

group made up of the Salina formation and the Lower Munroe dolomite and shale. The total thickness of the Silurian measures is around 1,750 feet.

The Cayugan beds are terminated by an erosion surface upon which rest Devonian beds about 1,000 feet in thickness. The succession from bottom to top is as follows: Sylvania sandstone, Upper Munroe dolomite, Oriskany sandstone, Onondaga limestone, Delaware limestone, Hamilton limestone and shale, Huron shale, and Port Lambton shale.

The only intrusive rocks of the St. Lawrence Region occur in the eastern part in what are known as the Monteregian hills. These are eight in number occurring along an approximately east and west line some 50 miles long. The most westerly is Mount Royal at Montreal. The hills are circular or oval in outline and rise abruptly to elevations of from 600 to 1,200 feet above the surrounding flat country. The flanks of the hills consist of altered and hardened sediments and the centres are composed of intrusive rocks, including various alkali types such as nepheline syenites, essexites, etc. The age of these intrusives may be as late as Pliocene.

The whole region was overrun by Pleistocene ice sheets and much of the bed-rock is covered by debris left by these glaciers. At Toronto stratified deposits carrying plant and animal remains lie between deposits of glacial material. These layers show that the region was crossed at least three times by ice sheets coming from central Ungava and that between these advances the region had a climate considerably milder than at present. In late Pleistocene time the region was depressed and an arm of the sea extended up the St. Lawrence valley as far at least as Brockville and up the Ottawa River valley beyond Ottawa. At Ottawa the sea stood at least 688 feet above its present level. In this sea, layers of clay were deposited and along its shores deposits of sand accumulated. Eventually uplift of the land caused the withdrawal of this sea to which the name Champlain is given.

The chief mineral occurrences of the St. Lawrence Region include petroleum and natural gas which are produced in southwest Ontario, salt from the counties bordering lakes Huron and St. Clair, and gypsum from the Grand River valley. Other materials which are available at many places include limestone and dolomite used in chemical and metallurgical industries, rock for construction purposes and clay for brick, tile, and cement manufacture.

**The Appalachian and Acadian Regions.**—The Appalachian and Acadian Regions include that part of Canada lying south of the St. Lawrence river and east of a line running from Quebec city south to the foot of lake Champlain. The Appalachian Region, whose eastern boundary in Canada is the Restigouche river and Chaleur bay, is a continuation of the Appalachian Mountain system of the eastern United States. The Acadian Region lies to the southeast and comprises the provinces of New Brunswick, Nova Scotia, and Prince Edward Island.

The region is for the most part mountainous or hilly. In southeastern Quebec the Notre Dame mountains, consisting of three roughly parallel ridges trending northeast, reach elevations up to 3,100 feet and in Gaspé peninsula, the Shickshocks, actually a continuation of the same range, have heights up to 4,200 feet. Many of the mountain summits are flat-topped, showing that the region is really a dissected plateau. The Acadian Region is also largely one of plateaux, ridges, and valleys. In central New Brunswick is a rugged area with summits rising over 2,000 feet. To the east of this is a lowland area of some 10,000 square miles comprising the eastern portion of the province and all of Prince Edward island. It nowhere rises over 600 feet above the sea. Nova Scotia is largely an upland region which in the northern part of Cape Breton island reaches elevations of 1,500 feet.