

OCTOBER, 1874.
PRIVATE OBSERVATORY, HOBART TOWN.

Day of Month.	Bar. 37ft abv sea level, corrected and reduced.		Self-registering Thermometers.				Wind.		
	Highest.	Lowest.	Highest in Shade.	Lowest in Shade.	Highest in Sun.	Lowest on Grass.	Direction from three daily registers.	Force in lbs. per square foot.	Rain in Inches.
1	30·321	30·287	68 44	99·0	41·0		NW SE	3·12	
2	30·314	30·125	70 40	101·0	35·0		NW SE	1·04	
3	29·917	29·815	70 46	102·0	39·0		N NW S	·78	
4	29·915	29·784	64 50	97·5	42·5		N S SW	1·30	
5	30·115	30·112	65 44	99·0	40·5		NE N	·52	
6	30·142	30·121	60 47	99·0	43·0		NW W NW	1·30	
7	30·012	29·873	81 47	107·0	46·0		NW SW	5·72	
8	29·937	29·752	81 53	104·5	57·0		SW NW	3·38	
9	29·907	29·728	73 52	98·0	49·0		SW	31·26	
10	29·984	29·731	77 47	113·0	44·0		NW N	8·33	
11	29·584	29·464	85 60	114·0	52·0		SW W SW	21·36	0·05
12	30·178	30·137	76 45	96·0	41·5		S SE	·52	0·02
13	29·958	29·714	75 45	105·0	41·5		NW S	1·30	
14	29·971	29·749	66 51	93·5	45·0		NE SW	1·04	0·02
15	30·293	30·259	62 46	99·0	43·5		SW SE	1·04	
16	30·168	29·923	63 44	84·5	40·0		NW	3·12	
17	30·182	30·126	70 50	107·0	43·5		NW NE S	1·04	
18	30·176	29·915	83 48	115·0	44·5		NW SE	1·04	
19	29·936	29·917	81 61	101·0	55·0		NW S SW	1·56	0·15
20	29·971	28·910	69 51	98·5	42·0		SW	13·45	
21	30·115	30·110	66 44	99·0	38·0		NW SE	·78	
22	30·209	30·095	68 40	100·0	36·0		W SE S	·52	0·02
23	30·152	30·127	67 44	111·0	39·0		W SE	1·04	
24	30·087	29·915	66 42	96·0	37·0		NE E	1·56	0·05
25	29·622	29·523	78 54	108·5	48·5		NW SE	·26	0·27
26	29·450	29·303	71 50	107·5	44·0		NW SW	23·44	
27	29·682	29·650	68 51	103·0	43·0		N NW	10·94	
28	29·932	29·839	71 48	108·0	45·0		NW N	6·25	
29	29·935	29·871	69 52	105·0	43·5		NW N	8·06	
30	29·692	29·611	75 50	107·0	45·0		W NW	15·63	
31	29·509	29·476	71 47	107·0	44·0		NE SW N	10·41	0·39
Monthly mean 29·904			61·38	93·56	43·65		Total Force...	183·18	0·97

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 30 years' standard tables are used for obtaining the difference from the average.

Barometer mean, 29·904in., being 0·126in. above the average.
 Temperature mean, 61·38°, being 6·99° above the average.
 Solar intensity mean, 98·56°, being 1·44° above the ditto.
 Dew point mean, 46·0°, being 1·46° above the ditto.
 Humidity of air mean, '60, being '13 per cent. below ditto.
 Elastic force of vapour mean, '324, being '031 per cent. above the ditto.
 Total amount of rain, 0·97in., being 1·09in. below the ditto.
 Increase of spontaneous evaporation on rainfall, 4·40in.
 Mean amount of ozone, 6·40, being 1·44 of chromatic scale below ditto.
 Electricity active all through the month, with only one register nil on the 25th.
 The force of electricity in the atmosphere is very arbitrary, when the air is clear and sky serene, the electricity is generally plus. In damp and rainy weather it is at a minimum. There are two positive, and two negative, every 24 hours. Lightning on the eve of the 30th.

FRANCIS ABBOTT.

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

- 10th.—Carpinus betulus commencing to leaf.
- 10th.—Ailanthus glandulosus ditto ditto.
- 22nd.—Common Lime ditto ditto.
- 22nd.—Black Mulberry ditto ditto.
- 24th.—Ulmus campestris seeds commencing to fall.
- 26th.—Melia azederach commencing to leaf.

The following are the results of the observations made at New Norfolk during the month :—

- Barometer mean of three daily readings, corrected and reduced, 29·930in.
- Thermometer mean of ditto, 58·49.
- Humidity ditto, '86. Dew point ditto, 54·2.
- Elastic force of vapour ditto, '430in.
- Solar intensity mean, 113·5.
- Terrestrial radiation mean, 39·9.
- Rainfall, 1·38in.
- Evaporation, 4 6/16 in. in excess of Rainfall, 3·29.
- Mean amount of cloud, 5·40 (scale, 0·10.)
- Ditto ditto Ozone, 7·7 (ditto.)
- Windforce total of 3 daily registers, 136·04lbs.

W. E. SHOOBRIDGE.

NOVEMBER, 1874.
PRIVATE OBSERVATORY, HOBART TOWN.

Day of Month.	Bar. 37 feet abv. sea level corrected & reduced.		Self-Registering Thermometers.				Wind.		
	Highest.	Lowest.	Highest in shade.	Lowest in shade.	Highest in sun.	Lowest on grass.	Direction from three daily re- gisters.	Force in lb. per square foot.	Rain in inches.
	In.	In.	°	°	°	°			
1	29·934	29·802	67·42	105·0	37·5	NW SW SE	3·64	0·05	
2	29·385	29·202	72·45	109·5	39·5	NW W	16·15	0·02	
3	29·480	29·404	74·47	106·0	43·0	SW W NW	15·63	0·11	
4	29·514	29·323	80·55	117·5	51·0	NW SW	28·64	0·30	
5	29·529	29·323	72·45	92·0	42·0	W	8·33	0·20	
6	29·685	29·559	67·47	102·0	44·5	NW SW	13·54	0·01	
7	29·824	29·770	65·47	100·0	43·0	SE W	1·30		
8	29·591	29·417	63·42	99·5	36·5	NW	3·33	0·20	
9	29·810	29·700	62·42	99·0	39·0	SWS	7·80		
10	30·070	30·029	66·49	103·5	43·0	S SE	3·12		
11	30·026	29·766	77·43	105·0	41·0	NE E NW	1·56		
12	29·697	29·414	85·55	120·5	49·5	NW NE	11·46		
13	29·554	29·538	84·54	118·0	46·0	SW SE	·78	0·35	
14	29·434	29·330	78·52	82·0	49·0	NWS SE	·78	0·03	
15	29·891	29·815	70·41	106·5	35·5	W NE W	3·64		
16	29·963	29·899	73·51	110·0	46·0	W SE S	1·04	0·30	
17	29·963	29·857	69·52	109·5	41·5	NW SE	·52	0·21	
18	29·630	29·443	70·52	112·0	43·0	NW SW	3·33	0·01	
19	29·485	29·464	67·50	107·0	46·0	NE SW W	3·72	0·03	
20	29·718	29·563	66·44	107·0	40·0	SW N SE	1·04	0·10	
21	29·563	29·280	62·40	61·0	40·0	NW NE	·78	1·0	
22	29·538	29·250	57·45	92·5	41·5	SW	7·80	0·22	
23	29·979	29·845	63·39	102·0	35·0	NW SW	8·07	0·01	
24	30·163	30·692	59·46	93·0	41·5	S SW SE	3·12		
25	30·313	30·195	63·49	106·5	47·0	NW SE	1·04		
26	29·994	29·836	70·51	105·0	45·0	NW	1·56	0·03	
27	29·735	29·620	67·51	108·0	46·0	NW SE S	·52	0·03	
28	29·912	29·879	63·49	66·5	42·5	S	1·56	0·02	
29	29·915	29·876	62·49	83·0	43·0	SE W S	·78	0·03	
30	30·029	29·922	61·53	68·0	44·5	SW S	3·33	0·03	
Monthly mean	29·711		29·22	100·07	42·90	Total Force ..	161·43	3·33	

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 30 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.

- 21st—First British Queen Strawberry ripe.
- 25th—First May Duke Cherry ditto.
- 26th—Black Mulberry in flower.
- 28th—Pomegranate in flower.
- 31st—First Red Antwerp Raspberry ripe.

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Barometer mean, 29·711in., being 0·354in. below the average
 Temperature, mean, 59·22°, being 1·55° above the ditto.
 Solar intensity, mean, 100·07°, being 1·84° below the ditto.
 Dew point mean, 47·5°, being 1·01° above the ditto.
 Humidity of air mean, '66, being '04 per cent. below the ditto.
 Elastic force of vapour mean, '223, being '106 per cent. below the ditto.
 Total amount of rain, 3·33, being 0·55in. above the ditto.
 Increase of spontaneous evaporation on rainfall 3·57in.
 Mean amount of ozone 7·57, being 0·07 of chromatic scale above ditto.

Electricity active when the air is clear and the sky serene, and then generally plus.
 In damp or rainy weather the electricity is usually minus. During a storm first plus
 then nil, then minimum with rapid changes.

Thunder and Lightning on the 13th and 27th. A fresh fall of Snow on Mount
 Wellington on the 19th.

FRANCIS ABBOTT.

Results of Meteorological Observations taken at New Norfolk for November, 1874.

Barometer mean of three daily readings, (corrected and reduced) 29·739in.
 Thermometer mean of ditto, 57°·24.
 Elastic force of vapor, mean of ditto '419in.
 Humidity mean of ditto, '88.
 Solar intensity, mean of maximum, 112°·2.
 Terrestrial radiation, mean of minimum, 43°·26.
 Rainfall, 5·35 inches. in excess of evaporation '45in.
 Evaporation, 4·90in.
 Clouds, mean daily amount, 6·9. (Scale, 1-10.)
 Ozone, mean daily amount 8·05
 Wind, total force of 3 daily registers 125·07lbs.

W. E SHOOBRIDGE, Valleyfield.

DECEMBER, 1874.

PRIVATE OBSERVATORY, HOBART TOWN.

Day of month.	Bar. 37 feet abv. sea level corrected & reduced.		Self-Registering Thermometers.				Wind.		
	Highest.	Lowest.	Highest in shade.	Lowest in shade.	Highest in sun.	Lowest on grass.	Direction from three daily re- gisters.	Force in lb. per square foot.	Rain in Inches.
1	30·065	30·035	65·48	110·0	40·5	S SE	5·72	0·02	
2	30·114	30·090	63·50	101·5	39·5	SE S	·78	0·03	
3	30·165	30·159	67·50	112·0	40·0	NE SE E	1·04		
4	30·131	29·881	80·50	116·0	45·0	NW S	1·04	0·11	
5	29·777	29·730	73·58	113·5	52·5	S SE	5·73		
6	29·765	29·694	69·57	104·0	56·0	SE	·78		
7	29·899	29·773	72·57	108·5	52·5	SE	1·04		
8	29·842	29·792	66·58	82·5	50·0	SE	1·04	0·08	
9	29·768	29·453	70·57	79·5	49·0	NW NW	0·	0·21	
10	29·471	29·421	72·59	110·0	55·0	NW	13·02	0·03	
11	29·846	29·712	71·48	80·5	43·5	SE SW S	5·72	0·04	
12	29·992	29·947	69·42	109·0	36·5	S	5·73		
13	30·025	30·002	68·52	106·0	49·0	SE	1·56		
14	29·989	29·983	65·50	101·0	47·5	S SE	1·56	0·01	
15	29·982	29·955	66·50	105·0	47·5	SE	·52		
16	29·949	29·844	70·54	94·5	51·0	NE SE	1·30		
17	29·741	29·650	91·52	127·0	46·5	NW SE S	1·04	0·33	
18	29·648	29·520	82·55	105·0	42·0	SW S NW	5·99	0·02	
19	29·776	29·593	77·49	119·5	43·0	NW W	3·64	0·01	
20	29·504	29·422	69·53	107·5	48·0	NW SW	5·72		
21	29·575	29·435	77·54	111·0	49·0	NW SW NW	3·64		
22	29·524	29·406	71·48	107·0	45·5	W NW	5·46	0·50	
23	29·425	29·330	78·48	106·0	42·0	S SW	6·25		
24	29·591	29·411	63·45	87·5	41·5	NW SW	3·64		
25	29·702	29·535	71·52	110·5	47·0	S W	7·80		
26	29·949	29·811	76·54	112·0	49·0	SW W	10·41		
27	30·118	30·039	75·47	111·0	42·5	NW SE	·78		
28	29·877	29·701	84·52	119·0	47·0	NW SE	·52	0·04	
29	29·841	29·719	84·52	110·5	47·5	NW S	6·25		
30	29·879	29·697	72·47	96·0	42·5	NW SE	1·30		
31	29·520	29·484	69·53	107·0	47·0	SW	3·38		
Mean monthly 29·775			63·30	105·50	46·30	Total Force	103·57	1·43	

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 30 years' standard tables are used for obtaining the difference from the average.

Barometer mean, 29·775in., being ·027in. above the average.
 Temperature mean, 63·30°, being 2·11° above the ditto.
 Solar intensity mean, 105·50°, being 0·68° above the ditto.
 Dew point mean, 50·1°, being 1·19° above the ditto.
 Humidity of air mean, ·63, being ·04 per cent. below the ditto.
 Elastic force of vapour ·362 mean, being ·009 per cent. above the ditto.
 Total amount of rain, 1·43in., being 0·38in. below the ditto.
 Increase of spontaneous evaporation on rain-fall, 1·52in.
 Mean amount of ozone, 6·50, being 0·61 of chromatic scale below ditto.
 Electricity, active all through the month with only 4 nil's. First min., a little before sunrise; first max., a few hours after; second min., a few hours before sunset; second max., a few hours after ditto.
 Much thunder and lighting on the 4th.

FRANCIS ABBOTT.

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

- 16th.—First bunch Red Currants ripe.
 18th.—Common Privet commencing to flower.
 24th.—First bunch Black Currants ripe.
 27th.—Melia Azederach commencing to flower.
 31st.—Doyene d'Ete Pear ripe; Juneating Apple ditto.

Results of observations taken at New Norfolk for December, 1874 :—

Barometer mean of three daily readings corrected and reduced 29.767 inches.

Thermometer mean of three daily readings 62.02°.

Dew point mean position ditto, 50.06°.

Humidity mean of ditto, .66.

Elastic force of vapour, .370.

Solar intensity mean of maximum temperature, 121.1°.

Terrestrial radiation mean of minimum temperature, 45.5°.

Rainfall, 1.40in.

Evaporation, 6.67in. in excess of Rainfall, 5.27in.

Clouds mean amount of three daily observations, 6.04.

Ozone ditto, 2 ditto 7.8.

Wind force in lbs. of 3 ditto, 106.39lbs.

W. E. SHOBRIDGE, Valleyfield.

NEW NORFOLK.

The following Observations taken at New Norfolk were obtained as follows, viz. :—

Barometer.—Mean of 3 daily readings (corrected to 32 deg. and reduced to sea level) with a pediment barometer by Casella, reading to within .02 inch of Mr. Abbott's standard in Hobart Town.

Temperature.—Mean of 3 daily readings of Dry Bulb of Hygrometer by Casella, with which also the dew point, humidity and elastic force of vapour are obtained by Glaisher's tables.

Duurnal range is the difference between daily registers of self-registering max. and min. thermometers by Casella.

Ozone.—Schonbein's prepared slips exposed for 12 hours and compared with Chromatic scale.

The above are placed in an instrument house 4 ft. square and 7 ft. high, double-roofed, and surrounded on E.N. and W. by Louvre boards, protected in turn by shutters from the roof, extending 3 ft. down the walls and inclined outwards to afford shade, at the same time allowing a free circulation of air.

Solar intensity.—Daily registers of Casella's improved self-registering black bulb and neck thermometer placed in vacuo, fixed on outside edge of north shutter of instrument house 4 ft. from the ground. The house is surrounded by a grass-plot, enclosed by a wire fence in which are placed—

1. The terrestrial radiation thermometer on small brass stand, and enclosed, except the bulb in a glass tube.

2. Rain gauge 5 inches in diameter fixed in stone bottle, from which the water is measured every evening after rain with guage glass.

3. Evaporating dish also 5 inches in diameter, and holding 4 inches of water to overflow pipe, placed in a stone bottle on the ground the same as rain guage.

A Lind's wind guage by Varley, is fixed on a pole at S.E. corner of house 18ft. from the ground.

All the above instruments were imported direct from Casella by Mr. Abbott, of Hobart Town, for scientific purposes and were the best procurable.

W. E. SHOBRIDGE, Valleyfield.

MONTHLY MEANS OF OBSERVATIONS TAKEN AT NEW NORFOLK FOR 1874.

Longitude 147° 4' 45" S.

Latitude 42° 46' 48" S.

Month.	Baro- meter.	Thermometer.			Humidity of Air.		Conden- sation.		Ozone.	Clouds.	Winds.				
	At Temperature 32°	Mean Temperature.	Mean Diurnal Range.	Mean Solar Intensity.	Mean Terrestrial Radiation.	Dew Point Mean	Humidity of Air per cent.	Elastic Force of Vapour per 1000.	Rain in inches.	No. of Days on which Rain fell.	Spontaneous Evaporation in inches.	Mean Daily Amount.	Mean Daily Amount.	Prevaling Direction.	Force in lbs. per square foot.
January	29.946	64.75	21.38	—	50.67	53.00	.64	.406	1.25	4	7.51	3.81	7.66	W, SE	—
February	29.995	62.32	18.00	—	47.42	50.05	.67	.372	1.67	7	4.99	5.16	7.78	W, SE	—
March	30.060	61.96	17.01	—	46.24	54.80	.77	.423	.99	8	4.48	6.41	7.51	SE, W	—
April	30.019	57.15	15.93	—	42.86	53.05	.86	.403	1.41	8	2.18	5.75	7	W, SE	—
May	29.937	51.41	13.74	—	41.30	49.00	.93	.348	1.80	12	.85	6.25	7	W, SW	—
June	30.054	44.92	12.73	—	34.10	43.10	.96	.292	1.80	10	.57	7.58	7.46	W, SE	—
July	30.025	44.66	16.67	—	31.22	42.36	.93	.282	1.77	8	.73	6.36	8.	W, NW	16.38
August	29.804	45.49	20.58	—	30.25	41.55	.90	.281	1.79	15	1.73	5.33	8.25	W, NW	24.94
September	29.672	48.41	18.	—	35.43	45.90	.88	.303	2.43	16	3.34	6.34	8.90	SE, NW	80.19
October	29.930	58.49	24.	113.3	39.40	54.40	.86	.430	1.38	14	4.67	5.40	7.70	NW, W	136.04
November	29.739	57.24	20.56	112.2	43.26	53.20	.88	.419	5.35	21	4.90	6.90	8.05	W, NW	125.07
December	29.767	62.02	23.10	121.1	45.50	51.40	.68	.384	1.40	13	6.67	6.10	7.80	{ W, NW SE, E	115.89
Results } Sums ...	358.948	658.82	221.70		488.15	591.81	9.96	4.343	1.75	11.3	3.55	71.39	92.61		498.51†
for } Means ..	29.912	54.90	18.47	115.5*	40.67	49.31	.83	.362	23.04	136	42.62	5.95	7.71	W, SE	83.8

* Mean of 3 months. † Total 6 months.