

Government Meteorological Observatory.

METEOROLOGICAL Observations at Kelburn, Wellington, for the month of January, 1940. 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.						
		At 9 a.m.			Maxim.	Minim.		Direction.	Force.					
		Dry.	Wet.	Humidity.						Run in 24 Hours.				
1	1013.5	69.8	63.4	68	73.5	58.3	54.6	NW	3	168	1	13.1	b	
2	1011.8	55.4	52.7	82	59.6	52.3	53.2	SW	5	333	1	4.4	o	
3	1021.0	59.1	53.0	64	64.3	46.2	38.9	ENE	1	109	..	6.4	o	
4	1025.2	64.3	56.9	60	68.6	48.2	41.1	NW	2	84	..	11.9	b	
5	1024.3	64.0	58.6	71	70.2	53.6	48.3	NW	4	131	..	8.2	b	
6	1022.7	70.2	63.8	68	75.4	56.1	52.7	NW	1	142	..	13.0	b	
7	1021.2	62.8	58.9	78	69.1	56.5	50.0	SSE	4	138	..	14.2	b	
8	1016.4	67.3	62.8	77	69.0	55.0	48.5	SE	2	95	..	10.0	o	
9	1016.4	59.3	58.4	95	69.3	57.0	52.1	SE	2	87	2	2.7	o	
10	1012.1	63.5	60.0	80	67.8	58.1	53.7	NW	4	187	..	7.9	o	
11	1012.9	63.8	60.8	83	68.5	60.1	58.6	NW	6	476	..	3.8	oq	
12	1013.2	67.0	63.1	80	69.4	60.0	58.8	NW	5	394	..	9.5	o	
13	1010.2	67.0	62.0	74	72.2	62.0	59.5	NNW	2	363	190	0.7	ow	
14	981.2	61.3	61.0	97	62.9	54.7	53.0	W	1	180	25	3.3	or	
15	1000.0	63.1	58.0	72	64.4	54.8	53.8	NW	5	369	13	2.9	o	
16	1016.5	63.1	56.6	65	67.5	53.0	49.6	SSE	3	173	..	12.5	b	
17	1022.9	61.8	57.0	73	70.6	52.0	43.3	SE	1	77	..	14.1	b	
18	1017.5	69.0	62.9	69	75.0	56.3	50.5	NW	3	76	..	11.0	bc	
19	1016.3	63.6	60.5	83	71.4	58.3	56.3	SE	2	54	Trace	7.5	ou	
20	1011.8	68.4	61.4	65	73.5	58.6	52.9	NNW	1	63	Trace	10.5	bc	
21	1008.0	65.8	62.7	84	71.4	62.0	56.9	NNW	2	124	2	0.5	oir	
22	1007.3	65.6	63.3	87	70.2	62.3	60.3	WNW	4	216	..	7.9	om	
23	1011.1	67.8	62.4	73	71.5	61.0	58.3	NNW	4	331	..	11.8	o	
24	1010.3	68.3	62.3	69	73.9	60.3	55.8	NW	4	195	3	2.5	o	
25	1004.9	69.5	63.2	68	72.1	63.4	61.8	NW	3	191	264	2.4	o	
26	989.0	56.4	56.0	97	65.7	56.1	56.8	NW	3	262	..	7.6	or	
27	977.0	60.7	56.6	74	73.9	56.1	53.2	NW	5	399	..	10.5	bc	
28	988.5	66.2	58.1	59	68.0	58.8	52.1	WNW	5	248	28	11.9	bq	
29	990.4	66.2	58.5	61	69.3	60.1	56.9	NW	6	405	..	5.3	bq	
30	991.0	65.1	57.9	62	68.2	59.0	55.8	NW	5	410	..	13.3	bq	
31	999.7	62.2	50.3	37	70.0	54.5	50.4	W	5	296	6	13.3	b	
Means, &c. . .	1008.5	64.4	59.5	73	69.6	56.9	53.1	..	3.3	219	535	254.6	..	

Mean earth temperature at 1 ft., 67.5°; and at 3 ft., 64.5°. Number of rain days, 11. Total rainfall, 84 per cent. above normal, being the highest total since 1923. Sunshine, 56 per cent. of the possible. Mean dew-point at 9 a.m., 55.6°; mean vapour pressure, 0.442 in.

Gale (force 8 or more).	Forces 4 to 7.	DIRECTION OF WIND.									
		N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.	
..	15	2	½	½	5	1	1	3	18	..	

NOTE.—Heavy rain and flooding occurred on the 26th.

NOTES ON THE WEATHER FOR JANUARY, 1940.

General Notes.—The month was warm and humid. The earlier part was pleasantly fine and the middle stormy. The latter days were varied, fair weather predominating in some districts, but others had little respite from the spell of muggy weather with frequent rain and strong winds. The rain has kept the countryside very green for the season, but has interrupted late haymaking. A good average has been maintained in the dairy output, the early decline being replaced by a later increase. Although sheep and stock are in good form generally, lambs have been fattening very slowly. All root crops have benefitted from the rains and the excellent progress of the rape and turnip crops should relieve any anxiety about winter feed. Orchards sustained some damage from the winds, and the wet and humid conditions have been detrimental to the early-maturing fruits.

Rainfall.—The month was an extremely wet one for the Auckland Peninsula where many rainfall totals were three or four times the average value. Over most of the country there were excesses, but slight deficiencies occurred in a few scattered places in the South Island. About Northern Hawke's Bay and Poverty Bay the deficiencies were rather more pronounced. Most of the heavy falls were associated with the storm of the 13th-14th and with the numerous electrical disturbances during the last week.

Temperature.—Mean temperatures were everywhere above normal, the average departures being a little more than 1½ degrees. Throughout the month there were many muggy days and several high maximum temperatures were registered in the centre of the North Island. During the 14th and 15th snow fell in the high country in the South Island leaving coatings between six inches and a foot about the Mackenzie Country.

Sunshine.—Humid conditions helped to reduce the duration of bright sunshine considerably in the far north and to a lesser extent in western areas. Small excesses of sunshine were recorded in South Canterbury, Wellington, and Hawke's Bay. Masterton, with 205.1 hours, was the station returning the highest total.

Weather Sequence.—At the beginning of the month pressure was high in the north, while westerly depressions brought moderate rain to Otago and Westland, southerly winds being strong at times. An anticyclone gradually covering New Zealand resulted in a fine, warm spell, but when, on the 8th, the anticyclone began to lose intensity skies became more cloudy and by the 10th the situation had reverted to the westerly type, with the rain confined chiefly to the south-west. The last of that series of westerly depressions formed a deep centre to the south on the 12th and westerly winds freshened.

The weekend 12th-15th was a stormy one. Some days previously a cyclone had developed off the North Queensland coast and then moved slowly towards New Caledonia and appeared to be filling up; but on the morning of the 13th when it was situated near Norfolk Island it began to deepen rapidly and to move with more than usual speed along a southerly course. At 6 a.m. on the 14th it was centred over the middle of the North Island and twenty-four hours later it was off the east coast of Otago. During the night 13th-14th strong north-easterly gales were experienced over the Auckland Province and there were many heavy downpours. As the cyclone moved, the north-easterlies changed to north-westerlies, backing in eastern districts and veering in western. Although the storm was severest in the Auckland Province, along the east coast of which small craft were badly buffeted, gales and heavy rain were general, while substantial falls of snow occurred in the Mackenzie Country. Widespread but mainly minor damage resulted from the winds.

After a rapid improvement the weather kept fair but humid with winds tending easterly. A feature of the situation for over a week was the anticyclone which remained centred to the south-east of New Zealand. Fresh easterlies continued to blow over the Auckland Peninsula, where the weather stayed cloudy with scattered but fairly heavy rains, while elsewhere fair weather prevailed. On the 21st winds were becoming north-westerly and the weather generally was dull with scattered rain, but during the 22nd conditions improved.

With a complex system of disturbances crossing the Dominion during the 24th and 25th, north-easterly to northerly winds freshened from Cook Strait northwards, some heavy rain falling in western districts. A deeper disturbance was located to the south on the 26th and winds, now between north and west, increased to gale force in places and conditions were unsettled. Over an extensive area barometers were very low, while in the New Zealand region the situation was a well-developed one of the westerly type with some periods of windy and showery weather with scattered thunderstorms.

On the 31st a sharp rise of pressure in the south turned winds to the south-west and the weather improved, although temperatures were cooler.