

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for January 1967—continued

Station	Height of Station Above M.S.L.	Air Temperatures in Degrees (Fahrenheit)								Rainfall in Inches				Bright Sunshine	
		Means of		Mean of A and B	Difference From Normal	Absolute Maximum and Minimum				Total Fall	No. of Rain Days	Difference From Normal	Maximum Fall		
		A Max.	B Min.			Maximum	Date	Minimum	Date				Amount		Date
	Ft.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	In.	In.	Hrs.				
Taieri .. .. .	80	69.5	48.0	58.8	+0.6	85.8	19	38.8	10	1.80	12	-1.0	0.93	5	
Berwick Forest .. .. .	60	68.2	46.8	57.5	-0.8	85.3	29	38.5	10	2.45	15	-0.5	0.55	5	
Dunedin Airport .. .. .	4	68.8	45.6	57.2	+1.5	85.8	18	31.6	10	2.31	13	-0.2	0.87	5	
Musselburgh, Dunedin .. .. .	5	66.9	52.3	59.6	+0.8	84.7	18	42.0	12	1.45	11	-1.4	0.62	5	
Oamaru .. .. .	47	69.2	51.3	60.2	..	86.0	18	42.0	15	1.39	8	..	0.32	25	
West Arm, Lake Manapouri .. .. .	590	65.2	48.7	57.0	-0.1	84.0	15	40.2	12	15.28	16	..	3.22	22	
Queenstown .. .. .	1,080	70.7	50.5	60.6	+0.6	88.8	15	42.4	28	3.95	11	+0.8	0.93	30	
Cromwell .. .. .	720	74.5	51.6	63.0	-0.2	93.2	16	39.6	9	1.71	11	-0.2	0.76	23	
Ophir .. .. .	1,000	69.2	49.1	59.2	-0.8	87.5	16	39.4	13	0.89	4	-1.1	0.42	23	
Moa Creek .. .. .	1,400	70.3	45.0	57.6	+0.2	84.9	15	34.4	28	0.86	8	-0.8	0.21	30	
Earnscleugh .. .. .	500	73.2	47.9	60.6	+0.4	92.5	16	36.0	10	1.74	8	0.0	0.59	23	
Alexandra .. .. .	461	72.9	52.5	62.8	+0.4	90.8	16	43.1	10	1.41	8	-0.4	0.56	23	
Roxburgh Hydro .. .. .	350	72.0	49.4	60.7	0.0	89.5	16	39.0	10	1.37	11	-0.8	0.23	4, 30	
Moa Flat, West Otago .. .. .	1,345	65.7	46.0	55.8	+1.0	82.0	17	37.3	10	2.53	15	-0.5	0.46	23	
Lake Mahinerangi .. .. .	1,300	63.6	45.4	54.5	..	78.5	15	35.5	10	2.89	15	-0.8	0.70	5	
Tapanui .. .. .	740	68.7	48.4	58.6	+1.1	90.0	15	40.0	10	3.72	18	+0.3	0.63	3	
Rankleburn Forest .. .. .	835	66.1	46.2	56.2	-0.5	81.2	16, 17	38.8	26	4.48	20	..	0.73	5	
Taieri Mouth .. .. .	50	64.4	47.9	56.2	..	80.7	18	40.0	10	2.20	13	..	0.73	5	
Otautau .. .. .	180	66.9	46.3	56.6	-0.4	84.0	16, 17	35.0	10	2.66	14	-0.9	1.10	25	
Gore .. .. .	230	68.0	49.5	58.8	+0.1	86.8	16	40.5	12	3.46	17	+0.3	0.60	4	
Winton .. .. .	150	68.4	47.5	58.0	..	86.1	17	37.5	10	2.16	12	..	0.55	24	
Pebble Hills .. .. .	138	68.4	48.4	58.4	+0.3	87.0	17	39.0	10	2.71	15	-0.6	0.53	25	
Invercargill Airport .. .. .	1	65.3	47.8	56.6	+0.5	81.2	17	38.1	8	1.90	17	-1.7	0.38	11	
Milton .. .. .	60	68.1	47.3	57.7	..	84.5	18	36.5	10	2.75	14	+0.2	0.70	5	
Balclutha .. .. .	20	67.4	48.7	58.0	..	84.3	18	38.8	10	2.48	15	..	0.54	3	
Rarotonga .. .. .	15	83.6	73.2	78.4	+0.2	86.0	9	68.8	4	15.57	19	+5.2	5.10	18	
Raoul Island .. .. .	126	72.1	68.9	70.5	-0.3	78.6	21	57.1	12	9.42	15	+5.7	4.73	15	
Chatham Islands .. .. .	157	63.4	52.7	58.0	+0.4	60.5	23	43.5	15	1.34	14	-1.5	0.38	7	
Campbell Island .. .. .	49	54.2	44.2	49.2	..	59.2	3	36.8	5	6.82	24	..	1.30	19	
Scott Base, Antarctica .. .. .	45	..	..	27.0	..	40.5	4	9.3	16	..	..	..	..	..	

LATE RETURNS

Whatawhata, December 1966	340	68.2	53.3	60.8	-0.8	78.9	25	41.2	27	4.33	17	+0.3	1.58	22	194
---------------------------	-----	------	------	------	------	------	----	------	----	------	----	------	------	----	-----

The "normal" refers to the present site of the instruments. The standard periods for normals are: for temperature 1931-60, for rainfall 1921-50, and for sunshine 1935-60. No normals are available for stations with only short records.

\*Sunshine recorder is not located at the station but is in the near vicinity.

NOTES ON THE WEATHER FOR JANUARY 1967

**General:** January was cloudy and cool, especially in the North Island. In the north growth was good but at times too soft for lambs; and in many districts the weather proved rather too unsettled for harvesting and haymaking. In Hawke's Bay and Wairarapa the cloudy, cool weather had a bad effect on fruit and vegetable crops. On the other hand, in many parts of the South Island, especially Southland, farmers found the weather too dry.

**Rainfall:** Rainfall was about half the average value in eastern districts of the North Island, except for the Gisborne high country. It was also well below average in most of Northland, in Taihape, in inland Marlborough, and in some eastern and southern coastal areas of the South Island. On the other hand, it was more than 50 percent above average in South Westland, the Alps, and the Canterbury high country. This area suffered from very heavy rain from the 21st to the 24th during a spell of westerlies, and some stations received more than 20 inches in these four days.

**Temperatures:** In the North Island mean temperatures were a degree below average. In the South Island they were mainly close to average.

The cold spell which had commenced in the last week of 1966 persisted during about the first 10 days of 1967, affecting especially eastern and inland districts from Christchurch to Gisborne.

**Sunshine:** Sunshine was below average by 20-60 hours in southern and eastern districts of the North Island, also in Bay of Plenty, Taupo, Taihape, and parts of Nelson, Marlborough, and Canterbury. Masterton had one of the cloudiest Januaries in 40 years of observation, with only 171 hours of sunshine.

Elsewhere sunshine was mainly close to average.

**Weather Sequence:** The cold spell which had been affecting the country in the last week of 1966, continued for about the first 10 days of 1967. During the 1st and 2nd the depression which had been centred near Gisborne moved away only slowly, and southerlies brought a few showers to some eastern districts and also the Bay of Plenty. A depression from the north Tasman Sea then crossed the North Island, with rain there and in many parts of the South Island. There were considerable falls in some northern districts.

On the 5th a second centre developed near Wellington, while the original centre lay to the east. Rain became fairly general over the South Island, but only scattered over the North Island. The complex depression remained to the east for three more days, while southerlies brought showers to several districts, especially about Cook Strait. During the 9th and 10th the depression deepened but moved away, and the showers gradually disappeared.

By the 11th an anticyclone was centred to the north. On this and the following day a trough of low pressure crossed most of the country, with rain in many districts. A depression then formed on the trough and moved slowly eastward past North Cape during the next four days, while the trough itself remained almost stationary. Considerable rain was recorded in northern districts, and temperatures became much warmer. On the 17th rain persisted in northern districts in the easterlies, while some was also reported on the West Coast with the passage of a depression across western Southland.

The 18th to the 25th was a period of westerlies, with persistently unsettled weather on the West Coast and in the Alps. For the first three days of this period the depression which had crossed Southland remained to the south, while pressures were high to the north. From the 21st to the 25th another deep depression far to the south-west moved eastward, while troughs of low pressure crossed the country. The rain on the West Coast and in the Alps became very heavy. It also spread over nearly the whole of the South Island and was very heavy on the 24th in the Canterbury high country. The period of westerlies finished on the 25th, with the passage of a trough bringing rain also to most of the North Island, while strong gales buffeted Wellington.

Another trough crossed the country on the 26th and 27th, with rain in some coastal districts of the South Island. The following day was fine under the influence of an anticyclone. However, this soon moved to the east. During the last three days of the month another depression passed far to the south, while a tropical storm moved into the north Tasman Sea from west of Noumea. In the northerlies there was further considerable rain on the West Coast and in the Alps, extending again at times to the Canterbury high country.

J. F. GABITES, Director.