

METEOROLOGY FOR MARCH, 1870.

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.	Highest in sun.	Lowest on grass.	Direction from three daily re- gisters.	Force in lbs. per square foot.	
	In.	In.	"	"	"	"			
1	30.394	30.195	76.45	116.0	41.5	NW SE	1.28		
2	30.021	29.897	79.52	120.0	49.0	NW SE	1.23		
3	29.820	29.775	79.50	117.0	47.0	NW SE	1.23		
4	29.808	29.787	73.53	110.0	55.5	NW	1.60		
5	30.124	29.982	69.49	106.0	44.0	SW	5.72		
6	29.902	29.863	65.43	106.0	41.5	W NW	8.33		
7	30.245	30.160	66.46	105.0	44.0	NW SW SE	1.04		
8	30.330	30.344	67.40	106.0	37.0	NW SE	1.04		
9	30.317	30.184	67.43	102.0	40.0	NW SE	1.04		
10	30.184	30.124	64.56	71.5	55.5	SW SE	.78		
11	30.437	30.181	61.51	81.0	48.5	SW SE	.52	0.07	
12	30.335	30.308	60.52	70.0	51.0	NW E	.52		
13	30.363	30.311	65.51	104.0	49.5	NW SE	1.04	0.04	
14	30.344	30.259	73.47	115.0	44.5	NE SE	1.30		
15	30.239	30.185	72.46	112.5	41.5	NW SE	1.04		
16	30.225	30.198	72.54	103.5	50.5	NW SE	.73		
17	30.230	30.171	83.53	120.0	50.5	NW SE	10.4		
18	30.200	30.008	81.54	117.0	51.5	NW	.78		
19	29.903	29.902	76.50	74.0	52.5	NW	.26	0.75	
20	30.222	30.142	75.50	94.0	49.0	SE	3.33		
21	30.293	30.267	62.51	101.0	46.5	SE	1.30	0.03	
22	30.239	30.013	69.47	106.0	44.0	NW SE	1.04		
23	30.280	30.175	62.53	64.0	54.0	SE	1.30	0.03	
24	30.278	30.211	64.53	97.0	50.0	NW NE	.78		
25	30.206	30.017	76.49	115.5	47.0	NW NE NW	.26		
26	29.857	29.839	80.60	115.5	47.0	NW SE	.73	0.02	
27	30.300	30.230	67.49	104.0	43.5	SW SE	3.64		
28	30.403	30.335	69.41	106.0	39.0	NW E	1.04		
29	30.330	30.322	74.46	108.5	40.0	NW NE	1.56		
30	30.317	30.310	69.49	110.0	43.5	NW SE	1.04		
31	30.349	30.324	63.54	92.0	50.5	SW SE	.52		
Monthly mean	30.177	60.71	102.52	46.81	Total Force ..	47.33	0.94		

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 an 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.*

- 5th—Tips of hornbeam commencing to turn brown.
- 10th—Coe's golden drop plum ripe.
- 10th—Seckle pear ditto
- 12th—Tips of elm turning yellow.
- 16th—Horsechestnuts leaves turning brown
- 13th—Common ash leaves commencing to fall.
- 20th—Oak leaves ditto. Acorns ripe.

Barometer mean, 30.177 in., being 0.322 in. above the average.
 Temperature mean, 60.71°, being 0.95° above the ditto.
 Solar intensity mean, 102.52°, being 0.77° below the ditto.
 Dew point mean, 49.8°, being 0.58° above the ditto.
 Humidity of air mean, .68, being .03 per cent. below the ditto.
 Elastic force of vapour mean, .360, being .004 per cent. above the ditto.
 Total amount of rain, 0.94 in., being 0.73 in. below the ditto.
 Increase of spontaneous evaporation on rain fall, 3.48 in.
 Mean amount of ozone, 6.87, being 0.14 of chromatic scale below the ditto.
 Electricity active on the 2nd, 5th, 6th, 7th, 8th, 11th, 13th, 20th, 22nd, 27th, 28th, 29th.
 Thunder, lightning, and rain on 20th.
 A rich display of Aurora on the 22nd.
 Aurora and Southern lights frequent.

FRANCIS ABBOTT.

ANALYSIS OF OBSERVATORY RECORDS, WITH HEALTH REPORT FOR MARCH. BY DR. E. SWARBRECK HALL.

More enjoyable weather than existed during this month could scarcely be possible. Sunny, with moderate temperature, abundant and gentle ozone-laden sea breezes, almost cloudless clear skies, with only one day of smart rain and five others with sprinkling showers, formed altogether such genial weather, that it well deserved the epithet of "heavenly" which our numerous visitors from the Australian Continent and other less favoured climates so rapturously affixed to it. Nevertheless most of the atmospherical phenomenon varied greatly from the mean character of the month, as exhibited by the Meteorological Records of the previous twenty-nine years.

Barometrical pressure mean exceeded the 25 years adopted standard average by + '322 of an inch. Only once before in the previous 29 years had any month of the twelve a higher mean, i.e., July, 1860, with 30·193 against 30·177 of the present month. High barometrical pressure in Tasmania is usually accompanied with a high death-rate, unless when counteracted by other more favourable atmospheric influences, as it was in the present month. Moreover, the extreme range of the pressure for the whole month was only '662 of an inch, being less than ever before recorded for March, while the minimum 29·775 was far the highest ever before registered. Only seven times during the month did the range from noon to noon exceed a quarter of an inch, the highest being a rise of + '433 on the 27th, which has been exceeded seven times out of the previous nine years. The maximum record 30·437 on the 11th has been exceeded six times in the previous 29 years.

The *Wind-force* total, 47·33 lbs. was — 5·76 lbs. below the average for this equinoctial month, but the falling off was entirely in winds from the points of the compass (northerly) least favourable to health. Gentle health-bearing sea breezes (southerly) prevailed to an unusual extent; 5 out of the 93 records being winds from south-east and south-west, and with one strong west wind, having more than two-thirds of the total force, with only the one day referred to on which the pressure to the square foot amounted to 5·21 lbs. There were only 18 *calms* registered being — 10·22 less than the March average.

Mean Temperature, 60·71 degrees, was less than one degree + 00·95) above the March average. The extremes of the self-registering maximum and minimum thermometers were respectively only 83 and 40, which have been exceeded—in the one above, and in the other below—frequently. The highest maximum for March being 99 in 1861, and the lowest minimum 38 in 1853, 1855, 1856. The *daily range*, however, was slightly (+ 1·02) above the March average, and with high atmospheric pressure and cold dry winds caused some cases of inflammation of the air passages, catarrh, bronchitis, pneumonia and croup, and had a fatal effect on long standing cases of pulmonary consumption.

The mean of *Solar Intensity*, notwithstanding the great prevalence of sunshine and the very small average of cloudy days was slightly (— '77) below the average; and the extreme record 120 degrees on 2nd and 17th has frequently been much exceeded in former years.

Terrestrial-radiation mean 46·81 degrees, was — 1·34 below the average.

Elastic force of Vapour, 360, was + 4 above average, ranging from 217 to 534, and therefore adverse to health.

Humidity mean, 68, was only — 3 below the average, notwithstanding the dry sunny days and small rain-fall, but then the night dews were heavy.

Rainfall, '94 of an inch was '73 less than the average, '75 of it fell on one day, the 19th, with heavier thunder and more brilliant lightning than has been experienced for a long time in Hobart Town. This down-pour had the effect of cleansing the gutters, sewers, and drains of the city, which wanted it badly. February and March of this year conjointly have had less rainfall than any February and March upon record.

Spontaneous Evaporation, 4·42, was not much in excess above the averages.

Cloud mean, 4·32, was — 1·10 less than the 25 years' average, only two years in the previous 29 years had a smaller mean.

Ozone mean, 6·87, was only '26 below the average of the previous twelve years, no year since 1862 having had so small a mean. With such a small

rain-fall a much greater depression might have been expected, but fortunately for the public health sea breezes made amends for it.

Electricity was never absent at any of the recording hours, but negative greatly predominated.

The *Deaths* during the month were 47, being — 7 11-13ths less than the average of the previous 13 years. Only March, 1869, had a smaller number (42) and the maximum was 73 in 1864. Males were 26, females 21. Nine only were under one year old, 3 only between 1 and 5. Four were between 5 and 20. From 20 to 60 there were 14 deaths only, but from 60 to 93 there were 16. At the *Cascades* Prison and Invalid Station 8 deaths took place, aged from 40 to 79; at the *Brickfields* Invalid Station, only one, aged 93. At the *Hospital* there were 11 deaths, including two *Inquest* cases. *Consumption* caused 6 deaths, three being natives of Tasmania. No disease prevailed epidemically, but a youth of 18 died from Typhoid or Pythogenic fever, but more impressively designated "*filth-fever*" by the best sanitarians. From time to time deaths from this preventible disease are occurring in Hobart Town, and will continue to increase as the population becomes more aggregated, seeing how the excreta of the inhabitants are allowed to decompose in the middle of our habitations, and how insufficient is the system (if it deserves such an appellation at all) of sewerage. Formerly Typhoid Fever prevailed largely at the Queen's Asylum, at New Town, notwithstanding its incomparable site, sanitorily considered, but then the cloacæ were within the buildings, and their contents were removed by drains which passed beneath the buildings; now the cloacæ are away from the buildings, and their contents are removed almost daily. The dry earth conservancy would be a still greater improvement. Hobart Town, with its privy cesspools saturating the surface soil, and with its drainage channels in many places converted into receptacles for human excreta and other decomposing refuse, so valuable for manure, will ultimately become a perennial hot-bed for those zymotic diseases which prove such a drawback on the health of the towns and cities of the United Kingdom. Yet a more advantageous site for sanitary purposes, in one of the naturally healthiest climates in the world, few cities can boast of.