

AUGUST, 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 in shade.	Direction from three daily re- gisters.	Force in lbs. per square foot.	
	In.	In.	°	°			
1	30.062	29.995	57.47	72.0	43.0	WE SE	1.04
2	30.177	30.134	62.33	87.0	27.5	NW	.78
3	30.161	30.024	65.41	89.5	38.0	NW SE	0.
4	29.802	29.770	62.48	85.5	43.5	NW W NW	2.38
5	29.853	29.771	62.44	86.0	40.0	NW SW	.52
6	29.664	29.609	70.39	92.0	34.5	N NE	0.
7	29.684	29.598	63.44	88.5	41.5	NW W	1.30
8	29.678	29.656	64.41	57.0	39.0	SE SE SE	1.04
9	29.824	29.787	56.37	85.0	32.5	W SW SE	.52
10	29.812	29.801	65.36	89.0	31.5	NE NW S	.52
11	29.852	29.774	62.41	81.5	40.5	NW	.52
12	29.824	29.802	68.41	92.5	34.5	NW	.26
13	29.823	29.674	67.45	93.0	40.0	NW	2.86
14	29.934	29.790	58.40	87.0	36.5	NW	1.04
15	29.934	29.761	60.40	90.0	37.5	NW SW W	3.38
16	30.224	30.145	59.35	84.0	29.0	NW N	.26
17	29.970	29.726	61.38	84.0	36.0	NW	.78
18	29.556	29.543	56.42	60.5	37.5	NW	.52
19	29.774	29.724	65.34	90.0	30.0	N NW	1.30
20	29.464	29.281	61.40	84.5	38.0	NW	2.86
21	29.603	29.467	58.40	87.5	37.5	NW W NW	1.56
22	29.865	29.838	61.46	93.0	43.5	NE NW	1.04
23	29.976	29.848	58.44	86.5	43.0	NW S SW	.78
24	29.917	29.441	53.34	75.5	30.5	NW	1.30
25	29.387	29.335	56.43	83.0	43.0	NW W	3.64
26	29.879	29.861	60.43	90.0	39.5	NW	1.04
27	29.882	29.800	60.45	87.0	40.0	NW SW SE	.78
28	30.032	29.957	62.32	91.0	29.5	NW SE	.26
29	29.695	29.301	52.37	56.5	32.0	NW	1.04
30	29.530	29.409	58.42	86.5	41.0	NW SW NW	1.04
31	29.512	29.433	57.43	75.5	39.5	NW	.26
Monthly mean			51.45	83.56	37.08	Total Force	35.88
29.761							1.99

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.

12th.—*Sambucus niger* commencing to break.

15th.—Gooseberries ditto.

18th.—Horse chestnut ditto.

23rd.—Elm commencing to flower.

24th.—Poplar commencing to break.

29th.—Apricot ditto.

Barometer mean, 29.761in., being 0.046in. below the average.

Temperature mean, 51.45°, being 3.38° above ditto.

Solar intensity mean, 83.56°, being 8.04° above ditto.

Dew point mean, 40.08°, being 0.76° per cent. below ditto.

Humidity of air mean, .71, being .09 above ditto.

Elastic force of vapour mean, .265, being .003 per cent. above ditto.

Total amount of rain, 1.99, being 0.16in. above ditto.

Increase of spontaneous evaporation on rainfall, 0.93in.

Mean amount of ozone, 6.42, being 1.18 of chromatic scale below the average.

Electricity active on the 2nd, 7th, 10th, 14th, 15th, 16th, 23rd, 26th, 27th, and 28th.

A brilliant Aurora on the 6th.

High wind, 15.02lb. to square foot on the eve of 21st.

Snow remaining on Mount Wellington during the month, with frequent fresh deposits.

FRANCIS ABBOTT.

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

BY DR. E. SWARBRECK HALL.

Except in a warmer temperature than usual, the weather during this month departed less from the average normal character than usual. The deaths were much below the average of the previous 14 years, and specially so in those at all ages under 20 years old.

Atmospheric pressure mean, 29·761, was only —·046 below the 25 years' standard mean. The maximum, 30·224, occurred on the 16th; the minimum, 29·281, was noted on the 20th. The extreme range of the barometer for the month was only ·943 of an inch, which has been largely exceeded in 12 out of the previous 16 years. Nevertheless, the daily mutations, within this extreme range, were very great; the greatest being a fall of —·539 on the 29th; and on the 26th there was a rise of +·527. On 10 other days there were variations exceeding one-fifth of an inch. As usual, these excessive fluctuations of atmospheric pressure told heavily on diseased, feeble, and aged people, while young and healthy persons were little affected by them.

Wind-force recorded at the usual hours of observation amounted on the whole to 35·88 lbs., being —10·61 lbs. below the average; but in the nights of the 21st and 26th there blew gales having a pressure of 15·62 lbs. each to the square foot, which really made the wind-force of the month in excess. The strongest winds recorded at the usual hours of observation, 7 a.m., 1 p.m., and sunset, were only 2·60 lbs., registered four times. North-west winds had 60 out of the 93 observations with strength of 23·40 lbs., but this must be qualified by the same remarks that were made in the previous month; many of these winds so registered being really deflected West winds. The calms were 30, being —5·33 below the average.

Temperature mean, 51·45 degrees, was + 3·38 above the 25 years' average. The extremes were 70 degrees at about midday on the 6th, and 32 in the right of the 23th. Both higher and lower registers have often been made in August. *Wet bulb* mean was 46·45, being only + 1·39 above the average.

Daily Range of Temperature mean, 19·90 degrees, was + 3·47 above the average, showing how necessary it is to take into consideration every meteorological record before drawing conclusions from the means of any one instrument. The greatest range was 31 degrees, noted on the 6th and 19th.

Solar-Intensity mean, 83·56 degrees, was + 8·08 above the average. The maximum was 93 degrees on the 13th and 22nd, and much greater heat than this has often been recorded.

Terrestrial-Radiation mean, 37·08 degrees, was + 1·23 above the average. The coldest night was the 16th, when this self-registering thermometer on the grass recorded 29 degrees only.

Elastic-force of vapour mean, 255, was — 3 below the average. The range was from minimum 175 at 7 a.m. on the 16th to maximum 353 at noon on the 6th.

Humidity mean, 71, was — 9 below the average, Saturation (100) was never recorded.

Rainfall — 1·99 inches was + ·16 above the average. It fell on 11 days, being — 2·45 below the average. In another and more elevated part of the city 18 wet days were registered, with a total fall of 2·51 inches. It was generally felt that this August was much wetter than usual. *Snow* was never absent from Mount Wellington during the month, and received frequent and copious additions, but none ever fell in the city.

Spontaneous Evaporation amounted to 2·92 inches.

Cloud Mean, 5·39, was —·31 below the average.

Ozone Mean, 6·42, was —1·10 below the average, ranging from 3·5 to 9.

Electricity had 21 positive indications with tension ranging from 3 to 6. The negatives were 36, with tension from 1 to 6. There were 5 *nils*. Neither *thunder* nor *lightning* were observed during the month. An *Aurora* was registered on the evening of the 6th.

The *Deaths* during this month were 34, being — 12 less than the average of the previous 14 years. Only one year out of the fourteen, 1866, had less, *i.e.*, 33. The range being from that to 74 in 1858. Under one year old there was only

one death ; from 1 to 5 there were 3 ; from 5 to 10, one ; from 10 to 15 none ; from 15 to 20, one. So small a proportion of the total deaths under 20 years old is very remarkable, August 1870 had ten more. From 20 to 60 the deaths were 17, being one less than in August 1870. At 60 and all ages above the deaths were 11, being — 4 less than in 1870. The three oldest this month were above 80 years old, the oldest being 86. In the *Zymotic Class* only one death was recorded, a man aged 60 from *gastric fever*. From *consumption* there were 4 deaths, 2 of them natives of Tasmania, born in Hobart Town, women, aged 21 and 25 respectively. One a man aged 44, a shoemaker, born in Dublin ; the other a man, aged 52, a truss-maker, born in Middlesex. In the public *Hospital* there were 11 deaths, all belonging to the Hobart Town registration district, except one from Green Ponds. There was only one *Inquest* on a man who died in hospital to which he was removed from the gaol. At the *Brickfields Invalid Asylum* there were 3 deaths, aged respectively 64, 68, 83. At the *Cascades* establishment two men died aged 58 and 73, the average age in the latter being eleven and a half years less than in the former. At the *Queen's Asylum* for orphan and destitute children, a girl aged 15 died from *abscess of the liver*.