

workable deposits of this mineral before passing to the oldest of fossiliferous systems, the Laurentian.

The rocks of this formation are among the most ancient on the North American continent and probably correspond to the oldest gneiss of Scandinavia. The modes of occurrence are so varied in the Canadian Apatite field, that the subject would require to be treated by itself in order to do it justice here.

We are all here familiar with how it is found, both in Ontario and Quebec provinces.

Dr. Hunt thus describes in 1884, the main features of its mode of occurrence: "The deposits of Apatite are in part bedded or interstratified in the pyroxenic rock of the region, and in part are true veins of posterior origin. The gneissic rock with their interstratified quartzite and pyroxenic layers, and an included band of crystalline limestone, have a general northeast and southwest strike, and are much folded, exhibiting pretty symmetrical anticlinals and synclinals, in which the strata are seen to dip at various angles, sometimes as low as 25 degrees or 30 degrees, but more often approaching the vertical. The bedded deposits of apatite, which are found running and dipping with these, I am disposed to look upon as true beds, deposited at the same time with the enclosing rocks. The veins, on the contrary, cut across all these strata, and in some noticeable instances, include broken angular masses of the enclosing rocks. They are for the most part, nearly at right angles to the strike of the strata, and generally vertical, though to both of these conditions there are exceptions. One vein, which had yielded many hundred tons of apatite, I found to intersect, in a nearly horizontal attitude, vertical strata of gneiss, and in rare cases what appear, from their structure and composition to be veins, are found coinciding in dip and in strike with the enclosing strata."

The apatites of Norway are known since 1854, and occur on the southern coast in similar rocks to our own (Canadian), and many of the associated minerals are similar to those observed in the Laurentian rocks, the vein matter differing chiefly in freedom from carbonate of lime.

Rutile may be mentioned as an exception, which in some mines is so abundant as to form a considerable revenue to a working mine, since