

METEOROLOGY FOR APRIL, 1870.

PRIVATE OBSERVATORY, HOBART TOWN.

Day of Month.	Bar. 37 feet abv. sealevel corrected & reduced.		Self-Registering Thermometers.				Wind.		
	Highest.	Lowest.	Highest in shade.	Lowest in shade.	Highest in sun.	Lowest on grass.	Direction from three daily re- gisters.	Force in lbs. per square foot.	Rain in Inches.
	In.	In.	°	°	°	°			
1	30.264	30.150	76.47	120.0	44.0		NW SW	.52	
2	30.211	30.183	69.49	106.0	47.0		NW SE	.52	
3	30.278	30.243	75.54	109.0	46.5		W SE	.52	
4	30.278	30.253	71.50	103.0	46.0		NW SE	1.04	
5	30.411	30.336	69.54	107.5	53.5		SW SE	1.04	
6	30.317	30.069	77.54	103.5	51.5		NW	.52	
7	30.010	29.939	78.59	109.0	57.0		NW	.78	
8	29.965	29.927	72.54	64.5	53.0		SE	.26	0.56
9	30.102	30.090	58.49	66.0	47.0		S N NW	.78	
10	29.829	29.673	71.53	107.0	50.0		NW SE	.52	0.50
11	29.918	29.724	67.54	105.0	53.5		NW	1.30	0.02
12	29.902	29.868	64.47	81.0	44.5		NW	1.04	
13	29.866	29.646	62.53	69.0	53.0		NW SE	.26	0.25
14	30.033	29.994	59.52	61.5	51.5		SE	0.	0.03
15	30.176	30.129	59.53	84.0	51.5		SE	.78	0.16
16	30.132	29.920	61.52	64.0	52.0		SE	.26	1.45
17	29.818	29.700	69.59	72.0	59.0		SE NE	.26	0.15
18	29.826	29.771	62.55	65.0	55.0		NW SE	0.	0.94
19	29.990	29.937	54.42	56.5	42.5		SE S	1.30	
20	30.060	29.998	57.46	64.0	41.0		SW SE	1.04	
21	30.136	30.087	64.45	99.0	41.5		NW SE	1.04	
22	30.061	29.830	57.43	66.0	37.5		NW NE	0.	
23	29.632	29.585	62.43	101.0	43.5		NW SE S	.52	0.02
24	29.895	29.580	56.47	94.5	42.5		SW	3.38	
25	30.300	30.216	54.40	90.0	34.5		NW SW SE	1.04	0.01
26	30.397	30.336	54.50	59.0	44.0		SW SE	.26	
27	30.371	30.305	59.49	89.0	46.5		SW SE NE	0.	0.02
28	30.247	30.126	59.45	90.0	42.5		NW SE	0.	
29	29.940	29.868	67.49	104.0	46.5		NW SE	.26	
30	30.164	30.060	59.49	72.0	44.0		SE SW	1.30	0.14
Monthly mean			57.21	86.13	47.57	Total Force ..	21.32	4.25	
			30.045						

The mean in all cases is taken from the sums of the three daily registers, and not from the maximum and minimum.

The direction of the wind is registered from currents moving at a height of 192 feet and the force according to Lind's Wind Gauge. The supposition, however, of a uniform velocity during the month is a very arbitrary one, and the results can be considered only approximately correct.

The relations of the quantities of rain which fell under the different winds are registered each evening at sundown.

The 25 years' standard tables are used for obtaining the difference from the average.

Leafing, Flowering, and Fruiting of a few Standard Plants in the Royal Society's Gardens during the month.

- 10th—Leaves of Elm (*Ulmus campestris*) commencing to fall.
 15th—Chinese Chrysanthemum commencing to flower.
 20th—Seeds of Hornbeam (*Carpinus betulus*) ripe; leaves of Mountain Ash commencing to fall.
 25th—Ditto of Black Mulberry ditto ditto.

Barometer mean, 30.045 in., being 0.154 in. above the average.
 Temperature mean, 57.21°, being 2.18° above the ditto.
 Solar intensity mean, 86.13°, being 5.68° below the ditto.
 Dew point mean, 49.3°, being 2.19° above the ditto.
 Humidity of air mean, .81, being .05 per cent. above the ditto.
 Elastic force of vapour mean, .374, being .149 per cent. below the ditto.
 Total amount of rain, 4.25 in., being 2.47 in. above the ditto.
 Increase of spontaneous evaporation on rain fall, 1.06 in.
 Mean amount of ozone, 7.01, being 0.02 of chromatic scale above the ditto.
 A feeble amount of atmospheric electricity all through the month.
 The apex of Mount Wellington covered with snow on the 23rd.
 A great number of calms registered, and a small amount of wind force.

FRANCIS ABBOTT.

ANALYSIS OF OBSERVATORY RECORDS, AND HEALTH REPORT FOR APRIL. BY DR. E. SWARBRECK HALL.

IN most respects the climatic character of this month has deviated widely from the normal standard, though on the whole most favorable to health and life.

Barometrical pressure mean, 30.045 was +.154 above the mean for April. Only three times in the previous 29 Aprils has this high mean been exceeded, and that by very little. Altogether in the 30 years, the mean has only reached 30.000 and upwards eight times. At the same time the extreme range for this month was only .826 of an inch; the extremes being 30.411 maximum on the 5th, and on the 23rd, minimum 29.585. Equable high pressure was, therefore, the character of the barometrical records. Such phenomena are generally associated with an epidemic constitution of the air, but at this time such a tendency was checked by a copious rainfall, and the unusual pre-eminence of sea breezes.

Wind-force had only a total of 21.32 lbs., being 25.36 lbs. below the April mean. Fifty-five out of the 90 records, were winds from the southerly points of the compass, with about two-thirds of the total force. South-east winds, the healthiest point, were 40 in number, being 25 above the April average, and with an aggregate force four times greater than usual. North-west, the least healthy point, was about the average in number, but much below it in force. Calms were 37, being 7 above the average.

Mean Temperature, both by the three daily observations and the maxima and minima self-registering thermometers, accorded more closely than usual; the former being 57.21 degrees, the latter 57.02. The mean is + 2.18 above the average for April. The *daily range*, 13.97 degrees, however, was - 3.25 less than the 25 years' average. Only two years in the previous 29 had a smaller daily range; i.e., 1854 with 11.00 degrees, 1852 with 12.60. The extremes also were not great, maximum being 78 at mid-day on the 7th, minimum, 40 in the night of the 25th.

Solar Intensity mean 86.13 was - 5.68 degrees below the average, owing to the very cloudy and wet character of the month.

Terrestrial Radiation, on the other hand, was + 4.50 above the mean, being 47.57 degrees.

Elastic-force of Vapour ranged from 207 to 633, with a mean of 374, which is + 49 above the average, and would have been inimical to health, but for humidity and rain-fall.

Humidity mean, 81, was + 5 above the average.

Rain-fall 4.25 inches was + 2.47 above the April average, and fell in such a way as to be most beneficial to health and vegetation; copious enough to cleanse the sewers, water courses, &c., yet not so heavy as to cause floods. and commencing so gently as to saturate the soil gradually. The number of wet days, 13, were only slightly (+ 1.18) above the average. Only two Aprils in the previous 29 years had a greater rain-fall, 1856 with 5.01 inches, 1852 with 4.99 inches, 1860 with 2.86 inches, was the next highest. Notwithstanding the dry character of February and March, the fall of rain on the aggregate of the first four months of this year exceeds the average by + 3.61 inches. *Snow* existed on Mount Wellington on the 22rd and 24th.

Spontaneous-evaporation, with so little sunshine and winds, and so much rain and clouds, was much less than rain-fall, i.e., 3.19 inches.

Cloud mean, 7.13, was + 1.39 above the average, contrasting remarkably with the previous month of March.

Ozone mean, 7.01, barely exceeded the average, notwithstanding the heavy rainfall and frequent sea-breezes. The gentle character of the latter accounts for this.

Electricity of a positive character was very small, and nils very numerous.

There were only 34 deaths, being nearly - 10 less than the April average of the previous 13 years. Seven (7) of these were under 1 year old; two (2) from one to five, none from that to twenty-two, but between that and sixty, sixteen (16), the rest (9) were from sixty-eight to eighty-five years old. A girl aged twenty-two died from *Typhoid-fever*, and there was only one other death in the Zymotic class, a child aged three months, from *Diarrhæa*. *Consumption* caused four deaths, none of them born in Tasmania. *Scarlet-fever* of a mild type was pretty general, but without a death. *Cutaneous diseases* were very prevalent, a result no doubt of the previous long-continued dry weather.