## REMARKS ON THE METEOROLOGICAL RESULTS AT TORONTO FOR THE YEAR 1899



## TEMPERATURE.

The mean temperature of the year 189) was $45^{\circ} \cdot 83$, being $1^{\circ} .53$ warmer than the average of 59 years and $\mathrm{I}^{\circ} \cdot 32$ colder than 1898 .

The mean temperature of the several months was in nine instances above and in three below the average for the respective months, the average excess to the average defect being in the ratio of $2^{\circ} 72$ to $2^{\circ} \circ 3$. On each of 220 days the mean temperature was above the normal of that particular day and below on 145 days. The mean temperature of each month, with the difference from the normal, was: January, $22^{\circ}{ }^{\circ} 52+0^{\circ} \cdot 04$; February, $19^{\circ} \cdot{ }^{\circ} 28-3^{\circ} \cdot 29$; March, $27^{\circ} .99-{ }^{\circ} 0^{\circ} 85$; April, $44^{\circ} 99+3^{\circ} .87$; May, $55^{\circ} 12+2^{\circ} .80$; June, $65^{\circ} \cdot 28+2^{\circ} 82$; July, $68^{\circ} \cdot 77+1^{\circ}$ ol ; August, $69^{\circ} 37+3^{\circ} \circ 7$; September, $56^{\circ} 76-1^{\circ} 96$; October, $50^{\circ} \cdot 45+3^{\circ} 97$; November, $40^{\circ} \cdot 58+4^{\circ} 40$; December, $28^{\circ} 89+2^{\circ} 49$. Dividing the year into the ordinary seasons we have for Winter, $23^{\circ} 26$; Spring, $55^{\circ}{ }^{\circ} 13$; Summer, $64^{\circ} 97$; Autumn, $39^{\circ} 97$. The thermic anomalies differ from the normal temperature proper to the latitude: Winter,- $12^{\circ} 60$; Spring,- $2^{\circ} 50$; Summer,- $1^{\circ}{ }^{\circ} 27$; Autumn,-4 $4^{\circ} 36$; In three months during the year the observed temperature exceeded the normal value for the latitude, viz: June, $0.68 ;$ July, 0.07 ; August, 0.87 . The mean daily range for the year was $17^{\circ} 51$, the geatest monthly average occurring in August ( $24^{\circ} 02$ ) and the least in December ( $12^{\circ} 13$ ). The greatest daily range $\left(35^{\circ} 1\right)$ occurred on the 23 rd June, and the least $\left(3^{\circ} 9\right)$ on the 24 th November. The warmest month relatively was November, estimated by its excess ( $4^{\circ} 40$ ) above the normal, August the warmest absolutely ( $69^{\circ} \cdot 37$ ). The coldest absolutely was February ( $19^{\circ} \cdot 28$ ). It also was the coldest relatively, its mean being $3^{\circ} \cdot 29$ below the normal.

The climatic difference was $50^{\circ} \circ 9$, the warmest day was the 20th of August, mean temperature, $77^{\circ} 43$, and the coldest the ioth February, $-5^{\circ} 42$; but the warmest day relatively was the 4 th January, it being $24^{\circ} \circ$ above its proper normal, and the coldest the Ioth February, which was $28^{\circ} 5$ below the normal. The average temperature of the warmest and coldest days from former years was $78^{\circ} \circ 7$ and $2^{\circ} 24$ below zero. The highest temperature of the year $\left(92^{\circ} 1\right)$ occurred on the 19th August, and the lowest ( $122^{\circ}$ o below zero) on the 11 th of February. The annual range from these extremes was $104^{\circ} 1$, being $8^{\circ}{ }^{\circ}$ o less than 1898 and 0.8 more than the average annual range. There were 28 instances in which the temperature at the hour of observation was $20^{\circ}$ above the normal and 53 when a defect of equal amount occurred. The most striking deviations from the daily normal curve of temperature have been as follows:

## IN EXCESS.



