

XV.—*Note on the Minerals of the Island of Cyprus.*

By J. H. COLLINS, F.G.S.

I HAVE lately had the opportunity of conversing with one of our members, Mr. Jos. Jewell, who has been making an inspection of some parts of the island of Cyprus for mining purposes, and having been called upon by other parties to report on a number of mineral specimens brought from that island, I have thought that a short note on the subject might be of some interest to the members generally.

So much has been said of the mineral riches of the island, that I was astonished at the comparative poverty of the specimens brought home, and also at the very small number of mineral species which the island has so far yielded. It is indeed evident that large quantities of ores have been worked in the island in former times as is shewn by the extent of some of the excavations and by the immense heaps of slag described by M. Albert Gaudry, but no rich deposits seem to be in existence now, so far as is yet known. With regard to the excavations at one of the principal localities, that of Bellahousa, Mr. Jos. Jewell reports as follows:—

The mountain in which the copper-ore is found consists of more or less decomposed limestone intermixed with layers of red and yellow ochre, and containing several bands of porphyry and small veins of iron pyrites.

The mines are approached by a deep and narrow valley which runs up direct from the sea-shore. In No. 1 mine on the south side of the valley two levels are driven into the mountains for distances of 3 and 15 fathoms respectively. These open into large chambers which have been excavated in a mixed "conglomerate" of black earthy matter containing masses of limestone, blue and green carbonate of copper, and sulphate of iron, together with layers of sand and pebbles. No. 2 mine is also entered by a short level, and consists of chambers excavated in a similar black earthy mass. Some of these chambers are 80 feet long, 60 feet wide, and 20 feet high. These "conglomerates" contain from 2 to 3 per cent of copper, but of course the parts worked away may have been much richer.

The limestone hills on the north side of the valley contain a large quantity of red and yellow ochre containing from $1\frac{1}{2}$ to 3 per cent. of copper, together with some particles of blende. By sinking pits in this mass some small lumps of carbonates of copper were found, yielding from 12 to 14 per cent of copper.

Somewhat further up the valley is a mine which has been worked in a mass of iron pyrites containing a small proportion of copper. In the same mountains, at some little distance, is a large deposit of black oxide of manganese.

It is difficult to see how such poor ores could be worked by the ancient miners of Cyprus, unless an abundance of fuel were obtainable. Had there been forests no doubt such free smelting ores might have been worked to considerable advantage. It is clear, however, that such ores will not pay for smelting now by the Welsh process, and not being pyritous ores they will not be adapted for the Hollway process unless they are worked in connexion with the large deposit of pyritous material above referred to.

The following list gives the names of all the mineral species of the island which have been observed up to the present time, so far as is known to the writer:—

List of Minerals found in Cyprus.

Serpentine.	Mount Troödos,	Malachite.
Saussurite	} in Gabbro, ,,	Chessylite.
Diallage		Chalcopyrite.
Hematite.	Lesso. Lithrodonta, Hai	Gypsum.
	Héracliti, Stavio Vormi, &c.,	Chrysocolla.
	(Specular Iron.)	Allophane.
Limonite.	Many localities, G.	Cyanosite.
Pyrites.	Dginhoussa and many other	Melaconite.
	places.	Titaniferous Iron Ore.
Melanterite.	Dginhoussa.	Galena.
Peroxide of Manganese.	Visatchia,	Blende.
	and Acoutzo, G.	Calamine.
Jasper.		Analcime (Cyprian diamonds).
Rock Crystal		