

APRIL, 1871.

PRIVATE OBSERVATORY, HOBART TOWN.

| Day of Month. | Bar. 37 feet abv. sea level corrected & reduced. | | Self-Registering Thermometers. | | | | Wind. | | Rain in Inches. |
|---------------|---|---------|-----------------------------------|-------|------------------|------|---|-----------------------------------|---|
| | Highest. | Lowest. | Highest in shade. | | Lowest on grass. | | Direction from three daily re- gisters. | Force in lbs. per square foot. | |
| | | | ° | ° | ° | ° | | | |
| 1 | 30.191 | 30.153 | 75 | 45 | 113.0 | 45.5 | NW SW SE | 1.04 | 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. |
| 2 | 30.191 | 30.105 | 77 | 45 | 115.0 | 42.0 | NW N SE | 1.04 | |
| 3 | 30.177 | 30.148 | 74 | 48 | 100.5 | 48.0 | NW NE SW | .78 | |
| 4 | 30.217 | 30.125 | 63 | 54 | 67.0 | 52.5 | NW SE | .78 | |
| 5 | 30.178 | 30.115 | 69 | 53 | 100.0 | 52.0 | SW SE W | .52 | |
| 6 | 29.126 | 30.085 | 74 | 48 | 105.0 | 44.0 | NW NE SE | .26 | |
| 7 | 30.005 | 29.813 | 67 | 45 | 95.5 | 43.0 | NW | .26 | |
| 8 | 29.940 | 29.844 | 69 | 50 | 101.0 | 45.0 | NW W NW | 1.04 | |
| 9 | 29.932 | 29.850 | 68 | 50 | 96.0 | 50.5 | NW | 7.80 | |
| 10 | 29.824 | 29.647 | 74 | 55 | 104.5 | 52.0 | NW | 5.72 | |
| 11 | 29.963 | 29.834 | 71 | 48 | 102.5 | 46.0 | NW SE W | 1.04 | |
| 12 | 29.948 | 29.565 | 62 | 42 | 65.0 | 39.0 | NW | 3.38 | |
| 13 | 29.598 | 29.499 | 62 | 43 | 87.0 | 38.5 | W NW SW | 7.80 | |
| 14 | 30.189 | 30.011 | 59 | 43 | 91.0 | 37.0 | SW SE | 5.72 | |
| 15 | 30.260 | 30.251 | 68 | 38 | 95.0 | 37.5 | SW NW | .52 | |
| 16 | 30.278 | 30.184 | 68 | 40 | 99.5 | 36.0 | NW SE | .52 | |
| 17 | 30.203 | 30.135 | 70 | 41 | 91.0 | 40.5 | NW SE | .78 | |
| 18 | 30.165 | 30.055 | 71 | 44 | 101.0 | 43.0 | NW | .52 | |
| 19 | 29.907 | 29.679 | 79 | 48 | 105.5 | 47.0 | NW W | 5.63 | |
| 20 | 30.279 | 29.942 | 61 | 47 | 95.0 | 46.0 | SW SE | .78 | |
| 21 | 30.464 | 30.378 | 71 | 45 | 99.5 | 43.0 | NW SE | 1.04 | |
| 22 | 30.174 | 29.979 | 66 | 41 | 93.0 | 40.0 | NW NE | .78 | |
| 23 | 29.735 | 29.614 | 65 | 50 | 84.0 | 49.0 | NW | 5.73 | |
| 24 | 29.860 | 29.664 | 67 | 45 | 92.0 | 43.5 | NW | 2.36 | |
| 25 | 29.824 | 29.693 | 64 | 45 | 88.0 | 44.0 | NW | 3.64 | |
| 26 | 29.907 | 29.832 | 66 | 50 | 72.5 | 48.5 | NW | .78 | |
| 27 | 29.980 | 29.879 | 78 | 53 | 105.0 | 51.0 | NW W | 1.30 | |
| 28 | 30.115 | 30.015 | 68 | 51 | 70.0 | 48.0 | W SW | 1.30 | |
| 29 | 30.345 | 30.304 | 68 | 42 | 97.5 | 39.0 | NW NE SE | .52 | |
| 30 | 30.361 | 30.330 | 57 | 44 | 64.0 | 40.0 | NW NE | 0. | |
| Monthly mean | | | 58.36 | 90.32 | 44.37 | | Total force 73.38 | 0.86 | |
| 30.019 | | | | | | | | | |

Leafing, Flowering, and Fruiting of a few Standard Plants in the Royal Society's Gardens during the month of April, 1871.

- 12th.—Coe's late red plum-ripe.
 15th.—Leaves of common elm falling.
 20th.—Chinese chrysanthemum commencing to flower.
 22nd.—Leaves of mountain ash commencing to fall.
 25th.—Seeds of *Carpinus betulus* ripe.
 28th.—Leaves of black mulberry commencing to fall.

Barometer mean, 30.019in., being 0.128in. above the average.

Temperature mean, 58.36°, being 3.33° above the average.

Solar intensity mean, 90.32°, being 1.49° below the average.

Dew point mean, 46.6°, being 0.51 below the average.

Humidity of air mean, .67, being .09 per cent. below the average.

Elastic force of vapour mean, .323, being .002 per cent. below the average.

Total amount of rain, 0.86in., being 0.92in. below the average.

Increase of spontaneous evaporation on rain fall, 2.58in.

Mean amount of ozone, 6.47, being 0.52 of chromatic scale below the average.

Electricity active on the 6th, 8th, 9th, 10th, 11th, 12th, 14th, 15th, 20th, 21st, 24th, 25th, 27th, and 29th.

Mount Wellington covered with snow on the 12th.

Strong Southern Lights on the 24th.

FRANCIS ABBOTT.

NOTES ON THE METEOROLOGY AND MORTALITY OF THE MONTH OF APRIL, 1871.

By DR. E. SWARBRECK HALL.

This month though unusually mild as to temperature, and with great aerial movements, was characterised by high atmospheric pressure, wide daily range of temperature, defective rain-fall, &c. The deaths were much below the average, and with a very equable distribution as to age, but a most unparalleled inequality of the sexes, females exceeding males in the proportion of 16 to 12.

Atmospheric pressure mean, 30·019, exceeded the 25 years' standard average by +·128. On ten days the variations exceeded one-fifth of an inch, the maximum, a rise of +·646, having occurred on the 14th. Nevertheless the range for the whole month was only ·965 of an inch, the maximum being 30·464 on the 21st, minimum, 29·499, on the 13th.

Wind-force amounted in the aggregate to 73·38lbs., being +26·70 above the average. *North-west* winds were recorded 51 times out of the 90, with a force of 41·38lbs. On four days these winds partook of the character of *hot-winds* though in a subdued form. *West* winds were unusually frequent and strong. On the 19th one was registered as exercising a pressure of 10·42lbs. to the square foot, the maximum of the month. *South-west* to were more numerous and stronger than common; no *South* winds were recorded; *South-east* were only 13 in number with a total of 4·94lbs. force; no *East* winds; *North-east* 5 in number, only ·78 of a lb. in force; one *North* wind ·26 of a lb. strength.

Temperature mean, 58·36 degrees, was +3·33 above the April average. The years 1855-6-7, only, out of the 30 years recorded, had a higher mean. The maximum was 79 degrees on the 19th by the self-registering thermometer, lent 80 by the observed thermometer at one p.m. There was a strong hot-wind on that day. The April maximum has often been higher than this. The minimum, 38, was recorded for the night of the 15th. It has often been lower in previous Aprils. The *wet bulb thermometer* mean was 52·11 degrees, being +1·02 above the average.

Daily range of temperature mean, 21·93 degrees, was +4·71 above the average. The highest recorded was 32 degrees on the 2nd.

Solar intensity mean, 90·32 degrees, was -1·49 less than the average, which may be accounted for by the excess of cloudy days. The maximum was 115 degrees on the 2nd.

Terrestrial radiation mean, 44·37 degrees, was -1·30 above the average, the minimum was 36 degrees in the night of the 16th.

Elastic force of vapour mean, 323, was -2 less than the average; it ranged from minimum 215 in the morning of the 14th to maximum 545 at noon on the 19th.

Humidity mean, 67, was -9 below the average.

Rainfall amounted to only ·86 of an inch, -·92 of an inch below the April average -·62 of an inch fell in one day, the 13th. Only 4 wet days were registered, being -7·82 less than the average. Though almost all the meteorological phenomena of this month were widely different from those of April, 1870, in no one was the contrast greater than in rainfall. In that month there were 13 wet days with an aggregate amount of 4·25 inches. *Snow* appeared on Mount Wellington on the 12th, 13th, and 14th.

Spontaneous evaporation was 3·38 inches, a great excess over rainfall, as was sure to be the case with so much wind and warmth.

Cloud mean, 6·26, was +·52 above the average.

Ozone, mean, 6·47, was -·52 only below the average. Saturation (10) was registered on the mornings of the 14th and 25th. A much greater deficiency of ozone might have been expected with such a prevalence of the anti-ozonic winds from the north-west, and the very dry character of the month.

Electricity was indicated by the electrometer for all the 60 observations during the month, 12 of the records being "positive" with tension from 4 to 7·5; the other 48 "negative" with tension from 2·5 to 7·5.

Deaths.—Only 28 persons were registered as dying during this month, though another is known of, but not yet registered as the law requires. The

average April deaths for the previous 14 years is 42 12-14th, ranging from 27 in. 1869 to 54 in 1864. No year had less than 34, but the present one and 1869. Under one year of age there were 5 deaths ; from 1 to 5 one death ; from 5 to 10 the deaths were 3 ; from 10 to 15 one death ; from 15 to 20 one death ; from 20 to 60 the deaths were 8 ; and at 60 and all ages above, 9, the oldest being 88 years old. So equal a distribution in the various groups of ages is a very rare occurrence. 12 only were males, 16 females, the disparity of the sexes being usually just the reverse. No epidemic disease was prevalent, and in all the *Zymotic class* there were only 2 deaths, from *diarrhœa*, aged 5 weeks and 15 months respectively. *Consumption* caused 4 deaths, one a native of Tasmania, the rest born in England, Ireland, and Scotland respectively. The last was only a visitor for health from Ceylon. The public *Hospital* had only 3 deaths, one of which came from another registration district, another was from *burns* on which an *inquest*, the only one in the month, was held. At the *Brickfields Male Invalid* establishment there was only one death, but at the *Cascades* there were 5.
