

rainfall in Canada, annual averages of more than 80 inches being common along the coast. There are, however, rain shadow areas in the lee of the mountains where the annual precipitation is less than 30 inches.

The most complex climatic region of Canada is the *Cordillera* which extends in a northwest-south belt through British Columbia and the Yukon Territory. In general, precipitation decreases eastward from the coast and, in contrast, temperature ranges decrease westward from the interior of the Continent. In this region, diurnal temperature variations are greater than anywhere else in Canada and, as a rule, altitude is more a climatic determinant than latitude.

The *Prairie* climatic region of interior Canada takes in most of the settled agricultural land of Manitoba, Saskatchewan and Alberta. Precipitation averages from 12 to 20 inches, with an early-summer maximum. July temperatures average in the neighbourhood of 65°F., although there have been extremes recorded as high as 115°F.; January temperatures average about 5°F., with observed extremes of -50°F. and -60°F. The *Prairie* region is well known for two wintertime weather phenomena—the blizzard and the chinook. Bitterly cold temperatures with high winds and driving snow combine to produce the blizzard, while the chinook is a warm air invasion, usually in Alberta, bringing temperature increases of 40°F. to 50°F. within a few hours.

The sixth general climatic region, called the *Southeastern* region, takes in southern Ontario, southern Quebec and the four Atlantic Provinces. Precipitation in this area is usually ample and ranges from 30 inches in northern Ontario to 50 inches in coastal Nova Scotia and Newfoundland. Snowfall is also abundant in winter, there being little seasonal variation in precipitation. July temperatures average between 65°F. and 70°F. and January temperatures from 10°F. to 25°F. Climatic conditions in general are modified in southwestern Ontario by the Great Lakes and those along the coastal areas by the Gulf of St. Lawrence and the Atlantic Ocean. In southern Ontario high sensible humidity or sultry conditions are felt more often than in any other area in Canada but these spells usually last only a few days at a time.

The following table gives temperature and precipitation data for typical stations in the various regions of Canada. Temperatures in this table refer to observations taken in a thermometer shelter which has been placed in a representative location with the thermometer bulbs four feet above the surface of the ground. Mean January and July temperature data are based on records over the 30-year period from 1921 to 1950 except for far northern stations where the available period of record is shorter. After an average temperature is obtained for each day in January over a 30-year period, the mean January temperature may be arrived at by striking a mean of these 930 daily values. The mean July temperatures may be obtained in a similar manner. The highest and lowest temperatures on record refer to the absolute extremes for the entire period of record at each station. Average dates are shown for the last occurrence in spring of a temperature of 32°F. or lower and for the first occurrence in autumn of freezing temperatures at the four-foot level in the thermometer shelter.

The official Canadian rain gauge is a small cylinder in which the rain is caught and then measured to one-hundredth of an inch with a simple measuring device. Freshly fallen snow is measured as it lies on the ground and recorded to the tenth of an inch. Total precipitation values as shown in the table are the sum of the total rainfall and one-tenth of the total snowfall. This assumes a specific gravity of 0.1 for freshly fallen snow. Snow gauges are being installed at many of the main observing stations in the country. At these stations it will be possible to observe and record the snow density for each snowfall. For the purposes of this table, a day with precipitation is one on which at least one-hundredth of an inch of rain or one-tenth of an inch of snow has fallen.