NOTES AND NEWS

BERTRANDITE AND EPISTILBITE FROM BEDFORD, NEW YORK

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Bertrandite, one of the rarer beryllium minerals and found at but few American localities, is always of interest. Several specimens were collected in May 1935, at Baylis Quarry, Bedford, N. Y., by Mr. James G. Manchester of Scarsdale, who submitted two of them to the American Museum of Natural History for identification, and announced the discovery at the January meeting of the New York Mineralogical Club. The specimens were collected from a pile of beryl fragments near the entrance to the quarry, which were taken out during recent widening operations.

The specimens examined are similar in appearance, with a matrix composed of a greenish-yellow beryl, upon the surfaces of which are the crystals of the two minerals. The beryl is not strongly etched and in this respect the occurrence differs greatly from that of Pisek, Bohemia, where only shreds of the former beryl crystals remain, with the bertrandite occupying the solution cavities. The surfaces which are now coated with the secondary crystals appear to be old interference faces of the beryl, but the etching has been sufficient to give them a lustrous finish. Directly in contact with the beryl is a layer of minute colorless crystals of bertrandite, and covering these, almost completely on one of the specimens, are subparallel bundles of yellowish to white crystals, 3 or 4 mm. long.

The bundles resemble stilbite in appearance, but the individuals are somewhat more platy and less equidimensional than is usual with that mineral. Optical tests showed the mineral to be epistilbite, with indices slightly higher than those of stilbite, but agreeing very well with those of the former mineral. Radiating clusters of stilbite needles have also been found at Bedford recently. The epistilbite bundles must be later than the bertrandite, for they cover the smaller crystals. The specimen on which the epistilbite crust is nearly continuous shows the minute plates of bertrandite in but two places, where they are revealed in gaps between the bundles. Apparently, however, bertrandite actually covers the surface beneath the later mineral.

The bertrandite layer is composed of extremely small crystals, none over 0.5 mm. long. While the crystals themselves are colorless, the crust is slightly brownish from a limonitic coating over some of the crystals. The crystals are tabular, dominated by $b(010)$ and slightly elongated in the direction of the a-axis. The unit prism and the three pinacoids were

the only forms observed. The optical properties agree perfectly with those accepted for bertrandite.

The occurrence of bertrandite and zeolites in any pegmatite is interesting from the standpoint of paragenesis and mineral sequence. Bertrandite never seems to form through ordinary weathering processes, but to be invariably the product of an hydrothermal attack upon beryl as that mineral becomes unstable in the environment of the later solutions. It has not been described as resulting from the alteration of any other beryllium mineral; beryl seems to be the sole parent mineral. Its occurrence, then, is a good indication of a complex pegmatite and a continued hydrothermal activity.

Consequently, with the addition of these minerals to the already long list of Bedford species, we may consider the deposit another of the pegmatite occurrences in which the entire sequence of mineralization, from late magmatic stages to the zeolite-forming phase, is revealed. With an intermediate period in which the bertrandite was formed before the zeolites began to crystallize, we can visualize a more or less continuous process of mineral formation and alteration.

URANINITE FROM HOTTAH LAKE

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Through the courtesy of Dr. A. C. Lane, a two kilogram sample of pitchblende from the Hottah Lake deposit was obtained from the Canadian Bureau of Mines.

The sample received had been crushed and coarsely ground. The mineral was subjected to a complete analysis, the results of which are given in the following table:

U_3O_8	51.45%
Fe_2O_3	41.51
Pb	2.31
SiO_2	2.75
Al_2O_3	1.12
CaO	1.01
MgO	Trace
Mn	Present
S	0.14
CO_2	0.42
Total	100.71

Chemical and electroscopic tests failed to show any thorium; this absence has also been substantiated by other reports.

The lead and uranium were determined in a very careful manner. The results of these determinations gave a lead-uranium ratio of 0.0529,