

A YELLOW TIN-SPAR FROM IRELAND

K.F.G. HOSKING, IB Penlu, Tuckingmill, Cornwall TR14 8NL, England

As I am concerned with the search for and exploitation of mineral deposits, particularly tin deposits, the identification of mineral species in which tin is an essential component is of considerable interest and importance to me.

Now and in the past, tin species have been mistaken for non-tin species, and minerals which are not tin-bearing have been thought to be tin minerals. Doubtless before malayaite ($\text{CaO} \cdot \text{SnO}_2 \cdot \text{SiO}_2$) had been described and its properties had been established, it was, perhaps frequently, identified as powellite (CaMoO_4) which also occurs in skarns and displays a yellow fluorescence similar to that of malayaite, under short-wave ultraviolet light. Varlamoffite (essentially stannic oxide) is still identified, on occasion, in the field, as limonite, because of the similar appearance of the two substances. A panned concentrate of fine zircon crystals can quite closely resemble a concentrate of small cassiterite grains. Because the Chinese miner is aware of this he long ago hit upon a simple test of differentiating between the two. This simple consists of heating the concentrate in a shallow metal dish over the flame of a paraffin or similar lamp when the zircon, unlike the cassiterite becomes colourless and transparent. This leads me to the reason for writing this note and that is that recently I came upon a brief account of a mineral which, beyond any doubt, was erroneously believed to be a tin species. The account occurs on page 307 of 'Museum Regalis Societatis' or a Catalogue and Description of the natural and artificial Rarities belonging to the Royal Society and preserved at Gresham College. Made by Nehemiah Grew, London. Printed by W. Rawlins, for the author, 1681. The account (or entry) reads "A yellow tin-spar from Ireland. Given by Sir. Rob. Moray. The several crystals are angular, pointed and soft; semiperspicuous like brown Sugar-Candy. Dissoluble with acids."

The species in question is surely a carbonate, possibly siderite. No tin-bearing carbonate minerals are known. I wonder what persuaded the collector that his Irish specimen was tin-bearing? Perhaps it was the fact that its colour was not unlike that of some cassiterite.

Manuscript received 23 February 1982