

Cassiterite of the Straits Settlements.

By J. H. HAMPTON.

[Read October 26th, 1886.]

THE tin from the Straits Settlements has hitherto been solely derived from the alluvial deposits, and is consequently in the form of alluvial or "stream" tin—each grain of Cassiterite being separate, and in many cases so considerably water-worn as to afford evidence of its having been washed down for a considerable distance; the angles of the grains having given place to smooth surfaces during their deposition.

The largest grains occur on the tops of some of the hills, with a diminution in size noticeable with distance from the hills.

The mineral is contained in beds of pebble-shaped quartz and granite, which denote the Cassiterite-producing "Wash"; these vary in thickness from a few inches to several feet, and contain from $\frac{1}{2}$ to 30 per cent. of the mineral. The wash rests on a bed of kaolin, or on the bed rock, which is granite, syenite, or limestone, the crevices in which are often found to hold a high percentage of the mineral. More Tourmaline is noticeable in these deposits than I have seen in Cornwall or Tasmania, and as other impurities are rare, the Cassiterite is easily separated from minerals of less specific gravity and prepared for smelting. Pyrites is occasionally found, but its existence is an exception to the rule.

Cassiterite has a wide range in the Malay Peninsula, and is visible in some places on the surface of the ground and at depths ranging to sixty feet.

White Cassiterite is of frequent occurrence, and occasionally I have seen specimens of "ruby ore," and imperfect crystals with one or two planes uninjured; these appear to have become fractured at some remote period, as in most cases the fractures are water-worn.

Individual specimens of the mineral are found which suggest the possibility of its being traced to its original matrix.