

to 67°F. in the extreme south. This relatively narrow temperature range is in contrast to the much wider variation of nearly 30°F. in January between the extreme northwestern and southeastern sectors. Periods of hot weather are not unusual in summer with occasional occurrences of maximum temperatures in excess of 90°F. In fact, extreme maxima on record have exceeded 100°F. throughout most of the southern portion of Northern Ontario. The summer is short, however, and by mid-October mean temperatures have receded to 40°F. in all but the southern sections.

The length of the frost-free season is of critical importance to agriculture in Northern Ontario. This is an area where there are wide local variations in the incidence of frost depending on the presence of lakes and muskeg, the type of soil and orientation of the site. The size of clearings also has some effect on minimum temperatures during the summer. Low ground and peat bog depressions are particularly liable to frost. In the districts of Kenora and Rainy River and immediately along the north shores of Lakes Superior and Huron there are frost-free periods in excess of 100 days—early June to mid-September. Elsewhere in Northern Ontario seasons free from frost range from 40 to about 100 days. In general, a frosty belt exists over the height of land extending from Lake Nipigon to Lake Nipissing.

Sunshine is ample in Northern Ontario, although somewhat less than on the prairies. Annual totals range from about 2,000 hours in the Lake of the Woods region to 1,500 hours in the James Bay region.

Throughout Northern Ontario there is a definite summer maximum and winter minimum in precipitation. This is especially pronounced in the Lake of the Woods area where the July precipitation is nearly four times the January amount. Average total precipitation over Northern Ontario generally ranges from 20 to slightly over 30 inches with the least amount in the District of Patricia. As a result of orographic effects, the heaviest precipitation in Ontario occurs on the steep northeastern shore of Lake Superior. Steep Hill Falls (elevation 1,100 ft.) has an average annual total of 44.8 inches. Snowfall at this station averages 196 inches. Throughout most of Northern Ontario, winter snowfall averages 60 to 100 inches, and in most winters the warm spells are not sufficiently warm or long enough to melt much of the snow, so by winter's end snow accumulation on the ground amounts to 30 inches or more.

Southern Ontario.—That part of Ontario lying south of Lake Nipissing comprises an area only about one-sixth as large as Northern Ontario. Roughly triangular in shape, it is bounded on the west by Lake Huron, on the south by Lakes Erie and Ontario and on the north and northeast by the Laurentian Highlands. Two important highland regions with large areas above 1,200 feet in elevation rise above the extensive lowlands bordering the lakes and the narrow Ottawa Valley. South of Georgian Bay the western Ontario uplands form a plateau with elevated areas rising to more than 1,700 feet. The other uplands are found in the Algonquin Park area between Georgian Bay and the Ottawa Valley.

The southwestern tip of the province extends farther south than any other part of Canada. This fact combined with the ameliorating influence of the lower Great Lakes serves to give peninsular Ontario a much milder climate than that of the northern districts. The lower lakes region lies in one of the major storm tracks of the Continent and the passage of cyclones and anti-cyclones over the area produces wide variations in the day to day weather, especially in winter. Changes in air masses may be expected to occur every two to five days throughout the year. Usually periods of extreme conditions of severe cold or excessively warm weather are not prolonged.

Winter temperatures reflecting the lake influence are mildest in the areas around Lakes St. Clair and Erie and in the Niagara Peninsula where January temperatures average 24° or 25°F. Northward and eastward the winters are considerably colder, January mean temperatures being 12°F. at Ottawa and 11°F. at Algonquin Park. Along the north shore of Lake Erie and in the Niagara Peninsula, extreme winter temperatures seldom