

# FEBRUARY, 1872. PRIVATE OBSERVATORY, HOBART TOWN.

Day of Month.	Bar. 37 feet abv. sealevel corrected & reduced.		Self-Registering Thermometers.				Wind.		Rain in Inches
	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.	
	In.	In.	°	°	°	°			
1	29.926	29.833	75	50	115.5	49.5	SE	.78	
2	29.694	29.602	71	51	108.0	46.0	NW SW	3.65	
3	29.980	29.799	72	40	113.0	34.0	NW NE S	1.30	
4	29.706	29.660	71	49	112.0	44.5	NW SW W	5.73	
5	30.013	29.934	67	48	110.0	43.0	NW SE	1.04	
6	29.979	29.744	72	52	95.0	50.5	SW NE SW	.52	
7	29.439	29.409	73	50	106.0	46.0	NW W	5.99	0.11
8	29.899	29.753	71	43	103.0	39.5	NW	.52	
9	29.836	29.810	80	58	114.0	51.0	NW	3.65	
10	30.076	29.968	81	55	117.0	51.5	NW SE	1.56	
11	30.068	29.947	80	52	112.5	47.0	NW SW SE	1.30	
12	29.827	29.821	77	53	85.0	53.5	NW SE	1.30	0.15
13	30.068	30.036	72	44	110.0	40.0	NE SE	1.04	
14	30.052	30.003	76	43	112.0	45.0	NW SE	1.30	
15	30.266	30.159	75	51	110.0	46.5	SE	1.56	
16	30.294	30.178	82	53	116.0	49.5	NW SE	1.04	
17	30.140	30.099	71	59	86.0	58.5	NW E SE	.78	0.07
18	30.163	30.122	66	57	80.0	55.5	SE	.26	0.01
19	30.130	29.962	83	58	118.5	57.5	NW NE	1.04	
20	29.841	29.653	81	66	95.5	65.5	NW W	1.30	0.50
21	29.852	29.774	79	53	86.0	49.5	SE	1.30	
22	30.047	29.945	74	44	90.0	40.5	NW SE	1.04	
23	30.178	30.123	79	52	118.0	50.0	NW SE NE	.78	
24	29.968	29.794	80	54	102.0	51.5	NW SE	1.56	0.57
25	30.060	29.947	76	49	107.0	43.5	NW SE SW	1.30	
26	30.225	30.178	79	51	118.0	43.5	NW SE	3.38	
27	30.429	30.423	75	51	115.0	44.5	NW SE	1.04	
28	30.369	30.110	89	56	121.5	49.5	NW SE	1.30	
29	30.214	30.116	86	60	120.0	52.0	SE	1.04	
Monthly mean	63.69		106.48	47.64	Total force 48.38				1.41
29.974									

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.

- 4th.—Kerry pippin apple commencing to ripen.
- 5th.—Windsor pear commencing to ripen.
- 10th.—Bon Chretien pear commencing to ripen.
- 14th.—Green gage commencing to ripen.
- 24th.—Ash commencing to shed seed
- 25th.—Sycamore commencing to shed seed.

Barometer mean, 29.974 in., being 0.143 in. above the average.

Temperature mean, 63.69°, being 1.81° above the ditto.

Solar intensity mean, 106.43, being 1.44° below the ditto.

Dew point mean, 48.38, being 2.17° below the ditto.

Humidity of air mean, 66, being .04 per cent. below the ditto.

Elastic force of air mean, 38.6, being .012 above the ditto.

Total amount of rain, 1.41 in., being 0.23 in. below the ditto.

Increase of spontaneous evaporation on rainfall, 2.68 in.

Mean amount of ozone, 7.16, being 0.15 of chromatic scale above the ditto.

Electricity moderately active on the 1st, 2nd, 3rd, 4th, 5th, 10th, 14th, and 25th.

Squally on the 7th, with fresh snow on Mount Wellington.

Aurora Australis on the 12th.

FRANCIS ABBOTT.

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

BY E. SWARBRECK HALL.

Warm days, cold nights, numerous and gentle sea breezes with plenty of ozone, nearly an average of rain-fall. but mostly precipitated on two days, five days apart, though with atmospheric pressure high and variable, and temperature above the average, was conducive to the health of the community above five years old, the deaths at all ages being considerably less than the average of the previous 15 years.

*Atmospheric-pressure* mean, 29·974, was +·132 above the 30 years' adopted standard average for February. The range of the month was 1·019 inches; the minimum 29·409, noted on the 7th; the maximum, 30·428, on the 27th. The greatest movement of the barometer in any 24 hours was a rise of +·487 of an inch on the 8th. On twelve other days there were movements exceeding one-fifth of an inch. The influence of these mutations of atmospheric pressure is visible in the deaths under "Diseases of the Brain," &c., and of the "Heart," and "old age," which altogether were 15 out of the total, from all causes, of 40.

*Wind-force* total, 48·38 lbs., was -6·34 below the average, but south-east sea breezes laden with ozone were not only unusually numerous, but prevailed over winds from all other points of the compass, both in frequency and force. The strongest winds had 5·21 lbs. pressure to the square foot, and were recorded at noon on the 4th from the south-west, and at sunset on the 7th from the west. No *hot winds*. *Calms* were 16 only, being -1·67 below the February average. Moderate, constant, and pure breezes from the best points of the compass therefore characterised this month.

*Temperature* mean, 63·69 degrees, was +1·58 above the 30 years' average for February. The extremes were maximum high-day temperature, 89 degrees, on the 28th, and minimum low-night temperature, 40 degrees, in the night of the 3rd. The mean of all the maxima was 76·31 degrees, the mean of all the minima being only 51·97 degrees, and the highest of the minima but 60 degrees. Warm days and cool nights were therefore characteristic of this month. The *wet-bulb thermometer* mean was 56·79 degrees, being +1·08 above the average.

*Daily range of temperature*, 24·34 degrees, was +4·53 degrees above the 30 years' average. Only the first year of the series—1841—had so high a mean, *i.e.*, 24·30. The highest range on any day was 33 degrees on the 28th, that being the extreme range between the hottest part of the day in the shade, 89 degrees, to the coolest record in the following night, 56 degrees.

*Solar intensity* mean, 106·43 degrees, was -1·17 below the average. The highest record was made on the 28th, being 121·5 degrees only. Twice in 16 years only have there been lower records.

*Terrestrial radiation* mean, 47·64 degrees, was -2·03 degrees less than the average, giving still stronger proof of the cool nights than the self-registering minimum air-thermometer did. The coldest night was the 3rd, when the thermometer sank to 34 degrees. On the night of the 20th this thermometer marked 65·5, being only half a degree less than was marked by the air-thermometer.

*Elastic force of vapour* mean, 386, was +11 above the average. The range was from 224 minimum on the morning of the 3rd, to 641 maximum at noon on the 20th.

*Humidity* mean, 66, was -4 less than the average.

*Rain* fell to the amount of 1·41 inches, which is only -·12 below the average. It was recorded on 6 days, being -2·93 days below the average. On the 20th half an inch fell, and on the 24th a little more, *i.e.*, ·57 of an inch. These two events were highly salutary in scouring the water courses, sewers, &c., of decomposing organic matters. *Snow* fell abundantly on Mount Wellington on the 7th, and did not disappear until some hours after sunrise on the 8th.

*Spontaneous evaporation* amounted to 4·09 inches.

*Cloud* mean, 5·67, was only +·04 above the average.

Ozone mean, 7·16, was but —·01 below the average. Saturation (10) was registered 5 times.

Electricity had 17 positives with tension ranging from 3·5 to 6, and 35 negatives with tension from 2 to 7, and 6 nils. Neither *thunder* nor *lightning* were observed. An *Aurora* was seen on the evening of the 12th.

The *Deaths* numbered 40 only, being --  $13\frac{3}{13}$  less than the average of the previous 15 years. Only February 1867 had fewer, *i.e.*, 34, and 1860 had 40 also. The highest February was that of 1859, *i.e.*, 75. Two of the deaths were in visitors from Victoria. Under one year old there were 13 deaths; from 1 to 5 there were 4; from 5 to 10 none; from 10 to 15 there were 2; from 15 to 20 there was 1. Thus exactly half the deaths of the month were under 20 years old. From 20 to 60 there were only 7 deaths, at 60 and all ages above there were 13, the oldest being a man aged 100 who had been in these colonies 67 years, and whose death was caused by the *accidental* fracture of his thigh-bone.

In the *Zymotic* class of diseases there were 13 deaths, all from bowel complaints at and under twelve months old. By the new Nomenclature of Diseases of the Royal College of Physicians of London now generally adopted, Diarrhoea, which constituted 11 out of the 13 cases, would be classed under diseases of the Digestive System amongst diseases of the intestines, and not under the head of "Miasmatic" or "General Diseases." During the summer months in Tasmania, diarrhoea always prevails with more or less fatality amongst young children, and occasionally as an epidemic. In the *Cachectic* or *Constitutional* class of diseases there were 5 deaths, 4 from *cancerous* affections of various organs, one from *Consumption*, a man aged 27 born in Tasmania. In diseases of the *Brain and Nervous System* there were 9 deaths; in diseases of the *Heart*, &c. 2; in the *Lungs*, &c., only 1; *Stomach*, &c., only 1; *Urinary* organs, 1; *bones*, &c., 1; *developmental*, 1; *old age*, 4; *violence*, 2. There were no Inquests. In the *Hospital* there were 11 deaths, one belonging to another registration district. At the *Cascades* establishment a man aged 81 died. At the *Brickfields Invalid Asylum* 3 men died, aged respectively 60, 72, 81.