

Throughout the southern interior valleys the frost-free season generally ranges from 60 to 140 days. Extreme cases are McCulloch—20 days, and Keremeos and Warfield (Trail)—184 days. These wide variations demonstrate the importance of local factors such as air drainage, elevation, exposure to invasions of cold air or, on the other hand, the presence of bodies of water sufficiently large to ameliorate the temperature or to produce a protective blanket of fog on radiation nights.

Scanty precipitation is the outstanding climatic characteristic of the southern interior valleys of British Columbia. Movement over the Coast Ranges condenses much of the water vapour from the moist lower layers of the westerlies but the air which reaches the interior is not especially dry since the mountains are only of moderate height and substantial volumes of air penetrate through the deep valleys and over the lower parts of the ranges. In general, the western slopes of the minor uplands receive considerable precipitation but little falls on the leeward slopes and in the valleys. Each time this process is repeated, windward slope precipitation decreases until it increases again in the high Selkirks.

Precipitation in the interior valleys of southern British Columbia is fairly evenly distributed throughout the year since the region represents a transition belt between the West Coast type with winter maximum and the continental type of central Canada with the pronounced summer maximum. Maritime influence with winter maximum is pronounced in the higher and more exposed locations particularly in the western interior valleys. Continental effects are more evident in the lower elevations where the summer maximum occurs. One of the two driest areas in southern Canada extends up the Thompson River Valley from Spences Bridge to Kamloops and down to Merritt (Ashcroft 7.4, Tranquille 9.1, Kamloops 10.1, and Merritt 9.0 inches); the other is in the southern parts of the Okanagan and Similkameen Valleys (Oliver 9.8, Keremeos 10.3 inches). The Rocky Mountain trench is in another prominent rain shadow with less than 15 inches of precipitation (Invermere 11.5 inches). On the other hand the westward slopes of the Selkirk Mountains have the highest precipitation in the interior of British Columbia.

In the valley bottoms the winter snowfall usually ranges from 30 to 50 inches and the fall increases to 80 to 150 inches at recording stations on the west slopes and tops of the uplands. At Glacier (elevation 4,094 ft.) in the north Columbia basin, the winter snowfall averages 342 inches. Even in southern British Columbia, heights above 6,000 feet are snow-covered all year.

Central Interior of British Columbia.—The central interior region comprises an area about 350 miles long and 250 miles wide; stretching eastward from the Coast Range it includes the Skeena River valley and the upper portions of the Fraser and North Thompson Valleys. East of the upper Thompson River this division contains the Cariboo country and the northern portions of the Monashee and the Selkirk Mountains. The central interior region has a more uniform climate than the southern interior and is characterized by long cold winters, often intensely so when continental polar air sweeps down from the north. Summers are short and much cooler than in the south. Precipitation is not heavy.

Temperatures in the valleys of the central interior are quite similar to those recorded at upland stations in the southern interior. Most stations have at least five months with mean temperatures below freezing while the warmest summer month generally does not exceed 60° F. The long winter nights are often very cold and even most valley stations have recorded temperatures below -50° F. Quite high maxima may occur during the long summer days with maximum temperatures over 100° F. reported occasionally. Quesnel has had an absolute maximum of 105° F. The frost-free season is short, ranging from 50 to 70 days in the upper Skeena Valley, but varies from 35 to 100 days in the upper Fraser River basin.

The precipitation pattern in the central interior is quite similar to the south but reflects the simpler relief. The rain shadow immediately east of the Coast Mountains is very prominent. Kleena Kleene, situated only 120 miles from the Pacific, has a mean annual precipitation of only 14 inches but some parts of the Chilcotin uplands probably receive as much as 30 inches. Farther eastward the rain shadow in the deep Fraser Valley