III.—*Notes on New Minerals and Mineral Localities in Cornwall and Devon.*

By C. Le Neve Foster, B.A., D.Sc.

IN looking over some specimens of chalkosiderite in the possession of Capt. Simmonds, of Liskeard, I noticed a bluish green mineral which was different from the rest, and subsequently on calling the attention of Capt. Hosking of West Phœnix to the mineral I obtained several pieces from him. I tested it before the blowpipe with following results :—

Henwoodite.

Colour. Turquoise blue.
Streak. White with bluish green tinge.
Matrass. Turns brown, gives H_2O, slight decrepitation.
Pt. forceps. Colours flame green ; does not fuse.
C. alone. Does not fuse.
Borax. O.F. green, hot ; blue, cold.
,, R.F. on C. Cu reduced.
Carb. soda on C. ; obtained metallic Cu.
Berzelius' test for P_2O_5. Boric acid bead and Fe on C. obtained round globule of phosphide of iron.
Dissolved in H_2SO_4 added ammonia, blue solution and white flocculent ppte (Al_2O_3).

Filtered, added oxalate of potassium, decided turbidity (Ca O). The mineral is therefore a hydrated phosphate of alumina and copper, with a little lime. Since this examination its composition has been determined by Mr. Collins, who has named it Henwoodite.

Pyrophyllite.

The specimen now exhibited was given to me by the Capt. of the dressing floors at Brookwood mine some months ago ; he assured me that it was obtained from the mine. As far as I am aware this is the first time it has been found in England.

The mineral agrees perfectly with the descriptions I can obtain of Pyrophyllite. The Brookwood mineral has a radiated lamellar structure.

Colour, white; pearly lustre on foliæ. Thin laminæ, flexible but not elastic.

Matrass gives water, and exfoliates.

Pt. forceps. Exfoliates in the most perfect manner, the laminæ separate from one another and open out like a fan.

Nit. of Cobalt gives a very decided blue.

ENYSITE.

The specimens on the table were obtained from St. Agnes. I found the mineral in one of the caves at the old quay, where it occurs in the form of a bluish green stalagmitic crust, an eighth of an inch thick, and even more.

The water from which the stalagmite was deposited has percolated through the ground on which copper ore used to be stocked previous to shipment.

Matrass gives much water, and on strongly heating a white sublimate near the assay.

Powder heated on C. becomes grey, tried with Nit. Cobalt, *blue.*

On C. alone. Colours flame green and a little blue, turns brown and becomes white at the edges; with cobalt, *blue* at edges.

Pt. forceps colours flame green and a little blue, turns brown, white at edge with strong heat, does not fuse.

Borax bead O.F. Green, *hot;* blue, *cold.*

Mic. salt, O.F. Gives a skeleton of Si O_2 if a fair sized piece is taken; but this disappears entirely after continued heating. Colours as with borax.

On C. with carb. soda gives metallic copper and the mass put upon Ag. with H_2O gives a black spot.

Ammonia throws down Al_2O_3, and the solution becomes blue.

In H Cl. dissolves with effervescence. If concentrated acid is used flocculent silica separates, and after evaporating the greater part of the acid you obtain decided gelatinous silica.

It appears that the mineral is a hydrated compound of alumina and copper, with some sulphates, carbonates, and chlorides.

Mr. Collins has since analysed the mineral and called it Enysite.

The solubility of the Si O_2 in microcosmic salt is peculiar, and when I first tried the reactions with the powdered mineral the presence

of SiO_2 escaped me entirely. Mr. Collins, however, obtained silica in a qualitative wet analysis, and I then tried whether the mineral would gelatinize with HCl., which it did perfectly.

ACTINOLITE AND GARNETS, (S. TERRAS.)

Good specimens of dark green actinolite are found, with green garnets, at South Terras iron mine, near Grampound Road. The iron ore, as might be supposed from the accompanying minerals, is magnetite, as it occurs in masses in connection with an elvan.

I heard of a mineral resembling rutile being found at the mine, but could not obtain a specimen.

ACTINOLITE, GARNET, AND AXINITE, (SOUTH BRENT.)

These minerals occur about ½ mile NE. of South Brent church, in what is marked on the Geological Survey Map as a mass of greenstone. A pit in a field west of the road from South Brent station to Dean furnishes splendid specimens of actinolite, some of the crystals being 3 in. long.