the least so. The diurnal variation of the humidity has one minimum which, on the annual average, occurs at four P.M., but in autumn and winter is frequently at two P.M. The maximum takes place at six A.M., on the annual and separate quarterly averages. The quarterly and annual means of humidity for the two years, 1841 and 1842, as ascertained, are—

Winter,.....	84	.....	84	= 84
Spring,.....	72	.....	70	= 71
Summer,.....	76	.....	76	= 76
Autumn,.....	81	.....	82	= 82
In the years,.....	78	.....	78	= 78

Pressure of Gazeous Atmosphere.—The diurnal pressure has one maximum which occurs about the coldest hour of the day, and one minimum about the warmest hour. In summer, the maximum is about four A.M.,—in autumn, six A.M.—in spring, eight A.M.—and in winter, intermediate between eight and ten A.M. In spring and summer the minimum is at four P.M.—in autumn, intermediate between two and four—and in winter, at two. These differences are obviously connected with the variations of temperature in the different seasons. The average diurnal variation in summer is nearly double the amount at any of the other three seasons of the year. The diurnal variation of the gazeous atmosphere exceeds the diurnal variation of the barometer in every quarter, as well as on the annual average. The annual variation consists of a maximum pressure in midwinter, and a minimum in midsummer. The average amount of the difference in the daily pressure in the several quarters of 1841 and 1842, are 29 inches, + the figures in the table.

	Max.		Min.		Difference.		
Winter	.511	.439 ...	.445	.381 ...	.066	.058 =	.062
Spring.....	.446	.422 ...	.374	.366 ...	.072	.056 =	.064
Summer	.213	.276 ...	.095	.159 ...	.118	.117 =	.1175
Autumn.....	.347	.416 ...	.293	.342 ...	.054	.074 =	.064
In the years.	.374	.383 ...	.302	.314 ...	.072	.069 =	.0705

The quarterly and annual means for the two years are 92 inches, + the figures in the table.

Winter.....	.480	.411 = .446
Spring	.420	.395 = .408
Summer.....	.158	.225 = .192
Autumn.....	.327	.379 = .353
In the years.....	.346	.353 = .349

Extreme Ranges.—The following are the maximum, minimum, and range of the Thermometer, Barometer, Elastic Force of the Atmospheric Vapour, and Humidity of the Air, as observed in Toronto in 1841 and 1842:—

		Max.	Date.	Min.	Date.	Range.
Thermometer	1841,	91°7	June 29	5°2	March 14	96°9
"	1842,	90.8	July 19	2.8	Jany. 2	88.0
Barometer....	1841,	30.355	Jan. 18	28.727	Feby. 22	1.628
Barometer....	1842,	30.417	Dec. 21	28.672	Dec. 4	1.725
Elastic Force	1841,	.860	July 23	.017	March 14	.843
"	1842,	.741	Aug.27	.049	Feby. 8	.692
Humidity....	1841,	.100	Frequent	22	July 2	78
"	*1842,	.100	do	22	Twice in Mar.	78

Direction and Force of the Wind.—The Anemometer used at the Observatory fully answers its purpose in recording the *direction*, but was less satisfactory in recording the *pressure* of the winds. In pressures of less than 1 lb. the plate did not move, or the record of its motion was very uncertain. Even in higher winds, the spring was insufficient to bring the pencil back to the zero, so that high pressures might continue to be marked after the wind had lulled. But these defects have been subsequently somewhat overcome, and more satisfactory performances obtained. In the present tables no pressures under 1 lb. are noticed. The force of the wind was also observed by *estimation* on a scale of thirteen gradations, designated by corresponding terms. The terms of the scale, and their corresponding values, varied from "very light, nearly calm," or 0.2 lbs., to "great storm," or 20 lbs. On comparing in detail the records by estimation and by the instrument, the record is generally satisfactory,—both record a preponderance of pressure from the N. and the W.; and in both years the hours in which the winds blew from the points included between N. and W. exceeded those from any one of the other quarters. A great majority of the high winds were also from the same direction. The hours of calm in 1841 were 2669, and in 1842 were 2409; those at which there was more or less wind were respectively 6010 and 6250,—the hours of wind being to those of calm in proportion, differing little in either year from that of 5 to 2; the balance to make up the number of 8760 observations to the year, being 81 and 101, being the number of hours in the respective years during which the instruments were out of order. In reference to the diurnal variation of the wind's force, its pressure is considerably greater during the day than the night; the force begins to increase between 6 and 8, A.M., reaches its maximum at noon, or soon after, and diminishes again until 10 or 12 P.M., undergoing little change during the remainder of the night. The pressure of the winds for 1841 and 1842, as taken by the anemometer, was respectively 4246.7 and 6247.0 lbs.; and divided by the number of hours during which the several winds prevailed, with the whole recorded pressure, we draw the following result:—

Direction.	Hours of prevailing Winds.		Whole Pressure.	
N.	795 ...	450	543.1 ...	512.8
N. N. E.	348 ...	333	222.0 ...	341.3
N. E.	330 ...	208	164.3 ...	202.5
E. N. E.	310 ...	470	131.6 ...	317.6
E.	460 ...	519	324.0 ...	428.4
E. S. E.	395 ...	278	135.7 ...	295.9
S. E.	226 ...	333	235.0 ...	137.4

Ontario, and the difference of its latitude from that of Montreal, may, and probably does, materially affect the humidity of the air. We are not disposed to think that May is our driest month, and we feel confident we will be confirmed in that opinion by many a housekeeper, accustomed to "flitting" at that period of general removal and destruction of household furniture.