

and resulting from the alteration of silico-magnesian sediments, and in many writings since has supported this view of the subject. In the transactions of the Royal Society of Canada, Vol. I, Sec. IV., 1883, is given the geological history of serpentines, including studies of Pre-Cambrian rocks by this author. Very interesting facts and many observations from several European and American geologists are mentioned in this clearly written paper, the most of which are in support of the theory therein advanced. Some of the serpentines that were then declared to be indigenous have been studied more in detail, and facts of recent date, brought to view, tend to show that these are in certain places eruptive.

The serpentines are, as we all know, metamorphic or igneous rocks, and consequently we should not judge of their age from lithological evidence only, for with very few exceptions this criterion is of little value. Since it is generally admitted that metamorphic rocks are not of any particular geological age, so we shall have to consider our serpentines as being also of different ages, for they not only differ in their lithological association but in chemical composition as well.

If we have serpentines that are the altered remains of olivine rocks, we have them derived from some other source as well, for it is impossible to suppose that the banded and slaty serpentines of the Shickshock mountains in Gaspé, and of Long Lake in the Province of Quebec are due to the metamorphism of the same class of stratified beds, the main constituents of which are derived from the trituration of olivine rocks; for in that case they would occur in some characteristic bands, and this is not the case as far as we know.

There is a magnesian rock says Daubr e that is very closely allied to peridotite and thersolite although it presents a great many peculiarities which are not characteristic of these. Although serpentine is hydrated, infusible and without distinct crystallisation, it occurs with eruptive rocks, and the general view of geologists is that it is derived in many cases from peridotite, since it exhibits very often the characteristic form of crystals of that rock.

By his synthetic studies, Daubr e has discovered that very often serpentine has a tendency to change to a peridotite and he is of the opinion that it is derived from the hydration of olivine rocks. There