

brachydomes, while Fig. 2 illustrates the equal development of the prisms and the macrodomes. The following forms were observed: C(001), B(010), M(110), N(310), L(120), H(021), K(052), D(101), E(111), and F(221). There were also a few small imperfectly developed faces which gave no distinct signal. The computed axial ratio was, $a : b : c = 0.7808 : 1 : 1.1645$.

	OBSERVED READINGS	CALCULATED VALUES
B:M (010):(110)	52° 1'	X
C:D (001):(101)	56°10'	X
B:N (010):(310)	75°20'	75°24'
B:L (010):(120)	31°48'	32°38'
C:E (001):(111)	27°32'	27°52'
C:K (001):(052)	67° 4'	66°46'
C:H (001):(021)	71° 8'	71° 2'
E:F (111):(221)	18°45'	18°43'

Complete optical orientation with reference to the crystallographic axes was not possible but upon a number of crushed crystal fragments the emergence of an optic axis could be observed. The substance is optically negative and the large number of rings gave evidence of its extremely high double refraction. Parallel extinction was also noted so the crystals undoubtedly belong to the orthorhombic system. Crystals kept in a desiccator containing calcium chloride for one week became coated with a fine white powder of the oxybromide. When this powder was removed good etch figures were observed upon the prisms and macrodomes showing the presence of planes of symmetry parallel to the brachy- and basal pinacoids, but no etch figures were observed which indicated the presence of a plane of symmetry parallel to the macropinacoid. The substance probably belongs to the bipyramidal class. Immersed in methylene iodide the fragments stood out in good relief indicating that the indices of refraction were considerably higher than that of the liquid (1.74). An unusually good cleavage was observed parallel to the brachypinacoid.

NOTES AND NEWS

Mr. William F. Foshag, who has been taking post graduate work at the University of California, has returned to the U. S. National Museum. We hope soon to be able to publish accounts of some of his visits to western mineral localities.

Mr. Samuel G. Gordon of the Philadelphia Academy of Natural Science has recently spent some time collecting rare-earth minerals around Spruce Pine, North Carolina.

We regret to note the death of Sir William P. Beale, former president of the Mineralogical Society (Great Britain) and of Professor Hjalmar Sjögren, the eminent Swedish Mineralogist.

The list of appointments to science research scholarships (overseas) made by the British Commissioners includes the name of Miss M. Bentivoglio, who has received a scholarship in crystallography.

At the sixty-third annual commencement of Cooper Union, Brooklyn, New York, the degree of Chemical Engineer was conferred upon Wallace Goold Levison, a member of the night class of 1865.

The following National Research Council Fellowships along mineralogical lines have been awarded: Correlation of some optical and electrical properties of crystals, Joseph Valasek, University of Minnesota; and Factors influencing the intensity of reflection of X-rays from crystals, R. G. Dickinson, California Institute of Technology.

We are pleased to note that a well-known English mineralogist, Mr. A. Hutchinson, of Cambridge University, has been honored by being elected a Fellow of the Royal Society.

M. Pruvost has been appointed to the newly established chair of geology and mineralogy at the University of Lille.

BOOK REVIEW

PETROGRAPHY AND MINERALOGY OF THE LIMESTONE DEPOSITS OF PARAINEN (PARGAS). (*Bull.* 54). AARNE LAITAKARI. 114 pages. *Commission geologique de Finlande*, Helsingfors. (1921).

This pamphlet presents an interesting account of a famous Finnish mineral locality. The region is underlain by igneous rocks, granite, migmatite—a mixture of granite with more or less of the invaded schist—pegmatite, in part with assimilated limestone, and diabase; and metamorphic rocks, comprising the gneiss of the migmatite, limestone, quartz or wollastonite-bearing limestone, calcareous gneiss, amphibolite, and grossularite-diopside rock. The minerals present include: graphite, in most of the limestone quarries; galenite, rare; pyrrhotite, general; chalcopyrite, rare; pyrite, unknown in the main limestone body, but in one small mass being present instead of pyrrhotite; loellingite, in small grains with scapolite in the Ersby quarry; arsenopyrite, occasional; fluorite, widespread, of intense purple color; a quartz; ilmenite, rare; spinel, of 2 kinds, dark, with sp. gr. = 3.841, and n_D 1.727, containing Ti, and light, with sp. gr. 3.682 and n_D 1.718; calcite, rarely crystallized; dolomite, occasional; microcline, abundant in pegmatite,