X.—*Notes on Cornish Mineral Localities.*

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THE following brief notes may be of some interest to students of Cornish Mineralogy.

1st.—New Localities.

Scheelite.—This occurs as a partial replacement of Wolfram at East Pool Mine, where it was first noticed by Mr. Cornelius Beringer, of Redruth, an Associate Member of this Society. Hitherto it has only been found at Pengelly Croft, Huel Mandlin, and Levant Mine, in Cornwall,* and at Huel Friendship, in Devon.

Montmorillonite.—This member of the chloropal group of minerals† has recently been found at Great Retallack Mine, in Perranzabuloe, Cornwall. It is associated with decomposing pyrites, but on careful separation yields the following results on analysis.

Silica	47·9
Peroxide of iron	1·2
Alumina	27·1
Water	23·0
Potash and loss	·8
	100·0

This agrees very closely indeed with the formula $Al_2 H_6 O_6$, $3SiO_2 + 2H_2O$, occupying the aluminous end of the same series in which chloropal occupies the ferruginous end.

No doubt this Montmorillonite is a secondary product, and therefore of little interest to mineralogists who care for nothing but crystallography, but it is interesting to chemical mineralogists as illustrating the constant tendency of the operations in nature's laboratory to produce definite chemical compounds rather than mere mixtures.

Millerite.—This I have recently found in a vein traversing black silurian schist at Gerrans Bay, in Cornwall, in a cavity lined with pale

* See Handbook, to the Mineralogy of Cornwall and Devon, part 2, p. 90; and Min. Mag., 1877, p. 74.

† Min. Mag., 1877, p. 70.

pink calcite. Only one such cavity could be found, which yielded the specimen now laid on the table and two others; one of which has been deposited in the Museum of the Royal Institutien of Cornwall, at Truro. The crystals are well formed and some are peculiarly twisted like a screw. Millerite has only previously occurred at Huel Chance and Fowey Consols, in Cornwall, and at Combemartin and Ilfracombe, in Devon.

2nd.—REMARKS ON DISTRIBUTION.

I have recently made a somewhat careful investigation into the occurrence of various minerals which occur in the Hensbarrow granite area and in the neighbouring killas within about 2 miles of the boundary. The tracts of country referred to are, roughly speaking, each about 50 square miles in area, and each have been pretty much opened up by mining and other operations. The same dislocations pass through both. In the accompanying lists all the minerals hitherto found are mentioned. A comparison leads to the following brief summary.

15 Minerals (species or well-marked varieties) have occurred in the granite only. (19 p.c.)*

44 Minerals occur in the killas only. (53 p.c.)†

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* Minerals occurring in the Granite only.

Albite ?	Fluellite	Stannite
Autunite ?	Gilbertite	Tavistockite
Apatite	Lepidolite	Topaz
Gramenite	Lepidomelane	Achroite
Chrysocolla	Muscovite	Wolfram

Of these, Autunite, Apatite, Chrysocolla, Stannite, Muscovite, Topaz, and Wolfram occur in the killas of other parts of Cornwall.

† Minerals occurring in the Killas only.

Actinolite	Childrenite	Millerite
Annabergite	Cobaltite	Mispickel
Francolite	Covellite	Niccolite
Axinite	Cronstedtite	Opal
Barytes ?	Cuprite	Pinite
Bismuth	Dolomite	Pitchblende
Bismuth Ochre	Erythrite	Pyrolusite
Bismuthinite	Epidote	Pyrrhotite
Blende	Fahlerz	Rutile
Calamine	Garnet	Scheelite
Calcite	Hornblende	Schorl
Chalybite	Liroconite	Scorodite
Chalcedony	Marcasite	Silver
Chalcopyrite	Magnetite	Smaltite
Chalcotrichite	Melanterite	

25 Minerals occur in both granite and killas. (28 p.c.)*

These figures shew that the adjacent slates contain nearly the same minerals as the granite, together with notable quantities of the ores of copper, zinc, cobalt, nickel, and bismuth. They also contain magnetite, chlorite, garnet, axinite, actinolite, and hornblende, which do not occur in the granite. Arseniates and carbonates are almost, if not entirely, absent from the granite, but of tolerably frequent occurrence in the slate. On the other hand, lepidolite and lepidomelane have only occurred in the granite; tourmaline especially characterises the granite and the slate immediately on the junction.

The pseudomorphs found in the granite or granitic dykes (elvans) are the following—

Quartz	after	Felspar	Rock Hill.
Schorl	,,	,,	Terras.
Cassiterite	,,	,,	,,
Chlorite	,,	,,	Carclaze.
Hematite	,,	Chalybite	Ruby Mine.
Gilbertite	,,	Orthoclase	Goonbarrow Mine.
Kaolin	,,	,,	Everywhere.

The following pseudomorphs have been noticed in mineral veins in the killas.—

Chalcopyrite	after	Fahlerz	Crinnis.
Chalybite	,,	Fluor	Fowey Consols.
Göthite	,,	Pyrites	Restormel.
Limonite	,,	Hematite	Restormel.
Pyrites	,,	Chalybite	Restormel.
Quartz	,,	Fluor	Crinnis.

It will be interesting to compare these details and generalizations with similar ones from other similarly related districts.

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* Minerals occurring in both Granite and Killas.

Amethyst	Jasper	Pyrites
Cassiterite	Kaolin (in slate only close to elvans)	Quartz
Do. Wood Tin		,, (milk)
Chalcocite	Limonite	,, False Topaz
Chlorite ?	Melaconite	,, Rock Crystal
Fluor	Orthoclase	,, Ferruginous quartz
Galena ?	Olivenite	Schorl
Gold (only in gravels)	Pharmacosiderite	Wolfram
Hematite	Psilomelane	