

*Note on a specimen of white beryl from Beam mine,  
St. Austell, Cornwall.*<sup>1</sup>

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THE specimen, which is in two pieces cemented together, was purchased for the Museum of Practical Geology in February, 1888, from Mr. F. H. Butler, and bears the Museum's original Mineral Inventory label (M.I. 5714) on each portion. The inventory description is "Tinstone, well crystallised, coating granite, Beam mine, Cornwall". The exhibition label mentions quartz, and the presence of beryl had no doubt been overlooked through the general resemblance to milky quartz, which is not uncommon on some Beam mine material. Actually it was noticed during the rearrangement of the collection in 1934 that the cassiterite is accompanied by large, dull white crystals which proved to be beryl. In view of the rarity of beryl in Cornwall a brief description may be of interest.

A block of granite forms the back of the specimen: it is about  $6\frac{1}{2}$  inches across, rich in quartz, with scattered crystals of sericitized feldspar up to  $\frac{1}{2}$  inch in length, and closely resembles the altered wall-rock seen in other specimens from the Beam mine. One side has been the face of an open fissure, and is coated with cassiterite and tourmaline in the manner typical of this well-known locality.

The cassiterite crystals are black, about  $\frac{1}{2}$  inch across, bounded by very short prism faces *m* with pyramids *s* and *e* (striated), and very small *a* faces. The crystals are twinned on *e*, resembling those from Zinnwald (Dana, System, 6th ed., 1892, p. 234, fig. 4). Among the cassiterite, and apparently deposited both earlier and later, are shafts and felted aggregates of black tourmaline, refractive index  $\omega$  1.66, particoloured brown and blue in crushed grains.

About twenty-five white crystals of beryl are implanted more or less parallel with the surface of the fissure. They enclose shafts of tourmaline, and are closely surrounded by cassiterite or occasionally by felted tourmaline, but their hexagonal outlines against the latter two minerals

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indicate that they are the earlier. The largest crystal is over 1 inch in length and  $\frac{1}{2}$  inch in diameter. They are translucent and are bounded by a hexagonal prism and base, but the faces are more or less deeply corroded. Crushed fragments are transparent, but contain numerous microscopic hexagonal negative crystals with steep terminations and filled with liquid, usually accompanied by a gas-bubble. Refractive index (by immersion) 1.57, cleavage indistinct, birefringence moderate, optically uniaxial and negative, scratches quartz.

This appears to be the only record of beryl from the Beam mine; the large number of crystals and their even distribution over the surface would suggest that more material from the same fissure may have been preserved. Unfortunately the crystals are corroded, but in size and quantity they afford an interesting addition to the very few records of beryl from Cornwall.

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