II.

THE CLIMATE OF NEW ZEALAND.

METEOROLOGICAL STATISTICS.

THE following TABLES, which form the most reliable data for judging of the Climate of New Zealand, are extracted from the Reports of the Inspector of Meteorological Stations, for 1867, and are appended for the information of those to whom the above Report was not accessible.

TABLE I.—MEAN TEMPERATURE of the AIR in shade, recorded at the Chief Towns in the NORTH and MIDDLE ISLANDS of NEW ZEALAND, from the earliest Observations to the end of 1867.

Place.	Mean Annual Temp.	Mean Temp. for (SPRING) Sept., Oct., Nov.	Mean Temp. for (SUMMER) Dec., Jan., Feb.	Mean Temp. for (AUTUMN) Mar., Apl., May.	Mean Temp. for (WINTER) June, July, Aug.	Period of Observations.
NORTH ISLAND.	Degrees.	Degrees.	Degrees.	Degrees.	Degrees.	
Auckland . .	60·3	58·8	68·6	62·3	53·3	15 years
Taranaki .	56·8	55·9	64·2	57·4	49·5	12 ,,
Wellington . .	55·7	54·6	63·6	56·7	47·9	10 ,,
Means for North Island . .	57·6	56·4	65·4	58·8	50·2	
SOUTH ISLAND.						
Nelson . .	55·0	53·3	62·5	56·4	46·7	16 years
Christchurch .	55·1	55·5	61·4	55·9	44·5	11 ,,
Dunedin . .	50·7	50·0	57·4	51·6	47·0	15 ,,
Means for South Island . .	53·6	52·9	60·4	54·6	46·0	
	57·6	56·4	65·4	58·8	50·2	
	53·6	52·9	60·4	54·6	46·0	
Means for North & South Islands.	55·6	54·6	62·9	56·7	48·1	

From the above Table it will be observed that in the North Island the mean annual temperature for Auckland is the highest (60·3 degs.), and that for Taranaki (56·8 degs.) the next, while Wellington is the lowest (55·7 degs.)

In the South or Middle Island, Christchurch and Nelson show the highest annual mean temperature (55·1 and 55·0 degs.), and Dunedin is very much lower, viz., 50·7 degs.

January and February, corresponding to July and August in England, are the two warmest months in New Zealand; and July and August, the two coldest (excepting in Nelson and Wellington, at which places the mean readings are lowest for June and July).

The climate of London is 7·2 degrees colder than that of the North Island, and 3·8 degrees colder than the Middle Island of New Zealand; and the difference between the mean annual temperature of the whole of New Zealand and that of London is 5·7 degs., the former being 55·7 degs. and the latter 50 degs.

The following are the means for the two warmest and two coldest months in the year in the several localities, with their differences:—

Auckland.	Taranaki.	Wellington.	Nelson.	Christchurch.	Dunedin.
69·6	64·7	64·6	63·6	65·2	58·0
53·1	49·3	47·8	45·9	44·3	43·2
16·5	15·4	16·8	17·7	20·9	14·8

From which we find that the average difference between the mean temperature of the warmest and coldest months of the year in New Zealand is 17·0 degs.; at Rome it is 27 degs., at Montpellier 33 degs., at Milan 38 degs., and at Jersey 22 degs.

The observations from these six Stations have been selected to form the above Table as they extend over a tolerably long period, and give a fair comparison of the climate of the North and South Islands.

TABLE II.—Showing the influence of the Southern Alps on the Climate of the East and West Coasts of the Middle Island; from Averages for the years 1866 and 1867.

Locality.	Mean Annual Temperature.	Maximum Solar Radiation recorded.	Minimum Terrestrial Radiation recorded.	Mean Elastic Force of Vapour.	Mean Degree of Moisture.	Mean Annual Rainfall.	Average number of days on which Rain fell.	Average Velocity of Wind, in miles per day.
	Degs.	Degs.	Degs.	Inches.	Sat.-100.	Inches.	Days.	Miles.
Christchurch (East Coast.)	53·3	137·Feb.	18·July.	·347	76	24·70	91	165
Hokitika (West Coast.)	52·3	103·Jan.	22·Aug.	·393	89	119·00	202	133

TABLE III.—Showing the Rainfall in the North and Middle Islands of New Zealand, compiled from the earliest Observations to the present date, 1867.

Place.	Mean Annual Rainfall.	Averages of Rainfall for the different Seasons of the Year, with the Mean Number of Days of Rain.								Mean Number of Days on which Rain falls Annually.	Period of Observations.
		Spring. (Sept., Oct., Nov.)		Summer. (Dec., Jan., Feb.)		Autumn. (Mar., April, May.)		Winter. (June, July, Aug.)			
	Inches.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Days.	
North Island.											
Auckland . . .	44·682	11·031	45	8·378	27	11·009	37	14·265	56	177	15 years.
Taranaki . . .	58·584	17·088	42	10·974	27	14·133	30	17·199	47	146	12 ,,
Wellington . .	50·091	12·148	35	9·685	27	12·666	33	16·021	46	146	10 ,,
Means for North Island	51·119	13·422	40	9·679	27	12·602	33	15·828	49	156	
Middle Island.											
Nelson	54·721	16·746	28	13·211	17	8·795	19	14·551	23	92	16 years.
Christchurch* .	31·636	5·145	24	7·266	23	8·022	26	13·193	35	113	11 ,,
Dunedin . . .	32·886	8·129	44	9·428	41	7·943	38	7·253	36	178	15 ,,
Means for Middle Island	39·747	10·006	32	9·968	27	8·253	27	11·665	31	127	
	51·119	13·422	40	9·679	27	12·602	33	15·828	49	156	
	39·747	10·006	32	9·968	27	8·253	27	11·665	31	127	
Means for both Islands	45·433	11·714	36	9·823	27	10·427	30	13·746	35	141	

* The monthly averages for the amount of rain and the number of days of rainfall are only for eight years, while the mean annual fall and number of days are for the eleven years.

Note.—From the above it will be observed that Taranaki has the highest average annual rainfall (58·584), and Nelson is the next (54·721), while the average means for Christchurch (31·636) and Dunedin (32·886) are the lowest; but while Dunedin has a much smaller annual fall of rain than the others, yet there are a greater number of days of rain yearly at that place than at any of the other Stations; and although the mean fall for Nelson is one of the highest averages, still the mean number of days of rain in that locality is the least of all. Taking these six Stations, the annual rainfall and number of days of rain is greater in the North than in the Middle Island.