

followed by 5 years of average or above-average temperature. After this the coldest winters were those of 1875, 1883, 1888, 1893 and 1904, 1905 and 1918, and the mild winters 1886, 1889, 1892, 1900, 1902 and 1906, 1908, 1910, while 13 winters other than those named were nearly normal.

While, as we have seen, the winters vary very considerably in severity, yet as the spring advances departures from a normal value diminish, and the summer season throughout the Dominion is subject to relatively small variations. There are differences, however, and in Alberta the summers of the eighties, exclusive of 1881, 1886 and 1889, were distinctly cooler than any term of years since, while the summers of 1894, 1896, 1898 and 1906 were especially marked by high temperature. In nearly all the other years the mean of the season differed very little from the normal derived from the whole period. The general character of the summers as regards temperature has been much the same in Manitoba as in the more western provinces. In the seventies they were warm, while in the eighties they were cool, especially in 1883 and 1885. The nineties were also cool, exclusive of '90, '93 and '94, but since 1900 warm summers have predominated with however marked exceptions in 1904 and 1905 and again in 1915.

From Ontario eastward the year 1869 had the coolest summer in the half century, and after that the coolest summers occurred from 1882 to 1891, exclusive of 1887 and in 1902-3-4. A decade of warm summers commenced in 1892 and then since 1905 warm summers have predominated, but 1912-15 and '17 were comparatively cool. The spell of greatest heat ever recorded in Ontario occurred in the first week of July, 1911, when temperatures above 100 were registered on several consecutive days in the peninsula of Ontario.

Fifty years of meteorological records afford no ground for belief that the precipitation of the Dominion has changed with a gradual deforestation and the general activities of man in covering the country with a network of railways and wires carrying electrical currents. Variations of a character which suggests cycles probably due to cosmical causes are however quite apparent, but at the same time perplexing, and it may be assumed with a high degree of probability that there has been no permanent progressive change in either rainfall or snow.

The Winnipeg records and also records from a shorter term of years in the West indicate that the eighties included more dry summers than in any corresponding period since, while the Alberta records show a remarkable period of about six wet summers from 1899 to 1904 and again from 1911 to 1915.

While 1878 was the year of greatest precipitation in Ontario, and also the summer of greatest rainfall, the seventies as a whole had dry summers. In the eighties the summers of '80 and '83 and '85 were wet and the others about normal excepting '87 which was very dry. In the nineties the summers of '95, '96 and '98 and '99 were particularly dry, while the other years had an ample but not