

APRIL, 1872.

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.		Direction from three daily re- gisters.	Force in lbs. per square foot.	Rain in Inches.
			°	°	°	°			
1	29.842	29.752	69.44	97.0	41.5	NW SE W	2.86		
2	29.974	29.940	66.48	100.0	45.0	SW SE E	1.04		
3	30.062	30.019	71.44	105.0	38.5	W SE S	.52		
4	29.852	29.699	73.49	98.0	44.5	NW SE	.78		
5	29.663	29.627	70.51	68.0	50.0	NW	.78	0.03	
6	29.580	29.547	70.52	86.5	50.0	NW	1.30		
7	29.921	29.832	67.49	100.0	47.0	NE SW NW	.52		
8	29.769	29.704	68.49	85.0	47.5	NW	5.99	0.07	
9	29.921	29.904	65.48	97.0	43.5	SW NE S	2.60		
10	30.021	29.998	69.43	99.0	39.5	WNW	.52		
11	30.241	30.182	65.46	92.0	42.0	NW W SW	.52		
12	30.302	30.103	72.38	100.0	33.5	NW	1.04		
13	29.929	29.829	70.49	94.5	44.0	N NW SW	5.72	0.50	
14	30.103	30.065	67.40	60.5	36.0	SW NW SE	.78		
15	30.192	29.976	65.45	84.0	40.5	NW SE NW	.78		
16	30.135	30.010	74.44	103.0	41.0	SW E SE	.78		
17	30.182	30.135	72.50	101.0	46.0	NW E SE	1.30		
18	30.194	30.157	70.45	100.0	41.5	NW E SE	1.04		
19	30.174	30.049	76.45	103.5	42.0	NW NE SE	1.04		
20	29.937	29.918	71.47	98.0	43.0	NW	3.12	0.70	
21	30.010	29.900	69.43	71.5	40.0	W SW S	10.94	0.23	
22	30.003	29.974	65.46	90.0	39.5	SW S	7.80	0.23	
23	30.087	30.052	64.49	22.0	47.0	SW	0.	0.03	
24	29.945	29.776	61.46	68.0	43.0	NW SE	0.	0.16	
25	29.818	29.752	60.53	97.0	49.5	S SE	.52		
26	30.075	30.029	64.53	88.0	52.0	SE	0.		
27	30.198	30.179	70.44	97.0	40.5	NW SE	0.		
28	30.242	30.224	67.45	81.0	40.0	NW NE SE	0.		
29	30.255	30.085	70.41	93.5	37.0	NW SE	.52	0.06	
30	29.950	29.776	65.44	70.0	38.5	WNW	.26		
Monthly mean 29.981			56.42	90.07	42.78	Tota force	53.07	2.01	

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.

Barometer mean, 29.981in., being 0.090in. above the average.

Temperature mean, 56.42°, being 1.39° above the average.

Solar intensity mean, 90.07,° being 00.74 below the average.

Dew point mean, 48.2,° being 1.09° above the average.

Humidity of air mean, .75, being .01 per cent. below the do.

Elastic force of vapour mean, .333, being .013 per cent. below the ditto.

Total amount of rain, 2.01in., being 0.23in. above the ditto.

Increase of spontaneous evaporation on rainfall, 0.24in.

Mean amount of ozone, 7.41, being 0.42 of chromatic scale above ditto.

A feeble amount of electricity all through the month. Thunder on the 4th. Large fall of snow on Mount Wellington on the 21st. Aurora on the 29th.

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

18th. Coes late red plum commencing to ripen.

14th. Chinese Chrysanthemums commencing to flower.

16th. Elm leaves commencing to fall.

26th. Black Ash ditto ditto.

26th. Black Mulberry ditto ditto.

30th. Seeds of Hornbeam ripe.

NOTES ON THE METEOROLOGY AND MORTALITY OF THE HOBART TOWN REGISTRATION DISTRICT DURING THE MONTH OF APRIL, 1872.

BY DR. E. SWARBRECK HALL.

The only meteorological phenomena of this month adverse to health were excessively high daily-range of temperature and high elastic-force of vapour. On the other hand, wind-force, temperature, rainfall, ærial purity, were all propitious to health and life, and consequently the deaths in the month were one-sixth less than the average of the previous 15 years' Aprils.

Atmospheric-pressure mean, 29·981, was only +·069 above the 30 years average for April. The maximum was 30·302 on the 12th, the minimum 29·547 on the 6th, the extreme range of the barometer being therefore only ·755 of an inch. The greatest movement in any 24 hours was a fall of—·395 of an inch on the 13th. On eight other days the movements exceeded one-fifth of an inch.

Wind-force total, 53·07 lbs., was, +6·13 lbs., above the April average. From the four healthiest points of the compass, S.E., S., S.W., W., the winds, both in frequency and force, greatly predominated over the other less favourable points. The strongest winds had a pressure of 5·21 lbs. to the square foot, and were recorded three times. Calms were registered at 32 out of the 90 observations, being +2 above the average.

Temperature-mean, 56·42°, was +1·09 above the average. The maximum was 76 on the 19th, the minimum 38 on the 12th. The *wet-bulb Thermometer* had the mean of 51·91°, being +0·82 above the average.

Daily-range of temperature, 21·83°, was +4·47 above the average. In only two years out of the 30, in 1857 and 1858, was the daily-range higher. Its effects were scarcely appreciable on deaths from diseases of the organs of circulation and respiration, but the deaths from apoplexy and paralysis were unusually numerous. The greatest range on any day was 34 degrees on the 12th; the high day maximum of that day being 72 degrees, and the low night minimum 38 degrees.

Solar-intensity mean 90·07 degrees, was - 1·67 below the average, the cloudy days being above the average. The maximum was 105 degrees on the 16th. Only two Aprils in the last 18 years have had a lower maximum.

Terrestrial-radiation mean, 42·78 degrees, was - ·91 below the average. The minimum was 33·5 degrees in the night of the 12th.

Elastic-force of vapour mean, 338, was × 9 above the average. The range was from 226 on the 12th to 485 on the 24th.

Humidity mean, 75, was - 1 below the average.

Rain-fall was 2·01 inches, being × ·24 of an inch above the average. It fell on 9 days, being - 1·70 less than the average. On two days, however, the rain was very heavy, *i.e.*, half an inch on the 13th and nearly three-quarters of an inch on the 20th, and nearly one-quarter of an inch on each of the two following days, so that as far as rain-fall can cleanse our drains, sewers, and city rivulet, they had this desirable advantage. *Snow* fell abundantly on Mount Wellington on the 21st and 22nd, but was not visible during the rest of the month.

Spontaneous evaporation amounted to 226 inches.

Cloud mean, 6·59, was × ·85 above the average.

Ozone had the mean of 7·41, which is × ·35 above the average. Only twice before in the previous 15 years has there been more ozone in April. Saturation (10) was recorded 7 times.

Electricity.—There were 15 "positive" records with tension 2 to 5. The "negatives" were 26, with tension from 1 to 4. "Nils" were registered 16 times out of the 60 observations.

Thunder was heard on the evening of the 4th. An *Aurora* was seen on the evening of the 29th.

The *Deaths* were 35 in number, being - $6^{10}/_{15}$ less than the average of the previous 15 years. Under one year old there were 6 deaths; from 1 to 5 there was only 1; from 5 to 10 also 1; from 10 to 15 there were 2; from 15 to 20 none; from 20 to 60 there were 14; at 60 and all ages above there were 11; the oldest being 79 years old. In the *Zymotic* class of diseases, there were 4 deaths, all from Diarrhœa. One of these, a child aged 7 months,

died in the group of houses where the deaths from typhoid fever occurred, referred to last month. Altogether the deaths in this group of houses during the three months (estimating the population at 150 persons) has been about six times more than the average for the whole city. In the *Constitutional class* of diseases there were 8 deaths. *Cancer* 3; *Tabes Mesenterica* 1; *Consumption* 4. Of the latter, two boys, aged 11 and 13 respectively, were natives of Tasmania. In the *Local class* of diseases—The 1st order, the *Brain and Nervous System*, had 7 deaths; 6 of them from *Apoplexy*, 1 from *Paralysis*. In the 2nd order, the *Heart and Organs of Circulation*, there was only one death. In the 3rd order, the *Lungs and Organs of Respiration*, there were 3 deaths. In the 4th order, *Stomach and Organs of Digestion*, there were 3 deaths. From *old age* there were 6 deaths, which with a child 5 weeks old from *malformation*, and one from *suffocation* (overlaid), and another *found drowned*, makes up the total deaths for April. There were 3 *Inquests*. In the *Hospital* there were only 4 deaths; two of them from other Registration-Districts. At the *Cascades Invalid Asylum* two men died, aged 69 and 77, and two women, aged 62 and 69. At the *Brickfields Male Invalid Asylum* 5 died, aged 49, 50, 57, 67, 75. One of these, however, had been removed from the public Hospital only five days before, and should therefore have been a Hospital death. In March, too, one of the deaths at the Brickfields was a man nearly moribund sent there instead of to the Hospital. He died a few days after admission. This practice was condemned long ago, and it was under stood that the dying should not be sent to an establishment which has not proper hospital requisites.