

Government Meteorological Observatory.

METEOROLOGICAL Observations at Kelburn, Wellington, for the month of December, 1939. Observations taken at 9 a.m.

Altitude of Observatory, 415 ft.

Date.	Pressure in Millibars, at Sea-level and Standard Gravity.	Temperature (° F.) from Observations at 9 a.m.							Wind.			Rainfall in Points: (100 Points = 1 Inch).	Bright Sunshine: Hours and Tenths.	Weather (Symbols) at 9 a.m.
		In Screen.					Minimum on Grass.	Beaufort Scale.		Anemo-meter.				
		At 9 a.m.			Maxi-mum.	Mini-mum.		Direction.	Force.					
		Dry.	Wet.	Humid-ity.						Dry.	Dry.			
1	1011.6	59.4	57.4	88	67.7	56.0	55.0	NNW	4	240	67	2.3	oir	
2	1003.9	57.9	57.6	98	66.0	57.4	56.6	NNW	5	294	14	2.3	or	
3	1004.9	59.8	53.8	65	62.0	51.4	48.9	NNW	5	403	..	4.5	bc	
4	1014.1	60.7	52.7	55	66.5	47.2	36.0	SE	2	248	..	12.7	c	
5	1015.7	62.7	57.8	73	63.8	52.3	47.3	N	4	143	..	7.4	c	
6	1014.7	61.3	57.8	80	67.0	56.0	55.1	N	6	304	..	13.0	oq	
7	1005.2	67.0	59.2	60	67.3	57.2	53.6	NNW	8	412	116	3.2	eqir	
8	1012.6	61.6	56.0	68	66.4	54.1	50.3	NW	6	391	..	14.0	b	
9	1018.5	61.6	54.7	61	64.9	51.8	45.7	N	2	160	9	7.4	o	
10	1011.3	59.8	58.3	91	61.9	51.6	51.2	Calm	..	129	177	0.0	oir	
11	998.4	55.1	55.0	99	55.1	51.3	51.5	SE	7	326	660	0.0	or	
12	1005.7	53.4	53.2	99	63.3	50.4	50.7	S	7	544	11	0.3	or	
13	1010.1	62.9	59.1	79	67.9	52.1	52.2	N	1	227	..	12.1	bc	
14	1008.7	59.3	57.1	87	62.7	55.0	51.6	N	1	134	..	6.1	o	
15	1003.1	61.8	50.4	86	68.4	57.3	56.5	NW	5	347	3	5.7	o	
16	1012.7	59.0	54.4	72	64.2	52.0	51.1	SE	5	233	..	11.6	c	
17	1015.6	65.0	58.2	64	71.4	46.8	38.5	Calm	..	150	..	11.8	b	
18	1017.7	64.8	59.5	72	71.6	53.2	46.4	NW	2	69	..	11.4	o	
19	1019.9	67.0	60.6	67	72.9	53.9	43.1	NW	2	109	..	13.8	b	
20	1020.7	63.8	59.6	77	65.5	57.0	53.4	NW	4	110	..	6.9	ou	
21	1021.2	67.6	61.0	67	69.3	57.8	56.1	N	4	244	Trace	11.0	c	
22	1019.0	61.9	60.1	89	66.6	59.9	58.8	NNW	3	209	..	1.7	oid	
23	1016.5	62.0	59.0	83	66.6	59.1	58.8	NNW	4	179	..	8.7	oq	
24	1010.4	63.7	60.7	83	66.0	59.3	58.9	NNW	5	220	..	1.7	o	
25	1003.9	65.8	60.2	81	70.8	60.2	59.4	NW	5	296	1	9.1	c	
26	1000.9	62.8	57.5	70	62.8	55.7	51.8	NW	2	187	448	4.1	cu	
27	1004.7	49.7	49.7	100	57.4	46.1	46.4	NE	1	133	75	0.0	or	
28	1015.9	54.3	49.7	70	59.8	48.7	48.0	S	4	312	..	9.9	o	
29	1017.4	59.8	56.4	79	66.2	46.6	40.4	N	2	112	..	8.6	o	
30	1019.0	61.8	59.2	86	70.3	54.2	47.2	Calm	..	44	..	6.2	o	
31	1018.0	66.2	61.3	73	73.1	57.8	52.8	NNW	3	111	..	12.7	c	
Means, &c. ..	1012.0	61.3	57.0	78	66.0	53.8	50.8	..	3.5	226	1521	220.2	..	

Mean earth temperature at 1 ft., 61.7°; and at 3 ft., 60.9°. Number of rain days, 11. Total rainfall, 419 per cent. above normal, being a record for Wellington. Sunshine, 47 per cent. of the possible. Mean dew-point at 9 a.m., 53.3°; mean vapour pressure, 0.407 in.

DIRECTION OF WIND.

Gale (force 8 or more).	Forces 4 to 7.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
1	16	11	1	..	3	2	11	3

NOTE.—The month was remarkable for the amount and intensity of the rainfall. On the 7th, 11th, and 26th-27th, abnormally heavy falls occurred. On the 7th, in little over an hour, 1.08 in. was registered. Many slips occurred on the 11th and again on the 26th-27th. A north-west gale blew on the 7th and one from the south-east on the 11th.

NOTES ON THE WEATHER FOR DECEMBER, 1939.

General.—For the whole Dominion December was rather a mixed month, but fine, warm weather predominated. Most of the precipitation came in substantial falls and the rain had refreshing effects, sustaining good pasture growth, especially in the North Island where very satisfactory crops of ensilage and hay have been harvested. The land over the greater part of Canterbury and Otago has continued too dry for the cereal crops, and with the feed shortage the autumn prospects are poor. Some of the coastal districts, however, had better rains which will help to fill the wheat. The reports indicate the excellent condition of stock. White butterflies are in evidence but in restricted numbers.

Rainfall.—Many districts had heavy rain but the totals came close to the average over a large part of the country. Falls in the North Island tended to be slightly above the average, but in the immediate neighbourhood of Wellington December was the wettest of any month since records were first taken. In the South Island there were rainfall deficits, most marked in South Canterbury and Otago, while the rainfall was somewhat above normal in the far south-west, and in considerable excess along the east coast from Banks Peninsula northwards.

On several occasions there were scattered hail showers associated with thunderstorms, more especially in Hawke's Bay. During the month flooding occurred in the north of the South Island and twice in the south of the Wellington Province.

Temperatures equalled or exceeded normal values, departures in the south being slightly larger than those in the north. Some departures in Otago exceeded 4° F. Humid conditions over a part of the month gave cloudy nights, resulting in fairly high minimum temperatures.

Sunshine.—The number of hours of bright sunshine either approached closely or exceeded the normal figures. Both Auckland and Blenheim averaged some two hours a day above normal, but Napier headed the list with its 291 hours.

Pressure Systems.—On the 1st, pressure was high to the east, and several disturbances crossing the Dominion kept the weather rather unsettled, with rain chiefly in the central provinces. The situation soon developed into the westerly type with a predominance of fair to fine weather, but by the 6th the centre of high pressure had moved eastwards off New Zealand. With an advancing trough, disturbances brought a southerly change, and rain developed in the south and west and became fairly general, but the weather in Canterbury and northern Hawke's Bay remained fair.

A temporary improvement followed, but an intense cyclone formed in the North Tasman Sea on the night of the 9th and moved south-eastwards across northern New Zealand. North-easterly gales blew over the Auckland Peninsula, where the weather continued stormy as the heavy rain spread south and east. Moderate to strong southerlies became general and reached gale force in a number of places. The heaviest falls were in the Wellington Province, where several floods occurred, particularly in the Hutt Valley. On the 11th there were thunderstorms in the Hawke's Bay region.

By the 13th the improvement had become general and temperatures were mild again. While pressure in the north was high, a series of weak disturbances passed in the south giving rain on the 14th to the west coast and resulting in a weak southerly change with some showers on the 15th.