

PRE-CAMBRIAN SERPENTINES.

Of these very little can be said; they seem to be limited to the almost extreme easterly portion of the Dominion. Mr. Hugh Fletcher, who so very carefully studied that section of the country, reports serpentines to occur in three different places:—

First, in Macdonald Brook, Cape Breton Island, where white, pyritous crystalline limestone, lemon-yellow serpentine limestone, and pale-green brown-weathering limestone, and tremolite in small fibrous tufts, occur between bluish-grey and red felsite and bluish-porphyrific felsite. Then on Kelvin Brook, in the same island, a cliff of coarse, reddish felsite, associated with greenish and red, mottled, soft serpentine, is in immediate contact with reddish coarse grit and conglomerate along an irregular line which runs N. 9° E.

On Campbell Brook, eastern Nova Scotia, some white crystalline limestone appears, some beds of which are covered on the surface with large knobs of light-greenish and white serpentine, but the hills are composed mainly of syenite.

These resemble very much the Laurentian serpentines in colour and in their association with crystalline limestones. No minerals of economic value were found in them.

CAMBRIAN SERPENTINES.

The most easterly outcrops of these are found in the Shickshock Mountains, Gaspé Peninsula.

*Mount Albert, which is one of the main peaks, is composed of serpentine. The thickness of this great mass is estimated to be about 1,000 feet. The whole of it presents evidence of stratification, in some parts remarkably clear and distinct, in others more obscure. Much of the lower 600 feet is bottle-green in colour, with beds towards the top of a streaked and mottled reddish and greenish brown, much studded with small crystals of diallage. The upper 400 feet display the bedding very beautifully, by difference of colour on the weathered exterior, as well as in freshly exposed surfaces. The weathered surfaces are marked by a set of red and opaque white bands, the white broader than the red, varying from one-eighth of an inch to an inch in thickness, and becoming often interstratified with layers of a brownish fawn colour, which

*From Geology of Canada, 1863, page 266.