

Mackenzie Mountains. This great mountainous tract is a formidable barrier between the ocean and the interior of Western Canada; by precipitating a great part of the moisture out of the winds coming from the Pacific, it has a marked effect on the climate of the western country. On the west side, the Cordilleras are drained by mountain streams pitching swiftly down to the Pacific. The Yukon Territory is drained to the north by that remarkable river of the same name which runs through a wide valley over 1,700 miles long before reaching the Bering Sea. On the east side of the mountains and their foothills, the land slopes gently away to the east and to the north.

The southern portion of the eastern declivity, from the Rocky Mountains down to Lake Winnipeg, is comprised in the Nelson River drainage emptying into Hudson Bay; representing the part of Western Canada now settled, it includes the treeless prairies and comprises the lands that, in the main, produce Canada's great wheat crops. This area is characteristically different from other parts of Canada in that any exposure of surface rock is rare. Generally, it is overlain by great depths of clay soil, through which the streams have cut themselves down into deep coulées and the rivers into deep wide valleys. Lakes of any considerable extent are infrequent and usually quite shallow; in the dry prairie section there are many places where the evaporation from the broad and shallow bodies of water is so great that they have little or no outflow and consequently the concentration of mineral salts in the water makes it unfit for domestic use. The terrain is generally smooth or gently undulating and, from an elevation of 3,400 feet at Calgary, falls away gradually to an elevation of 800 feet around Lake Winnipeg 700 miles to the east. Just north of Edmonton a height of land turns the waters to flow north into the great Mackenzie River, over 2,500 miles long, whose valley with its low elevation above the sea is the outstanding feature of the Northwest Territories. In this watershed the terrain becomes less smooth with prominent elevations in the Caribou, Horn, and Franklin Mountains and the clay soils of the prairies give way to more of sand and gravel. Great Slave and Great Bear Lakes, each half as large again as Lake Ontario and less elevated above the sea than Lake Erie, are notable features; north and east of these two great lakes the country comes within the Canadian Shield* and the rock, with some shallow overburden, slopes gently down to the Arctic Ocean without any large elevations to break the monotony.

Going east again, in the more northerly part there is encountered the orographical influence of Hudson Bay which, indenting the continent so deeply and with rivers running in from west, south, and east, has an enormous drainage basin mainly in Manitoba, Ontario, and Quebec. Practically all of this great basin, except the Nelson River drainage, is included in the Canadian Shield, the surface characteristic of which is hard rock either exposed or overlain with shallow soil, generally confining agriculture to the valleys or small basins. With only small areas in northeastern Quebec rising above 2,000 feet in elevation, there are no great eminences, but the surface is generally accidented by many hills and hollows with countless numbers of lakes and streams. On its west and south sides, Hudson Bay is bordered by a strip of low land under 500 feet in elevation and varying in width from one hundred to two hundred miles; in the southerly part of these flat, low lands the rock is overlain with a considerable depth of soil and this area is sometimes referred to as the Clay Belt of Northern Ontario.

* Excepting the St. Lawrence Lowlands, the Maritime Provinces, and the Hudson Bay Lowland, the Canadian Shield embraces all of Canada east of a line commencing at Darnley Bay on the Arctic Coast and running south and east through Great Bear Lake, Great Slave Lake, Lake Athabaska, Lake Winnipeg, and Lake of the Woods on the International Boundary.