

feared that ancient systems of drainage have dissolved out these deposits, if they ever existed. But the matter can be settled only by proper boring explorations, similar to those which disclosed the valuable salt beds of Goderich, Ontario.

The late Dr. How made, some years ago, an interesting discovery of compounds of borax in the gypsum and anhydrite of Windsor.

These minerals occur in crystals and nodules up to two inches in diameter and in some cases form a considerable percentage of the rock. The nodules are sometimes pearly white, compact, and hard; in other specimens they are made up of acicular tufts of prismatic crystals, colourless and transparent.

The following table shows the composition of these interesting minerals, and also of another discovered by the same gentleman. The latter appears to have been produced by alteration of the ulexite by selenite, as it occurs partly and completely replaced by the selenite, retaining the same nodular form :—

Component Parts.	Natroboro Calcite. Ulexite (Dana).	Cryptomorphite.	Silicoboro Calcite. Howlite (Dana).	Wentworthite.
Water ... ..	34.49	19.72	11.84	18.00
Lime ... ..	14.20	15.50	28.69	31.14
Sulphuric acid ... ..	...	...	...	31.51
Silicic " ... ..	...	...	15.25	4.98
Boracic " ... ..	44.10	59.10	42.22	14.37
Soda ... ..	14.20	5.68	...	...
	<u>106.99</u>	<u>100.00</u>	<u>98.00</u>	<u>100.00</u>

The ulexite is a very pure form of the Peruvian boratetiza, which the writer believes is found only in these two countries. It has been largely exported from Peru into the United States for the manufacture of borax, and for glazing operations. Should these Nova Scotia deposits be found to occur in quantities of economic importance, they would form a valuable article of export, and materially aid the output of the associated gypsum.

#### ORIGIN OF THE GYPSUM.

It is a comparatively easy task to account for the origin and mode of formation of most of the sedimentary non-metamorphosed rocks. But among the short list of those whose history is not quite understood must be placed Gypsum.