

Overlain by  
the Paleozoic.

On the upturned edges of these deeply eroded Archean rocks, both gneiss and anorthosite, the Potsdam sandstone and other Cambro-Silurian rocks repose in flat and undisturbed beds. At some points along the edge of the protaxis, as at St. Canut, to the west of St. Jérôme, the Potsdam sandstone is observed resting upon the gneiss; but as the plains are for the most part mantled with drift the actual contact is not in all cases seen, so that the Paleozoic exposures nearest to the Laurentian, in some places consist of the magnesian limestone of the Calciferous, as to the south of St. Jérôme, or even of the Trenton limestone, as between New Glasgow and Ste. Julienne.

A small outlier of these Paleozoic rocks occurs on the third and fourth ranges of the township of Abercrombie, about nine miles north of the edge of the protaxis, and proves that the Paleozoic strata once extended considerably further to the north than they do at present, although this outlier probably does not by any means mark their northerly limit.

The Paleozoic strata cover up the gneisses and anorthosites alike, and are evidently of much more recent age, being separated from the Laurentian by the long interval occupied in the upheaval and erosion of the Laurentian area. How long before Upper Cambrian times this folding and erosion took place cannot be determined from a study of this area, but investigations in other portions of the margin of the protaxis makes it very probable it took place in pre-Cambrian times.

#### THE LAURENTIAN PROPER.

This great system consists, as has been stated above, of orthoclase gneiss, presenting many varieties both in form and composition, alternating and interbanded with plagioclase gneisses, crystalline limestone, quartzite, amphibolite and other crystalline rocks.

Gneiss.

These rocks present many transitional forms. Thus bands of quartzite, holding more or less orthoclase, represent varieties intermediate between true quartzites and quartzose gneisses. Crystalline limestones, again, in certain places become very impure, owing to the presence of grains of various silicates, and may thus be classed as calcareous gneisses.

Orthoclase gneiss preponderates largely, and would, if the crystalline schists were classified in the same detail as the intrusive rocks, be separated, owing to variations in its composition, into a number of varieties, equivalent respectively to the various orthoclastic intrusive rocks, as well as the various transitional members between these