

The Interior Plains.—The Interior Plains division of Canada is part of a great plains region in the interior of the continent stretching from the gulf of Mexico to the Arctic ocean. In Canada it extends from the Canadian Shield on the east to the Cordillera on the west. At the United States border it has a width of 800 miles but in the extreme northwest at the mouth of the Mackenzie river it is less than 100 miles wide. Throughout most of the region the underlying Palæozoic, Mesozoic, and Tertiary rocks are nearly flat-lying. In the northwestern part of the area, however, the Franklin range, which lies between Great Bear lake and Mackenzie river, is composed of folded strata. In western Alberta, also, the rocks are folded and faulted.

Geologically the region falls into three zones. On the east a narrow plain known as the Manitoba Lowland is developed on flat-lying Palæozoic strata which range in age from Ordovician to Devonian. In Manitoba the Ordovician beds rest on the Precambrian rocks of the Canadian Shield and commonly present a low escarpment facing the Shield. To the northwest this zone broadens to form the Mackenzie Lowland. Here over wide areas Silurian measures form the base of the Palæozoic section. In the Franklin mountains, however, red quartzites and sandstones of the Mount Clark formation are regarded as of probable Lower Cambrian age. They are succeeded by Middle and Upper Cambrian sandstones and shales. Beds regarded as of probable Ordovician age are also known to occur at the base of mount Kindle east of Wrigley and beneath the Silurian dolomite of the Great Slave Lake area. Over considerable areas strata of Cretaceous age also occur in the Mackenzie Lowland region, as for example on Liard river, on the western shores of Great Bear lake, and at several places along the Mackenzie. At the mouth of Bear river is an area covered by partly consolidated Tertiary sands and clay carrying lignite beds.

The second zone includes much of southwestern Manitoba and southern Saskatchewan and Alberta. It is a broad belt underlain by Cretaceous rocks. Its eastern border, where these strata overlap the underlying Palæozoic sediments, is an abrupt rise known as the Manitoba escarpment. Its surface gradually rises from an elevation of from 1,000 to 2,000 feet at the escarpment to from 4,000 to 5,000 feet at the border of the mountains on the west.

The third zone consists of the plateaux of Wood mountain and the Cypress hills which rise up to elevations of 1,000 feet above the level of the surrounding region. They are composed of flat-lying beds of Tertiary age.

In Pleistocene time glacial drift was widely scattered over the region. On the retreat of the ice deposits, clay accumulated in lakes which stood in front of the waning ice sheet. Much of southern Manitoba formed the bed of glacial lake Agassiz.

The Interior Plains Region is the great wheat-producing area of Canada. Coal mining is an important industry. Bituminous coal and lignites are produced in large quantities in Alberta and in small amounts in Saskatchewan from Cretaceous and Eocene beds. Natural gas is produced in large quantities from various horizons of the Cretaceous in Alberta. Petroleum has been found in the Devonian beds of the lower Mackenzie valley north of Norman, in Cretaceous strata at a number of localities in Alberta, and in Palæozoic rocks in Turner valley. Along the Athabaska river the basal member of the Lower Cretaceous, known as the McMurray or the Tar sands, is heavily impregnated with bitumen. Gypsum is obtained from the Palæozoic rocks of Manitoba and also occurs in northern Alberta. Deposits of lead and zinc occur in Devonian limestones at certain places south of Great Slave lake.