

CLIMATE AND METEOROLOGY

hot days may be confidently looked for during July and August, and very occasionally in these months temperatures exceeding 90° , perhaps nearly 100° , are recorded, but the average mean maxima in July of 82° at Medicine Hat, 75° at Calgary and 74° at Edmonton indicate a not unpleasant warmth, while the corresponding minima shows that the nights are pleasantly cool. An important fact in connection with the climatology of Alberta is that the isotherms during the summer months run nearly north and south, and the mean summer temperature is almost as high in the extreme north as in the south. Fort Dunvegan in the Peace river country and Fort Chipewyan on lake Athabasca, have the same mean summer temperature as Calgary and Edmonton, and with the longer period of summer sunlight, it is probable that plant life in the north may make more rapid growth than in southern districts. But while the summer is of a pretty uniform character throughout the province, the effect of the increasing latitude is shown before the end of August by the more rapidly diminishing temperature at northern stations, and we find the following winter (i.e. December to March), mean temperatures: Calgary 17° ; Edmonton 14° ; Fort Dunvegan 1° ; and Fort Chipewyan 5° below zero.

The Chinook is one of the characteristic features of the Alberta climate, and usually occurs with strong southwest and west winds. It is most frequent in the south, but is by no means uncommon even in the Peace river. Sometimes a change of wind from north and northeast to southwest, will in Alberta mean a rise of temperature from perhaps 20° below zero to 40° above in a few hours. Largely to the effect of this wind is due the fact that the prairies of southern Alberta are usually bare of snow during the greater part of the winter.

Saskatchewan.—The southern half of this province is almost wholly prairie land, and it is only to the northward of the Saskatchewan river that any extensive forest areas are found. The climate is similar to that of Manitoba, except that in the southwestern portion spring sets in somewhat earlier than north and east, and in mid-winter the chinook effect of the mountains extends at times even as far east as Regina. Up to the end of April the temperature of southern Saskatchewan is somewhat higher than in Manitoba, but from May onward through the summer it is a little lower, and remains so until December. Reference to the Regina summary will show that the tendency to temperature extremes is even greater in Saskatchewan than in Manitoba, an absolute maximum of 107° and a minimum of -56° having been registered. The mean daily range of temperature during the summer months is here, as in the other prairie provinces, very large, amounting to between 25 and 28 degrees; occasionally during both early June and the latter half of August the temperature goes dangerously near the freezing point, and there are several instances on record of considerable damage by frost to unripened crops. The mean total annual precipitation is from 14 to 18 inches, of which amount nearly 60 p.c. falls in the growing season, May-August. The snowfall is from 30 to 36 inches in western and southern districts and from 10 to 15 inches greater in the east and north.