

At Toronto the coldest winters were those of 1875 and 1904 with a mean of  $17^{\circ}$ , followed closely by 1918 with a mean of  $18^{\circ}$ . The warmest winter was in 1890 with a mean of  $30^{\circ}$  and the next warmest 1906 with a mean of  $28^{\circ}$ , which give a difference of  $13^{\circ}$  between the warmest and the coldest winters. The coldest winter monthly mean recorded was  $10^{\circ}\cdot2$  in February, 1875, and the warmest January mean was  $32^{\circ}$  in 1880 and the warmest February was  $30^{\circ}\cdot3$  in 1882.

At Montreal the coldest winter mean was  $10^{\circ}$  in 1875 and the warmest  $21^{\circ}$  in 1878 and 1892; the coldest January was  $4^{\circ}$  in 1888 and also in 1893, and the warmest  $22^{\circ}$  in both 1880 and 1913. The coldest February was  $6^{\circ}$  in 1885 and the warmest  $27^{\circ}$  in 1877.

In Nova Scotia, as represented by Halifax, the coldest winters were those of 1868 and 1905, with mean temperatures of  $18^{\circ}\cdot3$  and  $18^{\circ}\cdot0$ , respectively, and the warmest were those of 1870 and 1890, each with a mean temperature of  $28^{\circ}\cdot3$ . The coldest January was that of 1875 with a temperature of  $16^{\circ}$ , and the coldest February occurred in 1904 with a mean of  $17^{\circ}$ .

The lowest temperatures on record at various stations in Canada are as follows: Fort Good Hope, Mackenzie river  $-79^{\circ}$ ; Fort Vermilion  $-78^{\circ}$ ; Edmonton  $-57^{\circ}$ ; Prince Albert  $-70^{\circ}$ ; Winnipeg  $-53^{\circ}$ ; White River, Ontario  $-60^{\circ}$ ; Toronto  $-26^{\circ}$ ; Ottawa  $-32^{\circ}$ ; Montreal  $-28^{\circ}$ ; Quebec  $-34^{\circ}$ ; Halifax  $-17^{\circ}$ .

The record of 47 years at Winnipeg presents some very striking facts. For a period of 23 years from 1872 there were but five winters with a mean temperature higher than the mean of the whole period and during the 22 years from 1895 until 1916 there were but three winters below normal. Each of the past two winters has been, however, below, but not as low as the winters of 1883-4-5-7 and 8. It would appear that we are dealing with a long-period cycle.

The records at Toronto and Montreal present much the same features as Winnipeg, but to a somewhat lesser degree. One is struck by the fact that the winters for a little better than the first half of the period contained three distinctive groups of years which are not evident in the second half. In the first of these groups, 1873-1883, the mean winter temperature see-sawed between extremely cold and comparatively mild, 1873, '75, '77, '79, '81 and '83 being cold while the intermediate winters were mild. Then in the second group we have six consecutive cold winters, followed by a group of four unusually mild winters. Following severe winters in 1893 and 1894 there were ten winters with nearly normal temperature, but most of them slightly in excess of average. The winters of 1904 and 1905 were very cold in Toronto and somewhat below average in Montreal, and at both places were followed by an exceptionally mild winter in 1906 and a very cold winter in 1907. Since that time, with the exception of moderately cold winters in 1911 and 1912, the winter curve has been mostly above the normal until 1918, which produced one of the coldest winters on record. In Halifax the winter of 1867-8 was the second coldest winter on record and was