METEOROLOGY

The want of a perfect and simultaneous system of meteorological observations in British North America has long been felt by individual observers in this department of physical science; and while Astronomy has marked with unerring accuracy the paths of our planets, and the vastly deep but certain extent of the tracks of our periodic comets, not one step has been taken to record, in a perfect and complete manner, the varying changes of our atmosphere. This cannot be owing to its want of importance, for it has a direct bearing on the health of individuals, on agriculture, and on the wealth and commerce of nations. It may be true that a few careful and reliable records have been kept by individual observers at some points in this country, but the requisite connection of a perfect and unbroken cord of observations taken at the same hours, have, up to the present time, not been attempted.

The climatology of so vast an extent of territory must surely influence man's present happiness and future destiny,—the boundaries of British North America stretching, as they do, from the Atlantic to the Pacific Oceans, including in its interior lakes of fresh water equal in extent to some of the inland seas of Europe, and which contain nearly one-half of the fresh waters of our globe; mighty rivers which flow on in their onward course to the seas, and which would seem only dependencies of the Atlantic Ocean and frozen regions, which extend to the extreme North; lofty mountain ranges which divide this portion of our continent into unequal slopes, and all of which tend, in no small measure, to modify our climate, and to render fruitful and fertile this favoured region of the earth's surface.

The following remarks will be confined more especially to the meteorology of the neighbourhood of Montreal, for it can scarcely be expected that the short time allowed for compiling the present work would allow of obtaining from distant points the necessary returns.

The following tables will show some interesting means of the past 20 years on the general climat of the vicinity of Montreal. They have been all reduced from observations made with standard instruments. Much attention has been paid to the observations on the winds, a subject which opens up an extensive field for investigation.

METEOROLOGICAL OBSERVATIONS.

Temperature.	Av'g, of 20 years.
Mean temperature of the year	41°56
Warmest month	July.
When the mean temperature of the month was	72°78
Coldest month	Feb.
When the mean temperature of the month was	12°10
Difference between the warmest and coldest months	60°68
Highest temperature which occurred was on	1852 June 15,
And was	100°0
Lowest temperature which occurred was on	1859 Jan. 10,
And was	—43°6
Range of the year	132°7
BAROMETER.	
Mean pressure of the year	29.676
Month of highest pressure	Jan.
When the mean pressure for the mo'th was	29.794
Month of the lowest pressure	March.
When the mean pressure for the mo'th was	29.492
Maximum pressure of the year	30.876
Which occurred	Jan. 8, 1855
Minimum pressure of the year	28.689
Which occurred	Dec. 10, 1855
Range of the year	2.187
HUMIDITY.	
Mean humidity of the year	.794
Month of greatest humidity	Nov.
When the mean of the month was	.824
Month of least humidity	July.
When the mean of the month was	744
CLOUDS.	In 10ths
Mean cloudiness of the year	4.4
Most cloudy month	Nov.
Least cloudy month	June.

Temperature.	Av'g, of 20 years.
When the mean of the month was	2.0
Number of fair days	232
Number of fair nights	110
WIND.	
Resultant direction	S67 30W
Month of greatest mean velocity	Dec.
When the mean velocity was	8.942
When the mean velocity was	3.366
RAIN.	
Total depth in the year	47.224
Number of days on which rain fell	87
Greatest depth fell in 42 minutes, 28th May, 1857	1.201
SNOW.	
Total depth in the year in inches	79.50
Number of days on which snow fell	46
Greatest depth in one day	17.00
Which fell on	Dec. 31, 1857

First frost of Autumn occurred in

1858 on	Aug. 25	1863	Sept. 12
1859	Oct. 7	1864	Oct. 22
1860	Sept. 3	1865	Sept. 16
1861	Sept. 5	1866	Sept. 16
1862	Aug. 24		

First snow of Autumn fell in

1858 on	Nov. 20	1863	Oct. 28
1859	Oct. 21	1864	Nov. 9
1860	Sept. 29	1865	Oct. 28
1861	Oct. 23	1866	Oct. 4
1862	Nov. 10		

Winter fairly set in, and all out-door work suspended in

1858 on	Dec. 20	1862	Dec. 19
1859	Dec. 10	1863	Dec. 9
1860	Dec. 2	1864	Dec. 12
1861	Dec. 23	1865	Dec. 22

The most prevailing wind is the westerly. The following table for one year (1856), will give a fair and pretty accurate idea of the monthly record of the winds. (This has been chosen as an intermediate year.) The importance of a study of the varied winds which pass, over us has hitherto, received but little attention. More observations have been registered on the temperature and pressure of the atmosphere than on any other physical phenomenon, while the very important study of the winds has received but a passing notice; yet its influence on the different climatic changes is too apparent. It is with this object in view that the following tables have been condensed for the purpose, hoping it will receive from observers more attention than it has up to the present time, for we are led to believe that much depends upon the velocity and direction of the atmospheric currents in causing sudden and varied changes, both in temperature and pressure, and which influence directly the climate of British North America:—