

IV.—*Some Notes from an Old Catalogue of Minerals.*

BY A. H. CHURCH, M.A.

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A MS. Catalogue of Minerals by the Comte de Bournon has lately come into my possession. From internal evidence the date of the volume may be fixed at 1811—three years after the publication of the Count's *Traité de Minéralogie*. The collection of minerals described in this catalogue was made for the Government of Brazil; if the collection still exists, a careful comparison of some of the specimens in it with their descriptions in the catalogue would clear up some obscure points and lead to useful results. Without this aid to a clear understanding of Bournon's descriptions, many interesting facts may be gathered from the manuscript in question. It is, however, a voluminous work extending over 356 pages, and illustrated with a large number of careful drawings of crystalline forms. The author was a very laborious compiler of catalogues. One of these, known to the present writer, is still in existence in the Town Hall of Devonport, along with the magnificent collection of minerals (the St. Aubyn collection) to which it refers. A few notes on the Brazilian catalogue may not be without interest.

Bournon wrote several papers on Cornish minerals, which were published in the *Philosophical Transactions*. He clearly discriminated between the several arseniates of copper. In speaking of the species now known as liroconite, he is careful to describe its association with cuprite, copper pyrites, metallic copper, &c.; also its variations of colour between a fine blue and a "beau vert-dragon." His second species is "cuivre arseniaté lamelliforme," the chalcophyllite of recent authors. In one specimen of this arseniate he describes its association with pharmocoserite. Next in order comes olivenite, the fibrous and octahedral forms of which Bournon rightly considered as belonging to one species. But he makes a distinction between some forms of the fibrous arseniate and others. Some, he says, contain more water than olivenite; to these

he gives the name "cuivre hydro-arsenate," including under this term the mamillated wood-copper. Recent analyses show no higher proportions of water in this so-called species of Bournon: thus the *doubt* about its distinctness which the Count expressed in a note in the MS. before us is confirmed. Under the name of "Cuivre et Fer arseniaté," Bournon describes a pale blue mineral of great rarity, accompanied by olivenite, mispickel, pharmacosiderite, &c. We feel that its identification with any recognised species of arseniate is uncertain.*

One of the richest sections of the Brazilian collection was that of the different varieties of spinel: it included no less than 874 specimens. Inserted in the catalogue are 32 figures illustrating modified and twinned crystals of this species. Some of the forms illustrated are by no means common; a few do not appear to have been recorded. Figs. 1 to 4, Plate 2, reproduce a few of these forms which are not given by either Brooke and Miller or Dana.

The specimens of corundum illustrated in the catalogue must have been very important and interesting, if one may judge from the 23 figures introduced into the text. At the end of the description of this mineral species is a good account of the phenomenon of chatoyancy as exhibited in the cats-eye variety of corundum; this account is accompanied by an explanatory diagram.

A thorough examination of this Brazilian Catalogue should be made, meanwhile the indications of its contents above given may provoke some inquiry as to the present *locale* of the collection to which it refers.

* May not this be the Scorodite which was afterwards called Martial Arseniate of Copper by Phillips? J.H.C.