

weathering mica slates and micaceous quartzites, traversed with numerous white quartz veins, and have a general southerly dip (S. 40 E. $< 60^\circ$); while in Springfield similar beds, again rest upon granite and dip northerly (N. 70 E. $< 80^\circ$). The synclinal structure thus indicated is, however, better seen along the roads leading south from Haynesville to Blowdown and Zealand. In Haynesville proper the micaceous and gneissic strata, which are often mottled or filled with dull black specks, probably representing incipient staurolite crystals, dip, as in Caverhill, southerly from the granite of the Nacawine; but on the other side of the belt, on approaching the granites of Zealand, similar strata are again met with, with a somewhat irregular but generally northward dip, the intervening area being occupied by bluish grey slates and sandstones, exhibiting a similar arrangement. These latter rocks, which tend to break up into angular blocks, are in this respect as also in colour and texture indistinguishable from those of the Woodstock branch railway, as well as from those of the southern Cambro-Silurian belt to be next described in Prince William and Bright. Both their position and their graduation into the micaceous strata below indicate that they are portions of a single formation, of which the lower members have been altered in connection with their proximity to the granite upon which they rest. It is noticeable that among these strata there are no representatives of the felspathic gneisses, schists, felsites or amygdaloids which are so conspicuous in the northern belt, a fact which gives some further support to the view that these latter are Pre-Cambrian rocks protruding through the Cambro-Silurian slates.

The southern Cambro-Silurian belt, referred to above, is a very extensive one, embracing, as it does, most if not all of the Pre-Carboniferous rocks between the granite and the Coal basin. Owing to the irregular course of the granite on the one hand and the still more irregular distribution of the overlapping Carboniferous strata upon the other, the belt is of somewhat variable breadth and outline, but may be described as extending continuously from the Maine frontier, south of Vanceboro, through the parish of Prince William to the St. John River; and eastward of the latter, through portions of Queensbury and Bright, to the valley of the Keswick; beyond which it is again seen in the valleys of the Nashwank and Miramichi, though outside of the limits to which this report relates. Owing to the hardness of the rocks underlying this district and their deficiency in lime, the soils covering them are usually neither deep nor rich, while large portions, especially near the granite, are rendered unfit for cultivation by the great number of boulders or loose blocks with which they are covered, or by the occurrence of heavy deposits of clay. When, however, these are absent, the soil is capable of yielding a fair return, and within the district are situated a large number of flourishing settlements.

Springfield.

Synclinal.

Southern
Cambro-Silurian belt.

Distribution.

Surface
features.