

METEOROLOGY FOR AUGUST, 1870.

PRIVATE OBSERVATORY, HOBART TOWN

Day of Month.	Bar. 37 feet abv. sea level corrected & reduced.		Self-Registering Thermometers.				Wind.		
	Highest.	Lowest.	Highest in shade.		Highest in sun.	Lowest on grass.	Direction from three daily re- gisters.	Force in lbs. per square foot.	Rain in Inches.
			In.	°					
1	30·116	30·100	48	40	65·0	36·0	SE SW	·26	
2	30·120	30·005	49	33	79·0	33·5	W SE S	·26	0·03
3	29·819	29·702	57	37	84·0	34·0	NW NE SW	·52	0·03
4	29·722	29·670	58	37	89·5	33·5	NW SE	·52	
5	29·613	29·363	56	33	85·0	31·5	NW	·52	
6	29·020	28·852	55	41	82·0	35·5	NW SW S	5·73	0·22
7	29·566	29·300	49	33	68·5	33·0	NE S SW	·26	
8	29·858	29·835	59	34	91·0	29·5	NW SW	·78	
9	29·912	29·848	52	35	69·5	30·5	W E SE	·26	0·01
10	29·808	29·712	58	32	83·0	28·5	NW	1·04	
11	29·769	29·724	69	39	90·5	31·5	NW	·52	
12	29·475	29·313	59	33	79·0	30·5	NW	·52	
13	29·375	29·212	61	44	90·0	39·0	NW	·78	0·09
14	29·278	29·049	56	46	84·0	32·0	NW	·52	0·03
15	29·123	29·007	53	40	84·5	37·0	NW	1·30	
16	29·370	29·368	58	40	82·5	37·5	NW	·52	0·13
17	29·267	29·081	63	41	90·5	36·5	NW	10·94	0·05
18	29·290	29·117	63	40	92·5	36·0	NW	·78	
19	29·485	29·375	60	36	93·0	33·5	SW W NE	·78	0·01
20	29·766	29·718	64	41	90·5	37·0	NW	1·04	
21	29·606	29·483	61	44	83·0	41·0	NW W	3·12	0·02
22	29·721	29·626	65	50	95·5	36·5	NW	·52	0·02
23	30·109	30·061	61	40	95·0	36·0	W NE SE	·52	
24	30·100	29·959	63	34	89·0	31·5	NW SE	·26	
25	30·037	30·016	68	40	96·0	34·5	NW SE	·52	
26	30·081	30·026	60	52	81·0	36·5	NW E	0	0·14
27	30·062	30·052	56	41	74·5	40·0	NW E	·26	0·12
28	30·328	30·230	63	43	97·0	37·5	NW E SE	·78	0·02
29	30·402	30·369	62	44	91·0	40·0	NW SE	·52	
30	30·375	30·300	56	46	79·0	43·5	S NW SW	3·64	
31	30·453	30·444	63	36	95·5	31·5	NW NE E	1·04	
Monthly mean 29·723			49·17		85·65	34·98	Total force	39·81	1·02

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.—Sambucus niger commencing to break.
- 16th.—Esculus hippocastanum ditto ditto.
- " Gooseberry ditto ditto.
- 20th.—Ulmus campestris commencing to flower.
- 26th.—Lombardy Poplar commencing to break.
- 27th.—Royal Apricot commencing to flower.

Barometer mean, 29·723 in., being 0·084in., below the average.
 Temperature mean, 49·17°, being 1·10° above the ditto.
 Solar intensity mean, 85·65°, being 10·13° above the ditto.
 Dew point mean, 38·6, being 2·78 below the ditto.
 Humidity of air mean, 74, being ·06 per cent. below the ditto.
 Elastic force of vapour mean, ·009 per cent. below the ditto.
 Total amount of rain, 1·02in., being 0·81in. below the ditto.
 Increase of rain fall on spontaneous evaporation, 0·83in.
 Mean amount of ozone, 5·97, being 1·55 of chromatic scale below ditto.
 Electricity active on the 1st, 8th, 9th, 11th, 13th, 17th, 18th, 21st, 23rd, 25th, and 31st.
 Aurora Australis on the 21st, 22nd, and 23rd.
 Snow never absent from Mount Wellington, with frequent fresh deposits.

FRANCIS ABBOTT.

NOTES OF METEOROLOGY AND MORTALITY OF AUGUST, 1870.
BY DR. E. SWARBRECK HALL.

The weather this month deviated much from the normal standard, and the deaths were above the average, and embraced a due proportion in every group of ages.

Atmospheric pressure had wide, sudden, and frequent variations, though the mean, 29·724, was —·083 below the 25 years' adopted August standard. The month's range was 1·601 inches, being the highest recorded for the last 10 years. The maximum was 30·453, recorded on the 31st. The minimum, 28·852, was registered on the 6th. Only thrice in the last 30 years have there been lower minima. Between 1 p.m. of the 5th to that of the 6th, the barometer fell —·620 of an inch, and rose +·647 in the following twenty-four hours. On twelve other days the rises and falls exceeded quarter of an inch.

Wind pressure was 39·81 lbs., being —6·68 below the August average. Out of the 93 observations, north-west winds prevailed 55 times, with 24·98 lbs. of the pressure. The strongest wind was a north-west gale on the 17th, having a pressure of 10·42 lbs. to the square foot. The calms, 36, were a few fractions only above the average.

Temperature mean, 49·17 degrees, was +1·10 above the 25 years' mean by the observed thermometers, and by the self-registering only +·18 of a degree more. The maximum record was 68 degrees on the 25th, and the minimum 32 on the 10th.

The *wet-bulb thermometer* had a mean of 44·84 degrees.

Daily range of temperature mean was 18·71 degrees, being +2·28 above the 25 years' standard. The greatest range on any day was 29 degrees, recorded on the 24th.

Solar intensity mean, 85·65 degrees, was +3·87 above the average. The maximum was 97 degrees on the 28th.

Terrestrial radiation mean, 34·98 degrees, was —0·82 below the average. In the night of the 10th, the temperature by this thermometer fell to 28·5 degrees.

Elastic force of vapour mean, 259, was —9 below the average.

Humidity mean, 74, was —6 below the average.

Rainfall, 1·02 inches, was —·81 below the average, though the number of days on which it fell—14—was slightly above the average.

Snow was never absent from Mount Wellington during the month, and received frequent additions.

Spontaneous evaporation amounted to 1·85 inches.

Cloud mean, 5·97, was +·27 above the average.

Ozone mean was only 6·57, being —·95 below the average. On the 15th only was saturation—10—recorded. With so little rain and wind, and such a predominance of winds from the worst quarter, the air could not be as pure as usual.

Electricity—There were 19 records of "positive" from 4 to 7 in strength; 39 "negative" from 1 to 7, and 4 "nils."

The *Deaths* amounted to 49, being +3 3-13ths above the 13 years' average for August. Seven were under one year old; 1 from 1 to 5; 2 from 5 to 10; 2 from 10 to 20; 18 from 20 to 60; and 15 at all ages above 60, the oldest being two females, 84 years old each. The contrast of 16 deaths under 20 years old this month, with only 3 in July, is very remarkable. There were 4 deaths in the *zymotic* class of diseases, but no epidemic disease prevailed. One of these deaths was in a girl, 15 years old, from *typhoid-fever* with ulceration of the bowels and peritonitis, indicating exposure to local insanitary conditions, which are gradually intensifying in the city owing to want of efficient sewerage and scavenging. This fever is denominated "filth-fever" by the Registrar General of England, and ranks among his list of deaths from *preventable* causes. A death from *tetanus* (lock jaw) in a man severely burnt was remarkable. It occurred in Hospital, being the second death from this rare disease this winter, though in different wards. *Consumption* caused 6 deaths, two of them born in Tasmania. There were 4 inquests.