal outlines in cross-section and show simple and cyclic twinning and traces of prismatic cleavage.

Some samples showed partial inversion to  $\gamma\text{-Ca}_2\text{SiO}_4$ . Bredigite dissolves readily in the weakest acids, leaving a silica pseudomorph.

Named for M. A. Bredig, physical chemist, for his studies of the polymorphism of  $\text{Ca}_2\text{SiO}_4$  (see *Am. Mineral.*, **28**, 594 (1943)).

MICHAEL FLEISCHER

### Rashleighite

ARTHUR RUSSELL, On rashleighite, a new mineral from Cornwall, intermediate between turquoise and chalcosiderite. *Mineralog. Mag.*, **28**, 353-358 (1948).

The name rashleighite is given to a mineral of the turquoise-chalcosiderite series. Two complete analyses are given; they show  $\text{Al}_2\text{O}_3$  21.63, 20.84;  $\text{Fe}_2\text{O}_3$  20.29, 21.29;  $\text{Al}_2\text{O}_3/\text{Fe}_2\text{O}_3$  1.69, 1.53. Two occurrences are described. At the Bunny tin-tungsten mine, St. Austell, Cornwall, it occurs in ore veinlets in greisen, associated with quartz, kaolinite, tourmaline, fluorite, topaz, cassiterite, and wolframite. At the Castel-an-dinas tungsten mine, St. Columb Major, Cornwall, it occurs with quartz, wolframite, wavellite, and lithiamica. The name is for Phillip Rashleigh, 1729-1811, Cornish mineralogist.

DISCUSSION: An unnecessary name for ferrian turquoise.

M.F.

**Wisaksonite**

J. H. DRUIF, On the occurrence of a new mineral species in the deposits of the river Pekoeringan, district Masamba, Celebes: *Communications of the General Agricultural Experiment Station, Buitenzorg, Java*, No. 69, 8 pp. (1948).

The mineral occurs as minute grass- to emerald-green tetragonal crystals. These are isotropic or nearly so, optically positive,  $n$  above 1.800. Insoluble in HCl, no data on chemical composition. Heavy,  $d$ . "probably about 4." Found in heavy mineral concentrates from river sand, associated with much colorless and pink zircon, allanite, biotite, green amphibole, some epidote, sphene, and apatite, and traces of chloritoid, glaucophane, tourmaline, and corundum. Sometimes observed in regular intergrowth with zircon. The name is for Wisaksono Wirjodihardjo, the first Javanese Acting Chief of the Institute for Soil Research at Buitenzorg.

DISCUSSION: This is another example of the unfortunate practice of naming a mineral on the basis of practically no data. Druif says, "At the first glance one feels almost compelled to identify this mineral as *green zircon*. . . . However, when the fact of the absence of double refraction becomes revealed, this supposition cannot be upheld any longer." Druif was apparently unaware of the fact that zircon of low density and low birefringence has been studied repeatedly; some recent references are Chudoba and Stackelberg, *Z. Krist.*, 95, 230-246 (1936); 97, 252-262 (1937); Leitz, *Z. Krist.*, 98, 201-210 (1937); Stott and Hilliard, *Mineralog. Mag.*, 27, 198-203 (1946). There seems little reason to suppose that the material here given a new name is anything but low-density zircon.

M.F.

**Basaluminite Hydrobasaluminite**

F. A. BANNISTER AND S. E. HOLLINGSWORTH, Two new British minerals. *Nature*: 162, No. 4119, 565 (1948).

White, plastic material, hitherto thought to be allophane, was found to be an aluminum sulfate. Analyses of air-dried material by C. O. Harvey gave  $\text{SO}_3$  15.6, 14.2;  $\text{Al}_2\text{O}_3$  43.0, 41.3;  $\text{Fe}_2\text{O}_3$  0.3, 0.2;  $\text{P}_2\text{O}_5$  trace, 1.0;  $\text{H}_2\text{O}$  by difference 38.7, 39.7%. This corresponds, deducting about 5% allophane, to  $2\text{Al}_2\text{O}_3 \cdot \text{SO}_3 \cdot 10\text{H}_2\text{O}$ , and the mineral is named basaluminite. Its composition is close to that of felsobanyite, but its  $x$ -ray powder pattern, with longest spacing 9.2 Å, differs from that of felsobanyite. Basaluminite is fine-grained, anisotropic, with mean  $n$  about 1.510.

Samples of the plastic material, preserved in contact with water, gave an  $x$ -ray pattern with longest spacing 12.9 Å. The water content of this fully hydrated material, named hydrobasaluminite, is not known. It loses approximately 50% by weight at 16° C. in ten days before constant weight is reached and the powder pattern of basaluminite only is given.

The mineral occurs coating of joint-faces and as a fissure breccia in quarries in the Northampton Ironstone, especially at the Lodge Pit, Irchester Ironstone Co., two miles south of Wellingsborough.

M.F.

## NEW DATA

## Wehrlite

K. SZTROKAY, Über den Wehrlit (Pilsenit): *Ann. Hist.-Nat. Musei Natl. Hungarici*, **39**, 75-103 (1946).

Optical study by reflected light was made on three samples from the type locality, Borszony (Deutsch-Pilsen). The specimens were found to contain tellurbismuth ( $\text{Bi}_2\text{Te}_3$ ), tetradymite ( $\text{Bi}_2\text{Te}_2\text{S}$ ), a similar phase, assumed to be  $\text{Bi}_2\text{TeS}_2$ , also bismuthinite ( $\text{Bi}_2\text{S}_3$ ) hessite ( $\text{Ag}_2\text{Te}$ ), and a little native Bi, petzite, gold, and molybdenite.

DISCUSSION: The results do not agree with the x-ray work of Peacock (Warren and Peacock, *Univ. of Toronto, Geol. Ser. No. 49*, 55-70 (1945)). Further work is necessary before the species can be considered discredited.

M.F.

Charles H. Behre, Jr., professor of economic geology, at Columbia University, has been granted a leave of absence for the year 1948-49 to continue the study of the genesis, distribution and geologic control of the mineral deposits of Mexico. T. S. Lovering of the U. S. Geological Survey and Donald M. Davidson of the E. J. Longyear Company lectured in the Department of Geology in October and November on ore genesis and its influence in search for minerals.

The U. S. Geological Survey has prepared for x-ray diffraction workers tables of  $d$  spacings based on the solution of the Bragg equation  $n\lambda = 2d \sin \theta$ . It is entitled: "Circular 29: Tables of  $d$  spacings for angle  $2\theta$ ." Spacings are tabulated for  $\text{CuK}\alpha$ ,  $\text{CuK}\alpha_1$ ,  $\text{CuK}\alpha_2$ ,  $\text{FeK}\alpha$ ,  $\text{FeK}\alpha_1$ , and  $\text{FeK}\alpha_2$  in steps of  $0.05^\circ \theta$ . Wave lengths used are those agreed upon in July, 1946, by the X-ray Analysis Group of the Institute of Physics (Great Britain). The tables are available free on application to the Director, U. S. Geological Survey, Washington 25, D. C. The data has been compiled by George Switzer, Joseph M. Axelrod, Marie L. Lindbergh, and Esper S. Larsen, 3d.

Attention is called to a new German journal of mineralogy and the revival of an old one. The new one is *Heidelberger Beiträge zur Mineralogie und Petrographie*. O. H. Erdmannsdorffer, Univ. Heidelberg, is editor and Springer-Verlag of Heidelberg, publisher. Vol. 1, No. 1, is dated Nov., 1947, and its price is given as RM 14.60. The revival is *Tschermak's mineralogische und petrographische Mitteilungen*. Vol. 1, No. 1 of Ser. 3 is dated June, 1948. The editors are F. Machatschki and H. Leitmeier, Univ. Vienna. No price is given. Published by Springer-Verlag, Wien I, Molkerbastei 5.

In the first issue of the new *Tschermak's Mitt.*, the deaths are reported of:

Max Haitinger, Vienna, died Feb. 19, 1946.

Emil Dittler, Mineralog. Inst., Univ. Vienna, died Nov. 9, 1945.

A comprehensive 20-page authors, name, and subject index of the first 73 issues of *Industrial Diamond Review*, 1940-1946 (vols. 1-6) has been prepared and is for sale at 3/- each. Address: N. A. G. Press, Ltd., 226 Latymer Court, Hammersmith, London, W. 1.

James G. Manchester, a summer resident of Hampton Bays, Long Island, New York, and Past President of the New York Mineralogical Club, died July 28, 1948, at the age of 76. His publications include a very attractive book on *The Minerals of New York City and*

Its Environs (Bulletin of the New York Mineralogical Club, vol. 3, No. 1, 1931), a booklet on The Minerals of the Erie Cut, Bergen Hill, New Jersey, and a number of papers.

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Dr. A. Lacroix of the Museum d'Histoire Naturelle, Paris, France, a Correspondent of The Mineralogical Society, died March 16, 1948.

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The Department of Geology and Geography of the University of Tennessee is sponsoring a symposium on the mineral resources of the Southeast. Sessions will be held on the campus at Knoxville, on March 3, 4, and 5. Papers on the major metallic and non-metallic mineral products of the Southeast will be presented by invited speakers.

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Professional Paper 180, The minerals of Franklin and Sterling Hill, Sussex County, New Jersey, by Charles Palache has been reprinted and is for sale by the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Price 75 cents.

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Alexander N. Winchell has accepted an appointment as visiting professor in the School of Geology of the University of Virginia for the present school year. He will continue to do some consulting work. His address until next June will be University Station, Charlottesville, Virginia.

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Bulletin 95 of the U. S. Department of the Interior, Bureau of Mines, A Glossary of the Mining and Mineral Industry, by Albert H. Fay, has been reprinted from the 1920 edition without change and can now be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., for \$1.75. The book lists many mineralogical and petrological names and terms.

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The fourth Annual Spring Meeting of the Crystallographic Society of America will be held at University of Michigan, Ann Arbor, Michigan, April 7, 8, 9, 1949. Rooms and meals will be available at the Michigan Union which will handle reservations. The closing date for titles of papers to be presented at this meeting is January 15 and for abstracts March 1, and should be sent to Dr. Howard T. Evans, Jr., Laboratory for Insulation Research, Massachusetts Institute of Technology, Cambridge 39, Mass. At least one of the sessions will be devoted to a symposium on some special topic of general crystallographic interest.

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