NOTES AND NEWS

MICRO-CRYSTALS OF BARITE FROM BARSTOW, CALIFORNIA

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Recently the writer had occasion to make a lithologic study of several rock specimens from a well known vertebrate fossil locality in the Miocene-Pliocene deposits near Barstow, California. One specimen, a fairly well indurated clay, is traversed by numerous tiny slip-faults with displacements of fractions of an inch. Barite occurs along the fault surfaces. It was separated with the heavy minerals of the sediment by gravity separation. A large heavy mineral residual was obtained consisting of about 95% barite. The greater proportion of the barite occurs as sharply defined, transparent, micro-crystals. The crystals average about 0.1 mm. in length. A few

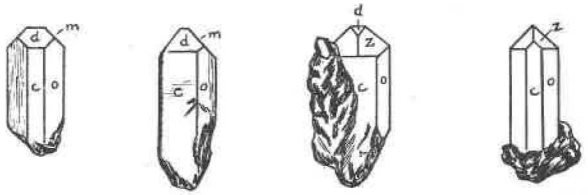

Fig. 1

are doubly terminated, although ordinarily only one end of the crystal is developed. The mineral was identified optically and checked by qualitative chemical tests. The indices of refraction agree within experimental limits with the figures given by Larsen for barite. The mineral is biaxial positive with $2V$ about 38°. The dispersion is weak ($\rho < \upsilon$). A comparison of the crystals sketched in fig. 1 with similar ones figured in Dana indicates that the forms present are: (001), (110), (011), (102), and (111). The crystals are authigenous and seem to have been precipitated along the fault sufaces by percolating water. The occurrence of such perfect, minute crystals in abundance in a sediment is of interest.

PRELIMINARY NOTE ON ASHTONITE

EUGENE POITEVIN,[1] *Ottawa, Canada*

The writer takes this opportunity to announce discovery of a new mineral related to the ptilolite group, to which he has given the name, ashtonite, in honour of the Honourable Wesley Ashton Gordon, Minister of Mines for Canada.

Small radiating masses of the new mineral were found in basalt five miles from Penticton, British Columbia. The mineral varies from colourless to white, lilac or brick red. It presents no crystal forms, but shows cleavage angles of 83° and 90°. It is biaxial with a large axial angle and optically positive, $\alpha = 1.481$, $\beta = 1.482$ and $\gamma = 1.486$, ± 0.001.

[1] Published with the permission of the Director, Geological Survey, Department of Mines, Ottawa, Canada.

A chemical analysis of the mineral yielded, SiO_2 63.30, Al_2O_3 11.74, Fe_2O_3 0.50, CaO 9.54, MgO 0.39, Na_2O 3.28, K_2O 0.42, BaO 0.21, H_2O 10.42; Total 99.80. This analysis yields the simple formula $9SiO_2 \cdot Al_2O_3 \cdot 2RO \cdot 5H_2O$, which differs from that of the ptilolite group by having 2RO instead of 1RO.

A fuller account of the mineral will appear in a forthcoming Museum Bulletin of the National Museum of Canada.

Watson's Microscope Record (London: 24, September 1931, page 22) carries a note on the Double Refraction of Cellophane. Sheets of this substance behave like a single crystal. They are uniform in optical character, show the same polarization color over a sheet, and definite orientation of the principal optic axes. Pieces can therefore be used in much the same way as mica and selenite plates. Cellophane has the same composition as artificial viscose silk.

The National Research Council has announced a new Committee on Accessory Minerals of Crystalline Rocks to study the nature of such minerals, their variation in time and space in igneous bodies and metamorphosed masses and their distribution in sediments. Such studies in the past have shown that some igneous masses have rather characteristic accessory minerals which may be useful in some cases in determining the relationships between isolated outcrops, but very little is known regarding the differences in different parts of a single intrusion or in successive intrusions from a single magmatic source. The committee will attempt to correlate work now in progress and stimulate further study along these lines. At present the committee consists of E. S. Larsen of Harvard, J. C. Reed of the U. S. Geological Survey, J. E. Stark of Northwesten, A. C. Tester of Iowa, A. N. Winchell of Wisconsin (chairman), and J. F. Wright of the Canadian Geological Survey.

PROCEEDINGS OF SOCIETIES

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences of Philadelphia, November 5, 1931

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the president, Dr. Cajori, in the chair. Forty-two members and twenty-eight visitors were present.

Mr. William T. Clay spoke on "Some Mining Camps of Colorado," descriptive of a trip taken during the summer, and visits made to various mines in company with Dr. Florian Cajori, and Mr. Lazard Cahn. Geologic details were presented, introductory to an account of the present state of activity at the various mines. Many mineral specimens and ores were exhibited.

Mr. Knabe exhibited a garnet, measuring three inches across, from the Mermaid quarry at Mt. Airy. Mr. Hoadley reported little success on a visit to the quarries near Portland, Conn., all but Strickland's quarry now being idle.

Mr. Edmund Cienkowski presented a brief report on a trip with Mr. Bernheimer to localities in England, France, Germany, and Switzerland. Fine specimens were exhibited from Cornwall, Cumberland, and Durham.

W. H. FLACK, *Secretary*