



NEW ZEALAND
GOVERNMENT GAZETTE.

(PROVINCE OF NELSON.)

PUBLISHED BY AUTHORITY.

All Public Notifications which appear in this Gazette, with any Official Signature thereunto annexed, are to be considered as Official Communications made to those Persons to whom they may relate, and are to be obeyed accordingly.

By his Honor's command,

HENRY ADAMS, *Solicitor of the Province.*

VOL. II.

NELSON, FRIDAY, JUNE 16, 1854.

No. 9.

Superintendent's Office,
Nelson, June 13, 1854.

HIS Honor the Superintendent has
been pleased to appoint

Mr. THOMAS ANDREWS

to be District Constable, for the district of
Waimea South.

By his Honor's command,

ALFRED GREENFIELD,
Clerk in Superintendent's Office.

Superintendent's Office,
Nelson, 13th June, 1854.

HIS Honor the Superintendent directs
the following Letter from the chief
Engineer of the Steamer Nelson, relative to
the Pakawau Coal, furnished by A. Fell,
Esq., to be published for general informa-
tion.

By His Honor's command,
ALFRED GREENFIELD,
Clerk in Superintendent's Office.

S. S. "Nelson,"
12th June, 1854.

SIR—In answer to your letter of the 6th instant,
I beg to state that having given the Pakawau
Coals a trial, I find a portion of them of good
quality; I should think about one-half of those
which I tried were of an inferior description.
When put in the fire they burn well, with a strong
clear flame; but they leave so much residue that
the furnaces require to be cleaned out very often.

Steam can easily be got up with them, but it
would be very difficult to keep a constant supply
for twenty-four hours.

I think that if the good coals were carefully
separated from shale and inferior coals, they
would answer our purpose well.

I remain, sir,

Your most obedient servant,
ALEXANDER MACNAB.

To Alfred Fell, Esq.,
Nelson.

Superintendent's Office,
Nelson, 7th June, 1854.

HIS Honor the Superintendent directs
that the following valuable Reports
and Statistical Tables, with explanatory
remarks, furnished respectively by Dr.
Thompson, of H.M. 58th Regiment, and

Dr. Prendergast, of H.M. 65th Regiment,
be republished for general information.

By his Honor's command,
ALFRED GREENFIELD,
Clerk in Superintendent's Office.

1.—ON THE BEST TEST OF THE CLIMATE
OF A COUNTRY.

The Climate of a country can be tested in various ways, but the amount of sickness and death which occurs among the human race living in it is now looked on as the most valuable of all tests, for a country is of little importance for colonization, even if food grows fast, so long as the climate causes those who cultivate it to decay. The comparison I have made in this, and more particularly in my first paper, between the health of troops in different countries, is the nearest approach we can have to a correct standard of measure, because British troops in all colonies are about the same age, have the same quantity of food served out to them, have the same medical attendance, and are called upon to perform nearly the same amount of labour. It may happen that some local circumstance may injure the fairness of the comparison, but this test is more free from error than any other. There is one important point to bear in mind, it is, that a civil population in the prime of life will suffer less sickness and death than a military. The reason is obvious. The life of a soldier is an unnatural state of existence, he is deprived of much of his natural sleep when on sentry, and the want of occupation interesting to the mind makes him more intemperate than civilians; and from sleeping in apartments crowded with human beings, he respire, for at least during eight hours out of the twenty-four, an atmosphere loaded with the most unwholesome of all poisons to the human frame, namely, human effluvia. With these preliminary remarks, I shall now proceed to the more immediate object of this paper.

2.—EVIDENCE OF THE CLIMATE DRAWN
FROM THE HEALTH OF THE TROOPS.

During the years ending March 1851, 1852, and 1853, the mean annual strength of the troops stationed in New Zealand was 1,340 men, and the aggregate strength 4,020. The conclusions drawn from them are applicable to the whole North Island, because during the above three years

519 men were stationed at Auckland,
451 " " at Wellington,
221 " " at Whanganui,
149 " " at the Bay of Islands.

The average age of the troops was twenty-six years, and the men had been on an average upwards of four years in New Zealand. As peace reigned between the European and Native population, none of the troops were harassed by active service; their employment was simply what is called Garrison Duty.

Rate of Mortality among the Troops.—During the three years ending March, 1853, thirty-two men died from disease. This gives an annual

mortality of eight men per thousand; and as in the United Kingdom sixteen men died annually from disease out of a thousand infantry soldiers,* it results, that residence in New Zealand saved the lives of eight men annually out of every thousand.

Let us now see in what class of disease this saving of life occurred, a point which will be clearly ascertained by an examination of the following table.

TABLE Number 1, showing the Total Admissions into Hospital among the Troops in New Zealand, and the Total Number of Deaths from the undermentioned classes of Diseases,† during the Three Years ending March, 1853, together with the proportion which these Admissions and Deaths bear to what occurred among Infantry Soldiers in the United Kingdom during the Ten Years subsequent to 1837.

Classes of Diseases.	Total Admissions among the Troops during the 3 Years ended March 1853.	Total Deaths among the Troops during the 3 years ended March 1853.	Annual Ratio of Admissions out of 1,000 Soldiers stationed in		Annual Ratio of Deaths out of 1,000 Inf. Soldiers stationed in	
			New Zealand.	Great Britain.	New Zealand.	United Kingdom.
Fever	28	1	7	73	.3	.5
Eruptive Fevers.	0	0	0	7	.0	.4
Diseases of the Lungs.....	235	16	58	171	3.9	
Diseases of the Liver	17	0	4	8	.0	.4
Diseases of the Stomach and Bowels	263	4	65	63	1.0	
Diseases of the Brain	29	6	8	7	1.5	.8
Dropsies.....	1	1	0	2	.2	
Rheumatic Affections	194	0	48	54		
Veneral.....	109	0	27	277		
Abscesses and Ulcers.....	315	0	79	124		
Wounds and Injuries	270	0	68	58	1.0	.4
Diseases of the Eyes.....	249	0	61	48		
Diseases of the Skin	30	0	8	95		
All other Diseases	162	4	40	52		
Epidemic Influenza	45	0	11	0		
Total & Mean	1,947	32	484	1,039	7.9	10.8

By glancing the eye over the four right hand columns of the above table, it will be seen that the chief saving of life in New Zealand occurred in the comparative low mortality from diseases of the lungs and fevers, a result which I cannot pass over without remark.

The cause why fevers are not common in New

* Report on the health of the troops in the United Kingdom from 1837 to 1847, presented to Parliament by Her Majesty's command, 1853.

† In every regiment, there are a few deaths which occur out of Hospital; these are often not included in the Medical Returns, but in this table I have included all deaths from disease, whether the event occurred in or out of Hospital. The fatal diseases are recorded after a *post mortem* examination, one case only required to be altered. It was entitled consumption with aneurism. The immediate cause of death was the rupture of this aneurism, and the lungs were sound, consequently this case was removed out of the list of fatal cases from diseases of the lungs.

Zealand is, that the troops are not mixed up with the inhabitants of densely inhabited towns as in Great Britain, and because either from the nature of the soil, or the elements of the climate, there are no cases of ague.

The comparative exemption of the troops from typhus and common continued fevers, is another proof added to the many which already exist, that these maladies result chiefly from the improper crowding together of human beings. The climate of New Zealand may be thought to have something to do with this, but I do not think it has, for this reason, that I have seen cases of typhus and common fevers among the civil population, living in low, badly drained, and badly ventilated houses in the town of Auckland; and scarlet fever, a malady which is generated by malaria, appeared for the first time in New Zealand, at Auckland, in 1848, but it did not extend itself among the Native population.

As diseases of the lungs in New Zealand produce less than one-half the mortality which they did among infantry soldiers in the United Kingdom, I shall therefore enter into a more minute examination of this class of maladies.

TABLE Number 2, showing the Specific Diseases of the Lungs which occurred among the Troops in New Zealand during the Three Years ending March, 1853, and the Proportion which each bears to what occurred among Infantry Soldiers in the United Kingdom for the Ten Years subsequent to 1837.

Specific Diseases of the Lungs.	Total Attacks among the Troops during Three Years in New Zealand.	Total Deaths.	Number of Men attacked annually with different Diseases of the Lungs out of 1,000 Troops stationed in	
			New Zealand.	United Kingdom.
Inflammation of Lungs	18	4	4.4	11.5
Pleurisy	1	0	0.2	1.9
Spitting Blood	5	1	1.0	2.2
Consumption	19	10	4.7	10.3
Acute Catarrh	157	0	40	122
Chronic Catarrh	35	1	8	21.1
Asthma and Difficulty of Breathing	0	0	0	2
Total	235	16	58.3	171

From this table it will be seen, that the low mortality among the troops in New Zealand arises from the few attacks of inflammation of the lungs, and catarrhs, diseases which lead directly and indirectly to the production of consumption. It will also be seen that the numbers admitted into hospital under the head of consumption are fewer than in Great Britain, and men affected with this malady live longer than I have ever seen similar cases in Great Britain, and the disease is occasionally apparently checked. The following is an indirect numerical proof of this. Out of 1,657 cases of consumption admitted into the hospitals of the infantry regiments stationed in the United Kingdom, 1,241 died, or 74 per cent.; out of

19 cases admitted among the troops in New Zealand (see table No. 2), 10 died, or 52 per cent.

I could detail several cases of consumption I have seen, which appeared to me to be checked, I do not say cured, in this country, but to remove any impression that I have unintentionally looked at such cases with a partial eye and prejudiced mind, I make the following extract from the Medical Report of Surgeon Prendergast, of the 65th Regiment, for the year ending March, 1853. "Of this disease" (consumption) he observes "only three cases have been treated at head quarters" (Wellington, New Zealand) "during the past year, and none of these proved fatal. In each of these cases it was astonishing to see how well suited the climate of this island is in arresting and keeping in abeyance the rapid progress of this disease, and the little tendency there is to excite or aid the development of Pulmonary affection."

Before leaving this subject, it is necessary to bear in mind that soldiers suffer more from consumption than civilians, a result which is chiefly produced by the tainted air they are obliged to respire in the barrack-rooms. I adduce the following examples as a proof of the correctness of this statement.

During the three years ending March, 1853, there has been an aggregate strength of 455 married women attached to the military in New Zealand. Most of them lived in small places detached or away from the barracks with their husbands. Out of this number only one died from pectoral disease, which is at the rate of 2.2 deaths annually out of 1,000, or nearly one-half less than what occurred among the soldiers.

During the three years ending March, 1853, there was an aggregate strength of 150 officers, between the ages of 20 and 40, in New Zealand, and not one died from any disease of the lungs.

Since 1836, seventeen Missionaries and their families have been resident in the North Island of New Zealand, and among the few deaths which have occurred among them, I cannot find that one was caused by consumption.

Since the establishment of the Registration of Deaths in Auckland, New Zealand, in 1848, I have been able to make out that about one-fourth of the mortality was produced by pectoral disease among civilians between the ages of 20 and 40, whereas among the soldiers one-half of the whole mortality arose from this class of maladies.

3.—NOTICE OF THE EPIDEMIC INFLUENZA.

During the latter part of the year 1852 and the beginning of 1853, an Epidemic Influenza of singular severity prevailed all over New Zealand. On referring to table No. 1, it will be seen that 45 soldiers were admitted into hospital with this disease, but many more were ill who managed to do their duty. On the old and the young it bore most heavily, and several of both classes died. This remark refers to the Anglo-Saxon and New Zealand races. There was nothing very peculiar about the elements of the climate when the disease prevailed, if I except an unequal distribution of electricity, and a large amount of rain and moisture in the air.

Epidemic Influenza was prevalent in every part of the Southern Hemisphere I have heard from, during the years 1852 and 1853.

4.—ELEMENTS OF THE CLIMATE DURING THE THREE YEARS ENDING MARCH, 1853, AT AUCKLAND, NEW ZEALAND, S. LAT. 36°51'; AT WELLINGTON, NEW ZEALAND, S. LAT. 41°22'; AND THE AVERAGE AT LONDON, N. LAT. 51°30.

The mean annual temperature at	
Auckland was	59½ Fhr.
Ditto at Wellington was	57½ do.
Ditto at London is	50 do.
The mean height of the barometer	
at Auckland was	29·83
Ditto at Wellington was	29·82
Ditto at London is	29·88
The number of days on which rain	
fell at Auckland was	144
Ditto at Wellington was	115
Ditto at London is	175
The mean annual quantity of rain	
at Auckland was	43 inches.
Ditto at Wellington was	53 do.
Ditto at London is	24 do.
The mean temperature of the hot-	
test month in New Zealand	
was	67½ Fhr.
Ditto at London is	64 do.
The mean temperature of the	
coldest month in New Zea-	
land was	51½ do.
Ditto at London is	37 do.

The elements of the climate of New Zealand would be very imperfectly stated if I omitted to mention that the atmosphere is seldom stationary for twenty-four hours, and in no country is the air more frequently agitated by winds, sometimes violent.

It has been usual to compare the climate of the North Island of New Zealand with that of Italy and the fine southern climates of Europe, but there is little resemblance between them beyond the fact, that the mean annual temperature of both is about 60 Fhr. New Zealand is distinguished for an even temperature; Italy and the southern countries of Europe are subject to great extremes.

In Italy there is a winter, as far as regards labour, in summer—a summer-winter it may be called—during which, for three or four months, for several hours in the day, all out-door work of man and beast is suspended and interrupted by heat. During the summer months in Italy, cattle must be provided for (in-doors) as in winter; and it is also the cause of malaria, out of which spring fevers among the working people exposed to the heat and dews of the climate.*

There is no summer-winter in New Zealand; cattle, grazing in the fields, may seek the shelter of the forest during the heat of the day, but man and beast can and do labour without injury during all hours of the day. Cattle have never yet perished from drought, and they can always find food in the driest seasons; and houseless labourers may sleep exposed to the

* Notes of a Traveller by Samuel Laing, Esq., 2d Edition, London, 1842.

dews of the climate, without being laid with fevers or agues.

It may be said the Italians are an idle people, that Englishmen could labour the whole of an Italian summer, but that is fiction. From great cold man and beast find a relief in hard work, but from great heat is no relief but bodily inaction. If, however, labour is carried on by men having the European constitution during the hot months of summer, in countries having a high temperature, for several hours daily, they do it at an enormous waste of human life, a waste which no return will repay. This great fact is known by European settlers in the Southern States of America know right well, for, without their labour their lands would remain uncultivated.

5.—EVIDENCE OF THE BENEFICIAL NATURE OF THE CLIMATE OF NEW ZEALAND DRAWN FROM THE PENSIONER FORCE.

In the neighbourhood of Auckland there are four Pensioners' Villages. These settlements were established in 1847 and 1848, and are now occupied by the two Battalions of Pensioners enrolled in England for service in New Zealand. Each man has a cottage built on an allotment of land; most of the men are employed in agricultural pursuits; and many of them are the owners of cattle and land. They are only called out to drill for a few days every year, but they are inspected every Sunday morning at church parade. All of them are old soldiers, and have seen service in widely different parts of the globe. In every village there are men who have spent years in Canada, Ceylon, the East and West Indies, Aden, Arabia, Sindh, China, Newfoundland, St. Helena, Mauritius, Corsica, Malta, Gibraltar, Cabul, Africa, and Australia. All the men have been invalided from the army on account of disease or length of service. They were found unfit for the more active duties of a soldier's life, but were selected in England for fit for seven years' garrison duty in New Zealand. There are many healthy men among them, who were rendered unfit for the army by liver complaints, contracted in the burning plains of Hindostan, by the fevers of Jamaica, by the snows of Canada, and among the mountains around Cabul—in short, there are many among them who have been invalided for every disease which tropical, frigid, and temperate climates can produce.

I came out to this country as Medical Superintendent of one division of the New Zealand Pensioners, and have ever since watched the influence which the climate has had on their health and strength with much interest; and Major Kenny, commanding the force, has kindly furnished me with some statistical information relative to them.

The average age of the men on the 31st of March, 1853, was about 47 years, and they range between the decennial period of 40 and 50. During the four years ending March, 1850, 1851, 1852, and 1853, the average strength of the two Battalions was 545 men, and the aggregate strength 2,180, out of which number 37 men died from disease, 3 were drowned, 1 cut his throat when insane, and 1 died by an

accidental injury. This shows that the mortality, during these years, was at the rate of 17 men annually out of every 1,000 from disease, and 19 from all causes.

The enrolled Pensioners in Great Britain and Ireland, during the eight years ending March, 1852, died at the rate of 22 men annually out of every 1,000 living. The deaths among all the Pensioners in the United Kingdom, enrolled and not enrolled, between 40 and 50 years of age, during the same period, were 32 per 1,000.* The English Peers, between 40 and 50 years of age, die at the rate of 27 annually out of every 1,000,† and the Northampton table makes the mortality, between 40 and 50, to be 24 per 1,000.

It is therefore obvious that the mortality among the Pensioner force in New Zealand has been very low—a result which not only indicates a healthy climate, but also affords a clear indication of the comfortable condition of the men.

I will now examine into the nature of the maladies which caused the deaths of the 37 men.

TABLE Number 3 shows the Number of Deaths which occurred from different classes of Diseases among the Pensioner Force stationed in the neighbourhood of Auckland, New Zealand, during the Four Years ending March, 1853, together with the annual ratio of Deaths per 1,000.

Classes of Diseases.	Specific Diseases.	Deaths.	Total Deaths from each Class.	Annual ratio of Deaths per 1,000 Men of the strength.	Average Age of the Men at Death.
Fever.	Common continued	1	1	0.5	48 years
	Diseases of the Lungs..	6			
Diseases of the Liver	Bronchitis	3	9	4.1	44 "
	Consumption ..	3			
Diseases of the Stomach and Bowels	Liver complaint	3	3	1.4	47 "
	Dysentery	3			
Diseases of the Brain ..	Cancer of Stomach	1	4	1.8	47 "
	Apoplexy	9			
Dropsies....	Delirium Tremens	2	14	6.4	45 "
	Paralysis	2			
All other Diseases	Mania	1	1	0.5	47 "
	General Dropsy	1			
Total	Heart affection	1	5	2.3	46 "
	Hernia	1			
	Stricture	1			
	Secondary Syphilis	1			
	Phlegmon	1			
	Total	37	37	17	46½ years

It will be seen from the above table, that there were fewer deaths from fever and diseases of the lungs, among the Pensioners in New Zealand, than among the army stationed in Great Britain; but the mortality produced by affections of the brain cannot be passed over

* Lieut.-Colonel Tulloch and Dr. Graham Balfour's Report on the Sickness, Mortality, and Invaliding in the Army, presented to both Houses of Parliament by her Majesty's command, 1853.

† *Lancet*, 1849. Mr. Edmonds.

without notice. The exact bearing of this will be seen in the following compilation:—

TABLE Number 4 shows, out of 1,000 Deaths among different classes of Men between the Ages of 40 and 50, the proportion which occurred from different classes of Diseases.

Classes of Diseases.	Pensioner Force, New Zealand.	Civil Population, Carlisle.*	Equitable Society.†
Fever.....	27	240	166
Diseases of the Lungs..	243	324	290
" Liver ..	81	56	70
Diseases of the Stomach and Bowels	108	74	66
Diseases of Cholera....	0	0	9
" of the Brain..	379	56	204
Dropsies.....	27	37	73
All other Diseases	135	213	132
Total	1,000	1,000	1,000

This Table is thus read: out of 1,000 deaths among the Pensioner Force in New Zealand, 27 occurred from fevers; among the same number of deaths in Carlisle, 240 were caused by fevers; and among persons assured at the Equitable Society, 166 were produced by fevers.

It will be observed, that diseases of the Brain caused a very large proportion of the mortality among the Pensioners, and according to table Number 3, Apoplexy was the most common malady, a disease which is, comparatively speaking, seldom met with among the civil population in Carlisle between 40 and 50, is more common among people sufficiently wealthy to assure their lives, but out of all proportion most frequent among the Pensioners.

Apoplexy, I may observe, is not a very common disease before men reach 50. It may therefore be asked, what is the cause of this frequency of apoplexy among the Pensioners at such an early age? I wish I could avoid this question, but the two deaths from Delirium Tremens indicate the abuse of intoxicating liquors, and, from enquiry, I have no hesitation in stating, that most of the deaths among the Pensioners from Apoplexy were directly and indirectly caused by intemperance, a vile habit contracted by these old soldiers in early life while serving in the army, and a habit which has been continued by some, although given up by many of them, since their arrival in New Zealand.

Many interesting deductions may be drawn from table No. 4, indicative of the laws which regulate our existence. The Pensioners still appear to suffer from those maladies, the seeds of which were laid in their bodies when serving in tropical climates, but I cannot imagine any country more suited for men enervated by long residences in the tropics, than the climate of New Zealand, and the Pensioners I have spoken to on this subject think so themselves.

6.—PROBABLE REASON OF THE SALUBRITY OF THE CLIMATE OF NEW ZEALAND.

I have been often surprised that the wet and boisterous weather in New Zealand, to which I have seen men exposed night and day, did not

* Carlisle Table for 1779 to 1787.]

† Calculated from 4,095 deaths.

produce more severe and more numerous attacks of disease. The great secret of the salubrity of the climate of the North Island of New Zealand rests on this very point, it admits the most constant and continued exposure in the open air without injury.

In all tropical countries men are obliged to shelter themselves from the burning rays of the sun, and the heavy dews of the night. In the fine southern climates of Europe, the cold of winter is often intense, and the heat of summer during several hours of the day oppressive; exposure to either produces disease.

In New Zealand there are no great extremes, and although the climate is a wet one, yet the Anglo-Saxon race can bear exposure to its vicissitudes without injury; on this account men live much in the open air, or in houses which admit the free entrance of air; the consequence is that severe sickness is, comparatively speaking, not frequent. But it may be asked, how does this produce a small mortality from diseases of the lungs? Consumption is now generally admitted to be a constitutional, not a local disease; whatever depresses the constitution, or impairs the powers of life, produces a tendency to consumption. Men living much in an impure atmosphere are liable to the disease, because that is a depressing agent of life; men breathing a pure air ward off the disease, because that is an invigorating agent. This is the cause why diseases of the lungs are comparatively rare in New Zealand; it is also the reason why fevers and other diseases are not frequent, maladies which directly and indirectly lay the foundation of others.

7.—EXAMPLE OF THE INJURIOUS EFFECT OF THE CLIMATE OF NEW ZEALAND ON THE CHILDREN OF THE TROPICS.

Bishop Selwyn has on two occasions brought to New Zealand from the tropical islands in the Pacific Ocean, a number of lads for the purpose of educating them at St. John's College, Auckland, as Christian teachers. Their ages might be from fourteen to twenty-four. The first detachment the Lord Bishop brought to New Zealand, after remaining in the country for several months, left in June, 1852; and "it was full time," it is stated in a paper issued from St. John's College Press, "that they should leave New Zealand, for the damp winds had severely affected their health, and two were sent on board dangerously ill. A favourable wind speedily carried them into a warmer climate, where they soon recovered;" one poor boy, a native of the Island of Lefu, died, however, at the college.

In October, 1852, the Bishop brought to New Zealand a second detachment of tropical children. This time there were twenty-seven of them, and they were collected from the Loyalty, Solomon's, and New Hebrides Islands. They remained eight months in New Zealand, but during that short time many of them fell sick, and two died, and they were all hastily removed in June, 1853, to prevent more from suffering. On embarkation, eight were sick with coughs and colds, and one died on board of ship, shortly after leaving New Zealand.

Those acquainted with the history of the human race know that the children of the tropics cannot bear transplantation to a temperate climate without losing their health, and the examples just quoted are only additional facts testifying to the correctness of this opinion; they afford no evidence of the trying nature of the climate of New Zealand for the Anglo-Saxon race.

8.—THE CLIMATE OF THE NORTH ISLAND OF NEW ZEALAND IS CHARACTERIZED BY THE GROWTH OF MAIZE AND POTATOES.

There is a curious, important, and characteristic peculiarity of the climate of the North Island of New Zealand, which I cannot pass over without notice. It is, that both maize (Indian corn) and potatoes ripen in this country, are very fruitful, and afford a copious supply of food for the inhabitants. In Italy, and the southern countries of Europe, maize is to the inhabitants what potatoes are to the people in the North of Europe—the staple article of food.* The cause of this is thus explained;—Potatoes and maize do not grow together in the same climates in Europe; one flourishing best where the other succeeds badly. The growth of maize in Europe is indeed almost limited to the country of the vine, for although potatoes can be raised in climates where the grapes of the vine come to perfection, yet potatoes in vine countries are deficient in quantity, and bad in quality.

There is no climate in Europe where maize and potatoes grow to perfection side by side as in New Zealand, and there is no country where both these substances form a large part of the food of the same people. In Van Diemen's Land potatoes grow to perfection, and maize decays; on the Australian continent maize yields abundantly, and potatoes are uncertain.

It is difficult to foresee the moral and physical results which will flow from the growth of these two productive plants in the climate of the North Island of New Zealand.

9.—EXAMPLE OF THE GROWTH OF TWO USEFUL TROPICAL PLANTS IN NEW ZEALAND.

Another curious and characteristic feature of the climate of the North Island of New Zealand I must relate. When the New Zealanders arrived in New Zealand, they brought with them, according to tradition, in their canoes, seeds of the plants they used as food in the tropical islands from whence they came; some of these plants have become extinct, but the sweet potato (*Convolvulus Batatas*), with the Taro (*Caladium Esculentum*), and a few others still survive.

It is true the sweet potato, the Kumera Maori, as it is called, and the Taro, are cultivated with some difficulty in New Zealand, and have degenerated much; but the fact that these two tropical plants should have furnished for several centuries a large portion of the food of a whole people, speaks volumes for the mildness of the climate, the excellence of the soil, and

* Laing's Notes of a Traveller. 2nd Edition, London, 1842.

the care bestowed on their cultivation by the New Zealanders.

Since the introduction of potatoes, maize, and other plants, the culture of the Taro and Maori Kumeru are much neglected.

10. — ON THE HEALTH OF THE NEW ZEALAND RACE.

It may seem strange that, in a country where the Anglo-Saxon race is remarkable for health, the New Zealanders should be distinguished for sickness, and that diseases of the lungs—the very class of maladies I have been endeavouring to show are not very frequent among the English here—are the maladies which prove fatal to a large portion of the whole New Zealand race.

This circumstance, I wish it to be clearly understood, is no argument against the climate of this country, for the condition of the New Zealanders is highly unfavourable for health. Three hundred days out of the year their food contains little good nourishment; they are badly clad and worse housed; their habitations are indeed miserable, ill-ventilated huts, their beds are on the ground; the secretion from their skins is checked by filth; and they often sleep in crowded huts in winter to keep each other warm, during which time the air they respire is most unwholesome. That consumption and scrofula under such circumstances should be frequent is not to be wondered at. The same mode of life would soon produce the same diseases among the Anglo-Saxon race; and there is one point in the history of the New Zealanders which is often overlooked—they originally migrated from a tropical country, and are therefore children of the tropics.

It is difficult to suggest how this unhealthy condition of the New Zealanders might be removed. My own opinion is, that an abundance of good food is the first and most important point to be looked into; and that man will be their greatest benefactor, in a worldly sense, who can devise some plan by which every New Zealander can get a pound of animal food, and a pound of wheaten flour, every day in the year—a result which peace, trade, and civilization are, however, slowly bringing about.

I have the honour to be, sir,

Your obedient servant,

A. S. THOMSON,

Surgeon, 58th Regiment,

In charge of the Principal Medical Officer's Department, New Zealand.

Auckland, New Zealand, Dec. 10, 1853.

Wellington, New Zealand,

May 14, 1854.

Sir—The accompanying Statistical Table, with a few explanatory remarks, I consider interesting, as showing the great salubrity of this portion of New Zealand, and I beg to enclose it for your information.

I have the honour to be, Sir,

Yours respectfully,

R. K. PRENDERGAST,

Surgeon 65th Regt.

To his Honor the Superintendent.

TABLE, showing the Total Admissions into the 65th Regimental Hospital, among the Men of the 65th Regiment, at Wellington, New Zealand, and the Total Number of Deaths from the undermentioned Classes of Diseases, during the Three Years ending 31st of March, 1854.

Classes of Diseases.	Total Admissions among the Troops during the 3 Years ended 31 March, 1854.	Total Deaths among the Troops during the 3 years ended 31 March, 1854.	Annual Ratio of Admissions out of 1,000 Soldiers stationed in		Annual Ratio of Deaths out of 1,000 Inf. Soldiers stationed in	
			Wellington, New Zealand.	Great Britain.	Wellington, New Zealand.	United Kingdom.
Fever	0	0	0	73	0	2.5
Eruptive Fevers.	0	0	0	7	0	.4
Diseases of the—						
Lungs	12	0	11	171	0	10.2
Liver	1	0	1	8	0	.4
Stomach and Bowels	13	0	12	63	0	.8
Brain	7	2	6	7	2	.8
Dropsies	0	0	0	2	0	.3
Rheumatic Affections	11	0	10	54	0	
Venereal	16	0	15	277	0	
Ulcers	10	0	9	124	0	
Abscesses	83	0	77		0	
Wounds and Injuries	60	0	56	58	0	
Diseases of the Eyes	29	0	27	48	0	1.4
Diseases of the Skin	9	0	8	95	0	
All other Diseases	133	1	123	52	1	
Epidemic Influenza	18	0	17	0	0	
Total & Mean	402	3	372	1,039	3	16.8

During the years ending the 31st March, 1852, 1853, and 1854, the Mean Annual Strength of the Troops stationed at Wellington has been about 360, and the aggregate strength about 1,079.

Near seven years' residence here has afforded me ample opportunity of judging of the climate, and each year's observation tends to prove more and more the great salubrity of the southern portion of the North Island of New Zealand.

The accompanying table shows in one view the little disease the troops stationed here have suffered from during the last three years, ending 31st March, 1854.

From the above table, the admissions into the 65th Regimental Hospital, and deaths, have been about a third less than in the United Kingdom.

Of the three deaths recorded, two were sudden; one from apoplexy, in a non-commissioned officer of a full habit of body; the second from the rupture of an aneurismal tumour.

The total exemption from all classes of fever here is a striking fact, as, during the last three years, I have not had a single case of fever amongst the men, women, or children, of the regiment.

Diseases of the lungs are comparatively few, and the cases treated were generally of a mild form.

Consumption is rare in the regiment: during the past year only one case has been treated, the patient being now convalescent, and I have no doubt of his continuing to improve. From my experience, I can with confidence assert how well suited the climate of this Island is in arresting and removing the seeds of this truly fatal English disease.

Rheumatic affections appear much more prevalent in the United Kingdom, in the proportion of 5 to 1; all the cases of rheumatism which have come under my observation in this country have been comparatively mild; in no instance has a soldier been invalidated from the effects of an attack of acute rheumatism.

Admissions from diseases of the brain have been nearly as high as in the United Kingdom; the deaths from this class have been 2, but one of these, as before stated, was from apoplexy.

The ratio of admissions from disease of the stomach and bowels are five times higher in the United Kingdom. I have never seen a pure case of acute dysentery in this country,

or any form of it approaching in intensity the disease as it appears in tropical countries.

The causes which are productive of this great salubrity, I think may be arranged under three heads—

First, the constant winds to which we are subject act as purifying agents in cleansing and removing "malaria," the fertile source of all disease.

Second, the invigorating nature of the climate, the result of pure air.

Third, equability of temperature, our mean of the hottest month being about 66, hottest at London, 64; our coldest, 50, London, 37. To this short range of temperature we may attribute our exemption from fevers on the one hand, and chest diseases on the other.

R. K. PRENDERGAST,
Surgeon, 65th Regt.

Wellington, New Zealand,
May 14, 1854.