

## PHYSICAL CHARACTERISTICS OF CANADA.

This plateau is underlain by hardened sediments and igneous rocks. The latter are much more widespread than the former, and granitic types predominate. The rocks of this region are among the oldest rocks of which geologists have any knowledge. They are very resistant, and although they have been exposed to weathering since very early in the earth's history the inequalities in the surface features have not been wholly reduced. These inequalities have been augmented by glacial action. A further effect of glaciation was the denuding of much of this region of its soil. Generally speaking, therefore, the physiographic and soil conditions are not favourable to agricultural pursuits. Over a great part of the area, however, sufficient soil has been retained to support a forest growth, although insufficient for agriculture, and it is to be regretted that large stretches of such land have been depleted of their forests and have become dreary, barren wastes.

Within the plateau there are valleys where areas of softer rock have afforded a greater abundance of soil that has not been removed by glaciation, and beautiful cultivated fields lend a pleasing contrast to the surrounding forest. In places the sediments deposited in the basins of glacial lakes have reduced the inequalities of the surface and produced large level areas of arable land. Interesting examples of these are furnished by the Clay Belt of northern Ontario and Quebec, traversed by the Grand Trunk Pacific railway, and by the flat section of country along the main line of the Canadian Pacific railway a few miles north of Sudbury.

**Appalachian Region.**—The Appalachian region occupies the hilly part of southeastern Quebec and the Maritime Provinces. Here during remote geological ages the sedimentary beds of limestone, sandstone and shale that had been deposited beneath the sea were folded into mountain ranges, and were much altered and hardened and intruded by igneous rocks. During long succeeding ages these mountains have been subdued, and little is left that may be regarded as mountains except the Notre Dame range of Quebec with a general elevation of 1,000 to 2,000 feet and with peaks rising above 3,500 feet, the broken hilly country of the northwestern part of New Brunswick, a section of this province bordering the Bay of Fundy and a central ridge in Nova Scotia.

In the ordinary processes of erosion much of the loosened material resulting from rock decay was carried seaward, and in recent times glaciation denuded a great deal of the more elevated sections of country, leaving barely enough soil to support a forest growth.

In some places sediments have been deposited subsequently to the great folding processes of earlier ages; they are unaltered, easily attacked by weathering agencies and are overlain by an ample depth of soil. The soils of Prince Edward Island, the Annapolis-Cornwallis valley and other sections are derived from these sandstones and shales of later deposition, the shales producing the clayey constituents and the sandstones yielding the sand that renders the soil porous and tillable. Calcareous slates have in places, such as in Carleton and York counties, New Brunswick, broken down into fertile soils. In