

cess of concentration by evaporation under the solar heat. Klement has more recently taken up this fact in the way of experiment, and finds that, while in the case of ordinary calcite this action is slow and imperfect, with the aragonite which constitutes the calcareous framework of certain corals, and at temperatures of 60° or over, it is very rapid and complete, producing a mixture of calcium and magnesium carbonates, from which a pure dolomite more or less mixed with calcite may subsequently result.¹

I regard these observations as of the utmost importance in reference to the relations of dolomite with fossiliferous limestones, and especially with those of the Grenville Series. The waters of the Laurentian ocean must have been much richer in salts of magnesium than those of the present seas, and the temperature was probably higher, so that chemical changes now proceeding in limited lagoons might have occurred over much larger areas. If at that time there were, as in later periods, calcareous organisms composed of aragonite, these may have been destroyed by conversion into dolomite, while others more resisting were preserved, just as a modern *Polytrema* or *Balanus* might remain, when a coral to which it might be attached would be dolomitized. This would account for the persistence of Eozoön and its fragments, when other organisms may have perished, and also for the frequent filling of the canals and tubuli with the magnesian carbonate.

The question now arises as to the mineralization of Eozoön with serpentine, and more rarely, especially in the case of its larger and lower chambers, with pyroxene. Connected with this is the alternation, as above described, of serpentinous and dolomitic layers in the limestone, as if in successive times the conditions were alternately favourable to the deposition of magnesium in the form of carbonate and in that of silicate.

¹ Bulletin Geol. Soc. Belgium, Vol. 1X. (1895, p. 3). Also notice in Geol. Mag., July, 1895, p. 329.