

by lack of protection from outbreaks of cold air or by elevation. Victoria (Gonzales Observatory) is the only official weather station in Canada that has experienced a winter season during which the temperature in the thermometer shelter at no time fell to the freezing level.

Frontal and orographic influences combine to increase the general rainy tendency of the West Coast, and the windward slopes of the littoral of British Columbia have precipitation among the heaviest in the world. The precipitation regime is characterized by wet winters, small proportions of snow at low levels, a large number of days with precipitation and a well-defined summer season minimum. Near sea level, wet snow that soon melts falls on a few days during most winters, but the Insular, Coast and Cascade Mountains receive an enormous amount of snow. A recently established weather station at Kildala Pass (elevation 5,280 ft.) in the Coast Mountains, southeast of Kitimat, reports an average seasonal snowfall of 809 inches. Thirty-nine inches of snow have fallen during a 24-hour period at this station and during one winter the total fall reached 880 inches.

The wet season begins late in September and ends about the middle of March along the West Coast. In contrast there is a marked dry season during the summer months. The heaviest rainfall occurs on the outer coasts of Vancouver Island, the Queen Charlotte Islands and on the mainland coast northward from Vancouver Island to the Alaskan Panhandle where the average annual precipitation is in excess of 100 inches. Exposure to the open ocean and local orographic influences often produce exceptionally heavy rainfall. Henderson Lake, which is situated at the head of a funnel-shaped valley at the end of an arm of Barkley Sound on the outer coast of Vancouver Island, holds the record for annual precipitation on the North American Continent. Precipitation records for this station include:—

Average annual total precipitation for a 14-year period.....	262.00 inches
Greatest total precipitation for one calendar year (1931).....	323.70 inches
Average total precipitation during the wettest month (December)...	46.70 inches
Total precipitation during the wettest month on record (Dec. 1923)..	79.45 inches
Greatest precipitation in one day (Dec. 30, 1926).....	16.61 inches

Despite the heavy winter precipitation, this station has the characteristic relatively dry summer with a total fall for the months of June, July and August averaging only a little over six inches per month.

Stations in the lee of the Coast Mountains show a remarkable reduction of precipitation. The effectiveness of the rain shadow of the Insular and Olympic Mountains is illustrated by the fact that Victoria receives only 26 inches a year in comparison with 40 inches at Vancouver Airport on Sea Island across the Strait of Georgia. At higher elevations on the eastern slopes of Vancouver Island, the annual precipitation is fairly high, averaging 64 inches at Lake Cowichan (elevation 580 ft.) as compared to 34 inches at Cowichan Bay (elevation 175 ft.).

Along the southwestern coast of the mainland, annual precipitation is slightly in excess of 35 inches on the outer islands of the Fraser Delta, but even at moderate elevations on the mountainous slopes to the north of the Fraser River there are substantial increases in precipitation. The seasonal regime of winter maximum and a very pronounced summer minimum is characteristic of the coastal area. At Vancouver Airport only 6 p.c. of the annual total falls during the summer months of July and August, and this produces an acute moisture deficiency during summer months. An extreme case occurred during the summer of 1951 when no measurable rain fell at Vancouver Airport during a period of 58 days (June 14 to August 10). Thunderstorms are very infrequent along the West Coast of British Columbia.

The littoral of British Columbia, and particularly the outer coast, is heavily clouded everywhere in autumn and winter. The less exposed districts, including the east coast of Vancouver Island and the Fraser Valley, have notably bright skies in summer. Victoria receives nearly 2,100 hours of bright sunshine each year, a record exceeded in Canada only on the southern prairies. On the other hand, Prince Rupert receives slightly less than half this amount.