

Statistical reports on the sickness, mortality, & invaliding among the troops in the United Kingdom, the Mediterranean, and British America / prepared from the records [by A.M. Tulloch, H. Marshall, and T.G. Balfour] of the Army Medical Department and War Office returns.

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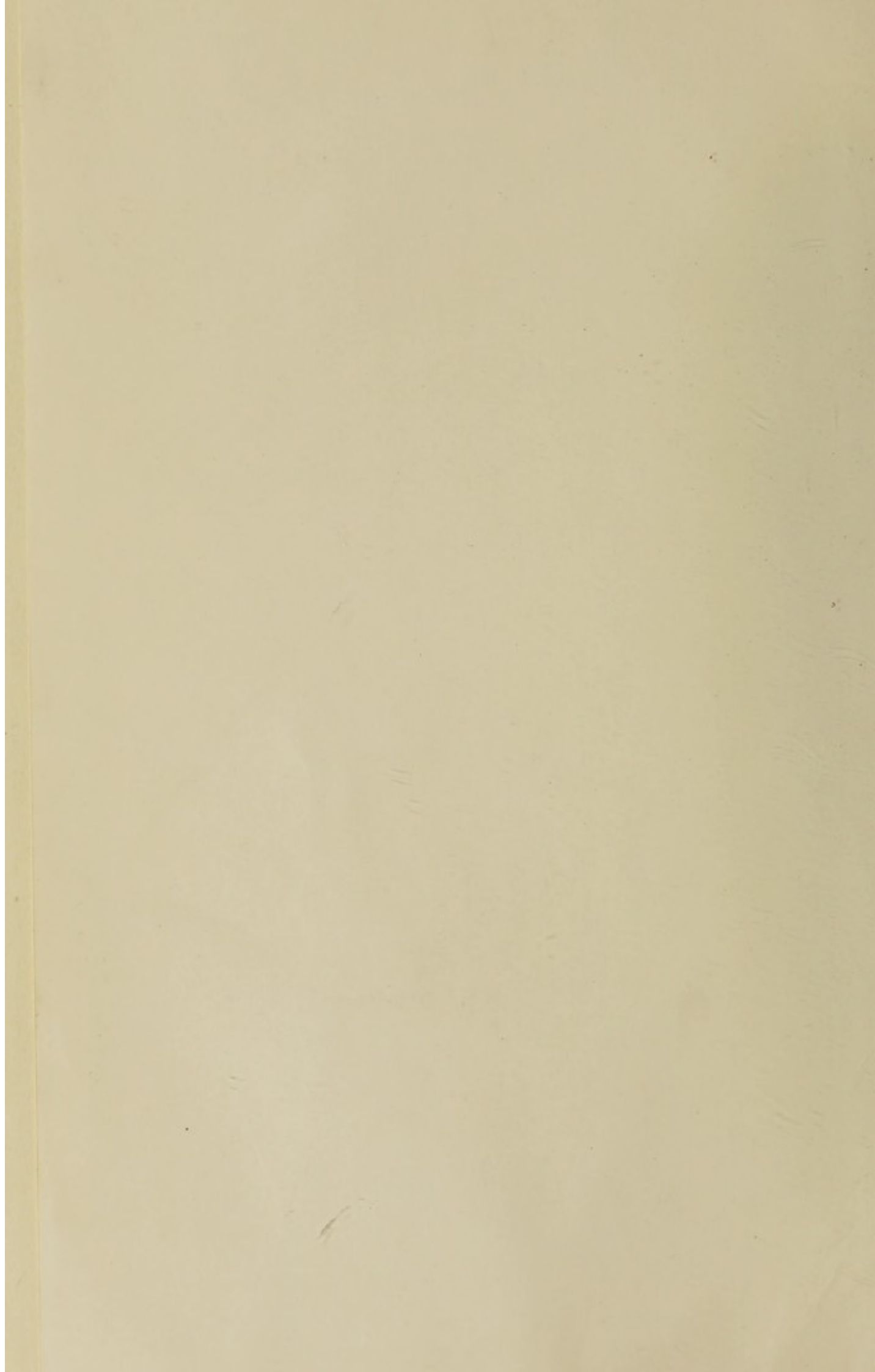
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GREAT BRITAIN

Army Medical Services





SICKNESS, MORTALITY, & INVALIDING

AMONG THE TROOPS

IN THE UNITED KINGDOM

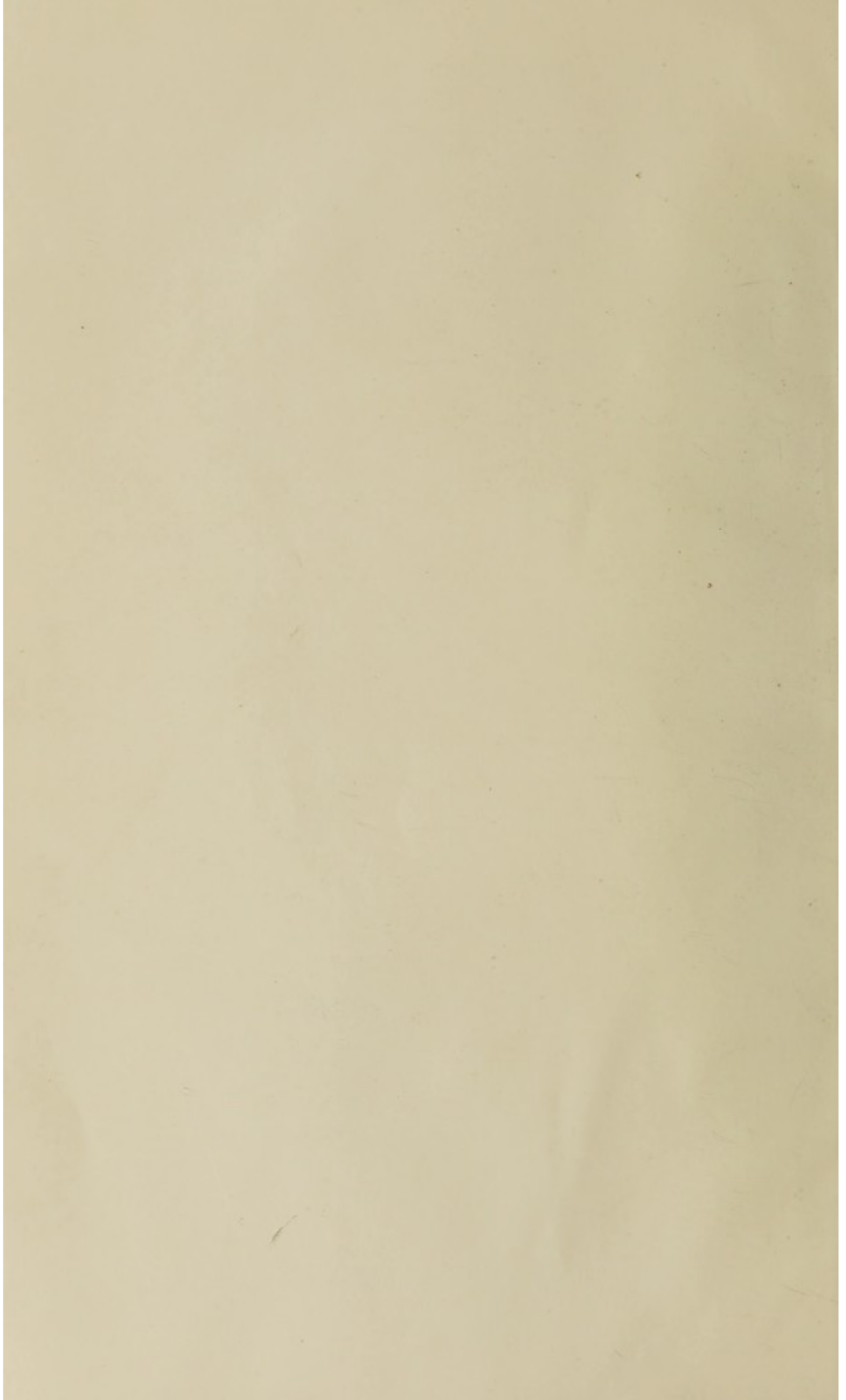
1861-1870

BRITISH ARMY

Prepared by the General Medical Officer of the Army

LONDON

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STATISTICAL REPORTS

ON THE

SICKNESS, MORTALITY, & INVALIDING

AMONG THE TROOPS

IN

THE UNITED KINGDOM,

THE MEDITERRANEAN,

AND

BRITISH AMERICA;

PREPARED FROM THE RECORDS OF THE ARMY MEDICAL DEPARTMENT
AND WAR-OFFICE RETURNS.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:

PRINTED BY W. CLOWES AND SONS, 14, CHARING CROSS,
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ERRATA IN WEST INDIA REPORT.

- Page 8. Proportion of Dragoon Guards and Dragoons attacked annually by Consumption, stated as being "5½ per thousand," for which read "6½ per thousand."
- „ 47. Same proportion, stated as being "from 5 to 6 per thousand," for which read "from 6 to 7 per thousand."
- „ 15. Aggregate strength of Black Troops in British Guiana, stated at "3,300," for which read "3,400."
- „ 23. Aggregate strength of White Troops in Grenada, stated at "6,276," for which read "6,267."
- „ 47, line 16. For "only seven cases of eruptive fevers occurred among the White Troops"—"four of which were measles," read "only ten cases occurred"—"seven of which were measles."
- In Appendix No. I. For "4 admitted of Black Troops, under the head of Morbi Oculorum," in 1829, read "44."

INTRODUCTION.

PURSUING the same course of investigation into the health of the Troops in other Colonies as was formerly adopted with regard to those serving in the West Indies, there are herewith submitted the following Reports and relative Appendices :—

1. On the Sickness, Mortality, and Invaliding among Troops serving in the United Kingdom.
2. Ditto, ditto, among those serving in the Mediterranean Stations.
3. Ditto, ditto, among those serving in British America.

It has been deemed expedient to combine these in the present volume, because, as they serve to illustrate the influence of climates of which the diseases are in many respects similar, the reference which may become necessary for the purpose of comparison will thereby be materially facilitated.

In the preparation of these documents, particularly the medical details, I have been indebted to the assistance of the same parties* to whom my obligations were expressed for similar aid in the West India Report, and the materials have principally been derived from the same source, viz., the Returns and Reports transmitted to the Director-General of the Army Medical Department by the Medical Officers in charge of the different Corps and Military Stations in each Command.

From these documents more ample details might have been given illustrative of the topography of the Mediterranean and American Colonies ; but as information on that subject can be obtained from other sources already before the public, it has been deemed expedient to limit that portion of the Report to such points as are likely to have exerted a material influence on the health of the Troops.

* Henry Marshall, Esq., Deputy Inspector-General of Hospitals, and Staff Assistant-Surgeon Balfour.

Many interesting speculations in regard to the supposed causes of some diseases, and the contagious or non-contagious properties of others, might also have been supplied from the same source, but these being inconsistent with a Report of this nature, have only been adverted to where sufficient numerical evidence could be obtained for estimating their accuracy. Limited as that portion of the investigation has necessarily been, however, it will at least serve to develop facts which may prove useful in directing the future inquiries of others on the same subject.

ALEX. M. TULLOCH.

War Office, March, 1839.

STATISTICAL REPORT

ON THE

SICKNESS, MORTALITY, AND INVALIDING

AMONG THE TROOPS SERVING

IN

THE UNITED KINGDOM.

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SECTION I.

On the Sickness and Mortality among Troops in the United Kingdom

BEFORE a just estimate can be formed of the influence of different climates on the health of troops abroad, it is requisite to ascertain the degree of Sickness and Mortality to which they are liable in their native country. In the West India Report, formerly submitted, this was but partially adverted to, and therefore, before entering on a similar course of investigation for the other colonies, it is desirable, for the purpose of comparison, to determine it as accurately as possible.

United Kingdom.

This stage of our investigation, however, presents considerable difficulty, as the Medical Returns, in most instances, include only those who died in regimental hospitals, and seldom notice deaths on furlough, or from accidental causes if not under treatment. Many soldiers too, belonging to corps at home, are sent to Chatham when in bad health with a view to their discharge, whose deaths, if occurring there, do not appear in the Regimental Returns.

It thus became necessary to refer to a variety of documents for the purpose of establishing the precise extent of sickness and mortality among the troops in this country. It was requisite, first, to examine the Medical Returns from each corps, in order to ascertain the number of admissions and deaths which took place in the regimental and detachment hospitals, and the diseases by which they were caused; then the Chatham Returns for those who died under treatment there; and, lastly, the Annual Regimental Returns furnished to the War Office, for the deaths which took place suddenly or on furlough: but as it would have been impossible, without the aid of the last of these, to have arrived at accurate conclusions, this Report is necessarily confined to the seven years subsequent to January 1830, when they were first established.

To obtain correct results, however, in regard to the influence of this climate on the health of any body of men, it is not only essential that they should have been continuously resident in this kingdom during the period over which the observations extend, but that they should not have been recently serving in stations where their health was likely to have been deteriorated, otherwise the effect of disease contracted in another climate might be attributed to that of the United Kingdom. This of course renders it necessary to exclude nearly all the infantry of the line from our calculations, as corps returning from foreign service seldom remain at home longer than four years, and in that period the mortality is likely to be materially influenced by diseases contracted in the climates where they have been serving. The interchange of men between the service companies abroad and depôt companies at home also renders the returns of the latter equally unavailable for an investigation of this nature, except where it can be ascertained, as in the case of the West India Depôts, that the number who have returned to them is too small to affect the results to any great extent. Owing to these circumstances we have been obliged to confine our observations principally to those regiments of cavalry which have not been serving abroad during the period embraced in this Report, and the Household Troops whose service is for the most part confined to the duties of the metropolis.

Had the mortality of these two classes of troops been nearly the same, they might have been included together; but, in proceeding with the investigation, so striking a disproportion was found to exist between the sickness and mortality among the Foot Guards compared with the Household Cavalry quartered in the same metropolis, or even with the other corps of cavalry quartered throughout the kingdom, that it became necessary to keep the calculations for each of these descriptions of force distinct, in order the more readily to ascertain the diseases to which so marked a peculiarity was attributable.

This Report is therefore divided into several heads, the first embracing the usual medical and statistical details of the Dragoon Guards and Dragoons, the second those of the Foot Guards only, the third those of the Royal Horse Guards and Life Guards, to which we have appended, for the purpose of comparison, some details regarding the mortality and diseases among the depôts of infantry corps serving in the West Indies.

In a limited Report of this nature it is impossible to enter as minutely on the subject of barrack and hospital accommodation, diet, duty, and employment, as in the Report on the health of the troops in the West Indies. The accommodation of course varies with the facilities afforded at the different towns or stations in which the troops happen to be quartered. The diet is in some measure dependent on the price of provisions, as the sum which a commanding officer may direct to be expended for that purpose is by the present regulations restricted to 4*s.* 7*d.* per week for infantry, and 5*s.* 1*d.* per week for cavalry; * but it may be

* The latest warrants direct that 4*s.* 11½*d.* per week in infantry, and 5*s.* 10*d.* in cavalry is to be the maximum stoppage for messing and washing; the rate above referred to is for messing alone, as established by the warrant of 31st December, 1830.

United Kingdom.

observed that in general the diet of each soldier consists of three-quarters of a pound of fresh beef or mutton, which is made into soup with vegetables for dinner, and a pound of bread with coffee for breakfast. Where the regulated stoppage admits of a larger supply, the commanding officer may direct it to be purchased for the soldier if he thinks necessary.

The extent of duty and nature of their employment of course vary according to the arm of the service to which the troops belong, and the circumstances which call for their exertions; but in general it may be remarked that in this country they are seldom employed on any duty not strictly military; fatigue and working parties, which are common in the Colonies, are rarely necessary, and, with the exception perhaps of occasional night duty, there appears nothing in the nature of their occupations likely to operate prejudicially to health. It may safely be affirmed that they are at least better lodged, better fed, and have less onerous duties to perform, than the great mass of the labouring population. Being carefully selected, and, so far as can be ascertained, subject to no physical defect at enlistment, it might be expected, as their profession during peace involves no danger, that the sickness and mortality among soldiers would be much lower than among those engaged in the occupations of civil life. That this is not the case however, at least to such an extent as might be anticipated, will appear sufficiently evident from the following results deduced from Abstract No. I. of Appendix.

Table I.
Showing the admissions into Hospital and Deaths among the Dragoon Guards and Dragoons serving in the United Kingdom.

Years.	Strength.	Admissions.	Deaths.	Ratio per 1000 of Mean Strength.	
				Admitted.	Died.
1830	6,402	5,527	61	863	9.5
1831	6,018	6,027	87	1,001	14.4
1832	6,408	5,943	100	927	15.6
1833	6,379	6,301	113	988	19.3
1834	6,261	5,743	84	917	13.4
1835	5,902	4,982	81	844	13.7
1836	*7,241	6,941	101	959	14.
Total for 7½ Years	44,611	41,464	627	..	..
Average	6,166	5,725	87	929	14.

This Table refers only to the deaths by diseases as ascertained jointly from the Medical and War Office Returns; but, to fix the total mortality from all causes, it will be necessary also to include the following deaths by accident and violence, extracted from the War Office Returns.

Years.	CAUSES OF DEATH.				
	Suicided.	Murdered.	Drowned.	Other Accidents.	Total.
1830	6	..	2	1	9
1831	4	..	3	..	7
1832	5	..	..	1	6
1833	5	2	3	1	11
1834	2	..	2	..	4
1835	6	2	2	2	12
1836	7	..	2	1	10
Total .	35	4	14	6	59

This class of deaths amounts to about $1\frac{3}{10}$ per thousand of the strength annually, which, added to 14 by disease, makes the total mortality from all causes $15\frac{3}{10}$ per thousand annually.

It must be observed, however, that this is rather an unfavourable estimate, for during two of these seven years the cholera added considerably to the mortality; the influenza also was unusually prevalent in 1833 and 1836, and, besides those who were cut off by it, there can be no doubt that in many it laid the foundation of pulmonary complaints which afterwards terminated fatally. In other years it is probable the ratio of mortality among this class of troops would be about 2 per thousand less than the preceding estimate.

On referring to No. XI. of Appendix, it will be seen that the mortality in the Prussian army, on an average of ten years, from 1821 to 1830, was $11\frac{7}{10}$ per thousand annually, being less than among troops in this kingdom, though the climate of Prussia is by no means so

* The actual strength in 1836 was only 5,793, but, as the admissions and deaths extended over a period of 15 months, it was necessary either to deduct the proportion corresponding to three months, or increase the strength by the addition of one fourth. The latter course has been preferred, as leading to less intricacy of calculation.

favourable to health and longevity; but that army is entirely composed of young men between 20 and 25, while our troops are for the most part above that age, and consequently subject to a more rapid decrement of life.

From the same document it will be seen that the mortality in the French army, on an average of six years from 1820 to 1826, amounted to $19\frac{5}{10}$ per thousand annually; but as this may possibly include the deaths in corps serving in the Colonies, it affords a less accurate standard of comparison.

Before comparing this rate of mortality with that which prevails among the civil population of the kingdom, it is necessary to ascertain the average age of soldiers, in order that the comparison may be made with civilians at the same period of life. By reference to Abstract No. VII. of Appendix, which has been framed from the Regimental Returns of Ages, it will be seen that, out of the whole force of Dragoon Guards and Dragoons, nearly one third were between 18 and 25, another third between 25 and 33, and the remaining third of various ages between 33 and 40, with the exception of a few boys under 18. It may therefore be safely assumed that the average age of this class of troops is from 29 to 30; now, by the Carlisle Tables, which exhibit the mortality of this country in the most favourable light, the number annually deceasing out of a thousand persons of that age would be about 10

By Mr. Finlaison's observation, deduced from the duration of life among the government annuitants, about 13

If we take the mean between these, viz., 11.5 per thousand, as our standard, it corresponds very nearly with the ratio deduced from the Population Returns, and is sufficiently accurate for the object in view.

Comparing this with the rate of mortality ascertained from the preceding Table, we should arrive at the conclusion that the proportion of deaths is at least one third higher among these troops than among an equal number of civilians of the same age, though the former have been carefully selected for their robust frames and supposed vigour of constitution.

This would at first sight indicate that the military profession, even under the most favourable circumstances, operates prejudicially to the health and constitution of those employed in it; and we should have proceeded to investigate the causes to which that was attributable, were it not in some measure accounted for by the great difference between the mortality in populous towns where troops are generally quartered and what prevails throughout the whole kingdom, or in the rural districts, on which the previous calculations as to the duration of civil life have principally been founded.

The great disproportion between the mortality of a town and country population has of late years been made the subject of Parliamentary investigation, and various Returns illustrative thereof have been ordered from the principal towns in the kingdom, which unquestionably prove the ratio there to be nearly one-third higher at the prime of life than among the rural population.* In comparing therefore the mortality of military with that of civil life, it becomes necessary to take for our standard of the latter, not the average of the whole kingdom, but of those towns in which the troops are generally quartered, and where the density of population is found to operate so prejudicially to health. In many cases it has been found impossible to procure the necessary data for this calculation: but the following Abstract affords a sufficient number of instances for the purpose.

Out of every thousand of the population in each of the undermentioned towns, the number deceasing annually at each age has been ascertained as follows:—

Ages.	Per Returns in Marshall's Parliamentary Digest.									Average of York, Hull, Norwich, Plymouth, Ferrisburgh, and Liverpool.	Glasgow, per Statistical Society's Report.	London, from Population Returns.	General Average of all these Towns.
	Chester.	Leeds.	Bolton.	Bury.	Preston.	Wigan.	Bradford.	Stockport.	Macclesfield.				
15 to 20	6	7	9	9	8	8	9	9	10	7	8	Not Stated.	8
20 " 30	14	17	19	18	19	16	15	18	18	14	12	12	16
30 " 40	15	19	20	18	20	16	15	19	20	15.5	16	17	18
40 " 50	17	23	21	19	22	21	18	24	23	19.5	23	25	21

Thus while the mortality among the Dragoon Guards and Dragoons, supposing the medium age to be 30, has been $15\frac{5}{10}$ per thousand, that of the civil population in the same towns, even between the ages of 20 and 30, has been 16 per thousand—a sufficient evidence that the apparent high ratio among the troops, as compared with the general mass of the population, arises not so much from any deteriorating influence in their profession, as from the disadvantage of their being subject to the insalubrious atmosphere of densely-populated districts.

Recent observations have tended to establish that there is also a very material difference in the degree of health and longevity attained by the rural inhabitants of some counties compared with others; for instance, those resident in North and South Wales, Cornwall and Devon, Northumberland and Cumberland, are not so liable to mortality, by at least

* The same striking disproportion between the mortality of a town and country population is exhibited in the Returns of Belgium, published by Mons. Quetelet, which show the proportion deceasing in the towns to have been 10 for every 369 inhabitants annually, while in the country it was only 10 for every 469 annually.

United Kingdom.

a tenth part, as those in the central counties of the kingdom. The same remark also applies to the Highlands of Scotland: now, in these salubrious districts, comparatively few troops are quartered, but they are principally concentrated in parts of the kingdom least noted for salubrity, which must also have a tendency to raise the mortality above that of the general mass of the population at the same age. Making all due allowance, however, for these causes, it is certainly remarkable that the mortality should be so high among a class of men selected with such care.

We have not deemed it necessary to enter into any investigation as to the relative mortality of the troops in England, Scotland, and Ireland; but from a rough estimate it appears that the troops in Scotland have been rather more healthy than in England or Ireland. A very extensive series of Returns, of which an Abstract will be found in the Appendix No. XII., shows the ratio among all classes of troops in Ireland, from 1797 to 1828, to have averaged about 15½ per thousand annually; but we have no means of ascertaining whether this includes the violent or sudden deaths generally omitted in the Medical Returns.

Pursuing our comparison of the health of the soldier with that of the citizen, we have next to ascertain whether the duties of the military profession at home entail a greater degree of sickness on the troops than usually falls to the lot of the civil population.

It will be seen from the preceding Table that the admissions into hospital among the Dragoon Guards and Dragoons have amounted, on the average of the last seven years, to 929 per thousand of the mean strength annually; it may consequently be taken as a general rule, that every soldier is in hospital for some disease or other once every thirteen months. Owing however to the great number who suffered from influenza during the two epidemics, this is probably above the usual ratio.

The extent and duration of sickness among the working classes have frequently engaged the attention of the British legislature; and, from the Supplementary Report of the Factory Commissioners, the following information has been obtained in regard to the number of attacks of sickness among the workmen in the government dock-yards, many of whom are of a much more advanced age than cavalry soldiers.

Station.	Period of Observations.	Average Number employed Annually.	Average Number attacked by Sickness Annually.	Ratio per 1000 of Strength attacked Annually.
Portsmouth . .	1830 to 1832	1,980	750	378·
Plymouth . .	1829 ,, 1831	2,062	715	347·
Sheerness . .	1830 ,, 1832	474	207	437·
Chatham . .	1830 ,, 1832	1,314	646	492·
Pembroke . .	1830 ,, 1832	446	234	524·
Total . .		6,276	2,552	Average 407·

This proportion of 407 attacks of sickness among every thousand workmen in the course of the year is generally estimated to be rather above than under the average among the working classes throughout the kingdom, although from the above calculation hurts and injuries received in the course of their labours have been excluded; in the Portsmouth dock-yard these were found to average about 150 per thousand of the strength annually, and the proportion in the others, though not stated, may be supposed much the same.

It now becomes necessary we should explain why the number annually under medical treatment should be nearly twice as high among the Dragoon Guards and Dragoons as the general mass of the population from which they have been selected. This striking disproportion is more apparent than real, and arises principally from the circumstance, that among soldiers every case of disease which comes under treatment, however slight, is entered on the hospital-books as an admission, whereas in the dock-yards, or among the working classes generally, cases are only recorded when of so serious a nature as to create an absolute disability for labour; the loss of wages consequent on such an occurrence must have a powerful tendency to reduce the number absent from sickness, which is understood to have been the principal criterion by which the existence of disease among the dock-yard labourers has been ascertained. This explanation is borne out by the fact, that while the number of attacks of sickness in the dock-yards was 407, the deaths amounted to 15 per thousand of the strength, hence, 1 in 27 died of those attacked; whereas among the Dragoon Guards and Dragoons, though there were 929 attacks out of every thousand present, the deaths from disease were but 14, or 1 in 66 of those attacked: thus, though there are more than double the number of cases recorded, they must have been of a much slighter nature among the latter class than the former.

We shall be better able to appreciate the correctness of this deduction, when we have investigated the different classes of diseases by which the admissions among the troops have been occasioned, as specified in the following Table, deduced from Abstract No. I. of Appendix.

	Admissions.		Deaths.		
	Total among whole Force in 7½ Years.	Annual Ratio per 1000 of Mean Strength.	Total among whole Force in 7½ Years.	Annual Ratio per 1000 of Mean Strength.	
By Fevers	3,327	75	60	1·4	
Eruptive Fevers	117	3	6	·1	
Diseases of the Lungs	6,627	148	345	7·7	
" of the Liver	337	8	19	·4	
" of the Stomach & Bowels	4,193	94	32	·8	
Epidemic Cholera	171	4	54	1·2	
Diseases of the Brain	293	6	32	·7	
Dropsies	55	1	14	·3	
Rheumatic Affections	2,244	50	6	1·4	
Venereal	8,072	181	2		
Abscesses and Ulcers	5,950	133	7		
Wounds and Injuries	5,619	126	12		
Punished	339	8	..		
Diseases of the Eyes	867	19	..		
" of the Skin	1,311	29	..		
All other Diseases	1,942	44	38		
Total in Medical Returns	41,464	929	627		14·
By Suicide, Accidents, and Violence	59		1·3
Total	41,464	929	686	15·3	

United Kingdom.

Table II. Showing the principal Diseases among the Dragoon Guards and Dragoons serving in the United Kingdom.

With regard to the admissions it appears that, out of the above total of 41,464, no less than 26,344, or nearly two-thirds of the whole, were of that class which seldom proves so serious as to incapacitate a person for the labours of civil life, and for which, were it optional on the part of the soldier, he would probably never have submitted to the confinement of hospital; in order, however, to check every disease in its commencement, and prevent those serious inroads on the constitution which too frequently result from neglect, a medical inspection of the troops takes place every week, at which their ailments are detected and immediately brought under medical treatment. This important peculiarity must always be kept in view in any comparison of the relative extent of sickness among the military and civil population.

The large proportion of admissions into hospital among the military extends also to the armies of other countries. In Prussia, for instance, the average ratio of admissions annually was 111 per cent., being considerably higher than in the British army, though the mortality was less.

So far as we are aware there is no document in existence to which reference can be made for the purpose of comparing the relative prevalence of particular diseases among military and civilians, and even so far as regards the relative mortality by these diseases there is considerable difficulty. Bills of mortality are of little avail for this purpose, both because they do not specify the diseases with any degree of accuracy, and because they include the deaths *at all ages*, whereas to form a just comparison, it is necessary that the parties should be of the same age as the troops. The best standard we can obtain is afforded by the following statement of the deaths between the ages of 20 and 40, among the parties insured in the Equitable Office from 1801 to 1832 inclusive,* with the fatal diseases. These we have arranged on the same principles as in the preceding Table, wherewith the results are to be compared.

Classes of Diseases.	Specific Diseases.	Died by each Disease.	Died by each class of Diseases.	Ratio per 1000 of Persons Insured Died by each class of Disease Annually.	Ratio of Troops Died by same class of Diseases as above.
Fevers	Common Continued Fever	35	61	1·6	1·4
	Bilious	6			
	Nervous	6			
	Inflammatory	5			
	Putrid	9			
Eruptive Fevers	None	·1
Diseases of the Lungs	Inflammation of the Lungs	14	122	3·4	7·7
	" Chest	2			
	Consumption	86			
	Ruptured Blood-Vessel	12			
	Angina Pectoris	8			
Diseases of the Liver	10	·3	·4	
Diseases of the Stomach and Bowels	Inflammation of the Bowels	16	30	·8	·8
	Diseased Stomach and Indigestion	11			
	Dysentery	1			
	Cholera	2			

Table III. Comparative view of the Mortality by different classes of Diseases in Military and Civil Life.

* See M'Culloch's Statistics of Great Britain, vol. ii. p. 598.

United Kingdom.

Classes of Diseases.	Specific Diseases.	Died by each Disease.	Died by each class of Diseases.	Ratio per 1000 of Persons Insured Died by each class of Diseases Annually.	Ratio per 1000 of Troops Died by same class of Diseases as on preceding page.
Epidemic Cholera	1·2
Diseases of the Brain	Water in the Brain	1	58	1·6	·7
	Brain Fever	19			
	Epilepsy	3			
	Apoplexy	29			
	Palsy	6			
Dropsies	Water in the Chest	4	14	·4	·3
	Other Dropsical Affections	10			
Other Diseases	Aneurism	1	24	·7	2·7
	Erysipelas	3			
	Diseased Bladder	3			
	Gout	2			
	Cancer	2			
	Atrophy	4			
Accidents, &c.	Anomalous	9	12	·3	
	Suicide	3			
	Killed in Action	2			
	Accidents	7			
	Total		331	9·1	15·3

This comparison, though the best we can obtain, is exceptionable in one important point, as it exhibits the mortality among the higher classes only; and, owing to the care with which the selection of those insured has been made, the deaths have been reduced to $9\frac{1}{10}$ per thousand annually, while that of the troops has been $15\frac{3}{10}$. Soldiers are no doubt selected also, and undergo a rigid examination prior to enlistment, but this refers only to visible defects and not to constitutional or hereditary maladies, the existence of which may, in some instances, be ascertained by the inquiries instituted by insurers.

This comparison, however defective it may be in this respect, is at least sufficient to show that there is no class of diseases but those of the lungs from which the troops suffer in a greater degree than the most select of the population. Cholera was only known in this country in its epidemic form during a part of the last year included in the Equitable Tables when no cases had occurred among the insured. In regard to that disease, therefore, the comparison is not appropriate.

The large proportion of suicides among this class of the military is a subject which particularly claims attention. Out of a total of 686 deaths no less than 35, or upwards of 1 in 20 of the whole, have been from this cause alone, independent of many attempts which did not prove fatal; whereas among those insured in the Equitable the proportion of suicides was not one-fifth part as great, being only 1 in 110 of the deaths. This extreme tendency to self-destruction in the army will best be estimated by a comparison with the proportion of suicides in civil life in different countries, as stated by a recent statistical author.*

In France there is annually 1 suicide to 18,000 inhabitants.			
Prussia	"	1	" 14,404 "
Austria	"	1	" 20,900 "
Russia	"	1	" 49,182 "
State of New York		1	" 7,797 "
" Boston		1	" 12,500 "
" Baltimore		1	" 13,656 "
" Philadelphia		1	" 15,875 "
Dragoon Guards and Dragoons in the United Kingdom		1	" 1,274 "

In cities, where a large proportion of the military are quartered, the ratio of suicides is greater than in the whole population of a country, but still much below that among our troops. In the Department of the Seine (Paris) for instance, between 1817 and 1825, the suicides averaged annually 1 in 2,400 inhabitants.

In Berlin, from 1813 to 1822	. . . . .	1	" 2,941 "
Geneva, " 1820 " 1826	. . . . .	1	" 3,900 "
London . . . . .	. . . . .	1	" 5,000 "

Even assuming, however, the very highest average in civil life in this country, it would appear that suicides are at least five times as numerous among this class of the military. It is necessary, however, to keep in view, that instances of self-destruction rarely occur among persons under the age of 18, and are by no means so frequent among females as males—circumstances which must materially influence any comparison between its prevalence among a population of all ages and sexes, and a select body of troops from 18 to 40 years of age.

The proportion of suicides is found to be higher among the Dragoon Guards and Dragoons

* Quetelet, sur l'Homme, vol. ii. p. 147.

than any other description of force, probably because these corps contain more of that class who have by dissipation or extravagance reduced themselves from a higher sphere in life to the necessity of enlisting, and on whose minds this change of condition may, in some instances, operate so powerfully as to lead to self-destruction.

We shall defer any further remarks as to the diseases by which this mortality has been occasioned till we have completed similar investigations regarding the other classes of troops serving in the United Kingdom, of whom we shall next proceed to notice

United Kingdom.

THE FOOT GUARDS.

The Medical Returns of this class of troops not being all sufficiently minute in their details we are unable to furnish the usual particulars regarding the number of admissions into hospital; but the extent of mortality and fatal diseases will be found in Abstract No. II. of Appendix, from which the following Tables of results have been compiled:—

Years.	Strength.	Deaths.	Ratio of Deaths per 1000 of Mean Strength.
1830	5,010	88	17·6
1831	4,589	108	23·5
1832	4,959	128	25·8
1833	4,962	98	19·8
1834	4,852	103	21·2
1835	4,524	85	18·8
1836	*5,642	135	23·4
Total for 7½ Years	34,538	745	..
Average	4,764	103	21·6

Table IV.
Showing the annual ratio of Mortality among the Foot Guards.

Thus, the mortality in this description of force on the average of these seven years has been 21·6 per thousand of the strength annually, being nearly one-half higher than in the Dragoon Guards and Dragoons. This is the more remarkable, as it has been shown on p. 5, that the climate of London, though certainly much less favourable to health than that of the rural districts, is not more insalubrious than many of the other towns in which the troops are quartered throughout the kingdom; the average annual mortality of the civil population between the ages of 20 and 40 being under 15 per thousand, and that of the East India Company's labourers employed there as low as 12½ per thousand at the same period of life.

We find too, from the Returns of the Metropolitan Police Force, quoted in the Appendix No. VI., that notwithstanding all the disadvantages of frequent night duty to which that class of men is exposed, the mortality out of an average strength of 3400 constantly employed was but 30 per annum, being under 9 per thousand, in addition to which nearly the same proportion was invalided for bad health. As it is understood, however, that many leave that service of their own accord if they find it proving injurious to their constitutions, we forbear drawing any positive conclusions from this source, except that it certainly tends to strengthen the opinion that the great mortality of the Foot Guards is attributable to other causes than the climate of the Metropolis, especially as we shall hereafter have occasion to show that the Household Cavalry do not suffer in a similar degree from its influence.

The principal diseases to which this high ratio of mortality is attributable are as follows:—

	Total Deaths by each Class of Diseases.	Ratio of Deaths Annually per 1000 of Mean Strength.
By Fevers	59	1·7
Eruptive Fevers	10	·3
Diseases of the Lungs	487	14·1
" Liver	2	·1
" Stomach and Bowels	24	·7
Epidemic Cholera	40	1·2
Diseases of the Brain	37	1·
Dropsies	18	·5
Other Diseases	47	1·4
Causes unknown	9	·2
Suicide and Accidents	12	·4
Total	745	21·6

Table V.
Showing the principal fatal Diseases among the Foot Guards.

On comparing this Table with that which shows the mortality by the same diseases among the Dragoon Guards and Dragoons, it will be found that the excess of the mortality among the Foot Guards arises entirely from diseases of the lungs.

* The real strength in 1836 was 4514, but one-fourth more had to be added, as the deaths stated are for 15 months,—from 1st January 1836 to 31st March 1837.

United Kingdom.

	In Foot Guards.	In Dragoon Guards and Dragoons.
The ratio of deaths by that class of diseases being	14·1	7·7
By all other diseases or causes of death	7·5	7·6
Totals	21·6	15·3

It would appear that this high ratio of mortality by diseases of the lungs among the Foot Guards is not a necessary consequence of residence in the Metropolis, but rather originates in some peculiarity in the moral or physical condition of that description of troops, from which the others are comparatively exempt; for by calculations deduced from the London Bills of Mortality, from 1830 to 1835,* it has been ascertained that out of a thousand deaths among the civil population the number by diseases of the lungs were,—

Pleurisy	12
Influenza	1
Inflammation of Lungs	96
Consumption	177
Asthma, &c.	42
Total	328

being scarcely one-third of the whole; whereas out of 745 deaths among the Foot Guards no less than 487, or upwards of two-thirds, were from these diseases.

But the most conclusive proof on this subject is, that no such peculiarity is manifested in the fatal diseases of another class of troops *also quartered in the Metropolis*, of which we have investigated the Returns, *viz.*, those of

THE HOUSEHOLD CAVALRY.

In Appendix No. III. will be found an abstract of the fatal diseases and causes of death among this class of troops, from January 1830 to March 1837, inclusive, from which the following Tables of results have been compiled:—

Table VI.
Showing the annual ratio of Mortality among the Household Cavalry.

Years.	Strength.	Deaths.	Ratio of Deaths per 1000 of Mean Strength.
1830	1,138	14	12·3
1831	1,155	19	16·4
1832	1,218	23	19·
1833	1,202	23	19·
1834	1,198	18	15·
1835	1,217	11	9·
1836	†1,521	17	11·2
Total for 7½ Years	8,649	125	..
Average	1,193	17	14·5

Thus, though this class of troops is exposed also to the climate of the Metropolis, the mortality is not so high by at least one-half as among the Foot Guards, and is even lower, by a small fraction, than among the cavalry corps employed throughout the kingdom. The following Table of the fatal diseases among this description of troops, compared with that of the Foot Guards on p. 9, demonstrates that the difference between the mortality of the Household Cavalry and Foot Guards is entirely owing to the greater liability of the latter to diseases of the lungs.

Table VII.
Showing the principal fatal Diseases among the Household Cavalry.

	Total Deaths by each Class of Diseases.	Annual Ratio of Deaths per 1000 of Mean Strength.
By Fevers	14	1·6
Eruptive Fevers	2	·2½
Diseases of the Lungs	70	8·1
" Liver	4	·5
" Stomach and Bowels	2	·2½
Epidemic Cholera	11	1·3
Diseases of the Brain	8	·9
Dropsies	2	·2½
All other Diseases	7	·8
Suicide and Accidents	5	·6
Total	125	14·5

Here it is shown that the mortality by diseases of the lungs among this class of troops has been but 8·1, while among the Foot Guards it has averaged 14·1 per thousand annually

* See M'Culloch's Statistics of Great Britain, vol. ii. p. 591.

† The real strength for 1836 was 1217, but it is necessary to add a fourth more, as the deaths stated are for 15 months,—from 1st January 1836 to 31st March 1837.

during the same period. That the exposure of the Foot Guards in a greater degree on night duty will scarcely account for this difference may readily be supposed from the fact that even among the troops of the line serving at home, whose constitutions have in some instances been deteriorated by residence in tropical or unhealthy climates, and who have an equal share of night duty to perform, the mortality by diseases of the lungs is much lower.

To exhibit this in the strongest possible light we shall take the mortality among the depôts of corps serving in the West Indies, which, for the reason just stated, may be supposed higher than the average among infantry in this kingdom. The deaths which occurred in each depôt, as shown by the War Office Returns, will be found particularly enumerated in Abstract No. IV. of Appendix, from which the following Table has been compiled:—

United Kingdom.

Period.	Mean Strength.	Deaths.	Ratio of Deaths per 1000 of Strength.
1st January to 31st December 1830 .	2,551	35	14.
" " 1831 .	2,952	47	16.
" " 1832 .	3,511	73	21.
1st January 1833 to 31st March 1834	*4,794	98	20.
1st April 1834 " 1835	3,346	50	15.
" 1835 " 1836	3,462	70	20.
" 1836 " 1837	2,921	63	21.
Total	23,537	436	..
Average	3,246	60	18.5

Table VIII. Showing the annual ratio of Mortality in the Depôts of Corps serving in the West Indies.

Thus, while the mortality in the Foot Guards, who have had no foreign service, has been 21⁶/₁₀₀ per thousand of the strength, on the average of the last seven years, that of the West India depôts has been only 18⁵/₁₀₀, though no doubt including a few whose constitutions had previously been deteriorated while on duty with the service companies. We have in the above estimate carefully excluded all those who died at sea on their passage home, or at the Invalid Depôt at Chatham, but it has not been practicable to do so with those who joined the depôts of their corps, and died there of disease originally contracted in the West Indies.

It is also necessary to state that the above estimate of the mortality is considerably higher than it ought to be, because we have taken the strength, not at the highest rate to which it attained by recruiting, but only at its average in the beginning and termination of each year, thus omitting all the recruits who may have been raised and sent out during the intermediate period, and among whom several deaths must have occurred which are included in the general mass. In comparing this mortality with that in the Foot Guards we are therefore taking the most unfavourable specimen of the troops of the line, among whom we apprehend, in years of ordinary health, the ratio at home does not exceed 15 per thousand, which was found to have been the average among all the troops in Ireland during a period of thirty-two years, as already stated on p. 6 of this Report.

The diseases by which the mortality in these depôts was occasioned will be found specified in Abstract No. V. of Appendix, which has been compiled entirely from the War Office Returns; for owing to the number of detachments, especially in Ireland, the Medical Returns must necessarily have omitted a large proportion of the sick under the charge of civil practitioners. Though the War Office Returns are not so specific as the Medical in regard to the nature of the diseases, we have no doubt they are sufficiently so for the purpose of a rough comparison; and the results deduced from them are therefore submitted in the following Table:—

	Total Deaths by each Class of Diseases.	Average Annual Ratio of Deaths per 1000 of Mean Strength.
By Fevers	68	2.8
Eruptive Fevers	5	.2
Diseases of the Lungs	226	9.6
" Liver	2	.1
" Stomach and Bowels	9	.4
Epidemic Cholera	27	1.2
Diseases of the Brain	14	.6
Dropsies	9	.4
Other Diseases	32	1.3
Suicide and Accidents	21	.9
Causes unknown	23	1.
Total	436	18.5

Table IX. Showing the principal fatal Diseases among the Depôts of Corps serving in the West Indies.

From this Table it appears that these depôts have suffered nearly twice as much from Fever as the Cavalry or Household Troops. We apprehend, however, that a great pro-

* The real strength in the year 1833 was only 3835, but it is necessary to add one-fourth more, as the deaths stated are for a period of 15 months.

United Kingdom. portion of the deaths reported under this head have occurred among men who had previously suffered from the same cause in the West Indies, and which may consequently be, in some measure, attributed to the deterioration of constitution, or increased susceptibility to the disease thus occasioned. The results obtained in the former Tables, in regard to the proportion of deaths by fever, are so uniform, both in military and civil life, as to render this supposition highly probable.

GENERAL RESULTS.

Having thus ascertained the fatal diseases among four different classes of troops serving in the United Kingdom, as well as among a select body of individuals in civil life, we shall now endeavour to draw from these results a fair standard for estimating the relative mortality by the same diseases among troops in the Colonies.

FEVERS.

The proportion of deaths annually per thousand, by this class of diseases, approximates very nearly by all the results except the last.

	Per thousand of Strength.
In the Dragoon Guards and Dragoons it was ascertained to have been	1.4
In the Foot Guards	1.7
In the Household Cavalry	1.6
In Civil Life	1.6
In the West India Depôts	2.8

We shall exclude the last, as, from the causes before referred to, the excess may not have been altogether attributable to the climate of this country. Taking the average of the four others, 1.6 per thousand may be computed to die annually from fever. The admissions have been shown on page 7 to be about 75 per thousand annually, and the proportion of deaths to admissions appears to be about 1 in 55.

From an extensive series of observations, it has been ascertained that, among troops serving in this kingdom, fevers are more prevalent during the summer than the winter months, in the proportion of 5 to 4. Of 4499 attacks, of which the dates have been stated, 2531 took place between May and October, and only 1968 during the rest of the year. This is by no means uniformly the case, however, for in 1832 and 1834, the preponderance of febrile cases was in those months which in other years were most exempt from them. It has also been ascertained that, in civil life in this country, fevers are most prevalent during the summer months, but that they are of a less fatal character than during winter.

ERUPTIVE FEVERS.

All the results show that this class of diseases, once such a source of mortality, is now of very rare occurrence in our army, and that the deaths are comparatively few, the proportion not exceeding annually—

	Per thousand of Strength.	
In the Dragoon Guards and Dragoons	$\frac{1}{10}$	or 1 in 10,000
In the Foot Guards	$\frac{3}{10}$	or 3 in ditto
In the Household Cavalry	$\frac{2}{10}$	or 2 in ditto
In the West India Depôts	$\frac{2}{10}$	or 2 in ditto

Taking the average of the above, it may be estimated that $\frac{2}{10}$ per thousand, or 2 out of every ten thousand of the troops throughout the kingdom, die annually from this class of diseases.

The admissions amount to about 3 per thousand annually, and the proportion of deaths to admissions is 1 in 15. It may be necessary to state, that by the regulations for the management of Regimental Hospitals, the Surgeon is called upon to report half-yearly, that every man, woman, and child, belonging to the regiment, bears unequivocal marks of either small or cow-pox, and he is directed to keep a register of the names and appearances, on the days of examination, of all patients vaccinated. Nothing shows the advantage of this precaution better than the fact that, in the Dragoon Guards and Dragoons quartered throughout the kingdom, only one soldier has been attacked by small-pox in every two thousand annually.

DISEASES OF THE LUNGS.

Exclusive of the mortality in the Foot Guards, which may be considered an exception, the loss in the other corps, by this class of diseases, approximates so nearly that there is little difficulty in fixing an average.

	Per thousand of Strength.
In the Dragoon Guards and Dragoons it amounts annually to	7.7
In the Household Cavalry	8.1
In the West India Depôts	9.6

As some of the last may probably have been attributable to the climate of the West Indies, which has a much greater tendency to induce consumption than that of this country, we may assume the average mortality throughout our army from diseases of the lungs to have been about 8 per thousand annually. The ratio of admissions has been stated on page 7

at 148 per thousand, and the proportion of deaths to admissions may be estimated at 1 in 19 nearly.

The admissions into hospital from this as well as the other classes of diseases referred to in the Medical Returns must not be supposed, however, to arise in every instance from fresh cases of sickness occurring in different individuals. In many chronic affections, particularly those of the lungs, relapses are frequent after the soldier has returned to his duty, and when thus brought again under hospital treatment his admission is registered as if it had arisen from a new case of disease. Keeping this in view, the rarity of recovery from consumption is strikingly exemplified in the fact that of 286 admissions, among the Dragoon Guards and Dragoons, 236 are ascertained to have proved fatal, and the remaining 50 are more likely to have consisted of re-admissions than recoveries.

Nearly four-fifths of the fatal cases of diseases of the lungs arise from consumption, being as many as from all other causes in the army at home. The highest estimates in civil life rate the mortality from this disease at a seventh part of the deaths of all ages: or if the observation is confined to adults alone, it may possibly amount to a fourth part, being at the utmost only half as high as among the troops.

That soldiers should suffer so much from this disease is remarkable, as an active life, spent for the most part in the open air, has generally a very material tendency to counteract its influence. From some very extensive calculations by Mons. Lombard, on the influence of professions on consumption at Geneva, it has been found that persons whose occupations were of an active description, inducing muscular exercise, and carried on in the open air, were not half so liable to that disease as those whose occupations were sedentary or carried on in shops and manufactories.

If the aggregation of a number of men into one apartment, even though the space is not very confined, creates a tendency to this disease, then it clearly points out the propriety of affording the soldier as ample barrack accommodation as possible, not with a view to his comfort alone, for that is a matter of minor consideration, but in order to check the ravages of a disease which creates more mortality than all the others to which troops in this country are subject.

DISEASES OF THE LIVER.

All the results show this class to be of very rare occurrence, and productive of but little mortality among our army in this country.

In the Dragoon Guards and Dragoons the ratio of deaths from this cause has been annually	} Per thousand of Strength.	$\frac{4}{10}$	or 4 in 10,000
In the Foot Guards		$\frac{1}{10}$	or 1 in ditto
In the Household Cavalry		$\frac{5}{10}$	or 5 in ditto
In the West India Depôts		$\frac{1}{10}$	or 1 in ditto
In Civil Life		$\frac{3}{10}$	or 3 in ditto

We shall assume the latter, which is about the medium, as our standard of the mortality caused by this class of diseases. The ratio of admissions has been shown, on page 7, to be about 8 per thousand annually, and the proportion of deaths to admissions may be estimated at 1 in 18.

DISEASES OF THE STOMACH AND BOWELS.

This class of diseases is by no means a source of great mortality among the troops serving in this country.

In the Dragoon Guards and Dragoons the ratio of deaths caused by it has been annually	} Per thousand of Strength.	$\frac{8}{10}$	or 8 in 10,000
In the Foot Guards		$\frac{7}{10}$	or 7 in ditto
In the Household Cavalry		$\frac{3}{10}$	or 3 in ditto
In the West India Depôts		$\frac{4}{10}$	or 4 in ditto
In Civil Life		$\frac{8}{10}$	or 8 in ditto

We may take the average of the whole at about $\frac{5}{10}$ per thousand or 5 in ten thousand annually; and it is especially worthy of remark that, though in many of our colonies we find the mortality among our troops by this class of diseases not only higher than in civil life, but in some cases even as high as by all the diseases in civil life together, so far from there being any corresponding feature among the troops in this country, it is even less than among the most select of the population.

The admissions have been shown to amount to 94 per thousand, but they are of so slight a nature that not above 1 in 131 proves fatal.

It has long been a subject of remark by medical writers that this class of diseases is most prevalent during the autumnal season. An examination of the Military Returns of the whole troops serving in this kingdom during the last seven years fully establishes the same fact; for of 1649 attacks of which the dates have been recorded, 649 were in August, September, and October, being twice as many as the average of the other months of the year, and the same feature has been uniformly manifested in every year of the period under observation.

EPIDEMIC CHOLERA.

It is impossible to frame any estimate of what may be the annual ravages of an epidemic of this kind, as its visitations are by no means regular; and, it is hoped, will in future be but

United Kingdom.

rare in their occurrence. In order to follow out the same principles of calculation as for the other diseases, we estimated the mortality upon the aggregate strength of the seven years, as if it had occurred annually, in which case the proportion of deaths caused by it annually in each description of force would have been—

	Per thousand Annually.
Of Dragoon Guards and Dragoons	1.2
Of Foot Guards	1.2
Of Household Cavalry	1.3
Of West India Depôts	1.2

But had the form of our calculations admitted of it, we should rather have stated that, during the three years it prevailed, about 2.8 per thousand of the strength were cut off by it annually.

Nothing can be more remarkable than the undeviating regularity with which this disease seems to have exerted its fatal influence in all localities. Here we have instances of different bodies of troops quartered in various situations throughout the kingdom, and yet the proportion of deaths is to within a fraction the same among all.

It did not prove equally fatal to all classes, the mortality having increased progressively with the advance of age in the following proportions :—

AGE.	Aggregate Strength of Cavalry and Household Troops during the three Years Cholera prevailed.	Deaths by Cholera in that Force during these three Years.	Annual rate of Mortality by Cholera at each age.
Under 18	548	0	0
18 to 25	14,103	32	2.3
25 to 33	13,336	33	2.5
33 to 40	7,223	29	4.
40 to 50 and upwards	2,229	11	4.9
	37,439	105	2.8

The West India Depôts are necessarily excluded from this calculation owing to the difficulty of forming any proper estimate of the numbers living at each age, but so far as could be ascertained from their Returns the result was much the same.

Of 171 treated for this disease among the Dragoon Guards and Dragoons 54 died, or about a third part of the whole number attacked. Among the other troops the proportion was much the same.

DISEASES OF THE BRAIN.

In this class of diseases the results obtained have been very uniform, and are as follows :—

	Per thousand of Strength.	
In the Dragoon Guards and Dragoons there died annually	$\frac{7}{10}$	or 7 in 10,000
In the Foot Guards	1.	or 10 in ditto
In the Household Cavalry	$\frac{9}{10}$	or 9 in ditto
In the West India Depôts	$\frac{6}{10}$	or 6 in ditto

We shall assume $\frac{8}{10}$ per thousand, or 8 in ten thousand, for our standard of the annual extent of mortality by this class of diseases among troops in the United Kingdom, being only half the proportion which occurs in civil life, as shown by the Tables of the Equitable Office, on page 8. But this class of diseases is generally supposed to prove a greater source of mortality among the higher ranks, of whom the persons insured in that office are principally composed, than among the lower orders from whom our soldiers are recruited.

The proportion of admissions has been shown on page 7 to be about 6 per thousand of the strength annually, and the proportion of deaths to admissions appears to have been about 1 in 9.

DROPSIES.

The results in regard to the influence of this class of diseases in producing mortality among the troops in this country approximate very nearly, and are as follows :—

	Per thousand of Strength.	
In the Dragoon Guards and Dragoons there died annually	$\frac{3}{10}$	or 3 in 10,000
In the Foot Guards	$\frac{5}{10}$	or 5 in ditto
In the Household Cavalry	$\frac{3}{10}$	or 3 in ditto
In the West India Depôts	$\frac{4}{10}$	or 4 in ditto
In Civil Life	$\frac{4}{10}$	or 4 in ditto

We shall assume the latter for our standard, being a pretty fair medium between the other results. The proportion of admissions is little more than 1 per thousand of the strength, and the deaths are about 1 in 4 of the admissions.

Having by this course of investigation obtained a standard for estimating the influence of the principal classes of diseases on troops in the Colonies, compared with those in the United Kingdom, we shall next proceed to the subject of Invaliding.

SECTION II.

On the Extent of Invaliding among Troops serving in the United Kingdom.

OWING to the want of specific information in regard to the causes of disability, we have only been able to ascertain the number discharged annually as unfit for further service in each description of force, under the three following classes:—

1. Under 14 years' service.
2. Above 14 and under 21 years' service in infantry, or 24 in cavalry.
3. Above these periods of service.

The numbers in the first two classes best serve to illustrate the extent of disabilities resulting from climate, or military service; for in the last class are included many who have completed the period of service usually exacted from soldiers, and whose incapacity for the duties of their profession is more the result of advanced age than disease. It is from the numbers of the former, therefore, that we have principally to draw our conclusions, though it has been necessary also to insert those of the latter in the following Tables:—

Length of Service.	1830			1831			1832			1833		
	Dragoon Guards and Dragoons.	Foot Guards.	Household Cavalry.	Dragoon Guards and Dragoons.	Foot Guards.	Household Cavalry.	Dragoon Guards and Dragoons.	Foot Guards.	Household Cavalry.	Dragoon Guards and Dragoons.	Foot Guards.	Household Cavalry.
Under 14 years	153	79	4	54	42	4	58	91	13	71	107	15
14 to 21 or 24	38	27	3	46	10	1	56	20	10	30	39	12
Above 21 or 24	40	8	7	37	2	8	37	23	7	58	74	8
Total . . .	231	114	14	137	54	13	151	134	30	159	220	35
Length of Service.	1834			1835			1836			Total in 7½ years.		
	Dragoon Guards and Dragoons.	Foot Guards.	Household Cavalry.	Dragoon Guards and Dragoons.	Foot Guards.	Household Cavalry.	Dragoon Guards and Dragoons.	Foot Guards.	Household Cavalry.	Dragoon Guards and Dragoons.	Foot Guards.	Household Cavalry.
Under 14 years	105	96	7	68	76	4	61	136	6	570	627	53
14 to 21 or 24	47	42	6	42	34	5	34	48	10	293	220	47
Above 21 or 24	44	109	11	56	110	11	37	84	4	309	410	56
Total . . .	196	247	24	166	220	20	132	268	20	1,172	1,257	156

Table X.
Showing the number annually discharged as unfit for Service of the Household Troops and Cavalry.

From this abstract have been excluded all those recruits discharged as ineligible within a few months after enlistment; and as the proportion of soldiers who have completed these three periods of service is much the same in the Cavalry and Household Troops, we have now only to compare the numbers discharged with the total strength, to obtain the following results:—

	Dragoon Guards and Dragoons.	Foot Guards.	Household Cavalry.
	Discharged Annually per 1000 of Strength.	Discharged Annually per 1000 of Strength.	Discharged Annually per 1000 of Strength.
Under 14 years' service . . .	12.8	18.1	6.1
Above 14 and under 21 or 24	6.6	6.4	5.5
Above 21 or 24	6.9	11.9	6.4
Total	26.3	36.4	18.

Table XI.
Showing the ratio per Thousand discharged annually of Household Troops and Cavalry.

Here we find the same remarkable feature in the invaliding as in the mortality of the Foot Guards, viz., that it is nearly one-half higher than among the cavalry corps throughout the kingdom; and, like that mortality, falls heaviest on those under 14 years' service. It is worthy of remark, too, that in the Household Cavalry, though also serving in the Metropolis, the invaliding is scarcely one-third as high as among the Foot Guards after the same period of service.

The total number discharged from the Foot Guards for disabilities is nearly double that from regiments of the line, whether in healthy or unhealthy stations, as will be seen by the following comparison:—

United Kingdom.

	Discharged annually per 1000 of Mean Strength.
In Jamaica	16
Windward and Leeward Command	24
Gibraltar	16
Malta	20
Ionian Islands	18
North American Stations	19
Foot Guards	36

As the soldiers of the Foot Guards are not sent to Chatham for treatment and examination prior to their discharge, but, after being examined by the Adjutant-General, appear before the Board at Chelsea, on a certificate of their unfitness for the service by the medical officers of their corps and the Staff Surgeon of the district, we can give no explanation of the cause of so remarkable an increase in the number discharged since 1832, though that is a subject which, in relation to this branch of the inquiry, it would be interesting to have investigated.

SECTION III.

On the Number constantly sick in Hospital among Troops serving in the United Kingdom.

In the Appendix No. X. will be found an Abstract of the average number daily sick in each regiment of Dragoon Guards and Dragoons serving throughout the kingdom, compiled from the medical returns. As these, however, do not include the sick of detachments having no medical officer in charge, a small addition must be made on that account to the totals as stated in the following Table:—

Table XII.
Showing the number constantly Sick in Hospital of the Dragoon Guards and Dragoons serving in the United Kingdom.

Years.	Mean Strength.	Average constantly Sick.	Ratio per 1000 of Mean Strength constantly Sick.
1830	6,402	229	35
1831	6,018	254	42
1832	6,408	249	39
1833	6,379	237	37
1834	6,261	218	35
1835	5,902	204	35
1836	5,793	218	38
Total	43,163	1,609	37.3

Thus the number constantly sick appears to be only about 37 per thousand of the force; but making allowance for the omissions above referred to, several of which we have detected, though unable to correct them, the proper average may be stated at about 40 per thousand, which corresponds with the result of 24 monthly musters in 1823 and 1824, referred to by Mr. Finlaison in his evidence on Friendly Societies. The number constantly sick in the Prussian army, on an average of 10 years, amounted to 44 per thousand.

From these results, combined with the information formerly obtained on page 7, in regard to the number of admissions, we can now ascertain the average period each soldier is sick in the course of the year, and the average duration of each attack of sickness: 40 multiplied by 365 shows the total days of sickness among 1000 soldiers throughout the year to have been 14,600, that is, about 14½ days to each. If the 14,600 is divided by 929, the number of admissions into hospital, the quotient gives 16 days as the average duration of each attack of sickness.

We shall now compare these results in regard to the number constantly sick, the average extent of sickness throughout the year, and the duration of each attack among this class of troops, with what occurs among civilians about the same age, as ascertained from the following sources:—

	Ages.	By Tables of Scotch Benefit Societies.	By Tables of English Benefit Societies.	Returns of East India Company's Labourers in London.	Returns of Portsmouth Dock Labourers.	Returns of Woolwich Dock Labourers.
Constantly sick per 1000	20 to 30	11.4	15.4	13.6	19.9	23.4
	30 to 40	13.2	18.3	13.8		
Average number of Days Sick in each Year	Days.					
	20 to 30	4.1	5.6	4.02	7.3	8.5
30 to 40	4.8	6.6	5.06			
Average Duration of each Attack of Sickness	Days.					
	20 to 30	..	..	18.7	13.2	
30 to 40	..	..	22.6			

This shows the proportion constantly on the sick list, and the number of days' sickness to each person, to be twice, if not thrice, as high in military as in civil life, arising, no doubt, from the circumstance, that every individual who requires any description of treatment, however slight, is included in the former class, but not in the latter. The duration of sickness seems to be much about the same in both. Each attack of sickness lasted upon an average 16 days among these troops, while among the dock-yard labourers at Portsmouth it lasted 13 days, and among the labourers in London from 18 to 22.

It is perhaps unnecessary to enter on any similar calculations for the household troops and infantry, especially as the Medical Returns of the former do not in every instance mention the mean number of daily sick, and those of the latter include many, whose constitutions having been worn out by a long course of foreign service, are seldom out of hospital. The number constantly sick in the infantry may be rated at a fourth part more than in cavalry; it having been found, by a series of observations, extending over all the troops of the line in Ireland, from 1797 to 1828, the particulars of which are to be found in the Appendix No. XII., that the proportion constantly sick was 51 per thousand; and by 24 monthly musters, in 1823 and 1824, it was calculated by Mr. Finlaison at 49 $\frac{9}{10}$ per thousand: 50 per thousand may therefore safely be assumed as the average; but this, for the reason above stated, must not be supposed to result entirely from the influence of the climate of this kingdom.

SECTION IV.

On the Influence of Age on the Mortality of Troops serving in the United Kingdom.

In a previous Report we stated very fully the importance of this branch of our investigations, and the documents on which it required to be founded. If this species of information is requisite in regard to the troops serving in the Colonies, it must be still more so for those in the United Kingdom, seeing that it is only thereby a proper standard can be obtained for comparing the influence of age on mortality in different climates.

Owing to the want of some such standard we were under the necessity, in the West India Report, of drawing our conclusions on that subject from the deaths at various ages among the civil population of this kingdom; but to military authorities this can never be so satisfactory a means of comparison as that which we are now able to offer from the authenticated Returns of several corps.

Pursuing the same arrangement as in that part of the Report which refers to the diseases of the troops, we shall investigate the rate of mortality at different ages in the Cavalry and Household Troops separately.

We formerly stated the total deaths in the whole force of Dragoon Guards and Dragoons serving in the United Kingdom, from 1st January, 1830. to 31st March, 1837, to have been 686; but, to prevent intricacy in the details arising from the insertion of broken periods, we propose only to investigate the ages of those who died from 1st January, 1830, to 31st December, 1836, amounting to 663.

Of these there died under 18 years of age	2
" " 18 to 25	213
" " 25 ,, 33	222
" " 33 ,, 40	148
" " 40 and upwards	78
Total	663

This information, however, is not in itself sufficient to determine the proportion of mortality at each age. To ascertain that point it is essential we should also know the numbers alive at these ages, which can only be obtained with accuracy by framing general Abstracts of the Returns annually transmitted to the War Office on that head; these being too voluminous for insertion in the body of this Report, have been subjoined in the Appendix No. VII., and we shall here merely state the results in the following Table:—

Ages.	Aggregate Strength at each Age in Returns of 7 Years.	Total Deaths at each Age in Returns of 7 Years.	Annual Ratio of Deaths per 1000 living at each Age.
Under 18	455	2	4.4
18 to 25	15,320	213	13.9
25 ,, 33	15,919	222	14.
33 ,, 40	8,549	148	17.3
Above 40	2,920	78	26.7
Total	43,163	663	15.3

Table XIII. Showing the Influence of Age on Mortality among the Dragoon Guards and Dragoons serving in the United Kingdom.

United Kingdom.

Thus the mortality increases progressively with the advance of age, but by no means in so rapid a ratio as in the West India stations. The numbers under 18 are however too low to warrant any further conclusion than that they corroborate former results as to the comparative exemption from mortality of persons at that early period of life.

On comparing the above ratios with the mortality at different ages among the population of the large towns of this kingdom, stated at page 5 of this Report, it will be found that the mortality increases with the advance of age, in nearly the same proportions among this class of the military, as in civil life. The same rule does not, however, apply to the troops stationed in the Metropolis, as will be seen by the Returns of

THE FOOT GUARDS.

Of this class of troops, as stated in a previous part of this Report, there died 745 from 1st January, 1830, to 31st March 1837. For the reasons before adverted to, we shall, however, restrict this portion of our investigation to those who died from 1st January, 1830, to 31st December, 1836, amounting, as per Abstract No. VIII. of Appendix, to 720. Of these the proportion of mortality at each age, was as follows:—

Table XIV.
Showing the
Influence of Age on
Mortality among
the Foot Guards.

Ages.	Aggregate Strength at each Age in Returns of 7 Years.	Total Deaths at each Age in Returns of 7 Years.	Annual Ratio of Deaths per 1000 living at each Age.
Under 18 . .	490	3	6.1
18 to 25 . .	11,778	263	22.3
25 „ 33 . .	12,470	280	22.5
33 „ 40 . .	6,637	118	17.7
Above 40 . .	2,035	56	27.5
	33,410	720	21.6

Comparing these with the previous results, there will be observed this remarkable difference, that the mortality falls in a much higher proportion on soldiers between 18 and 25, and 25 and 33, in the Foot Guards than in the Dragoon Guards and Dragoons, while between 33 and 40, the mortality in both these descriptions of force is very nearly alike. This may be held in some measure to arise from a larger proportion being annually discharged for disabilities in the Foot Guards than in the Cavalry, as shown on p. 15 of this Report, whereby the few who are left above 33 must be comparatively more select lives in the former than in the latter force, and consequently less liable to mortality.

But though this may account for the reduced ratio of mortality between 33 and 40, to what are we to attribute its excess between the ages of 18 and 33, at which period of life it is double that of the Dragoon Guards and Dragoons or even of the Household Cavalry quartered in the Metropolis, while the number discharged for disabilities under 14 years' service is also proportionably high.

That this cannot altogether be accounted for by the mere influence of the climate of the metropolis on persons about that period of life, is sufficiently established by the fact that no such peculiarity is observable, either among the population of the metropolis generally, or the East India Company's labourers—an extensive body of men constantly employed in London, whose medical records have been preserved with great care, and from an analysis of which, lately published,* we extract the following results as to the mortality at different ages.

Ages.	Died Annually per 1000 of Living.	
	By London Bills of Mortality.	By Returns of East India Company's Labourers.
From 20 to 30	12.2	8.2
„ 30 „ 40	16.9	14.8
„ 40 „ 50	25.4	24.3

Some may perhaps be inclined to attribute this peculiarity to the extent of night-duty which devolves on this class of troops in the metropolis; but obviously that should affect those above 33, as well as those under that age; and, besides, we find by the returns of the Metropolitan Police Force before referred to, that, though for the most part composed of men at the same period of life, who have much more severe night-duty to perform, neither the mortality nor invaliding is one-half so high as in the Foot Guards.

* See M'Culloch's Statistics of Great Britain, vol. ii. p. 577.

The Returns of the Household Cavalry, though also serving in the Metropolis, do not show so great a mortality at an early period of life, as will be seen by the following Table of the deaths at each age, from 1st January, 1830, to 31st December, 1836, whereof the materials will be found in the Appendix No. IX.

United Kingdom.

Ages.	Aggregate Strength at each Age in Returns of 7 Years.	Total Deaths at each Age in Returns of 7 Years.	Annual Ratio of Deaths per 1000 living at each Age.
Under 18 . . .	119	1	8.4
18 to 25 . . .	2,928	43	14.7
25 ,, 33 . . .	2,892	34	11.4
33 ,, 40 . . .	1,836	30	16.3
Above 40 . . .	570	13	22.8
	8,345	121	14.5

Table XV.
Showing the Influence of Age on Mortality among the Household Cavalry.

Here it appears that the mortality increases progressively with the advance of age, except between 18 and 25, when it is a little higher than at the succeeding period of life. On so small a scale of numbers, it could scarcely have been anticipated that the results would have exhibited the same regular progression as when extended over the whole body of cavalry throughout the kingdom; they are, however, sufficient to establish, that the great mortality in the Foot Guards at an early period of life is not shared by the other troops serving under the same circumstances, and must therefore, be attributable to other causes than the climate of the Metropolis.

Owing to the frequent interchange of men between the Depôts and Service Companies, and the short period infantry corps are stationed in this country, it would be useless to draw any deductions from such sources, as to the influence of age on mortality among that class of troops in the United Kingdom. To admit of any prospect of accuracy in such investigations, it is essential to have the same body of men under observation for a series of years, which, from the nature of the service of infantry corps in this country, can seldom be the case.

SECTION V.

On the Mortality among Officers serving in the United Kingdom.

It is not our intention to enter into any lengthened investigation on this head, because the results are so liable to be affected by the facility with which officers can dispose of their commissions in the event of bad health, that, however accurate the details, they cannot always be relied on as affording satisfactory evidence of the influence of the climate of this country in inducing mortality among that class.

As many die on leave of absence, who consequently are not reported in the Medical Returns, we cannot draw our information as usual from that source, but must confine ourselves to an enumeration of the deaths among the officers of corps on home service annually recorded in the pages of the Army List.

From that document we have ascertained that, from 1826 to 1836 inclusive, there died among the officers of the Household Troops, Dragoon Guards and Dragoons, serving in the United Kingdom 67

The average number of officers in these corps, exclusive of the staff aftermentioned, was about 700

Making the annual ratio of mortality during these eleven years $9\frac{1}{2}$ per thousand of the strength, or very nearly the same as among the most select class of individuals insured in the Equitable Office between the ages of 20 and 40.

During the same period there were on the average about 27 regiments of the line always on the tour of home service; of the officers of which corps there died . . . 110

The average number of officers belonging to these corps, exclusive of the staff aftermentioned, was 900

Making the average ratio of mortality during these eleven years, 11 per thousand of the strength annually.

In this calculation we have excluded the Paymasters, Quarter-masters, and Medical Staff, as they are considerably above the average age; indeed, many of the two former have gone through a long course of service before being appointed to their situations, and the mortality has consequently fallen on them in at least twice as high a ratio as any of the other ranks. The average age of the other officers may be held to correspond nearly with that of

United Kingdom. the privates, and in this respect, therefore, their relative mortality may be a fit subject for comparison.

Were we to draw our conclusions from the preceding results, the mortality among the officers, both of the Household Troops and Line on home service, would appear to be about one-half less than among the privates; but so many cases occur in this country of officers selling out when their health begins to be impaired, that unless we knew what addition to make on that account, or how far it may be compensated by the numbers invalidated among the men, it would be useless to enter on the comparison. We may venture to do so, however, to a greater extent in the investigation of the mortality in the Colonies, where most of the fatal diseases run too rapid a course to admit of officers in bad health disposing of their commissions.

In regard to the prevalence or relative severity of the different classes of diseases by which this mortality has been caused among the officers in this country, we have no specific information to offer.

SECTION VI.

On the Influence of the Seasons in producing Sickness and Mortality among Troops in the United Kingdom.

THERE exist no documents on an extensive scale, to show the seasons at which sickness is most prevalent in this country, and the only mode of estimating the relative prevalence of mortality is by a comparison of the number of burials in each month of the year, in some of the principal towns of the kingdom. Results drawn from this source, however, are obviously defective as a standard of comparison for determining the influence of the seasons on the health of troops, because in civil life are included the deaths in infancy and old age, which are liable to be materially increased by the inclemency and sudden atmospherical vicissitudes of winter—causes affecting persons in the prime of life in only a very minor degree.

Though but little practical benefit can result from this branch of the inquiry, still it is essential that it should be carefully investigated; otherwise we might be inclined to view the unhealthy character of some months in other climates as depending on local causes, when a more extended investigation would have shown that the same law regulated the sickness and mortality of troops in this kingdom.

As the Returns of the Household Troops are not sufficiently minute in their details for this purpose, we can only refer to the number of admissions and deaths recorded in each month among the Dragoon Guards and Dragoons employed throughout the kingdom for the last seven years: an Abstract of these will be found in the Appendix No. XIII., from which the following totals have been extracted:—

Table XVI.
Showing the Influence of the Seasons in producing Sickness and Mortality among the Dragoon Guards and Dragoons in the United Kingdom.

	TOTAL ADMISSIONS.				TOTAL DEATHS.			
	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	Total by all Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	Total by all Diseases.
In 7 Januarys .	1,287	271	1,619	3,177	18	17	2	37
7 Februarys .	1,161	310	1,527	2,998	13	14	4	31
7 Marches .	1,085	303	1,634	3,022	21	18	3	42
7 Aprils .	1,170	280	1,610	3,060	19	26	5	50
7 Mays .	1,336	328	1,866	3,530	31	26	6	63
7 Junes .	1,274	322	1,824	3,420	21	15	..	36
7 Julys .	1,333	350	1,893	3,576	24	12	4	40
7 Augusts .	1,628	335	1,877	3,840	29	13	6	48
7 Septembers	1,411	293	1,740	3,444	26	8	4	38
7 Octobers .	1,231	323	1,729	3,283	22	13	2	37
7 Novembers	1,071	266	1,588	2,925	20	16	3	39
7 Decembers	1,215	298	1,673	3,186	20	15	3	38
Total .	15,202	3,679	20,580	39,461	264	193	42	499

On comparing these admissions with the totals in the General Abstract, No. I. of Appendix, it appears that not more than 1 per cent. has been omitted in this Table; these were probably cases of too slight a nature to be deemed worthy of insertion, and, as their omission may be presumed to affect all the months equally, the accuracy of the results is not likely to be materially influenced thereby.

The omissions in the deaths are of more importance. Those stated in the Medical Returns being no less than 164, or nearly a fourth part of the whole, under the number in the War Office Returns. A great portion of these consists of men who have died on furlough of chronic diseases, principally consumption, or from accidents; few who died of acute diseases can have been omitted, because no patient suffering under an attack of that nature would be allowed to remain out of hospital, or to proceed on furlough. And it is therefore to the latter class of diseases only we have referred in the following calculations.

Of every 1000 admissions and deaths among the Dragoon Guards and Dragoons, the proportion occurring in each month was— United Kingdom.

	ADMISSIONS.	DEATHS.
	By Acute Diseases only.	By Acute Diseases only.
January . . .	85	68
February . . .	76	49
March . . .	71	80
April . . .	77	72
May . . .	88	117*
June . . .	84	80
July . . .	88	91
August . . .	107	110
September . . .	93	98
October . . .	81	83
November . . .	70	76
December . . .	80	76
	1000	1000

Thus notwithstanding the large proportion of diseases which are attributed to the changeable nature of this climate, the attacks of sickness are fewest among the troops during the fogs and gloom of November, and throughout the winter they are considerably under the average, even though, from their professional duties, soldiers are much exposed to its severity; while during the months of July, August, and September, when there exists that mild and serene atmosphere which *à priori* might be supposed most conducive to health, the proportion of sickness generally attains its maximum. The same feature will hereafter be shown to exist to a still greater extent in America, and other regions of the northern temperate zone. April and May seem also to prove peculiarly fatal to chronic cases among the troops in this kingdom; but at least nine-tenths of these are from consumption, and the influence of spring in accelerating the course of that disease has been often the subject of remark by medical writers.

It may be supposed that these results are influenced by the furloughs which commanding officers are permitted to grant between the 1st November and the 10th March, to the extent of ten per troop or company, as these obviously tend to make the force under medical charge less at that period than during summer. Comparatively few, however, avail themselves of that privilege; for by the Returns of January last, which may be assumed as a fair average, only 2½ per cent. of the cavalry force, and about twice as many of the infantry were absent on furlough—too small a proportion, certainly, to make more than a fractional difference in these results.

The unhealthy influence of the autumnal months on soldiers is strongly corroborated by the result of a recent investigation into the relative mortality in each month in the French army, from which it appears that out of 17,092 deaths, in a period of seven years, the numbers in each month were as follows:—

	Deaths.	Millesimal Ratio of Deaths.
January . . .	1,402	82
February . . .	1,334	78
March . . .	1,432	84
April . . .	1,475	86
May . . .	1,450	85
June . . .	1,257	73
July . . .	1,279	75
August . . .	1,607	94
September . . .	1,577	92
October . . .	1,638	96
November . . .	1,381	81
December . . .	1,260	74
Total . . .	17,092	1,000

Table XVII. Showing the Influence of the Seasons in producing Mortality in the French Army.

Thus, whatever may be the causes which give such an unhealthy character to the autumnal season, these operate no less powerfully in the French army than our own, only that they seem to be a month later of coming into operation and continue for a month longer than in this country. This however may possibly arise from a difference in the periods embraced in the Returns; for instance, if they are made up at the commencement each month, the deaths there stated will be those of the previous month, and if this distinction has not been

* The deaths by acute diseases in May were raised considerably above the usual average, by the general prevalence of Cholera among the troops in that month in 1833.

United Kingdom.

attended to in the above calculation, the necessary correction would make the results as to the influence of the seasons correspond in both countries, *viz.*, July, August, and September would be the most sickly, and November nearly the least so.

Mons. Quetelet, a statistical author whose attention has been drawn to this peculiarity of the mortality among troops being so much higher during the autumnal months than at any other period, has recently been at great pains to ascertain whether the same law extends to persons in civil life at corresponding ages; and the following scale exhibits his results as to the relative influence of mortality in each month, on persons between 20 and 40, as ascertained from the Population Returns of Belgium, of which he has the superintendence.

AGES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
20 to 25	0.97	1.00	1.09	1.02	1.09	0.96	0.90	0.92	0.96	0.95	1.03	1.11
25 to 30	1.05	1.04	1.11	1.06	1.02	1.02	0.91	0.96	0.95	0.93	0.97	0.97
30 to 40	1.11	1.13	1.11	1.04	0.99	0.92	0.85	0.94	0.99	0.95	0.94	1.03

Thus, at those periods of life corresponding to the average ages of our soldiers, the autumnal months instead of being, as in the army, the most fatal, are, in civil life, the reverse; when, therefore, we find the unhealthy character of that season established in a still more marked degree among Troops in the colonies, we shall no longer be inclined to view it altogether as a peculiarity of climate, but as in some measure resulting from the operation of a general cause affecting the health of soldiers in all latitudes north of the line.

APPENDIX TO REPORT
ON THE
SICKNESS, MORTALITY, AND INVALIDING
AMONG THE TROOPS SERVING
IN
THE UNITED KINGDOM.

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Showing the Admissions into Hospital, and Deaths, among the DRAGOON GUARDS and DRAGOONS serving in the UNITED KINGDOM, from 1st January 1830 to 31st March 1837.

Classes of Diseases.	Years.	1830		1831		1832		1833		1834		1835		1836, and 3 months in 1837		Total for whole Period.							
		Strength		6015		6408		6379		6261		5992		*7241		Aggregate Strength 44,611							
		Adm.	Diad.	Adm.	Diad.	Adm.	Diad.	Adm.	Diad.	Adm.	Diad.	Adm.	Diad.	Adm.	Diad.	Admitted.	Diad.						
Fever.	Specific Diseases.																			By each Class of Diseases.	By each Class of Diseases.	By each Class of Diseases.	By each Class of Diseases.
																				3,127	42	60	
																				117	3	6	
																				34	21	2	
Eruptive Fevers.	Specific Diseases.																			117	3	6	
																				34	21	2	
																				117	3	6	
																				34	21	2	
Diseases of the Lungs.	Specific Diseases.																			6027	236	343	
																				6027	236	343	
																				6027	236	343	
																				6027	236	343	
Diseases of the Liver.	Specific Diseases.																			337	11	19	
																				337	11	19	
																				337	11	19	
																				337	11	19	
Diseases of the Stomach and Bowels.	Specific Diseases.																			4193	10	32	
																				4193	10	32	
																				4193	10	32	
																				4193	10	32	
Epidemic Cholera.	Specific Diseases.																			171	54	54	
																				171	54	54	
																				171	54	54	
																				171	54	54	
Diseases of the Brain.	Specific Diseases.																			293	3	32	
																				293	3	32	
																				293	3	32	
																				293	3	32	
Dropsies.	Specific Diseases.																			55	4	14	
																				55	4	14	
																				55	4	14	
																				55	4	14	
Rheumatic Affections.	Specific Diseases.																			2244	4	6	
																				2244	4	6	
																				2244	4	6	
																				2244	4	6	
Venereal Affections.	Specific Diseases.																			4072	1	2	
																				4072	1	2	
																				4072	1	2	
																				4072	1	2	
Abscesses and Ulcers.	Specific Diseases.																			2050	3	7	
																				2050	3	7	
																				2050	3	7	
																				2050	3	7	
Wounds and Injuries.	Specific Diseases.																			5619	4	12	
																				5619	4	12	
																				5619	4	12	
																				5619	4	12	
Punished.	Specific Diseases.																			339	339	..	
																				339	339	..	
																				339	339	..	
																				339	339	..	
Diseases of the Eyes.	Specific Diseases.																			867	867	..	
																				867	867	..	
																				867	867	..	
																				867	867	..	
Diseases of the Skin.	Specific Diseases.																			1311	..	..
																				1311	..	..
																				1311	..	..
																				1311	..	..
All other Diseases.	Specific Diseases.																			1942	..	38	
																				1942	..	38	
																				1942	..	38	
																				1942	..	38	
Total		5527	61	6027	87	5943	100	6301	113	5743	84	4982	81	6941	101	41464	41464	627	627				

* See foot-note on page 4 of Report for cause of increased strength in 1836.

Showing the Deaths and Fatal Diseases among the FOOT GUARDS, from 1st January 1837
31st March 1837.

Classes of Diseases.	Years . Strength Specific Diseases.	1830	1831	1832	1833	1834	1835	1836, and 3 Months in 1837	Total for whole period.	
		5010	4589	4959	4962	4852	4524	*5642	Aggregate Strength 34,538	
		Died.	Died.	Died.	Died.	Died.	Died.	Died.	Total by each Disease.	Total by each Class of Disease.
Fever.	Febris Intermittens	1	1	2	5
	.. Cont. Com.	3	..	4	4	2	1	8	22	
	.. Typhus	5	8	2	6	9	2	3	35	
Eruptive Fevers.	Variola	1	..	4	3	..	8	1
	Rubeola . . . . .	..	..	2	..	..	..	..	2
Diseases of the Lungs.	Pneumonia	8	7	11	15	7	13	19	80	485
	Pleuritis . . . . .	..	..	..	1	..	..	..	1
	Hæmoptysis	2	2	7	..	1	4	8	24	
	Phthisis Pulmonalis Catarrhus	52	58	55	43	53	41	71	373	
Diseases of the Liver.	Hepatitis	1	1	2
	Icterus . . . . .	..	..	..	..	..	..	1	1
Diseases of the Stomach and Bowels.	Peritonitis	2	..	2	..	1	..	5	24
	Gastritis . . . . .	..	1	..	1	..	..	..	2
	Enteritis	2	1	..	1	1	..	..	5
	Dysentery Diarrhœa . . . . .	..	..	..	..	1	..	1	2
Epidemic Cholera.	Cholera Epidemica	20	13	7	40	40
	Phrenitis	1	..	3	3	..	7	37
Apoplexia	2	4	1	1	2	1	2	13		
Diseases of the Brain.	Paralysis . . . . .	..	..	..	..	..	..	2	2
	Mania	1	2	5	..	..	1	..	9
	Delirium Tremens Epilepsia . . . . .	..	..	4	..	..	..	..	4
Dropsies.	Anasarca	1	4	1	6	18
	Ascites	1	..	2	2	3	1	1	10	
	Hydrothorax . . . . .	..	..	1	..	1	..	..	2
All other Diseases.	Rheumatismus	1	..	1	2	47
	Phlegmon et Abscessus	2	1	1	..	..	..	1	5
	Apostema Lumbare	1	1	..	..	1	1	1	5
	Fistula . . . . .	..	1	..	..	..	..	1	2
	Syphilis . . . . .	..	..	..	..	1	1	1	3
	Luxatio . . . . .	..	1	..	..	..	..	..	1
	Cystitis . . . . .	..	..	..	..	..	..	..	1
	Aneurisma	2	1	1	..	1	..	..	6
	Erysipelas . . . . .	..	5	2	..	1	1	..	10
	Cynanche . . . . .	..	1	..	..	..	2	1	4
	Scrophula . . . . .	..	1	..	1	..	1	..	2
	Tetanus . . . . .	..	1	..	..	..	..	..	2
	Morbus Cordis . . . . .	..	..	1	1	..	..	..	2
Cardiis . . . . .	..	..	..	1	..	..	1	2	
Suicide and Accidents.	Suicide	2	2	12
	Drowned . . . . .	..	..	1	1	..	..	..	2
	Accident	1	..	..	..	..	3	1	6
	Cause Unknown	5	1	1	2	4	9
	Total	88	108	128	98	103	85	135	745	745

ABSTRACT No. III. OF APPENDIX.

Showing the Deaths and Fatal Diseases among the HOUSEHOLD CAVALRY, from 1st January
1830 to 31st March 1837.

Classes of Diseases.	Years . Strength Specific Diseases.	1830	1831	1832	1833	1834	1835	1836, and 3 Months in 1837	Total for whole period.	
		1138	1155	1218	1202	1198	1217	*1521	Aggregate Strength 8,649	
		Died.	Died.	Died.	Died.	Died.	Died.	Died.	Total by each Disease.	Total by each Class of Disease.
Fever.	Febris Cont. Com.	1	1	..	..	..	..	..	3	14
	.. Typhus	1	2	5	1	..	..	2	11	
Eruptive Fevers.	Variola	1	..	..	..	..	..	..	1	2
	Scarlatina . . . . .	..	..	..	..	1	..	..	1	
Diseases of the Lungs.	Phthisis Pulmonalis	8	4	8	13	11	9	11	64	70
	Pneumonia	1	3	1	..	..	1	..	6	
Diseases of the Liver.	Hepatitis Acuta . . . . .	..	1	..	1	1	..	1	4	4
Diseases of the Stomach and Bowels.	Peritonitis . . . . .	..	..	..	1	..	..	..	1	2
	Dysentery Acuta . . . . .	..	1	..	..	..	..	..	1	
Epidemic Cholera.	Cholera Epidemica . . . . .	..	..	6	4	1	..	..	11	11
Diseases of the Brain.	Apoplexia . . . . .	..	..	..	..	2	..	..	2	8
	Paralysis	1	..	1	..	..	..	..	2	
	Abscessus Cerebri Delirium Tremens	1	..	1	..	..	..	1	3	
Dropsies.	Hydrothorax . . . . .	..	2	..	..	..	..	..	2	2
	Apostema Lumbare . . . . .	..	1	..	..	..	..	..	1	
All other Diseases.	Aneurisma . . . . .	..	..	..	1	..	..	..	1	7
	Hydrophobia . . . . .	..	..	..	..	..	..	..	1	
	Pericarditis . . . . .	..	..	..	1	..	..	1	1	
	Debilitas . . . . .	..	..	..	..	1	..	..	1	
	Marasmus . . . . .	..	2	..	..	..	..	..	2	
Suicide and Accidents.	Suicide . . . . .	..	2	..	1	..	1	..	4	5
	Drowned . . . . .	..	..	..	..	..	..	1	1	
	Total	14	19	23	23	18	11	17	125	125

* See foot-notes on pages 9 and 10 of Report for causes of increased strength in 1836.

Showing the Deaths and Fatal Diseases among the Depôts of Corps serving in the WEST INDIES, in each Year from 1st January 1830 to 31st March 1837.

Classes of Diseases.	Years .	1830	1831	1832	1833*	1834	1835	1836	Total for whole Period.		
		Strength	2551	2952	3511	4794	3346	3462	2921	Aggregate Strength, 23,537	
		Specific Diseases.	Died.	Died.	Died.	Died.	Died.	Died.	Died.	Total by each Disease.	Total by each Class of Diseases.
Fevers.	{ Febris Cont. Com. ,, Typhus	5	13	11	17	3	6	13	68	68	
		2	1	1	..	1	5	5	
Eruptive Fevers.	Varicella	2	1	1	..	1	5	5	
Diseases of the Lungs.	{ Pneumonia Hæmoptysis Phthisis Pulmonalis Catarrhus Chronicus Asthma	1	1	5	2	1	2	12	226	
		..	1	1	3	1	1	1	8		
		23	22	24	35	27	40	25	196		
		..	..	1	4	..	2	2	9
Diseases of the Liver.	{ Hepatitis	1	1	..	2	2	
		1	1	9	
Diseases of the Stomach and Bowels.	{ Gastritis Enteritis Hæmatemesis Dysentery Diarrhœa . . . . .	..	..	..	..	1	..	..	1
		..	..	..	..	..	..	3	3
		..	..	..	..	1	..	..	1
		..	..	2	..	..	1	..	1
Epidemic Cholera.	{ Cholera Epidemica	14	9	4	27	27	
		1	1	4	14	
Diseases of the Brain.	{ Phrenitis Apoplexia Paralysis Delirium Tremens	2	..	..	..	..	1	1	6
		..	..	2	1	..	1	2	2
		..	..	1	..	..	1	..	2
Dropsies.	{ Anasarca Hydrothorax Ascites	1	..	1	..	2	9	
		1	..	1	..	..	1	1	4
		..	1	1	1	..	..	..	3
All other Diseases.	{ Rheumatismus Phlegmon et Abscessus Apostema Lumbare Fistula Syphilis Cachexia Syph. Fractura Vulnus Scelopitorum Cynanche Tonsillaris Otitis Morbus Cordis Aneurisma Aortæ Hæmorrhagia Purpura Hæmorrhagica Scrophula Erysipelas Debilitas	1	1	1	3	32	
		..	..	..	..	..	1	..	1
		..	1	..	..	..	..	1	2
		..	..	..	1	1	1	1	3
		..	..	2	1	..	1	1	5
		..	1	..	..	..	..	..	1
		..	..	2	..	..	..	..	2
		..	..	..	1	..	..	..	1
		..	..	..	1	..	..	..	1
		..	..	..	..	2	..	..	2
		..	..	..	1	..	..	..	1
		..	..	..	..	..	..	1	1
		..	..	..	..	..	..	1	1
		..	..	..	1	..	..	..	4
..	..	1	..	..	..	..	1		
Suicide, Accidents, &c.	{ Drowned Suffocated Suicide Cause unknown	2	3	..	1	..	3	1	10	21	
		..	1	..	..	..	1	..	2
		1	..	2	2	1	3	..	9		
		1	..	2	8	5	2	5	23		
Total	35	47	73	98	50	70	63	436	436		

* This includes a period of 15 months.

ABSTRACT No. VI. OF APPENDIX.

Showing the Strength of the METROPOLITAN POLICE, the Number of Deaths, and the Average Daily Number of Men Sick, in the undermentioned Years.

YEARS.	Mean Strength	Number of Deaths.	Average Sick Daily.	Removed on Account of Ill Health.†	REMARKS.
1830	3307*	19	77	Not stated.	* The Police were not completely established until the latter end of May, 1830. † The numbers here stated are only those reported unfit by the surgeon; exclusive of these, many have voluntarily retired on account of bad health.
1831	3384	26	86		
1832	3392	35	85		
1833	3390	40	89		
1834	3400	35	92		
1835	3402	27	90		
1836	3414	29	91	26	
Total	23698	211	610		

Ratio per thousand of mean strength died 9
Ratio per thousand constantly sick 26

Showing the Ages of the DRAGOON GUARDS and DRAGOONS serving in the UNITED KINGDOM, and the Deaths at each Age, from 1st January 1830 to 31st March 1837.

CORPS.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.		
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	
1830	1st Dragoon Guards.	1	..	117	..	184	2	105	1	35	1	442	4
	2nd "	3	..	193	1	55	..	70	2	12	..	333	3
	3rd "	..	..	111	1	112	4	71	1	34	..	330	6
	4th "	3	..	112	2	126	2	67	1	25	..	333	5
	5th "	..	..	83	..	99	1	97	..	46	1	325	2
	6th "	..	..	115	2	129	2	51	1	30	..	327	5
	7th "	..	..	164	3	103	..	48	1	17	1	334	5
	1st Dragoons	..	..	115	2	134	1	58	2	22	..	331	5
	2nd "	..	..	111	1	137	1	67	..	22	1	337	3
	3rd Light Dragoons.	3	..	121	1	114	1	68	1	25	1	331	4
	6th Dragoons	3	..	96	..	115	..	81	..	27	..	322	..
	7th Hussars	2	..	89	3	102	1	106	1	30	..	329	5
	8th "	..	..	69	..	243	1	16	..	6	..	334	1
	9th Lancers	2	..	98	1	87	2	119	1	24	1	330	5
	10th Hussars	1	..	101	1	102	1	100	..	28	..	332	2
	12th Lancers	..	..	132	2	130	1	47	2	23	..	332	5
	14th Light Dragoons	2	..	109	..	95	..	79	2	50	..	335	2
15th Hussars	1	..	104	1	93	1	105	..	28	..	331	2	
17th Lancers	2	..	123	3	191	1	15	2	3	..	334	6	
Total	31	..	2163	24	2351	22	1370	18	487	6	6402	70	
1831	1st Dragoon Guards.	1	..	119	1	177	1	99	3	31	2	427	7
	2nd "	5	..	193	3	55	1	48	1	8	..	309	5
	3rd "	2	..	123	1	103	2	65	..	25	..	318	3
	4th "	6	..	112	2	122	1	61	1	23	..	324	4
	5th "	3	..	86	1	89	4	94	3	36	..	308	8
	6th "	4	..	105	3	122	2	49	..	27	1	307	6
	7th "	4	..	148	..	96	..	43	1	10	..	301	1
	1st Dragoons	5	..	116	..	125	..	47	2	6	1	299	3
	2nd "	..	..	101	2	130	2	63	..	13	..	307	4
	3rd Light Dragoons.	3	..	120	1	107	6	64	1	18	..	312	8
	6th Dragoons	4	..	103	1	111	2	79	..	18	..	315	3
	7th Hussars	2	..	84	2	96	..	101	1	30	..	313	3
	8th "	4	..	70	..	229	4	16	..	5	..	324	4
	9th Lancers	3	..	102	1	79	3	113	4	21	..	318	8
	10th Hussars	3	..	103	2	95	..	85	3	22	4	308	9
	12th Lancers	..	..	129	6	126	1	33	..	14	1	302	8
	14th Light Dragoons	2	..	105	4	91	1	62	..	39	..	299	5
15th Hussars	9	..	100	1	87	..	96	2	27	1	319	4	
17th Lancers	2	..	113	..	178	1	12	..	3	..	308	1	
Total	62	..	2132	31	2218	31	1230	22	376	10	6018	94	
1832	1st Dragoon Guards.	..	..	149	2	229	1	57	2	10	..	445	5
	2nd "	1	..	134	2	112	1	62	2	19	1	328	6
	3rd "	4	..	113	3	109	3	77	2	28	1	331	9
	4th "	6	..	99	1	121	3	80	..	23	..	329	4
	5th "	2	..	127	1	112	2	71	..	23	..	335	3
	6th "	6	..	115	2	131	2	48	1	29	3	329	8
	7th "	2	..	145	1	128	2	49	..	11	..	335	3
	1st Dragoons	14	..	140	1	131	..	38	1	6	1	329	3
	2nd "	3	..	126	3	102	2	83	1	13	..	327	6
	3rd Light Dragoons.	5	..	144	3	95	4	68	4	19	..	331	11
	6th Dragoons	8	..	131	2	104	1	77	3	12	..	332	6
	7th Hussars	5	..	125	1	103	..	77	2	24	..	334	3
	8th "	3	..	107	1	184	..	31	..	10	..	335	1
	9th Lancers	6	..	137	2	97	3	77	2	16	..	333	7
	10th Hussars	8	..	119	3	109	2	80	2	17	..	333	7
	12th Lancers	2	..	141	1	119	1	45	..	16	2	323	4
	14th Light Dragoons	3	..	146	3	103	1	46	1	35	1	333	6
15th Hussars	10	..	127	3	75	..	102	1	21	3	335	7	
17th Lancers	1	..	112	3	194	3	20	1	4	..	331	7	
Total	89	..	2437	38	2358	31	1188	25	336	12	6408	106	
1 Jan. 1833 to 31 March 1834	1st Dragoon Guards.	4	..	142	1	161	2	100	2	32	2	439	7
	2nd "	..	..	119	3	126	1	67	..	14	2	326	6
	3rd "	4	..	151	2	84	6	75	1	20	..	334	9
	4th "	5	..	118	4	100	..	91	2	17	..	331	6
	5th "	5	..	122	5	110	..	71	2	23	..	331	7
	6th "	4	..	114	4	136	3	46	..	25	..	325	7
	7th "	3	..	106	2	155	6	50	2	14	2	328	12
	1st Dragoons	5	..	140	3	112	2	61	2	12	2	330	9
	2nd "	3	..	132	3	99	1	78	4	16	1	328	9
	3rd Light Dragoons.	12	..	134	2	99	4	62	1	20	..	327	7
	6th Dragoons	5	..	111	4	117	2	77	2	17	1	327	9
	7th Hussars	4	..	119	2	96	2	79	2	29	1	327	7
	8th "	4	..	100	1	190	1	29	1	5	1	328	4
	9th Lancers	6	..	135	2	104	1	59	1	32	..	336	4
	10th Hussars	5	..	130	4	110	2	63	2	24	1	332	9
	12th Lancers	2	..	133	..	96	4	91	2	12	..	331	6
	14th Light Dragoons	5	..	143	6	100	1	52	4	39	2	330	13
15th Hussars	2	..	140	4	80	1	84	2	28	..	334	7	
17th Lancers	3	..	104	1	192	6	28	1	5	..	332	8	
Total	81	..	2393	53	2267	45	1263	33	375	15	6379	146	

Showing the Ages of the Dragoon Guards and Dragoons serving in the United Kingdom, and the Deaths at each Age, from 1st January 1830 to 31st March 1837—continued.

CORPS.		Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
		Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1 April 1834 to 31 March 1835	1st Dragoon Guards	1	..	164	2	146	2	86	2	28	1	425	7
	2nd "	..	..	143	1	116	..	48	1	19	..	326	2
	3rd "	3	..	141	5	89	5	79	3	16	1	328	14
	4th "	2	..	99	2	125	2	84	..	20	..	330	4
	5th "	5	..	149	2	103	1	41	..	21	..	319	3
	6th "	3	..	110	1	138	1	52	1	21	..	324	3
	7th "	6	..	80	..	176	2	52	1	14	..	328	3
	1st Dragoons	4	..	121	1	126	1	56	..	13	..	320	2
	2nd "	5	..	119	2	108	3	71	..	21	1	324	6
	3rd Light Dragoons	11	..	123	3	111	1	51	2	27	..	323	6
	6th Dragoons	8	..	96	..	115	1	67	4	30	..	316	5
	7th Hussars	3	..	132	..	80	3	72	..	32	3	319	6
	8th "	6	..	90	..	183	2	39	..	10	..	328	2
	9th Lancers	1	..	126	2	119	1	57	..	25	2	328	5
	10th Hussars	..	..	98	1	128	..	72	..	23	2	321	3
	12th Lancers	4	..	147	..	86	2	75	..	18	1	330	3
	14th Light Dragoons	4	..	127	1	119	1	48	..	29	1	327	3
15th Hussars	1	..	154	1	87	4	53	1	27	..	322	6	
17th Lancers	5	..	109	1	172	1	33	..	4	..	323	2	
Total		72	..	2328	25	2327	33	1136	15	398	12	6261	85
1 April 1835 to 31 March 1836	1st Dragoon Guards	1	..	89	2	145	1	125	3	45	..	405	6
	2nd "	..	..	99	1	135	3	45	..	25	1	304	5
	3rd "	3	..	102	2	101	1	71	..	27	1	304	4
	4th "	3	..	80	1	114	1	82	..	27	1	306	3
	5th "	4	..	105	2	93	..	75	1	21	1	298	4
	6th "	..	..	92	1	136	3	54	1	26	2	308	7
	7th "	6	..	68	2	153	4	66	..	17	..	310	6
	1st Dragoons	2	..	127	2	119	1	49	..	10	1	307	4
	2nd "	5	..	131	..	77	2	68	1	16	1	297	4
	3rd Light Dragoons	6	..	102	1	116	2	52	3	30	1	306	7
	6th Dragoons	8	..	102	1	119	1	60	1	16	..	305	3
	7th Hussars	1	..	110	1	84	..	56	1	50	2	301	4
	8th "	2	..	80	..	159	2	51	1	14	..	306	3
	9th Lancers	..	..	116	..	110	1	55	..	30	2	311	3
	10th Hussars	1	..	95	1	109	1	78	2	28	1	311	5
	12th Lancers	3	..	101	2	118	3	55	1	24	1	301	7
	14th Light Dragoons	2	..	103	1	124	2	51	..	31	2	311	5
15th Hussars	5	..	145	2	86	1	50	1	26	2	312	6	
17th Lancers	4	..	66	1	179	2	41	1	9	..	299	4	
Total		56	..	1913	23	2277	31	1184	17	472	19	5902	90
1 April 1836 to 31 March 1837	1st Dragoon Guards	2	..	95	3	128	2	114	1	55	..	394	6
	2nd "	2	..	114	2	129	1	38	..	18	..	301	3
	3rd "	3	..	118	2	87	1	70	..	24	..	302	3
	4th "	3	..	74	1	118	4	77	..	33	..	305	5
	5th "	..	..	112	1	111	4	48	..	29	..	300	5
	6th "	3	1	79	2	131	1	58	1	22	1	293	6
	7th "	5	..	71	3	138	5	68	2	19	..	301	10
	1st Dragoons	2	..	96	2	127	2	63	1	11	..	299	5
	2nd "	9	1	129	1	90	3	50	3	15	..	293	8
	3rd Light Dragoons	5	..	153	1	69	1	51	..	25	..	303	2
	6th Dragoons	7	..	92	1	101	1	75	1	22	1	297	4
	7th Hussars	2	..	107	..	81	1	71	..	43	..	304	1
	8th "	1	..	79	1	154	3	55	3	15	..	304	7
	9th Lancers	..	..	106	2	94	3	61	1	30	2	291	8
	10th Hussars	2	..	106	1	96	1	71	3	24	..	299	5
	12th Lancers	7	..	80	1	129	..	56	..	25	..	297	1
	14th Light Dragoons	5	..	91	1	125	4	58	5	23	1	302	11
15th Hussars	2	..	173	..	57	..	40	1	34	2	306	3	
17th Lancers	4	..	79	1	156	..	54	1	9	..	302	2	
Total		64	2	1954	26	2121	37	1178	23	476	7	5793	95

General Results from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st Jan. to 31st Dec. 1830	31	..	2163	24	2351	22	1370	18	487	6	6402	70
" " " 1831	62	..	2132	31	2218	31	1230	22	376	10	6018	94
" " " 1832	89	..	2437	38	2358	31	1188	25	336	12	6408	106
1st Jan. 1833 to 31st March 1834	81	..	2393	53	2267	45	1263	33	375	15	6379	146
1st April 1834 " " 1835	72	..	2328	25	2327	33	1136	15	398	12	6261	85
" " 1835 " " 1836	56	..	1913	23	2277	31	1184	17	472	19	5902	90
" " 1836 " " 1837	64	2	1954	26	2121	37	1178	23	476	7	5793	95
Total for Seven Years and a Quarter	455	2	15320	220	15919	230	8549	153	2920	81	43163	686
Deduct a 29th part of the deaths to ascertain the mortality of Seven Years exactly	..	..	..	7	..	8	..	5	..	3	..	23
Total for Seven Years	455	2	15320	213	15919	222	8549	148	2920	78	43163	663

Showing the Ages of the Foot Guards and the Deaths at each Age, from 1st January 1830 to 31st March 1837.

CORPS.		Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
		Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1830	1st Batt. Grenadier Guards . . .	9	..	724	15	882	16	466	7	167	1	2248	39
	2nd ,, ,, . . .												
	3rd ,, ,, . . .												
	1st Batt. Coldstream Guards . . .	14	..	414	5	568	11	265	4	112	2	1373	22
	2nd ,, ,, . . .												
	1st Batt. Scots Fusilier Guards . . .	12	..	443	11	569	11	298	4	67	1	1389	27
	2nd ,, ,, . . .												
	Total	35	..	1581	31	2019	38	1029	15	346	4	5010	88
1831	1st Batt. Grenadier Guards . . .	8	..	257	6	354	18	134	2	34	2	787	28
	2nd ,, ,, . . .	6	..	227	3	258	1	105	1	24	1	620	6
	3rd ,, ,, . . .	6	..	237	9	208	8	158	2	49	1	658	20
	1st Batt. Coldstream Guards . . .	9	..	213	1	251	3	99	1	28	2	603	7
	2nd ,, ,, . . .	10	..	198	3	264	4	118	2	58	3	648	12
	1st Batt. Scots Fusilier Guards . . .	9	..	224	4	237	7	117	3	20	1	607	15
	2nd ,, ,, . . .	7	..	219	12	275	6	135	1	30	1	666	20
	Total	55	..	1575	38	1850	47	866	12	243	11	4589	108
1832	1st Batt. Grenadier Guards . . .	19	..	291	7	339	7	194	6	41	2	884	22
	2nd ,, ,, . . .	15	..	318	7	228	8	119	3	34	..	714	18
	3rd ,, ,, . . .	8	..	244	6	194	7	145	5	42	1	633	19
	1st Batt. Coldstream Guards . . .	12	..	274	9	209	6	153	3	48	1	696	19
	2nd ,, ,, . . .	12	..	212	5	316	11	68	3	42	1	650	20
	1st Batt. Scots Fusilier Guards . . .	7	..	285	2	229	5	116	1	36	3	673	11
	2nd ,, ,, . . .	11	..	264	7	250	4	157	7	27	1	709	19
	Total	84	..	1888	43	1765	48	952	28	270	9	4959	128
1 Jan. 1833 to 31 March 1834	1st Batt. Grenadier Guards . . .	13	1	310	7	326	13	152	3	42	..	843	24
	2nd ,, ,, . . .	12	1	286	4	240	6	113	4	46	..	697	15
	3rd ,, ,, . . .	8	..	280	13	220	9	118	1	61	1	687	24
	1st Batt. Coldstream Guards . . .	14	..	325	3	212	2	124	5	68	2	743	12
	2nd ,, ,, . . .	10	..	225	3	244	4	110	3	43	..	632	10
	1st Batt. Scots Fusilier Guards . . .	14	..	296	8	229	5	127	2	39	..	705	15
	2nd ,, ,, . . .	12	..	244	9	241	8	120	4	38	2	655	23
	Total	83	2	1966	47	1712	47	864	22	337	5	4962	123
1 April 1834 to 31 March 1835	1st Batt. Grenadier Guards . . .	10	..	298	5	318	7	177	5	39	..	842	17
	2nd ,, ,, . . .	13	..	243	2	212	3	212	3	30	..	710	8
	3rd ,, ,, . . .	10	..	249	8	212	6	133	1	56	2	660	17
	1st Batt. Coldstream Guards . . .	6	..	214	5	205	5	137	2	58	3	620	15
	2nd ,, ,, . . .	14	..	219	4	277	3	117	3	57	1	684	11
	1st Batt. Scots Fusilier Guards . . .	18	..	241	5	237	7	142	1	20	1	658	14
	2nd ,, ,, . . .	11	..	251	6	248	6	131	5	37	2	678	19
	Total	82	..	1715	35	1709	37	1049	20	297	9	4852	101
1 April 1835 to 31 March 1836	1st Batt. Grenadier Guards . . .	7	..	254	8	341	4	195	2	52	2	849	16
	2nd ,, ,, . . .	13	..	150	5	259	7	124	1	29	2	575	15
	3rd ,, ,, . . .	7	..	209	8	252	2	101	1	37	1	606	12
	1st Batt. Coldstream Guards . . .	8	..	217	2	176	8	183	..	74	2	658	12
	2nd ,, ,, . . .	12	..	189	7	242	7	100	1	52	1	595	16
	1st Batt. Scots Fusilier Guards . . .	13	..	224	4	204	3	137	3	32	..	610	10
	2nd ,, ,, . . .	17	..	222	6	223	4	136	1	33	1	631	12
	Total	77	..	1465	40	1697	35	976	9	309	9	4524	93
1 April 1836 to 31 March 1837	1st Batt. Grenadier Guards . . .	8	1	230	5	263	9	162	1	46	2	709	18
	2nd ,, ,, . . .	8	..	216	1	269	5	137	2	35	2	665	10
	3rd ,, ,, . . .	10	..	265	4	258	2	114	3	27	1	674	10
	1st Batt. Coldstream Guards . . .	12	..	224	9	234	5	137	1	33	1	640	16
	2nd ,, ,, . . .	13	..	203	7	245	5	104	1	40	3	605	16
	1st Batt. Scots Fusilier Guards . . .	9	..	233	10	226	8	105	4	24	2	597	24
	2nd ,, ,, . . .	14	..	217	2	223	4	142	4	28	..	624	10
	Total	74	1	1588	38	1718	38	901	16	233	11	4514	104

General Results from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st January to 31st December 1830	35	..	1581	31	2019	38	1029	15	346	4	5010	88
,, ,, ,, 1831	55	..	1575	38	1850	47	866	12	243	11	4589	108
,, ,, ,, 1832	84	..	1888	43	1765	48	952	28	270	9	4959	128
1st January 1833 to 31st March 1834	83	2	1966	47	1712	47	864	22	337	5	4962	123
1st April 1834 ,, 1835	82	..	1715	35	1709	37	1049	20	297	9	4852	101
,, 1835 ,, 1836	77	..	1465	40	1697	35	976	9	309	9	4524	93
,, 1836 ,, 1837	74	1	1588	38	1718	38	901	16	233	11	4514	104
Total for Seven Years and a Quarter	490	3	11778	272	12470	290	6637	122	2035	58	33410	745
Deduct a 29th part of the deaths to ascertain the mortality of Seven Years exactly . . . . .	..	..	..	9	..	10	..	4	..	2	..	25
Total for Seven Years	490	3	11778	263	12470	280	6637	118	2035	56	33410	720

Showing the Ages of the HOUSEHOLD CAVALRY, and Deaths at each Age, from 1st January 1830 to 31st March 1837.

CORPS.		Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
		Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.
1830	1st Life Guards . .	4	..	120	1	142	..	111	2	24	1	401	4
	2nd ,, . .	3	..	134	2	162	1	89	1	13	..	401	4
	Royal Horse Guards	1	..	107	4	135	1	68	..	25	1	336	6
	Total . .	8	..	361	7	439	2	268	3	62	2	1,138	14
1831	1st Life Guards . .	6	..	132	8	137	2	106	..	21	..	402	10
	2nd ,, . .	5	..	139	..	157	..	87	..	9	1	397	1
	Royal Horse Guards	10	..	125	3	132	3	67	2	22	..	356	8
	Total . .	21	..	396	11	426	5	260	2	52	1	1,155	19
1832	1st Life Guards . .	7	..	139	3	135	1	107	3	19	..	407	7
	2nd ,, . .	5	..	161	2	152	1	83	4	8	..	409	7
	Royal Horse Guards	12	..	167	5	130	2	66	2	27	..	402	9
	Total . .	24	..	467	10	417	4	256	9	54	..	1,218	23
1 Jan. 1833 to 31 March 1834.	1st Life Guards . .	5	..	153	6	117	5	105	4	25	1	405	16
	2nd ,, . .	4	..	152	2	147	2	87	..	11	..	401	4
	Royal Horse Guards	11	..	164	1	123	4	70	2	28	4	396	11
	Total . .	20	..	469	9	387	11	262	6	64	5	1,202	31
1 April 1834 to 31 March 1835.	1st Life Guards . .	3	..	128	..	132	3	99	2	40	1	402	6
	2nd ,, . .	5	..	135	..	145	..	84	1	31	..	400	1
	Royal Horse Guards	5	..	177	2	117	2	70	1	27	1	396	6
	Total . .	13	..	440	2	394	5	253	4	98	2	1,198	13
1 April 1835 to 31 March 1836.	1st Life Guards . .	7	..	121	1	130	1	103	1	45	..	406	3
	2nd ,, . .	5	..	132	1	143	..	100	..	30	..	410	1
	Royal Horse Guards	3	..	154	1	145	2	67	2	32	..	401	5
	Total . .	15	..	407	3	418	3	270	3	107	..	1,217	9
1 April 1836 to 31 March 1837.	1st Life Guards . .	8	..	126	1	118	4	94	2	61	1	407	8
	2nd ,, . .	4	..	120	2	143	..	100	1	40	..	407	3
	Royal Horse Guards	6	1	142	..	150	1	73	1	32	2	403	5
	Total . .	18	1	388	3	411	5	267	4	133	3	1,217	16

General Results from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.
1st Jan. to 31st Dec. 1830 . .	8	..	361	7	439	2	268	3	62	2	1138	14
,, ,, 1831 . .	21	..	396	11	426	5	260	2	52	1	1155	19
,, ,, 1832 . .	24	..	467	10	417	4	256	9	54	..	1218	23
1st Jan. 1833 to 31st March 1834	20	..	469	9	387	11	262	6	64	5	1202	31
1st April 1834 ,, 1835	13	..	440	2	394	5	253	4	98	2	1198	13
,, 1835 ,, 1836	15	..	407	3	418	3	270	3	107	..	1217	9
,, 1836 ,, 1837	18	1	388	3	411	5	267	4	133	3	1217	16
Total for Seven Years and a Quarter	119	1	2928	45	2892	35	1836	31	570	13	8345	125
Deduct a 29th part of the deaths to ascertain the mortality of Seven Years exactly . . . . .	..	..	..	2	..	1	..	1	..	..	..	4
Total for Seven Years	119	1	2928	43	2892	34	1836	30	570	13	8345	121

Showing the Average Number of Daily Sick in Hospital in each of the following Regiments of DRAGOON GUARDS and DRAGOONS, from 1830 to 1836 inclusive, extracted from the Medical Returns.

	1830	1831	1832	1833	1834	1835	1836	REMARKS.
1st Dragoon Guards .	7 $\frac{7}{10}$	10	8	8	5	4	7 $\frac{1}{2}$	In 1834 and 1835 the daily sick at Head Quarters appear only to have been stated.
2nd ,, .	8	10	13	4 $\frac{1}{2}$	5	10 $\frac{1}{2}$	10		In 1833 and 1834 the daily sick at Head Quarters appear only to have been stated.
3rd ,, .	14	14 $\frac{1}{2}$	16	11 $\frac{1}{2}$	16	11 $\frac{1}{2}$	13	
4th ,, .	14	16	17	17	18	15	14	
5th ,, .	7	8	9	12	14	9	15	
6th ,, .	12 $\frac{1}{2}$	16	20	13	13	13 $\frac{1}{2}$	14	
7th ,, .	12	17 $\frac{1}{2}$	12	15 $\frac{1}{2}$	14	15 $\frac{1}{2}$	14	
1st Dragoons	8	9	11	9 $\frac{1}{2}$	8	10	11 $\frac{1}{2}$	
2nd ,,	16	18	13	13	13	12	11	
3rd ,,	14	20	23	20	13	17	14	
6th ,,	13	14	9	11 $\frac{1}{2}$	6	5	9	In 1833 and 1834 the daily sick at Head Quarters appear only to have been stated.
7th ,,	12	10	14	15	13	7 $\frac{1}{2}$	12	
8th ,,	14	14	11	7	11	8	13	
9th ,,	12 $\frac{1}{2}$	14	16	13	12	9 $\frac{1}{2}$	10 $\frac{1}{2}$	
10th ,,	13 $\frac{3}{10}$	14	15	13	12	14	10	
12th ,,	17	18	9	15	10 $\frac{1}{2}$	9 $\frac{1}{2}$	11 $\frac{1}{2}$	
14th ,,	9	9	9	13 $\frac{1}{2}$	9	10	10	
15th ,,	10	11	14	12	12	11	9	
17th ,,	15	11	10	12 $\frac{1}{2}$	13 $\frac{1}{2}$	12	9 $\frac{1}{2}$	
Total	228 $\frac{1}{2}$	254	249	237	218	204	218 $\frac{1}{2}$	

ABSTRACT No. XI. OF APPENDIX.

Showing the Sickness and Mortality in the FRENCH and PRUSSIAN ARMIES.

FRENCH ARMY.				PRUSSIAN ARMY.			REMARKS.
Year.	Strength.	Died.	Annual Ratio of Mortality.	Years. †	Admissions into Hospital.	Deaths.	
1820	122,084	2582	21	1821	90,815	913	* The year 1823 has been omitted in the French Abstract, because a considerable part of the troops were then employed in Spain. † From 1821 to 1830 the strength of the Prussian army averaged from 100,000 to 110,000; assuming 105,000 to have been the mean, then the ratio of admissions would be 1110, and the deaths 11 $\frac{1}{2}$ per thousand of the strength annually.
1821	115,287	1799	15	1822	93,084	1123	
1822	140,921	3354	23	1823	99,487	1121	
				1824	99,897	1014	
1824	115,420	2250	19	1825	98,677	1150	
1825	117,425	1823	15	1826	108,706	1311	
1826	112,604	2302	20	1827	128,955	1253	
				1828	139,097	1364	
				1829	142,613	1429	
				1830	164,677	1632	
Aggregate.	723,741	14110	..	Aggregate.	1,166,008	12310	
Mean . .	120,623	2352	19 $\frac{1}{2}$	Mean . .	116,601	1231	

ABSTRACT No. XII. OF APPENDIX.

Showing the Sickness and Mortality among the TROOPS serving in IRELAND for a period of Thirty-two Years from 1797 to 1828 inclusive.

Years.	Strength.	Ratio constantly sick per 1000.	Died.	Ratio of Deaths per 1000.	Years.	Strength.	Ratio constantly sick per 1000.	Died.	Ratio of Deaths per 1000.
1797	40,907	43	674	16	1813	39,685	44	439	11
1798	53,036	48	825*	15	1814	44,305	41	679	15
1799	60,871	46	1165	19	1815	35,866	46	520	14
1800	54,396	50	1121	20	1816	32,382	51	528	16
1801	62,009	60	1107	18	1817	24,255	45	302	12
1802	37,008	57	455	12	1818	21,353	51	294	13
1803	29,753	63	492	16	1819	19,110	46	201	10
1804	53,578	64	1102	20	1820	22,213	48	262	11
1805	51,198	51	678	13	1821	19,382	50	242	12
1806	46,652	52	760	16	1822	20,598	47	260	12
1807	52,890	53	813	15	1823	21,582	49	271	12
1808	53,935	53	1025	19	1824	21,257	47	299	14
1809	40,640	48	583	14	1825	22,050	51	346	15
1810	43,248	49	590	13	1826	21,379	58	431	20
1811	47,886	52	642	13	1827	20,861	60	365	17
1812	44,778	48	610	13	1828	22,426	60	371	16
					Mean of 32 Years	36,921	51	576	15.5

* The men killed in the field, or who died of their wounds, are not included in this number.

Showing the Total Admissions and Deaths by Acute, Chronic, and Surgical Diseases among the Dragoon Guards and Dragoons serving in the United Kingdom in each Month, from 1830 to 1836 inclusive, so far as can be ascertained from the Medical Returns.

I. ADMISSIONS.

MONTHS.	1830			1831			1832			1833			1834			1835			1836			Total in Seven Years.				
	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Total.	
January	237	41	250	189	41	234	184	47	261	492	178	32	233	413	156	45	184	385	163	37	212	412	1287	271	1619	3177
February	217	66	280	170	46	214	138	37	225	361	164	47	198	429	159	56	250	465	146	32	181	359	1161	310	1527	2998
March	175	50	227	172	55	227	133	35	201	370	168	38	239	415	143	40	234	417	165	44	184	393	1085	303	1634	3022
April	110	98	205	162	54	263	153	47	261	583	194	30	221	445	129	41	206	376	128	41	204	373	1170	280	1610	3060
May	148	52	201	162	60	292	149	61	290	583	194	30	221	445	129	41	206	376	128	41	204	373	1170	280	1610	3060
June	184	51	232	181	41	264	172	48	257	743	157	41	251	449	147	48	248	443	147	30	243	450	1336	328	1866	3530
July	151	47	232	172	48	257	172	48	257	558	210	43	271	534	132	48	256	416	170	48	234	452	1274	322	1824	3440
August	176	95	250	181	65	313	169	60	314	572	210	36	286	532	140	51	250	441	142	46	224	412	1333	350	1893	3576
September	156	34	221	163	32	272	165	39	266	537	285	41	272	598	165	39	237	411	170	51	257	478	1628	335	1877	3840
October	138	32	238	173	41	267	156	42	233	549	223	38	231	492	165	46	225	436	182	49	218	449	1411	293	1740	3444
November	135	37	250	171	41	267	174	28	264	466	151	37	212	400	137	46	171	354	170	47	221	433	1231	323	1729	3283
December	148	43	294	182	49	259	203	45	261	509	175	40	218	473	151	50	191	392	204	40	205	449	1215	298	1588	3935
Total	1995	495	3003	5494	2177	3251	2568	329	3059	5956	2650	525	3070	6215	2281	468	2917	5669	1764	561	2657	4982	15202	3679	20580	39461

II. DEATHS.

MONTHS.	1830			1831			1832			1833			1834			1835			1836			Total in Seven Years.				
	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Acute.	Chronic.	Surgical.	Total.	
January	5	3	8	3	3	6	1	4	5	6	1	10	5	1	6	1	1	2	1	3	2	4	1	17	18	37
February	1	3	4	2	3	5	3	4	7	7	3	10	2	3	5	4	3	9	3	5	3	1	1	5	13	14
March	3	1	4	4	4	8	4	4	8	6	3	9	5	3	8	3	6	11	3	4	2	4	2	18	18	36
April	1	3	4	3	6	9	7	5	12	6	3	9	4	6	6	5	3	11	3	6	2	4	2	19	26	45
May	3	4	7	3	6	9	2	5	7	13	3	6	9	6	5	3	1	9	9	3	1	3	4	31	26	57
June	3	1	4	3	4	7	2	2	4	7	3	1	4	5	3	1	3	6	6	6	1	1	1	21	15	36
July	3	1	4	3	4	7	2	2	4	7	3	1	4	5	3	1	3	6	6	6	1	1	1	21	15	36
August	3	1	4	3	4	7	2	2	4	7	3	1	4	5	3	1	3	6	6	6	1	1	1	21	15	36
September	6	1	7	4	1	5	10	3	13	8	4	12	7	11	3	4	1	14	3	5	4	1	5	29	13	42
October	2	1	3	2	2	4	6	4	10	6	4	10	1	11	1	1	1	6	6	2	2	2	4	26	8	34
November	1	1	2	1	3	4	1	4	6	9	2	11	4	14	3	3	3	11	4	3	3	3	6	22	13	35
December	4	3	7	4	4	8	3	7	10	7	3	10	8	11	3	6	3	18	9	2	3	2	2	20	16	36
Total	32	23	63	34	23	68	51	26	85	85	43	38	4	85	31	21	8	60	35	34	3	72	38	264	193	42

STATISTICAL REPORT
ON THE
SICKNESS, MORTALITY, AND INVALIDING
AMONG THE TROOPS SERVING
IN
THE MEDITERRANEAN.

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SECTION I.

1. *On the Sickness and Mortality among Troops serving in the Mediterranean.*

THE Mediterranean Stations form three distinct Military Commands—Gibraltar, Malta, and the Ionian Islands; it is proposed in this Report to investigate the sickness and mortality at each of these in succession.

I.—GIBRALTAR.

I.
Gibraltar.

THE Rock of Gibraltar, as it is generally termed, is a lofty promontory, forming, with that of Ceuta on the Barbary coast, the entrance to the Straits from the Mediterranean. It is generally esteemed the most southerly point in Europe, and lies in

General Description.

Lat. $36^{\circ} 9' N.$; Long. $5^{\circ} 17' W.$

The Rock is of an oblong form, about 4700 yards in length, 1600 in breadth, and rising abruptly to the height of 1439 feet. On its western side it is bounded by an extensive bay, from 30 to 40 miles in circumference; on the east by the wide expanse of the Mediterranean; on the south by the waters of the Straits; and the only connecting link with the mainland of Spain is a sandy isthmus on the north, about a mile in length, half a mile in breadth, and at its highest part not more than 10 feet above the level of the sea. On that side the rock is perfectly perpendicular, except for a small space on the north-west, where a narrow strip of flat ground covered with fortifications joins it to the isthmus. The eastern face is also an abrupt precipice to within a short distance from its base, where a steep bank of sand has been thrown up by the Mediterranean. On the southern side the rock sinks rapidly into a succession of flats or terraces surrounded by precipices which ultimately terminate in the sea at Europa Point. The western side is also of an abrupt precipitous character, but towards the base breaks into a series of rugged slopes which, before reaching the bay, terminate in a narrow strip of level ground whereon the principal streets of the town and the seaward fortifications are erected.

To enter into a minute description of the local peculiarities of this station, or to narrate the various precautions which have been adopted to preserve the health of the troops and inhabitants, would lead us far beyond the limits within which this Report must be circumscribed, and, as these topics have already been made the subject of publication by the late Dr. Hennen, in his Medical Topography of the Mediterranean, we shall only advert generally to such points connected with the health concerns of the garrison as are essential to be kept in view in the course of the subsequent investigation.

The Rock of Gibraltar is principally composed of grey limestone. The upper part is almost entirely devoid of soil, except in the gullies and a few spots where it has accumulated by the action of the rains. The level piece of ground on which the principal streets of the town are built is composed of red sand, and towards the south side there is some light fertile mould, but it is exceedingly scanty; every spot available for the purpose is laid out in garden grounds, and wherever an adequate supply of soil and moisture can be obtained the produce is most abundant. About 200 acres of that portion of the isthmus, termed the Neutral Ground, have also been brought under cultivation, and furnish an ample supply of vegetables for the garrison.

Geological Structure.

The whole surface of the rock, particularly on the western side above the town, is much intersected by deep gullies, in which, during winter, water occasionally lodges; they are, however, always dry in summer. To the southward are several extensive tanks, containing nearly two million gallons of water for the use of the troops and shipping; but in no part is there any ground which can be designated as marshy, and in general it is necessary to dig to the depth of 30 or 40 feet before water can be procured.

It is not our intention here to enter on the oft-agitated question, whether, notwithstanding the rocky, barren, and arid character of its surface, Gibraltar possesses in its soil, underground moisture, or vegetation, the germs of those noxious agencies to which the occasional visitations of pestilence in that garrison have been attributed: that question we shall leave to others who have had better opportunities of local information, or who may be more inclined to enter on such a discussion; the object of this Report being principally to point out the extent of the sickness and mortality, without venturing to decide upon the presence or influence of causes which hitherto seem to have baffled the researches of the ablest authorities on the spot.

I.
Gibraltar.
Climate.

With regard to climate, Gibraltar, though dry and sultry in summer, and subject to fogs and mists throughout the year, may generally be characterised as healthy. The greatest height of the thermometer in the shade during a period of five years was 91°, and the minimum 50°. Its range in each month, and the average fall of rain during the same period is shown in the following Table: *—

Temperature and
Rain.

	THERMOMETER.			PLUVIOMETER.						No. of Rainy Days in 10 Years.
	Maximum.	Medium.	Minimum.	1823	1824	1825	1826	1827	Mean.	
January .	63	58½	55	2·40	4·50	·75	8·94	·08	3·33	91
February	64	59½	55	5·55	5·23	5·29	4·29	9·83	6·04	71
March .	67	61½	57½	·70	1·68	1·33	1·13	·72	1·11	62
April .	71½	65½	61	3·55	·24	6·27	2·31	1·89	2·85	101
May . .	75	69	64	1·57	·08	·62	2·54	1·76	1·31	61
June . .	78½	74½	70	3·23	..	..	·47	..	·74	18
July . .	84½	79	74	..	..	·23	..	..	·05	4
August .	84	79	75½	·80	·99	..	..	..	·36	9
September	81	77	72½	·07	·07	1·02	..	2·06	·64	29
October .	76½	72	67	·87	3·42	1·24	·25	4·26	2·01	57
November	69½	65	60	2·87	1·37	3·74	8·07	2·56	3·72	95
December	66	60½	55½	4·39	·54	6·69	2·01	3·51	3·43	88
Total annual fall of Rain in inches.				26·00	18·12	27·18	30·01	26·67	25·60	686

The temperature in summer is always from 3° to 4° lower during the night than during the day—often much more; and in the morning before the sun appears above the Rock, and also towards sunset, the air is pleasantly cool and refreshing, even in the hot season. In these respects Gibraltar enjoys a great superiority over Malta, where, though the extreme range of the thermometer is only 2° or 3° higher, there is, during the middle of summer, no perceptible reduction of temperature at night or in the morning, and the heat is much more oppressive.

Though snow seldom or never falls, and ice is rarely formed, the cold is keenly felt during the winter months, especially by those who have been long resident on the Rock.

Prevailing Winds.

The prevailing winds are from the westward and eastward. It seldom blows from the north or south, and when from these quarters continues but for a short time. The westerly winds are clear, dry, and refreshing; blowing directly on the town, they promote a free circulation of air, and are esteemed highly favourable to health. The easterly winds, or Levanters, as they are termed, have quite a contrary character; their baneful effects are said materially to aggravate wounds and acute diseases, and often to prove fatal to convalescents; being surcharged with moisture during their transit across the Mediterranean, they are always damp, raw, and unpleasant, and when from the southward of east, are generally accompanied with thick fogs, which envelope the Rock, and are supposed to produce the same debilitating effects as the sirocco in the upper part of the Mediterranean.

From observations extending over a period of 16 years, from 1810 to 1826, it has been found that the relative proportion of easterly and westerly winds throughout the year is very nearly alike, there having been during that period,—

Of easterly winds 2,944 days.
Of westerly „ 2,832 „

Easterly winds are most prevalent from July to November; this is the unhealthy period of the year among troops in Gibraltar, but as the same is the case in other countries remote from the influence of these winds, the insalubrity of that season cannot be altogether attributable to their agency.

Rain.

The rains generally commence in the end of September or beginning of October, and set in with such violence as frequently to overflow the watercourses and commit great havoc in the streets of the town. The succeeding rains, which continue to fall at intervals till the end of May, are much lighter, and during the middle of summer there is seldom any, the sky is then without a cloud, vegetation becomes languid, and, unless irrigated by artificial means, generally perishes. The average quantity of rain throughout the year has been already stated in the preceding Table at 25½ inches; one of the peculiarities of this climate, however, is the extreme irregularity in the supply; for instance, 73½ inches fell in 1796, and in four days of that period no less than 25 inches, whereas in 1801 only 15 inches fell throughout the year, being little more than half the average in Britain; neither the excess nor deficiency on either of these occasions in any way affected the health of the troops. Heavy dews and thick fogs prevail during the autumnal months, and keep up a constant dampness in the atmosphere, which renders it very unpleasant to the feelings.

Having given this brief sketch of the local peculiarities and climate of this station, we shall next proceed to the usual details regarding the garrison.

Troops employed.

Except during the years 1817, 1818, and part of 1819, when the 4th West India Regiment (a black corps) was employed at this station, the garrison has generally consisted of the service companies of five regiments of the line, with five companies of Artillery and one of Sappers and Miners.

* The years for which this Table of temperature has been made up are 1825, 1826, 1827, 1834, 1836.

The principal barracks in which the troops are accommodated will here be briefly described. Commencing at the northern extremity of the town the first in importance are the Casemate Barracks at Landport, an extensive range of bomb-proofs, two stories high, placed behind the works which protect the land approach, and having an open gallery along the upper range of rooms, both in front and rear. These barracks are capable of accommodating the service companies of two regiments; but, like all casemated buildings, are somewhat defective in ventilation, and occasionally subject to damp, being sunk below the level of the fortifications. Every means have been adopted, however, to remedy these defects, and render the rooms as dry and comfortable as the peculiarity of their structure will permit.

At a short distance to the southward, behind the sea-wall, are the Orange Bastion Barracks, consisting of casemates of one story, of a similar construction to the preceding, though the ventilation is not so complete. These barracks are occupied by a part of the artillery, for whom there is ample accommodation.

In the centre of the town, and parallel to the main street, stands the Town Range Barrack, at about 45 feet above the level of the sea. It is a stone building, of which that part occupied by the troops consists of two wings, each two stories high, with a colonnade and gallery in rear. The service companies of a regiment are generally divided between it and the King's Bastion Barracks—a casemated building of one story, close to the sea-wall, and opposite the centre of the town. It is but 4 feet above high-water mark, and one of the town-drains passes under it, owing to which it is frequently damp in winter. The ventilation is also imperfect; and, from the position of the building, will not admit of improvement.

Hargrave's Parade Barrack is that occupied by the Sappers and Miners: it is a stone building, two stories high, 65 feet above the sea-level, and close to the southern entrance of the town. The rooms are dry, airy, and furnish abundance of accommodation.

The South Barracks stand on a level spot of ground about 130 feet above the sea. They are built of stone, three stories high, and on an excellent plan, which ensures free ventilation throughout their whole extent. They are generally occupied by the service companies of a corps, for whom they afford ample space.

Rosia Barracks can afford accommodation for all the service companies of a corps, though there are seldom above two or three quartered in them. They consist of a stone building of two stories, and another of wood of the same height, about 40 feet above the level of the sea, and in the vicinity of the naval hospital.

Towards the southern extremity of the Rock stand Windmill Hill Barracks, at an elevation of 350 feet. They consist of two detached buildings—one of stone two stories high, with a gallery and arcade, the other of wood, and of one story only. Occasionally the service companies of a regiment are divided between Rosia and these barracks.

To the southward of the whole, and about 110 feet above the level of the sea, stands the Brewery Barrack, a small stone building of one story, containing three rooms, occupied by a few of the artillery. The situation is healthy, but from its exposure the cold is much felt in the winter months. There are also two small barracks for the artillery at the Moorish Castle and Governor's Parade, which offer no peculiarities worthy of notice.

From what has been here stated it will be seen that the barrack accommodation at this station is most ample; indeed it is necessary that it should be so, as in the event of war more than double the present force of the garrison might have to be quartered in it.

All the sick of the troops, except those of the Ordnance, are treated in the naval hospital, an extensive range of buildings, situated on the southern part of the Rock, about 130 feet above the level of the sea, forming a large square surrounded by piazzas, over which is a covered gallery for the patients; it has also the advantage of being shut out by walls from all communication with houses in the vicinity, and contains accommodation for at least 450 sick and convalescents. The Ordnance Hospital lies farther to the south, and several hundred feet higher; it is a small compact building of four wards with the requisite offices, all on one floor.

The rations of the soldier, as at present regulated, consist of one pound of meat, fresh or salt, and one of bread per day: the proportion in which the salt meat is issued is four days in the week during winter, and two days in the week during summer, so that on the average of the whole year the quantity of fresh and salt meat consumed is about equal. A pint of wine is also issued daily to each soldier, the money allowance in lieu thereof not being drawn in this garrison.

The cattle are supplied from the Barbary coast, and though lean when imported, are generally brought into good condition by stall-feeding before being used: the supply may be increased to any extent the garrison requires, if a larger issue is deemed advisable. The bread is not supplied by contract, as at some other stations, but is baked in a Government establishment, under the direction of the Commissariat, from flour purchased in the town.

Breakfast consists of the ration-bread with a pint of coffee, and dinner of the fresh meat made into soup, with vegetables, or of the salt meat and potatoes; the latter, however, are too expensive to be at all times obtained by the soldier. Much anxiety has prevailed of late years to establish a supper-mess in some corps, but as the authorized stoppage from the soldier's pay is not sufficient for that purpose it has never been carried into effect.

Owing to the great extent of the works, and the number of sentries required, the duties of this garrison are rather severe: the results in this Report, however, sufficiently establish that they are by no means so much so as to prove injurious to health; and the duties of fatigue and employment at the public works, on which a large proportion of the troops were at one time employed, have of late been very materially diminished.

Having given these particulars regarding the circumstances by which the health of the troops

I.
Gibraltar.

Barrack Accommodation.

Hospital Accommodation

Rations and Diet.

Duty and Employment.

I.
Gibraltar.

is likely to have been affected, we shall next proceed to show the extent of sickness and mortality which has occurred among them since 1818; but these details will at present be confined to the white troops only, as those of the black troops must be considered separately.

Table I.
Showing the Admissions into Hospital and Deaths among the White Troops serving in Gibraltar.

Years.	Mean Strength, per War Office Returns.	Admissions into Hospital.	Deaths, per Medical Returns.	Ratio per 1000 of Mean Strength.	
				Admitted.	Died.
*1818	2,749	2,158	48	785	18
1819	3,144	1,984	39	631	12
1820	3,017	2,434	32	807	11
1821	2,809	2,545	32	906	11
1822	2,737	2,489	23	909	8
1823	2,729	2,424	22	888	8
1824	3,029	3,573	55	1,279	18
1825	3,153	3,253	37	1,032	12
1826	3,607	3,843	37	1,065	10
1827	3,200	2,133	29	698	9
1828	3,494	4,075	448	1,169	126
1829	3,733	3,362	29	901	8
1830	3,707	3,667	47	989	13
1831	3,480	2,888	41	830	12
1832	3,526	3,225	47	915	13
1833	3,053	2,228	40	730	13
1834	3,034	4,545	170	1,498	56
1835	2,988	3,689	51	1,235	17
1836	3,080	3,412	64	1,108	21
Total ..	60,269	58,227	1,291	..	..
Average	3,172	3,065	68	966	21.4

Thus it appears that among 1000 troops there have been 966 admissions into hospital in the course of the year, consequently every man has, on the average, been under treatment about once in twelve months, which corresponds very nearly with the proportion among troops in the United Kingdom.

Though the admissions in the preceding Table are complete, the deaths include only those who have died under medical treatment. The total mortality, as ascertained by a comparison of the War Office and Medical Returns was as under:—

	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Deaths, per War Office Returns	51	41	36	36	24	24	55	38	41	37	453	29	49	46	47	44	174	54	67	1,346
Ditto, per Medical Returns . .	48	39	32	32	23	22	55	37	37	29	448	29	47	41	47	40	170	51	64	1,291
Omitted in Medical Returns	3	2	4	4	1	2	..	1	4	8	5	..	2	5	..	4	4	3	3	55

We can only state the causes of death of some of these omissions:—5 were drowned, 2 found dead, 2 died from excessive intoxication, 2 were executed, 2 murdered, 2 killed by gunshot wounds, 4 by falls from the rock, 2 committed suicide, 2 died suddenly, 5 were invalids left behind in a dying state by corps quitting the garrison; leaving in all 27 regarding which we can supply no information, except that they have probably originated in similar accidental causes, prior to 1826, from which period only we have been able to trace those above stated.

These casualties increase the average ratio of deaths to 22 per thousand of the strength annually, being considerably above that of troops in Britain; but in this is included the mortality occasioned by two severe and fatal epidemics,—one of yellow fever in 1828, and another of cholera in 1834, by which nearly as many deaths occurred as during all the other 17 years at this station. Exclusive of these, the mortality would not have been more than 13 per thousand annually.

Sufficient evidence of the general salubrity of Gibraltar is afforded by the low mortality among the civil inhabitants. Out of a population of from 16,000 to 17,000, the deaths recorded in 10 years, when no severe epidemic prevailed, did not average more than 350 annually, which is as low as in the United Kingdom, though the fluctuations constantly occurring in the number of the inhabitants prevent our entering into any calculation as to the exact ratio.

The diseases whereby the admissions and deaths in each year have been occasioned among the troops composing this garrison are enumerated in Abstract No. I. of Appendix, of which the results are exhibited in a condensed form in the following Table:—

* As the diseases of the white and black troops have been included together in the Returns of 1817, and we possess no means of separating them, it has been deemed more expedient to omit that year entirely than to hazard the erroneous conclusions which might result from such data.

	ADMISSIONS.		DEATHS.	
	Total among whole Force in 19 Years.	Annual Ratio per 1000 of Mean Strength.	Total among whole Force in 19 Years.	Annual Ratio per 1000 of Mean Strength.
By Fevers	9,687	161	563	9.3
Eruptive Fevers	54	1	1	..
Diseases of the Lungs	8,487	141	318	5.3
" Liver	759	13	22	.4
" Stomach and Bowels	11,202	186	128	2.1
Epidemic Cholera	459	7	131	2.2
Diseases of the Brain	371	6	32	.5
Dropsies	72	1	16	.3
Rheumatic Affections	2,309	38	8	
Venereal Affections	3,450	57	1	
Abscesses and Ulcers	6,131	102	9	
Wounds and Injuries	5,372	89	24	1.3
Punished	938	16	..	
Diseases of the Eyes	5,862	97	..	
" Skin	903	15	..	
All other Diseases	2,171	36	38	
Total	58,227	966	1,291	21.4

I.
Gibraltar.Table II.
Showing the principal Diseases among the White Troops serving in Gibraltar.

Though, during the period under observation, the epidemic of yellow fever appeared only in 1828, and that of cholera only in 1834, yet in a general Table of this kind there is no mode of estimating their effect on the sickness and mortality otherwise than as if they were of annual occurrence; leaving the precise extent of their ravages in the year when they prevailed to be more particularly defined in the following remarks on the principal classes of diseases.

FEVERS.

Under this head are comprised in the preceding Table—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Quotidian Intermittent Fever.	174	5	1 in 35
Tertian "	124	..	0 " 124
Remittent Fever	314	28	1 " 11
Common Continued Fever	7,002	83	1 " 84
Synochus	517	13	1 " 40
Typhus	30	10	1 " 3
Yellow Fever (not Epidemic)	4	1	1 " 4
Total	8,165	140	1 in 58
Epidemic Yellow Fever	1,522	423	1 " 3½
Total	9,687	563	1 in 17¼
Annual Ratio per 1000 of Mean Strength, exclusive of Epidemic Fever	136	2.3	..
Annual Ratio per 1000 of Mean Strength, inclusive of Epidemic Fever	161	9.3	..

On investigating the admissions and deaths by this class of diseases separately from those caused by the epidemic in 1828, we find that the troops at this station have not suffered in any remarkable degree—the proportion of deaths being only about one-half higher, and the admissions about double what occurs from the same cause in this country. It will be seen that, notwithstanding the arid rocky nature of the ground and the apparent absence of any marshy soil, Gibraltar is not altogether exempt from fevers of the intermittent type, about 5 per thousand of the strength having been annually admitted under this head; and in the year in which the epidemic fever prevailed no less than 101 cases were reported.

The influence of age on the mortality by this class of diseases will be hereafter referred to at p. 60 of this Report.

EPIDEMIC, or YELLOW FEVER.

Admitted . . 1522 Died . . 423 Proportion of Deaths to Admissions . . 1 in 3½.

So much has already been written on the ravages of this disease at Gibraltar, and so many different opinions expressed as to its origin, even by those resident on the spot and who had an opportunity of watching its progress on several occasions, that we deem it expedient to confine our observations to a very brief detail of the facts connected with its appearance.

I.
Gibraltar.

Some medical officers maintain that this disease is of local origin and merely an aggravated form of the remittent fever, which has in every year prevailed in this garrison; others as confidently refer its origin to contagion, and assert, that it was introduced by ships arriving in the Bay from ports where it prevailed.

Without adopting either opinion we have kept this form of fever distinct, in order that each party may be able to draw their own conclusions from the data we have furnished, and shall merely give the following history of its ravages on different occasions.

The first appearance of this epidemic, of which we possess any specific details, was in August 1804, but till the end of September it did not become so prevalent as to call for the notice of the public authorities. It then rapidly increased till the end of October, when it reached the maximum, after which it gradually diminished in frequency and severity, and ultimately disappeared in the end of December or beginning of January. In this instance, however, it seems rather to have died away from want of subjects than from any mitigation of the causes by which it was induced,—for, after the most diligent inquiry, only 28 adults could be discovered within the garrison who had escaped the malady, and it very rarely attacks the same person twice. A manuscript journal of the events of that period states that neither wind, rain, nor any change of weather, had the smallest effect in checking its ravages or diminishing its malignity; about one-third of the troops who were attacked died, and of the civilians a still greater proportion. The total number of deaths during its continuance amounted to—

Officers	54
Soldiers	864
Soldiers' wives and children	164
Civilians	4864

We cannot state the precise number of each class so as to ascertain the ratio of mortality, but about a fourth part of the troops and more than a half of the civil inhabitants were cut off. To the precaution of encamping the former out of town, which was adopted on the 26th of September, is probably to be attributed their not having suffered to so great a degree as the civilians who remained constantly within the garrison.

In the end of October 1810 a similar disease appeared, but was confined to the soldiers of one regiment, of whom only six died, and it ceased on that corps being encamped on the Neutral Ground.

In 1813 this disease again made its appearance as early as the middle of July, but two months elapsed before it prevailed to such an extent as to form the subject of official Reports. In the month of October most of the troops were removed to encampments on the Neutral Ground, where they were in a great measure exempt, though it continued to rage in the town till the month of December. It then became extinct, after cutting off 461 of the troops and 883 of the inhabitants.

In the following year this epidemic again broke out in the month of August, and, the same precaution of encamping the troops having been resorted to, it disappeared by the end of October, with the loss of 114 of the military and 132 of the inhabitants.

The garrison suffered from no similar visitation from this period till 1828, when that epidemic broke out which is referred to in the preceding Tables.

The first cases occurred among the civil inhabitants in the southern district of the town about the end of August, and on the 5th of September its appearance among the Sappers and Miners and 12th Foot quartered in that neighbourhood was officially reported: the men of the latter corps were immediately encamped on the Neutral Ground, from which period till the end of the month, when they were obliged to resume their duties in the town, no new cases occurred among them.

Notwithstanding this precaution, however, by the middle of September the disease had appeared throughout all the town, and though both on this and previous occasions its ravages were at first confined to the filthiest and most densely populated districts, yet ultimately all ranks suffered from it in nearly an equal degree, as will be seen by reference to the number of attacks and deaths among the civil and military portion of the population during the period it prevailed in the garrison.

	Strength.	Admitted.	Died.
Commissioned Officers	158	53	10
Non-commissioned Officers and Soldiers	3,494	1,514	422
Women and Children . . . . .	..	447	83
Civilians	17,000	4,701	1,281

The proportion of deaths to the number treated was almost the same among the inhabitants as the troops, but the proportion attacked does not appear to have been so great. This exemption is, however, more apparent than real, as from the total population should be deducted 6000, who, having had the disease formerly, may have been thereby exempt from it on this occasion,—with this correction, its relative prevalence among military and civilians was very nearly the same.

The fever seems to have been most severe among the Royal Artillery and 43d Foot, as in these corps nearly one-half died of all those attacked. It was also observed to prevail more in some situations than others, particularly along the line wall facing the sea: few of the

soldiers stationed there escaped fever, and these posts proved so generally fatal that the sentries were ultimately withdrawn. The troops who were confined to the different encampments in the vicinity, and had no communication with the town, were not attacked, and possibly might, by the continuance of this precaution, have entirely escaped, but the necessity for sending detachments daily into town, to perform the duties of the garrison, exposed them anew to the influence of the disease, whether arising from malaria or contagion. The officers were not so much exposed in this way as the soldiers, to which is probably attributable the slight exemption in their favour.

In the service companies of the six infantry corps then in garrison the proportion of deaths by this epidemic among the serjeants, corporals, drummers, and privates, was as under:—

	Strength.	Died.	Ratio per Cent.
Serjeants . . .	170	17	10
Corporals . . .	146	18	12
Drummers . . .	60	4	7
Privates . . .	2,770	296	11

There are no Returns to show its relative effect on the different ranks of artillery and engineers.

These results afford a convincing proof that, though the exposure of the privates on night duty may, in some instances, have rendered them more subject to this disease, as stated in the Medical Reports, it could not have materially increased the mortality, seeing that the ratio among them is exactly a mean between that of the serjeants and corporals, who are not exposed to a similar extent. That the drummers suffered less than the others may be accounted for by their being in general younger men—a circumstance which, as will be shown in the latter part of this Report, has a material influence on mortality.

The following Table exhibits the deaths by this disease in each week from its commencement till it disappeared:—

PERIODS.	MILITARY.					INHABITANTS.			
	Officers.	Men.	Women.	Children	TOTAL.	Men.	Women.	Children	TOTAL.
1st to 7th Sept. . .	..	1	..	..	1	10	4	5	19
8th 14th " . . .	..	6	..	2	8	13	9	10	32
15th 21st " . . .	1	11	1	1	14	30	8	7	45
22d 28th " . . .	1	22	..	2	25	51	21	9	81
29th Sept. to 5th Oct. . .	..	31	2	1	34	82	35	20	137
6th Oct. 12th " . .	1	67	3	3	74	85	21	21	127
13th* " 19th " . . .	..	75	3	2	80	115	43	32	190
20th " 26th " . . .	..	56	4	2	62	78	26	17	121
27th " 2d Nov. . . .	..	53	3	2	58	77	33	19	129
3d Nov. 9th " . . .	1	51	..	2	54	50	19	9	78
10th " 16th " . . .	2	23	1	1	27	31	26	11	68
17th " 23d " . . .	1	19	..	..	20	13	11	10	34
24th " 30th " . . .	1	6	..	5	12	10	10	4	24
1st Dec. 7th Dec. . .	1	9	..	3	13	9	3	9	21
8th " 14th " . . .	..	7	..	3	10	11	6	6	23
15th " 21st " . . .	..	7	1	..	8	3	1	2	6
22d " 28th " . . .	..	2	..	..	2	8	8	2	18
29th " 4th Jan. . . .	..	..	..	3	3	4	1	1	6
5th Jan. 11th " . . .	..	1	..	..	1	2	..	5	7
12th " 14th " . . .	..	1	..	..	1	2	1	1	4
Total†	9	448	18	32	507	684	286	200	1170

In 1828 and also in 1813 the mortality attained its maximum on the 16th of October, and in 1804 about a week earlier. The same has been observed in other parts of Spain, and also at New York, when yellow fever prevailed.

Without venturing an opinion as to whether this epidemic is one *sui generis*, or merely an aggravated form of remittent fever, there is one marked peculiarity to which it is necessary to advert. In Gibraltar the same individual has seldom been attacked twice, even though a long series of years may have elapsed since he first suffered from it; but in the West Indies, and on the West Coast of Africa, a former attack of remittent fever secures no such immunity,—indeed it could be proved, by reference to the Returns from these stations, that, in many corps every soldier must have been treated, on the average, twice or thrice for remittent fever during the few years of his service there.

There was nothing remarkable in the atmospherical phenomena which preceded the last

* Mortality attained its maximum on the 16th of October, when 45 died.

† These totals do not correspond exactly with those stated on the previous page: many of the women and children of the military appear to have been omitted, and there are more soldiers and one officer fewer than is stated in the Returns; it is, however, sufficiently accurate to show the progress of the disease.

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epidemic: the summer was cool and pleasant, and the easterly winds, so much complained of at the station, were more rare than usual; there was rather less rain and fewer rainy days than had occurred during the two preceding years, but a smaller quantity had often fallen in other years which proved remarkably healthy.

Meteorological observations have, for many years past, been made with great care in this garrison, but we look to them in vain for a solution of the mystery in which the origin of this singular disease is involved. For instance, the temperature at corresponding periods throughout the whole of 1827, a healthy year, and 1828, in which this epidemic last prevailed, was as under:—

		1827, A Healthy Year.	1828, An Epidemic Year.			1827, A Healthy Year.	1828, An Epidemic Year.
January to April.	At 9 A.M.	57°	58½°	July to October.	At 9 A.M.	76½°	76¼°
	12 Noon	60½	62½		12 Noon	78	76½
	5 P.M.	59½	60½		5 P.M.	78½	78
April to July.	At 9 A.M.	69½	69½	October to December.	At 9 A.M.	59½	61½
	12 Noon	70½	70½		12 Noon	62½	63½
	5 P.M.	71½	69½		5 P.M.	63	64½

The pressure of the atmosphere, as indicated by the barometer, was equally uniform at these periods, being in—

	July.	August.	September.	October.
1828	29 $\frac{2}{100}$	29 $\frac{2}{100}$	29 $\frac{7}{100}$	30 $\frac{7}{100}$
1827	30 $\frac{1}{100}$	29 $\frac{2}{100}$	30	29 $\frac{9}{100}$

The quantity of rain which fell up to the period when the epidemic commenced was no less uniform, being—

	Inches.
In 1828	13 $\frac{4}{100}$
In 1827	13 $\frac{4}{100}$

Of easterly winds, which are supposed to be favourable to the development of this disease, there were—

	Days.
In 1828	164½
In 1827	162

but in July and August, immediately previous to the breaking out of the disease, there were only 19 days of easterly winds, whereas in the same months of the previous year there were 39 days of these winds without the slightest indication of any such disease. Similar observations, which have been extended to other periods when the epidemic prevailed, give corresponding results, so that there seems unquestionable evidence that it had in neither instance been attributable to any appreciable atmospherical agency. The same conclusions were arrived at in the course of our investigations regarding the sickness and mortality in the West India colonies.

Though no marked diminution either in prevalence or severity could be distinctly traced to the occasional reductions of temperature which took place during the continuance of this disease, yet it may be proper to observe that these epidemics have never been known to make their appearance at this station during winter, and have always declined in severity as that season approached. Whether this has arisen from their virulence being then exhausted, or from the reduction of temperature at that period having any decided effect in arresting their progress, we presume not to decide. It must be remembered that other epidemics also are generally less common in spring than during the latter end of summer and autumn.

As a cause of this disease, much has been attributed to the want of due ventilation in Gibraltar during the hot season, owing to the town being so much screened by the rock in rear; but this cause ought obviously to operate equally in all years under equal degrees of temperature, which it does not; and it is only necessary, as a complete refutation of this theory, to refer to the situation of Cadiz and many of the other towns along the coast of Spain which, though open to every breeze, are more frequently subject to this disease, and that too in a more aggravated form, than Gibraltar.

In 1804 and 1813 the state of the drains, and the crowded and filthy condition of the town, were assigned as the primary causes of the epidemic; but in 1828 many improvements had been made in these respects, and though some complaints were urged against the drains, and one was undergoing repair during the summer, it does not appear that, at the time the disease broke out, they were in a worse condition than they had often been in previous years when the town enjoyed its usual salubrity.

A removal, even to a very small distance from the town, seems to have secured a complete immunity from the epidemic, for it is stated by the Surgeon of the 12th Regiment that of 92 women and 190 children encamped on the Neutral Ground during the whole period it prevailed, not one was attacked, though in constant communication with the soldiers of the corps who went daily from that encampment to do duty in the town, and of whom

many were attacked with the disease on their return. It is also remarked, that on the Neutral Ground the epidemic never made its appearance to any extent, though from 6000 to 8000 of the inhabitants were encamped there, yet that spot is composed of materials which are supposed highly favourable to the formation of malaria.

By those who maintain the doctrine of contagion, the disease was supposed to have been imported from the Havannah in a Swedish ship, which lost two of her men on the passage, but on investigation, it was not established that the disease of which they died was yellow fever; and whether the origin of the epidemic be attributable to contagion or not, there seems no good reason for assigning the introduction of it to that ship more than to many others, especially as, on the suspicion of having had yellow fever on board, it underwent six weeks' quarantine, and was twice fumigated before being allowed to hold any communication with the garrison; during all this period no deaths or sickness took place on board, and at least ten weeks elapsed between the death of the two sailors and the period when the epidemic became prevalent.

By those adverse to the doctrine of contagion it has been asserted, that persons in immediate attendance on the sick within the garrison did not suffer to a greater extent than others who were not so exposed, and that those employed on that duty beyond the walls were not at all affected by the epidemic. Having no return of the number thus employed, or of the casualties among them, under these circumstances, it is impossible to test this assertion by the numerical evidence requisite to warrant its authenticity.

Such are the principal facts connected with the appearance and progress of this singular disease, of which the cause still seems involved in mystery. When the unhealthy character of the autumnal months throughout the globe has been distinctly traced in the course of these investigations, and the remarkable coincidence established that most of the epidemics of a fatal nature in the northern hemisphere have either made their appearance, or raged with the greatest severity, about that season of the year, it may possibly lead to the discovery of some peculiarity in the constitution of the atmosphere at that period, which may tend to elucidate the subject.

DISEASES OF THE LUNGS.

Under this head are comprised in the preceding Table :—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Inflammation of Lungs	2,515	56	1 in 45
Pleurisy	28	..	0 „ 28
Spitting of Blood	189	4	1 „ 47
Consumption	394	215	1 „ 2
Acute Catarrh	4,527	16	1 „ 283
Chronic Catarrh	659	23	1 „ 29
Asthma	42	2	1 „ 21
Difficulty of Breathing	133	2	1 „ 67
Total	8,487	318	1 in 27
Annual Ratio per 1000 } of Mean Strength . }	141	5.3	..

The ratio of admissions by this class of diseases is to that in the United Kingdom as 141 to 148, the principal difference being, that catarrhal affections are less frequent in Gibraltar, while inflammation of the lungs is much more so; the cases of the latter are, however, of a milder character, as only 1 in 45 died of those admitted into hospital in Gibraltar, while 1 in 18 died of those admitted for the same cause among the Dragoon Guards and Dragoons in the United Kingdom. The total mortality by diseases of the lungs would appear to be less at this station than at home; but that, we apprehend, arises from many of the consumptive patients being invalided, who if they die on their passage, or after their arrival in Britain, are not included in the Returns of the station where their diseases originated. That this is sufficient to account for the difference may easily be supposed from the fact stated in the Medical Report of 1835, that during the thirteen years previous, the average number of deaths from consumption in Gibraltar was $12\frac{3}{10}$ annually, besides about five sent home labouring under the same disease, of whom few or none recovered.

In the perusal of these Reports it must be kept in view, that the admissions which do not appear to have terminated in death are not necessarily to be held as recoveries. If the disease proved of a lingering nature, the patient may have been invalided as above stated; or where it assumed a different form, passing for instance from catarrh to consumption, he may have been discharged under the former head and re-admitted under the latter. In both of these cases, the proportion of deaths to admissions would be diminished, though in reality, the diseases may have assumed a more serious character. As, however, one uniform practice is adopted in this respect throughout the service, the results can be little affected by that source of error, at least so far as regards the purpose of comparison.

In the Report on the health of the troops in the United Kingdom, in which we were able to trace every consumptive case which terminated fatally, we found that, out of 286 admissions for that disease amongst the Dragoon Guards and Dragoons, 236 died, and there is good reason to believe that had we been able to follow out all the cases sent home

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from Gibraltar, with the same exactness, we should have found the proportion of deaths equally high.

This disease seems to be as prevalent and fatal among the civil as the military population, for it is stated in the Medical Reports for 1823, that, of 10,900 cases of different diseases admitted into the military hospital in the seven years previous, there were 137 from consumption, while, of 11,545 admitted into the civil hospital during the same period, 129 were from that disease. Of the civil cases 1 in 2 $\frac{1}{7}$ died; of the military 1 in 2 $\frac{1}{2}$, exclusive of those who died at home or on their passage.

The influenza, or epidemic catarrh, which prevailed so generally throughout Europe in 1833, made its appearance in this garrison about the middle of December. In the service companies of 5 regiments of the Line, amounting to 2554 men, 248 were attacked by it; but the artillery, though quartered in various parts of the town, were in a great measure exempt. Officers, women, and children, were affected in nearly equal proportions, and the civilians suffered quite as much as the military. Though so generally prevalent, the epidemic was not productive of much mortality among the troops, for only 2 cases terminated fatally. Fortunately its duration was but short; by the 8th of January the admissions had materially decreased, and by the 14th had entirely ceased. During its continuance, as well as for some time before it broke out, there was a prevalence of dry winds from the N. E. and N. W., and the medium range of the thermometer during the day was from 60° to 62°, but the nights were very cold. The disease entirely disappeared on the setting-in of the first rains, accompanied by easterly winds.

DISEASES OF THE LIVER.

Under this head are comprised in the following Table:—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Acute Inflammation of Liver	331	7	1 in 47
Chronic „	257	11	1 „ 23
Jaundice	171	4	1 „ 43
Total	759	22	1 in 34
Annual Ratio per 1000 } of Mean Strength . }	13	$\frac{1}{4}$	..

This class of diseases is by no means either prevalent or a source of great mortality in Gibraltar, indeed it is only in a very trifling degree more so than in the United Kingdom, and in most of the cases the parties attacked were men at an advanced period of life, and had probably acquired a predisposition to it during previous service in tropical climates.

DISEASES OF THE STOMACH AND BOWELS.

Under this head are comprised in the preceding Table:—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Abdominal Inflammation .	13	5	1 in 2 $\frac{1}{2}$
Inflammation of Stomach .	20	5	1 „ 4
„ of Bowels	45	12	1 „ 4
Vomiting of Blood	7	1	1 „ 7
Acute Dysentery	2,594	49	1 „ 53
Chronic „	59	15	1 „ 4
Indigestion	304	1	1 „ 304
Colic	993	2	1 „ 496
Cholera	1,230	7	1 „ 176
Diarrhœa	5,600	31	1 „ 181
Constipation	337	..	0 „ 337
Total	11,202	128	1 in 89
Annual Ratio, per 1000 } of Mean Strength . }	186	2.1	..

Comparing the influence of these diseases among the troops at this station and in the United Kingdom, it would appear that they are twice as prevalent and about thrice as fatal. This may in some measure be owing to increased temperature, which generally predisposes to them, but it does not appear to originate entirely from that cause, seeing that the admissions among the officers are by no means proportionate.

In order to ascertain whether these diseases are also of common occurrence among the inhabitants of Gibraltar, we have investigated the Returns of the Civil Hospital, to which all

the lower classes repair for medical aid, and find that they do not bear so high a proportion to the other diseases as among the troops. This is the only way in which we can make the comparison, and though it does not supply such accurate grounds for our deductions as could be wished, it certainly adds to the presumption that the tendency to diseases of the bowels at this station may be increased by the large proportion of salt meat issued to the troops, especially as the officers suffer so little from them, and there is nothing in the duty of the troops likely to have created such a peculiarity. Whatever may be the opinion in regard to the possibility of this diet creating such diseases, there seems little doubt that for those who may have been suffering under them, and have recently come out of hospital, it is most inappropriate, as having a greater tendency to induce a relapse than the milder and more digestible nutriment afforded by fresh provisions.

With the exception of chronic dysentery, however, these diseases seldom prove fatal, or assume a very aggravated character at this station; the issue of salt meat being principally confined to the winter months, when the bowels are least liable to be affected, is by no means likely to produce such serious consequences in this respect as in some warm climates, where it forms the principal diet of the soldier throughout the year.

EPIDEMIC CHOLERA.

Admitted . . 459 Died . . 131 Proportion of Deaths to Admissions . . 1 in 3½

During the spring of 1834 this disease prevailed in several of the towns and villages in the vicinity of Gibraltar; but no case occurred in the garrison till the 23rd of May, when a soldier of the 92nd Regiment, quartered in the King's bastion barrack, was suddenly attacked with decided symptoms, from which, however, he ultimately recovered. Two of the civil inhabitants died from it on the 3rd and 5th of June, several other cases occurred on the 14th, and by the 17th of that month its presence was so decidedly manifested, both among the troops and inhabitants, as to be made the subject of official reports. From that period the number of cases progressively increased till the middle of July, when they began to decline, and the disease became extinct in its epidemic form in the beginning of August, though bowel complaints of a severe character prevailed among the troops for several weeks thereafter.

The regiment which suffered most was the 5th Foot, though quartered in the south barracks occupying one of the healthiest situations on the rock, and, by one of those peculiarities which often characterises the progress of this singular disease, its ravages were principally confined to the inmates of the two wings of the building, while those in the centre were comparatively free from it. It was also remarked that though the first case was in the 92nd Foot, quartered in the centre of the town, in immediate contact with the inhabitants, no other occurred in that regiment till the middle of July, when the disease was on the decline, and even then few were attacked compared with the rest of the garrison, as will be seen by the following Abstract of the admissions and deaths during the continuance of the epidemic.

MILITARY POPULATION.

	Ordnance.				5th Foot.				23rd Foot.				60th Foot.				70th Foot.				92nd Foot.				Total.			
	Strength.	Admitted.			Strength.	Admitted.			Strength.	Admitted.			Strength.	Admitted.			Strength.	Admitted.			Strength.	Admitted.			Strength.	Admitted.		
		Severe.	Slight.	Died.		Severe.	Slight.	Died.		Severe.	Slight.	Died.		Severe.	Slight.	Died.		Severe.	Slight.	Died.		Severe.	Slight.	Died.		Severe.	Slight.	Died.
Men	455	26	15	17	497	56	67	41	502	50	54	16	489	33	33	18	556	50	42	30	549	11	22	9	3048	226	233	131
Women	116	10	1	9	35	3	11	3	38	2	..	1	31	6	..	4	23	4	..	2	56	5	2	4	299	30	14	23
Children	263	4	1	2	56	6	1	4	76	1	1	..	69	2	1	2	36	..	..	..	82	..	..	..	582	13	4	8

CIVIL POPULATION.

	Estimated Civil Population.	Cases Admitted.			Died.	Ratio per 1000 of Military.		Ratio per 1000 of Civil Population.	
		Severe.	Slight.	Died.		Adm.	Died.	Adm.	Died.
Men	6,000	193	345	104	150	43	90	17	
Women	5,000	216	267	107	147	77	97	21	
Children under 16	6,000	50	95	41	29	14	24	7	

These Tables show that females were attacked in very nearly the same proportion as males, but that the cases proved more generally fatal. Children were in a great measure exempt, though, when attacked, they rapidly sunk under it; very few cases occurred among persons about the age of puberty. The influence of age on the mortality by this disease among the troops of the Line is exemplified in the following Table:—

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Ages.	Strength at each Age.	Died at each Age.	Ratio per 1000 Died at each Age.
18 to 25	911	43	47
25 to 33	1,385	57	41
33 to 40	204	11	54
40 to 50	50	3	60
Total .	2,550	114	45

Thus soldiers under 33 appear to have been more exempt than those above that period of life. The ages of 17 of the artillery who died during the epidemic cannot be ascertained, consequently these calculations refer to troops of the line only.

The duration of the fatal cases, when they did not terminate in consecutive fever, averaged from 12 to 14 hours. Some were remarkably rapid in their course, almost instantaneously prostrating every energy, and carrying off the patient in 5 or 6 hours. When reaction was established, and fever supervened, the duration of the fatal cases was from 4 to 10 days. No remedies seemed to have any certain effect in arresting the progress of the disease when in an aggravated form. Of the cases reported as severe 60 per cent. died among the troops, and 55 per cent. among the civil population; but there was by no means so large a proportion attacked of the latter as of the former, and many of the cases reported were either extremely slight, or merely attacks of diarrhoea which prevailed to a great extent at that period.

Among the civilians, the old, the infirm, and the dissipated, are said to have been the principal sufferers. This was not generally the case among the troops, however, for the 5th and 60th Regiments lost several of their finest and best conducted men, while in other corps it was remarked that many long addicted to habits of intemperance escaped altogether or speedily recovered. Very few of the higher ranks, either among the military or civil population were attacked, and only one officer and one officer's wife died from it.

In some localities the disease existed only for a few days, while in others it lingered for several weeks. At first those in the crowded districts of the town suffered most, but ultimately its effects were most severely experienced on the south part of the rock at a considerable distance beyond the town, where if free ventilation could have had any effect, its virulence was likely to have been materially modified. Several cases occurred among the shipping in the bay, but they were never so prevalent there as in the town.

No part of the Rock seems to have been exempt from the influence of the disease; the Neutral Ground, so often resorted to in former epidemics, afforded no security. At Windmill Hill, Europa Flats, and even at the small village of Catalan Bay, behind the Rock, it was as prevalent as in the centre of the town. Owing to this circumstance and the limited extent of our territory, little benefit could be obtained from change of quarters. The 70th regiment, when attacked by the epidemic, was moved from the Casemate Barrack to Rosia; three companies of the 5th Foot were encamped on an elevated portion of the rock called Buena Vista; and subsequently the whole of that corps, with the exception of the married men and their families, was encamped at Europa Flats, but without any decided effect in arresting the progress or ameliorating the character of the disease.

The medical officers seem to have been almost unanimous in their opinion that the disease was not contagious. In the same ward with the cholera patients in the civil hospital were several persons labouring under other diseases, who, although in constant communication with, and frequently in attendance on, those suffering under the epidemic, were in no instance affected by it. In the military hospital, too, it was observed that the orderlies employed in attendance on the sick were not attacked in a greater proportion than others who were not so employed. A medical officer of one of the corps furnishes the following specific information on this head:—

	Orderlies Employed.	Attacked with Cholera.	REMARKS.
30th June to 7th July .	30	12	Of these, 12 were attacked within three days after being so employed, 11 within four days, and the rest at various periods, some exceeding four weeks.
8th July to 12th „ .	35	13	
12th „ 18th „ .	48	11	
18th „ 24th „ .	48	8	
24th „ 29th „ .	44	3	
30th „ 3rd Aug. .	14	..	
Total . . .	219	47	

During the same period the aggregate strength of the corps amounted to 502, attacked 104

Deduct employed as orderlies 219 „ 47

Remain 283 57

Consequently the proportion of attacks among those employed as orderlies was 1 in $4\frac{2}{3}$, and of those not so employed 1 in 5 nearly.

It may also be stated, as another evidence on this subject, that, of 30 medical officers in constant attendance on the sick during the prevalence of the epidemic, all of whom, from the

nature of their duties, were subject to great fatigue and anxiety, only one or two exhibited any symptoms of the disease, and then cases were comparatively slight.

Prior to the appearance of the epidemic, and during its continuance, easterly winds were uncommonly prevalent. The temperature was not higher than is usual at that season, the maximum range being from 73° to 80°. The barometer fluctuated from 29·96 to 30·76. No observations appear to have been made on the electric or hygrometric state of the atmosphere, but it is stated that during May and June there were frequent thunder-storms, accompanied with heavy showers.

The only circumstance connected with the health of the troops prior to the appearance of the disease was the general prevalence of influenza, or epidemic catarrh, during the spring of that year. Slight affections of the bowels were also exceedingly common throughout the summer, and continued to be so for some months after the cessation of the cholera; indeed, in some corps comparatively few escaped an attack of this description. The troops were supplied constantly with fresh meat during the prevalence of the epidemic; and every care was taken, both in regard to diet and duty, that they should, so far as possible, be exempt from any cause likely to predispose to the disease.

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DISEASES OF THE BRAIN.

Under this head are comprised in the preceding Table:—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Inflammation of Brain	12	3	1 in 4
Headache	27	..	0 „ 27
Stroke of the Sun	3	1	1 „ 3
Apoplexy	36	14	1 „ 2½
Palsy	53	4	1 „ 13
Epilepsy	110	1	1 „ 110
Fatuity	47	2	1 „ 23
Madness	38	1	1 „ 38
Water in the Head	1	1	1 „ 1
Brain Fever of Drunkards	44	5	1 „ 9
Total	371	32	1 in 11½
Annual Ratio per 1000 } of Mean Strength . }	6	$\frac{6}{10}$	..

The proportion admitted is exactly the same at this station as among the Dragoon Guards and Dragoons at home, and the ratio of deaths is even lower; it may be necessary to state, however, that, in order to obviate the consequences of exposure to solar influence, a precaution is adopted in this Command of confining the troops to barracks during summer from 9 or 10 o'clock in the morning till 4 or 5 in the afternoon. Cases of Delirium Tremens are comparatively rare; not more than half as many have died by it in the course of 19 years as in the Mauritius during one year alone out of half the strength. Though intemperance is by no means uncommon among the garrison, it seems neither to be carried to that extent nor to be productive of the same prejudicial effects, morally or physically, as in tropical climates, where consequently there is the more urgent necessity for restrictive measures to prevent an indulgence so pernicious to the health and discipline of the soldier.

DROPSIES.

Under this head are comprised:—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Subcutaneous Dropsy	24	6	1 in 4
Abdominal Dropsy	44	7	1 „ 6
Water in the Chest	4	3	1 „ 1½
Total	72	16	1 in 3
Annual Ratio per 1000 } of Mean Strength . }	1	$\frac{1}{10}$	..

Both the admissions and deaths by this class of diseases are exceedingly low as compared with the strength, the proportion being exactly the same as among the Dragoon Guards and Dragoons in this kingdom. Almost all the deaths were of old men worn out by dissipation or a long course of service. In the West India Report it was stated that the comparatively high mortality from dropsies arose from their being in many instances the sequelæ of fever;

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but it is worthy of remark that the epidemic fever, which sometimes proves so fatal at this station, leaves no such effect on the constitution, for though nearly one-half of the troops were attacked by it in 1828, the cases of dropsy were not more numerous in that or the subsequent year.

The other classes of diseases so rarely prove fatal, that it is unnecessary to enter into the proportion of deaths and admissions with the same minuteness. We shall merely exhibit the following comparison of their relative influence among troops in the United Kingdom and Gibraltar, and offer a few remarks in regard to any striking peculiarity which they present.

	Admissions per 1000 of the Force Annually.	
	Of Dragoon Guards and Dragoons in the United Kingdom.	Of Troops in Gibraltar.
From Rheumatic Affections . . .	50	38
Venereal	181	57
Ulcers and Abscesses	133	101
Wounds and Injuries	126	89
Diseases of the Eyes	19	97
" Skin	29	15
Punished	8	16

In this comparison the rarity of venereal affections at Gibraltar is particularly worthy of notice, the proportion of admissions from that cause being scarcely one-third as high as among troops at home, which has a material influence in diminishing the extent of sickness. A reference to the General Abstract, No. I. of Appendix, will show that by far the greater proportion of these diseases are of that description which may not have originated in impure contact, and that in some years, particularly prior to 1824, cases decidedly of venereal origin were almost extinct in the garrison.

This rarity of venereal affections corresponds with what has been observed in the West Indies; but it cannot hence be inferred with the same certainty that the climate is decidedly unfavourable to their existence or propagation, because at Gibraltar, the strictness of the police regulations for the exclusion of all females likely to communicate venereal, may in some measure account for the comparative exemption enjoyed by the troops.

The preceding results show that diseases of the eyes have been more than five times as prevalent as in the United Kingdom; from 1823 to 1827 ophthalmia was exceedingly so among the troops, but since the latter period it has gradually become less frequent.

The very small proportion of the officers and inhabitants afflicted with this disease, even when it raged with the utmost virulence among the soldiers, leads to the presumption that many of the cases may have been artificially excited—a practice once exceedingly common in the army, but which late regulations, restricting the grant of pension for ocular disabilities to cases in which there is a total loss of eyesight, have tended much to diminish.

None of the other diseases above enumerated appear worthy of notice: we shall only advert to the proportion corporally punished, in order to show how much it has diminished of late years.

	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.	Avera
Number Corporally Punished.	38	48	44	51	26	28	56	61	95	81	64	92	77	56	35	20	24	21	21	938	49
Ratio per 1000 of Strength Corporally Punished.	14	15	14	18	9	10	18	20	26	25	19	25	21	16	10	7	8	7	7	..	16

This table exhibits the lowest ratio of corporal punishment at any of the foreign stations, being only 16 per thousand of the strength annually, on the average of 19 years, and since 1833 it has been reduced to less than half that amount. Hence it may be inferred either that crime is less prevalent, or that other punishments have been found equally effectual for the maintenance of discipline in this garrison.

We shall next proceed to illustrate the medical occurrences among the Black Troops during the short period they were employed here.

BLACK TROOPS.

Mortality of
Troops.

It having been judged expedient, shortly after the termination of the last war, to reduce the number of colonial troops serving in the West Indies, most of the supernumerary corps were disbanded; but the 4th West India Regiment, composed principally of men who were anxious to remain in the service rather than return to their own country, was early in 1817 sent to form part of this garrison, where it was supposed they would prove extremely useful in relieving the British soldiers from such duties as subjected them to exposure during

the heat of the day. From the comparatively high temperature of Gibraltar it was not anticipated that this transition would materially affect their health, or that any of those serious consequences would ensue which have demonstrated, in so striking a manner, the extreme susceptibility of the Negro to diseases of the lungs and bowels at this station.

By the War-Office Monthly Returns it appears that the deaths among these troops in one year and ten months of their residence here, amounted to 119, being at the rate of 62 annually, while the strength averaged about 1000 of all ranks, so that the mortality was at least four times as high as that of the European troops in Gibraltar during the same period.

To the medical authorities this appeared an exceedingly high ratio of mortality, and various theories were started as to the cause of it, some attributing it to the cold, others to the heavy fogs, some to want of proper clothing, and others to change of diet; but none seem to have been aware of the fact, that great as this mortality appeared to them, it very little exceeded the ratio to which the Negro is occasionally subject, even in the West Indies where none of these causes are in operation; for it will be seen, by reference to the Windward and Leeward Report, that the mortality among the Negro troops throughout that Command in 1819 was 63 per thousand, and that on the average of 20 years it was not less than 40 per thousand.

We have not been able to trace the number of admissions into hospital and deaths by each disease, with the same minuteness as in other portions of this Report; but the most important of them were as follows:—

	Admitted.	Died.
Fevers	62	..
Diseases of the Lungs	518	67
" Liver	1	1
" Stomach and Bowels	151	20
" Brain	6	1
Dropsies	5	3
Rheumatic Affections	143	..
Venereal	7	..
Abscesses and Ulcers	88	3
Wounds and Injuries	62	..
Punished	47	..
Diseases of the Eyes	7	..
Other Diseases	4	..
Total per Medical Returns	1,100	95
Causes unknown, supposed to have been principally Affections of the Lungs and Bowels . . . . .	..	24
Total per War-Office Returns . . . . .	..	119

Table III.
Showing the Mortality and fatal Diseases among the Black Troops in Gibraltar.

As these troops were for so short a period at the station, and we are unable to trace the cause of so large a proportion of the deaths, it has been deemed unnecessary to enter further into particulars. Enough has been stated to afford another striking instance how unfitted is the constitution of the Negro for any other climate than that of which he is the native.

It is worthy of remark that while the mortality was at least four times as high as among the European troops, there were but half as many admissions into hospital, the proportion treated annually being 550 per thousand of the strength, and the mean daily sick averaged only from 24 to 32 per thousand. This arose from the circumstance, that the only diseases of importance among them were inflammation of the lungs and bowel complaints; and so rapid was their progress, and so little fitted was the constitution of the Negro to struggle against their virulence, that those attacked generally sunk under them in the course of a week or two, so that even with comparatively few cases of sickness occurring, and an hospital by no means so full as was usual at this station, the deaths proved exceedingly numerous. Thus these two data can never be deemed illustrative of the salubrity of a station without a statement of the number of deaths which occur during the same period.

II.—MALTA.

II.
Malta.

Lat. 35° 54' N.; Long. 14° 34' E.

General Description. THIS island is situated in the Mediterranean Sea, about 60 miles from Sicily, and nearly 200 from the African coast. It is of an irregular oval shape, about 11 or 12 miles from north to south, 20 from east to west, and from 60 to 70 in circumference. It is not mountainous, though well diversified by hill and dale: a rocky range, called the Ben Jemma hills, stretches across its entire breadth, but the highest elevation in any part does not exceed 1200 feet. The surface presents the appearance of an inclined plane, sloping gradually from the south-west, where the above elevation is attained, to the north-east, where it dips into the ocean. The whole substratum is composed of a soft calcareous sandstone. It is but scantily covered with soil; and of this the greater portion has been placed there by the hand of industry, or artificially created by breaking the surface of the soft rock into small fragments, which, crumbling by exposure to the action of the atmosphere, in the course of two or three years become well adapted for the purpose of agriculture.

The island contains neither river nor lake, and from its geological structure, and the absorbent nature of the soil, has but little marshy or swampy ground; indeed, so far as can be ascertained, there is none to which that character is assignable, except two spots of very limited extent, at the head of the great harbour and St. Paul's Bay, where the ocean has receded, and left an accumulation of moist soil, from which noxious exhalations have been supposed to emanate. There is no exuberant vegetation, brushwood, or forest; the verdure is scanty, and the greater part of the surface presents nothing to the view but the arid rock.

Adjacent to Malta, from which it is only separated by a narrow strait of three or four miles, lies the island of Gozo, a dependency of this Command; its greatest length is eleven, and breadth six miles; it consists of several hills, which, at the north-western extremity, rise to the height of 2000 feet, and, declining towards the south, break into a diversity of gentle rising grounds and fertile valleys. The substratum is of the same calcareous rock as Malta, but better covered with soil and more capable of cultivation. There are a few smaller islands in the vicinity, which, not being occupied by troops, it is unnecessary to describe.

Temperature. Malta, being much exposed to the influence of the hot winds which sweep over the deserts of Africa, and the sandy coast of Egypt and Syria, is subject to a higher temperature, particularly during the summer months, than is usual in the latitude of that island; indeed the heat at that period is little inferior to what is experienced in tropical regions. This high degree of temperature exists not only during the day, but, owing to the radiation of the heat absorbed by the rocky surface of the ground, and the thick stone walls of the buildings, continues, with very little abatement, even after the solar influence has ceased; and sometimes, for a period of several weeks together, the thermometer maintains, during the night, the same height as throughout the day, creating thereby a feeling of extreme lassitude and oppression among all classes of residents. Gozo being more under cultivation, and having a less extent of rocky surface to absorb the heat, is generally cooler than Malta by at least two or three degrees: we possess no specific details of the temperature there, but at Malta the range of the thermometer on the average of five years, from 1830 to 1835, was as under:—

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Maximum .	61	60½	63	67	73½	78	83	86	83	77	69	63½
Medium .	56½	56½	58½	63	69	74	79	81½	77½	70½	65	59
Minimum .	53	52½	54½	59	64	69½	75	77½	72½	64	61	54½

Rain. We possess no measurement of the quantity of rain which falls in this island throughout the year. In September there are frequent showers, increasing in frequency during October and November; but from December to February the rain falls with nearly the same violence as in the tropics, and the atmosphere continues surcharged with moisture till March; it then begins to clear, and during the five following months scarcely a drop falls, and the sky is generally without a cloud.

Winds. The most prevalent winds in Malta are from the south-east, south, and north-west. That from the south-east, termed the sirocco, is the most common; and the disagreeable effect it produces on the human frame is frequently adverted to in the medical reports. It prevails principally during the autumnal months. There is no regular land and sea breeze, which, in some southern stations, serves materially to modify the temperature.

General Salubrity. This island has been esteemed exceedingly salubrious, and the rapid increase of its population repeatedly adduced in proof of it; but, as accurate records of the deaths and births, since 1819, are to be found in the Medical Reports, we are more inclined to draw our deductions from that source than to trust to assertions on the subject. For this purpose we therefore submit the annexed Table:—

Years.	Births.	Deaths.	Remarks.
1819	3,687	2,396	
1820	3,761	2,663	
1821	3,468	2,266	
1822	3,219	2,126	
1823	3,388	2,483	
1824	3,575	2,365	
1825	3,544	2,613	
1826	3,355	2,284	
1827	3,254	2,443	
1828	3,182	2,522	
1829	3,288	2,302	
1830	3,499	3,407	{ Small-pox prevailed to a great extent in this year.
1831	3,513	2,581	
1832	3,263	2,470	
1833	3,317	3,173	{ Infantile diseases prevailed in this year, to which the excess of mortality may principally be attributed.
1834	3,312	2,732	
Total	54,625	40,826	
Average	3,414	2,552	

The aggregate population, which, exclusive of Gozo, was about 92,500 in 1819, had increased to 99,876 in 1828, and is now upwards of 103,000. If, therefore, we assume 100,000 to have been the average during the period referred to in this Table, the annual ratio of mortality would be about 1 in 39, or nearly $2\frac{5}{10}$ per cent., for all ages, while in this country it has been, on the average of the same years, only 1 in $47\frac{1}{2}$, or $2\frac{2}{10}$ per cent.; so that, even as regards the indigenous inhabitants of both countries, Malta is by no means so healthy as Britain, but seems only to enjoy the average salubrity of the states in the South of Europe, where the mortality varies from 1 in 35 to 1 in 40 of the population annually.

But besides the mortality of ordinary years, on which the above estimate is founded, Malta, in 1813, suffered from the ravages of the plague, which cut off 4486 of the inhabitants, between April and November; and in 1837 cholera broke out, and also cut off several thousands. Here, therefore, as at Gibraltar and other stations liable to occasional visitations of pestilence, it is exceedingly difficult to fix exactly the ratio of mortality among the inhabitants, as so much depends on the series of years over which the observations extend.

The diseases by which this mortality has been caused will be hereafter referred to, for the purpose of elucidating the nature of the climate; we shall, in the mean time, proceed to investigate the usual details regarding the troops composing the garrison.

For several years past, the force stationed in this island has consisted of the service companies of four infantry regiments of the line, two companies of artillery, and the Royal Malta Fencibles, a colonial corps composed of natives.

The employment of the troops consists merely of the usual routine of garrison duties; and care is taken that these should be performed at the hours least likely to expose them to solar influence. The men are generally on guard two nights in the week. Fatigue parties are seldom required, and most of the outposts and smaller guards are furnished by the Malta Fencibles.

It would lead us much beyond the limits to which this Report must be restricted, were we to enter into minute details regarding the extent of the barrack and hospital accommodation throughout the island. On this head it may be sufficient to state, that as most of the buildings were originally constructed on a gigantic scale by the Knights of Malta, at a period when their number much exceeded that of the present garrison, ample space is every where afforded for the comfort and health of the troops*; and they are of so solid a nature, that ages may pass away before they require much repair. They consist, for the most part, of bomb-proof casemates placed behind the walls of the fortifications, of which indeed they form a part; the barrack-yards and squares are the quarries whence the materials have been obtained, and the lower part of the buildings has even, in some instances, been chiselled out of the soft rock of which the island is composed. The position of these buildings behind the walls of the fortification renders thorough ventilation impracticable by the usual means, but this defect is partially remedied by long galleries and doors of communication, and any inconvenience to which it may give rise is more than compensated by the comparative coolness enjoyed by the troops during summer, in consequence of being sheltered from the intensity of the sun's rays by the thick roof of the casemates.

This will suffice for a general description of these buildings; we shall here also notice the situation and local peculiarities of each, in order that any subsequent reference to them may be readily understood.

The Citadel of St. Elmo, in which are the principal barracks of the troops, is situated at the northern extremity of the tongue of land whereon the city of Valetta is built, and which

* The accommodation is estimated as sufficient for 5000 men; the average force, including the Malta Fencibles, has rarely exceeded half that number during the period under review.

II.
Malta.

by its projection into the sea divides a large bay into two harbours, one termed the Grand, the other the Quarantine Harbour. The barracks in the Citadel are the Upper St. Elmo, occupied by the artillery, and described as being dry and well ventilated, and the Lower St. Elmo, occupied by the troops of the line, and said to be occasionally damp, owing to the lower rooms not reaching above high-water mark.

The force quartered here generally consists of the six service companies of one regiment of the line, and three companies of another. At Valetta, the Head Quarters of the Malta Fencibles are accommodated in a casemated barrack on the land side of the works, of which the ventilation is said to be defective, but not to such an extent as to affect the health of the inmates.

The six service companies of another infantry corps are quartered in the Floriana, one of the out-works of Valetta. The barracks there are also bomb-proof casemates erected on the land extremity of the isthmus, in that part of the works which commands the Quarantine Harbour. They are about 100 feet above the level of the sea, but below that of the esplanade, and situated nearly midway between the head of the two bays which form the harbours, where there is much alluvial deposit brought down by the watercourses during the rain, and where the soil is consequently wet, and the sea shallow and muddy.

On the eastern side of the Grand Harbour, opposite to Valetta, are situated the three populous towns of Isola, Burmola, and Vittoriosa; the two former are about half a mile apart, the latter a mile distant from either, the whole occupying an area of two and a half miles, and enclosed within one extensive line of fortifications, called the Cottonera, which is generally garrisoned by the service companies of an infantry corps, half a company of artillery, and a company of the Malta Fencibles. The three principal barracks in the Cottonera are those of Isola, St. Francisco de Paulo, and Fort St. Salvador; the first in the town of Isola, the second in that of Burmola, and the third in Vittoriosa: the two former are from 60 to 80 feet, and the latter nearly 400 feet, above the level of the sea. They are all bomb-proof casemates, two stories high, with lofty ceilings.

These are the principal barracks in the island: there are three smaller ones at Fort Ricasoli, Fort Manuel, and Fort Tigné, which shall next be briefly described.

Fort Ricasoli is an extensive fortification covering a neck of land at the north-eastern extremity of the Great Harbour; and from 30 to 60 feet above the level of the sea. The barracks consist of bomb-proof casemates possessing abundance of accommodation for the small force quartered there, which in general consists of a company of one of the corps at Valetta and a few artillery men. From the position of these barracks at the mouth of the harbour, they enjoy the full benefit of every breeze from the ocean, and are cooler by several degrees than any other in the island. They are esteemed so healthy that a convalescent dépôt was for some years formed there, and with very good effect.

Fort Manuel is a regular quadrangular fortification, comprising a square of about 200 feet, and crowning a small island which commands the Quarantine Harbour. The force there, consisting of a company of one of the corps at Valetta with a few artillery men, performs the duties of the Lazaretto, and is quartered in casemates affording extensive and healthy accommodation.

Fort Tigné is a round tower with casemates, protecting the north-west entrance of the Quarantine Harbour, and about 50 feet above the level of the sea: the barracks are esteemed healthy, and possess ample accommodation for the garrison, which generally consists of a subaltern's detachment from the regiment at Valetta and four artillery men.

The troops stationed at Gozo, consisting of a company of the Royal Maltese Fencibles, and half a company of one of the infantry corps at Valetta, with four or five artillery men, are quartered in Fort Chambray, an extensive fortification elevated nearly 500 feet above the level of the sea. The barrack consists of a large bomb-proof building, affording abundance of accommodation, with a good hospital attached to it.

There are three hospitals for the troops in Malta; one, termed the General Hospital, is situated in Valetta, and of great extent, having been formerly occupied by the sick of the Knights of Malta. A considerable part of it is now used for stores and other purposes, but the space occupied by the troops is sufficiently ample for their accommodation; and it is, therefore, unnecessary to enter into any details of the number or extent of the wards, and other conveniences for the patients. The situation has been objected to, in consequence of being shut in on one side by the adjacent buildings which impede ventilation; but, in other respects, it appears to be well adapted for the sick.

The Floriana hospital, situated in the outworks of that name, consists of a range of apartments extending along two sides of a quadrangle. In most of these the ventilation is free, as the windows look into the square, and the open space in which the hospital has been built offers no impediment to the circulation of air.

Most of the sick of the troops in the Cottonera are brought across the harbour to the General Hospital at Valetta, but at Fort Ricasoli there is an hospital capable of furnishing good accommodation for 50 or 60 patients, though, being now little used, it is unnecessary to enter into the details of its construction*.

The diet of the British soldier at this station is good and ample, and the comparatively low price of all the necessaries of life enables him to have an excellent breakfast and dinner mess out of the authorized stoppage from his pay. Attempts have been made to introduce an evening meal in various corps, both with a view of diminishing the surplus pay, too often wasted in procuring the means of intoxication, and also to reduce the long interval without

* Some change has recently taken place in regard to these hospitals; that in the Floriana having been applied to other purposes, and one opened in the Cottonera.

Hospitals.

Rations and Diet.

food between the dinner hour at one o'clock, and breakfast at seven or eight the following morning; but as the stoppage for this purpose could not, consistently with the present regulations, be made compulsory, the measure was ultimately abandoned.

As the Maltese soldiers use little animal food, their ration consists only of 1½ lb. of bread, on six days of the week, and 1½ lb. of biscuit on the other day, for which each is subject to a stoppage of 1½d. sterling daily. The ration of the troops of the line consists of 1 lb. of fresh meat, and 1 lb. of bread on six days of the week, and 1 lb. of salt beef or pork, and ¾ of a lb. of biscuit on the other day, for which each soldier is subject to the usual stoppage of 5d. per day. His breakfast consists of a pint of coffee, with the ration bread, and his dinner of the meat made into soup, with vegetables and potatoes. The wheat required for the troops is generally imported from the Black Sea, and converted into flour in a Government establishment at Malta, as the island does not supply sufficient for its own consumption. The cattle are imported from Barbary, and are stall-fed before being brought into use; mutton, which is also occasionally issued to the troops, is obtained in the island.

The issue of salt provisions once a week prevents the supply which it is always necessary to have in store from becoming unserviceable by age, and is too limited to prove prejudicial to the health of the troops. We are not aware of any reason for the substitution of biscuit for bread as an article of diet, as there is an excellent bakery within the fortifications from which any quantity of bread can be supplied, and biscuit forms no part of the rations at any of the other stations of which the details have yet been investigated.

Having thus adverted to the different circumstances by which the health of the troops is likely to have been affected, we shall next proceed to show the extent of sickness and mortality. The Malta Fencibles being natives of the island, the details relative to them will be considered separately. The following Table, therefore, refers to the British troops only:—

Years.	Mean Strength, per War-Office Returns.	Admissions into Hospital.	Deaths, per Medical Returns.	Ratio per 1000 of Mean Strength.	
				Admitted.	Died.
1817	2,535	2,274	28	897	11
1818	2,317	2,847	49	1,229	21
1819	1,501	1,809	37	1,206	25
1820	1,567	1,705	36	1,088	23
1821	1,927	2,364	22	1,227	11
1822	2,094	2,667	35	1,274	17
1823	1,973	2,143	19	1,086	10
1824	1,860	3,313	50	1,781	27
1825	1,760	1,663	18	944	10
1826	2,120	2,133	27	1,006	13
1827	1,722	1,946	19	1,130	11
1828	2,132	2,109	27	989	13
1829	2,287	2,229	32	975	14
1830	2,299	1,955	43	850	19
1831	2,056	2,212	47	1,076	23
1832	2,045	2,444	24	1,195	12
1833	2,124	2,914	34	1,372	16
1834	2,198	2,931	47	1,334	21
1835	2,123	2,430	32	1,145	15
1836	2,186	2,551	39	1,167	18
Total	40,826	46,639	665	..	..
Average	2041	2332	33	1,142	16.3

Table IV.
Showing the Admissions into Hospital and Deaths among the British Troops in Malta.

Thus, it appears, that among every thousand soldiers serving in Malta, 1142 cases of sickness have been admitted into hospital annually on the average of the last 20 years, being more by 176 per thousand than in Gibraltar, though the mortality is less than at that station.

The deaths, as shown by the preceding table, have averaged only 16.3 per thousand annually, but only those are included which took place under medical treatment. The total, as ascertained by a comparison of the War Office and Medical Returns, was as under:—

	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Deaths per War-Office Returns . . .	33	54	42	41	26	40	22	50	24	29	23	33	36	49	52	28	40	54	43	44	763
Deaths per Medical Returns . . .	28	49	37	36	22	35	19	50	18	27	19	27	32	43	47	24	34	47	32	39	665
Omitted in the Medical Returns	5	5	5	5	4	5	3	..	6	2	4	6	4	6	5	4	6	7	11	5	98

The following are the causes to which some of the deaths thus omitted in the Medical Returns are attributable: Drowned 9, Suicide 16, Accidents 7, Murdered 1, Executed 2, Suffocated 1, Poisoned 1, Suddenly 12, Found Dead 4—Total 53; leaving 45 regarding which we can supply no information, except that they have in all probability originated in similar accidental causes prior to 1824, from which period only we have been able to trace those above stated.

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These casualties increase the average ratio of mortality to 18.7 per thousand of the strength annually, a sufficient proof that the climate of Malta by no means deserves that salubrious character which has, by some authors, been assigned to it. We have already shown, by reference to the mortality among the natives, that it is much the same, in this respect, as the other states in the south of Europe, and the extent of mortality among the troops, during the above period, sufficiently corroborates that deduction. Were it not for the occurrence of the epidemic fever in Gibraltar in 1828, the average mortality there would have been lower than at this station by at least 5 per thousand annually; and we have shown that Malta is by no means exempt from visitations of pestilence in a much more aggravated form, though no instance of it has occurred during the years over which this Report extends.

Had we taken the total admissions and deaths as originally stated in the War Office and Medical Returns, this ratio would have been much higher; but in 1817 we found it necessary to deduct the deaths of 27 men of the 14th Regiment, who arrived from the Ionian Islands in the last stage of fever, and died shortly after they landed. Seven deaths were deducted, in 1818, for a like reason. Corresponding alterations have been made in the number of admissions where it was possible to ascertain them.

From 1821 to 1826 a convalescent dépôt was formed at Malta for invalids from the Ionian Islands, among whom about 30 deaths occurred, which, having been caused by diseases contracted in the latter Command, cannot be attributed to the climate of Malta, though they were originally included in the Medical Returns of that island. These we have therefore kept distinct, and have subjoined, in the Appendix No. V., a note of the principles on which that correction has been made. This has added very materially to the labour of framing this Report, and shows how essential it is, in future Returns prepared with a view of exhibiting the influence of each of the Colonies on the health of our troops, that the deaths of invalids sent from other stations in bad health should be kept separate from those which occur among the troops composing the garrison.

The diseases whereby the admissions and deaths in each year have been occasioned among the troops in this island are enumerated in Abstract No. II. of Appendix, of which the results are exhibited in a comprehensive form in the following Table:—

Table V.
Showing the principal Diseases among the troops in Malta.

	ADMISSIONS.		DEATHS.	
	Total among whole force in 20 Years.	Annual Ratio per 1000 of Mean Strength.	Total among whole force in 20 years.	Annual Ratio per 1000 of Mean Strength.
By Fevers	7,078	173	118	2.9
Eruptive Fevers	34	1	3	.1
Diseases of Lungs	4,883	120	245	6.0
Liver	857	21	47	1.1
Stomach and Bowels	6,317	155	147	3.6
Brain	236	6	30	.8
Dropsies	70	2	16	.4
Rheumatic Affections	1,383	34	9	
Venereal	7,336	180	2	
Abscesses and Ulcers	6,013	147	7	
Wounds and Injuries	4,105	100	23	1.4
Punished	1,628	40	..	
Diseases of the Eyes	4,162	102	..	
Skin	858	21	..	
All other Diseases	1,679	40	18	
Total	46,639	1,142	665	16.3

Though, as already stated, there has been a larger proportion of admissions among the troops than in Gibraltar, yet on investigating the diseases by which they were occasioned we find that the excess is principally among those which seldom prove fatal, such as venereal affections, ulcers, and diseases of the eyes. This accounts for the extent of sickness being greater, though the mortality has been less than at that station.

We shall now proceed to make a few remarks on the principal classes of diseases contained in the preceding Table.

FEVERS.

Under this class are comprised—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Quotidian Intermittent	232	1	1 in 232
Tertian	79	..	0 .. 79
Remittent	384	16	1 .. 24
Common Continued	6,255	94	1 .. 67
Synochus	125	5	1 .. 25
Typhus	3	2	2 .. 3
Total	7,078	118	1 in 60
Ratio per 1000 of Mean Strength	173	2.9	..

On comparing these results with the admissions and deaths by the same class of diseases among troops in the United Kingdom, or in Gibraltar, it will be found that, exclusive of the epidemic of 1828 in the latter garrison, the troops at Malta have suffered more from fevers than those at Gibraltar, and twice as much as those at home.

It would appear that the troops at some of the military stations in this island are much more subject to febrile diseases than at others; taking the average of those at Valetta, Cottonera, and Floriana, during eight years, the admissions and deaths per thousand annually were—

	In Valetta.	Cottonera.	Floriana.
Admitted	133	178	217
Died	1.4	3.5	4.0

We have not the materials on which this calculation has been founded; but if they are correct it certainly shows a remarkable exemption in favour of Valetta, where, though fevers are more common, they occasion less mortality than in the United Kingdom.

It may be proper to remark that, notwithstanding the care which has been taken to extract the deaths of invalids sent to the island from those occurring among the troops of the garrison, it is possible a few of the former may still be included which are most likely to have been classed under the head of fevers. Indeed, it has been stated by several of the medical authorities that almost every case of intermitten fever has been traced to sources independent of the climate of Malta, having been originally contracted during a previous service in the Ionian Islands, or in other colonies where that disease prevailed.

The absence of forests, or any dense vegetation throughout the island, and the nature of the soil, which rapidly absorbs moisture and prevents the formation of marshes, are generally assigned as reasons for the exemption of this garrison from those fevers which have proved so injurious at other stations in the Mediterranean. It may be observed, however, that in several of the Ionian Islands, equally destitute of marsh and vegetation, fevers are exceedingly prevalent and fatal among the troops, and conversely, where both these alleged causes abound under a high temperature, as in the Mauritius,* they are neither so prevalent nor so fatal as in Malta.

As the Returns afford very ample information in regard to the diseases of the civil inhabitants of Malta, we have been able to trace the influence of fever among that class as well as the military. In No. III. of Appendix will be found an abstract showing the deaths and fatal diseases among the whole population from 1822 to 1834 inclusive, from which a Table has been framed on the same principles as for the troops, whereby it appears that the average number deceasing annually from fever in a population of 100,000 of all ages was 211, or about $2\frac{1}{5}$ per thousand, being only in a very small degree lower than among the troops; and, in order to show how nearly the same class of diseases will produce similar effects in countries of which the mean temperature and local peculiarities are widely different, it may be stated that the deaths from fever in Sweden in one year, out of the whole civil population of 2,500,000 of all ages, were 5877, or about $2\frac{3}{5}$ per thousand.

A reference to the Abstract above referred to also shows that though, on the average of a long series of years, this class of diseases is most prevalent among the civil inhabitants from June to October, it is not so uniformly, or in a very marked degree—the deaths from fever having in several years been more numerous during the winter than the summer months. This corresponds with the result of similar observations in regard to the relative mortality by fever among troops in the United Kingdom at different seasons. At page 60 of this Report will be found some interesting particulars illustrative of the influence of age on the mortality among troops by this class of diseases.

The next class on which we have to offer a few observations is

DISEASES OF THE LUNGS;

Under which are comprised in the preceding Table—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Inflammation of Lungs.	1,370	44	1 in 31
Pleurisy	21	..	0 " 21
Spitting of Blood	106	8	1 " 13
Consumption	235	144	10 " 16
Acute Catarrh	2,616	18	1 " 145
Chronic "	425	26	1 " 16
Asthma	40	1	1 " 40
Difficulty of Breathing.	70	4	1 " 17
Total	4,583	245	1 in 20
Annual Ratio per 1000 of Mean Strength	120	6	..

* In this Colony, as will be shown in a future Report, only 13 cases of intermitten, and 7 cases of remittent fever occurred in 19 years among the troops, out of an aggregate strength of 30,515.

II.
Malta.

The climate of this island appears from the preceding results to be by no means favourable to persons predisposed to these diseases: the mortality is higher than in Gibraltar, and there is every reason to believe that could we have taken into account the number invalided, and who died on their passage, it would have proved even higher than at home. It is somewhat remarkable that, in a climate where the thermometer never sinks to the freezing point, where the temperature at night is generally within a few degrees the same as during the day, and where those sudden transitions from heat to cold, to which this class of diseases is generally attributed in other countries, are exceedingly rare, the ratio of admissions should be only about one-fifth less than in the United Kingdom.

It may serve as a striking illustration how little influence the climate of Malta is likely to have in diminishing the tendency to consumption, that the proportion attacked by that disease among the troops there during the last seven years has averaged $6\frac{7}{8}$ per thousand of the strength annually, while in the United Kingdom, during the same period, the proportion attacked of the Dragoon Guards and Dragoons was but $6\frac{1}{8}$ per thousand annually. Nor is the fatal influence of diseases of the lungs confined to the troops alone; it extends in a corresponding degree to the inhabitants. A reference to Abstract No. III. of Appendix shows that the deaths from these diseases among the population of all ages in the course of 13 years, from 1822 to 1834 inclusive, have been as follows:—

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Inflammation of Lungs	75	58	73	73	55	29	10	19	25	27	31	48	523
Pleurisy	15	7	11	7	12	3	7	6	3	4	6	11	92
Spitting of Blood	13	10	20	7	4	13	4	8	7	10	13	9	118
Phthisis Pulmonalis	115	94	115	122	147	91	110	110	103	129	105	122	1363
Consumption*	238	177	205	179	202	223	294	249	258	301	233	227	2786
Catarrh	110	118	128	102	71	66	60	64	53	70	83	131	1056
Asthma	80	73	74	53	46	31	38	30	19	34	43	66	587
Hooping Cough	30	23	18	14	16	11	8	3	7	2	2	5	139
Total	676	560	644	557	553	467	531	489	475	577	516	619	6664

This total of 6664 deaths in 13 years shows the mortality to have been 513 annually, which upon an average population of 100,000 of all ages is about $5\frac{1}{8}$ per thousand of the strength, being scarcely one per thousand less than among the troops, notwithstanding the night exposure of the latter in the course of their military duties.

Though the climate of this island has been supposed favourable to diseases of the lungs, its inhabitants appear to suffer from them nearly as much as those of high northern latitudes; for the Returns of Sweden show that there were only 14,087 deaths from this class of diseases out of the whole population in one year, being in the ratio of $5\frac{1}{8}$ per thousand, or within a fraction the same as in Malta.

During the greater part of 1833, but particularly in February, March, and September, the influenza or epidemic catarrh, which in that year was so common throughout Europe, prevailed in this island. The 7th Fusiliers and 94th Foot suffered most from it, upwards of one-third of the strength having been attacked; and, in the latter corps, nearly 100 cases were complicated with pneumonia. The officers suffered in the same proportion as the troops; but the women and children were rather more exempt. Only two cases proved fatal among the soldiers. It was, however, of a much more severe character among the inhabitants, for, as will be seen by the Abstract No. III. of Appendix, the deaths among them from catarrh and phthisis were nearly twice as numerous in that as in any of the preceding years. There was no atmospheric peculiarity during the early part of the year when the epidemic prevailed; but September was much more variable than usual—dry and moist, warm and cool weather following in rapid succession, with occasional heavy rains. The disease gradually disappeared towards the latter end of the year.

DISEASES OF THE LIVER.

Under this head are comprised in the preceding Table—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Acute Inflammation of the Liver.	411	19	1 in 22
Chronic	198	23	1 " 9
Jaundice	248	5	1 " 49
Total	857	47	1 in 18
Ratio per 1000 of Mean Strength	21	1.1	..

* The deaths reported by the Maltese medical practitioners under the head of consumption, as distinguished from phthisis pulmonalis, are understood in many instances to have referred to that class of cases more generally designated *marasmus*.

This class of diseases is about twice as prevalent and occasions nearly thrice as many deaths among the troops at this station as in Gibraltar or the United Kingdom, but still it is no great source either of inefficiency or mortality. Among the civil inhabitants it is very rare indeed, even more so than in Britain, the deaths being only 11 annually out of a population of 100,000, while among the military the proportion has been exactly ten times as high; but in this comparison we must keep in view that many of the soldiers may possibly have contracted the disease, during a previous course of foreign service in climates where it was prevalent, and the greater mortality among them may therefore be accounted for without referring it either to their duties or course of life.

DISEASES OF THE STOMACH AND BOWELS.

Under this head are comprised in the preceding Table—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Abdominal Inflammation . . .	21	4	1 in 7
Inflammation of Stomach . . .	10	1	1 „ 10
„ Bowels . . .	68	7	1 „ 10
Vomiting of Blood . . .	9	2	1 „ 4½
Acute Dysentery . . .	1303	78	1 „ 17
Chronic „ . . .	98	16	1 „ 6
Indigestion . . .	164	1	1 „ 164
Colic . . .	508	2	1 „ 254
Constipation . . .	659	1	1 „ 659
Cholera . . .	454	5	1 „ 91
Diarrhœa . . .	3023	30	1 „ 101
Total . . .	6317	147	1 in 43
Ratio per 1000 of Mean Strength	155	3·6	..

This class of diseases prevails to a considerable extent: fortunately, however, not in any very aggravated forms: acute and chronic dysentery, which prove so fatal in the West Indies, being here comparatively rare. The annual mortality amounts altogether to $3\frac{2}{7}$ per thousand of the strength, which is considerably higher than in Gibraltar, though the proportion attacked is less. In the Report on the West Indies it was stated that this class of diseases produced comparatively little mortality either among the officers or civil inhabitants; and we were hence led to infer that among the soldiers it was, perhaps, not so much attributable to the influence of climate as to the quality of the diet to which they were restricted. We now possess an indirect proof of the accuracy of these deductions in the fact, that in this island, where the troops enjoy the advantage of fresh provisions, the mortality among them by diseases of the bowels does not exceed that of the civil inhabitants, as will be seen by the following extract from No. III. of Appendix, showing the total deaths from all diseases of this class among the inhabitants during a period of 13 years:—

Abdominal Inflammation . . .	15
Inflammation of Stomach . . .	47
„ Bowels . . .	294
Vomiting of Blood . . .	12
Indigestion . . .	18
Colic . . .	143
Dysentery . . .	1478
Diarrhœa . . .	2901
Cholera . . .	12

13) 4920

Annually . . . 380

This annual mortality of 380 divided among a population of 100,000 makes the ratio of deaths $3\frac{2}{7}$ per thousand, being rather higher than among the troops. A considerable portion of those reported under the head of diarrhœa may no doubt have arisen from infantile diseases of that nature, but even making due allowance for this, there is ample proof that the troops do not suffer to a greater extent than the inhabitants. It may, perhaps, also be inferred that, wherever the soldier enjoys the advantages of proper diet and accommodation, there is nothing in the nature of his duties to render him peculiarly subject to the influence of this class of diseases.

The following statement of the monthly admissions from bowel complaints among the troops, between 1816 and 1823, shows that they principally prevail from June to November:—

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL.
By Acute Dysentery	35	19	21	18	18	37	52	50	67	75	111	61	564
Cholera Morbus .	3	1	2	5	8	10	26	13	7	13	6	2	106
Diarrhœa . . .	45	31	32	28	45	84	128	158	174	167	129	65	1086
Total . . .	83	51	55	51	71	131	206	221	258	255	246	128	1756

II.
Malta.

The deaths by dysentery and diarrhoea among the civil population, from 1822 to 1834, establish, in nearly as marked a degree, the same fact as to the period at which these diseases prove most fatal; and a reference to the abstract on which the calculations are framed, will show that it is not occasionally, but uniformly, that they prevail most at that season of the year.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL.
By Dysentery .	66	55	54	41	53	112	199	189	162	212	207	128	1478
Diarrhoea .	206	166	168	166	155	260	354	335	260	279	278	274	2901
Total .	272	221	222	207	208	372	553	524	422	491	485	402	4379

The deaths by cholera among the inhabitants, during these 13 years, having altogether amounted only to 12, are scarcely worthy of insertion.

These documents appear conclusive that diseases of the bowels are intimately connected with, if not induced by, increased temperature, a fact which, though often asserted, has hitherto been without any proof on so extensive a scale: consequently, in all tropical climates in which troops are employed, it is more requisite that their food should be nutritive and easy of digestion, than in temperate or northern regions, as the same quantity of salt meat which might there be consumed with comparative impunity may, from this cause, in warm latitudes, prove an active source of disease. We are well aware that no diet, however simple or well regulated, will secure to the soldier an entire immunity from diseases of this class when exposed to a high temperature in tropical climates; but it is hoped much may be done, by a due attention in this respect, to reduce their prevalence and diminish their fatal influence.

In several of the West India islands, where affections of the bowels are much more prevalent than in others, the medical authorities have attributed them to the exceedingly moist character of the climate: it appears, however, that from June to September, when scarcely a drop of rain ever falls in this island, and the sky is without a cloud, the admissions and deaths from these diseases are at their maximum, whereas from December to March, when most rain falls, they are nearly at the minimum.

EPIDEMIC CHOLERA.

No cases of this disease have occurred during the period embraced in this Report; it appeared, however, in June, 1837, and was productive of considerable mortality among the troops and inhabitants, but the details cannot properly be included here.

DISEASES OF THE BRAIN.

Under this class are comprised in the preceding Table:—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Inflammation of the Brain	9	1	1 in 9
Headache	16	..	0 „ 16
Apoplexy	28	15	1 „ 2
Palsy	29	2	1 „ 14
Catalepsy	1	..	0 „ 1
Brain Fever of Drunkards	38	5	1 „ 8
Fatuity	15	2	1 „ 7
Madness	30	2	1 „ 15
Water in the Head	1	1	1 „ 1
Epilepsy	69	2	1 „ 35
Total	236	30	..
Annual Ratio per 1000 of Mean Strength	6	$\frac{8}{1000}$	1 in 8

The ratio of admissions by this class of diseases is exactly the same as among troops in the United Kingdom and Gibraltar, and the ratio of deaths very nearly corresponds. In Malta, too, as in this country, we find the mortality twice as high among the civil as the military inhabitants; the total deaths among the former in 13 years having amounted to 1758, or 135 annually, which, calculated upon a population of 100,000, makes the mortality nearly $1\frac{1}{10}$ per thousand. This high ratio, in civil as compared with military life, must be partly attributable to several of the deaths by this class among the soldiers being omitted in the Medical Returns, when they occurred too suddenly to admit of treatment. Cerebral affections are also more common among persons in old age than men in the prime of life, of whom the army is for the most part composed.

The abstract of the diseases of the civil population, before referred to, affords good evidence that the mortality by diseases of the brain is, in this island at least, not increased by a high temperature. Take, for instance, the deaths from apoplexy, which constitute four-fifths of the whole, and we find that from 1822 to 1834 the total in each month was as follows:—

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Died from Apoplexy	207	183	173	131	114	93	86	80	97	112	117	147	1540

Thus from June to September, the hottest months in the year, the deaths from apoplexy are scarcely half as numerous as from December to March, which are the coldest; and if the mortality for every year is examined separately, it will be found to exhibit the same feature with remarkable uniformity. The deaths by this disease, too, increase with the utmost regularity from August, when they are at the minimum, to January, when they attain the maximum, and diminish exactly in the same proportion during the other six months of the year. The infantile diseases reported under the head of convulsions follow the same law, though not so uniformly or in so marked a degree.

DROPSIES.

Under this class are comprised in the preceding Table:—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Subcutaneous Dropsy	36	9	1 in 4
Abdominal „	30	5	1 „ 6
Water in the Chest	4	2	1 „ 2
Total	70	16	1 in 4
Annual Ratio per 1000 of Mean Strength	2	$\frac{1}{5}$	..

The mortality by this class of diseases is much the same as among troops in the United Kingdom or in Gibraltar, but the admissions are more numerous. No useful deductions could be drawn from a comparison of the mortality among the troops and civil inhabitants, as so large a portion of the deaths in old age may be traced to dropsical affections, and there are comparatively few soldiers at that period of life.

The other classes of diseases, which more rarely prove fatal, it will be sufficient to notice in a general way, by bringing the proportion of admissions into comparison with that in the United Kingdom and Gibraltar, viz.—

	Admissions per 1000 of the Force Annually.		
	In Malta.	In Gibraltar.	In the United Kingdom.
From Rheumatic Affections . . .	34	38	50
Venereal „	180	57	181
Ulcers and Abscesses	147	101	133
Wounds and Injuries	100	89	126
Diseases of the Eyes	102	97	19
„ Skin	21	15	29
Punishment	40	16	8

It is one of the most striking features in the above comparison that the proportion of venereal affections is to within a fraction the same as in the United Kingdom, and more than thrice as high as in Gibraltar. Though there are certainly not the same facilities as in that garrison for preventing intercourse with those from whom the troops are likely to contract infection, yet as the police regulations for the seclusion of all females labouring under venereal are very rigidly enforced in Malta, the difference in the health of the troops in this respect is very remarkable. This peculiarity, taken in connection with what has already been observed in regard to the rarity of this disease in the West Indies, where no sanatory regulations exist on the subject, confirms the supposition that certain climates may possess an influence in favouring or retarding its propagation, though on what agency that influence depends it is impossible to determine.

The proportion of admissions under the head of punishment appears to have been much higher in this Command than in Gibraltar or the United Kingdom, owing to the extent of punishment prior to 1821. Since that period the admissions have undergone a rapid diminution, as will appear by the following Table:—

	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.	Average.
Number Corporally Punished per 1000 of Strength	166	231	189	214	113	87	61	65	58	46	25	59	38	44	43	20	38	38	55	38	1628	81½
Number Corporally Punished	65	100	126	137	59	42	31	35	33	22	14	28	17	19	29	10	18	18	26	18	..	40

II.
Malta.

This punishment has not been so much on the decline here as at other stations; the ratio annually subject to it during the last four years has been more than twice as high as in Gibraltar, and exhibits little alteration since 1826.

Diseases of the eyes have proved a very great source of inefficiency among the troops in this Command; indeed, more so than at any of the other stations which have yet come under observation, the total admissions amounting to 4162, or in the ratio of 102 per thousand of the mean strength annually. Almost all these are reported under the head of ophthalmia, which in many instances proved exceedingly severe, and, in several, terminated in loss of vision, as will be seen by reference to the numbers invalidated on that account.

It was in 1822 and 1824 that this disease prevailed most among the troops, and at each of these periods it was principally confined to one corps. In 1822, for instance, 184 men were admitted from the 85th regiment alone, then about 600 strong, while from all the rest of the garrison, amounting to upwards of 1300, only 138 were admitted. In 1824 also a still more striking disproportion was observed; the 95th regiment, though only about 550 strong, sent into hospital no less than 725 cases in eight months, while from all the rest of the garrison, amounting to 1250, the cases admitted in that year were only 86.

These, combined with other suspicious circumstances, induced a belief among many of the medical authorities that the disease had been artificially excited, a practice not unfrequent among soldiers who are anxious to be discharged, or to avoid duty. It might therefore lead to erroneous conclusions, were we to estimate the influence of the climate in inducing ocular affections from the gross number of admissions, as shown in the General Abstract. An hospital has for several years been set apart for the treatment of ophthalmia, and every means adopted to diminish its prevalence.

The other diseases before enumerated offer no peculiarity worthy of notice; but before concluding these remarks, it may be necessary to advert to a most formidable pestilence, from which this island has repeatedly suffered, though fortunately it has not made its appearance during the period embraced in this Report: we mean,—

THE PLAGUE.

The records of Malta show that this pestilence prevailed in 1519, in 1593, in 1623, and 1663: but at none of these periods, so far as can be ascertained, was the mortality very great, or its ravages of long duration. In 1675, however, it broke out with dreadful violence, and cut off no less than 11,300 persons. For 138 years thereafter the island remained free from it; but in April, 1813, some suspicious cases occurred, and by the middle of the following month it had extended its ravages in all directions; from that period, till its final extinction in November following, the mortality among the inhabitants was as follows:—

May	110
June	800
July	1595
August	1042
September	674
October	211
November	53
Total	<u>4485</u>

The total number attacked, so far as can be ascertained from the best authorities, was about 5600; consequently so virulent was the disease that about 80 per cent of these must have died, a proportion no doubt greatly increased by the difficulty of procuring proper medical aid, owing to the dread of contagion. This disease was by no means so prevalent among the troops as the natives, only about 28 having been attacked by it, of whom 7 recovered. Several corps escaped entirely; those which suffered most were the 3d Garrison Battalion and De Rolle's Regiment, quartered in the highest and healthiest part of the citadel. Throughout the continuance of the disease it was remarked that the natives of northern climates were much less susceptible of its influence than those of the south of Europe, to which circumstance the exemption of the troops may, perhaps, be attributed. The disease was accompanied by buboes, carbuncles, glandular swellings, and all the characteristic symptoms of the genuine plague; so that no doubt could be entertained of its identity.

It is foreign to the object of this Report to enter into any discussion as to whether this pestilence did or did not arise from contagion, or whether the separation of the infected, resorted to by the authorities, had ultimately the happy effect of checking its ravages. We wish merely to notice that, besides the ordinary diseases to which the inhabitants and troops in this island are subject, there exists a possibility of the mortality being materially increased in some years by a recurrence of this fatal malady.

No peculiarity could be recognized in the seasons or atmospherical phenomena adequate to account either for the origin or continuance of this disease; the three months antecedent to its appearance were rather cooler than usual; but neither heavy rains, deficiency of moisture, nor alternations of temperature, seemed to have had any effect in arresting its progress. High winds, and from all points of the compass, frequently prevailed, but no mitigation of the disease could be traced to their influence: on the contrary, it is said to have been most prevalent and fatal when they blew strongest, and ventilation was most free. The period during which it raged with the greatest violence was June, July, August, and September, the months most fatal to our troops not only in tropical, but also in temperate climates to the north of the line.

The history of the plague on former occasions, however, sufficiently establishes the fact, that its appearance is not confined, like the yellow fever of Gibraltar, to any particular period of the year. In 1663, for instance, it broke out in December, and continued during the whole year, and it is on record that 2000 have perished from it daily in Constantinople, at a period when the streets were covered with snow.

II.
Malta.

MALTA FENCIBLES.

This corps was organized in 1825, and is composed entirely of natives enlisted for a limited period of service, and on the understanding that they are not to be employed out of the island.

For the same reason therefore that the mortality among other colonial corps has been kept distinct from that of the British troops, we have deemed it advisable to arrange these details under a separate head; but as the sick have generally been treated in the Civil Hospitals, from which no Returns are forwarded to the Director-General of the Army Medical Department, we are unable to enter into the usual specification of the diseases, and must confine our remarks to the mortality and extent of sickness, as shown by the War Office Returns, of which an extract is contained in the following Table:—

Years.	Mean Strength.	Died.	Mean Daily Sick in Hospital.
1826	500	3	13
1827	582	6	14
1828	545	2	15
1829	509	5	14
1830	504	9	15
1831	503	4	14
1832	506	3	16
1833	505	4	15
1834	507	6	12
1835	508	4	8
1836	507	5	9
Total .	5,676	51	145
Average	515	4 $\frac{1}{11}$	13

Table VI.
Showing the Deaths and number daily Sick in Hospital of the Malta Fencible Corps, from 1826 to 1836 inclusive.

Thus, only 51 have died in 11 years, out of an average strength of 515, being at the rate of 9 per thousand annually, or less than half the mortality among the troops of the line, which strikingly demonstrates the exemption enjoyed by soldiers composed of the indigenous inhabitants of a colony, compared with those foreign to the climate.

The proportion constantly sick is equally low, being only 13 out of an average strength of 515, or about 25 per thousand, while that of the troops of the line is nearly twice as great. There are two circumstances, however, independent of the influence of climate, to which this may, in some measure, be attributed; the first is their comparative freedom from those excesses to which the British soldier is addicted; the other arises from four-fifths of the corps being married men, and therefore likely to be exempt from those venereal affections which constitute nearly one-sixth of all the admissions into hospital among British soldiers in the Command.

In comparing the low mortality among this class of men with what occurs among British troops, it must be kept in view that owing to the corps having been raised so late as 1825, and the period of service originally limited to five, then to seven, and latterly to ten years, there was an opportunity at the end of each of these periods of substituting young men of approved constitutions for those whose health began to be deteriorated—a measure obviously of great importance to efficiency. This corps contains also a much larger proportion than usual of young men, upwards of three-fifths of the whole being, by the latest Returns, under 25 years of age; and as the pay is higher than the ordinary rate of wages in the colony, there are always plenty of candidates for enlistment, from whom a good selection can be made.

Even taking all these circumstances into view, however, when we compare the mortality with that of the civil inhabitants, there is so marked a superiority as to afford good evidence of the general health and efficiency of this description of troops.

It may be stated that the pay of the Maltese soldier is 8 $\frac{1}{2}$ d. a day, subject to the stoppage of 1 $\frac{1}{2}$ d. for his bread ration. When wine was issued, he received half a pint daily, and the stoppage was a $\frac{1}{2}$ d. more than at present.

The description of ration issued to this class of troops seems admirably adapted to their habits. The Maltese use very little animal food; bread, with the vegetables of the country, and occasionally a little fish, forms their principal sustenance; and the healthy and efficient state of the corps may no doubt partly be attributed to the important circumstance that, in becoming soldiers, they have not been required to change the simple diet which nature seems to have pointed out to the inhabitants of all southern latitudes as most conducive to their health. The cost of the ration to Government is exactly the same as the stoppage from the soldier, so that while the public sustains no loss, the Maltese, even upon his reduced rate of pay, has the same surplus as the British soldier whose habits require a more expensive diet.

III.—IONIAN ISLANDS.

III.
Ionian Islands.Geographical
Position.

THE islands comprised in this military Command are Corfu, Paxo, Santa Maura, Cephalonia, Ithaca, Zante, and Cerigo. With the exception of the last, which is considerably detached from the others, they extend nearly in a continuous chain from north-west to south-east, skirting the shores of Greece from the entrance of the Adriatic to the southern extremity of the Morea.

Physical Aspect.

The physical aspect of these islands is very much alike. Mountainous, rugged, and for the most part comparatively barren, they at first sight present nothing to the view but masses of bare rock, broken into abrupt and picturesque forms, and intersected by deep clefts and ravines, which occasionally open into valleys of limited extent. In some parts these valleys admit of cultivation, and are very fertile, but in others, for want of free drainage, they are wet and marshy. The coasts are in many places deeply indented with shallow bays and lagoons, of which the banks are swampy; but, as will hereafter be shown, when we come to a more minute description of the localities of each island, the extent of marshy ground in any of them, except Corfu, is by no means very great, and in some of the smaller ones there is absolutely none which deserves that character.

Except in Corfu the soil does not in general appear to be retentive of moisture, and from the rocky precipitous nature of the high grounds, the rain speedily finds its way through deep ravines and watercourses to the sea.

These islands are by no means remarkable for that exuberance of vegetation which, in warm latitudes, is supposed to be a source of insalubrity. On the contrary, they are, with the exception of Corfu, Paxo, and Zante, but scantily covered with trees, principally olives which flourish on the poorest soil. As their produce forms a ready article of export without much outlay or trouble, the inhabitants do not in general apply themselves to the more laborious occupations of agriculture, so that the soil is by no means as much improved by cultivation as its capabilities will admit; the fertile portions are principally devoted to the rearing of currants, and though much has been done of late years to reclaim the marshes and increase the quantity available for agricultural purposes, most of the grain used by the inhabitants still requires to be imported.

Climate and
Temperature.

As these islands, with the exception of Cerigo, do not differ materially in geographical position, there is but little difference in the nature of their climate. Like all mountainous regions, they are subject to sudden atmospherical vicissitudes; the extremes of cold and heat, dryness and moisture, tempestuous and calm weather, often succeeding each other in the space of a few hours. The neighbouring mountains of Albania, covered with snow for six or seven months in the year, exert considerable influence in diminishing the temperature, during the winter and spring, in those islands which lie within their influence, while the reflection of the sun's rays from the bare and arid surface of the rocky mountains which intersect most of the Ionian group tends to render the heat of summer equally oppressive as in more southern latitudes. From the operation of these causes the extremes of heat and cold are said to be much more sensible to the feelings than is indicated by the mere range of thermometer, of which the average height in each month, as ascertained at Corfu, during a period of 10 years, was as under:—

Months.	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	Average.
January	51°	52°	53°	52°	52°	52°	53°	54°	51°	56°	52½°
February	54	53	49	53	54	51	50	53½	53½	50	52
March	55	56	53	56	56	51	55	55	57	59	55½
April	62	63	59	59	56	57	57	57	60½	62½	59½
May	73	74	66	68	65	66	61	67½	68½	68	67½
June	72	74	76	75	71	69	70	71	76½	71	72½
July	78	79	80	79	77½	76	73	79½	81	79	78½
August	82	84	84	80	81½	77	80	82½	82½	82	81½
September	76	78	82	79	80½	74	79	75½	76	79	78
October	69	67	75	73	73	65	72	71	69½	73	70½
November	64	63	65	63	62	62½	66½	64	64	64	63½
December	67	59	58	54	58	61	59	60	57	57	59
Annual Average	67	66½	66½	66	65½	63½	64½	66	66½	66½	65½

Prevailing Winds.

The degree of heat at particular seasons is greatly influenced by the direction of the wind. When from the N. or N. E. it is generally cool and pleasant, but from the S. or its collateral points it is hot and humid, often accompanied by mists and rain, and not unfrequently by the sirocco, during the continuance of which not only is vegetable life parched and languid, but the animal powers succumb to its influence. Patients previously convalescent are apt to relapse, ulcers and wounds become more difficult of cure, and every type of disease, but particularly remittent fever, assumes a more aggravated form. It would be impossible to specify with any degree of accuracy the winds which are most prevalent during particular

seasons of the year; for, owing to the peculiar shape and position of these islands, and the currents of air being so much intercepted by high mountain ranges, they are exceedingly variable and irregular, and often blow strongly from contrary directions within the distance of a few miles.

We possess no exact measurement of the annual quantity of rain in these islands; but it appears to be rather under than above the average in similar latitudes. It does not fall in heavy torrents, as in Gibraltar or the south of Spain, but in genial showers, like those of the northern temperate zone, and is more equally distributed throughout the year: the greatest fall is generally in November, December, February, and March, and the least from June to September: the number of days on which it rained in each month at Corfu, on the average of 10 years, was as follows:—

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Fall of Rain.

Months.	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	Average.
January	7	4	19	14	15	6	21	19	7	19	13·1
February	9	11	7	16	10	8	8	13	10	22	11·4
March	11	14	6	14	14	11	1	10	12	15	10·8
April	9	12	11	10	24	7	10	5	10	15	11·3
May	6	9	8	3	4	5	10	2	1	8	5·6
June	8	10	4	3	4	8	7	10	1	5	6
July	3	1	1	1	2	4	2	4	1	..	1·9
August	1	2	1	..	1	1	..	..	..	..	·6
September	8	6	7	3	7	10	3	14	4	4	6·6
October	10	14	9	12	7	12	17	16	8	9	11·4
November	8	7	9	10	6	16	23	20	12	20	13·1
December	17	16	12	13	11	16	18	8	7	14	13·2
Total .	97	106	94	99	105	104	120	121	37	131	105·

The whole range of the Ionian Islands, but particularly Santa Maura, Zante, Cephalonia, and Ithaca, are exceedingly subject to earthquakes, which have in many instances, during the period under observation, caused great destruction both to life and property. In Santa Maura they have continued almost without intermission for several weeks, and scarcely a year passes without violent shocks being experienced in some part of the Command. As however these phenomena do not appear to exercise any material influence on health, and, so far as we can learn, the accidents to which they gave rise have occasioned no deaths among the troops, it is unnecessary here to advert more particularly to them.

Earthquakes.

The troops employed in this Command consist of the service companies of several regiments of the line, two companies of artillery, and a party of sappers and miners; the force has varied from about 3000 to 4500, according to circumstances.

Troops employed.

The duties performed by these troops have been in many respects different from those in other colonies, for, when the islands were finally placed under the protection of the British Government, it was deemed essential that the communications with the interior should be improved. New roads were accordingly planned, on which for several years a considerable portion of the troops were employed; the most severe cases of disease generally came from these working parties; but it does not appear that sickness was more prevalent than among the others who were engaged in the mere routine of garrison duty.

Duty and Employment.

For several years past extensive additions have also been making to the fortifications of the small island of Vido, on which several hundred of the troops have constantly been employed, partly as labourers in the removal of earth, and partly as artificers in the erection of the buildings and fortifications. This duty has generally been performed by the corps at Corfu in rotation. The working hours were from 7 to 12 A.M., and from 2 to 7 P.M.; for which labourers received, in addition to their military pay, 6*d.* or 7*d.* per day, mechanics and artificers from 9*d.* to 1*s.*, according to their skill as workmen. There appears to have been great diversity of opinion among the medical authorities, as to whether this occupation, and the excesses consequent on the surplus pay thereby placed at the soldier's disposal, operated prejudicially to his health; that it could not have done so to any great extent will be sufficiently established by the fact that the mortality at Corfu and Vido has not, on the average of the last 20 years, much exceeded 2 per cent.

As a brief sketch of the locality of the buildings, and the nature of the accommodation for the soldiers in each island, will be found in a subsequent portion of this Report, it is only necessary for us here to remark that, till within the last year or two, the expenses attending the erection and repairs of Barracks and Hospitals were defrayed by the Colonial Government, who, having no direct interest in preserving the efficiency of the troops, seem to have allowed motives of economy in too many instances to operate to the prejudice of their health and comfort. Numerous complaints have in consequence been made regarding the state of these buildings in almost every part of the Command, which have ultimately led to an arrangement with the Ionian government, whereby a certain sum is to be paid annually to the British Treasury, for the erection and repairs of barracks and hospitals, and this is now in the course of application for that purpose, under the direction of the military authorities. The space allotted to each soldier in the different barracks of the Command appears by some recent measurements to vary from 400 to 500 cubic feet.

Barrack and Hospital Accommodation.

The ration in the Ionian Islands consists, as at Malta, of a pound of fresh meat and a pound of bread on six days in the week, [and a pound of salt meat and three-fourths

Rations and Diet.

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of a pound of biscuit on the other day, and his meals are regulated in the same way. The fresh meat is stated at some periods of the year to be very good; but at others, when the herbage is scanty, it is indifferent, by no means affording the same nutriment as an equal quantity in this country. The cattle required for the troops are generally obtained from the opposite coast of Albania, and the wheat is imported from the Black Sea, as the islands do not afford a sufficiency for their own consumption. The price of these necessaries of life are, however, exceedingly moderate; indeed, all kinds of provisions are cheap and plentiful, and the soldier's surplus pay is sufficient to supply him with whatever is requisite for his subsistence in addition to his ration.

No wine is issued to the troops; but it is produced in abundance in most of the islands, and of good quality, though often much adulterated in the canteens, from which the soldier is obliged to purchase it, however inferior the quality as compared with what could be procured elsewhere at the same price.

Having given these details in regard to the circumstances likely to have affected the health of the troops in this Command, we shall now proceed to show the extent of sickness and mortality among them during the last 20 years, in the following Table:—

Table VII.
Showing the Admissions into Hospital and Deaths among the Troops serving in the Ionian Islands.

Years.	Mean Strength, per War Office Returns.	Admissions into Hospital.	Deaths, per Medical Returns.			Ratio per 1000 of Mean Strength.	
			In the Ionian Islands.	Among Invalids sent to Malta.	Total Deaths.	Admitted.	Died.
1817	3,000	4,133	119	27	146	1,378	49
1818	3,203	4,077	79	7	86	1,273	27
1819	3,020	4,136	103	..	103	1,370	34
1820	2,854	3,557	59	..	59	1,246	21
1821	3,483	5,182	120	3	123	1,488	35
1822	3,842	4,879	86	4	90	1,270	23
1823	3,730	3,654	111	6	117	980	31
1824	3,631	4,001	101	8	109	1,102	30
1825	3,479	4,089	69	6	75	1,175	22
1826	3,368	3,816	67	3	70	1,132	21
1827	3,490	4,384	94	..	94	1,256	27
1828	4,178	5,792	147	..	147	1,386	35
1829	4,614	6,050	138	..	138	1,311	30
1830	4,646	5,971	118	..	118	1,285	25
1831	3,388	3,640	50	..	50	1,074	15
1832	3,254	3,164	46	..	46	972	14
1833	3,257	3,455	58	..	58	1,061	18
1834	3,284	3,999	54	..	54	1,218	16
1835	3,274	3,209	44	..	44	980	13
1836	3,298	3,250	48	..	48	985	15
Total	70,293	84,438	1,711	64	1,775	..	..
Average	3,515	4,222	..	..	89	1,201	25.2

By this Table it appears that the admissions into hospital have averaged 1201 per thousand of the strength annually, being only a twentieth part more than in Malta, though the mortality considerably exceeds the average of that station. On further investigation, however, there will be found an essential difference in the nature of the diseases, which are generally of a fatal character in this Command.

The deaths in the preceding Table include only those which took place under medical treatment; but the mortality from all causes, as ascertained from the War Office Returns, has been as follows:—

	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Deaths in Ionian Islands per War Office Returns	119	88	119	65	127	100	119	122	82	90	104	163	148	126	60	61	63	57	54	58	1925
Deaths in Ionian Islands per Medical Returns	119	79	103	59	120	86	111	101	69	67	94	147	138	118	50	46	58	54	44	48	1711
Omitted in Medical Returns	..	9	16	6	7	14	8	21	13	23	10	16	10	8	10	15	5	3	10	10	214

Estimating the ratio of deaths from the War Office Return, which is the most accurate source of information, they must have averaged $28\frac{1}{10}$ per thousand of the strength annually, including the 64 which took place at Malta from diseases contracted in the Ionian Islands, whereof the particulars will be found in Abstract No. V. of Appendix.

Thus the climate of these islands has proved much more inimical to our troops than that of the other Mediterranean stations. Compared with Malta, the deaths are as $28\frac{1}{10}$ to $18\frac{1}{2}$, and with Gibraltar as $28\frac{1}{10}$ to $22\frac{1}{2}$. It will hereafter be shown, however, that there is a very great difference in the salubrity of the several islands in this Command, as in some the mortality

has occasionally equalled that of the West Indies; but the force having been comparatively small, that circumstance has not materially increased the general average.

Among the natives of the Ionian Islands, the mortality does not appear to be higher than among those of Malta or the South of Europe, as will be seen by the following Table, extending from 1828 to 1834:—

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Years.	Population of Ionian Islands.	Deaths Annually.
1828	195,323*	5,352
1829	189,898	5,018
1830	187,474	5,498
1831	188,690	4,673
1832	192,846	4,306
1833	194,167	5,013
1834	194,395	4,818
Total .	1,342,793	34,678 or 1 in 39

We have already shown the deaths in Malta to be also 1 in 39 of the population; so that, notwithstanding the supposed disadvantages in point of locality, the natives of the Ionian Islands are quite as healthy.

It will be observed that, within the last six years, a very great reduction has taken place in the mortality of the troops; indeed, during that period the average has been lower than in Malta or Gibraltar, and this improvement has extended to all the islands in the Command. To what causes so marked a change in the character of the climate is attributable we profess not to decide; but can only state that, during this period, great improvements have taken place in the barrack and hospital accommodation at several of the stations, fewer soldiers have been employed in working on the roads, agriculture has made considerable progress in many districts which formerly lay waste, and several of the lakes and marshes, formerly supposed injurious to health, have been drained and converted into available soil: all of which circumstances may have exerted considerable influence in this respect.

Of the 214 deaths which appear in the War Office, but not in the Medical Returns, the following only can be traced: 9 committed Suicide, 17 were Drowned, 2 Found Dead, 3 from Excessive Intoxication, 2 Executed, 3 Killed by Gunshot Wounds, 1 by an Explosion, 1 Suffocated, 1 by a Sting or Bite, 9 from other Accidents not specified, and 12 Suddenly; leaving 154 of which the causes are unknown: of these a considerable portion arose also from violence or accidents, prior to 1826, from which period only we have been able to trace the above through the medium of the Casualty Returns; the rest probably occurred from disease at some of the small islands or out-stations where the troops have been under charge of private medical practitioners, who furnished no detail of their cases.

The diseases by which the other deaths, as well as all the admissions into hospital, have been occasioned, will be found enumerated in Abstract No. IV. of Appendix, of which the results are exhibited in a comprehensive form in the following Table:—

	Total Admissions in 20 Years.	Total Deaths in 20 Years.			Annual Ratio per 1000 of Mean Strength.	
		In the Ionian Islands.	Among Invalids sent to Malta.	Of both Classes.	Admitted.	Died.
By Fevers	32,160	887	29	916	457	13·
Eruptive Fevers	58	2	..	2	1	..
Diseases of Lungs	6,313	320	17	337	90	4·8
,, Liver	1,168	56	2	58	17	·8
,, Stomach and Bowels	10,969	237	10	247	156	3·5
,, Brain	693	69	2	71	10	1·
Dropsies	183	43	1	44	2½	·6
Rheumatic Affections	2,428	7	..	7	34½	..
Venereal	4,660	3	..	3	66½	..
Ulcers and Abscesses	8,199	8	..	8	117	..
Wounds and Injuries	8,442	28	..	28	120	..
Punished	2,614	1	..	1	37	1·5
Diseases of Eyes	2,903	..	..	..	41	..
,, Skin	1,241	1	..	1	17½	..
All other Diseases	2,407	49	3	52	34	..
Total	84,438	1,711	64	1,775	1,201	25·2

Table VIII.
Showing the principal Diseases among the Troops in the Ionian Islands.

* The great difference here observable in the population of some years, compared with others, arises from the inhabitants of several of the islands passing over to the Morea during summer in search of employment; so that the number is liable to considerable fluctuations, depending in some degree on the season of the year at which the census is taken.

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On comparing these with similar results, showing the prevalence of the same classes of diseases among the troops at Malta, it will be found that the admissions by those which rarely prove fatal, constitute about three-eighths of the whole, while in Malta they constitute about five-eighths, a difference which must operate most essentially in increasing the mortality in this Command.

We shall now proceed to illustrate these results by a few remarks on the different classes of diseases.

FEVERS.

Under this head are comprised in the preceding Table:—

	Admitted.	Died—including Invalids sent to Malta.	Proportion of Deaths to Admissions.
Quotidian Intermittent Fevers . . .	5,363	44	1 in 122
Tertian „ „ . . .	3,848	11	1 „ 350
Quartan „ „ . . .	107	..	0 „ 107
Common Continued „ . . .	15,855	229	1 „ 69
Remittent Fevers	6,934	623	1 „ 11
Synochus „	43	5	1 „ 9
Typhus „	10	4	1 „ 2½
Total	32,160	916	1 in 35
Annual ratio per 1000 of Mean Strength	457	13·	..

The prevalence and fatal character of this class of diseases is one of the leading features of the climate of the Ionian Isles—nearly one-half of the admissions and deaths being attributable to that alone.

Every form of fever is much more prevalent than at the other Mediterranean stations, as will be seen by the following comparison:—

	Admissions per 1000 of Mean Strength Annually.		
	Gibraltar.	Malta.	Ionian Islands.
By Intermittent Fevers . . .	5	8	132
Remittent „ . . .	5	9	99
Com. Cont. „ . . .	117	152	226

Nor is the difference in the mortality less remarkable, particularly by remittent fever, which has cut off about 9 per thousand of the strength annually in the Ionian Islands, though not more than 1 in three thousand have died from the same cause in Malta, or even in Gibraltar, if we exclude the epidemic of 1828. Though not so prevalent this disease is nearly as intense as in the West Indies, 1 in 11 having died of all those attacked, and occasionally at some of the stations even as many as 1 in 3.

The prevalence of remittent fever is in a great measure confined to the months of July, August, September, and October—it sometimes commences in June and continues till November, but rarely occurs during any other period of the year. In this respect it differs materially from the remittent fever of the West Indies and Western Africa, which rages with great severity at all seasons, though more commonly from July to October.

Intermittent fevers are principally confined to the winter and spring months, when there is a considerable degree of humidity in the atmosphere: this is not, however, without exceptions, as in some corps intermittent fevers have occasionally been as prevalent throughout the summer as during winter. It is stated by the medical officers, that those who have had remittent fever in the summer are particularly liable to intermittent in winter, even if they have removed to a station where the latter is otherwise rare: for instance, after the removal of the 7th Fusiliers to Malta, in 1828, almost every individual who had suffered from remittent in the Ionian Islands was attacked by intermittent; the same was observed in the cases of fever which proved so fatal to our troops at Walcheren.

The inhabitants of the Ionian Islands suffer from intermittent and remittent fevers as well as the troops, though not to the same extent: it has been computed that about one-fifth of them are attacked annually by these two diseases, which, however, by no means prevail equally in all the islands, nor are they most frequent where there is the greatest extent of marshy ground or vegetation, as will be seen by the following comparison deduced from Abstract No. VI. of Appendix:—

STATIONS.	Aggregate Strength.	Total Admissions in 20 Years.*			Ratio per 1000 of Mean Strength admitted in each Year.			
		Intermittent.	Remittent.	Com.Cont ^d .	Intermittent.	Remittent.	Com. Cont.	By Fever generally.
Corfu and Paxo	44,380	3,740	2,941	9,286	84	66	209	359
Santa Maura . . .	5,133	1,295	1,507	1,043	252	294	203	749
Cephalonia . . .	7,485	1,466	998	1,775	196	133	237	566
Ithaca	1,302	345	151	163	265	116	125	506
Zante	7,939	1,282	1,123	2,198	162	141	277	580
Cerigo	1,495	296	98	358	198	65	240	503

When the relative prevalence of these diseases, as thus established, is compared with the topographical description of each island, in a subsequent portion of this Report, it will at once be seen how little they can have been influenced by the agencies of marsh, moisture, or vegetation, to which they have hitherto been principally, if not solely, attributed.

By a careful investigation it has been ascertained that, in this Command, the ratio of mortality by fever is nearly twice as high among soldiers above 25 as among those under that age; the data on which that conclusion has been founded will be stated in a subsequent portion of this Report, where the influence of age on mortality is fully illustrated.

Eruptive fevers have been exceedingly rare among the troops in this Command, the admissions not having amounted to one per thousand of the strength, and the half of these were recruits admitted into hospital for the purpose of vaccination. Only two deaths occurred by this class in the whole course of 20 years, and they were from scarlet fever.

DISEASES OF THE LUNGS.

Under this head are comprised in the preceding Table—

	Admitted.	Died—including Invalids sent to Malta.	Proportion of Deaths to Admissions.
Inflammation of Lungs	2,186	81	1 in 27
Pleurisy	86	3	1 „ 29
Spitting of Blood	147	12	1 „ 12
Consumption	339	209	3 „ 5
Acute Catarrh	2,788	13	1 „ 214
Chronic „	613	13	1 „ 47
Asthma	93	3	1 „ 31
Difficulty of Breathing	56	3	1 „ 19
Pain in the Chest	5	..	0 „ 5
Total	6,313	337	1 in 19
Annual Ratio per 1000 of Mean Strength	90	4.8	..

Notwithstanding the variable character of the climate, the rapid alternations of temperature, and the tempestuous weather which frequently prevails in this Command, diseases of the lungs are both less prevalent and less fatal than at Malta or Gibraltar: the admissions into hospital by that class of diseases in these three Commands being respectively as 90, 120, and 141, and the deaths as 4.8, 6.0, and 5.3 per thousand of the strength annually. The principal exemption in the Ionian Islands is from catarrhal affections, which are not half so prevalent or half so productive of mortality as in the other Mediterranean stations, or in the United Kingdom. Most of the deaths arise from consumption; but neither is the proportion attacked so high nor the fatal cases so numerous as in Malta, where there exists a comparatively equable temperature, and that mild condition of the atmosphere which is supposed favourable to persons predisposed to that disease. In Malta, on the average of 20 years, about 6 per thousand of the troops have been attacked annually by consumption, and in Gibraltar and the United Kingdom nearly the same ratio, while in the Ionian Islands only 5 per thousand have been attacked, and the deaths have been fewer in the same proportion. This slight exception may, however, in some measure, be attributable to a smaller proportion of force being at that period of life when persons are supposed most liable to this disease: for instance, on reference to the abstract of ages, No. XVI. of Appendix, it will be seen that, in Malta and Gibraltar, one-third of the troops are under 25, whereas, in the Ionian Islands, about a fifth only are under that age; a circumstance which may exert considerable influence on the results, particularly as regards consumption.

It is stated in many of the Medical Reports that, owing to the sudden and frequent atmospheric vicissitudes in this climate, inflammation of the lungs is extremely frequent and fatal. The result of these investigations, however, establishes that it is not more so than in other stations which are less liable to such vicissitudes: in Malta, for instance, out of an

* The totals of these admissions will not exactly correspond with those in p. 32, because the troops stationed at Parga in 1817, 1818, and 1819, are not included.

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aggregate strength of 40,826, there were 1370 attacked and 44 died by this disease in the course of 20 years; whereas in the Ionian Islands, out of an aggregate strength of 70,293, there were only 2186 attacks and 81 deaths during the same period, being about an equal proportion. This disease is more prevalent in Corfu, and more generally fatal in Cephalonia, than in any other of the Ionian Islands.

The influenza, or epidemic catarrh, prevailed throughout this Command during the summer of 1833, appearing first in Cephalonia about the end of May, and successively in the other islands during the two following months. No class of persons was exempt from it, and, in general, the civil population suffered more than the military. In the city of Zante upwards of 3000 were attacked, but it was much more rare among the peasantry in the rural districts. The epidemic was rather of a milder form than in the United Kingdom, and, with adults, rarely terminated fatally.

DISEASES OF THE LIVER.

Under this head are comprised in the preceding Table—

	Admitted.	Died—including Invalids sent to Malta.	Proportion of Deaths to Admissions.
Acute Inflammation of Liver	600	24	1 in 25
Chronic " " " "	344	31	1 " 11
Jaundice.	224	3	1 " 81
Total	1,168	58	1 in 20
Annual Ratio per 1000 of Mean Strength	17	$\frac{5}{17}$	..

This class of diseases is not so common, or so productive of mortality, as in Malta, though considerably more so than in Gibraltar; almost all the chronic cases which proved fatal occurred among men long resident in the Mediterranean whose constitutions had been impaired by habits of intemperance. The island of Zante is the only part of this Command where these diseases are of frequent occurrence.

DISEASES OF THE STOMACH AND BOWELS.

Under this head are comprised in the preceding Table—

	Admitted.	Died—including Invalids sent to Malta.	Proportion of Deaths to Admissions.
Abdominal Inflammation	20	5	1 in 4
Inflammation of Stomach	34	1	1 " 34
" " Bowels	201	22	1 " 9
Vomiting of Blood	27	2	1 " 13½
Acute Dysentery.	3,461	116	1 " 30
Chronic " " " "	307	68	1 " 4½
Indigestion	189	2	1 " 94
Colic	1,258	3	1 " 419
Diarrhœa.	3,896	15	1 " 260
Constipation	290	..	0 " 290
Cholera	1,286	13	1 " 99
Total	10,969	247	1 in 44
Annual Ratio per 1000 of Mean Strength	156	3.5	..

As the proportion of admissions and deaths is to within a fraction the same as in Malta, there is no necessity for entering into any lengthened details on this head. The principal circumstance which deserves observation is, that here, as in the other Mediterranean stations, the cases of chronic dysentery are very fatal, even more so than in the West Indies, though fortunately they are less common. In all warm latitudes dysentery, in the chronic stage, is extremely fatal in its character; throughout the East and West Indies the proportion of deaths to admissions is from 1 in 5 to 1 in 6, in Gibraltar 1 in 4, in Malta 1 in 6, and in the Ionian Islands 1 in 4½. If it be taken into view that a great proportion of these admissions consists of the same individuals who have come several times under treatment in the course of the year, there appears to be but little chance indeed of recovery, except by removal to a cold climate, where, fortunately, that disease is rarely experienced in an aggravated form.

Bowel complaints are most common during the months in which the temperature is highest; occasionally, however, they prevail to a considerable extent in January and February, when the cold is accompanied with much rain and boisterous weather.

The cases of cholera which occurred at this station were not in general of a serious nature. These islands have hitherto escaped that disease in its epidemic form, which created such ravages on the adjacent Continent as well as at the other Mediterranean stations.

DISEASES OF THE BRAIN.

Under this class are comprised in the preceding Table—

	Admitted.	Died—including Invalids sent to Malta.	Proportion of Deaths to Admissions.
Brain Fever	15	6	1 in $2\frac{1}{2}$
Headache	59	1	1 " 59
Apoplexy	33	14	1 " $2\frac{1}{2}$
Palsy	66	7	1 " $9\frac{1}{2}$
Stroke of the Sun	1	..	0 " 1
Fatuity	30	..	0 " 30
Madness	71	4	1 " 18
Epilepsy	226	9	1 " 25
Brain Fever of Drunkards	192	30	1 " $6\frac{1}{2}$
Total	693	71	1 in 10
Annual Ratio per 1000 of Mean Strength	10	1	..

This class of diseases is rather more prevalent and more fatal than at the other Mediterranean stations; the difference arises principally from the admissions and deaths by *delirium tremens*, which have been five times as numerous as in Malta or Gibraltar. If the relative degree of intemperance may be estimated from these data, this vice is much more prevalent in the Ionian Islands stations—probably attributable to the additional sum placed at the disposal of the soldiers employed on working parties, the low price of liquor, the number of men scattered in small detachments throughout the islands, and the unenclosed state of some of the barracks, which enables those quartered in them to indulge at all hours in this pernicious propensity.

Here, as in most of the other climates in which there is great facility in obtaining the means of intoxication, the consequences of this vice, as shown in the number of admissions and deaths from *delirium tremens*, are annually becoming more apparent. On an average of the eight years immediately subsequent to 1821, when this disease began to be specially noticed in the Medical Returns, the proportion of admissions and deaths was scarcely one-third as high as during the last eight years included in this Report.

In this fact we have a strong proof that intemperance cannot well be assigned as the principal source of those sudden accessions of sickness and mortality which occasionally take place in these islands, because though it appears to have been materially on the increase in this Command during the last few years, the troops, instead of being more unhealthy, have been rather less so than before. We state this not as an apology for, or encouragement to, intemperance, but to prevent causes being assigned for disease which are not warranted by numerical results.

DROPSIES.

Under this head are comprised in the preceding Table—

	Admitted.	Died—including Invalids sent to Malta.	Proportion of Deaths to Admissions.
Subcutaneous Dropsy	127	26	1 in 5
Abdominal "	46	10	1 " $4\frac{1}{2}$
Water in the Chest	10	8	1 " $1\frac{1}{4}$
Total	183	44	1 in $3\frac{1}{2}$
Annual Ratio per 1000 of Mean Strength	$2\frac{1}{2}$	$\frac{6}{18}$	..

This class of diseases, though rather more common than in Malta, and about twice as much so as in Gibraltar or the United Kingdom, does not add materially either to the sickness or mortality in this Command; indeed, considering the general prevalence of fever, which has a tendency, in many cases, to induce dropsical affections, they are less common than might have been expected.

We shall now briefly advert to the other classes of diseases, which, though they occasion much sickness, are seldom the cause of any great mortality among the troops. Those who may be inclined to enter into further details will find the diseases of which each class is composed specially enumerated in No. IV. of Appendix; we shall here merely compare the results with those stated under similar heads in the previous Reports.

	Admissions per 1000 of the Force Annually.			
	Ionian Islands.	Malta.	Gibraltar.	United Kingdom.
Rheumatic Affections	34	34	38	50
Venereal	66	180	57	181
Ulcers and Abscesses	116	147	101	133
Wounds and Injuries	120	100	89	126
Diseases of the Eyes	41	102	97	19
" Skin	17	20	15	29
Punished	34	40	16	8

There appears little worthy of remark in any of these diseases except the comparative exemption from venereal affections in this Command; they are nearly as rare as in Gibraltar, and thrice as much so as in Malta: but this may, in some measure, be attributable to the precaution, of subjecting all public prostitutes to a weekly inspection, and sending those found diseased to a lock hospital.

Diseases of the eyes, though twice as common as in Great Britain, have not, by any means, prevailed to such an extent as at the other Mediterranean Stations, where, in some corps, the annual number of admissions into hospital has nearly equalled the whole strength of the regiment.

The proportion of admissions from corporal punishment has been, on the average of the last 20 years, rather less than at Malta, though considerably higher than in Gibraltar or the United Kingdom. In this Command, also, it has been rapidly on the decline, as will appear from the following Table:—

	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Numbers corporally punished	167	205	323	215	333	343	135	124	101	72	60	87	102	103	57	50	40	35	36	26	2614
Ratio per 1000 corporally punished	56	64	107	75	96	89	36	34	29	21	17	21	22	22	17	15	12	11	11	8	37

Thus, though this punishment was very common during the first period over which these observations extend, it has been annually becoming less frequent, till last year when the ratio was as low as in Gibraltar or Great Britain.

THE PLAGUE.

Though this pestilence has not prevailed in any of the Ionian islands since 1817, when the Report commences, yet having done so only a few months antecedent to that period, it must be noticed as one of the contingencies to which troops are liable when serving in this part of the Mediterranean. About the middle of December 1815, it broke out in a small village called Marathea, on the south side of the island of Corfu, a low situation abounding in stagnant pools and marshes, and at all times unhealthy. In the preceding autumn remittent fever had been very common throughout the whole of that district, and the weather, for some months previous to the appearance of the plague, had not been so cold or rainy as usual.

So rapid was the progress of this pestilence, that more than a fourth part of the inhabitants of Marathea were cut off by it in a few days; and before any steps could be taken to arrest its progress, it had begun to show itself in several of the adjacent villages. As soon as its existence was officially reported measures were adopted for cutting off all communication between the infected districts and the capital; strong cordons of troops and police were posted round each village in which the disease had made its appearance; the inhabitants were shut up in their respective residences; no communication was permitted between them; and the approach to the capital was guarded by a double line of troops, through which no one was allowed to pass from the interior without performing 14 days' quarantine. Owing, it is supposed, to these precautions, the disease was confined principally to the upper and lower districts of Leftimo, in which it originally broke out, and the capital entirely escaped its ravages. It finally disappeared about the middle of May 1816.

We possess no exact statement of the mortality; but we find it stated by a medical writer,* that, out of 700 attacked in the district of Leftimo, only 70 recovered. The disease was equally virulent among the troops; for, of 28 attacked, only 3 recovered. No remedies seem to have been of the slightest avail in mitigating its severity. The few recoveries

* Gregory: "Practice of Physic."

which took place appeared rather to result from strength of constitution than any therapeutic means employed.

After the plague had ceased in Corfu, it broke out, in the beginning of June 1816, in the village of Comitato in Cephalonia, in a situation mountainous, rocky, barren, and almost destitute of water and vegetation, the very reverse of the district in which it first made its appearance at Corfu. In a few days it had extended to several families in the village, and so rapidly fatal did it prove, that death followed in every case within a few hours; indeed, in some instances, whole families were cut off in the course of one night. Owing to its appearance not being immediately reported, the same measures which had been resorted to at Corfu for arresting its progress could not be adopted till the end of June; but in the meantime, it did not extend beyond the village in which it first broke out, and entirely disappeared by the middle of July, after destroying from 65 to 70 out of a population of 700. In this instance, the military suffered less than at Corfu, only one case occurred among them, and that terminated fatally.

Unlike the ordinary course of febrile epidemics, which generally become more mild in their character, as they are about to disappear, the last cases of this disease, both at Corfu and Cephalonia, were equally severe and fatal as the first. Nor did the period of its commencement at Corfu correspond with that in which epidemics generally prevail in the Mediterranean, viz. from July to October; on the contrary, it appeared during what is generally the healthiest season of the year. In neither case did the weather exert the slightest influence on the character or progress of the disease: it was just as virulent in the middle of winter in Corfu as in the middle of summer in Cephalonia.

As to the causes from which this disease originated, there exists a contrariety of opinion; strong evidence has been adduced to show that it was, in both instances, imported from Turkey, and afterwards propagated by contagion, but it has also been maintained that, like other epidemics, it was attributable to the operation of some unappreciable atmospherical agency. It being foreign to the object of this Report to discuss the question of contagion, we have confined ourselves to a statement of the ravages of this formidable malady, and the principal circumstances which marked its origin and progress.

Having made these observations in regard to the sickness, mortality, and prevailing diseases among the troops employed generally throughout this Command, we shall next endeavour to ascertain the relative salubrity of the different islands comprised in it, by investigating what proportion of the mortality occurred at each, and the diseases by which that was occasioned.

CORFU.

Lat. 39° 36' N.; Long. 19° 50' E.

THIS island, the seat of Government and Head Quarters of the Command, is about 38 miles in length and 18 in extreme breadth. It lies near the entrance to the Straits of Otranto, and adjacent to the coast of Albania, from which it is separated by a channel varying from two to ten miles in breadth.

Though Corfu is mountainous, it is not of so rugged a character as many others composing the Ionian group. A lofty range runs through its whole length, intersected by another at the northern extremity. The latter is rocky and bare, except in some few places where the olive takes root, but the former is thickly covered at the summit with groves of olive and cypress, and on the eastern side breaks into a succession of hills of moderate elevation, which, with the intervening valleys, are in some parts under cultivation, and in others richly wooded. The most elevated part of the island is not more than 1900 feet in height. The shores are bold and abrupt, particularly those which face the Mediterranean, but on the south-east side they are flat, swampy, and considered unhealthy.

There are only four small rivers or rather streams in the island; one of these discharges itself into the harbour about two miles from the citadel; its course is sluggish, and its exhalations are supposed to be prejudicial. The others are several miles distant, and therefore not likely to have any influence on the health of the troops.

In the low grounds, particularly in the vicinity of the harbour, are several marshy lakes or ponds; these were formerly more numerous, but of late years much has been done by draining to bring them under cultivation. Among the hills are also several marshy lakes; the largest of which lies seven miles N. W. from the town of Corfu, and is about six miles long by two broad; beyond it is another of more limited extent.

At Govino, about five miles N. W. of the citadel, is an old harbour nearly filled up by the accumulation of sand and mud; and not above a mile from the citadel is another in a similar condition, three or four miles in circumference, with a marshy surface along the banks of at least an equal extent. There are several other lagoons in different parts of the island, which it is unnecessary here to describe, as they are at too great a distance to affect the health of the

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troops. In addition to these alleged sources of disease there was, in the vicinity of the town and citadel, a very extensive ditch, commenced by the French in 1814 with the view of strengthening their position. This not having been extended to the sea, as originally designed, soon became filled with stagnant water, and being supposed prejudicial to the health of the troops and inhabitants, was, in the autumn of 1819, filled up by a levy *en masse* of the peasantry, but the ground is still in some places wet and marshy.

The soil of the island is a stiff, tenacious clay, extremely retentive of moisture, and nearly two-thirds of its surface is covered with trees, principally olives, so that Corfu may be said to abound with what are generally considered sources of malaria. Dr. Hennen, in his Topography of that island, states "that there is scarcely a square mile free from them, either as they proceed from decaying vegetation, underground moisture, or the more open swamp, and that every shower of rain, if succeeded by heat, at whatever season of the year, is productive of 'miasmata.'" Out of 153,000 acres, of which the island consists, 90,000 are under olives or vines, 22,000 used for agricultural purposes, 7500 for pasture, and about 33,500 are lying waste and uncultivated.

The general description we have already given of the climate of these islands is sufficiently applicable to Corfu to obviate the necessity of entering minutely on that topic. It may generally be characterized as extremely variable, even more so to the feelings than is indicated by the thermometer, though that often shows a difference of 20° of temperature in the course of a few hours; the range on the average of four years was from 44° to 90°, and the number of days on which rain fell was 96 annually. Snow is rarely seen in the low grounds, and never lies, even on the mountain tops, except for a very short period.

The town of Corfu is built on an irregular promontory on the eastern side of the island, protected on the land-face by a double line of fortifications, and flanked on the east by a strong citadel built on a steep precipitous rock which forms the apex of the promontory, and on the west by Fort Neuf, situated on another rocky eminence about 100 feet above the level of the sea.

Opposite to the town lies the small island of Vido which commands the harbour. It is 280 feet in height, about two miles in circumference, and consists entirely of limestone rock with very little soil; it is nearly destitute of vegetation, without a single spot of marshy ground on its surface, and there is none on the main land nearer than the swamp of Bucintro, which is seven miles distant.

The garrison of Corfu is principally quartered in the Citadel, Fort Neuf, Vido, or in a barrack at Port Raymond on the south-western extremity of the esplanade.

The Citadel barrack is a large stone building of four stories, situated near the foot of the rock, about 40 feet above the level of the sea, with a free exposure in front, but much shut in by the rock in rear. The citadel is cut off from the town by a wide and deep ditch communicating with the sea, beyond which extends an esplanade 500 yards long and 300 broad.

Port Raymond barracks, esteemed the best in the Command, are built near the sea at the south-west extremity of the esplanade on a gentle elevation of about 100 feet; they are of stone, and contain several large well-ventilated rooms, capable of accommodating six or eight companies.

There are two barracks at Fort Neuf, both built of stone. The one on the summit of the rock, to which there is an ascent by a flight of steps, consists of a range of small buildings capable of accommodating about 300 men, and with a free, healthy exposure; the other about 30 feet from the base of the rock, consists of a few irregularly built houses of small dimensions, defective in point of ventilation, and excessively hot in summer, owing to their being much shut in on every side.

The barracks at Vido have been erected on the summit of the island, and extend round the interior of a triangular fort, having a small court or area in the centre. They are of stone, two stories high, and consist of 12 apartments, each 30 feet long, 17 wide, and from 10 to 14 high.

There are several hospitals belonging to this garrison: one on the summit of the Citadel rock containing four wards capable of accommodating about 25 patients each, and another at the foot of it, 30 feet above the level of the sea, consisting of three stories, the two upper ones for patients, and the lower one for stores. There is another hospital establishment at the north-east side of Fort Neuf near the foot of the rock, consisting of two hired houses of two stories with a ward in each. There is also an hospital in the works at Vido, consisting of one large room 46 feet by 14, with a surgery; but during most of the period under review, the sick from that island have been sent for treatment to Corfu.

In 1829 a convalescent hospital was established at Palio Castrizza, about 16 miles from the town of Corfu, on the summit of a rocky peninsula three-quarters of a mile in circumference, and 250 feet above the level of the sea, united to the main land by a low ridge of sand, and shut out from the rest of the island by a lofty range of limestone hills exceedingly precipitous and abrupt. The temperature is much lower than at Corfu, the maximum of the thermometer being 86° and the minimum 38½°. There are no swamps or marshes in the vicinity; the whole of the surrounding district is said to be exceedingly salubrious, and the natives much more robust and healthy than those in the low grounds. This hospital was at one time a monastic establishment, and is of considerable extent. It consists of a massive stone building of two stories, the upper allotted to the patients, of whom it is capable of accommodating 50 or 60, the lower used as a kitchen and guard-room for the few troops occasionally quartered there.

The mortality among the whole force at the different stations in this island and Vido during the last 20 years has been as follows:—

Year.	Mean Strength.	Deaths.	Ratio of Deaths per 1000 of Strength.
1817	1,696	60	35
1818	1,699	47	28
1819	1,773	56	32
1820	1,789	28	16
1821	1,735	40	23
1822	2,035	27	13
1823	2,052	66	32
1824	2,080	39	19
1825	2,184	32	15
1826	1,979	35	18
1827	2,065	50	24
1828	2,835	69	24
1829	3,261	88	27
1830	3,334	55	16
1831	2,302	29	13
1832	2,495	38	15
1833	2,241	39	17
1834	2,256	38	17
1835	2,299	27	12
1836	2,240	28	13
Total .	44,380	891	..
Average	2,219	44	20·1

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Table IX.
Showing the annual ratio of Mortality of Troops in Corfu.

This Table shows that the mortality during the last 20 years has averaged only 20 $\frac{1}{10}$ per thousand annually, exclusive of accidents and sudden deaths not enumerated in the Medical Reports; while in Gibraltar, on the average of 19 years of the same period, the mortality from diseases alone amounted to 21 $\frac{4}{10}$, and in Malta to 16 $\frac{7}{10}$ per thousand of the strength annually, so that in point of salubrity Corfu appears to hold a medium between them.

It is necessary, however, in comparing the mortality of Gibraltar with that of Corfu, to keep in view that the former station is more generally healthy, and that it was only in consequence of the epidemic fever in 1828 which cut off 13 per cent., and the cholera in 1834 which cut off upwards of 4 per cent. of the garrison, that the ratio has been higher than at Corfu which has fortunately been exempt from such visitations. The greatest mortality there during the period now under review was only 35 per thousand, and in many of the years it has been as low as in Britain. Even in 1816, when the plague prevailed, the mortality did not exceed 34 per thousand, so that, notwithstanding the extent of marshy and wooded ground, Corfu has proved by no means very unhealthy to our troops.

We possess no information in regard to the deaths among the inhabitants, except for the year 1834, when they amounted to 1 in 36, being a little above the average of the other islands, but this is too limited a period to warrant any conclusions as to what may be the usual ratio.

The diseases by which the deaths in each of these years have been occasioned will be found in Abstract No. VII. of Appendix, of which the totals for the whole period have been arranged in classes as follows:—

	Total Deaths in 20 years.	Annual ratio of Deaths per 1000 of Mean Strength.
By Fevers	396	9·
Diseases of the Lungs	212	4·8
,, Liver	28	·6
,, Stomach and Bowels	136	3·
,, Brain	39	·9
Dropsies	23	·5
All other Diseases	57	1·3
Total	891	20·1

Table X.
Showing the principal fatal Diseases of the Troops in Corfu.

On comparing these results with the Tables exhibiting the influence of the same diseases on the troops throughout the whole Command, it will be found that the mortality by fevers in Corfu is greatly under the average, and, as already shown at page 35 of this Report, those of the intermittent and remittent type are not half so common as at several of the other islands where there are neither woods nor marshes.

It is still more remarkable that the great majority of the cases of fever included in the preceding Table, are reported to have originated among the troops at the rocky island of Vido, which in itself contains no apparent source of malaria, and is supposed to be beyond the reach of any from other quarters. As the details of the sick in that island have not been kept separate from those at Corfu, we have no means of offering any numerical evidence on this subject; but the concurring testimony of the medical officers for a series of years leaves

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little doubt of the fact, though they seem quite at a loss to account for it. The constant employment of the troops on fatigue duties at the public works might be supposed to have rendered them more obnoxious to the influence of fever at Vido; but the same circumstance was noticed before these works were commenced.

In Corfu there has been a remarkable diminution both in the prevalence and severity of fever since 1831, the deaths not having averaged more than 4 per thousand annually, and during the whole of the period under observation, it was never so productive of mortality as in the other islands.

In regard to diseases of the lungs, the troops have suffered less than in Cephalonia or Ithaca, but nearly twice as much as in Santa Maura. Pneumonia and consumption are, as usual, the principal sources of the mortality; and the natives are said to be extremely subject to them as well as the troops, but we possess no means of ascertaining to what extent.

The other classes of diseases do not seem to require any special notice.

PAXO.

Paxo.
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THIS island lies about seven miles to the south of Corfu, and extends upwards of five miles in length by one and three quarters in breadth, with a population of about 5000 souls. It consists merely of a single mountain from 800 to 1000 feet high, rocky, and much broken into deep chasms and ravines. There is so little soil that no grain can be raised, and it is mostly covered with olives, which readily take root even in the interstices of the rocks, and produce in great abundance. There are no marshes; the surface is of a sandy nature, and scarcely any part of it will admit of the retention of moisture. The climate is much the same as in the adjacent island of Corfu, but drier and less subject to variation; the thermometer seldom rises above 90°, and is rarely under 44°; and the number of days in which it rained was only 80 on the average of four years.

The garrison consists of a detachment of about 40 men, quartered in a small fort in the island of St. Nicolo, opposite to the principal village and harbour of Paxo, from which it is separated by a narrow channel 200 feet in breadth.

The barracks consist of a small range of buildings placed along the north-west side of the fort, and are said to be dry and comfortable, having been thoroughly repaired in 1830. The officers' quarters and garrison hospital are in the principal village opposite to St. Nicolo; the latter consists of one ward capable of containing six patients.

There are no returns from which we can supply the usual details regarding the health of the troops at this station, and, even had we possessed them, the numbers are so few that no accurate deductions could have been drawn from so limited a source. It is stated, however, in the Medical Reports, that although there is no marshy ground on the surface of the island and it is several miles distant from any other quarter whence malaria can be conveyed, fevers, both of the remittent and intermittent type, frequently prevail among the troops. Even the inhabitants are, in spring and autumn, much affected by the latter, and are said, at all times, to present a very sallow and sickly appearance. By an estimate taken on the average of five years, from 1829 to 1833, it was ascertained that the deaths amounted to 146 annually, or 1 in 34½ of the population, which shows this island to be more unhealthy than the others.

About a mile to the south-east of Paxo lies another small island called Antipaxo, in which a few soldiers are sometimes quartered. It is about two miles long and one broad; there is no marshy ground, it is less rocky, and contains more soil adapted for cultivation than Paxo, but the general features, in other respects, are much the same.

SANTA MAURA.

Lat. 39° N., Long. 20° 30' E.

Santa Maura.
 —

THIS island approaches nearer to the mainland of Greece than any other of the Ionian group, being only separated from it by a narrow channel not more than a hundred yards in breadth, and so shallow as in some places to be fordable. It lies nearly 50 miles south-east of Corfu, and is about 23 miles long, and 10 broad.

Santa Maura is intersected by a chain of mountains running north and south through its whole extent, and rising in some places to the height of 3000 feet; at the northern extremity they are almost perpendicular, but decline gradually towards the south-east, where they break into a succession of conical hills terminating in a bold promontory called Cape Ducato.

From this chain secondary ridges branch off intersecting the island in various directions, and forming between them a few valleys admitting of cultivation, but of very limited extent. Most of the produce is raised on a narrow strip of land stretching about 20 miles along the north-west side of the island, where the greater part of the population resides.

The soil is generally very scanty, and the greater part of the surface exhibits nothing to the view but bare rock interspersed with small patches of verdure. In the valleys the soil is either alluvial, or a rich loamy earth tenacious of moisture. There are no rivers, and though numerous torrents flow from the mountains during the winter months, their channels are quite dry in summer. The only fresh-water lake of any extent is about six miles to the south of the town, in the bottom of a valley surrounded by high mountains, but it exists merely during winter, being in summer dry and productive of rich crops. The bottoms of some of the smaller valleys are also converted into lakes and marshes during the rainy season; but, so far as can be ascertained, these exert no unfavourable influence on the health of the inhabitants in their vicinity. At the south-east extremity of the island, however, is a shallow bay or lagoon, called the Venetian harbour, now rapidly filling up by the accumulation of sand and mud, and of which the banks are said to be unhealthy.

The temperature of Santa Maura, like most of the other islands, is extremely variable, the range of the thermometer in autumn sometimes exceeding 20° in 24 hours. In the low grounds it seldom falls to the freezing point, but occasionally there is snow on the hills, and when the wind blows from that quarter the sensation of cold is said to be experienced as strongly as in more northern latitudes. The quantity of rain, and the seasons in which it falls, are much the same as in the adjacent islands.

The principal fortress stands on a low narrow strip of land, which stretches nearly across the channel separating the island from the continent of Greece, and, after running parallel to that coast for upwards of half a mile, returns towards the island, shutting in a lagoon of about six or eight square miles in extent, and varying in depth from one to three feet. The bottom of this lagoon is muddy, and as the quantity of water is variable, depending greatly on the action of the wind, the reflux frequently leaves a considerable portion of the banks exposed, from which offensive exhalations are said to arise. Amaxichi, the capital of the island, is situated on the southern side of this lagoon, opposite the fortress; it is built on an alluvial plain, about two miles long and one broad, thickly covered with olives, and shut in by high mountains in rear.

Since 1825, when the barracks were destroyed by an earthquake, the troops have been quartered in wooden huts within the fort, of the insufficient state of which there have been many complaints. In 1836 new barracks were erected, which now afford excellent accommodation; but the hospital is said to be still in very bad repair; it consists of a long range of buildings two stories high, placed against the north wall of the fortress, the upper story consisting of one large ward 112 feet long, by 21 broad, the ground floor containing a surgery, store-room, and offices.

The garrison of Santa Maura has generally furnished detachments to the following islands and outposts in the vicinity:—

St. Nicolo, a small sandy island, opposite the extremity of the strip of land, which bounds the lagoon; it is surrounded by shoals, and forms the lazaretto station. It has a healthy character; so much so, that convalescents have frequently been sent there with good effect from the fort. A non-commissioned officer and 10 or 12 men are generally stationed at this post.

Fort Constantine, a small work in the middle of the lake, near the narrowest part of the channel. A corporal and four men are quartered there, in a small house completely surrounded by the water, and only 2 or 3 feet above its level.

Fort Alexander, situated at the extremity of the lagoon. It is built on a bank of sand surrounded by others of the same description, and has a guard of a non-commissioned officer and 10 or 12 men, who reside in a small house containing merely one room.

It is worthy of remark, that though the two last mentioned forts lie, as it were, in the focus of malaria, and are sometimes very unhealthy, yet, in 1825, when so much sickness and mortality prevailed at Santa Maura, they furnished scarcely one case of fever.

There are also two islands adjacent to Santa Maura of considerable extent, to which detachments are occasionally sent:—

Meganissi, situated opposite the south-east extremity, about 18 miles from the fort. It is nearly 25 miles in circumference, consists for the most part of barren rock, and contains no population except in two small villages on the high grounds. Though there are neither swamps nor excessive vegetation on its surface, it has generally furnished its full proportion of sick to the hospital of Santa Maura; owing, in some measure, it is supposed, to its vicinity to the Venetian harbour before described. The few soldiers at this station are quartered in a house on the highest part of the island.

Scorpio, another small island to the south of Santa Maura, and at the entrance of the Venetian harbour. It is composed entirely of rock covered with brushwood, and has only a guard of four men.

The mortality among the troops at these stations during the last 20 years has been as follows:—

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Table XI.
Showing the Annual
ratio of Mortality of
Troops in Santa
Maura.

Years.	Mean Strength.	Deaths.	Ratio of Deaths per 1000 of Mean Strength.
1817	264	15	57
1818	306	4	13
1819	335	17	51
1820	321	5	16
1821	341	14	41
1822	349	24	69
1823	335	15	45
1824	298	7	24
1825	274	4	15
1826	252	8	32
1827	281	7	25
1828	294	50	170
1829	234	19	81
1830	241	18	75
1831	276	10	36
1832	190	3	16
1833	136	5	37
1834	128	7	55
1835	136	1	7
1836	142	3	21
Total .	5,133	236	..
Average	257	12	46

Thus, the deaths have averaged 46 per thousand of the strength annually, and in one year, upwards of a sixth part of the force was cut off. The mortality has, however, been extremely variable. In 1828, it considerably exceeded that of Jamaica, while in 1835 it was lower than among troops in Britain. On some occasions, the healthy years were cooler, and the unhealthy ones hotter, than usual, but not so invariably as to admit of increased temperature being regarded as an essential cause of disease.

The unhealthy character of this island is not confined to the troops alone, the inhabitants, particularly at Amaxichi, on the banks of the lagoon, suffer also to a very great extent by fever. In 1822 the deaths in that town amounted to 1 in 19 of the population, and most of the natives of the island, except those who live in the high grounds, are said to present a very sickly appearance.

The diseases by which the deaths in each year have been occasioned among the troops will be found in Abstract No. VIII. of Appendix, of which the totals for the whole period have been arranged in classes as follows:—

Table XII.
Showing the principal fatal Diseases of Troops in Santa Maura.

	Total Deaths in 20 Years.	Ratio of Deaths Annually per 1000 of Mean Strength.
By Fevers	193	37·6
Diseases of Lungs	13	2·5
" Liver	3	·6
" Stomach and Bowels	10	2·
" Brain	3	·6
Dropsies	4	·7
All other Diseases	10	2·
Total	236	46·

Such is the fatal character of fever at this station, that the ratio of deaths from that cause among the troops during the last 20 years, has been even higher than in the Windward and Leeward Command, in the proportion of 36 to 37, and so general has been its prevalence, that 749 per thousand of the troops have been attacked annually, while in the Windward and Leeward Command the average proportion attacked out of the same number of troops during that period was 717.

Fevers, both of the intermittent and common continued type, are more prevalent than in most of the other islands; about a fourth part of the force has been attacked by the former, and a fifth part by the latter, in the course of each year, but neither of them is in general severe or fatal. The great source of mortality is remittent fever, by which nearly a third part of the force has been attacked annually; it proved most fatal to our troops in 1828, when, of 294 in the island, there died 33 of remittent, and 11 of common continued fever which ultimately assumed the remittent type, being a much larger proportion than among the garrison at Gibraltar in that year, when the epidemic prevailed there.

Not only the troops on the banks of the lagoon were affected on this occasion, but several small detachments, as well as the inhabitants in various parts of the island, suffered severely from it. Dry and sandy situations free from damp or miasma, low marshy spots in the vicinity of the lagoon, close and deep ravines, and high airy ridges surrounded by the sea, all yielded their full share of victims. The fever commenced in the beginning of June, and appears to have terminated about the end of October, but not before almost every individual in the garrison had been attacked.

The spring of that year had been remarkable for a lower range of temperature and greater fall of rain than usual. During the month of May, refreshing winds from the west and north-west prevailed; the thermometer did not attain its usual high range till the middle of July, but in the end of May several cases of fever had begun to assume the remittent type, and throughout June many were admitted which speedily proved fatal. In July, August, and September no rain fell, the range of the thermometer was rather under than above the average at that season, and there was either a dead calm or a prevalence of the sirocco during the continuance of the disease, but the same had occurred in many other years which were comparatively healthy.

In the following year remittent fever again broke out with considerable virulence; the weather up to the end of June was uncommonly cool with high winds, but during the latter part of July and the whole of August it was, as in the former year, rather calm with a general prevalence of the sirocco. This epidemic appeared later than on the former occasion; the first manifestations of it were on the 4th July, and it was altogether of a milder character, the deaths being only about one in eleven of those attacked; the number of cases, however, was 202, being very nearly equal to the whole strength of the garrison.

In the autumn of 1830, this disease again prevailed to a similar extent; 212 cases occurred out of a force of 241, and of these about one in sixteen died. It commenced in July, attained its height in September, and disappeared in November. During this period the weather was hot and sultry, with an absence of any wind but the sirocco; this, however, is very generally the case in all years at that season.

It will be observed that the prevalence of febrile diseases in this climate has of late undergone a very remarkable change: in 1832, for instance, there was no fatal case, and in 1835 but one, and not a twentieth part as many were attacked as formerly, yet the temperature was as high as in those years when fever most abounded. Within that time great improvements had taken place on the lake, by increasing its depth, contracting its extent, and bringing a portion of the banks under cultivation, which may have had considerable influence on the health of the troops in its vicinity. There is so little certainty, however, regarding the real cause of remittent fever, that it is extremely difficult to state with any degree of accuracy what the effect of such improvements may have been. As an instance, in 1819 it prevailed to a considerable extent in the fort; and being supposed to have originated in the muddy stagnant state of the ditches and lake in the vicinity, part of the troops was, in 1820, employed in clearing them, and cutting a communication between the lake and the sea to admit a fresh current of water; but instead of this effecting the desired improvement in salubrity, the admissions and deaths from fever were much more numerous during the three succeeding years than in those which preceded this alteration. It is still more remarkable, that of all the soldiers employed on this duty, who were for several months engaged, even during the hottest part of the day, in throwing up and carrying away the mud, scarcely one was attacked by fever of any description, though among those not so employed several severe cases occurred.

Diseases of the lungs are comparatively rare, and seldom fatal in this island; the mortality from them does not amount to half the usual average in the Command; of consumption there have been but three cases admitted into hospital in the last fifteen years, and inflammation of the lungs has been by no means prevalent. It has often been a subject of remark that pulmonary affections are less common in low marshy situations where remittent and inter-mittent fevers frequently occur, and these results tend to support that conclusion.

The troops have also enjoyed a very considerable exemption from diseases of the bowels, not one-half as large a proportion has been attacked as in the other islands, and the deaths are greatly under the general average. Diseases of the liver are also comparatively rare. Thus though the fevers of this island prove so inimical to our troops, most of the other diseases are less fatal than in the United Kingdom.

CEPHALONIA.

Lat. 38° 8' N.; Long. 21° 18' E.

THIS island, the largest and most populous of the Ionian group, lies about six miles to the south of Santa Maura, having Zante on its southern extremity, and the island of Ithaca interposed between it and the Morea, from which it is about 25 miles distant. Owing to the irregularity of its shape the precise length and breadth of Cephalonia cannot well be defined, but its greatest length is 31 miles, greatest breadth 28, and in circumference it extends from 160 to 180 miles.

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Cephalonia.

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 Cephalonia.

A chain of lofty mountains runs throughout the centre of the island, attaining, at its southern extremity, the height of about 3700 feet. From this point, termed the Black Mountain, they gradually decline towards the north, and branch off in lateral directions. Indeed the whole surface of the island may be characterized as rugged and mountainous in the extreme, the elevated portions arid, barren, and presenting nothing to the eye but immense masses of dark grey rock. Between these, however, are a number of small confined valleys filled with rich mould readily admitting of cultivation; and even in the interstices of the rocks, wherever there is a little soil, the vine and olive take root and produce abundantly, so that the agricultural capabilities of the island are much greater than would at first be supposed from the barren and rugged nature of its outline. By recent statistical accounts it appears that of 220,000 acres of surface only 10,000 are devoted to agricultural purposes, 1600 to pasturage, 12,000 are under vines, 400 under olives, 6000 under currants, and about 190,000 waste and uncultivated.

This island possesses no stream of sufficient magnitude to deserve the name of a river, but there are several small rills which continue to flow throughout the year, and in winter are swelled by the rains into formidable torrents. It is now almost destitute of timber, an extensive forest which once covered the Black Mountain having been burnt down several years ago.

There are no inland lakes or marshes of any extent. During a part of the year pools are formed in the deep gullies or ravines by the mountain torrents, and these are supposed occasionally to give rise to exhalations unfavourable to health. The principal sources, however, to which the febrile diseases of this island are attributed, are two lagoons communicating with the sea, each terminating in a shallow marshy bay: one of these, the lagoon of Livadi, is 8 or 9 miles from Argostoli, and the marsh in which it terminates is three miles long, by one broad; the other, the lagoon of Cutano, is about a mile to the south of that capital, but the extent of the marsh there is by no means so great. Towards the extremity of these lagoons the water is very shallow, and sometimes a large portion of their muddy bottoms is left exposed to the action of the sun; of late years much has been done, by embanking in some parts, and deepening in others, to render them less obnoxious.

The climate of Cephalonia is more variable than that of the other islands in the Command; a difference of 24° in the thermometer has sometimes been observed in the space of a couple of hours. This may partly arise from the great elevation of the Black Mountains, which being generally covered with snow from December to April, must exert a material influence on the temperature of the low grounds. In summer, however, the range of the thermometer is higher by several degrees than in the adjacent islands. During winter the prevailing winds are from the north-east; in summer from south to east during the early part of the day, and from north to west during the afternoon and evening, with a dead calm from midnight to sunrise. Rain falls at all periods of the year, but most copiously in November, and least in June, July, and August.

Most of the troops are quartered in Argostoli, situated at the foot of a narrow promontory or tongue of land, which by its projection into the lagoon of Cutano forms the principal harbour; the town extends for a distance of nearly a mile and a half towards the head of the bay, where the water becomes exceedingly shallow and the banks of a marshy character, as already described.

The barracks in which the troops at Argostoli are at present quartered were erected in 1831, close to the sea-beach, at the end of the town farthest from the marshy part of the bay; they form an oblong square, surrounded by high walls, and contain five large and eight small rooms, with outhouses and offices attached. The hospital is a hired house of two stories, situated on the mole, near the sea: the upper story contains four wards capable of accommodating 40 patients; a surgery, store-room, and offices occupy the ground-floor.

It is necessary to remark that previous to the erection of these barracks the accommodation for the troops was a frequent subject of complaint by the medical officers, and a considerable portion of the sickness and mortality has been attributed to that cause. At the period when the Report commences the troops were principally quartered at the southern extremity of the town, nearest the marsh of Cutano; they were afterwards accommodated in the north part, in buildings of only one story, shut in by high walls, not properly ventilated, often extremely crowded, and in want of repair. Frequent representations on the subject at length led to the desired improvement, and the troops have ever since been remarkably healthy.

A party of from 20 to 25 men is sometimes quartered at Luxuri, a town situated at the opposite side of the entrance to the harbour of Argostoli; they have generally occupied a hired house, of one story, on the shores of the bay, and the sick have been sent over to the hospital at Argostoli.

A serjeant's party is also stationed at the Castle of St. George, five or six miles south of the capital, on the summit of a hill, where there is extensive accommodation, but for the most part out of repair. There is another serjeant's party at Asso, an old castle built on a lofty eminence, about 30 miles to the north of Argostoli. These outposts are esteemed very healthy.

Two other small detachments are sometimes furnished by the garrison: one to St. Euphemia, distant 21 miles, and the other to Guisardo, distant 32 miles from head quarters; but of the locality or accommodation we can supply no details.

The mortality among the troops serving in the different stations in this island has been, during the last 20 years, as follows:—

Years.	Mean Strength.	Deaths.	Ratio of Deaths per 1000 of Mean Strength.
1817	298	8	27
1818	221	2	9
1819	213	5	23
1820	237	7	30
1821	441	25	57
1822	541	15	28
1823	502	16	32
1824	450	33	73
1825	413	9	22
1826	422	6	14
1827	485	20	41
1828	375	16	43
1829	422	16	38
1830	424	17	40
1831	231	6	26
1832	215	1	5
1833	411	9	22
1834	368	4	11
1835	396	7	18
1836	420	6	14
Total	7485	228	..
Average	374	11	30·5

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Table XIII.
Showing the annual
Ratio of Mortality
of Troops in Cepha-
lonia.

Thus, during this period the mortality has averaged upwards of 30 per thousand of the mean strength annually; and as the troops at the outposts have in general been healthier than at Argostoli, it is probable the mortality among those quartered in that town alone may have been considerably higher than this estimate.

Though, fortunately, no instance of it has occurred within the period at present under observation, the troops at Argostoli have at times suffered to as great an extent as in Santa Maura. In 1816, for instance, 80 died out of a force which seems never to have exceeded 290, principally by remittent fever of so virulent a type that 1 in 3 of the cases proved fatal. At this period the plague was raging in some districts of the island, and a considerable portion of the troops were employed in forming cordons round the villages where it prevailed; but while those in Argostoli suffered so severely from fever only one soldier appears to have died from the plague out of about 80 employed on this arduous duty.

The high rate of mortality among the troops at Argostoli seems to have been more attributable to the unhealthy locality in which they were quartered than to the climate of Cephalonia, which, so far as regards the inhabitants at least, appears as healthy as any of the Ionian Islands; indeed, there is good reason to believe it is nearly as much so as Britain. In 1832 the deaths amounted only to 1 in 56 of the population, and in 1834 to 1 in 72: though we possess only the details of these two years, which seem to have been more healthy than the general average, yet we have abundant proof of the salubrity of the island in the fact that the population, which in 1822 amounted to 53,236, had in 1834, without any material influx of strangers, increased to 57,174. The inhabitants, particularly those of the highland districts, are said to possess a much more robust and healthy appearance than in the other islands, and though in the low grounds they occasionally suffer from remittent and intermittent fevers, these do not seem by any means of so fatal a character as among the troops. We find it recorded by Dr. Hennen, for instance, that in the epidemic of 1816, out of 12,000 of the inhabitants attacked, only 50 died throughout all the island; while, of 220 soldiers attacked, 80 died in the town of Argostoli alone.

The diseases by which the deaths in each year have been occasioned among the troops will be found in Abstract No. IX. of Appendix, of which the totals for the whole period have been arranged in classes as follows:—

	Total Deaths in 20 Years.	Ratio of Deaths Annually per 1000 of Mean Strength.
By Fevers	117	15·6
Diseases of the Lungs	44	6·
" Liver	7	·9
" Stomach and Bowels	27	3·6
" Brain	12	1·6
Dropsies	7	·9
All other Diseases	14	1·9
Total	228	30·5

Table XIV.
Showing the prin-
cipal fatal Diseases
of Troops in Cepha-
lonia.

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 ———
 Cephalonia.
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From this Table it will be seen that more than half the mortality has been caused by fever—principally of the remittent type, which in 1824 cut off 5 per cent. of the troops in the garrison, and proved fatal to 1 in 4 of all those attacked; so that it must have been of nearly as virulent a character as the worst class of fever in the West Indies. It commenced in June and terminated in October or November; during which period the weather was hot and sultry, but not so much, so as in the previous year, when the disease did not prevail to such an extent. Fever was also very common among the inhabitants, but did not prove by any means so fatal to those attacked; and on this occasion it was particularly observed by the medical officers that the temperate and intemperate suffered alike. Fever prevailed to a very great extent also in 1821 and cut off about 5 per cent. of the force, but in that year partook more of the common continued type and was not so virulent, though it extended more generally among the troops, nearly three-fourths of whom were attacked.

Intermittent fevers are also very common at Cephalonia. On the average of the last 20 years, a fifth part of the force has been under treatment for them annually; they rarely, however, terminate fatally, though a source of much inefficiency among the troops.

The proportion of deaths by diseases of the lungs is higher than the general average of the Command, principally from pneumonia, which is said to be one of the chief sources of mortality also among the inhabitants. Neither consumption nor catarrhs, however, seem to be more prevalent or fatal here than in the other islands.

The other classes of diseases offer no peculiarity worthy of notice, being much about the usual average throughout the Command.

ITHACA.

Lat. 38° 14' N.; Long. 21° 12' E.

Ithaca.
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THIS island is about 15 miles in length, but nowhere exceeds 4 in breadth, and in some parts is not more than half a mile across. It lies between Cephalonia and the Morea, separated from the former by a narrow strait only 8 miles in width, and consists principally of two mountains connected by a narrow ridge; that on the north rises very abruptly from the sea, and presents merely a rugged surface of grey rock intersected by deep chasms and ravines, and destitute of vegetation except a few patches of grass and wild olives; that on the south is of less altitude, but of the same rocky character. The ridge connecting them, though of considerable elevation, is not so rugged in its outline, and in some parts admits of cultivation.

There are no rivers, lakes, or marshes, and, from the nature of the soil, the rain is soon absorbed, or flows rapidly to the sea through the numerous ravines with which the island is intersected.

The climate is milder, and less subject to sudden alternations of temperature than that of Cephalonia; the thermometer rarely falls to the freezing point, and the difference in its range seldom exceeds a few degrees in 24 hours. The seasons are, of course, much the same as in the adjacent islands.

Vathi, the capital, is situated at the extremity of a bay surrounded by a high mountain range. The barracks, which are in the northern suburbs near the sea-shore, have been recently erected, and consist of two stories, the upper divided into a couple of large airy rooms, the lower forming a guard-room, cook-houses, and offices. These barracks form two sides of a small square, which is enclosed by walls on the other sides. The hospital is a hired house, about 200 yards from the barracks, and is said to be sufficiently capacious for the comfortable accommodation of the sick.

There are, in general, only from 40 to 50 men at Vathi; a few are scattered in detached posts, and there is a serjeant's party at Calamos, a small rocky island about 16 miles to the north-east of Ithaca, from which serious cases are generally transferred to the hospital at Vathi. The force distributed in these two islands seems to have averaged about 65 during the last 20 years, of whom 34 died in the course of that period, being at the rate of 26 per thousand of the strength annually, whereof about a fifth part were cases sent from Calamos, which terminated fatally within a few days after their arrival.

This ratio of mortality by no means corresponds with the salubrious character assigned to Ithaca, but which appears to have been given to it rather from the supposed effect which the absence of lakes and marshes, and its rocky arid surface was likely to have had upon the health of the troops, than by reference to numerical statements of the sickness and mortality to which they have been subject while stationed there.

The mortality may, to a small extent, have been increased by the deaths of invalids sent from the adjacent islands for change of air; we have kept these separate in every instance where it has been possible, but the returns do not always afford the means of doing so. There is sufficient proof, however, in the number of admissions into hospital, which could not have been affected to any material extent by this cause, that, so far as regard the troops at least, this island is not entitled to a high character for salubrity.

The diseases by which the 34 deaths before specified have been occasioned are thus detailed from Abstract No. X. of Appendix.

	Total Deaths in 20 Years.	Ratio of Deaths Annually per 1000 of Mean Strength.
By Fevers	14	10·7
Diseases of Lungs	9	6·9
,, Stomach and Bowels	3	2·3
,, Brain	3	2·3
Dropsies	2	1·6
All other Diseases	3	2·3
Total	34	26·1

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Ithaca.

Table XV.
Showing the Mor-
tality and Principal
Fatal Diseases of
Troops in Ithaca.

Even from this limited scale of numbers we may learn that although Ithaca is rocky, barren, and devoid of moisture and vegetation, the mortality by fever is greater than at Corfu where vegetation is luxuriant and marshes abound. That the troops in Ithaca are also more liable to that disease is clearly established by the following comparison from page 35 of this Report:—

	IN CORFU.		IN ITHACA.	
	Aggregate Strength 44,380.		Aggregate Strength 1,302.	
	Total attacked in 20 years.	Annual Ratio attacked per 1000 of Strength.	Total attacked in 20 years.	Annual Ratio attacked per 1000 of Strength.
Intermittent Fever	3,740	84	345	265
Remittent „	2,941	66	151	116
Common Continued	9,286	209	163	125
Total	15,967	359	659	506

Thus when the relative strength of the garrison is taken into consideration, we find that fevers are on the whole nearly twice as prevalent in Ithaca as in Corfu, and that intermittents are about three times and remittents twice as much so, while it is only from those of the common continued type, which seem in general little affected by locality, that there is any marked exemption. In some years, more than half the strength of the garrison has been attacked by intermittent fever, and in few, has less than a fourth or a fifth part been so; whereas at Corfu the proportion has never been so high.

Diseases of the lungs prove a greater source of mortality than at any of the other stations. Even in so small a force there have been four deaths by consumption; and the cases of inflammation of the lungs have been particularly severe, often arriving at a fatal termination with more than ordinary rapidity. It is said that the natives also suffer considerably from this class of diseases.

ZANTE.

Lat. 37° 42' N.; Long. 18° E.

This island lies to the south of Cephalonia, from which its nearest extremity is distant about 10 or 12 miles; it is somewhat of an oval shape, about 21 miles in length, 18 in extreme breadth, and nearly 70 in circumference.

Zante is by no means of so barren and rugged a character as other islands of the Ionian group. Though a chain of mountains, attaining in some parts the height of 2200 feet, extends throughout its whole length on the western side, there is towards the north and east a large tract of alluvial plain which occupies more than half the surface of the island, having a marly soil, extremely fertile, and in a high state of cultivation. There are also a few small spots among the hills available for agricultural purposes, but for the most part the whole of that range produces only scanty herbage. Zante has neither rivers nor lakes, and, in some parts of the mountains, even springs are rare, but in the hills nearest to the town are numerous small streams, which, during the rainy season, swell into impetuous torrents and inundate the low grounds. The beds of the gullies and ravines formed by these torrents are frequently damp and marshy during summer, and the exhalations from them are supposed to be prejudicial to health. There is an extensive morass at Chieri Bay near the south-east extremity of the island, but it is too far distant to be likely to affect the health of the troops, and no other ground of that description exists near the capital, except a small spot about a mile in circumference, which forms a marsh during winter, but is generally dry in summer.

The climate of Zante is not so variable as that of the other islands, and is considerably warmer in winter. The thermometer rarely falls to the freezing point, and snow never lies except on the mountain-tops, and then only for a few hours. The winds are more regular than in the islands to the north, generally blowing from N. W. and N. in spring and

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Zante.

summer, from the south often accompanied with the sirocco in autumn, and from the south-west, with violent storms, during winter. More rain falls than in the adjacent islands, but in other respects the climate is very similar.

The troops are principally quartered in the town and castle of Zante, situated at the southern extremity of the great plain before referred to. The town stretches nearly two miles along a gently curved bay; immediately behind it rises a hill of from 300 to 400 feet, on which stands the castle, an extensive fortress, covering an area of from 12 to 14 acres; and having from its elevated position free ventilation, with a temperature several degrees lower than in the town. Except the small piece of marshy ground at the extremity of the plain before referred to, and the beds of some of the ravines which are occasionally damp, there are in the vicinity none of those agencies to which the prevalence of fever is generally attributed.

The barracks in the citadel consist of a number of detached buildings, mostly of one story, scattered over the interior of the fort. Prior to 1836 they seem to have been in a very dilapidated state, without flooring to secure the troops from the damp, and without glass to protect them from the weather; most of these defects were remedied in the course of that year, and further improvements are in progress.

Within the town is another barrack for 50 men, close to the sea-beach, and about 300 yards south of the castle; it commands the landing-place, and is said to be sufficiently commodious but till last year was in the same state of disrepair as the others.

The hospital consists of a house two stories high, affording sufficient accommodation for the sick; it seems to have been kept in much better repair than the barracks, as there are no complaints regarding it.

The mortality among the troops quartered in this island during the last 20 years has been as under:—

Table XVI.
Showing the Annual ratio of Mortality of Troops in Zante.

Years.	Mean Strength.	Deaths.	Ratio of Deaths per 1000 of Mean Strength.
1817	338	16	47
1818	199	10	50
1819	263	20	76
1820	381	13	34
1821	641	43	67
1822	589	17	29
1823	542	10	18
1824	509	16	31
1825	457	8	18
1826	404	8	20
1827	432	15	35
1828	450	12	27
1829	454	10	22
1830	455	23	51
1831	294	3	10
1832	252	2	8
1833	323	6	19
1834	335	6	18
1835	289	8	28
1836	332	8	24
Total	7939	254	..
Average	397	13	32

Thus during this period the mortality has averaged 32 per thousand annually, and in 1819 it was even as high as 76 per thousand of the strength.

This appears a very high ratio, when we consider there is so little in the physical aspect or surface of the island to induce disease among the troops, and that the natives do not appear to be more unhealthy than those of Corfu, as will be seen from the following statement of the mortality for a period of six years:—

Years.	Total of all Ages.
1818	612
1819	474*
1820	945
1821	1055
1832	1195
1834	1181
Total	5462

* The very low mortality in this year appears to have arisen principally from infantile diseases being exceedingly rare.

The deaths from 1818 to 1821 are taken from Hennen's Military Topography, where the population is stated at 34,965; those for 1832 and 1834 are from the Medical Reports, and the population is there stated to have increased to 35,600. Taking the medium of these as our basis, the deaths at all ages have during this period averaged about 1 in 39 annually.

The diseases by which the deaths in each year have been occasioned among the troops will be found in Abstract No. XI. of Appendix, of which the totals for the whole period have been arranged in classes, as follows:—

	Total Deaths in 20 Years.	Annual Ratio of Deaths per 1000 of Mean Strength.
By Fevers	140	17·6
Diseases of the Lungs	32	4·
" Liver	16	2·
" Stomach and Bowels	44	5·5
" Brain	10	1·3
Dropsies	4	·5
All other Diseases	8	1·1
Total	254	32·

Table XVII.
Showing the principal Fatal Diseases of Troops in Zante.

By this Table it appears that upwards of one half the mortality among the troops in this island has been caused by fevers: nearly as many are cut off annually by this class of diseases alone, as in Malta by all diseases together. They are more prevalent and fatal here than in any other island in the Command, except Santa Maura, particularly in the remittent and common continued forms; the latter, however, is so intimately connected with, and so frequently terminates in the former, that it is impossible to make any accurate separation of them from the Returns. In 1821 for instance, two-thirds of the garrison were attacked by fever, which cut off 6 per cent. of their number. The deaths on that occasion are all entered as having been caused by common continued fever, though it generally terminated in remittent, and ought perhaps more properly to have been stated under that head.

The fever could certainly not, in that year, be ascribed to a higher temperature than usual, for the thermometer had been lower by several degrees during the autumnal months when it prevailed, than for the three preceding years at the same season. Though more prevalent, and therefore ultimately the cause of more mortality, it was by no means so severe as that which appeared in 1814, when out of 42 attacked 14 died, or 1 in 3, being as large a proportion as by the worst description of yellow fever in the West Indies.

In 1821 the disease was confined entirely to the castle; those in the town escaped. Men previously in the best health, of the soundest constitutions, and of the most regular habits, seemed equally liable to it with the sickly, the infirm, and the drunkard. The energies of those attacked were rapidly overpowered, and in fatal cases death generally ensued before the fourth day. There was no atmospherical peculiarity, nor anything in the state of the surrounding country to which the aggravated character of the disease in that year as compared with others, could be attributed.

As will be seen by reference to page 35 of this Report, intermittent fevers are less common at this station than at any of the others in the Command, except Corfu, and they have very much diminished in frequency of late years.

Diseases of the lungs are rather under the average; but those of the liver and of the bowels are much more prevalent, and nearly twice as productive of mortality as at any of the other islands, though it is difficult to conjecture to what peculiarity of climate or locality so marked a difference can be attributable. The other diseases exhibit nothing particularly worthy of remark.

CERIGO.

Lat. 36° 6' N.; Long. 22 50' E.

This island, the most southerly of the Ionian group, lies at a considerable distance from the others, between the southern extremity of the Morea and the island of Candia, about 14 miles from the former, and 45 from the latter. Its extreme length is 20, breadth 12, and circumference about 50 miles, and it contains a population of between 8000 and 9000, mostly composed of refugees from the Morea.

Cerigo is exceedingly rugged and mountainous; its shores are rocky, abrupt, and precipitous; and the surface, broken into numerous chasms and ravines, presents in many places bold and picturesque scenery, intersected by a few small valleys of considerable beauty and fertility.

Most parts of the island which admit of it are under cultivation; but deficiency of vegetation is a conspicuous character throughout. Over a great part nothing is visible but the bare rock. There are scarcely any trees except olives, and these are few and stunted in their growth, owing to the tempestuous blasts to which the island is exposed during the winter season.

The elevation of Cerigo secures the advantage of a constant breeze, with a reduced temperature, and though much exposed to storms and gales, the extremes of heat and cold are less strikingly experienced than in the more northern islands. There are no marshes, the soil

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—
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—

is light and porous, there are no rivers or permanent streams, and the rain speedily finds its way to the sea through the deep ravines and gullies with which the island is intersected.

The principal military station is a fort on the south-east side of the island, on the summit of a rock rising abruptly from the sea to the height of 500 feet, and insulated, except on the northern side where it slopes and communicates with the ridge of land whereon the principal town is built. Both the town and fort are partly encircled by a chain of bare rugged mountains, intersected by two deep ravines or watercourses through which the rain from the high grounds finds its way to the ocean.

The space within the walls of the fort is about half a mile in circumference, and from the nature of the ground presents many inequalities of surface, but none which admit of the formation of pools or accumulation of moisture during the wet season. The troops are, for the most part, quartered in hired buildings, which, with the exception of the hospital, are stated in the Reports of 1836 to be wretched in the extreme, partly ruinous, and not water-tight. So far back as 1828 the medical officers give a similar description of them.

There is another small island, called Cerigotto, in which a few soldiers have occasionally been stationed: it is about equidistant from Cerigo and Candia, and of the same rocky character as the former.

The average number of troops employed in these two islands during the last 20 years has been about 75, of whom 30 have died in that period, or 20 $\frac{1}{2}$ per thousand of the strength annually, being exactly the same as at Corfu. Thus, though this island, like Ithaca, has been supposed more healthy than others of the Ionian group, it does not appear from these results particularly to deserve such a character. Indeed, the prevalent opinions in regard to the salubrity of these small islands would appear in some measure to be founded on the few deaths which occur there as compared with the larger ones, without adverting to the very limited extent of the force employed. It is only by ascertaining as we have now done, what per-centage of the strength dies annually, on the average of a long series of years, that any accurate conclusions can be attained on that head.

The diseases by which the deaths at this station have been occasioned will be found specified in Abstract No. XII. of Appendix, of which the following Table exhibits the results arranged in classes:—

Table XVIII.
Showing the Mortality and principal Fatal Diseases of Troops in Cerigo.

	Total Deaths in 20 Years.	Annual Ratio of Deaths per 1000 of Mean Strength.
By Fevers	13	8·7
Diseases of the Lungs	6	4·
" Liver	1	·7
" Stomach and Bowels	3	2·
" Brain	6	4·
Dropsies	1	·7
Total	30	20·1

Thus, nearly half of the deaths among the troops are caused by fever, or about the same proportion as in Corfu, where vegetation is luxuriant, and swamps and marshes abound. Indeed in 1825 remittent fever cut off 6 per cent. of the force, being more than died from it in one year in any of the islands except Santa Maura. Notwithstanding the rocky arid nature of its surface, Cerigo enjoys no immunity from fevers of the intermittent type; for, on reference to page 35, it will be found that, on the average of the last 20 years, upwards of a fifth part of the troops have been admitted into hospital for that disease annually, and in 1825 and 1826 the number exceeded half the strength of the garrison, though this island is at such a distance from all extraneous sources whence malarious exhalations can be conveyed.

As the numbers are too few to admit of accurate deductions, it is unnecessary to make any remarks in regard to the other classes of diseases. Those of the brain appear to have been more productive of mortality than usual, principally owing to two deaths by delirium tremens, from excessive intoxication, for the indulgence of which these small stations afford great facilities.

PARGA.

Parga.
—

Besides the troops in the Ionian islands, there was, during the years 1817, 1818, and part of 1819, a force of about 300 men stationed at Parga, a town on the continent of Greece, nearly opposite to the island of Paxo; among these we find 26 deaths took place in 1817 and 1818, being at the rate of about 4 per cent. annually. The fatal diseases were,—

Fevers	10
Diseases of the Lungs	2
" Stomach and Bowels	11
Dropsies	1
All other Diseases	2
Total	26

There are no deaths stated in 1819; and the information in regard to this portion of the force is so defective, that we should not have adverted to it, had it not been necessary to do so, in order to complete the following summary of our results.

III.
Ionian Islands.
Parga.

GENERAL SUMMARY.

For the purpose of testing the accuracy of the preceding details in regard to the relative salubrity of these islands, it is necessary to ascertain whether the strength and deaths at all of them collectively correspond with what has been stated in the general tables at the commencement of this Report.

The strength and deaths in each island have already been stated as follows:—

	Aggregate Strength of Troops for 20 Years.*	Total Deaths in 20 Years.
Corfu	44,380	891
Santa Maura	5,133	236
Cephalonia	7,485	228
Ithaca	1,302	34
Zante	7,939	254
Cerigo	1,495	30
Parga (300 men for 2½ years, say)	750	26
Total	68,484	1,699
In Table VII. the Aggregate Strength and Deaths } throughout the Command were stated at . . . }	70,293	1,711
Difference	1,809	12

In this estimate, however, are not included the garrisons of the small island of Paxo, and another a few miles to the north-west of Corfu, called Fano, regarding which we have not been able to procure any separate details. The deaths there have generally been included with those which took place at Corfu, though in most instances the force has not been stated in the same Returns. About 75 men have been employed annually in these two islands, forming, in a period of 20 years, an aggregate strength equal to the above difference. The deaths correspond as nearly as can be expected on so large a scale of numbers, and for so long a period.

The accuracy of the preceding deductions being determined, we shall next submit the following Abstract of them, to show at one view the mortality by the principal classes of diseases at each station:—

	Annual Ratio of Mortality per 1000 of the Troops serving in each of the following Islands.						Average of whole Command.
	Corfu.	Santa Maura.	Cephalonia.	Ithaca.	Zante.	Cerigo.	
By Fevers	9·	37·6	15·6	10·7	17·6	8·7	13·
Diseases of the Lungs	4·8	2·5	6·	6·9	4·	4·	4·8
" Liver	·6	·6	·9	..	2·	·7	·8
" Stomach and Bowels	3·	2·	3·6	2·3	5·5	2·	3·5
" Brain	·9	·6	1·6	2·3	1·3	4·	1·
Dropsies	·5	·7	·9	1·6	·5	·7	·6
All other Diseases	1·3	2·	1·9	2·3	1·1	..	1·5
Total by all Diseases	20·1	46·	30·5	26·1	32·	20·1	25·2

Table XIX.
Comparative view of the Mortality by the principal classes of Diseases among the Troops in each of the Ionian Islands.

Keeping in view the previous details regarding the topography of each island, we can now see at a glance how far the character of insalubrity assigned to some, or exemption from malarious agencies attributed to others, corresponds with the ratio of mortality experienced by their garrisons during the last 20 years.

In the following Table we have in like manner placed in juxtaposition the ratio of mortality in each year at four of the principal islands, for the purpose of showing how inadequately the operation of any general cause, as heat or moisture, accounts for so striking a difference in the same year at stations within a few miles of each other, and therefore likely to be affected to an equal degree by such cause:—

* The aggregate strength consists of the number of men present in each year added together for the period over which the observation extends, being the proper basis of comparison with the total mortality for the same period.

III.
Ionian Islands.

Table XX.
Comparative view
of the ratio of Mor-
tality among the
Troops in four of
the principal Ionian
Islands from 1817
to 1836.

Average Ratio of Mortality per 1000 of the Troops serving in each of the following Islands.					
Years.	Corfu and Paxo.	Santa Maura.	Cephalonia.	Zante.	Average of whole Command.
1817	35	57	27	47	49
1818	28	13	9	50	27
1819	32	51	23	76	34
1820	16	16	30	34	21
1821	23	41	57	67	35
1822	13	69	28	29	23
1823	32	45	32	18	31
1824	19	24	73	31	30
1825	15	15	22	18	22
1826	18	32	14	20	21
1827	24	25	41	35	27
1828	24	170	43	27	35
1829	27	81	38	22	30
1830	16	75	40	51	25
1831	13	36	26	10	15
1832	15	16	5	8	14
1833	17	37	22	19	18
1834	17	55	11	18	16
1835	12	7	18	28	13
1836	13	21	14	24	15
General Average	20·1	46·	30·5	32·	25·2

Here then we find that, instead of extending over the whole Command as they would be likely to do if resulting from the operation of any general cause, the sudden accessions of mortality which occasionally take place are frequently confined to one island, while others, in the immediate vicinity, are exempt. In 1818, for instance, when 50 per thousand of the strength died at Zante, the mortality at Cephalonia, only a few miles distant, was but 9 per thousand. In 1817 and 1819 the troops were unhealthy both at Santa Maura and Zante, while those of Cephalonia, lying between them, experienced no more than the usual degree of mortality, and in 1828 and 1829, though a fourth part of the force was cut off at Santa Maura, those at Corfu and Zante were subject to no great degree of sickness, and even those in Cephalonia, immediately adjacent, did not suffer in any marked degree. Various other instances of a similar nature might be quoted.

Ithaca and Cerigo have not been included in the preceding Table, because the troops there are too few to admit of accurate deductions: it may be sufficient to state that the years 1820 and 1826, which proved very fatal to the troops at Ithaca, were more than usually healthy in the adjacent islands of Cephalonia and Santa Maura, and that in 1825, when as many soldiers were cut off by remittent fever at Cerigo as during all the other 19 years, every other island in the Command enjoyed a more than ordinary degree of salubrity.

SECTION II.

On the Extent of Invaliding in the Mediterranean Stations.

Mediterranean
Stations.

THE number of invalids from each Command, prior to 1825, cannot be stated separately; but those who arrived at Chatham from all the Mediterranean stations, between 1817 and that year, were as follows:—

Invaliding.

Years.	Total Force in the Mediterranean.	Number Invalided of whole Force.	Ratio per 1000 of whole Force Invalided.
1817	8,736	816	93·4
1818	8,269	97	11·7
1819	7,665	743	97·
1820	7,438	441	59·3
1821	8,219	372	45·3
1822	8,673	291	33·6
1823	8,432	223	26·4
1824	8,520	620	72·8
Total .	65,952	3,603	54·6

Thus, during this period there were invalided annually of the force serving in the Mediterranean, upwards of 54 per thousand, being more than twice as high a proportion as from the West Indies, where during the same period they amounted only to 22 per thousand annually.

As, however, many of those above stated may have been sent home owing to reductions in the establishment, when it is generally deemed advisable to discharge the men least likely to prove effective, though not absolutely disqualified for service, it is impossible to draw any

deductions as to the influence of the climate of the Mediterranean in producing disabilities among the troops during that period.

The information on this head since 1825 has, however, been more specific, and is comprised in the following Table :—

Mediterranean Stations.

Invaliding.

Table XXI. Showing the ratio Discharged Annually as unfit for Active Service of Troops in the Mediterranean.

Years.	GIBRALTAR.					MALTA.					IONIAN ISLANDS.				
	Mean Strength of Troops.	Discharged totally unfit for further Service.	Found fit for Garrison Duty only.	Total of both Classes.	Ratio per 1000 of Strength Invalidated of both Classes.	Mean Strength of Troops.	Discharged totally unfit for further Service.	Found fit for Garrison Duty only.	Total of both Classes.	Ratio per 1000 of Strength Invalidated of both Classes.	Mean Strength of Troops.	Discharged totally unfit for further Service.	Found fit for Garrison Duty only.	Total of both Classes.	Ratio per 1000 of Strength Invalidated of both Classes.
1825	3,153	146	..	146	46	1,760	76	..	76	43	3,479	118	..	118	34
1826	3,607	79	..	79	22	2,120	69	..	69	33	3,368	227	..	227	67
1827	3,200	53	3	56	18	1,722	31	1	32	19	3,490	50	..	50	14
1828	3,494	71	15	86	25	2,132	55	5	60	28	4,178	164	24	188	45
1829	3,733	44	18	62	17	2,287	25	7	32	14	4,614	42	25	67	14
1830	3,707	28	11	39	10½	2,299	28	10	38	17	4,646	17	3	20	5
1831	3,480	25	12	37	11	2,056	20	1	21	10	3,388	1	..	1	3
1832	3,526	24	5	29	8	2,045	23	2	25	12	3,254	3	5	8	3
1833	3,053	4	..	4	1	2,124	10	1	11	5	3,257	3	..	3	1
1834	3,034	45	7	52	17	2,198	17	10	27	12	3,284	7	2	9	3
1835	2,988	10	..	10	3	2,123	50	5	55*	26	3,274	13	..	13	4
1836	3,080	52	2	54	18	2,186	61	2	63	29	3,298	72	1	73	22
Total	40,055	581	73	654	16·	25,052	465	44	509	20	43,530	717	60	777	18

Thus it appears that, since 1825, the proportion annually discharged as unfit for active service has amounted to about 16 per thousand of the strength in Gibraltar, 20 in Malta, and 18 in the Ionian Islands. The men found "fit for garrison duty only" are included in these calculations, as they are understood to have been in most instances discharged, as well as those totally unfit for service. It will be observed, that at all these stations there has been a great reduction of the numbers invalided since 1830; probably owing to the greater strictness subsequently exercised in investigating into the reality of the disabilities for which soldiers claimed to be invalided, and also to the increased facilities afforded to those who were anxious to quit the army, for obtaining free discharges with gratuities or modified pensions after certain periods of service; the tables of sickness and mortality show clearly that, except in the Ionian Islands, there has been no such improvement in climate, during these years, as to lead us to suppose that disabilities were really less frequent.

In addition to the numbers in the preceding table there have been sent home invalided,—

From Gibraltar	167
„ Malta	162
„ Ionian Islands	121
Total	450

who were afterwards deemed fit for further service, and returned to their corps or depôts. During the same period, there have also died on their passage home about 64, principally by consumption and other pulmonary affections; 26 of these were from the Ionian Islands. The number of invalids who died on their passage, prior to 1825, cannot be stated with any degree of accuracy, as the deaths of women and children have been included with them in the Returns.

The disabilities or diseases of those found fit for garrison duty only, are not stated in the Returns; but the following are the causes assigned for the discharge of such as have been deemed totally unfit for further service :—

GIBRALTAR.

Diseases or Causes of Disability.	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Cachexies†	6	..	..	..	..	2	2	..	1	3	4	2	20
Dropsies . . . . .	..	..	..	2	7	..	..	..	..	..	1	4	14
Dysentery and Hepatic	13	4	1	2	2	2	..	..	..	..	..	2	26
Eye Diseases	6	8	12	17	8	1	3	1	..	2	..	2	60
Fractures, Dislocations, Wounds, and Hernia	15	9	8	9	6	7	3	5	..	8	2	4	76
Paralysis† and Epilepsy	3	1	1	3	6	5	3	2	1	2	..	6	33
Mental Diseases . . . . .	..	1	..	2	1	..	3	..	..	5	..	1	13
Pulmonic „	64	16	10	15	6	9	7	4	1	14	..	9	155
Rheumatism and Chronic Pains	15	2	2	2	3	1	1	5	1	..	1	6	39
Scrofula, Ulcers, Varices, and Strictures	2	3	2	3	2	1	..	6	..	5	2	4	30
Veneral . . . . .	..	1	..	..	..	..	..	..	..	1	..	..	2
Worn-Out, Old-Age	22	34	17	16	3	..	3	1	..	1	..	8	105
Deafness and Impediment of Speech . . . . .	..	..	..	..	..	..	..	..	..	3	..	1	4
Contractions . . . . .	..	..	..	..	..	..	..	..	..	1	..	3	4
Total	146	79	53	71	44	28	25	24	4	45	10	52	581

Table XXII. Showing the Diseases or causes of Disability of those found unfit for further Service.

* The numbers invalided from Malta, in 1835, include several from the Ionian Islands; but, owing to the Returns being blended together, they could not be separated.
 † In some of the earlier years scrofula was included with cachexies, and deafness with paralysis. We have no means of separating them.

MALTA.

Mediterranean
Stations.
Invaliding.

Diseases or Causes of Disability.	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Cachexies*	3	..	1	..	..	1	..	1	..	1	3	..	10
Dropsies . . . . .	..	2	1	1	..	..	1	..	1	1	..	2	9
Dysentery and Hepatic.	6	1	..	..	..	1	..	..	..	2	2	2	14
Eye Diseases	2	9	8	3	6	1	4	8	2	1	4	3	51
Fractures, Dislocations, Wounds, and Hernia }	11	24	4	6	2	1	3	1	..	2	6	6	66
Mental Diseases . . . . .	..	1	1	2	1	2	..	3	1	..	2	2	15
Paralysis* and Epilepsy	1	3	1	3	3	1	1	..	..	..	3	9	25
Pulmonic Diseases	32	16	4	8	2	15	6	8	5	4	14	11	125
Rheumatism and Chron- ic Pains	2	1	1	2	1	2	1	1	..	2	2	9	24
Scrofula, Ulcers, Varix, and Strictures	9	1	1	2	4	3	3	1	1	2	9	5	41
Venereal . . . . .	..	..	..	..	..	..	..	..	..	..	1	1	2
Worn-Out	10	11	9	28	6	..	1	..	..	1	3	7	76
Deafness and Impedi- ment of Speech . . . . .	..	..	..	..	..	..	..	..	..	1	..	2	3
Contractions . . . . .	..	..	..	..	..	1	..	..	..	..	1	2	4
Total	76	69	31	55	25	28	20	23	10	17	50	61	465

IONIAN ISLANDS.

Diseases or Causes of Disability.	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Cachexies*	14	3	..	..	2	3	..	..	..	..	..	5	27
Dropsies and Visceral Diseases . . . . .	..	5	..	26	5	..	1	..	..	1	..	5	43
Dysentery and Hepatic.	10	11	1	7	7	3	..	..	..	..	..	1	40
Eye Diseases	3	5	7	5	3	..	..	..	..	..	..	1	24
Fractures, Dislocations, Contractions, Wounds, and Hernia	22	51	8	22	8	..	..	..	2	2	..	7	122
Mental Diseases	3	4	..	3	2	..	..	2	1	..	..	3	18
Paralysis, Epilepsy, and Deafness	1	6	..	7	3	1	..	..	..	..	..	10	28
Pulmonic Diseases	24	44	8	21	..	5	..	..	..	2	..	15	119
Rheumatism and Chron- ic Pains	6	14	..	10	1	1	..	1	..	..	..	8	41
Ulcers, Strictures, and Varices	4	15	11	9	5	2	..	..	..	1	..	6	53
Venereal . . . . .	..	..	..	..	..	1	..	..	..	..	..	..	1
Worn-Out	31	69	15	54	6	1	..	..	..	1	..	11	188
Diseases not known. . . . .	..	..	..	..	..	..	..	..	..	..	13	..	13
Total	118	227	50	164	42	17	1	3	3	7	13	72	717

No distinction having been made between those discharged in consequence of the infirmities of age and those who had become unfit for the service by disease, we must forbear drawing any conclusions as to the influence of the climate of the Mediterranean in producing the disabilities above stated.

* In some of the earlier years scrofula was included with cachexies, and deafness with paralysis. We have no means of separating them.

SECTION III.

*On the Number constantly Sick in Hospital of the Troops serving in the Mediterranean Stations.*Mediterranean
Stations.

Mean Sick.

In No. XIII. of Appendix will be found a detailed statement of the number reported sick in the War Office Returns on the muster-day of each month, from which the following Table has been compiled, exhibiting, in a comprehensive form, the results for each station:—

Years.	GIBRALTAR.		MALTA.		IONIAN ISLANDS.			
	Average constantly Sick.	Ratio per 1000 of Mean Strength constantly Sick.	Average constantly Sick.	Ratio per 1000 of Mean Strength constantly Sick.	Average constantly Sick, per War Office Returns.	Add one-fifth for Sick omitted.	Total estimated Number constantly Sick.	Ratio per 1000 of Mean Strength constantly Sick.
1817	..	..	124	49	101	20	121	40
1818	112	41	119	51	125	25	150	47
1819	96	30	67	45	123	25	148	49
1820	103	34	73	47	112	23	135	47
1821	88	31	92	48	179	36	215	59
1822	104	36	113	54	160	32	192	50
1823	119	44	92	47	145	29	174	47
1824	185	61	130	70	137	27	164	45
1825	123	39	81	46	117	23	140	40
1826	148	41	68	32	116	23	139	41
1827	95	30	65	38	155	31	186	53
1828	176	50	76	36	214	43	257	61
1829	131	35	73	32	213	42	255	55
1830	149	40	66	29	207	41	248	53
1831	123	35	73	36	112	22	134	40
1832	143	41	86	42	93	19	112	34
1833	111	36	108	51	112	22	134	41
1834	149	49	109	50	113	23	136	41
1835	177	59	107	50	107	21	128	39
1836	144	47	119	55	113	23	136	41
General Average	130	41	92	45	138	28	166	47

Table XXIII.
Showing the Number constantly Sick in Hospital of the Troops in each of the Mediterranean Stations.

There has been considerable difficulty in obtaining this information accurately for the troops in the Ionian Islands, because the War Office Monthly Returns, to which we have been in the habit of referring for that purpose, only state the number sick at Corfu and some of the other stations. Occasionally, indeed, those of the whole force have been included, but in many instances they have not. On the average of the last 20 years about a fifth part of the sick were thus omitted; and it therefore became necessary to add that proportion to the number stated in the Returns before drawing any deductions.

This Table shows the proportion constantly ineffective from sickness in Gibraltar to have been 41 per thousand of the strength, or nearly the same as among the Dragoon Guards and Dragoons in the United Kingdom; in Malta 45 per thousand, and in the Ionian Islands 47. The proportion in Gibraltar is exceedingly low, probably arising from the comparative rarity of venereal affections in that garrison, which materially increase the ratio of inefficiency in Malta. Though the mortality in the Ionian Islands is so much higher than in Malta, there is no corresponding increase in the proportion constantly sick, but as already explained in the West India Report, that is generally the case at stations where the diseases are mostly of a febrile character and run rapidly to a termination.

Pursuing the same system of calculation as in previous Reports, we find the average period of sickness to each soldier, and the duration of each attack, to have been as under:—

	Gibraltar.	Malta.	Ionian Islands.
	Days.	Days.	Days.
Average Sick time in each Year	15	16½	17
Average Duration of each Attack of Sickness . . .	15½	14½	14¼

Thus, although the proportion constantly sick in hospital in Gibraltar is smaller, the average duration of each attack of sickness is longer than in the other stations, probably arising from the greater prevalence of diseases of the lungs, which are usually of a lingering character.

SECTION IV.

Mediterranean
Stations.On the Influence of Age and Length of Residence on the Mortality among
Troops serving in the Mediterranean.Influence of Age,
&c.

IN the Appendix will be found Abstracts Nos. XIV., XV., and XVI., showing the ages of the men serving in each of the Mediterranean stations, and the deaths at each age, from 1830 to 1836 inclusive, from which the following results have been extracted:—

General Results for GIBRALTAR from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.
1st January to 31st December 1830 .	21	..	1,207	12	1,039	16	407	8	71	1	2,745	37
" " " 1831 .	23	..	1,447	15	1,199	14	388	8	61	3	3,118	40
" " " 1832 .	28	..	1,269	18	1,365	20	392	6	50	..	3,014	44
" " " 1833 to 31st March 1834 .	27	1	783	7	1,337	20	269	11	58	4	2,474	43
1st April 1834 " " 1835 .	28	..	927	61	1,418	87	207	18	51	3	2,631	169
" " " 1835 .	40	1	1,026	17	1,238	27	219	7	36	1	2,559	53
" " " 1836 .	41	..	1,107	20	1,205	31	207	3	22	..	2,582	54
" " " 1837 .												
Total for 7½ Years . . .	208	2	7,766	150	8,801	215	1,999	61	349	12	19,123	440
Deduct a 29th part of the Deaths to ascertain the Mortality of 7 Years exactly . . . . .	..	..	..	5	..	7	..	2	..	..	..	14
Total for 7 Years . . .	208	2	7,766	145	8,801	208	1,999	59	349	12	19,123	426

General Results for MALTA from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.
1st January to 31st December 1830 .	3	..	526	12	780	13	302	10	50	6	1,661	41
" " " 1831 .	13	..	737	15	874	23	380	13	58	4	2,062	55
" " " 1832 .	18	..	933	4	734	25	190	4	47	2	1,922	35
" " " 1833 to 31st March 1834 .	13	..	627	6	993	36	264	11	41	2	1,938	55
1st April 1834 " " 1835 .	19	1	307	4	1,231	26	293	15	50	1	1,900	47
" " " 1835 .	34	..	426	4	1,334	23	171	9	51	2	2,016	38
" " " 1836 .	24	1	641	11	1,178	26	194	1	33	3	2,075	42
" " " 1837 .												
Total for 7½ Years . . .	124	2	4,197	55	7,124	172	1,794	63	335	20	13,574	313
Deduct a 29th part of the Deaths to ascertain the Mortality of 7 Years exactly . . . . .	..	..	..	2	..	6	..	2	..	1	..	11
Total for 7 Years . . .	124	2	4,197	54	7,124	166	1,794	61	335	19	13,574	302

General Results for the IONIAN ISLANDS from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.	Strength.	Died.
1st January to 31st December 1830 .	17	1	862	15	1,200	42	537	10	173	3	2,789	71
" " " 1831 .	18	..	1,072	14	1,393	20	493	15	153	5	3,129	54
" " " 1832 .	22	..	754	9	1,577	33	585	17	130	4	3,068	63
" " " 1833 to 31st March 1834 .	25	..	622	4	1,668	46	533	16	117	6	2,965	72
1st April 1834 " " 1835 .	23	..	426	6	1,925	31	451	13	136	2	2,961	52
" " " 1835 .	30	..	415	7	1,865	31	578	9	132	2	3,020	49
" " " 1836 .	15	..	288	1	1,689	33	462	12	113	2	2,567	48
" " " 1837 .												
Total for 7½ Years . . .	150	1	4,439	56	11,317	236	3,639	92	954	24	20,499	469
Deduct a 29th part of the Deaths to ascertain the Mortality of 7 Years exactly . . . . .	..	..	..	2	..	8	..	3	..	1	..	14
Total for 7 Years . . .	150	1	4,439	54	11,317	228	3,639	89	954	23	20,499	395

Reducing these results to a common ratio, on the same principle as in previous Reports, the relative mortality in each class appears to have been as follows:—

Mediterranean Stations.

Table XXIV. Showing the influence of Age on Mortality among Troops in the Mediterranean.

AGE.	GIBRALTAR.			MALTA.			IONIAN ISLANDS.		
	Aggregate Strength at each Age in Returns of 7 Years.	Total Deaths at each Age in Returns of 7 Years.	Annual Ratio of Deaths per 1000 Living at each Age.	Aggregate Strength at each Age in Returns of 7 Years.	Total Deaths at each Age in Returns of 7 Years.	Annual Ratio of Deaths per 1000 Living at each Age.	Aggregate Strength at each Age in Returns of 7 Years.	Total Deaths at each Age in Returns of 7 Years.	Annual Ratio of Deaths per 1000 Living at each Age.
Under 18	208	2	10·	124	2	16·	150	1	6·6
18 to 25 .	7,766	145	18·7	4,197	54	13·	4,439	54	12·2
25 „ 33 .	8,801	208	23·6	7,124	166	23·3	11,317	228	20·1
33 „ 40 .	1,999	59	29·5	1,794	61	34·	3,639	89	24·4
40 „ 50 .	349	12	34·4	335	19	56·7	954	23	24·2
Total .	19,123	426	22·3	13,574	302	22·3	20,499	395	*19·3

From this Table it appears that the mortality increases with the advance of age at all these stations in a much more rapid ratio than in the United Kingdom; this is particularly observable at Malta, where the increase is nearly as rapid as in tropical regions, probably resulting from the temperature being higher and more of a tropical character than that of Gibraltar or the Ionian Islands.

In the Ionian Islands the ratio of mortality between 40 and 50 does not appear to increase in the same progression as at the other ages, because in the strength of that class are included many old soldiers sent home to be discharged, who were only exposed to the climate for a few months of the year, though the calculations have necessarily been made as if they had served there for the whole year. This was, in some measure, the case, also, in the other Commands, but not to so great an extent.

The numbers under 18 are too few to warrant any general results in themselves, but taken in connexion with the small proportion of deaths at the same age in other stations, they confirm that remarkable exemption from mortality, about the age of puberty, which has already been established by more extensive observations in civil life.

If the results for each of the three Mediterranean stations are blended together, and a broader basis of calculation thereby obtained, the ratio will be found to exhibit the following regular progression:—

	Under 18 Years.	18 to 25.	25 to 33.	33 to 40.	40 to 50.	Total of all Ages.
Ratio of Deaths per 1000 of Mean Strength Annually .	10	15½	22¼	28½	33	21

Thus the mortality increases from 5 to 6 per thousand annually at each of these periods of life; an equally regular, but less rapid, ratio of increase has been observed among the civil population of the United Kingdom, wherever observations sufficiently extensive have been obtained.

The rapid increase of mortality with the advance of age in each of these three Commands sufficiently demonstrates that in the Mediterranean, as in the West Indies, troops do not suffer less in proportion to their length of residence, but the reverse. Every military person is aware that the drafts sent out from the depôts are for the most part composed of young men, and that corps newly arrived from the United Kingdom also contain a larger proportion of that class than those which have been longer on service: hence more of the soldiers between 18 and 25 must have been unacclimatized than of those at any other age. If their recent arrival in the Mediterranean, therefore, had the effect of inducing a greater degree of mortality, it would be shown by the proportion of deaths at that period of life being higher than at any other, whereas the reverse has just been established.

As most of the corps which served in Malta since 1830 were previously for some years at Gibraltar, it may safely be inferred that nearly all the troops in that island, above 25, must have been well inured to the climate of the Mediterranean; but the above Table shows that this circumstance has produced no exemption in their favour, as unquestionably it ought to have done, if such advantages resulted from acclimatization as have frequently been attributed to it.

It being principally in the exemption from febrile diseases that the advantage of length of residence in warm climates is supposed to manifest itself, we have, as a test of our conclusions on this subject, ascertained the ages of those who died from fever in Gibraltar, Malta, and the

* As these results include only the troops of the line, and extend over a different period, the general ratio of deaths in each of these Commands cannot correspond with what has been stated in the previous part of this Report: it must also be remembered that, during the last 7 years, the Ionian Islands have been so remarkably healthy that the mortality has been lower than at Gibraltar or Malta, though the reverse is the case, as formerly shown, when the observations are extended over the 20 years subsequent to 1816.

Mediterranean
Stations.

Ionian Islands, during the last seven years included in this Report, and by comparing them with the numbers alive at the same ages, as stated in the preceding page, have obtained the following results:—

Table XXV.
Showing the
Influence of
Age on the
Mortality by
Fever among
Troops serving
in the Mediter-
ranean.

AGE.	GIBRALTAR.			MALTA.			IONIAN ISLANDS.			TOTAL IN MEDITERRANEAN STATIONS.		
	Aggre- gate Strength.	Deaths by Fever.	Ratio of Deaths at each Age by Fever.	Aggre- gate Strength.	Deaths by Fever.	Ratio of Deaths at each Age by Fever.	Aggre- gate Strength.	Deaths by Fever.	Ratio of Deaths at each Age by Fever.	Aggre- gate Strength.	Deaths by Fever.	Ratio of Deaths at each Age by Fever.
Under 18.	208	..	..	124	..	..	150	1	6.6	482	1	2.1
18 to 25 .	7766	14	1.8	4197	9	2.1	4439	17	3.8	16402	40	2.4
25 " 33 .	8801	13	1.5	7124	15	2.1	11317	69	6.1	27242	97	3.5
33 " 40 .	1999	5	2.5	1794	9	5.	3639	26	7.1	7432	40	5.4
40 " 50 .	349	1	2.9	335	2	6.	954	5	5.2	1638	8	5.

This does not comprehend all the deaths from fever, as no returns of Age and Service are received from the Artillery; and in 1830 the ages of 16 men who died in two of the corps serving in the Ionian Islands not having been specified at all, could not be included in the above estimate.

Notwithstanding these omissions, however, the result is sufficient to establish that in each of the Mediterranean stations, but more particularly in the Ionian Islands, the fatal tendency of fever increases progressively with the advance of age; and when the results of the whole are combined together the progression is almost as uniform as that which regulates the law of mortality at different ages.

These results, taken in connection with the fact that the oldest soldiers have generally been longest in the climate, leave no doubt that, so far as regards fever, the mortality among the troops is likely to be increased, instead of diminished, by length of residence.

It is possible fevers may be more prevalent among the juniors, for on this point, unfortunately, we have no numerical evidence to adduce; but it seems extremely improbable that they should be so, as in that case recoveries must be comparatively rare among the seniors to produce the increased rate of mortality to which they are subject.

SECTION V.

On the Sickness and Mortality of Officers serving in the Mediterranean.

Mortality, &c. of
Officers.

OWING to the facility with which officers serving in the Mediterranean can change their residence, when necessary for the benefit of their health, and the consequent difficulty of tracing the deaths which may take place, during their absence on sick leave, from diseases contracted in the climate, this portion of the information is by no means so complete as that which refers to the troops generally; but the results, so far as can be ascertained, are, for each of these Commands, as follows:—

	Gibraltar, for 19 Years.	Malta, for 19 Years.	Ionian Islands, for 18 Years.
Aggregate Strength of Officers, ex- cluding Garrison Staff	2,511	1,772	2,506
Average Strength of each Year	132	93	147
Of these there are stated in the Medical Returns to have died	27	30	31
And there have been reported to the War Office, though not included in the Medical Returns	7	..	6
And it has been ascertained that there died, of those who left the Station in bad health . . . . .	..	..	7
Total Deaths	34	30	44
Annual ratio of Deaths per 1000 of Mean Strength	13.5	16.9	17.5
The total number of attacks of Sickness at each of these Stations during the the same period has been	1,942	1,206	2,567
Annual Ratio attacked by Sickness per 1000 of Mean Strength	773	650	1,024

From this it will be seen that the greatest portion of sickness among the officers is in the Ionian Islands, and as many left them in bad health, the deaths resulting from that climate may have been more numerous, though we have not been able to trace all of them.

The diseases by which the sickness and mortality have been occasioned, in each of these Commands, are detailed in Abstracts Nos. XVII., XVIII., and XIX. of Appendix, from which we have condensed the following Table, to exhibit the results in a comprehensive form:—

Mediterranean Stations.

Aggregate Strength . Of these	Gibraltar.		Malta.		Ionian Islands.		Ratio per 1000 of Mean Strength Attacked Annually.		
	2511		1772		2506		In Gibraltar.	In Malta.	In Ionian Islands.
	Attacked.	Died.	Attacked.	Died.	Attacked.	Died.			
By Fevers	265	14	145	6	755	10	106	82	302
Eruptive Fevers	4	..	1	..	4	..	1		
Diseases of the Lungs	325	2	184	3	303	3	129	104	121
" Liver	47	..	53	5	44	..	19	30	17
" Stomach and Bowels	310	2	229	1	600	6	123	129	239
Epidemic Cholera	2	1	..	..	..	..	1	..	..
Diseases of the Brain	10	1	14	3	20	3	4	8	8
Dropsies	3	3	4	3	7	1	1	2	3
Rheumatic Affections	148	1	63	1	120	1	59	36	48
Venereal	241	..	267	..	235	..	96	151	94
Abscesses and Ulcers	205	..	67	..	182	..	82	37	73
Wounds and Injuries	190	..	94	4	149	2	75	53	59
Diseases of the Eyes	37	..	25	..	24	..	15	14	10
" Skin	10	..	5	..	10	..	4	3	4
All other Diseases	145	3	55	4	114	8	58	31	46
On Sick Leave, and Causes Unknown . . . . .	..	7	..	..	..	10	..	..	..
Total	1942	34	1206	30	2567	44	773	680	1024

Table XXVI. Showing the Mortality and Principal Diseases among Officers serving in the Mediterranean.

Though the admissions are sufficiently numerous to form a fair basis for determining the relative prevalence of each of these classes of diseases among officers and privates, or to compare with those of officers at other stations, the deaths have been so few, and the causes of so many unknown, owing to their having occurred beyond the limits of these Commands, that no calculations deduced from them could be made available for any useful purpose. In Gibraltar, for instance, though the climate has proved so exceedingly inimical to consumptive patients, yet on referring to the abstract of diseases among the officers, we do not find one case of phthisis recorded, though there is good reason to believe that most of the deaths of which the causes are unknown arose from that disease. The Medical Reports explain this peculiarity by stating that, owing to the prejudicial influence of that climate on pulmonary patients, any officer in whom symptoms of consumption begin to manifest themselves, is immediately sent from the Rock.

In comparing the diseases of the officers and privates, it is necessary to direct attention to the relative influence of those of the Stomach and Bowels.

	In Gibraltar.	In Malta.	In the Ionian Islands.
There were admitted annually per 1000 of the Troops for this class of diseases	186	155	156
And per 1000 of the Officers annually	123	129	237

Thus, while in Malta the ratio in both ranks is nearly the same, and in the Ionian Islands is much higher among the officers, the reverse is the case in Gibraltar, and that in a very marked degree. This corroborates what was previously stated at page 12 of this Report, that affections of the stomach and bowels are by no means common at Gibraltar, except among the troops; and consequently that their prevalence may arise more from the large quantity of salt provisions issued there than from climatorial influence.

The remarkable exemption of the officers from ocular disease, so common among the troops in Gibraltar and Malta, is the only other peculiarity to which we think it necessary to call attention. At Gibraltar the proportion attacked of the troops was 97, and at Malta 102 per thousand, whilst of the officers only 14 or 15 per thousand were attacked annually at each of these stations; in the Ionian Islands the relative proportion is not so striking, being as 40 to 10. We are led to infer from these results, either that the nature of the soldier's duties in the Mediterranean particularly exposes him to this kind of disease, or that it has been in many instances artificially excited.

SECTION VI.

Mediterranean
Stations.*On the Influence of the Seasons in producing Sickness and Mortality among
Troops serving in the Mediterranean.*

THE prevalence of sickness and mortality from July to November, compared with the rest of the year, has been already noticed in the Report on the Health of the Troops in the United Kingdom, and several of the West India Stations of which the statistical details were formerly investigated. This result is still more strongly marked in the Mediterranean, as will be seen from the following Table, framed from Abstracts Nos. XX., XXI., and XXII. of Appendix, for the purpose of showing the total admissions and deaths in each month during the following periods:—

Table XXVII.
Showing the
Influence of the
Seasons on the
Sickness and
Mortality of
Troops in the
Mediterranean.

	ADMISSIONS.											
	GIBRALTAR, 19 Years.				MALTA, 20 Years.				IONIAN ISLANDS, 20 Years.			
	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	Total by all Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	Total by all Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	Total by all Diseases.
January .	2,053	382	1,822	4,257	1,347	313	1,761	3,421	2,492	324	2,121	4,937
February .	1,941	334	1,747	4,022	1,363	234	1,641	3,238	2,224	375	2,024	4,623
March .	1,780	342	1,873	3,995	1,208	265	1,579	3,052	2,478	341	2,024	4,843
April .	2,288	384	1,836	4,508	1,412	304	1,765	3,481	2,890	315	2,121	5,326
May .	2,398	340	1,810	4,548	1,544	297	1,730	3,571	3,798	340	2,320	6,458
June .	2,939	447	1,879	5,265	1,933	334	1,761	4,028	4,973	386	2,275	7,634
July .	3,631	505	1,911	6,047	2,634	396	1,784	4,814	6,944	407	2,482	9,833
August .	3,449	478	1,826	5,753	2,492	408	1,951	4,851	8,720	460	2,442	11,622
September .	3,643	377	1,732	5,752	2,748	412	1,843	5,003	7,494	468	2,160	10,122
October .	3,741	380	1,640	5,761	2,479	388	1,821	4,688	5,174	469	1,993	7,636
November .	3,109	349	1,483	4,941	1,935	373	1,641	3,949	3,714	423	2,016	6,153
December .	2,297	306	1,580	4,183	1,604	284	1,505	3,393	2,634	352	2,004	4,990
Total .	33,269	4,624	21,139	59,032	22,699	4,008	20,782	47,489	53,535	4,660	25,982	84,177
DEATHS.												
January .	33	40	4	77	36	28	2	66	47	30	5	82
February .	43	31	3	77	28	18	3	49	60	32	6	98
March .	34	30	2	66	28	19	2	49	41	35	6	82
April .	35	31	5	71	30	25	1	56	39	27	5	71
May .	23	33	3	59	23	16	7	46	48	25	..	73
June .	32	28	3	63	32	19	3	54	42	20	..	62
July .	91	21	2	114	33	19	1	53	103	20	..	128
August .	41	17	5	63	53	16	1	70	273	16	4	293
September .	57	19	2	78	56	11	4	71	257	28	3	288
October .	270	26	7	303	64	14	2	80	205	28	6	239
November .	209	21	3	233	47	18	2	67	151	25	1	177
December .	62	27	3	92	46	23	1	70	79	26	4	109
Total .	930	324	42	1,296	476	226	29	731	1,350	312	40	1,709

It will be observed that these totals do not correspond exactly with the numbers formerly stated, because it has not been practicable, in every instance, to ascertain the precise period at which an admission or death took place; but as this source of error is likely to affect all the months equally, it cannot materially influence the results as to their relative salubrity.

In the admissions for chronic and surgical diseases, there is little difference observable at any season, but the acute cases, which particularly mark the influence of climate, are in Gibraltar and Malta twice, and in the Ionian Islands thrice as numerous, from July to November, as during the rest of the year; and the deaths in Gibraltar and the Ionian Islands, during these months, have borne a still higher proportion. The Reports of all the medical officers who have served in the Mediterranean concur in stating, that no sooner does the month of June arrive than the hospitals begin to be crowded, and that this takes place not in occasional years only, as at some stations, but invariably in every year. This is particularly observable in the Ionian Islands, where, during one-half of the year, the degree of health enjoyed by the troops is probably unequalled in any part of the globe; while, during the other half, the climate seems to be frequently as inimical to the constitution as that of the West Indies; a circumstance which has given to some of these islands a still more unhealthy character than they merit, the sickness invariably experienced during the latter half of the year, creating a much more lasting impression than the absence of it during the first six months. The diseases which cause so rapid an increase, are principally fevers, varying in severity, but all requiring the most active treatment.

The unhealthy character of these months is further established by the average number daily sick, as ascertained from Abstract No. XIII. of Appendix, viz.—

Average constantly Sick of whole Force.	In Gibraltar.	In Malta.	In Ionian Islands.
In January	108	82	106
February	110	82	105
March	113	81½	114
April	123	84½	114
May	122	86	128
June	132	89½	140
July	141	96	180
August	146	101½	194
September	149	109	171
October	157	108	161
November	147	101	133
December	115	84	106

Thus, both as regards the number of admissions and the duration of disease, the unhealthy character of these months is equally apparent.

SECTION VII.

Deductions from the preceding Report.

As the preceding results tend to render questionable many of the theories regarding the influence of certain climates and localities in inducing some diseases, and modifying the operation of others, it may be necessary here to take a brief review of the information which has been obtained on that subject in the course of this investigation.

The mild climate of the Mediterranean, for instance, has generally been considered favourable to the cure or prevention of consumption and other pulmonary affections. To ascertain whether this supposition is well founded, or the reverse, is manifestly an object of much importance to medical science, and can only be determined by investigations extending over a long series of years, and including large masses of individuals. The experience of civil practitioners, however carefully recorded, is on too limited a scale to warrant general conclusions on a subject of such magnitude; yet, hitherto, no other source of information has been available for that purpose, and it is not surprising, therefore, if their conclusions, when submitted to the test of numerical calculation, are, in many instances, found to be erroneous.

In no way can the relative influence of climate in inducing any particular disease in different countries be more accurately estimated than by a comparison of the proportion attacked annually out of a given number of individuals resident in each. If we apply this test to the Mediterranean stations, by investigating the relative prevalence of consumption among the troops there and in the United Kingdom we obtain the following results:—

Deductions from
Report.

	Aggregate Strength of 7 Years, from 1830 to 1836 inclusive.	Total Attacked by Consumption in these 7 Years.	Ratio per 1000 of Mean Strength Attacked Annually.
United Kingdom	43,163	286	6·6
Gibraltar	22,868	187	8·2
Malta	15,031	101	6·7
Ionian Islands	24,401	129	5·3

We have already alluded to this subject in a more general way, in the course of our observations on diseases of the lungs in each of the Mediterranean Commands, but we can now speak with more certainty from results extending in each instance over the same seven years, and embracing a large number of individuals of the same profession, the same age, the same habits, and having, except at Gibraltar, the same diet. This affords so accurate a standard of comparison as to place beyond a doubt the interesting fact, that, except in the Ionian Islands, the liability of troops to consumption in the Mediterranean stations is even greater than in the United Kingdom. We have not compared the deaths by consumption for a similar period, because conclusions could not have been drawn in regard to the relative mortality with the same accuracy, so many labouring under that disease having died on their passage home or after their arrival in this country; but from all the information we have been able to obtain there can be no doubt that if due allowance is made for these casualties, the proportion of deaths also, among those attacked by consumption, will be found fully as high in the Mediterranean as in the United Kingdom.

We might have carried this comparison further, and shown how little influence temperature has on this disease by the fact that it is still more prevalent and fatal in the Mediterranean than in North America, where the soldier has frequently in the course of his duty to be exposed to the night air, when the thermometer is several degrees below zero; but

Mediterranean
Stations.

we defer entering on any more extensive comparison of this kind till we have an opportunity of adducing evidence on that subject in a more detailed form.

These facts offer a striking contradiction to the popular idea regarding the influence of sudden atmospheric vicissitudes, and rapid alternations of temperature, in inducing this disease; but it is even more remarkable that similar results should be obtained in regard to the relative prevalence and mortality by pleurisy and inflammation of the lungs, which are supposed to be still more influenced by these agencies:—

Stations.	Aggregate Strength of 7 Years, from 1830 to 1836 inclusive.	Total Attacked by Pleurisy and Inflammation of Lungs in same Period.	Total Died of these Diseases in same Period.	Ratio per 1000 of Force Attacked Annually.	Ratio per 1000 of Force Died Annually.
Great Britain. . . .	43,163	720	37	17	·9
Gibraltar	22,868	655	13	29	·6
Malta	15,031	456	28	30	1·8
Ionian Islands . . .	24,401	556	30	23	·9

Here, then, we find that inflammatory affections of the lungs are nearly twice as prevalent in the Mediterranean as among the same number of troops in the United Kingdom, and that in the mild climate of Malta they are also twice as fatal.

These facts, combined with a careful examination of the Abstracts in the Appendix, lead to the inference that residence in the Mediterranean, though so often recommended to patients labouring under pulmonary affections, is by no means likely to be attended with beneficial results: in some cases, no doubt, change of air, change of scene, and the sea voyage, may have benefited a patient, and led to a partial recovery, but the same would in all probability have taken place wherever he had been sent, it being by no means likely that any beneficial influence can be exerted by the climate itself, when a body of selected soldiers, subject to no severe duty and exposed to no hardship, lose annually a larger proportion of their number by consumption than in the United Kingdom. This inference, however adverse to generally received opinions, is strikingly corroborated by the prevalence of consumption and other pulmonary affections among the civil inhabitants of Malta, as shown in Appendix No. III. of this Report.

The average number of pulmonary affections during the last seven years is certainly not too favourable a standard of comparison for the climate of the United Kingdom, as they have been more frequent than usual, owing to the influenza having twice prevailed to a great extent among the troops. The results for the same period may be supposed, however, to afford a fairer average for the Mediterranean, where that epidemic was not so prevalent.

The only point wherein this comparison may be deemed defective is, that the results for the Mediterranean refer to infantry only, while those for the United Kingdom refer to the cavalry. There are no means, however, of remedying this defect by ascertaining the prevalence of these diseases in this country among infantry alone, because in all regiments of the line, or their depôts so many constitutions have been deteriorated by foreign service, that all the sickness and mortality could not be fairly attributed to this climate; and the Foot Guards, though they have had no foreign service for the last 20 years, appear to suffer so much from the duties, or the dissipation of the metropolis, to which the sphere of their service is for the most part confined, that any results drawn from their Returns would form a still more unsuitable comparison. The cavalry, who seldom serve out of the kingdom, and are equally dispersed over it, appear under these circumstances to offer the best standard, and this has accordingly been adopted.

The results in this Report, as to the relative prevalence of fevers of the remittent and intermittent type in each of the Ionian Islands, afford strong confirmation of the doubts expressed in the West India Report regarding the uniform agency of emanations from a marshy soil or excessive vegetation in the production of those diseases; for, though sometimes more prevalent in the vicinity of such causes, yet we find that in the rocky, barren, and rugged islands of Vido, Ithaca, and Cerigo, they are more common than at Corfu, where these supposed sources of fever abound. This cannot altogether be accounted for by supposing exhalations to be wafted from any other island, because the geographical position of Cerigo places it completely beyond the reach of any such source of disease, and even the other two are beyond the distance to which, according to most authors, malaria in a concentrated form is likely to be conveyed.

In some colonies where remittent fever prevails, particularly the West Indies, it has been attributed to excessive moisture, because there the unhealthy and the rainy seasons happen to correspond. If, however, we are to consider the yellow fever of the West Indies and the Mediterranean so far similar as to be produced by the same agencies, we have a striking contradiction to the effect of moisture as an exciting cause, in the fact, that in the Ionian Islands this disease always appears and prevails at the period when there is least rain. On reference to the Table at page 31 of this Report, showing the days on which rain fell in the Ionian Islands, it will be found that from June to October, when remittent fever was most prevalent, the rainy days were not one-third as numerous as during the rest of the year, and so great was the drought in August, when that disease generally attains its maximum prevalence and severity, that it only rained six times in the course of ten years;

we are aware that the absence of rain cannot always be assumed as a proof of the non-existence of moisture in the atmosphere, but from the want of hygrometric observations we possess no other criterion by which to estimate the presence of that supposed agency.

The emanations from decayed vegetation have also been assigned as another of the agencies to which this disease owes its origin in some colonies. Here, however, we find that it generally appears in the beginning of June, when vegetation is yet in luxuriance, and that it diminishes in September, when vegetation has become scanty and, from the fall of moisture combined with the approach of winter, is rapidly hastening to decay.

The uniformity with which remittent fever makes its appearance in the Ionian Islands, during the month of June, is certainly a very remarkable feature in this disease, and would, to a superficial observer, appear to indicate that it depended principally on temperature; but this conclusion is rendered extremely questionable not only by what we already know in regard to the statistics of that disease in the West India colonies, but by the fact that on the average of ten years, from 1820 to 1830, when fever was exceedingly prevalent and fatal in the Ionian Islands, the mean temperature in the month of October, when it began to disappear, or to assume a very modified form, was but two degrees lower than in the month of June, when it generally commenced, and in some instances raged with considerable violence. If we refer to its appearance in Gibraltar, too, we find that it has never shown itself there to any extent, except towards the middle of September, by which period the thermometer has sunk some degrees below its maximum range; and throughout the South of Spain this epidemic is always at its height about the middle of October, when the temperature has undergone a still further reduction.

Taking a general view of this question, too, we must suppose that if it depended on a high range of temperature alone it would always be most prevalent in those years when that was greatest, whereas the reverse has been frequently observed. In that case, too, all stations in the vicinity should be equally affected, instead of which we often find the fever extremely prevalent at one of the Ionian Islands, while at another, though adjacent and subject to the same or a still higher temperature, the troops are comparatively exempt.

Similar considerations on the subject of fever will be found more fully discussed in the West India Report, where there existed a wider field of observation. The origin of that disease may long baffle research, but an important step in the inquiry will have been gained by thus establishing that none of these agencies sufficiently account for its existence and operation.

The first part of the book is devoted to a general history of the United States from its origin to the present time. It is divided into three volumes. The first volume contains the history of the thirteen original states from 1776 to 1800. The second volume contains the history of the United States from 1800 to 1860. The third volume contains the history of the United States from 1860 to the present time.

The second part of the book is devoted to a general history of the world from its origin to the present time. It is divided into three volumes. The first volume contains the history of the world from its origin to 1000 B.C. The second volume contains the history of the world from 1000 B.C. to 1000 A.D. The third volume contains the history of the world from 1000 A.D. to the present time.

The third part of the book is devoted to a general history of the United States from its origin to the present time. It is divided into three volumes. The first volume contains the history of the United States from its origin to 1800. The second volume contains the history of the United States from 1800 to 1860. The third volume contains the history of the United States from 1860 to the present time.

THE HISTORY OF THE UNITED STATES



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ON THE

SICKNESS, MORTALITY, AND INVALIDING

AMONG THE TROOPS

IN

THE MEDITERRANEAN.

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Showing the Admissions into Hospital, and Deaths, among the Troops serving in GIBRALTAR, from 1815 to 1856 inclusive.

Table with columns for Year (1815-1856), Strength, Admissions, and Deaths for various diseases. Includes sub-sections for Fevers, Epidemic Fevers, Diseases of the Lungs, Diseases of the Liver, Epidemic Cholera, Diseases of the Brain, Rheumatic Affections, Venereal Affections, Abscesses and Ulcers, Wounds and Injuries, Diseases of the Eyes, Diseases of the Skin, Punished, and All other Diseases. Includes a 'Total' row at the bottom.

When corps have been removed from this station towards the end of the year, the deaths which took place during the whole of that year in the relieving corps have sometimes been inserted in the Medical Returns instead of those which occurred in the corps at the stations during the previous part of the year. Whenever this error has been detected, the necessary corrections have been made, and the changes which have then become necessary will account to the medical officers for the totals in the preceding abstract not corresponding in some instances with those stated in their returns.

* Returned under this head by the Ordnance Medical Officer.

Showing the Deaths among the Civil Population of MALTA, from 1822 to 1834 inclusive, with a Specification of the Diseases which proved fatal in each Month during that period.

Classes of Diseases.	Period	1822												1823												1824																																															
		Estimated at 95,484, exclusive of Gozo, &c.												Estimated at 95,943.												Estimated at 96,404.																																															
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.																																				
		Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.	Total by each Disease.																																				
Fever.	Population	244																								320																								320																							
	Specific Diseases.	1																								4																								4																							
	Febris	21	12	8	16	13	14	22	24	34	31	28	21	244	20	11	13	9	16	64	34	29	52	27	24	21	320	21	18	23	35	14	13	17	16	17	18	22	231	231																																	
Eruptive Fevers.	Rubra	1																								4																								4																							
	Scarlatina	1																								4																								4																							
	Varicella	1																								4																								4																							
Diseases of the Lungs.	Pneumonia	9	2	1	4	3	3	2	2	3	2	1	32	5	1	4	1	5	11	2	2	3	2	1	1	35	3	3	10	11	4	1	1	1	1	3	3	1	40																																		
	Pleuritis	2	1	1	1	1	1	1	1	1	1	1	9	2	1	1	1	1	1	1	1	1	1	1	6	2	1	1	3	1	1	1	1	1	1	1	11																																				
	Hæmoptysis	12	16	20	18	12	12	28	19	26	11	18	204	16	10	12	12	14	9	21	20	19	27	14	20	193	13	15	13	5	17	6	15	10	8	3	13	139																																			
	Consumption*	14	8	12	5	12	3	5	6	5	11	9	94	3	8	5	7	9	9	7	7	3	6	3	7	74	6	2	6	9	7	4	8	1	6	8	3	7	67																																		
	Phthisis Pulmonalis*	2	3	1	2	2	2	2	4	2	2	2	3	25	3	5	4	10	8	9	11	4	17	16	34	121	30	37	46	24	12	5	8	7	5	7	13	204																																			
	Catarrhus	8	8	6	5	3	4	7	1	2	4	6	59	5	10	9	6	2	7	2	1	2	3	2	1	49	5	7	3	4	3	3	4	2	4	2	6	42																																			
	Asthma	1																								1																								1																							
	Pertussis	1																								1																								1																							
	Hepatitis	1																								1																								1																							
	Icterus	1																								1																								1																							
Diseases of the Liver.	Peritonitis	1																								1																								1																							
	Gastritis	1																								1																								1																							
	Hæmorrhæ	1																								1																								1																							
	Hæmatemes	1																								1																								1																							
	Dysenteria	1																								1																								1																							
Diseases of the Stomach and Bowels.	Diarrhoea	3	8	3	5	1	15	19	9	12	19	9	8	111	8	3	1	3	5	6	16	7	14	20	17	9	109	6	1	4	1	5	8	7	18	11	10	12	91																																		
	Dyspepsia	18	19	12	7	15	19	26	14	20	20	15	209	18	6	9	17	13	21	23	15	21	16	20	18	197	13	12	13	15	6	11	22	23	22	14	12	20	183																																		
	Colica	1	1	1	1	1	2	1	2	1	2	1	14	1	2	1	1	2	1	2	1	2	1	1	10	3	1	1	1	1	3	1	1	1	1	1	1	14																																			
	Cholera Morbus	1																								1																								1																							
	Dyspepsia	1																								1																								1																							
Diseases of the Brain.	Phrenitis	2																								1																								1																							
	Cephalalgia	1																								1																								1																							
	Apoplexia	17	15	12	8	6	11	4	7	4	4	5	9	102	18	7	13	9	11	5	6	3	6	9	11	7	105	14	10	14	10	7	5	8	5	7	8	6	7	101																																	
	Paralysis	1																								1																								1																							
	Epilepsia	1																								1																								1																							
Dropsies.	Hydrocephalus	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	3																																		
	Anasarca	5	3	11	7	4	6	5	2	5	3	8	4	63	6	4	8	5	4	5	1	5	4	6	3	55	2	13	1	4	1	2	1	2	1	2	1	2	8																																		
	Ascites	13	10	14	4	6	4	2	2	2	2	7	6	79	8	9	8	15	11	6	8	6	8	5	6	18	6	10	22	12	5	5	7	5	3	13	11	4	103																																		
	Hydrothorax.	67	68	58	38	63	73	108	71	64	85	72	79	846	77	173	69	75	58	61	91	78	81	82	88	106	1039	87	93	96	76	62	80	69	92	62	96	100	124	1040																																	
All other Diseases	196	174	164	122	148	170	231	165	174	216	184	182	2126	195	251	165	175	158	228	217	184	221	223	213	253	2483	218	228	258	215	152	151	169	187	159	196	188	241	2365																																		
General and Monthly Totals	244																								320																								320																								
	1																								4																								4																								
	32																								187																								187																								
	6																								12																								12																								
	3																								7																								7																								
	113																								116																								116																								
	63																								173																								173																								
	846																								1039																								1039																								
	2126																								2483																								2483																								

* The deaths by Consumption and Phthisis Pulmonalis are reported under different heads by the Maltese medical practitioners; the former is understood principally to refer to that class of consumptive cases more generally designated Marnasus, which term has been adopted in the Returns since 1831.

Showing the Deaths among the Civil Population of MALTA, from 1822 to 1834, &c.—(continued).

Classes of Diseases.	Period Population	1825												1826												1827																		
		Estimated at 97,627.												Estimated at 98,739.												Estimated at 99,549.																		
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.							
Fever.		10	16	17	16	15	25	30	24	25	21	17	13	229	229	229	11	15	13	13	8	9	17	18	16	16	12	8	156	156	13	11	16	17	12	11	13	24	15	12	14	13	171	171
Eruptive Fevers.														119	119	119	9	6	5	9	2	8	3	2	2	1	1	49	49														9	9
Diseases of the Lungs.		4	2	3	6	2	1	2	1	2	4	1	1	27	27	27	4	6	4	4	1	1	1	3	1	1	20	20	3	3	3	5	3	1	1	1	2	1	4	4	30	30		
Diseases of the Liver.		1	1	1	1	1	1	1	1	1	1	1	1	7	7	7	1	2	1	2	1	1	1	1	1	12	12	1	1	1	1	1	1	1	1	1	1	1	1	6	6			
Diseases of the Stomach and Bowels.		3	4	4	2	1	16	28	25	21	13	7	3	127	127	127	4	1	5	2	4	8	12	16	8	13	103	103	4	3	2	3	6	12	20	24	8	10	11	7	110	110		
Diseases of the Brain.		10	7	12	9	8	7	10	6	7	12	11	11	110	110	110	15	14	9	9	5	5	6	5	9	8	6	109	109	1	10	12	12	7	6	7	11	10	4	16	15	118	118	
Dropsies.		15	14	15	5	18	14	8	11	16	14	9	14	153	153	153	6	3	6	4	2	2	1	2	2	4	31	31	1	2	3	2	1	2	1	2	1	2	6	6	25	25		
All other Diseases.		104	102	102	111	89	104	134	120	87	97	81	75	1206	1206	1206	103	99	92	68	70	67	92	90	96	94	90	1061	1061	89	71	90	65	77	94	142	109	73	87	98	78	1073	1073	
General and Monthly Totals.		197	195	210	210	181	235	282	280	222	231	183	187	2613	2613	2613	209	187	195	157	158	166	210	193	195	203	227	2284	2284	193	142	179	171	161	211	297	268	179	215	233	194	2443	2443	2443

Showing the Deaths among the Civil Population of MALTA, from 1822 to 1834, &c.—(continued).

Classes of Diseases.	Period Population	1831 Estimated at 102,839.												1832 Estimated at 101,263.												1833 Estimated at 101,056.												Total by each Class of Diseases.	Total by each Class of Diseases.
		Estimated at 102,839.												Estimated at 101,263.												Estimated at 101,056.													
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		
Fevers.		4	13	7	17	9	16	17	26	14	20	11	8	162	162									18	5	18	21	16	16	20	20	12	23	12	32	213	213		
Eruptive Fevers.																																							
	Rubeola	2													2	2																					2		
	Scarlatina														121	121																					2		
	Variola	46	32	15	15	7	1	1	1	1	1	1	1																								2		
Diseases of the Lungs.		4	7	7	5	8	3	1	3	3	3	2	7	53	53									5	4	7	5	7	1	1	1	3	4	2	7	13	58		
	Pneumonia																							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Pleuritis																																						
	Hæmoptysis																																						
	Consumption*	28	13	16	19	20	30	18	28	23	24	17	26	17	232	232							30	16	19	18	21	23	36	25	41	49	32	21	331	331			
	Phthisis Pulmonalis	7	11	9	14	8	11	5	6	13	10	12	11	13	99	99							15	10	12	15	11	16	13	10	17	20	25	17	178	178			
	Catarhus	7	2	3	4	5	1	1	3	1	3	1	5	10	44	44							9	7	10	12	14	8	11	4	3	4	8	4	8	22	101		
	Asthma	10	8	4	3	3	3	6	4	1	3	7	4	5	56	56							5	6	10	6	3	2	2	2	3	4	6	10	57	57			
	Pertussis																						29	21	16	9	16	11	7	2	5	1	1	1	5	13	13		
Diseases of the Liver.		1	1	2	1	2	2	2	2	2	2	2	2	1	14	14																							
	Hepatitis																																						
	Icterus																																						
Diseases of the Stomach and Bowels.																																							
	Peritonitis																																						
	Gastritis																																						
	Enteritis																																						
	Hæmatemesis																																						
	Dysenteria																																						
	Diarrhœna	18	15	11	14	13	22	39	38	36	22	30	267	141	467	467							21	13	15	17	10	18	31	25	25	11	12	26	225	225			
	Colica	3	1	1	1	1	1	3	3	2					14	14							2	2	2	2	1	1	1	1	1	1	1	1	1	1	10		
	Cholera Morbus																																						
	Dyspepsia																																						
Diseases of the Brain.																																							
	Phrenitis																																						
	Cephalalgia																																						
	Apoplexia																																						
	Paralysis	17	14	9	14	18	10	5	6	9	10	13	14	139	139																								
	Epilepsia	2	1	1	1	1	1	1	1	1	1	1	1	6	6	6																							
	Hydrocephalus																																						
Dropsies.		11	9	14	9	9	7	6	10	7	9	5	8	104	104																								
	Anasarca																																						
	Ascites																																						
	Hydrothorax																																						
All other Diseases		109	79	74	69	65	69	86	71	67	78	82	74	923	923																								
Totals		294	210	194	201	186	208	215	233	188	229	216	217	2581	2581																								

* Since 1831 the deaths which were formerly reported to have arisen from Consumption are returned under the head of Marasmus. They are understood to have occurred principally among children and old persons, and many of them may not have been directly attributable to Diseases of the Lungs, though, as we possess no means of distinguishing the exceptions, it has become necessary to include them under that class.

Showing the Deaths among the Civil Population of MALTA, from 1822 to 1834, &c.—(continued).

Classes of Diseases.	Period	1834												General Total for whole Period.																
		Estimated at 103,926.												Aggregate Population 1,303,517; Average 100,270.																
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total by each Disease.	Total by each Class of Diseases.	In 13 January.	In 13 February.	In 13 Marches.	In 13 Aprils.	In 13 Mays.	In 13 Junes.	In 13 Julys.	In 13 Augusts.	In 13 Septembers.	In 13 Octobers.	In 13 Novembers.	In 13 Decembers.	Total by each Disease for 13 Years.	Total by each Class for 13 Years.	
Fever.	Febris	26	34	40	39	33	25	21	27	24	14	22	22	327	327	205	198	220	233	211	267	256	256	267	252	234	201	199	2,743	2,743
	Eruptive Fevers.	Rubeola	12	9	10	29	6	27	14	14	17	28	14	9	20	195	195
		Scarlatina	1	1	1	1	..	1	..	1	1	2	..	8	8
		Varola	46	32	20	31	35	35	96	186	190	173	160	136	64	1,169	1,169
	Diseases of the Lungs.	Pneumonia	7	3	9	12	4	2	1	3	2	3	4	6	56	56	75	58	73	73	55	29	10	19	25	27	31	48	523	523
		Pleuritis	3	2	2	3	2	1	1	12	12	15	7	11	7	12	3	7	6	3	4	6	11	92	92
		Hæmoptysis	13	10	13	10	20	7	4	13	4	8	7	10	13	9	118	118
		Consumption	28	14	17	9	11	32	33	20	20	19	21	17	237	237	238	177	205	179	202	223	294	249	248	233	233	227	2,786	2,786
		Phthisis Pulmonalis	14	12	12	10	13	8	14	19	15	11	13	9	150	150	115	94	115	122	147	91	110	110	110	103	105	122	1,363	1,363
		Catarrhus	13	12	14	8	7	2	3	2	3	6	6	4	83	83	110	118	128	102	71	66	66	60	53	70	83	131	1,056	1,056
Asthma		4	1	8	1	5	..	2	..	1	..	..	..	38	38	80	73	74	53	46	31	33	30	19	34	43	66	587	587
Pertussis	1	1	1	3	..	..	..	..	..	..	..	..	8	8	30	23	18	14	16	11	11	8	3	7	2	5	139	139	
Diseases of the Liver.	Hepatitis	2	1	1	2	..	..	1	3	1	1	2	1	14	14	8	9	14	8	9	12	8	11	14	14	12	15	131	131
	Icterus . . . . .	..	..	..	..	..	..	..	1	..	..	..	..	3	3	..	3	..	4	..	1	..	1	..	..	..	12	12	
Diseases of the Stomach and Bowels.	Peritonitis	1	1	1	1	2	1
	Gastritis . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	12	12	..	..	..	7	2	4	5	3	3	3	..	..	15	15
	Enteritis	3	6	4	6	3	3	7	2	9	11	6	6	66	66	19	14	27	31	23	19	23	20	25	25	33	37	23	294	294
	Hæmatemesis . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	3	2	2	2	1	1	2	2	12	12
	Dysenteria	6	2	8	3	1	1	9	22	9	13	19	4	97	97	66	55	54	41	53	112	199	189	162	212	207	128	1,478	1,478	
	Diarrhœa	17	15	30	16	10	31	23	34	27	20	25	25	275	275	266	166	168	166	155	260	354	335	260	279	278	274	2,901	2,901	
	Colica	2	1	1	1	4	2	..	3	1	6	21	21	18	9	7	9	12	13	11	13	13	13	16	10	12	143	143
	Cholera Morbus	1	1	2	2	2	2	1	..	1	12	12
	Dyspepsia	2	5	..	2	..	1	1	2	2	2	1	18	18
	Diseases of the Brain.	Phrenitis	1	1	..	2	2	4	1	1	12	12	3	2	5	2	2	2	4	3	4	4	..	5	5	2	37	37
Cephalalgia . . . . .		..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	3	..	..	..	1	2	1	3	..	..	..	16	16
Apoplexia		24	16	12	13	8	4	6	7	3	13	7	17	130	130	207	183	173	131	114	93	86	80	97	112	117	147	1,540	1,540	
Paralysis . . . . .		..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	8	6	4	6	6	..	5	4	4	8	3	61	61
Epilepsia . . . . .		..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	6	4	5	6	7	1	3	3	1	1	3	18	57
Dropsies.	Hydrocephalus . . . . .	..	2	..	..	..	..	..	..	..	..	..	..	4	4	2	6	4	1	6	3	1	8	4	4	4	2	47	47
	Anasarca	8	17	13	10	14	6	5	8	7	8	11	10	117	117	88	77	88	77	70	51	40	47	45	75	67	91	816	816	
	Ascites . . . . .	..	3	4	3	2	..	4	2	1	3	1	4	27	27	12	11	13	26	17	25	21	20	17	25	16	27	230	230
All other Diseases	Hydrothorax . . . . .	..	9	10	2	3	5	3	1	5	3	8	7	56	56	121	148	159	130	121	111	91	83	101	126	130	156	1,457	1,457
	General and Monthly Totals	101	109	98	85	74	53	76	96	73	64	61	73	963	963	1211	1270	1152	908	884	983	1235	1131	993	1179	1247	1265	13,398	13,398	
General and Monthly Totals	262	262	291	230	195	176	218	252	204	208	211	223	2732	2732	2920	2773	2786	2404	2292	2568	3075	2919	2675	3081	3013	2995	33,501	33,501		

Showing the Admissions into Hospital and Deaths among the Troops serving in the IONIAN ISLANDS, from 1817 to 1836 inclusive.—Extracted from the Annual and Quarterly Medical Returns.

Table with columns for Years (1817-1836), Admissions (Adm.), Deaths (Di.), and Aggregate Strength (70,293). Rows are categorized by disease classes: Fevers, Eruptive Fevers, Diseases of the Lungs, Diseases of the Liver, Diseases of the Stomach and Bowels, Diseases of the Brain, Dropsies, Rheumatic Affections, Venereal Affections, Abscesses and Ulcers, Wounds and Injuries, Pustuled, Diseases of the Eyes, Diseases of the Skin, and All other Diseases. Each cell contains numerical data for admissions and deaths for each year, and totals for each category.

* Under Measles, Cholera 3; Morbilli 3; Hemorrhages 1; Pneumonia 1; Diseases Spine 1; Stricture Recti 2; Aphasia 1; Singultus 2; Nodus 1; Palpitatio 6; Purgatio 3; Retentio Urinae 1; Observatio 24; Asphyxia 2, and 1 died; Spasmus 2, and 1 died; Typhus 1, and 1 died; Diseases not stated 2—Total 54 admitted, and 3 died.

Showing the Deaths and Fatal Diseases among the Troops serving in ITHACA, from 1817 to 1836 inclusive.

Table with columns for Years (1817-1836), Strength, Classes of Diseases (Fevers, Lungs, Bowels, Brain, Dropsies, All other Diseases), Specific Diseases (e.g., Febris Intermittens, Pneumonia, Dysentery), and Total by each Disease (Total 1817 to Aggregate 136).

ABSTRACT No. XI. OF APPENDIX.

Showing the Deaths and Fatal Diseases among the Troops serving in ZANTE, from 1817 to 1836 inclusive.

Table with columns for Years (1817-1836), Strength, Classes of Diseases (Fevers, Eruptive Fevers, Lungs, Liver, Bowels, Brain, Dropsies, All other Diseases), Specific Diseases (e.g., Febris Intermittens, Scarlatina, Pneumonia, Hepatitis, Cholera), and Total by each Disease (Total 1817 to Aggregate 87,936).

Showing the Deaths and Fatal Diseases among the Troops serving in CERRIGO, from 1817 to 1836 inclusive.

Table with columns for Years (1817-1836), Strength, Specific Diseases (e.g., Fevers, Pneumonia, Phthisis Pulmonalis), and Total from 1817 to 1836. Includes sub-totals for Aggregate Strength (1,495) and Total by each Disease (30).

ABSTRACT No. XIII. OF APPENDIX.

Showing the Number Sick in Hospital of the Troops serving in the MEDITERRANEAN STATIONS on the Muster-Day of each Month, from 1817 to 1836 inclusive.

I. GIBRALTAR.

Table showing the number of troops sick in hospital in Gibraltar from 1817 to 1836, by month and year. Includes columns for months (July-Dec), Total (T.I.), and Average (Age).

II. MALTA.

Table showing the number of troops sick in hospital in Malta from 1817 to 1836, by month and year. Includes columns for months (July-Dec), Total (T.I.), and Average (Age).

III. IONIAN ISLANDS.

Table showing the number of troops sick in hospital in the Ionian Islands from 1817 to 1836, by month and year. Includes columns for months (July-Dec), Total (T.I.), and Average (Age).

Showing the Ages of the Troops composing the Service Companies of Corps stationed in GIBRALTAR, and the Deaths at each Age, from 1st January 1830 to 31st March 1837.

YEARS.	CORPS.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
		Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1830	12th Foot	2	..	138	1	236	2	148	4	30	..	554	7
	23rd ,,	10	..	174	2	194	4	154	3	19	..	551	9
	42nd ,,	2	..	181	2	268	1	72	..	20	1	543	4
	53rd ,,	2	..	279	4	250	6	17	..	1	..	549	10
	94th ,,	5	..	435	3	91	3	16	1	1	..	548	7
	Total	21	..	1207	12	1039	16	407	8	71	1	2745	37
1831	12th Foot	3	..	136	2	231	3	135	2	29	1	534	8
	23rd ,,	10	..	160	5	185	4	148	2	16	1	519	12
	42nd ,,	2	..	168	..	257	..	65	2	13	1	505	3
	53rd ,,	2	..	270	3	242	5	17	1	1	..	532	9
	60th ,, 1st Batt.	..	..	308	3	204	2	7	..	1	..	520	5
	94th ,,	6	..	405	2	80	..	16	1	1	..	508	3
	Total	23	..	1447	15	1199	14	388	8	61	3	3118	40
1832	5th Foot	15	..	336	4	177	2	24	..	4	..	556	6
	12th ,,	4	..	131	3	222	1	123	3	23	..	503	7
	23rd ,,	4	..	125	..	186	..	113	3	15	..	443	3
	53rd ,,	2	..	147	3	327	5	16	..	5	..	497	8
	60th ,, 1st Batt.	1	..	291	5	197	4	5	..	1	..	495	9
	67th ,,	2	..	239	3	256	8	21	..	2	..	520	11
	Total	28	..	1269	18	1365	20	302	6	50	..	3014	44
From 1st Jan. 1833 to 31st March 1834.	5th Foot	9	1	305	4	205	4	19	..	6	..	544	9
	12th ,,	5	..	90	..	238	1	122	4	32	3	487	8
	23rd ,,	10	..	115	2	247	2	89	5	14	..	475	9
	53rd ,,	2	..	92	..	365	9	23	2	4	1	486	12
	60th ,, 1st Batt.	1	..	181	1	282	4	16	..	2	..	482	5
	Total	27	1	783	7	1337	20	269	11	58	4	2474	43
From 1st April 1834 to 31st March 1835.	5th Foot	5	..	197	21	283	37	22	1	6	..	513	59
	23rd ,,	6	..	87	1	294	14	96	8	24	1	507	24
	60th ,, 1st Batt.	7	..	129	12	351	16	17	3	1	..	505	31
	70th ,,	4	..	220	21	275	11	45	4	12	2	556	38
	92nd ,,	6	..	294	6	215	9	27	2	8	..	550	17
	Total	28	..	927	61	1418	87	207	18	51	3	2631	169
From 1st April 1835 to 31st March 1836.	47th Foot	10	..	247	4	228	4	25	..	2	1	512	9
	59th ,,	7	1	179	4	282	10	43	3	4	..	515	18
	68th ,,	13	..	223	2	193	4	71	2	8	..	508	8
	70th ,,	4	..	198	5	260	7	40	2	9	..	511	14
	92nd ,,	6	..	179	2	275	2	40	..	13	..	513	4
	Total	40	1	1026	17	1238	27	219	7	36	1	2559	53
From 1st April 1836 to 31st March 1837.	47th Foot	15	..	247	7	230	5	25	2	2	..	519	14
	52nd ,,	9	..	219	3	235	5	50	..	7	..	520	8
	60th ,, 2nd Batt.	7	..	229	6	258	15	26	..	..	..	520	21
	68th ,,	9	..	227	1	207	6	64	..	6	..	513	7
	81st ,,	1	..	185	3	275	..	42	1	7	..	510	4
	Total	41	..	1107	20	1205	31	207	3	22	..	2582	54

General Results from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st January to 31st December 1830	21	..	1207	12	1039	16	407	8	71	1	2,745	37
.. .. . 1831	23	..	1447	15	1199	14	388	8	61	3	3,118	40
.. .. . 1832	28	..	1269	18	1365	20	302	6	50	..	3,014	44
.. .. . 1833 to 31st March 1834	27	1	783	7	1337	20	269	11	58	4	2,474	43
1st April 1834 1835	28	..	927	61	1418	87	207	18	51	3	2,631	169
.. .. . 1835 1836	40	1	1026	17	1238	27	219	7	36	1	2,559	53
.. .. . 1836 1837	41	..	1107	20	1205	31	207	3	22	..	2,582	54
Total for 7½ Years	208	2	7766	150	8801	215	1999	61	349	12	19,123	440
Deduct a twenty-ninth part of the deaths, to ascertain the mortality of 7 years exactly . . . . .	..	..	..	5	..	7	..	2	..	..	..	14
Total for 7 years	208	2	7766	145	8801	208	1999	59	349	12	19,123	426

Of the above there died at Chatham, or on their passage home, the following numbers of each class:—

PERIOD.	18 to 25 Years.	25 to 33.	33 to 40.	Total.
1st January to 31st December 1830	3	..	..	3
.. .. . 1831	2	3	1	6
.. .. . 1832	1	2	2	5
1st April 1834 to 31st March 1835	4	2	..	6
.. .. . 1836 1837 . . . .	..	1	1	2
Total	10	8	4	22

Showing the Ages of the Troops composing the Service Companies of Corps stationed in MALTA, and the Deaths at each Age, from 1st January 1830 to 31st March 1837.

YEARS.	CORPS.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
		Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1830	73rd Foot . . .	1	..	205	3	322	7	24	1	2	1	554	12
	85th ,, . . .	1	..	118	4	232	3	161	6	37	5	549	18
	Rifle Brig. 2nd Batt.	1	..	203	5	226	3	117	3	11	..	558	11
	Total . . .	3	..	526	12	780	13	302	10	50	6	1661	41
1831	7th Foot . . .	10	..	237	5	125	5	98	4	22	1	492	15
	73rd ,, . . .	1	..	195	4	306	10	22	1	2	..	526	15
	85th ,, . . .	1	..	112	3	226	6	151	6	27	3	517	18
	Rifle Brig. 2nd Batt.	1	..	193	3	217	2	109	2	7	..	527	7
Total . . .	13	..	737	15	874	23	380	13	58	4	2062	55	
1832	7th Foot . . .	4	..	168	..	214	7	57	2	33	2	476	11
	42nd ,, . . .	1	..	161	1	212	1	102	1	9	..	485	3
	73rd ,, . . .	..	..	194	1	275	10	21	..	1	..	491	11
	94th ,, . . .	13	..	410	2	33	7	10	1	4	..	470	10
Total . . .	18	..	933	4	734	25	190	4	47	2	1922	35	
From 1st Jan. 1833 to 31st March 1834.	7th Foot . . .	5	..	89	2	262	12	90	3	27	1	473	18
	42nd ,, . . .	1	..	187	2	155	3	127	4	12	..	482	9
	73rd ,, . . .	..	..	135	2	317	13	32	2	1	1	485	18
	94th ,, . . .	7	..	216	..	259	8	15	2	1	..	498	10
Total . . .	13	..	627	6	993	36	264	11	41	2	1938	55	
From 1st April 1834 to 31st March 1835.	7th Foot . . .	7	1	119	1	240	3	80	7	22	..	468	12
	42nd ,, . . .	1	..	71	2	228	6	140	4	17	..	457	12
	53rd ,, . . .	6	..	46	..	386	11	40	2	4	..	482	13
	94th ,, . . .	5	..	71	1	377	6	33	2	7	1	493	10
Total . . .	19	1	307	4	1231	26	293	15	50	1	1900	47	
From 1st April 1835 to 31st March 1836.	5th Foot . . .	9	..	134	2	313	6	28	1	5	1	489	10
	7th ,, . . .	12	..	95	1	285	6	76	2	41	1	509	10
	53rd ,, . . .	5	..	58	..	394	6	55	4	5	..	517	10
	60th ,, 1st Batt.	8	..	139	1	342	5	12	2	..	..	501	8
Total . . .	34	..	426	4	1334	23	171	9	51	2	2016	38	
From 1st April 1836 to 31st March 1837.	5th Foot . . .	10	..	111	4	343	11	35	1	6	..	505	16
	59th ,, . . .	5	..	175	3	283	3	64	..	7	..	534	6
	70th ,, . . .	8	1	165	2	278	8	44	..	13	3	508	14
	92nd ,, . . .	1	..	190	2	274	4	51	..	12	..	528	6
Total . . .	24	1	641	11	1178	26	194	1	38	3	2075	42	

General Results from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st January to 31st December 1830 . . .	3	..	526	12	780	13	302	10	50	6	1661	41
,, ,, ,, 1831 . . .	13	..	737	15	874	23	380	13	58	4	2062	55
,, ,, ,, 1832 . . .	18	..	933	4	734	25	190	4	47	2	1922	35
,, 1833 to 31st March 1834 . . .	13	..	627	6	993	36	264	11	41	2	1938	55
1st April 1834 ,, 1835 . . .	19	1	307	4	1231	26	293	15	50	1	1900	47
,, 1835 ,, 1836 . . .	34	..	426	4	1334	23	171	9	51	2	2016	38
,, 1836 ,, 1837 . . .	24	1	641	11	1178	26	194	1	38	3	2075	42
Total for 7½ Years . . .	124	2	4197	56	7124	172	1794	63	335	20	13,574	313
Deduct a twenty-ninth part of the deaths, to ascertain the mortality of 7 years exactly . . . . .	..	..	..	2	..	6	..	2	..	1	..	11
Total for 7 Years	124	2	4197	54	7124	166	1794	61	335	19	13,574	302

Of the above there died at Chatham, or on their passage home, the following numbers of each class:—

PERIOD.	18 to 25 Years.	25 to 33.	33 to 40.	40 to 50.	Total.
1st January to 31st December 1830 . . .	..	..	..	1	1
,, ,, ,, 1831 . . .	..	1	..	..	1
,, ,, ,, 1832 . . .	1	7	1	..	9
,, 1833 to 31st March 1834 . . .	1	6	..	..	7
1st April 1834 ,, 1835 . . .	1	2	1	..	4
,, 1836 ,, 1837 . . .	..	2	..	2	4
Total	3	18	2	3	26

Showing the Ages of the Troops composing the Service Companies of Corps stationed in the IONIAN ISLANDS, and the Deaths at each Age, from 1st January 1830 to 31st March 1837.

YEARS.	CORPS.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
		Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1830	11th Foot	3	..	259	1	138	3	111	3	33	1	544	8
	51st ,,	3	..	184	3	212	6	119	3	34	1	532	13
	88th ,,	5	..	236	4	160	9	93	1	62	..	556	14
	90th ,, . . . . .	..	..	149	1	193	2	174	1	42	1	558	5
	95th ,,	6	1	34	6	497	22	40	2	2	..	579	31
	Total	17	1	862	15	1200	42	537	10	173	3	2789	71
1831	10th Foot	2	..	221	4	245	2	49	..	2	..	519	6
	11th ,,	3	..	247	4	132	9	105	5	29	2	516	20
	18th ,, . . . . .	..	..	177	2	203	3	102	1	27	..	509	6
	51st ,,	3	..	175	..	202	..	110	4	31	..	521	4
	88th ,,	5	..	226	2	144	3	90	3	62	3	527	11
	95th ,,	5	..	26	2	467	3	37	2	2	..	537	7
	Total	18	..	1072	14	1393	20	493	15	153	5	3129	54
1832	10th Foot	2	..	187	..	246	6	85	..	11	..	531	6
	11th ,,	3	..	180	6	179	..	100	..	27	..	489	6
	51st ,,	3	..	116	3	207	4	156	4	39	3	521	14
	88th ,,	5	..	97	..	260	2	118	5	32	1	512	8
	95th ,,	5	..	26	..	460	7	24	3	12	..	527	10
	R. B., 2nd Batt.	4	..	148	..	225	14	102	5	9	..	488	19
	Total	22	..	754	9	1577	33	585	17	130	4	3068	63
From 1st Jan. 1833 to 31st March 1834.	10th Foot	3	..	183	..	248	9	81	..	9	..	524	9
	11th ,,	4	..	128	..	228	8	91	3	28	3	479	14
	51st ,,	6	..	108	..	218	6	126	5	30	1	488	12
	88th ,,	12	..	80	2	257	5	108	3	35	2	492	12
	95th ,, . . . . .	..	..	25	..	451	11	22	2	7	..	505	13
	R. B., 2nd Batt.	..	..	98	2	266	7	105	3	8	..	477	12
	Total	25	..	622	4	1668	46	533	16	117	6	2965	72
From 1st April 1834 to 31st March 1835. * Corps 9 Months, Cork 3.	10th Foot	2	..	48	..	371	4	76	2	18	1	515	7
	11th ,,	9	..	83	2	288	6	77	3	31	1	488	12
	73rd ,,	1	..	78	1	341	5	47	2	2	..	469	8
	88th ,,	9	..	35	2	302	4	84	1	59	..	489	7
	95th* ,,	2	..	115	1	327	7	50	..	7	..	501	8
	R. B., 2nd Batt.	..	..	67	..	296	5	117	5	19	..	499	10
	Total	23	..	426	6	1925	31	451	13	136	2	2961	52
From 1st April 1835 to 31st March 1836.	10th Foot	1	..	27	2	334	4	78	..	26	..	516	6
	11th ,,	6	..	76	1	312	5	65	..	27	..	486	6
	42nd ,,	11	..	86	1	244	3	139	3	26	..	506	7
	73rd ,,	4	..	86	1	358	4	57	..	1	..	506	5
	88th ,,	5	..	65	1	274	10	123	2	36	1	503	14
	R. B., 2nd Batt.	3	..	75	1	293	5	116	4	16	1	503	11
	Total	30	..	415	7	1865	31	578	9	132	2	3020	49
From 1st April 1836 to 31st March 1837.	10th Foot . . . . .	..	..	24	..	382	8	78	1	26	..	510	9
	11th ,,	4	..	72	..	319	2	72	1	49	1	516	4
	53rd ,,	5	..	55	..	367	5	73	4	7	..	507	9
	73rd ,,	1	..	64	..	326	13	119	3	7	..	517	16
	R. B., 2nd Batt.	5	..	73	1	295	5	120	3	24	1	517	10
	Total	15	..	288	1	1689	33	462	12	113	2	2567	48

General Results from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st January to 31st December 1830	17	1	862	15	1200	42	537	10	173	3	2789	71
,, ,, 1831	18	..	1072	14	1393	20	493	15	153	5	3129	54
,, ,, 1832	22	..	754	9	1577	33	585	17	130	4	3068	63
,, 1833 to 31st March 1834	25	..	622	4	1668	46	533	16	117	6	2965	72
1st April 1834 ,, 1835	23	..	426	6	1925	31	451	13	136	2	2961	52
,, 1835 ,, 1836	30	..	415	7	1865	31	578	9	132	2	3020	49
,, 1836 ,, 1837	15	..	288	1	1689	33	462	12	113	2	2567	48
Total for 7½ Years	150	1	4439	56	11,317	236	3639	92	954	24	20,499	409
Deduct a 29th part of the deaths, to ascertain the mortality of 7 years exactly . . . . .	..	..	..	2	..	8	..	3	..	1	..	14
Total for 7 Years	150	1	4439	54	11,317	228	3639	89	954	23	20,499	395

Of the above there died at Chatham, or on their passage home, the following numbers of each class:—

PERIOD.	18 to 25 Years.	25 to 33.	33 to 40.	40 to 50.	Total.
1st January to 31st December 1830	1	3	1	..	5
,, ,, 1831 . . . . .	..	1	1	..	2
,, 1832 to 31st March 1834 . . . . .	..	1	1	1	3
1st April 1834 ,, 1835 . . . . .	..	1	2	..	3
,, 1836 ,, 1837	1	5	1	..	7
Total	2	11	6	1	20

ABSTRACT NO. XVII. OF APPENDIX.

Showing the Number Treated, and Deaths, among the Officers serving in GIBRALTAR, from 1818 to 1836 inclusive.

Main table with columns for 'Classes of Diseases', 'Years' (1818-1836), 'Adm.', 'Died.', 'Aggregate Strength 2511', and 'From 1818 to 1836' (Treated, Died).

* The Strength of Officers, as here stated, is taken from the Adjutant-General's Returns to the Commissioners for Inquiring into the Military Expenditure of the Colonies.

Year	Month	Day	Particulars	Debit	Credit	Balance
1850	Jan	1	Balance forward			100.00
1850	Jan	15	Received of Mr. A. B.		50.00	150.00
1850	Feb	1	Balance forward			150.00
1850	Feb	10	Received of Mr. C. D.		25.00	175.00
1850	Mar	1	Balance forward			175.00
1850	Mar	15	Received of Mr. E. F.		75.00	250.00
1850	Apr	1	Balance forward			250.00
1850	Apr	10	Received of Mr. G. H.		100.00	350.00
1850	May	1	Balance forward			350.00
1850	May	15	Received of Mr. I. J.		50.00	400.00
1850	Jun	1	Balance forward			400.00
1850	Jun	10	Received of Mr. K. L.		100.00	500.00
1850	Jul	1	Balance forward			500.00
1850	Jul	15	Received of Mr. M. N.		50.00	550.00
1850	Aug	1	Balance forward			550.00
1850	Aug	10	Received of Mr. O. P.		100.00	650.00
1850	Sep	1	Balance forward			650.00
1850	Sep	15	Received of Mr. Q. R.		50.00	700.00
1850	Oct	1	Balance forward			700.00
1850	Oct	10	Received of Mr. S. T.		100.00	800.00
1850	Nov	1	Balance forward			800.00
1850	Nov	15	Received of Mr. U. V.		50.00	850.00
1850	Dec	1	Balance forward			850.00
1850	Dec	15	Received of Mr. W. X.		100.00	950.00
1850	Dec	31	Balance forward			950.00

Showing the Number of Admissions into Hospital and Deaths among the Troops serving in GIBRALTAR, in each Month, from January 1818 to December 1836 inclusive.

I. ADMISSIONS.

MONTHS.	By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.			By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.		
	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.
Years .	1818			1819			1820			1821			1822					
January .	131	20	86	107	5	55	81	6	46	69	40	98	132	8	70			
February .	108	11	67	212	12	81	72	7	56	50	39	87	98	11	72			
March . .	93	4	57	87	6	64	110	4	63	82	25	77	89	8	79			
April . .	92	26	70	81	7	79	187	3	72	103	13	67	118	3	74			
May . . .	71	12	62	67	4	56	159	15	51	90	10	71	102	6	89			
June . . .	109	16	56	105	12	62	119	5	80	176	16	64	118	2	87			
July . . .	105	13	83	138	9	63	189	4	64	169	9	60	228	1	87			
August . .	119	13	67	134	5	62	239	4	56	165	8	65	175	4	65			
September .	210	7	62	123	9	32	182	9	48	171	6	75	140	9	48			
October . .	297	22	70	125	7	42	107	14	63	181	10	83	176	2	94			
November .	231	25	98	101	7	48	102	8	63	123	7	68	98	4	70			
December .	133	13	78	86	5	40	80	2	64	114	4	50	58	6	58			
Total . .	1699	182	856	1366	88	684	1627	81	726	1493	187	865	1532	64	893			
Years .	1823			1824			1825			1826			1827					
January .	48	13	84	109	22	129	91	15	118	104	33	77	119	25	66			
February .	83	14	80	95	11	118	71	19	113	97	21	68	97	11	58			
March . .	60	17	77	65	20	98	77	11	114	110	30	92	49	12	80			
April . . .	59	25	85	99	33	97	107	16	99	150	32	111	84	19	68			
May . . .	117	10	83	146	30	90	108	21	109	155	21	97	65	14	79			
June . . .	142	29	90	169	55	102	119	38	142	144	25	99	104	17	59			
July . . .	133	14	83	235	82	122	145	61	139	179	35	116	111	17	70			
August . .	136	16	109	272	72	121	207	53	134	318	45	138	110	16	64			
September .	185	10	101	343	59	109	211	25	135	304	29	129	88	7	68			
October . .	98	7	84	263	38	97	148	20	143	234	33	124	82	24	57			
November .	84	20	71	191	34	103	133	18	85	253	21	99	91	13	75			
December .	86	13	81	145	17	83	84	22	102	152	17	95	47	7	56			
Total . .	1231	188	1028	2132	473	1269	1501	320	1433	2200	342	1245	1047	182	800			
Years .	1828			1829			1830			1831			1832					
January .	82	14	102	107	22	91	168	23	178	102	5	70	132	40	137			
February .	87	15	135	104	15	125	134	27	156	68	10	81	146	23	90			
March . .	82	14	120	87	26	108	107	19	173	104	10	101	136	42	124			
April . . .	95	18	110	146	19	112	317	29	162	101	8	92	119	20	97			
May . . .	117	18	136	125	9	105	196	31	178	117	14	98	120	11	106			
June . . .	145	16	130	178	32	135	149	23	153	131	10	98	208	20	93			
July . . .	153	21	171	187	39	130	166	32	149	178	12	89	243	30	99			
August . .	127	15	105	207	28	122	164	35	133	168	8	115	184	32	93			
September .	318	23	110	191	25	133	156	20	154	209	8	116	127	23	87			
October . .	747	4	13	145	16	120	120	26	107	153	5	96	170	37	89			
November .	548	8	16	110	17	63	165	23	122	120	5	71	100	26	53			
December .	198	16	15	123	18	150	164	32	117	212	6	97	76	12	80			
Total . .	2699	182	1163	1710	266	1394	2066	320	1782	1663	101	1124	1761	316	1148			
Years .	1833			1834			1835			1836			Total for 19 Years.					
January .	80	10	60	164	19	150	127	30	100	100	32	105	2053	382	1822			
February .	61	10	64	142	18	119	118	27	106	98	33	71	1941	334	1747			
March . .	63	6	71	172	20	177	122	44	131	85	24	67	1780	342	1873			
April . . .	69	17	87	128	29	151	124	44	119	109	23	84	2288	384	1836			
May . . .	88	11	70	201	28	127	222	37	113	132	38	90	2398	340	1810			
June . . .	105	28	68	276	31	126	206	33	120	236	39	115	2939	447	1879			
July . . .	115	19	77	515	22	92	212	40	111	230	45	106	3631	505	1911			
August . .	89	18	75	232	26	108	206	34	85	197	46	109	3449	478	1826			
September .	133	10	73	187	18	80	194	28	104	171	51	67	3643	377	1732			
October . .	117	10	108	222	29	107	175	25	74	181	51	69	3741	380	1640			
November .	83	9	100	241	35	95	140	34	93	195	35	90	3109	349	1483			
December .	108	17	99	119	30	114	160	49	102	152	20	100	2297	306	1580			
Total . .	1111	165	952	2599	305	1446	2006	425	1258	1886	437	1073	33,269	4624	21,139			

Showing the Number of Admissions into Hospital and Deaths among the Troops serving in
GIBRALTAR, &c.—(continued).

II. DEATHS.

MONTHS.	By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.			By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.		
	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.
Years .	1818			1819			1820			1821			1822					
January .	6	2	1	7	3	1	2	6	..	1	..	..	1	..	1	..	..	1
February .	8	12	..	3	12	..	1	7	..	..	..	1	1	..	..	..	..	..
March .	12	1	..	3	12	..	12	4	..	1	..	..	12	12	1	..	..	..
April .	12	1	..	4	12	..	12	3	1	..	..	1	..	..	..	..	..	..
May .	12	..	1	1	1	..	3	15	..	..	..	1	3	..	..	..	..	..
June .	4	1	1	..	..	..	3	5	..	..	..	..	..	..	..	..	..	..
July .	3	1	..	4	..	..	3	..	1	..	..	..	1	..	..	..	..	..
August .	..	4	1	1	..	..	12	..	..	..	..	..	3	..	..	..	..	..
September .	6	..	..	12	..	..	12	2	..	..	..	3	..	1	..	..	..	..
October .	13	2	..	3	..	..	3	..	..	..	2	..	3	..	..	..	..	1
November .	13	1	..	3	..	..	3	..	..	..	1	..	..	..	..	..	..	..
December .	6	..	..	1	..	..	1	..	..	..	1	..	..	3	..	..	..	..
Total .	65	15	4	32	10	1	27	42	2	23	5	4	16	5	2			
Years .	1823			1824			1825			1826			1827					
January .	..	..	..	2	..	..	1	5	..	..	2	..	1	1	..	..	..	..
February .	1	1	1	2	2	..	4	2	..	3	1	..	2	2	..	..	..	..
March .	2	1	..	4	1	..	..	2	..	4	..	..	..	1	..	..	..	..
April .	..	4	..	2	1	..	2	1	..	..	..	..	2	1	..	..	..	..
May .	1	1	..	3	1	..	..	2	..	1	1	..	..	..	..	..	..	..
June .	..	..	..	1	1	..	1	..	..	..	1	..	..	1	..	..	..	..
July .	1	..	..	5	1	..	2	1	..	2	1	..	4	..	..	..	..	..
August .	1	..	..	2	2	..	2	2	..	2	1	..	1	..	..	..	..	..
September .	1	1	..	7	2	..	..	..	..	3	..	..	1	..	..	..	..	..
October .	3	1	2	5	..	1	1	2	..	5	1	..	2	1	..	..	..	..
November .	1	..	..	4	1	..	2	..	..	3	2	1	1	1	..	..	..	..
December .	..	..	..	3	1	1	2	1	..	..	2	..	2	1	..	..	..	..
Total .	11	9	3	40	13	2	19	18	..	23	9	1	16	9	..			
Years .	1828			1829			1830			1831			1832					
January .	..	2	..	4	3	..	1	2	..	1	1	..	2	2	..	..	..	..
February .	..	..	..	3	..	..	1	2	..	1	1	1	6	2	..	..	..	..
March .	2	1	..	1	2	..	3	2	1	..	3	1	1	2	..	..	..	..
April .	1	1	1	1	1	..	5	2	..	2	1	..	3	1	1	..	..	1
May .	1	1	1	1	..	..	2	4	..	2	1	..	1	1	..	..	..	..
June .	2	..	..	..	1	1	3	2	..	2	3	..	1	2	..	..	..	..
July .	1	3	..	2	1	..	2	4	..	..	1	1	3	..	..	..	..	..
August .	..	..	1	..	..	..	4	..	1	3	1	1	3	2	..	..	..	..
September .	18	..	..	2	1	..	1	2	..	2	1	..	2	2	..	..	..	..
October .	217	2	..	1	..	..	3	2	1	1	1	..	2	..	..	..	..	..
November .	163	1	1	1	2	..	1	1	1	3	..	..	1	2	..	..	..	..
December .	23	..	..	..	1	..	1	3	..	..	3	1	2	2	..	..	..	1
Total .	433	11	4	16	12	1	27	26	4	17	17	5	27	18	2			
Years .	1833			1834			1835			1836			Total for 19 Years.					
January .	..	3	..	1	..	..	2	2	..	1	6	1	33	40	4			
February .	..	2	..	5	1	..	1	2	..	1	2	..	43	31	3			
March .	1	..	..	3	1	..	2	2	..	1	4	..	34	30	2			
April .	..	2	..	2	1	..	1	7	..	2	2	1	35	31	5			
May .	..	1	..	2	1	..	..	2	..	..	1	..	23	33	3			
June .	..	4	1	9	2	..	2	3	..	2	2	..	32	28	3			
July .	3	3	..	50	1	..	1	2	..	2	2	..	91	21	2			
August .	2	1	..	3	..	..	2	2	..	6	2	1	41	17	5			
September .	2	3	..	2	1	..	1	1	..	..	2	1	57	19	2			
October .	2	3	1	1	5	..	2	2	..	1	2	1	270	26	7			
November .	1	..	..	3	..	..	3	4	..	..	5	..	209	21	3			
December .	2	3	..	4	2	..	3	2	..	4	4	..	62	27	3			
Total .	13	25	2	85	15	..	20	31	..	20	34	5	930	324	42			

Showing the Number of Admissions into Hospital and Deaths among the Troops serving in MALTA, in each Month, from January 1817 to December 1836 inclusive.

I. ADMISSIONS.

MONTHS.	By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.			By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.		
	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.
Years .	1817			1818			1819			1820			1821					
January .	89	60	137	66	11	123	56	11	95	43	9	113	53	26	92			
February .	42	30	94	108	18	169	52	6	68	19	10	79	38	14	64			
March . .	48	34	79	80	28	134	37	7	67	24	6	61	46	9	68			
April . .	68	33	102	138	20	176	55	14	84	34	7	79	56	19	66			
May . . .	64	23	72	116	10	142	45	12	75	48	4	54	109	25	111			
June . . .	46	14	89	105	19	111	59	13	84	68	5	62	67	25	79			
July . . .	136	24	98	94	30	128	73	34	66	59	4	72	143	14	59			
August . .	105	14	69	99	42	123	77	17	91	88	11	77	156	10	65			
September .	225	16	110	92	39	112	68	20	78	131	6	73	206	9	52			
October . .	263	14	147	99	33	114	52	15	69	68	6	66	158	13	86			
November .	109	8	74	55	20	87	58	16	108	62	10	89	120	17	103			
December .	78	2	76	53	22	81	43	12	72	63	15	81	74	12	104			
Total . .	1273	272	1147	1105	292	1500	675	177	957	707	93	906	1226	193	949			
Years .	1822			1823			1824			1825			1826					
January . .	93	15	104	58	15	84	74	22	64	36	15	119	46	18	53			
February .	73	11	79	73	15	75	52	20	64	38	8	107	44	16	57			
March . .	76	28	75	42	10	52	48	16	62	32	7	84	48	20	74			
April . . .	82	13	61	51	12	64	66	33	64	28	9	83	70	29	76			
May . . .	71	7	78	80	14	62	82	32	70	37	10	89	52	34	72			
June . . .	129	16	77	105	35	69	149	34	78	46	23	87	77	15	73			
July . . .	222	16	82	110	29	92	256	19	136	81	20	58	67	45	70			
August . .	199	30	91	120	37	73	274	25	216	63	16	69	84	55	73			
September .	205	13	81	120	21	75	224	43	199	49	21	59	131	51	74			
October . .	177	11	73	107	29	71	276	35	103	54	9	75	118	63	85			
November .	98	47	80	92	25	64	301	24	63	49	14	68	104	40	75			
December .	90	24	73	107	26	67	204	19	57	28	9	81	37	29	61			
Total . .	1515	231	954	1065	268	848	2006	322	1176	541	161	979	878	415	843			
Years .	1827			1828			1829			1830			1831					
January . .	43	13	81	48	16	65	47	21	86	88	9	72	50	11	64			
February .	40	17	76	38	10	76	48	14	94	60	8	85	66	9	59			
March . .	33	15	78	29	13	78	58	13	102	43	4	73	62	11	72			
April . . .	55	14	128	40	12	87	63	20	95	70	11	62	59	20	85			
May . . .	44	12	110	55	24	97	73	21	89	80	12	60	60	22	74			
June . . .	54	18	93	100	24	102	87	26	79	78	10	66	129	20	85			
July . . .	70	15	114	128	24	82	80	30	95	95	13	65	155	28	91			
August . .	100	14	85	101	22	142	82	32	119	80	17	69	109	29	88			
September .	82	10	67	60	22	130	100	32	120	87	14	71	125	28	91			
October . .	75	11	104	65	30	81	170	27	93	83	25	82	95	28	70			
November .	60	12	92	50	18	78	46	26	113	67	19	97	96	26	48			
December .	41	10	60	54	17	91	37	13	76	65	19	96	73	11	63			
Total . .	697	161	1088	768	232	1109	893	275	1161	896	161	898	1079	243	890			
Years .	1832			1833			1834			1835			1836					
January . .	75	3	69	70	8	92	68	4	86	147	17	85	97	9	77			
February .	102	4	74	165	7	81	94	3	82	120	8	69	91	6	89			
March . .	97	1	72	139	10	97	94	6	87	78	15	75	94	12	89			
April . . .	93	1	108	102	10	112	99	10	98	106	14	63	77	3	72			
May . . .	79	3	107	86	9	105	169	9	86	114	7	83	78	7	89			
June . . .	111	4	110	133	9	129	167	11	119	101	5	72	122	8	97			
July . . .	160	5	108	153	12	135	201	7	91	173	2	71	178	25	71			
August . .	140	5	112	115	9	118	155	7	128	143	5	64	202	11	79			
September .	131	7	84	148	16	122	201	8	102	148	14	74	215	22	69			
October . .	109	3	115	136	8	134	117	5	111	109	7	84	148	16	58			
November .	102	6	95	111	13	102	144	12	102	117	4	32	94	16	51			
December .	64	3	82	116	9	93	160	10	69	107	8	64	110	14	58			
Total . .	1263	45	1136	1474	120	1320	1669	92	1161	1463	106	861	1506	149	899			
				MONTHS.			Total for 20 Years.											
				January .			Acute.	Chronic.	Surgical.									
				February .			1347	313	1761									
				March . .			1363	234	1641									
				April . . .			1208	265	1579									
				May . . .			1412	304	1765									
				June . . .			1544	297	1730									
				July . . .			1933	334	1761									
				August . .			2634	396	1784									
				September .			2492	408	1951									
				October . .			2748	412	1843									
				November .			2479	388	1821									
				December .			1935	373	1641									
				Total . .			22,699	4008	20,782									

II. DEATHS.

MONTHS.	By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.			By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.		
	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.
Years .	1817			1818			1819			1820			1821					
January .	1	1	1	..	3	2	..	2	1	4
February .	1	3	..	8	..	1	1	1	..	1	1	..	1	1
March .	1	5	2	1	..	3	1
April .	2	2	..	3	1	..	1	3	..	4
May .	1	2	..	2	1	3	..	1
June .	1	4	2	1	2	1	..	1	1	1
July .	3	2	..	4	1	2	1
August .	1	5	2	..	4	2
September .	8	3	..	1	2	1	..	5	..	1	1	1	..	1	1	..
October .	16	3	..	2	2	1	..	2	..	1	8
November .	6	4	2	3	..	2	1
December	3	1	..	5	3	1	..	1
Total .	41	14	..	43	10	3	23	14	..	28	5	3	14	11	..			
Years .	1822			1823			1824			1825			1826					
January .	2	..	..	3	1	..	2	3	..	2	4	..	1	2	1	
February .	2	..	..	..	2	..	4	..	..	1	2	..	..	..	..
March .	1	..	..	..	1	..	..	2	..	..	1	..	..	..	..
April .	1	..	..	1	1	..	2	4	..	2	1	..	1	3	..	
May .	..	1	..	..	1	..	3	2	..	1	2	..	1	3	..	
June .	3	..	..	..	..	..	3	..	..	1	1	..	..	1	..
July .	1	1	1	..	..	..	1	2	..	1	..	..	1	..	..	
August .	4	1	..	1	..	..	4	2	..	2	1	..	2	2	..	
September .	4	..	1	1	1	..	7	2	..	1	..	..	3	..	..	
October .	4	..	..	..	1	..	8	2	..	1	..	..	1	1	..
November .	4	2	..	..	2	..	3	..	..	1	..	..	2	1	1
December .	4	2	..	5	4	..	..	2	..	..	..	..	..	3	..
Total .	30	7	2	11	14	..	37	21	..	13	12	..	12	16	2			
Years .	1827			1828			1829			1830			1831					
January .	1	..	..	2	1	..	1	3	..	3	..	..	5	1	..
February .	..	2	..	1	..	..	1	..	2	..	1	..	3	2	..	
March .	1	1	1	..	..	..	2	..	1	1	..	..	4	3	..
April .	..	1	..	..	1	1	..	1	..	4	1	..	..	..	..
May .	..	..	..	..	..	..	..	..	..	1	..	..	1	3	2
June .	..	..	..	2	2	1	1	3	..	2	1	..	1	..	..	
July .	3	2	..	3	..	..	1	4	..	3	..	..	..	2	..
August .	4	..	..	2	2	..	1	2	..	7	..	..	..	1	..
September .	1	..	..	3	..	..	3	..	..	5	1	..	5	..	..	
October .	1	..	..	1	1	..	1	1	..	3	2	..	4	..	..	
November .	..	..	..	1	..	..	..	1	..	1	2	1	4	4	..
December .	1	..	..	2	1	..	1	1	1	1	3	..	2	..	..	
Total .	12	6	1	17	8	2	12	16	4	31	11	1	29	16	2			
Years .	1832			1833			1834			1835			1836					
January .	3	..	..	..	1	..	3	1	..	2	..	1	..	2	..
February .	2	1	..	..	..	..	1	..	..	1	1	..	..	1	..
March .	1	1	..	1	..	..	3	..	..	1	4	..	2	2	..
April .	1	..	..	5	1	..	2	1	..	1	1	..	..	1	..
May .	..	..	1	1	..	1	4	..	..	2	1	..	2	..	2
June .	2	1	..	..	..	..	8	2	..	..	3	..	1	..	1
July .	2	1	..	2	1	..	3	..	..	1	..	..	1	3	..
August .	2	..	..	6	..	..	3	..	1	1	1	..	2	2	..
September .	..	1	1	1	1	..	1	..	..	1	1	..	1	2	..	
October .	1	..	..	5	..	1	1	..	..	1	..	..	4	..	..	
November .	..	..	..	2	..	..	5	..	..	6	1	..	4	1	..
December .	2	1	..	4	1	..	8	..	..	1	1	..	3	2	..	
Total .	16	6	2	27	5	2	42	4	1	18	14	1	20	16	3			
										MONTHS.		Total for 20 Years.						
										January .	Acute.	Chronic.	Surgical.					
										February .	36	28	2					
										March .	28	18	3					
										April .	28	19	2					
										May .	30	25	1					
										June .	23	16	7					
										July .	32	19	3					
										August .	33	19	1					
										September .	53	16	1					
										October .	56	11	4					
										November .	64	14	2					
										December .	47	18	2					
										December .	46	23	1					
										Total .	476	226	29					

II. DEATHS.

MONTHS.	By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.			By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.		
	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.
Years.	1817			1818			1819			1820			1821					
January .	3	4	..	3	3	..	3	1	..	4	1	..	4	2	2			
February .	4	3	..	6	2	1	2	..	1	4	1	1	1	2	..			
March .	2	1	..	..	3	..	1	1	1	3	3	..	..	..	..
April .	1	1	..	2	2	..	4	1	..	3	2	..	1	1	..			
May .	..	..	..	3	1	..	2	1	..	..	1	..	..	..	..
June .	2	..	..	..	3	..	4	..	..	..	..	..	2	1	..
July .	6	..	..	3	1	..	5	2	..	7	..	..	..	..	..
August .	17	..	..	11	2	..	17	..	1	7	2	..	26	..	1	
September.	22	2	..	8	2	1	15	1	1	5	..	..	37	..	..	
October .	22	..	..	7	1	..	18	2	2	6	2	..	17	1	..	
November .	15	1	..	8	1	..	7	1	1	4	..	..	5	1	..	
December .	6	..	1	3	..	1	7	1	..	3	..	..	5	3	..	
Total .	100	18	1	54	21	3	85	11	7	46	12	1	105	11	3			
Years .	1822			1823			1824			1825			1826					
January .	4	..	..	2	3	..	1	..	..	1	1	1	1	1	1
February .	8	1	..	3	1	1	..	..	..	..	2	..	5	..	..	
March .	2	2	..	..	1	..	2	..	..	2	1	..	5	2	..
April .	2	2	..	..	..	..	2	..	1	..	2	..	4	1	..
May .	4	..	..	3	1	..	5	1	..	6	..	..	1	1	..
June .	3	2	..	4	1	..	..	..	..	3	2	..	1	..	..	
July .	3	2	..	12	1	..	1	1	..	6	..	..	3	..	..	
August .	12	1	..	20	..	..	20	..	..	8	..	..	10	..	..	
September.	11	3	..	13	3	..	21	..	1	9	1	..	6	..	..	
October .	3	1	1	17	4	..	24	1	1	6	1	..	13	..	..	
November .	13	1	..	13	2	..	13	2	..	5	..	..	5	2	..	
December .	2	3	..	5	1	..	4	..	..	9	2	1	3	1	..	
Total .	67	18	1	92	18	1	93	5	3	55	12	2	57	8	1			
Years .	1827			1828			1829			1830			1831					
January .	4	1	..	4	..	..	1	2	..	2	2	..	1	..	..	
February .	5	1	..	3	1	..	..	7	..	9	1	1	3	2	..	
March .	4	2	1	3	..	..	1	2	2	7	..	1	..	1	..	
April .	3	..	..	1	3	1	5	2	..	3	2	1	2	1	..	
May .	3	..	..	3	3	..	5	2	..	1	2	..	3	..	..	
June .	1	3	..	6	1	..	2	3	..	5	..	..	3	..	..	
July .	13	..	..	13	1	..	5	4	..	7	..	..	7	..	..	
August .	17	1	..	34	3	..	18	2	..	22	1	..	7	1	..			
September.	15	..	..	25	3	..	21	3	..	22	1	..	7	..	..	
October .	8	1	..	13	1	1	17	..	..	9	1	..	4	2	..	
November .	5	1	..	12	3	..	17	6	..	10	..	..	3	1	..	
December .	4	1	..	9	..	..	1	7	..	7	1	..	1	1	..	
Total .	82	11	1	126	19	2	93	40	2	104	11	3	41	9	..			
Years .	1832			1833			1834			1835			1836					
January .	2	..	..	3	3	..	1	2	1	2	2	..	1	2	..	
February .	4	..	..	1	1	..	..	1	1	1	2	..	1	4	..
March .	3	2	..	1	2	..	2	6	1	3	1	..	..	5	..	
April .	..	1	..	1	3	1	1	2	1	2	..	..	2	1	..	
May .	2	..	..	2	4	..	1	4	..	2	1	..	..	1	..
June .	..	..	..	1	..	..	1	..	..	..	..	..	4	2	..
July .	2	2	..	6	..	..	3	..	..	..	5	..	1	1	..
August .	7	3	..	3	..	..	6	..	1	5	..	..	6	..	1
September.	7	1	..	5	6	..	5	..	..	1	2	..	2	..	..	
October .	1	1	..	6	3	1	7	1	..	2	..	..	5	3	..	
November .	2	..	..	2	..	..	2	1	..	7	..	..	3	2	..
December .	1	2	..	1	2	..	2	..	1	6	..	..	..	1	..
Total .	31	12	..	32	24	2	31	17	6	31	13	..	25	22	1			
				MONTHS.			Total for 20 Years.											
				January .			Acute.			Chronic.			Surgical.					
				February .			60			32			6					
				March .			41			35			6					
				April .			39			27			5					
				May .			48			25			..					
				June .			42			20			..					
				July .			108			20			..					
				August .			273			16			4					
				September.			257			28			3					
				October .			205			28			6					
				November .			151			25			1					
				December .			79			26			4					
				Total .			1350			312			40					

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SECTION I.

I. *On the Sickness and Mortality among the Troops in British America.*

THE stations occupied by our troops on the Continent and Coast of North America form four Military Commands:—

- I. The Bermudas,
- II. Nova Scotia and New Brunswick, including Cape Breton and Prince Edward's Island,
- III. Upper and Lower Canada,
- IV. Newfoundland.

It is proposed in the present Report to investigate the statistical details of each of these in succession.

I.—THE BERMUDAS.

THESE islands lie about 600 miles to the east of South Carolina, in latitude $32^{\circ} 25' N.$, longitude $64^{\circ} 50' W.$, and are said to exceed 300 in number, but most of them are barren rocks; four only are of sufficient importance to be garrisoned by troops, viz., St. George's, the Main, Somerset, and Ireland Island, and to these the following observations will, therefore, be confined.

This group extends in a continuous chain, about 25 or 30 miles in length, but in no part exceeding $3\frac{1}{2}$ in breadth, and so disposed as to form several capacious bays, completely land-locked, easily defended, and capable of affording anchorage for the whole British navy. These, from their position with regard to the American continent, and the security they afford to our shipping, confer on the Bermudas a degree of importance which neither the extent nor produce of the islands themselves would otherwise warrant. The population, exclusive of about 1000 convict prisoners, does not exceed 9000, of whom one-half are either blacks or people of colour.

The northern shore of these islands is low and studded along its whole extent with a chain of sunken rocks, which prevents the access of any vessel except through a narrow and intricate passage. The southern shore is more bold and abrupt, and likewise guarded by a similar chain, which, extending in a semicircular form, prevents any vessel from approaching nearer on that side than several miles; so that the whole coast is completely protected from foreign aggression by natural defences, except at one or two points where strong batteries have been erected.

Compared with the West India Islands, the Bermudas are by no means elevated, the highest point not exceeding 200 feet. They are rocky and very destitute of soil, which in no part is more than two or three feet in depth, and generally consists of the debris of marine shells mixed with sand and vegetable mould. The substratum is a white porous rock, called "Bermuda stone," which is easily worked, but on exposure to the air becomes hard and of a bluish colour.

Though the surface is apparently so unfavourable to vegetation, a considerable part of these islands, particularly on the southern side, is covered with forests of lofty cedar. There is little cultivation, and the produce consists principally of arrow-root, Indian corn, yams, and potatoes; pasturage for cattle is but scanty, and almost all the supplies for the troops are imported from the adjacent continent. The natives live principally on the vegetable productions of the soil, and fish which are very abundant.

In the larger islands are several lagoons or marshes, some of them communicating with the sea. Their banks are covered with mangroves, reeds, and the rank vegetation peculiar to such situations in warm climates, but no morbid influence seems attributable to them even under the high temperature which generally prevails during the summer months. All the water at a small depth below the surface is of a brackish quality, owing to the porous nature of the rock admitting of the intermixture of sea-water. The supply required for the troops and inhabitants is principally obtained from tanks in which the rain is preserved.

The climate of the Bermudas has been described by some authors as a perpetual summer. This description, however, appears to be rather overstrained; compared with the climate of northern regions, or even of the adjacent coast of America under the same latitude, it is certainly uniform; but the summer is exceedingly hot, even more so than in the West Indies, probably attributable to the light and scanty nature of the soil, which, being speedily divested of vegetation by the influence of solar heat and the absence of moisture, reflects the sun's rays from its arid surface with increased intensity. The absence of the regular trade winds, which serve to modify the heat in the West Indies, has by some been supposed another cause of the high range of temperature during the summer months, but this seems by no means probable in a climate where there is rarely a calm, and strong winds generally prevail from one quarter or other. The following Table shows the range of the thermometer at St. George's on an average of five years:—

I.
The Bermudas.
Geographical
Position.

General Description.

Climate.

Temperature.

I.
The Bermudas.

Months.	Thermometer.			Diurnal Range.		
	Maximum.	Medium.	Minimum.	Greatest.	Mean.	Least.
January	72	65 $\frac{3}{4}$	55	8	4	1 $\frac{1}{2}$
February	71	64 $\frac{3}{4}$	53	10	5 $\frac{3}{8}$	1
March	72	65	54	9 $\frac{1}{4}$	4 $\frac{1}{4}$	1 $\frac{1}{2}$
April	71	64 $\frac{3}{4}$	56 $\frac{1}{2}$	10	5 $\frac{1}{2}$	1 $\frac{1}{2}$
May	75	70	57	11	6 $\frac{1}{4}$	2
June	86	79	68	10	7	3
July	89	83 $\frac{1}{2}$	75	12	7 $\frac{1}{2}$	2
August	89 $\frac{1}{2}$	83	75	12	8	1
September	87	82 $\frac{1}{2}$	74	9	6	4
October	86 $\frac{1}{2}$	76 $\frac{1}{4}$	65	10	4 $\frac{3}{8}$	1
November	82	76 $\frac{1}{2}$	64	7	4	0 $\frac{1}{2}$
December	76	69 $\frac{1}{2}$	56	8	4 $\frac{1}{2}$	0 $\frac{1}{2}$
Mean	79 $\frac{3}{4}$	73 $\frac{1}{2}$	63	9 $\frac{1}{2}$	5 $\frac{3}{8}$	1 $\frac{3}{8}$

If the temperature of the summer months is compared with that of British Guiana, as shown in the West India Report, there will be found an excess of several degrees at this station, though 1500 miles further to the north.

Rain.

We possess no exact measurement of the quantity of rain; the principal fall is between August and October, there are also very heavy showers in January and February, but seldom any during the summer months, and at that season dew is never deposited, though it is, occasionally, in winter. Immediately after the rains vegetation flourishes with great luxuriance, but soon becomes parched for want of moisture, and during the rest of the year little is to be seen except the cedar and wild sago.

Winds.

The limited extent and moderate elevation of the Bermudas leave them exposed to every breeze, and in these regions calms are seldom of long continuance. Southerly winds are most common during summer, and are said to be damp and oppressive; those from the north-east frequently blow with great violence during winter, and are dry, cold, and in many instances too keen for invalids. Winds from the west and north-west are most common in spring and autumn, and when from the latter point are generally accompanied by heavy falls of rain or thunder-storms.

The principal military station is at the town of St. George, situate on an island of the same name, about three miles in length, but in no part exceeding half a mile in breadth. It may be termed the capital of the Bermudas, and lies in a low confined situation near the eastern extremity of the island, at the foot of some high grounds which form a kind of amphitheatre around it, and, by impeding ventilation, add materially to the temperature.

Troops employed.

The troops in these islands have of late years consisted of the Service Companies of a Regiment of the Line, one Company of Artillery, and another of Sappers and Miners. A body of Marines was employed in 1824 and 1825; and there was a temporary addition of the service companies of another Regiment of the Line in 1831 and 1832. Part of this force guards an extensive dock-yard and naval stores at Ireland Island; detachments consisting of a non-commissioned officer and a few privates are also stationed at Gibbs' Hill, Mount Langton, St. George's Ferry, and Fort George; the rest are in the vicinity of the capital.

Duty and Employment.

The employment of the troops has been principally confined to protecting the dock-yards and arsenals, and guarding the convicts under transportation; a few of the best artificers have also been engaged on the public works erecting for the defence of the colony. The ordinary routine of duty has not been severe, or likely to have affected the health of the garrison.

Barrack and Hospital Accommodation.

Of the nature of the accommodation at Ireland Island and the other outposts we can supply no details, but in St. George's Island the troops of the line are principally quartered in the Royal Barrack, a stone building one story high, containing twelve large rooms, and having a verandah in front, and a tank at each extremity to collect the rain-water from the roof for the use of the troops. It stands on a promontory or ridge of land near the sea at the eastern extremity of the town, above which it is considerably elevated and consequently enjoys more free ventilation and reduced temperature. A new barrack has lately been erected for the Artillery at the north point of the island, but as yet we possess no description of the nature of the locality, or the extent of accommodation which it affords.

The hospital is about 500 yards in rear of the Royal Barrack, but in a lower situation. It contains two wards with surgeries and serjeants' rooms on the ground-floor, and five wards on an upper story, the whole surrounded by a verandah and capable of accommodating from 50 to 60 patients. A supply of good water is obtained from tanks attached to the building.

There is also an hospital at Ireland Island, where the sick of the detachment are treated by a naval surgeon. The sick of the smaller outposts are either sent to the hospital at St. George's, or are treated by civil practitioners on the spot, as the nature of the case may require.

Rations and Diet.

The rations of the soldier in the Bermudas have, during the last 20 years, been nearly the same as in the Windward and Leeward Command, consisting weekly of 7lbs. of bread, 2lbs. of

fresh meat, 2lbs. of salt beef, 27½ oz. of salt pork, 8oz. of rice, 9oz. of sugar, 5oz. of cocoa, and 1½ pint of pease. The rice is made into soup with the fresh meat, or the pease with the salt beef and pork for dinner, and the cocoa and sugar with the ration bread form the materials for breakfast. Vegetables are scarce and indifferent, and, except fish, all articles of consumption required by the soldier in addition to his rations are expensive, and, as the Colony is unable to supply its own wants, are likely to continue so.

These facts embrace the principal details connected with the topography of the Bermudas and the circumstances by which the health of the troops is likely to have been affected; we have next to show what has been the extent of sickness and mortality among them.

The admissions into hospital, and deaths, from 1817 to 1836 inclusive, so far as can be ascertained from the Medical Returns, have been as follows:—

Years.	Strength.	Admissions.	Deaths.	Ratio per 1000 of Mean Strength.	
				Admitted.	Died.
1817	439	287	4	654	9
1818	495	374	16	756	32
1819	414	528	99	1,275	239
1820	332	476	11	1,434	33
1821	349	414	6	1,186	17
1822	325	425	13	1,308	40
1823	288	390	8	1,354	28
1824	212	336	10	1,585	47
1825	268	598	4	2,231	15
1826	616	1,120	11	1,818	18
1827	666	1,154	9	1,733	14
1828	701	1,065	8	1,519	11
1829	722	805	14	1,115	19
1830	769	1,153	9	1,499	12
1831	1,182	1,880	22	1,591	19
1832	1,147	1,258	25	1,097	22
1833	776	1,127	24	1,452	31
1834	714	955	17	1,338	24
1835	657	496	7	755	11
1836	649	515	21	794	32
Total .	11,721	15,356	338	. .	. .
Average	586	768	17	1,310	28.8

Table I. Showing the admissions into Hospital and Deaths among the Troops serving in the Bermudas.

From this Table we should conclude that, among every 1000 troops employed in this Command, 1310 cases of sickness have occurred in the course of the year, that is, every soldier has on an average, been under treatment for some disease or other once in nine months.

It is necessary to bear in mind, however, that this must be considerably under the actual extent of sickness, because as the troops at Ireland Island are treated in the Naval Hospital, the admissions and deaths among the detachment there have not been reported with the same accuracy as at Head Quarters, and there is good reason to believe that in some of the years they have been omitted altogether.

So far as regards the admissions into hospital it is impossible to remedy this defect, but we are enabled to supply the total number of deaths by the following reference to the War Office Returns:—

Year .	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Deaths reported in War Office Returns	5	17	102	11	7	16	10	10	4	12	10	13	16	11	62	31	27	19	9	24	416
Deaths reported in Medical Returns	4	16	99	11	6	13	8	10	4	11	9	8	14	9	22	25	24	17	7	21	333
Difference.	1	1	3	..	1	3	2	..	..	1	1	5	2	2	40	6	3	2	2	3	78

Of these 78 deaths which are not accounted for in the Medical Returns, 36 took place in 1831 by the loss of the transport brig Billow, with a detachment of the 81st on board. Of the remaining 42 the greater number are supposed to have occurred at Ireland Island, and a few by accidents or violence, which the medical officers do not generally include in their Returns.

According to the War Office Returns, the deaths during these 20 years have averaged 32½ per thousand of the strength annually, a very high ratio of mortality in a climate generally esteemed healthy; but a considerable part of this is attributable to the yellow fever of 1819, by which a fourth part of the force was cut off in a couple of months. Even deducting the extra mortality from that cause, however, the average of the other years considerably exceeds that of troops in Great Britain or the Mediterranean.

I.
The Bermudas.

In Abstract No. I. of Appendix is enumerated every disease, whereby either an admission or a death has been caused among the troops during the last 20 years, as stated in the Medical Returns, from which the following Table has been framed to exhibit a summary of the results:—

Table II.
Showing the
principal Diseases
among the Troops
in the Bermudas.

	ADMISSIONS.		DEATHS.	
	Total among whole force in 20 years.	Annual Ratio per 1000 of Mean Strength.	Total among whole force in 20 years.	Annual Ratio per 1000 of Mean Strength.
By Fevers	1,593	136	129	11·
Diseases of Lungs	1,473	126	102	8·7
" Liver	168	14	6	·5
" Stomach and Bowels	4,865	415	62	5·3
" Brain	199	17	24	2·
Dropsies	84	7	7	·6
Rheumatic Affections	290	33		
Venereal "	461	39		
Abscesses and Ulcers	2,239	191		
Wounds and Injuries	1,583	135		
Punished	685	59	8	·7
Diseases of the Eyes	1,167	99		
Diseases of the Skin	75	7		
All other Diseases	374	32		
Total	15,356	1,310	338	28·8

If the admissions and deaths from Ireland Island had been obtained with the same accuracy as from Head-quarters, it is supposed they would, on a rough estimate, have added about one-tenth to each of the above results, which allowance should accordingly be made in any comparison with the diseases of other stations.

We shall now proceed to make a few remarks in regard to the principal classes of diseases referred to in the preceding Table.

FEVERS.

Under this head are comprised,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Intermittent Fever	27	..	0 in 27
Remittent "	19	6	1 " 3
Common Continued Fever	1,266	20	1 " 63
Typhus	2	2	1 " 1
Epidemic Yellow Fever	1,314	28	1 in 47
	277	101	1 " 2 $\frac{1}{2}$
Total	1,591	129	1 in 12 $\frac{1}{2}$
Annual Ratio per 1000 of Mean Strength, exclusive of the Epidemic Fever	112	2 $\frac{1}{16}$	..
Annual Ratio per 1000 of Mean Strength, including Epidemic Fever	136	11	..

If the sickness and mortality by yellow fever in 1818 and 1819 be excluded, as that disease is comparatively of rare occurrence in these islands, the other types of fever will be found less frequent and less productive of mortality than at any of the Mediterranean stations; and it is especially worthy of remark, that notwithstanding the numerous marshy situations in different parts of this island, fevers of the intermittent type are almost altogether unknown: the only prevalent form is the common continued, which is observed in every climate, and is seldom of a fatal character.

Though however these islands have in most years been remarkably free from this class of diseases, they have been subject, at long intervals, to epidemics of yellow fever of a most aggravated character, but unfortunately the Medical Records prior to 1817 are too imperfect to admit of our giving any complete detail of the circumstances under which they appeared, or the extent of their ravages.

Of the epidemic of 1780, we can supply no information whatever. In regard to that of 1796, we have only been able to learn that it was first noticed at Ireland Island, the most

westerly of the group, from which it gradually extended to the others according to their proximity. So slow was its progress, however, that seven months elapsed before it reached St. George's. In 1818 it again broke out in Ireland Island, and proved very fatal to those employed in the dock-yard; but as it was principally confined to that quarter, few of the troops suffered from it.

It has been alleged that on both these occasions the disease was imported;—in 1796 by a French prize, on board of which yellow fever was raging when it was carried into Ireland harbour, and in 1818 by a man of war from the West Indies, of which several of the crew had died on the passage from the same disease. It must be observed, however, that between these periods numerous arrivals took place from various ports where yellow fever prevailed, without any similar occurrence. Ireland Island, where the fever first made its appearance, contains in itself none of the causes to which that disease is generally attributed, being extremely rocky, with little verdure or vegetation. It contains neither marshes nor swamps, and is scarcely a mile in length, and not more than a few hundred yards across at the broadest part.

The epidemic of 1819 broke out at St. George's, and was supposed to have been imported into that island by a vessel from Ronoco, which had lost several of her crew on the passage by yellow fever. The first case was observed about the middle of August, and by the end of September a fourth part of the garrison had fallen victims to it. As in the West Indies and other stations where similar epidemics have occurred, all classes were affected to nearly an equal extent, as will be seen by the following Abstract of the admissions and deaths:—

Corps.	Non-commissioned Officers & Privates.			Women and Children.		
	Strength.	Admitted.	Died.	Strength.	Admitted.	Died.
15th Regiment	330	210	64	Not stated.	50	23
Royal Artillery	20	14	9		6	5
Sappers and Miners	52	39	22		14	5
Total	402	263	95	..	70	33

The 15th Regiment suffered rather less than the others, because about 80 of them were detached at out-stations where the disease did not prevail to the same extent, and was not of so virulent a character as at Head Quarters. Of 20 officers in the island 4 died; the number attacked is not specified in the Returns.

Of the effect of this epidemic on the civil population we possess no details, and, so far as we can learn, there was nothing in the state of the atmosphere, the condition of the marshes, the soil, or the vegetation differing in that year from others when it did not prevail.

Eruptive fevers are exceedingly rare, only two cases having occurred among all the troops in the course of 20 years.

DISEASES OF THE LUNGS.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Inflammation of Lungs	436	13	1 in 34
Pleurisy	5	..	0 " 5
Spitting of Blood	32	2	1 " 16
Consumption	103	69	1 " 1½
Acute Catarrh.	774	6	1 " 129
Chronic "	112	12	1 " 9½
Asthma, &c.	11	..	0 " 11
Total	1473	102	1 in 14½
Annual Ratio per 1000 of Mean Strength	126	8·7	..

Though this class of diseases, when taken in the aggregate, does not appear to be very prevalent in these islands, yet the most dangerous of them, viz., inflammation of the lungs and consumption, are decidedly so, and hence the above ratio of mortality is unusually high, being $8\frac{7}{10}$ per thousand of the strength annually, which is more than among troops in the United Kingdom, or any of the Mediterranean stations.

This appears more remarkable when we consider the uniformity of temperature at the Bermudas during a great part of the year, and the absence of those extremes of cold to which such diseases in northern latitudes are frequently attributed. It is sufficiently demonstrative of the erroneous nature of the ideas generally entertained on this head, particularly as regards consumption, that 9 per thousand of the troops at this station are attacked annually by that disease, of whom nearly three-fourths die before an opportunity offers for their removal, while in Great Britain the proportion attacked annually is but $6\frac{4}{10}$ per thousand, and we shall presently have occasion to observe, that even in the most inclement regions of British America the proportion is equally low.

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Inflammation of the lungs, too, is exceedingly prevalent, without any perceptible cause in the climate to induce it; catarrhal affections and the other diseases of this class exhibit much the same degree of prevalence as among troops in the Mediterranean.

DISEASES OF THE LIVER.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Acute Inflammation of Liver.	85	4	1 in 21
Chronic " "	58	2	1 " 29
Jaundice	25	0	0 " 25
Total	168	6	1 in 28
Annual Ratio per 1000 of Mean Strength	14	$\frac{5}{16}$	..

This class of diseases is about twice as prevalent and twice as fatal as in the United Kingdom; but, considering the higher temperature to which the soldier is exposed, it is scarcely so much so as might have been expected, and the cases which have occurred offer no peculiarity worthy of notice.

DISEASES OF THE STOMACH AND BOWELS.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Abdominal Inflammation	3	2	1 in 1½
Inflammation of Stomach	213	7	1 " 30
" " Bowels	33	3	1 " 11
Vomiting of Blood.	10	2	1 " 5
Acute Dysentery	1,712	30	1 " 57
Chronic " "	39	6	1 " 6½
Indigestion.	74	..	0 " 74
Colic	138	1	1 " 138
Diarrhœa	2,051	8	1 " 257
Constipation	206	..	0 " 206
Cholera	386	3	1 " 129
Total	4,865	62	1 in 79
Annual Ratio per 1000 of Mean Strength	415	5.3	..

When we take into view that the above ratio of admissions is exclusive of the sick under treatment, in several of the years, at Ireland Island, it may safely be assumed, that on an average nearly one-half of the troops are attacked by diseases of the bowels annually, which is a larger proportion than even in the Windward and Leeward Command, though they are fortunately less severe in their character. This class of diseases is exceedingly prevalent here in every form, and in particular inflammation of the stomach, which elsewhere is of rare occurrence, has been so common, that in 1825 and 1826 a seventh part of the force was attacked by it.

It is worthy of remark, that since 1825 when the force was augmented, there has been a very great increase in the ratio of diseases of the bowels. Prior to that period it was only 160 per thousand of the force annually, being little above the average of the Mediterranean stations; but since then it has amounted to 500 per thousand annually. We can assign no cause for so remarkable an increase, except that it may have arisen from there being a greater difficulty, after the force was augmented, of procuring supplies of fresh meat and vegetables at a station the resources of which are so limited; at all events we find, since that period, a larger issue of fresh meat and the more abundant use of vegetables frequently recommended by the medical officers as a probable means of counteracting the tendency to these diseases, though prior to that date no remarks on the subject appear in their Reports.

This prevalence of bowel complaints has occasionally been attributed to the brackish quality of the water; and certainly while the soldier, besides being restricted to salt meat on five days of the week, could only obtain such water to quench his thirst, the prevalence of these diseases need scarcely have excited surprise. For some years, however, rain-water has been collected for the use of the troops; if, in addition to this, a more liberal issue of fresh meat could be obtained for them, there is reason to suppose their suffering from this class of diseases might be materially mitigated. It strengthens such a supposition, that among the officers there has been no fatal case, and not more than 54 have been under treatment for these diseases in the course of 14 years, which is as small a proportion as in the United Kingdom.

DISEASES OF THE BRAIN.

Under this head are comprised in the preceding Table,—

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	Admitted.	Died.	Proportion of Deaths to Admissions.
Headache	7	1	1 in 7
Apoplexy	26	14	1 „ 2
Paralysis	11	..	0 „ 11
Epilepsy	44	..	0 „ 44
Fatuity	2	..	0 „ 2
Madness	7	..	0 „ 7
Brain Fever of Drunkards	102	9	1 „ 11
Total	199	24	1 in 8½
Annual Ratio per 1000 of Mean Strength	17	2	..

This ratio is considerably above the average of the Mediterranean stations. Fully one-half of the cases, however, and nearly the same proportion of deaths arise from *delirium tremens*, the direct consequence of drunkenness, which, so far as we can judge from its effects, seems to be exceedingly prevalent in this Command. Were we to deduct the cases thus originating in the soldiers' own imprudence, the others would be found comparatively rare, notwithstanding the high temperature to which these islands are subject for several months of the year.

DROPSIES.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Subcutaneous Dropsy	27	2	1 in 13
Abdominal Dropsy	57	5	1 „ 11
Total	84	7	1 in 12
Ratio per 1000 of Mean Strength	7	$\frac{6}{10}$	

This class of diseases is as common here as in the West Indies, though by no means of so fatal a character, the proportion of deaths being only about one-third as high. It is rather singular that 42 of the cases of abdominal dropsy occurred in 1828; but the Medical Report of that year having been lost, we are unable to furnish any details as to the causes of so remarkable an increase at that period.

It only remains for us now to notice in a very general way the other classes of diseases which rarely prove fatal, but which are a source of considerable inefficiency in this Command. As their influence can best be appreciated by comparison, we submit the following abstract of the ratio per thousand of mean strength annually under treatment at this and other stations:—

	Bermudas.	Windward and Leeward Command.	Jamaica Command.	United Kingdom.
Rheumatic Affections	33	49	29	50
Venereal Affections	39	35	20	181
Abscesses and Ulcers	191	204	187	133
Wounds and Injuries	135	129	120	126
Diseases of the Eyes	99	89	90	19
„ Skin	7	6	6	29
Punished	59	50	64	8

From the remarkable uniformity in the results, this comparison establishes that in all these diseases the climate of the Bermudas exerts much the same influence as that of the West Indies. In regard to venereal affections, there is nearly as remarkable an exemption; nor can this arise, as at some stations, from any sanatory regulations to prevent the propagation of the disease, such precautions being unknown.

Diseases of the eyes have been still more common than in the West Indies; in 1826 and 1827 about one-half of the troops in garrison was under treatment for them. This was supposed in some measure attributable to several parties being employed in quarrying and preparing the white stone of the island for the public works then in progress; but there is

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The Bermudas.

also good reason to believe that many of the cases were artificially excited, as a quantity of pulverised blue vitriol, which had apparently been used for that purpose, was discovered in the ophthalmic ward, and the disease was not common at the time either among the officers or inhabitants, nor did it, ever previous or subsequent to that period, exhibit a similar degree of prevalence or severity.

The extent of punishment has also been much the same as in the West Indies, and has of late undergone a very remarkable diminution, as will appear from the following table showing the ratio per thousand of the strength punished in each year.

	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Number Corporally Punished.	28	25	19	12	56	133	103	61	11	49	37	14	7	14	34	36	27	13	3	3	685
Ratio per 1000 of Strength Corporally Punished.	64	51	46	36	160	409	358	288	41	80	55	20	10	18	29	31	35	18	5	5	59

Thus, instead of 2 men out of every 5 in the garrison undergoing this punishment, as was the case in 1822, the proportion has, within the last two years, been reduced to somewhat less than 5 per thousand of the strength annually.

During the years 1822, 1823, and part of 1821 and 1824, when corporal punishment was so frequent in this Command, the garrison was principally composed of a wing of the 2nd Battalion of the 60th, a penal corps, which some years previous was recruited by culprits transferred from other regiments, and among whom crime appears to have been so prevalent, that at least half of them were flogged annually. Out of 353 punishments which took place at this station in these four years, all, except two, were in this wing of the 60th, though not above 230 strong; thus affording a striking instance how unfitted for the reformation of the soldier, and how detrimental to the character of the service, was the practice of uniting in one corps the depraved members of a whole army.

More than a third part of all the cases admitted into hospital from this wing of the 60th was from punishment alone, and so often had some undergone it, that their recovery was in general extremely tedious—a circumstance which added greatly to the extent of inefficiency at this station. This shows how necessary it is in investigations of this nature, by which the influence of certain climates on the constitution is to be determined, that a careful distinction should be drawn between admissions into hospital, resulting from the vices, crimes, and punishments of soldiers, and those which may have originated in diseases usually prevalent at the station.

II.—NOVA SCOTIA AND NEW BRUNSWICK,

*Including Cape Breton and Prince Edward's Island.*II.
Nova Scotia and
New Brunswick.Geographical
Position.

THE Peninsula of Nova Scotia, as it is generally termed, extends in an oblong shape about 280 miles in length, and from 50 to 100 in breadth. Being bounded on the south-east and south by the Atlantic, on the west by the Bay of Fundy, and on the north by Cape Breton and a portion of the Gulf of St. Lawrence, its position is perfectly insular, except where a strip of land, only eight miles in breadth, connects it on the north-west with the province of New Brunswick. The superficial area of this peninsula has been computed at 15,600 square miles, of which, however, not a twentieth part is cleared or under cultivation. Its physical aspect, like that of all the settlements in British America, is by no means mountainous; a chain of hills extends along the western side, from which a loftier range branches off to the north, but neither of them are of any great elevation, the highest point not exceeding 800 feet. In other parts the ground is diversified by numerous though slight undulations, and, except along the banks of the rivers and at the heads of some of the bays, level tracts of any extent are seldom to be met with.

The south-east coast, facing the Atlantic, is bold, rocky, and sterile, but, at the mouths of rivers and creeks, occasionally intersected by small patches of alluvial soil. The country presents the same features to the distance of several miles inland, being strewn with immense masses of granite, or slightly covered with a loose sandy soil. Beyond that, however, its agricultural capabilities rapidly improve, though it is still in most parts heavily covered with timber. The south and west coasts are deeply indented with numerous bays and lagoons by the action of the Gulf Stream, which, rushing upon this portion of the American continent in tides of from 60 to 70 feet, overflows the country to the distance of several miles, and converts the mouths of streams, fordable at low water, into extensive arms of the sea where whole fleets might ride at anchor.

General Description

As a necessary consequence of this phenomenon, a very considerable portion of the banks of the rivers and the heads of the bays on that side of the peninsula are constantly in a marshy state, and as these tides are thickly impregnated with alluvial soil, owing to the force with which they are impelled against the adjacent continent, they leave on their reflux a considerable deposit of mud, which, by the aid of embankments, is converted into rich meadow land; and even where no such care has been taken, spontaneously supplies a coarse winter fodder for cattle.

Though the south-east coast may therefore, from the nature of its soil and surface, be considered as in a great measure free from the agencies supposed to give rise to malaria, yet the western coast, particularly around Windsor and the head of the Bay of Fundy, abounds in them in no ordinary degree, both as regards marshy land, and a muddy surface exposed during summer to the action of a high temperature. The interior of the peninsula, too, is so much intersected by lakes and bays that nearly one-third of its surface is under water, yet the inhabitants enjoy a remarkable degree of health, and an almost total exemption from those intermittent and remittent fevers, which, as we shall hereafter have occasion to show, affect the constitution in Upper Canada to so remarkable an extent.

The climate of this province is distinguished by great and sudden alternations of temperature, such as, even in the changeable climate of Britain, appear almost incredible; though Nova Scotia is in this respect less remarkable than some of the North American stations, the thermometer has been known to exhibit a difference of 52° in 24 hours. The atmosphere is also exceedingly moist, the showers heavier and more frequent than in Britain, and fogs are common along the sea-coast throughout the year, but particularly in May and June, though they seldom extend any distance into the interior.

Climate.

Though the winter is no doubt exceedingly severe, as compared with that of Great Britain, yet the cold is not by several degrees so intense as in that part of the American continent further to the west, neither is the heat of summer so great, probably attributable to the insular situation of the province having a tendency to modify both these extremes; the thermometer is seldom lower than 6° or 8° below zero in winter, or above 88° in summer, but we possess no table sufficiently accurate to exhibit its precise range for a series of years.

Temperature.

The prevailing winds are from the east in spring, from the south or south-west in summer and autumn, and from the north or north-west in winter, at which period a change to any other quarter is generally followed by a rapid rise in the thermometer, accompanied by much rain or snow.

Winds.

From December to the end of March the ground is generally covered with snow. Summer follows winter in such rapid succession, that there is scarcely any spring, but the autumn is pleasant and sometimes of long duration, as, towards its termination, there is frequently a continuance of what is termed the Indian summer, till December again ushers in the winter with its usual severity.

The force in Nova Scotia has generally consisted of two companies of Artillery, with the service companies of two regiments of the Line, and a small party of Sappers and Miners; of this force the greater part is quartered at Halifax, on the south-east coast, one company of the Line only being detached to Windsor and Annapolis, and another to the adjacent islands of Cape Breton and Prince Edward's.

Troops employed.

II.
Nova Scotia and
New Brunswick.
—
Military Stations.
Halifax, &c.

Halifax, the capital of Nova Scotia, lies about ten miles from the sea, upon the side of an extensive peninsula formed by two deep bays, one of which serves for the harbour. It is built on a gentle slope rising to the height of 256 feet, and crowned by a citadel, where a portion of the troops will be quartered as soon as the necessary accommodation is prepared for them. The barracks they at present occupy lie between the upper part of the town and the citadel, and consist of two extensive wooden buildings for the troops of the line, each disposed in the form of a square, with two smaller barracks of the same materials for the Artillery and Engineers. The principal hospital, situated immediately above the most northerly of these barracks, is also built of wood, and four stories high, but, except in cases of emergency, the two upper ones only are occupied by patients.

In the harbour of Halifax, and commanding both the shipping and the town, is an island of about six acres, on the summit of which, at an elevation of 56 feet is a strong fort and round tower, where a small detachment is generally quartered. There is also a fortified position for the protection of the harbour at Point Pleasant, a mile and a half from Halifax, and another at its mouth, called the York Redoubt, to which small parties are occasionally sent. All these outposts are deemed as salubrious as the capital, around which, for the distance of several miles, the ground is dry and rocky, free from swamps, and as well cultivated as the light and scanty nature of the soil will permit.

Windsor.

Windsor, generally occupied by a detachment of 20 or 30 men, lies about 45 miles west from Halifax, on the banks of the Avon, which, there uniting with several small streams, forms an estuary of considerable extent. The ground in the vicinity is well cleared, open, and, at a distance from the river, presents a pleasing succession of hill and dale, bounded towards the north by ranges of high land. Along the banks of the river, and in the direction of the coast, however, it is for several miles so low as to be overflowed by the tide, which leaves a vast extent of mud and marsh exposed to the action of the atmosphere; yet though the barrack and town stand on an eminence overlooking these supposed sources of malaria, no bad effects have ever been experienced from the nature of the locality by the troops or inhabitants.

Annapolis Royal.

Annapolis Royal, formerly the capital of this province and a military post of considerable importance, is also in this respect similarly situated, being built at the confluence of two rivers, which, communicating through a narrow lagoon with the Bay of Fundy, overflow their banks at high water, to the distance of several miles and form extensive savannahs. Of these, several thousand acres have been rendered available for agricultural purposes by embankment, but much still remains in a marshy state, particularly to the south and south-east. The barracks are in the centre of the town, and although for the most part in a ruinous condition afford sufficient accommodation for the detachment, which seldom consists of more than 40 men. There is also an hospital with two wards, each capable of containing ten patients, but the troops are so healthy that it is seldom required. The country around is well cleared, cultivated, and, at the distance of two or three miles from the banks of the river, hilly and picturesque. The inhabitants of the whole district are remarkably healthy.

Fort Cumberland.

Close to the narrow isthmus which unites Nova Scotia to the American continent, and about 142 miles N. W. of Halifax, is a small outpost called Fort Cumberland, commanding an extensive basin of the same name, communicating with the Bay of Fundy; a Serjeant's party is generally stationed here, and a larger force could be accommodated if necessary. All the ground, to the distance of several miles is low and marshy; nearly 100,000 acres have been either wholly or partly reclaimed from the sea by dykes, but though much still remains subject to the influence of the tide, this post is remarkably healthy, and febrile diseases are exceedingly rare.

Cape Breton.

Adjacent to the northern shore of Nova Scotia, from which it is only separated by a strait about a mile broad, lies the extensive island of Cape Breton, said to contain nearly two millions of acres, but, being intersected through nearly its whole breadth by an extensive arm of the sea, 50 miles in length, and in some places nearly 20 in breadth, its precise dimensions cannot be accurately estimated. On the banks of the Spanish River, a few miles south of the entrance to this lake, stands the small town of Sydney, on an elevated tongue of land, having the river on both sides, and surrounded by hills of moderate elevation; the country in the immediate vicinity is said to be well cleared, but the soil is light and sandy, and the ground in many parts covered with large boulders of granite which retard agricultural improvement. A detachment of about 40 men and two officers is generally quartered here, in two wooden buildings erected on the extremity of the tongue of land whereon the town is built, and having in front an open piece of ground extending to the river. There is no regular hospital, but part of the barrack is set aside for that purpose.

The physical aspect of this island is much bolder than the adjacent parts of the North American continent, particularly towards the north where the mountains rise to the height of 1800 feet. Several fresh-water lakes are scattered over its surface, one of them 40 miles in circumference; and there is much wet and spongy land, interspersed with dense forests of which the wood is more dwarfish than on the continent. The climate is much the same as in Nova Scotia, but even more healthy; no epidemic disease, except small pox, has for many years been known in the island, and both among the inhabitants and troops sickness and mortality are exceedingly rare.

Prince Edward's Island.

About 27 miles west from Cape Breton, and stretching along a part of the northern shores of Nova Scotia and New Brunswick, from which it is in some parts only about nine miles distant, lies Prince Edward's Island, 140 miles in length, varying from 15 to 34 in breadth, and comprising an area of 2134 square miles. Its physical aspect, like that of Nova

Scotia, presents a succession of gentle undulations rising towards the centre of the island, where they form a regular chain intersecting it longitudinally, but in no part attaining any considerable altitude. Owing to the high tides in the Gulf of St. Lawrence, the coast is much broken into deep creeks and inlets, which run for a considerable distance into the interior, and so completely intersect it that there is no point further than six or seven miles from water conveyance. In some parts the soil is light and sandy, but more generally rich and alluvial. Except on the banks of the principal rivers, or in the immediate vicinity of the capital, cultivation has made little progress; the rest of the island is still in a state of nature.

The garrison seldom exceeds a Subaltern's detachment which is stationed in Charlotte Town, the capital, near the mouth of the Hillsborough, a broad river, or rather arm of the sea, navigable for large vessels to the distance of several miles. There is a small barrack for the troops, in an elevated position, at the west end of the town; but the station is so healthy as to require no regular hospital.

In this island the winter is rather more severe than in Nova Scotia, the thermometer frequently falling to 20° or 25° below zero. The rivers and bays remain frozen till towards the end of April, and the springs are late and backward. The inclemency of these seasons are, however, by no means prejudicial to health, the inhabitants being even less subject to mortality than in Britain.

We now come to that part of the Command which constitutes the province of New Brunswick, where the service companies of one regiment of the Line and half a company of Artillery are generally stationed.

New Brunswick.

This province forms a section of the North American continent, extending between 45° and 48° north latitude, and 63° 47' and 67° 53' west longitude, and comprising nearly 14 millions of acres. Towards the north-east it is united to Nova Scotia by the narrow strip of land before referred to, but differs from that peninsula in being composed of bolder undulations, which in some parts assume a mountainous character; cultivation has also made less progress, the whole province, with the exception of a few spots along the banks of the principal rivers, being still covered with dense forests.

The troops are principally quartered at St. John's and Fredericton, both situated on a broad and extensive river, which intersects the province in a north-westerly direction. St. John's is built on a rugged rocky peninsula, where this river falls into the Bay of Fundy: the soil in the neighbourhood, as well as along the sea-coast, to the distance of several miles, is dry and stony, and in the vicinity of the town tolerably well cultivated; but dense forests still occupy the back-grounds at a short distance from the river. The garrison generally consists of two or three companies of the Line and a small party of Artillery, who are accommodated in a barrack at the south side of the town, on an elevated point of land which forms the right of the harbour. The hospital stands in a more sheltered situation lower down the hill, and consists of two stories, containing four wards and the requisite offices, with a colonnade in front, and garden for the use of the convalescents.

St. John's.

Fredericton, the head-quarters of the regiment in this province, lies about 80 miles higher up the river, on an alluvial strip of land about two miles in length, and so low as to be much subject to inundations. The streets during rainy weather are almost impassable, and the banks of the river generally wet and muddy. Cultivation has made very little progress in the vicinity, which is principally covered with dense forests of hard wood. The soil is either alluvial, mixed with gravel, or of a tenacious clayey nature, and by no means ready to absorb moisture.

Fredericton.

The barracks stand on the bank of the river, near the centre of the town; they are of stone, two stories high, with basement and attics, affording sufficient accommodation for the usual strength of the garrison. The hospital is also a stone building about 100 yards to the north of the barracks, containing four wards, with surgery and other offices. Notwithstanding the apparently unfavourable nature of the locality, both troops and inhabitants enjoy excellent health and a marked exemption from all diseases of a febrile nature.

There is also a detachment of 20 or 30 men stationed about three miles from the frontier of the United States, in a small town called St. Andrew's, situated on a narrow strip of land, 60 miles below St. John's, and fronting Passemaquody Bay, a branch of the Bay of Fundy; but of its topography we possess no details.

St. Andrew's.

The climate of New Brunswick, particularly at Fredericton, is not liable, during winter, to such sudden vicissitudes as that of Nova Scotia. The frost is steadier, and the winter more severe as well as of longer duration; the heat of summer is also more intense, and the thermometer, in the course of one year, has been known to range from 96° above to 42° below zero, though these extremes are considerably beyond the usual average.

Climate of
New Brunswick.

As in Nova Scotia, fogs are common along the sea-coast of New Brunswick, particularly in the months of May and June, but seldom extend any distance into the interior, nor do they appear in the slightest degree prejudicial to health, the stations most exposed to them being quite as free from sickness as any other part of the Command.

Having given this brief notice of the principal localities occupied by the troops, it is only necessary to add, that their duty varies little from that in other garrisons. Fatigue parties of any kind are seldom required, except for clearing away the snow in the vicinity of their barracks. The ration, consisting of a pound of bread and a pound of fresh meat, is generally of the best quality; and, as all the necessaries of life can be obtained at a moderate rate, the soldier may be said to enjoy greater advantages in regard to diet than in the United Kingdom. His breakfast consists of a pint of coffee or tea with sugar, two ounces of milk, and a portion of the ration bread. The meat is made into soup with vegetables for dinner, to which is added about a pound of potatoes, and the remainder of

II.
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the bread. There is no supper, and as the hour for breakfast is 8 and for dinner 1 o'clock, nineteen hours elapse without any regular meal.

Unfortunately, in this, as well as the other stations of British America, the price of spirits is so extremely low as to admit of the soldier indulging frequently in intemperance, even on the limited amount of his surplus pay; but though these excesses may have been a fertile source of crime, indiscipline, and punishment, the following results sufficiently establish that they cannot have materially affected the health of the troops during the period under review, as the sickness and mortality have been lower than among those in the United Kingdom.

In preparing the usual tables illustrative of this point, considerable difficulty has been experienced, owing to several small detachments being under the charge of private medical practitioners. The number of these has not only varied in each year, but often during several months of the same year, according as medical officers became available for employment at out-stations; and as most of the cases which occurred there have consequently been omitted, it becomes necessary to deduct the average strength of these detachments before estimating the ratio of sickness and mortality in the following Table.

Table III.
Showing the Admissions into Hospital and Deaths among the Troops in Nova Scotia and New Brunswick.

Years.	Strength per War-Office Returns.	Deduct proportion generally attended by Private Practitioners.	Strength referred to in Medical Returns.	Admitted into Hospital of that Strength.	Died. of that Strength.	Ratio per 1000 of that Strength.	
						Admitted.	Died.
1817	3,416	171	3,245	2,499	65	770	20
1818	2,538	127	2,411	1,343	17	557	7
1819	2,179	109	2,070	1,595	36	771	17
1820	2,098	105	1,995	1,481	24	743	12
1821	2,141	107	2,034	1,828	16	899	8
1822	2,193	110	2,083	1,736	29	833	14
1823	2,091	104	1,987	1,444	24	727	12
1824	2,110	105	2,005	1,655	22	825	11
1825	2,312	116	2,196	2,418	29	1,101	13
1826	2,298	115	2,183	1,796	32	823	15
1827	2,328	116	2,212	1,724	34	779	15
1828	2,250	112	2,138	1,588	28	743	13
1829	2,406	120	2,286	2,062	28	902	12
1830	2,544	127	2,417	2,051	33	849	14
1831	2,593	130	2,463	2,182	53	886	22
1832	2,410	120	2,290	1,781	29	778	13
1833	1,992	100	1,892	1,376	32	727	17
1834	2,071	104	1,967	2,196	79	1,116	40
1835	2,259	113	2,146	1,681	18	783	8
1836	2,213	111	2,102	1,738	21	827	10
Total .	46,442	2,322	44,120	36,174	649	..	..
Average	2,322	116	2,206	1,809	32	820	14.7

On comparing this Table with the results in the United Kingdom Report, it will be found that the proportion attacked by sickness annually in this Command is less by about 109 per thousand than among the Dragoon Guards and Dragoons, while the mortality is to within a fraction the same. The latter, however, refers only to deaths by disease as reported by the medical officers. The War-Office Returns increase that ratio very considerably, as will be seen by the following extracts:—

	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Deaths per War-Office Returns .	91	37	35	32	21	32	26	28	32	42	50	34	41	43	66	38	44	86	24	26	829
Ditto per Medical Returns . .	65	17	35	24	16	29	24	22	29	32	34	28	28	33	53	29	32	79	18	21	649
Omitted in Medical Returns .	26	20	..	8	5	3	2	6	3	10	16	6	13	10	13	9	12	7	6	5	180

The War-Office Returns make the average ratio of mortality 18 per thousand annually, but of this a great proportion arose from causes in no way connected with climate; for instance:—

There Died Suddenly	8	Drowned	35
By Suicide	17	Suffocated by Drinking	3
„ Accident, not specified	7	Frozen to Death	1
„ Excessive Drinking	5	Died at Sea	1
„ Aneurism	1	Shot, attempting to Desert	1
„ Causes unknown	5		
		Total	84

Leaving 96 of which the causes are still unaccounted for; some no doubt arose from similar casualties among the Artillery, who furnish no annual Returns to the War-Office,

and a few from diseases at outposts under charge of private practitioners, for which a twentieth part has been deducted from the strength, as before specified. With this correction, it is believed the following calculations, deduced from Abstract No. II. of Appendix, will exhibit a pretty fair estimate of the influence of this climate in inducing sickness and mortality by the principal classes of diseases:—

II.
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	ADMISSIONS.		DEATHS.	
	Total among whole Force in 20 Years.	Annual Ratio per 1000 of Mean Strength.	Total among whole Force in 20 Years.	Annual Ratio per 1000 of Mean Strength.
By Fevers	3,055	69·	71	1·6
Eruptive Fevers	65	2·	1	·
Diseases of the Lungs	5,532	125·	314	7·1
" Liver	384	9·	10	·2
" Stomach and Bowels	4,146	94·	67	1·5
Epidemic Cholera	210	5·	59	*1·4
Diseases of the Brain	508	11·	56	1·3
Dropsies	78	2·	23	·5
Rheumatic Affections	1,310	30·	3	
Venereal "	3,675	83·	2	
Abscesses and Ulcers	4,626	105·	3	
Wounds and Injuries	6,545	148·	20	1·1
Punished	1,375	31·	·	
Diseases of the Eyes	2,241	51·	·	
" Skin	1,030	23·	·	
All other Diseases	1,394	32·	20	
Total	36,174	820·	649	14·7

Table IV.
Showing the principal Diseases among the Troops serving in Nova Scotia and New Brunswick.

Let these results be compared with the influence of the same classes of diseases upon the Dragoon Guards and Dragoons serving in the United Kingdom, and they will be found, with one or two exceptions, to correspond in a remarkable degree, though the climates and localities are in many respects so dissimilar; for instance:—

	ADMISSIONS.		DEATHS.	
	Annual ratio per 1000 of Mean Strength.		Annual ratio per 1000 of Mean Strength.	
	Nova Scotia and New Brunswick.	United Kingdom.	Nova Scotia and New Brunswick.	United Kingdom.
Fevers	69·	75·	1·6	1·4
Eruptive Fevers	2·	3·	·	·1
Diseases of the Lungs	125·	148·	7·1	7·7
" Liver	9·	8·	·2	·4
" Stomach and Bowels	94·	94·	1·5	·8
Epidemic Cholera	5·	4·	1·4	1·2
Diseases of the Brain	11·	6·	1·3	·7
Dropsies	2·	1·	·5	·3
Rheumatic Affections	30·	50·		
Venereal "	83·	181·		
Abscesses and Ulcers	105·	133·		
Wounds and Injuries	148·	126·	1·1	1·4
Punished	31·	8·		
Diseases of the Eyes	51·	19		
" Skin	23·	29·		
All other Diseases	32·	44·		
Total	820·	929·	14·7	14·

This comparative view precludes the necessity for any lengthened remarks on the different classes of diseases contained in the preceding Table, there being little room for observation when they present almost identically the same features as among troops at home. We shall, therefore, refer to that subject in a very cursory way, merely to show the individual diseases of which each class is composed, and to notice any striking peculiarity which they present.

* With regard to cholera it must be kept in view that though we have been obliged in this table to estimate the ratio as if it had been of annual occurrence, that epidemic only prevailed here in 1834, when it cut off nearly 39 per 1000 of the force; this mortality, extended over a period of 20 years, makes the average annual ratio $1\frac{1}{2}$ per 1000 as above stated.

II.
Nova Scotia and
New Brunswick.

FEVERS.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Quotidian Intermittent . . .	33	..	0 in 33
Tertian	4	..	0 " 4
Remittent	15	..	0 " 15
Common Continued.	2,968	62	1 " 48
Yellow Fever	2	1	1 " 2
Synochus	11	1	1 " 11
Typhus	22	7	1 " 3
Total	3,055	71	1 in 43
Annual Ratio per 1000 of Mean Strength	69	1.6	..

This shows at a glance that almost all the fevers are of the common continued type which is found to prevail in every climate. Intermittents are so rare that not two cases occur among the whole force annually, and these have in almost every instance been traced to individuals who had previously suffered from them in Upper Canada. Though such an exemption might be expected for the troops at Halifax, owing to the arid, rocky nature of the soil, and the absence of all causes likely to induce that form of fever, yet it is singular that the same exemption should extend to the troops and inhabitants at Windsor, Annapolis, Fort Cumberland, and Fredericton—situations abounding with those supposed sources of malaria, which, in the provinces of Upper Canada, under a similar temperature, are found, or at least are supposed, to produce fevers of the remittent and intermittent type. On that subject the medical officer at Fredericton particularly remarks that, though the station is on the alluvial bank of a large muddy river, surrounded by forests interspersed with swamps, with vegetation in abundance and in every shape undergoing decomposition, yet the diseases attributed to malaria are scarcely known; and the same subject is frequently adverted to with equal surprise by other officers who have served at that station and on the western coast of Nova Scotia, where the agencies supposed to generate malaria exist in such abundance.

Eruptive fevers are so exceedingly rare as scarcely to require any observation; only one fatal case occurred during the whole period under observation, and the proportion attacked was but 3 in every 2000 of the force annually.

DISEASES OF THE LUNGS.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Inflammation of the Lungs . . .	1,505	56	1 in 27
Pleurisy	72	2	1 " 36
Spitting of Blood	116	9	1 " 13
Consumption	321	212	2 " 3
Acute Catarrh.	3,024	22	1 " 137
Chronic "	388	7	1 " 55
Asthma	24	3	1 " 8
Difficulty of Breathing	81	3	1 " 27
Hooping Cough	1	..	0 " 1
Total	5,532	314	1 in 17½
Annual Ratio per 1000 of Mean Strength	125	7.1	..

On comparing the relative influence of this class of diseases in the United Kingdom and this Command, as shown in the preceding Table, it will be found that, notwithstanding the severe winter and sudden atmospherical vicissitudes peculiar to Nova Scotia and New Brunswick, diseases of the lungs are less prevalent in the proportion of 125 to 148, and less fatal in the proportion of 7.1 to 7.5. It is true the results for the United Kingdom embrace a period of 7 years only, while those of Nova Scotia and New Brunswick extend over 20 years; but, even if the same period is taken for both, the admissions will be found lower in the proportion of 120 to 148, and the deaths in the proportion of 7.5 to 7.5. Were any other proof necessary to show how little even the most acute of these diseases seems to be aggravated by such atmospheric influence, it would be found in the relative proportion treated for inflammation of the lungs and pleurisy in this Command, compared with the Mediterranean and Bermuda—climates remarkable for their mild and equable temperature.

	Aggregate Strength in Returns of 20 Years.	Total Admissions from Inflammation of the Lungs and Pleurisy in that period.	Ratio per 1000 of the Force attacked annually by these Diseases.
Gibraltar	60,269	2,543	42
Malta	40,826	1,391	34
Ionian Islands	70,293	2,272	32
Bermuda	11,721	441	37
Nova Scotia and New Brunswick	44,120	1,577	35

Thus almost exactly the same proportion of the force is admitted into hospital for these diseases in Malta as in Nova Scotia and New Brunswick, though it is impossible to conceive two climates more dissimilar so far as regards temperature and atmospheric vicissitudes.

In this Command, too, there does not appear to have been any great increase in catarrhal affections of late, as has been the case in the Mediterranean, for the average proportion of admissions during the last seven years is to within a fraction the same as in the thirteen which preceded them.

DISEASES OF THE LIVER.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Acute Inflammation of the Liver	165	3	1 in 55
Chronic " "	99	2	1 " 49½
Jaundice	120	5	1 " 24
Total	384	10	1 " 38½
Annual Ratio per 1000 of Mean Strength	9·	$\frac{1}{10}$	..

The prevalence of this class of diseases is almost the same as among the Dragoon Guards and Dragoons serving in the United Kingdom, and the mortality is only half as high. This fact tends to throw very considerable doubt on the supposed influence of spirituous liquors in inducing affections of the liver, at least in a cold climate; for owing to the low price of these in Nova Scotia and New Brunswick, there are few stations where intemperance is carried to a greater extent; yet not only do the troops suffer less from diseases of the liver than at home, but the proportion of deaths is only two-thirds as high as among persons insured in the Equitable Office, who, from their rank in life as well as the caution exercised in their selection, are by no means likely to be addicted to that vice.

DISEASES OF THE STOMACH AND BOWELS.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Abdominal Inflammation	6	2	1 in 3
Inflammation of the Stomach	68	6	1 " 11½
" " Bowels	43	10	1 " 4½
Vomiting of Blood	17	2	1 " 8½
Dysentery	244	18	1 " 13½
Indigestion	156	0	0 " 156
Colic	469	4	1 " 117
Diarrhœa	2,189	17	1 " 129
Constipation	524	1	1 " 524
Cholera	427	4	1 " 107
Cancer of the Stomach	3	3	1 " 1
Total	4,146	67	1 " 62
Annual Ratio per 1000 of Mean Strength	94·	1·5	..

The ratio of admissions from this class of diseases is identically the same as among troops in the United Kingdom, but that of the deaths is higher in the proportion of $1\frac{1}{10}$ to $\frac{1}{10}$. This difference, however, is principally attributable to the 15th Foot having brought with it from the West Indies, in 1817, several invalids labouring under chronic affections of the bowels, most of whom died within a few weeks after their arrival. On this account, about a fourth part of all the deaths should be deducted, to obtain the proportion really attributable to the climate of this Command, which would then be nearly the same as among troops and civilians in the United Kingdom.

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New Brunswick.

The rarity of these diseases presents a striking contrast to Bermuda, where nearly one-half of the troops are under treatment annually, and at least six times as many die from them as in this Command.

EPIDEMIC CHOLERA.

Admitted 210, died 59; proportion of deaths to admissions, 1 in 3 nearly.

The troops in this Command escaped this disease in 1832, when it raged with great severity in Canada, but in July 1834 it broke out among those at Halifax under the following circumstances.

On the 20th of that month a vessel from Quebec, where the cholera was then prevalent, entered the harbour of Halifax. During the voyage the crew had suffered severely from bowel complaints, and one of them was admitted into the poor-house labouring under symptoms of cholera, of which he died. About a week afterwards another fatal case occurred in a person occupying the same ward, and by the 7th August the disease began to be very general among the inmates of the establishment. The first cases were observed in the town about the 10th of August, from which period till the 24th the epidemic made rapid progress, and continued with various degrees of intensity till the end of September. The extent of its ravages cannot be accurately ascertained, but it is supposed that throughout the town and suburbs about 600 died. The number admitted into the civil hospitals was 1020, and the deaths 382. The infirm, the drunken, and the dissipated were its principal victims, though to this there were many exceptions.

Among the military, two cases of simple cholera had been noticed in the 96th Regiment, on the 24th and 31st July, but it was not till the 8th of August that the first fatal case occurred. After that period it spread throughout the garrison; the Rifle Brigade suffered most, indeed, to such extent, that 18 deaths took place between the 21st and 25th of August. The corps was, in consequence, sent to Sackville, about 8 miles from Halifax, after which only four new cases occurred. The success of this experiment led to the same measure being adopted with the 96th and 83rd Regiments, who were removed to an encampment in the vicinity of the town, with the like good effect; the disease ceased both among the civilians and military about the end of September, though a few isolated cases continued to present themselves for some weeks after.

During the whole of this period bowel complaints of various kinds were exceedingly common, even among those who escaped the graver forms of the disease. The following Table exhibits the admissions and deaths in each of the corps, from its first commencement till its termination:—

Attacked.	96th Regiment.			Rifle Brigade.			83rd Regiment.			Detachments.			Ordnance.			Patients in Civil Hospitals.	
	Spasmodic Cholera.	Other Bowel Complaints.	Died.	Spasmodic Cholera.	Other Bowel Complaints.	Died.	Spasmodic Cholera.	Other Bowel Complaints.	Died.	Spasmodic Cholera.	Other Bowel Complaints.	Died.	Spasmodic Cholera.	Other Bowel Complaints.	Died.	Admissions.	Deaths.
Aug. 8	1	1	1	..	..	..	..	..	..	5	..	1	..	1			
" 9 to 15	2	10	..	2	5	1	1	7	..	..	..	2	6	1			
" 16 " 20	7	7	..	4	8	4	1	3	..	1	..	1	3	..			
" 21 " 23	12	5	2	38	15	18	4	19	1	2	4	..	2	..			
" 24 " 27	2	2	..	11	4	2	..	15	..	2	4	..	2	7	131	21	
" 28 " 31	9	4	1	7	..	3	8	12	..	2	..	..	6	6	4	142	61
Sept. 1 " 2	7	9	2	1	..	..	2	2	..	..	1	..	5	2	2	84	37
" 4 " 6	19	16	5	..	2	..	..	5	..	..	..	..	3	7	1	121	39
" 7 " 9	19	11	5	..	..	..	2	1	..	..	..	..	2	4	2	147	45
" 10 " 14	13	13	1	2	3	..	3	13	..	..	..	..	5	..	1	208	73
" 15 " 20	..	12	..	..	1	..	..	7	..	..	..	..	3	..	104	41	
" 21 " 30	..	6	..	..	..	..	..	..	..	..	..	..	..	..	63	23	
Total .	91	96	17	65	38	28	21	84	1	7	14	1	26	40	12	1000	340

Though the circumstances under which the disease first appeared were such as to favour the idea of contagion, yet nothing occurred in the course of its progress to strengthen that supposition; and neither the medical officers, nor those in immediate attendance on the sick, suffered in a greater proportion than persons not so exposed.

Of 293 women attached to the different corps, 37 were attacked and 16 died, being almost exactly the same proportion as among the soldiers. Children were remarkably exempt, for of 560 in the garrison only 16 were attacked, and 6 died. The officers also suffered but little; out of a strength of 60 only 4 were attacked, all of whom recovered.

The following Table, compiled from the Age and Service Returns furnished annually to the War Office, shows that the mortality on this occasion fell very heavily on soldiers at an advanced period of life.

* The admissions and deaths among the civil inhabitants prior to 24th August cannot be accurately ascertained.

Age.	Strength.	Total Deaths by Epidemic Cholera.	Ratio of Deaths per 1000 at each Age by Epidemic Cholera.
Under 18 .	18
18 to 25 .	502	1	2
25 „ 33 .	829	30	36.2
33 „ 40 .	158	14	88.6
40 „ 50 .	37	4	108.
Total .	1,544	49	34.7

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Table V.
Showing the Influence of Age on the Mortality by Epidemic Cholera among Troops of the Line serving at Halifax.

This Table only includes a part of the deaths, as those which occurred among the Ordnance cannot be traced.

We find it stated, that prior to the appearance of cholera there was more easterly wind than usual, and that the progress of the disease was greater during and after a long continuance of rain than in dry weather; but the meteorological observations are not sufficiently detailed to warrant the accuracy of that assertion. The epidemic does not seem to have extended beyond the limits of Halifax, at least the troops were exempt, and we can find no record of it having prevailed in any other quarter among the civil population.

DISEASES OF THE BRAIN.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Brain Fever	20	6	1 in 3½
Headache	11	..	0 „ 11
Apoplexy	46	18	1 „ 2½
Palsy	43	7	1 „ 6½
Fatuity	21	..	0 „ 21
Madness	41	5	1 „ 8½
Brain Fever of Drunkards . .	217	18	1 „ 12
Epilepsy	109	2	1 „ 54½
Total	508	56	1 „ 9
Annual Ratio per 1000 of Mean Strength	11	1.3	..

This class of diseases appears to be twice as prevalent, and twice as great a source of mortality, as among troops in the United Kingdom, principally owing to the general prevalence of *delirium tremens*, under which nearly half the cases, and a third of the deaths, are reported.

Though the baneful consequences of intemperance on the constitution can scarcely be recognized in the other classes of diseases among the troops, yet here they become sufficiently evident in the frequent occurrence of a disease which directly results from that vice. It is much to be regretted that, notwithstanding all the regulations adopted to diminish intoxication, the cases of *delirium tremens* have of late years undergone no diminution, but seem rather on the increase.

DROPSIES.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Subcutaneous Dropsy	41	11	1 in 3¾
Water in the Chest	9	5	1 „ 1½
Abdominal Dropsy	28	7	1 „ 4
Total	78	23	1 „ 3¾
Annual Ratio per 1000 of Mean Strength	2	¼	..

These form but a very small proportion of the sickness and mortality in this Command; they are rather more frequent than among troops in the United Kingdom, but not to such an extent as to merit any particular notice. The other classes which rarely prove fatal, though frequently a source of considerable inefficiency, will be referred to when we come to investigate their prevalence in Canada, to which the diseases of these provinces will be found in many respects extremely similar.

III.
Canada.

III.—CANADA.

In this Military Command are included the provinces of Upper and Lower Canada, both of so vast an extent, and embracing such varieties of surface and climate, as to render it impossible in a Report of this nature to give more than a very brief outline of their general features and of the peculiarities of climate by which they are distinguished.

Lower Canada.

The province of Lower Canada lies between 45° and 52° North Lat. and 57½° and 80° West Long., and may be said to extend from the shores of the Atlantic to 55 miles beyond Montreal, comprising an area of nearly 250,000 square miles. Of these 3300 are covered by lakes and small rivers, and 52,000 by the extensive surface of the St. Lawrence; leaving upwards of 200,000 square miles of land territory, of which not more than a fortieth part is under cultivation, the rest being still in its primitive state, covered with forests and over-run with dense vegetation of every description.

General Description.

The whole extent of the lower province is intersected by the St. Lawrence, a river from 70 to 90 miles in width at its mouth, and with a course of about 760 miles from Lake Ontario to the sea. Both sides of this river are bounded by lofty ranges of hills, extending on the north nearly as high as Quebec, but, about 60 miles below that town, branching off on the south towards the United States. Between these ranges and the boundary line of 45°, which comprises the greater part of the available territory in this province, the surface is diversified by a few gentle undulations of hill and dale, but may generally be termed level, with the exception of two or three isolated hills of no great height. Throughout this space cultivation is principally confined to the banks of the St. Lawrence and its tributaries, or to the margin of the small lakes in its vicinity; consequently most of the towns and villages are in marshy situations, which, however, are not found to affect the health of the inhabitants in any material degree.

Climate.

The climate of the lower province is distinguished for the extreme severity of its winter, and the sudden alternations of temperature to which it is subject; so remarkable are these, that at Quebec the thermometer has on some occasions been known to fall 70° in the course of 12 hours; the cold weather sets in as early as November, and from the end of that month till May, the ground remains covered with snow to the depth of 3 or 4 feet. During this period there is generally a clear dry atmosphere, with light north-westerly winds or calm weather, and the sensation of cold is by no means so acute as might be anticipated from the low range of the thermometer; but when the wind blows from the N. E., especially with any degree of violence, the intensity of the frost becomes so excessive, that on several occasions the mercury, frozen in the thermometer, has no longer served to record the extreme reduction of the temperature. The general range, however, during winter, is from the freezing point to 30° below zero.

Seasons.

Though there is seldom a complete thaw in winter, yet occasionally, when the wind changes to the southward and eastward, the usually clear and serene sky becomes overcast, the atmosphere damp, and a considerable rise in the thermometer takes place, accompanied by thick fogs and heavy falls of snow. The seasons do not glide imperceptibly into each other as in more temperate regions; summer succeeds so rapidly to winter that the thermometer sometimes rises to 80° at mid-day before the ground is clear from its covering of snow.

Summer commences about the middle of May, and is usually ushered in by moderate rains and a rapid rise in the temperature, though the nights still continue cool; but during June, July, and part of August, the heat is great, indeed often as oppressive as in the West Indies, the thermometer frequently attaining to 95° in the shade; in these months the rain is never excessive nor of long duration; the earth, already saturated by the melting of the snow, requires no further supply of moisture to aid the rapid progress of vegetation.

Troops employed.

The troops employed in the lower province have generally consisted of the service companies of three Regiments of the Line, two companies of Artillery, and a small party of Sappers and Miners, quartered at the following stations:—

Military Stations.
Quebec.

Quebec.—This city lies nearly 400 miles up the St. Lawrence, at the extremity of a lofty promontory which rises on the one side almost perpendicularly from the river to the height of 330 feet, and on the other descends with a steep slope to the St. Charles, which there forms a junction with the St. Lawrence. The town is divided into upper and lower; in the former, at a considerable elevation, stands an excellent barrack, formerly a monastery of the Jesuits; it is a large stone building of three stories, surrounding an inner square of about 200 feet, with extensive galleries to each story, and capable of containing the service companies of two regiments. At a short distance from this barrack is a large hospital, also of three stories, with galleries along each opening into the wards and serving as places of exercise for convalescents. This building affords suitable accommodation for the sick, but the site is objectionable, owing to its rear being placed within a few feet of a rocky bank which impedes ventilation and adds materially to the heat during summer. In the town there is also a barrack and various buildings for the Artillery, but of the particulars of their construction we possess no details.

A line of irregular fortifications surrounds the crest of the heights on which the town is built, for a circuit of three miles; this is crowned by a citadel, where several casemates are occupied as barracks by the troops, though by no means well adapted for that purpose, being low, ill ventilated, and extremely damp particularly during the alternate frosts and thaws which usher in and terminate the winter; the nature of their construction, too, renders it impossible to secure a proper equality of temperature during the severity of winter. An hospital is also about to be erected in the citadel, that in the town not affording sufficient accommodation for all the garrison.

Quebec being the capital of the province, and possessing many local advantages, the ground in the vicinity is well cleared. The soil of the ridge on which it stands is light, dry, and unproductive, but north of the river St. Charles is a considerable extent of fertile and well-cultivated country. But little forest remains except to the south of the St. Lawrence, and the general aspect of the country presents nothing likely to operate unfavourably to health.

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Next in importance of the military stations is Montreal, 180 miles above Quebec, situated on an island formed by the junction of the St. Lawrence with the Ottawa. This island is about 32 miles long by 10 broad; low, flat, and subject to frequent inundations at the western extremity, but rising gradually towards the east till it forms a ridge whereon the upper part of the town is built. At a short distance to the north is a narrow valley through which a small rivulet flows into the town; it is the receptacle of much filth, and its banks are low and muddy; beyond this valley the hill of Montreal rises to the height of 600 feet. Around the town the soil is well cultivated and highly productive.

Montreal.

The barrack is situated on a rising ground on the bank of the river, and consists of two stone buildings parallel to each other, consisting of a basement and three stories. The latter only are occupied, and contain 24 rooms, estimated to accommodate 20 men each. In front of the barrack, and reaching down to the river, is an extensive enclosure for the exercise of the troops. A hired house within 40 yards of the barrack has hitherto been occupied as an hospital, it contains four small wards for patients, and one for convalescents, and there is a garden attached for their use; the lease under which it has been occupied by Government expired in 1835, and as it is much dilapidated, a new hospital is in course of erection. Opposite to the town, in the centre of the river, is the island of St. Helen's, which contains barracks for a company of Artillery, with a temporary hospital.

Though the distance between Montreal and Quebec is but 180 miles, there is a difference of nearly six weeks in the seasons; the snow commencing three weeks later, and disappearing three weeks earlier, at the former; this circumstance, though highly favourable to agriculture, appears, however, to exercise little influence on the health of the troops or inhabitants.

About 45 miles below Montreal the river Richelieu flows into the St. Lawrence from Lake Champlain, after a course of about 80 miles; and as it forms a ready communication with the territory of the United States, there are several military posts along its banks, to which detachments have been generally furnished from Montreal.

Of these the principal is Isle aux Noix, the naval arsenal of Lower Canada, situated in the centre of the river, about 12 miles from Lake Champlain. This island is about three quarters of a mile in length, quarter of a mile in breadth, and not more than 4 or 5 feet above the bed of the river; so that, in the spring and wet season, a considerable part of its surface is under water. The soil is entirely vegetable mould, and mostly under cultivation. The surrounding country, to some distance from the river, is low, swampy, and covered with hemlock, cedar, and pine. Southerly winds are more prevalent, and the winter is of shorter duration than at Montreal.

Isle aux Noix.]

The island is defended by a small fort, in which are several bomb-proof stone buildings occupied as barracks and ordnance stores. The detachment generally consists of one company with a medical officer attached, who also attends the sick at the outposts of St. John's and Chambly in the vicinity.

The first of these is a small village on the banks of the Richelieu, about 10 miles below Isle aux Noix; there is a barrack for one company, but it is seldom occupied by more than a Serjeant's party. The other, which lies a few miles below St. John's, was a post of considerable importance during the war; and still affords accommodation for a large force, but, during the period under observation, has seldom been occupied except by a few soldiers.

St. John's.

Chambly.

Nearly 60 miles lower down the Richelieu, at its junction with the St. Lawrence, is another post called Fort William Henry, where there is an old fort and barrack; the detachment does not consist of more than 12 or 15 men, of whom the sick are sent for treatment to Montreal.

Fort William Henry.

These are the stations generally occupied by our troops in the Lower Provinces.* Following up the course of the St. Lawrence to the distance of 55 miles beyond Montreal, the eastern boundary of Upper Canada is attained, of which province we shall next endeavour to give a brief description.

Upper Canada may be said to extend from the Hudson's Bay territory, in latitude 46°, on the north, to that of the United States, latitude 42° on the south; and from the river Ottawa and boundary of Lower Canada on the east, to the distant shores of the Pacific. A great portion of this extensive territory is occupied by a chain of four immense lakes communicating with each other by rivers of corresponding magnitude. Lake Ontario, from which issues the St. Lawrence, is 183 miles in length, by 42 in breadth. Lake Erie, connected with the Ontario by the river Niagara, is considerably longer, but not so broad; while Lake Huron and Lake Superior are of still greater extent. The two last it is unnecessary here to describe, as no troops are quartered in their vicinity, with the exception of a Subaltern's party at Penetanguishene on Lake Huron; we shall therefore confine ourselves to a brief notice of that part of the province bordering on Lakes Ontario and Erie, where the population is principally concentrated.

Upper Canada.

The whole of this space, from the boundary of Lower Canada to Amherstberg, a distance of nearly 600 miles in a due westerly direction, may be termed a level champaign country,

General Description .

* These descriptions only refer to such stations as were occupied by our troops prior to the late insurrection. Since that event there have been many changes in the distribution of the force, but of these no notice can here be taken as they did not occur within the twenty years under review.

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which, though slightly diversified with gentle hills and sloping valleys, is without any elevation which can be designated as mountainous. The same feature extends to the distance of 70 or 80 miles north from these lakes, beyond which a lofty ridge of rocky ground runs in a north-easterly direction, backed by others of still greater elevation, which ultimately terminate in high mountain ranges yet unexplored.

At the lower extremity of Lake Ontario, whence the St. Lawrence issues, the shores are flat and swampy, but to the westward they assume a bolder character, and round the northern side there extends, at the distance of from 10 to 24 miles, an undulating ridge of ground seldom exceeding 130 feet in height, which, after crossing the Niagara, stretches into the territory of the United States. The level nature of the surface between this ridge and the banks of the Ontario is exceedingly favourable to the formation of pools and marshes, from which numerous sluggish rivers and streamlets take their rise, intersecting the surface in every direction. These, on reaching the lake, generally terminate in creeks and inlets, whose banks are either muddy or swampy, and covered with vegetable deposit.

The country bordering on Lake Erie presents nearly the same appearance, though rather more diversified with occasional elevations. The shores being subject to the action of a heavy surf, are, in many parts, broken into steep and abrupt cliffs; and, as the water rises two or three feet when under the influence of a strong breeze, the flux and reflux keeps them constantly soft and muddy.

Along this extensive tract, of course every variety of soil is to be found; in some parts it is thin, sandy, and rocky, supporting only a stunted race of forest trees and dwarfish brushwood; in others it is either clayey or alluvial, and covered with clusters of oak, elm, maple, and all the finer species of hardwood, while not unfrequently, from the want of drainage, extensive tracts are to be met with, of which the soil is little better than an accumulation of black mud; and which, from being overgrown with a soft species of that tree, are termed cedar swamps. The hand of industry, however, is effecting rapid and important changes in the physical aspect of the country; in the vicinity of the lakes, nearly a third of the ground is cleared and partly under cultivation, but dense forests still occupy the less valuable portions of the soil, particularly where there is no water conveyance for the produce.

A province of such extent as Upper Canada necessarily presents considerable diversity of climate, the intensity of the cold and duration of the winter gradually diminishing from the lower extremity of the province along the borders of Lakes Ontario and Erie. About Amherstberg, at the head of the latter, the climate is said to be much the same as in Britain, except that the extremes of cold and heat are greater; while in proceeding northward from the shores of these lakes, even the distance of 60 or 70 miles is found to produce a marked increase, both in the severity of the winter and its duration. Compared, however, with Lower Canada, it is, in general, shorter by at least two months, while spring and autumn are lengthened in a corresponding proportion. The frost is, perhaps, for a few days as intense, but never of such duration; and thaws occur at short intervals. Snow seldom falls in any quantity till towards the end of December, and usually disappears in March; and the severity of the winter is said to have perceptibly diminished of late years, as the surface has been cleared and brought under cultivation.

The climate is generally more equable than that of the lower province; and though the thermometer ranges higher by a few degrees, the summer heat is not so oppressive, probably owing to the influence so vast a body of water is likely to exert in modifying the temperature, and to the cooling breeze which prevails along the lakes during the day. The following Table exhibits a comparative view of the meteorological phenomena of the two provinces, so far as can readily be ascertained:—

Temperature.

	UPPER CANADA.*					LOWER CANADA.*				
	Temperature.			Number of Days on which Rain or Snow fell in 5 Years.		Temperature.			Number of Days on which Rain or Snow fell in 5 Years.	
	Max.	Med.	Min.	Rain.	Snow.	Max.	Med.	Min.	Rain.	Snow.
January . . .	47°	18°	-14°	11	28	36°	10°	-15°	5	32
February . . .	48	21	-9	14	26	41	8	-23	6	32
March . . .	49	31	14	30	13	50	27	5	9	25
April . . .	66	46	25	39	3	59	41	23	27	5
May . . .	75	58	40	41	1	79	57	35	46	..
June . . .	86	70	56	31	..	86	66	47	47	..
July . . .	91	73	56	38	..	87	72	57	63	..
August . . .	90	73	56	27	..	84	67	51	58	..
September . . .	84	67	50	31	..	80	61	43	59	..
October . . .	73	52	30	45	2	67	49	31	73	1
November . . .	61	40	20	32	10	45	30	15	30	18
December . . .	52	27	2	19	30	38	14	-9	3	38

The climate of Upper Canada is more moist than that of the lower province, a necessary consequence of its proximity to the lakes; but we possess no exact measurement of the relative quantity of rain which falls in the two provinces.

* The temperature of Upper Canada has been made up on the average of the five years 1822-3-5-6-7; that of Lower Canada from 1823-7 inclusive: and the rainy days in both from 1831 to 1835 inclusive.

During most of the summer a strong breeze blows along the course of the great lakes, setting in about 10 A. M., and continuing till 4 P. M. The wind generally comes from the same quarter also during spring and autumn. In winter north-easterly winds prevail, and are described as being dry, cold, and elastic.

The troops employed in the upper province during the period under review have seldom exceeded the service companies of two Infantry Corps, and two companies of Artillery, with occasional detachments of the Staff Corps. The principal stations, commencing at the boundary line of the two provinces and proceeding along the course of the lakes, are as follows:—

Kingston.—This town is situated on Lake Ontario, about 190 miles above Montreal, near the outlet of the St. Lawrence, where a bend of the lake forms an extensive harbour; part of the town is considerably elevated, but the other part is low, and at the dock-yard opposite, the ground is described as swampy. This is the head-quarter station of the Artillery in Upper Canada, as well as of one of the Infantry corps, of which two companies are quartered in a stone barrack recently erected within a small *tête-du-pont* fortification close to the water; there is also an hospital in the town, which has been in a dilapidated state and condemned since 1824, but it is in contemplation to erect a new one better adapted for the purpose.

Two miles to the east of Kingston, overlooking the St. Lawrence, is a high rocky ridge of ground, called Point Henry, whereon a fort of the same name has been erected, with accommodation for two companies of the corps at Kingston; there is also an excellent hospital capable of containing from 30 to 40 patients. The ground around these buildings is rocky, and they are said to be much healthier than the town in their vicinity.

Opposite Fort Henry, and about a mile to the west of Kingston, is a long narrow peninsula stretching into the lake, called Point Frederick, on which stands an old wooden block-house capable of accommodating one or two companies, but from the nature of its construction, defective in ventilation during summer and excessively cold in winter. The ground in the vicinity is low and swampy and the lake shallow, stagnant, and muddy, leaving, when the waters recede, a slimy surface of considerable extent, mingled with a vast quantity of decayed vegetation which is brought down the lake by the general prevalence of south-westerly winds. Here the climate is represented as so variable that the thermometer has sometimes exhibited a difference of 40° between sunrise and sunset, and the lake is frequently frozen to the depth of several inches in the course of one night.

Kingston forms the southern terminus of the Rideau Canal, which unites Lake Ontario with the Ottawa, a river falling into the St. Lawrence at Montreal, and thereby secures a water communication between the upper and lower provinces, not liable to interruption in the event of war with the United States. At the other extremity of this canal, about 150 miles from Kingston, stands By Town, a small military post, to which a detachment of 20 or 30 men is generally furnished by that garrison; the barrack in which they are quartered stands on the brink of a precipice nearly 150 feet in height, facing the Ottawa; the soil in the vicinity is rocky or sandy, and the elevation secures to the troops the advantage of a constant breeze.

Proceeding westward from Kingston along the shores of Lake Ontario for a distance of 184 miles, the next military station of any importance is Toronto, the capital of the upper province, built on a level plain along the north bank of an extensive bay, where a narrow neck of land, or isthmus, projecting into the lake, forms a safe and capacious harbour. The site of the town was originally wet meadow land, which, towards the east, where the River Don falls into the lake, is still marshy, and supposed to exert an unfavourable influence on the health of persons in its vicinity, but there seems no other part which at present deserves that character. The soil in the low grounds is a rich black mould, in the higher grounds it is sandy and loamy, and where not under cultivation is principally covered with pine and hemlock.

The garrison generally consists of four companies, with the head-quarters of a corps; their barracks are at the mouth of the harbour, about a mile to the west of the town, elevated 24 feet above the level of the lake, and composed of several ranges of brick buildings with two old block-houses, but so much out of repair that it is in contemplation to erect others half a mile further west; the hospital, which is a wooden building in a sheltered situation near the bottom of a ravine at the extremity of the barracks, contains three wards with suitable offices.

At the distance of about 40 miles across the head of the lake is the next station, Fort George, situated at the confluence of the River Niagara with the Ontario. In this vicinity there is a considerable extent of swampy ground, particularly at Four-mile Creek, and the soil being of a clayey nature, has a tendency to retain moisture during the wet season, though much has been done of late to improve it by draining. The force seldom exceeds one company, which is quartered in barracks erected on a considerable extent of table-land slightly elevated above the lake, and well exposed to the breeze which generally prevails there; but of the nature of their construction, or the extent of accommodation they afford, we are unable to furnish any details.

Proceeding westward from Fort George, along the course of the Niagara, and northern shores of Lake Erie, for a distance of about 300 miles, the next military station is Amherstberg, situated at the head of the lake where it receives the waters of the Detroit, a river communicating with Lake St. Clair and Lake Huron. There are several extensive marshes in the vicinity, and the fort is surrounded by a wet ditch, the water of which being generally stagnant is supposed to aid the production of the febrile diseases prevalent there; the soil is

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Winds.

Troops employed.

Military Stations.

Kingston.

Fort Henry.

Point Frederick.

By Town.

Toronto.

Fort George.

Amherstberg.

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principally a rich black mould on a stratum of clay, exceedingly fertile, but in many parts still uncultivated. The garrison generally consists of from 30 to 40 men, who are quartered within the fort in a brick building of three apartments capable of accommodating one company; there is also a small hospital, said to be sufficiently commodious for the sick, though in frequent need of repair.

Penetanguishene:

This is the most southerly of our stations in Upper Canada; beyond it, to the north, on Georgian Bay, a branch of Lake Huron, is another small post called Penetanguishene, distant about 80 miles north-west from Toronto, where a subaltern, with 30 or 40 men, is generally quartered. The barrack, a substantial stone building affording excellent accommodation, stands at the base of a long sandy ridge of ground from 200 to 300 feet in height, forming, by its projection into the bay, one extremity of an extensive harbour. There is also a small wooden hospital on the rising ground about 400 yards in rear of the barrack. At the head of this bay, as well as for several miles to the south-east, the ground is low and swampy, but as the post is well sheltered in that direction by the rise of the hill on which it is built and the wind generally blows down the lake, the exhalations are likely to be carried beyond the garrison.

The general character of the country in this district is undulating and hilly, but there are no mountains of any magnitude in the vicinity, though several are to be seen in the distance; the soil is still covered with primeval forests, except for a short distance around the post.

Though this station is little more than one degree north of Toronto, there is a vast difference in the climate; the winters are as severe and as long as those in Lower Canada; snow falls about the middle of November and continues till the beginning of May, and in some instances the whole lake is frozen till the end of that month. The summers are however much cooler, and more agreeable than in either of the provinces. Notwithstanding the severity of this climate, the troops have been healthy to an unprecedented degree; no death has taken place, except from accidents, since 1828, when the station was first occupied. Fevers are almost entirely unknown; and in 1836, out of an average force of 42 men, only four cases of disease occurred which could fairly be attributed to climate; yet so sudden are the changes of temperature, that the thermometer has been known to fall from 40° above to 15° below zero, between midnight and sunrise.

Drummond's Island.

Previous to 1828 there was another station at the head of Lake Huron, on Drummond's Island, commanding the principal entrance to Lake Superior; but on the establishment of Penetanguishene the troops were withdrawn, and the island given up to the American government. It is described as being a mass of rocks elevated 200 or 300 feet above the lake, and covered with forest trees and brushwood on every spot where there was soil for their support; many parts towards the margin of the lake were swampy, but the station, while occupied by our troops, always bore a healthy character.

Barrack and Hospital Accommodation.

This must suffice for a brief sketch of the principal localities occupied by the troops in this Command: it may only be necessary to add, that, during the period under review, the condition of the barracks and hospitals has been a frequent subject of complaint by the medical officers, particularly as regards the state of repair, and the perishable nature of the materials of which these buildings have been constructed. We have adverted to this circumstance, because in such a climate it is obvious that the most complete accommodation is absolutely requisite to protect the soldier against the inclemency of the weather. The space allotted to him in barracks, too, is described as being in many instances inadequate for healthy respiration. By some recent measurements, supplied by the officers of the medical department, the maximum allotted to each soldier is calculated at 300 cubic feet, while the minimum does not exceed 216 cubic feet, being little more than half what is deemed essential to health in the prisons of this country.

Duty and Employment.

The duty and employment of the troops has, prior to the late insurrection in these Colonies, differed but little from the ordinary routine in other garrisons, except that working parties have occasionally been employed during summer on the Rideau Canal, and during winter, in clearing away the snow from the barrack yards to facilitate the progress of drill, and also in the conveyance, piling, and sawing of wood for fuel, which is carried on in the open air, during the utmost inclemency of the season.

The other military duties have not, in general, been severe. The soldier is seldom on guard oftener than one night in four, and in performing the duty of sentinel during winter he is never exposed longer than an hour at a time, and if the cold is extremely intense, he is relieved every half-hour; he is also provided with an allowance of fuel sufficiently ample to secure a moderate temperature in his barrack and guard-room during the inclemency of the season.

Clothing.

In so severe a climate an extra supply of clothing is obviously essential to the preservation of health; care is accordingly taken that, in addition to his usual necessaries, each soldier on the approach of winter is provided with two thick flannel shirts or waistcoats, two pair of flannel drawers, a pair of cloth overalls, fur cap, woollen mits, galoshes or mocassins, and, in the lower provinces, a thick cloak to be worn over his great coat when on duty. These the soldier has hitherto been obliged to provide and keep up at his own expense; but it is understood that they are in future to be supplied at the cost of the public.

Rations and Diet.

In regard to rations and diet, few Colonies offer greater advantages to the soldier; there are issued to him daily, one pound of fresh meat and a pound of bread, both, in general, of excellent quality, for these he is subject to the usual stoppage of 5*d.* per day; salt pork is occasionally issued at some of the stations, but rarely in any greater proportion than once a week; his meals are regulated as in Nova Scotia, and provisions being generally cheap and plentiful, his pay is sufficient to supply him with any additional food he may require.

In tracing the extent of sickness and mortality among the troops in this Command, the same difficulty has been experienced as in Nova Scotia and New Brunswick, owing to several detachments being under the charge of private medical practitioners. This we have endeavoured to obviate on the same principle as was adopted in that Report, by deducting the usual proportion of the force under the care of these practitioners, before calculating the ratio of sickness and mortality, as in the following Table:—

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Years.	Strength, per War Office Returns.	Deduct Proportion generally attended by Private Practitioners.	Strength referred to in Medical Returns.	Admitted into Hospital of that Strength.	Died of that Strength.	Ratio per 1000 of that Strength.	
						Admitted.	Died.
1817	4,638	232	4,406	4,147	83	941	19
1818	4,025	201	3,824	3,493	59	913	15
1819	3,806	190	3,616	3,063	33	847	9
1820	3,372	169	3,203	3,280	29	1,024	9
1821	3,335	167	3,168	3,502	36	1,105	11
1822	3,305	165	3,140	3,153	27	1,004	9
1823	3,111	156	2,955	2,986	40	1,010	14
1824	3,150	157	2,993	2,996	40	1,001	13
1825	2,917	146	2,771	2,579	52	931	19
1826	2,930	147	2,783	2,652	50	953	18
1827	3,215	161	3,054	3,734	57	1,223	19
1828	3,258	163	3,095	4,360	31	1,409	10
1829	3,229	161	3,068	3,973	36	1,295	12
1830	3,354	168	3,186	3,491	49	1,096	15
1831	3,294	165	3,129	3,691	55	1,180	18
1832	2,909	145	2,764	3,696	132	1,337	48
1833	2,663	133	2,530	2,833	30	1,120	12
1834	2,588	129	2,459	3,302	65	1,343	26
1835	2,599	130	2,469	2,947	37	1,194	15
1836	2,582	129	2,453	3,079	41	1,255	17
Total .	64,280	3,214	61,066	66,957	982	..	..
Average	3,214	161	3,053	3,348	49	1,097	16.1

Table VI.
Showing the Admissions into Hospital and Deaths among the Troops in Canada.

With this correction, it appears that among every thousand soldiers serving in Canada 1097 cases of sickness have occurred in the course of the year, being 168 per thousand more than among the Dragoon Guards and Dragoons serving at home. The deaths, as stated in the Medical Returns, have averaged 16 ¹/₁₀ per thousand of the force annually, which is a medium between the ratio in Infantry Depôts and Cavalry Corps serving in the United Kingdom.

This calculation, however, applies only to the mortality caused by disease, as reported by the medical officers. The deaths stated in the War Office Returns, which include those from all causes, furnish very different results.

	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	TOTAL
Deaths, per War-Office Returns	108	68	52	45	67	41	55	61	68	63	78	46	47	72	67	140	43	69	49	47	1286
Deaths, per Medical Returns	83	59	33	29	36	27	49	40	52	50	57	31	36	49	55	132	30	65	37	41	982
Omitted in the Medical Returns	25	9	19	16	31	14	15	21	16	13	21	15	11	23	12	8	13	4	12	6	304

The deaths in the War Office Returns, compared with the strength as reported in these Returns, make the average ratio of mortality about 20 per thousand annually, which would lead to the conclusion, that the climate of Canada operated much more prejudicially to the health of the troops than that of their native country; but on investigating the causes of this mortality, the greater number of the deaths omitted in the Medical Returns are found to have arisen from the vices and acts of the unfortunate victims themselves, or from circumstances in no way connected with climate. For instance, there were—

Drowned	122	By Excessive drinking	10
Committed Suicide	13	Apoplexy	10
Shot dead	2	Steam Explosion	2
Died suddenly	4	Suffocated by charcoal	1
Murdered	1	Accidents (not specified)	5
Executed	3	Cause unknown	2
Found dead	3		
Killed by Lightning	2	Total	180

The 124 still unaccounted for consist either of fatal cases among the detachments under charge of private medical practitioners, or of deaths from accidental causes among the Artillery, which, for want of the Casualty Returns of that corps, we have been unable to trace. The proportion in either case is, however, too small to influence the results in any material degree.

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Of the above it is remarkable that no less than 122 deaths are ascertained to have taken place by drowning, exclusive of those in the Artillery, which would probably swell the number to 150, or about an eighth of the total mortality. Most of these men lost their lives in attempts to cross rivers or creeks for the purpose of deserting, a crime of very frequent occurrence throughout this Command, particularly at stations in the vicinity of the United States.

As the Medical Returns have been blended together since 1828, we possess no means of showing the relative proportions of sickness and mortality among the troops in Upper and Lower Canada, except for the years prior to that period, when they were as follows:—

	Aggregate Strength in Returns of 10 years.	Total Admissions in Returns of 10 years.	Total Deaths in Returns of 10 years.	Ratio per 1000 of Mean Strength.	
				Admitted.	Died.
In Upper Canada . . .	12,825	11,350	135	885	10·5
„ Lower Canada . . .	20,341	20,088	288	988	14·2

This would decidedly establish Upper Canada to be the healthiest; but as most of the out-stations, where the troops have been attended by private practitioners, are in that province, it is necessary, before drawing the comparison, to add about one-tenth for the admissions and deaths likely to have been thus omitted. Even with this correction, however, there is sufficient proof that the upper province is the healthiest, though peculiarly subject, as we shall hereafter show, to some diseases from which the lower province is comparatively exempt.

The diseases by which the admissions and deaths throughout the whole Command have been occasioned in each of the 20 years included in this Report, will be found in Abstract No. III. of Appendix, whereof the principal results are comprised in the following Table:—

Table VII.
Showing the principal Diseases among the Troops in Canada.

	ADMISSIONS.		DEATHS.	
	Total among whole Force in 20 years.	Annual Ratio per 1000 of Mean Strength.	Total among whole force in 20 years.	Annual Ratio per 1000 of Mean Strength.
By Fevers	13,044	214	147	2·4
Eruptive Fevers	102	2	10	·2
Diseases of Lungs	9,061	148	411	6·7
„ Liver	488	8	12	·2
„ Stomach and Bowels	9,480	155	84	1·3
Epidemic Cholera	356	6	127	*2·1
Diseases of the Brain	822	14	72	1·2
Dropsies	128	2	23	·4
Rheumatic Affections	2,427	40	3	
Venereal	6,063	99	1	
Abscesses and Ulcers	6,624	109	10	
Wounds and Injuries	9,904	162	42	
Punished	1,981	32	..	1·6
Diseases of the Eyes	2,771	45	..	
„ Skin	1,332	22	..	
All other Diseases	2,374	39	40	
Total	66,957	1,097	982	16·1

Without much additional trouble, and the risk of considerable error, it would not have been practicable to show the influence of each of these diseases for the same series of years among the troops in Upper and Lower Canada separately; but we shall endeavour to illustrate this branch of the subject, so far as our information will admit, in the following review of the different classes of diseases:—

FEVERS.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Quotidian Intermittent . . .	1,858	3	1 in 619
Tertian „	3,212	1	1 „ 3,212
Quartan „	16	..	0 „ 16
Remittent	294	18	1 „ 16
Common Continued	7,289	95	1 „ 77
Synochus	339	17	1 „ 20
Typhus	36	13	1 „ 3
Total	13,044	147	1 in 89
Annual Ratio per 1000 of Mean Strength	214	2·4	..

* See remark at page 15 b in regard to annual ratio of sickness and mortality by cholera.

These results exhibit a remarkable prevalence of fevers in Canada compared with what has been observed in Nova Scotia or New Brunswick, the proportion of admissions being at least thrice as high; this feature may be said to extend over every form of the disease, but particularly the intermittent, of which we find several thousand admissions recorded in the former, while scarcely one indigenous case has ever been known in the latter Command, though the general features and climate are in many respects so similar.

When we come to investigate the localities most subject to this disease in Canada, we find it principally confined to the upper province, as will be seen by the following summary of the cases from 1818 to 1827:—

	UPPER CANADA.			LOWER CANADA.		
	Aggregate Strength of 10 years	} 12,825		Aggregate Strength of 10 years	} 20,341	
	Admissions.	Deaths.	Ratio of Admissions per 1000 of Strength.	Admissions.	Deaths.	Ratio of Admissions per 1000 of Strength.
Quotidian Intermittent	1,289	2	178	262	1	26
Tertian "	988	..				
Quartan "	9	..				
Remittent	149	7	12	19	4	1
Common Continued	1,150	17	90	2,670	38	131
Synochus	62	4	5	140	5	7
Typhus	3	1	..	1	1	..
Total	3,650	31	285	3,365	49	165

Table VIII.
Showing the relative prevalence of Fever among the Troops in Upper and Lower Canada.

Taking the results of these ten years as the basis of our deductions, then, the prevalence of intermittent fevers in Upper compared with Lower Canada, is as 178 to 26. It is necessary, however, to keep in view that all the admissions from intermittent fever in Lower Canada did not originate there, by far the greater proportion of them having occurred among soldiers who came from the upper provinces while labouring under that disease, or who had acquired a predisposition to it during a previous residence there. Indeed, except at Isle aux Noix and the other small stations along the banks of the Richelieu, fevers of the intermittent type are rarely indigenous in Lower Canada; at Quebec they are said to be unknown, and at Montreal nearly so.

In Upper Canada these diseases prevail most among the troops stationed along the course of the great lakes from Kingston to Amherstberg; they are almost unknown at Penetanguishene and By Town. The settlers who reside even at the distance of a few miles inland rarely suffer from them; yet the districts enjoying this exemption are in many parts covered with lakes, intersected by streams, and abound in marshy ground, decayed vegetation, and all the other agencies to which the origin of this type of fever is generally attributed. A reference to the Report on Nova Scotia and New Brunswick will also show that though the same agencies exist to a similar extent at some of the stations in that Command, intermittent fevers are almost unknown.

These diseases, too, are said to be comparatively rare wherever the surface is covered with dense forests, even though the ground is wet and marshy. The vicinity of lands recently cleared are most subject to them, particularly meadows or open patches of the forest, which, though denuded of trees, have not been brought under cultivation; it would appear, too, that their prevalence is diminishing with the progress of agricultural improvement; for it will be observed on reference to the Abstract of Diseases, No. III. of Appendix, that since 1831, a period during which this province has been rapidly advancing in wealth and population, and many important changes have taken place in the vicinity of the stations occupied by the troops, intermittents have become comparatively rare, the proportion attacked having been scarcely one tenth part so high as the average previous to that period.

Intermittents most frequently occur from July to September when a high temperature prevails; but they are also to be met with, though more rarely, in spring, when that agency could only operate in a trifling degree to induce them. Though a source of considerable inefficiency among the troops, they add but little to the mortality, as not one case in a thousand proves fatal. A person who has been once attacked is exceedingly apt to suffer from them again; but this susceptibility is easily removed by change of residence to the northern parts of the province, or to Lower Canada.

In some years fever also manifests itself along the borders of the lakes in the remittent form, but not of so fatal a character as in the West Indies or the Mediterranean, for only one case in 16 is found to have proved fatal among the troops.

The febrile diseases of Upper Canada are by no means uniform in their prevalence; even in years when the degree of temperature, fall of rain, or extent of vegetation, have been much the same, the proportion of cases, particularly of intermittents, is very different. A general impression exists that their prevalence is in some measure dependent on the height of the waters in Lake Ontario, which attain their maximum in June or July. If, from the quantity of snow or moisture in the course of the year, this is found to be greater

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than usual, febrile diseases are expected to abound, and the reverse if the maximum has been under the average. As Lake Ontario is the reservoir into which all the waters of Upper Canada are drained off before finding their way to the ocean, this theory, if accurately substantiated, would tend to show how far the origin of these diseases depended on moisture, and we have therefore instituted the following comparison between the height of the waters in the lake, as measured at Kingston for a series of years, and the prevalence of fever in Upper Canada during the same period.

	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828
Average Height of Lake at Kingston Harbour in each year	14ft. 9in.	13ft. 3in.	12ft. 3in.	11ft. 11in.	12ft. 1in.	13ft. 5in.	13ft. 11in.	12ft. 5in.	12ft. 10in.	14ft. 3in.	15ft. 7in.
Cases of Intermittent Fever in Upper Canada	110	319	509	348	222	143	171	135	111	220	489
Cases of other Fevers	109	54	150	152	132	69	168	190	155	185	360

Here we find that though in the last of these years the maximum height of water in the lake happened to correspond with the greatest prevalence of fever, the latter can by no means be looked upon as a consequence of, or in any way connected with the former; since in 1818, when the water rose to within a few inches of the same level, there was less fever than in any of the years under observation, whereas in 1820 and 1821, when the waters of the lake appear to have been at their minimum, there was more than in any of the years prior to 1828.

This supposition seems to have originated in the circumstance of fevers being generally most prevalent from June to October, which happens to correspond with the period when the waters of the lake are at their greatest height, but the wide sphere over which these statistical investigations now extend, has enabled us to show that febrile diseases always prevail most at that season of the year, even in countries where no such cause is in operation to produce them; consequently, the rise of the waters in the lakes can no more be regarded as the cause of fever in America, than the cessation of the trade winds about the same period can be deemed a satisfactory reason for the appearance of that disease in the West Indies. Both are merely coincidences, which by those who have not a sufficiently extensive field of observation, are apt to be mistaken for causes.

Though there exists but little intermittent fever in the lower provinces, the common continued form is very prevalent, about 131 per thousand of the force being attacked by it annually; this is one-half more than the proportion in Upper Canada, and nearly twice as much as in the United Kingdom or the maritime provinces of Nova Scotia and New Brunswick. Owing to this circumstance, though fevers are on the whole more prevalent in the upper province, they cause exactly the same degree of mortality as in the lower, the greater number of cases in the former being counterbalanced by the more fatal character of those which appear in the latter.

Eruptive fevers exhibit nearly the same degree of prevalence as among troops in the United Kingdom; most of the deaths have been from small pox, of which seven cases occurred in 1823 and 1824, of so virulent a nature that, with one exception, they all proved fatal.

DISEASES OF THE LUNGS.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions
Inflammation of the Lungs	2,774	99	1 in 28
Spitting of Blood	129	6	1 „ 21
Consumption	402	259	1 „ 1 $\frac{3}{5}$
Acute, Catarrh.	5,135	15	1 „ 342
Chronic „	569	25	1 „ 23
Asthma	39	4	1 „ 10
Difficulty of Breathing	11	2	1 „ 5 $\frac{1}{2}$
Pain in the Chest	1	1	1 „ 1
Hooping Cough	1	..	0 „ 1
Total	9,061	411	1 in 22
Annual Ratio per 1000 of Mean Strength	148	6.7	..

Though the degree of mortality is much the same, the proportion of admissions from this class of diseases is greater than in Nova Scotia and New Brunswick, principally owing to the more general prevalence of inflammation of the lungs and catarrhal affections. This peculiarity does not extend, however, over the whole of Canada, but is principally confined to the lower province, in which, during the 10 years the Returns were kept separate, the proportion under treatment for these diseases was nearly twice as high as in Upper Canada, as is shown by the following Table:—

	UPPER CANADA.			LOWER CANADA.		
	Aggregate Strength of } 12,825			Aggregate Strength of } 29,341		
	Admissions.	Deaths.	Ratio of Admissions per 1000 of Mean Strength.	Admissions.	Deaths.	Ratio of Admissions per 1000 of Mean Strength.
Inflammation of the Lungs	383	13	30	1,226	36	60
Consumption	61	33	5	145	89	7
Catarrh	571	7	45	1,471	10	72

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Table IX. Showing the relative prevalence of Diseases of the Lungs among the Troops in Upper and Lower Canada.

It would appear from these results, that phthisis is also in some degree less prevalent and less fatal in Upper Canada; but as soldiers about to be invalided for that disease are generally transferred for a short period to the hospitals of the lower province, previous to embarkation for England, several of the cases are likely to have been inserted in the returns there, though the disease originated in Upper Canada; could the necessary correction have been made for this error, it is probable the influence of consumption would be found equally manifested in both.

The following results afford another interesting proof how little the tendency to consumption is increased, either by intensity of cold, or sudden atmospherical vicissitudes:—

	Aggregate Strength at each Station.	Total Attacked by Consumption.	Ratio per 1000 Attacked Annually by Consumption.
Bermuda for 20 years	11,721	103	8.8
Gibraltar for 19 years	60,269	394	6.5
Canada for 20 years	61,066	402	6.5

In the two former climates, the thermometer rarely falls to the freezing point, and its fluctuations are comparatively trifling; in the latter, the cold is often so intense as to freeze mercury, the variations sometimes exceed 50° in the course of a few hours, and the soldier in passing from his heated guard-room to his night duties in the open air is not unfrequently exposed to an immediate change of temperature exceeding 100°.

DISEASES OF THE LIVER.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Acute Inflammation of the Liver	186	5	1 in 37
Chronic " " " "	94	5	1 " 19
Jaundice	208	2	1 " 104
Total	488	12	1 in 40 $\frac{2}{3}$
Annual Ratio per 1000 of Mean } Strength	8	$\frac{1}{8}$	..

These results, both as regards the proportion of admissions and deaths, are almost the same as in Nova Scotia and New Brunswick, and consequently render any remark in regard to them superfluous.

DISEASES OF THE STOMACH AND BOWELS.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Abdominal Inflammation	22	7	1 in 3
Inflammation of the Stomach	23	5	1 " 4 $\frac{2}{3}$
" " Bowels	110	16	1 " 7
Vomiting of Blood	13	1	1 " 13
Acute and Chronic Dysentery	735	36	1 " 20 $\frac{1}{2}$
Indigestion	240	1	1 " 240
Colic	911	3	1 " 304
Diarrhoea	6,434	8	1 " 804
Constipation	545	1	1 " 545
Cholera	447	6	1 " 74
Total	9,480	84	1 in 113
Annual Ratio per 1000 of Mean } Strength	155	1.3	..

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It is necessary to observe, that a considerable proportion of these deaths took place in the 2nd battalion of the 60th, which arrived from the West Indies in August 1817, bringing with it a number of invalids worn out by dysentery, most of whom died in that or the subsequent year. As their deaths can in no respect be attributed to the climate of Canada, at least 20 of the fatal cases of dysentery should be deducted, which correction would reduce the mortality by this class of diseases to somewhat less than 1 per thousand annually, being nearly the same ratio as in Nova Scotia and New Brunswick. Prior to 1832, the proportion of admissions was also much the same as in that Command; but so great an increase has since taken place, particularly in Upper Canada, that on the average of the last five years, at least a third part of the troops has been attacked annually. It will be observed, that during the same five years, the intermittent fevers, formerly so common in the upper province, have almost entirely disappeared. The occasional alternations of these two diseases has also been observed in other colonies, and would appear to indicate some intimate connexion between the causes in which they originate. The disease which constitutes by far the greatest majority of these affections of the bowels in Canada, is merely a slight diarrhoea, which readily yields to the influence of medicine, and seldom or never proves fatal to adults, unless complicated with some other visceral complaint of a more serious nature.

EPIDEMIC CHOLERA.

Admitted . . 356 Died . . 127 Proportion of Deaths to Admissions . . 1 in 3

This disease prevailed in Canada in 1832 and 1834; in the former of these years cases of it were first noticed at Quebec, on the 8th of June, among a party of emigrants who landed there on their way to Montreal, in consequence of the steam-boat in which they had embarked being overcrowded. On the following day a person belonging to the same party, but who had proceeded by the vessel to Montreal, was attacked shortly after his arrival there, and within a few days the disease became general in both towns, breaking out almost simultaneously at different and opposite parts with extreme virulence, even when no communication with strangers or emigrants could be traced; it chiefly affected residents in crowded or ill-ventilated buildings, or low and marshy situations, where whole families were in several instances cut off by it.

By the 17th or 18th of June, the disease had attained its greatest prevalence and severity, and continued with little abatement during the rest of that month; but towards the beginning of July the cases became of a milder nature; it afterwards raged, however, at intervals with increased virulence for a few days, and isolated cases continued to make their appearance till the month of October. The disease then ceased, after having destroyed in Quebec upwards of 2200 out of a population of 30,000, including passing emigrants, and 3000 in Montreal out of a population of nearly the same extent; as the greater proportion of these perished within a fortnight after the disease appeared, the mortality during that period must have been most appalling. In Quebec, it broke out among the troops a few days later than among the inhabitants, but did not affect them to quite so great an extent; out of about 1100 quartered at Quebec 25 died, besides two or three at some of the small outposts. The 32nd Foot, which was cut off from communication with the inhabitants by being quartered in the citadel, escaped for 66 days, but then suffered as much as the rest of the troops; for of 17 attacked 11 died, and the disease was so rapid in its progress, that the average duration of the fatal cases did not exceed 16½ hours.

In Montreal, cholera appeared among the troops two days after it broke out in the town, and raged with still greater severity than at Quebec, for out of a force which did not exceed 550 men 39 were cut off in a few days.

With the view of arresting the alarming progress of this pestilence, the military at Montreal were, about the 20th of June, removed to an encampment on the island of St. Helens', and all communication with the town cut off; they remained there till the end of October, during which period only one case occurred among them. A detachment of 70 men, however, who had been removed to the barrack of La Prairie, on the opposite side of the river, suffered extremely; for, of 10 soldiers attacked, 8 died; the remainder were then transferred to St. Helens', after which no fatal case, and only two or three slight attacks, occurred among them.

On this occasion the troops at Isle aux Noix, Sorel, and the other stations in Lower Canada, escaped the disease, but within eight days after its appearance at Montreal it broke out at Kingston in the upper province, and gradually extended to Toronto and Fort George, where it proved fatal in nearly the same proportions as in the lower province, particularly at Toronto. Though the inhabitants at By Town suffered very much, the cases among the military were comparatively few and slight, and at Amherstberg and Penetanguishene they entirely escaped. The loss of the troops at those stations in the upper province where it prevailed was,—

	Strength.	Died.
At Kingston and Fort Henry	577	8
Toronto	317	10
Fort George	59	2

As it was later in its appearance, so it was, in a corresponding degree, of longer continuance in the upper province, where cases occurred till the commencement of winter. Owing to the scattered state of the population, the precise extent of the mortality cannot be exactly ascertained; but at Toronto, about an eighth part was attacked, and of these, one-half died.

At By Town, 49 deaths took place out of a population of 1000, and in some of the smaller villages the mortality was even greater.

During 1833 no cases of cholera were observed; in May, 1834, a few were said to have occurred at Quebec immediately after the opening of the ports, but it was not till the 7th of July that the presence of the disease in that town was so far ascertained as to be made the subject of official announcement. On the 11th it was reported also at Montreal, but in both of these towns, and indeed generally throughout the province, its progress was by no means so rapid or so alarming as on the previous occasion. By the middle of August it was on the decline throughout Lower Canada, but did not entirely disappear till November. The mortality was not so great as in 1832, for only 930 deaths are recorded to have taken place from it in Quebec, and 882 in Montreal.

Though one case is said to have occurred in the end of June, it was not till the 14th of July that the epidemic began to prevail among the military in Quebec. Between that date and the 4th of August, several were attacked in the town barrack; but, as on the former occasion, those in the citadel escaped till the disease was on the decline among the inhabitants; the first case among them occurred on the 18th of August, and for a week thereafter they suffered very much, though not to such an extent as the others. In all, 16 deaths took place among the troops in the town and citadel of Quebec, besides 3 at the quarantine station of Gros Isle, where there was a small detachment.

At Montreal the disease appeared among the military the day after it was observed among the inhabitants, and by the 22nd of July several cases and four deaths had taken place; the troops were then removed to the Island of St. Helens' as on the former occasion, and with like good effect, for only two cases occurred afterwards, neither of which proved fatal, though of nine cases left sick in the hospital at Montreal three died. Of the troops at Isle aux Noix, and the other small military posts in the Lower Province, none were attacked, but in some of the adjacent villages it proved very fatal; at Three Rivers, for instance, 63 deaths took place out of a population of 300.

Following up the course of the St. Lawrence the cholera reached Kingston on the 26th July, and prevailed among the inhabitants quite as much as in 1832. The artillery, though in an elevated and what was supposed a healthy quarter, lost five men in the course of a few days. The troops of the line, who, being in a low swampy situation, were more likely to suffer, lost only one man, but their barracks admitted of a more complete separation from the inhabitants, to which this exemption was attributed, and on the Artillery being removed to an encampment at Fort Henry the disease disappeared. From Kingston it extended to Toronto on the 30th of June, and committed great havoc among the inhabitants, particularly the lower orders, but the troops escaped with three cases only of simple cholera, none of which proved fatal.

The disease prevailed to a considerable extent both at Fort George and Amherstberg among the inhabitants, but did not extend to the troops, who only suffered from a general tendency to bowel complaints during the time it prevailed in the vicinity. At the remote station of Penetanguishene no cases occurred.

The proportion of deaths to the number attacked was very nearly the same in both years. In all situations and under all modes of treatment, about one in two died of the cases in the civil, and one in three of those in the military hospitals; but from the strict surveillance exercised over the troops nearly half of the cases among them were noticed in the premonitory stage, and consequently could be treated with a greater prospect of success than those in the civil hospitals, where the great majority of patients were far advanced in the disease before they applied for medical aid.

One of the most extraordinary features of this epidemic is, that the proportion of deaths to recoveries has been very nearly alike, in all the military Commands of which the medical records have been investigated, for instance:—

	Attacks.	Deaths.	Proportion of Deaths to Attacks.
Among Cavalry in the United Kingdom, } 1832, 1833, and 1834	171	54	10 in 32
,, Troops in Gibraltar, 1834	459	131	10 ,, 35
,, ,, Nova Scotia, &c. 1834	210	59	10 ,, 35
,, ,, Canada, 1832.	259	94	10 ,, 28
,, ,, Canada, 1834.	97	33	10 ,, 29
,, Black Troops at Honduras, 1836	62	20	10 ,, 31

Thus, under all the modes of treatment which may have been adopted on these different occasions, the proportion of deaths to recoveries has not varied above one-fourth, showing that the remedial measures hitherto employed can have had little if any effect in counteracting the fatal character of the disease.

In both these years, when this epidemic prevailed, the native Indians suffered from it to the same extent as the white population. At three settlements from which Returns were received, about a twelfth part of the population died in 1832, and about half that proportion when it again prevailed in 1834. Although their principal remedy consisted in swallowing large quantities of charcoal mixed with lard, almost exactly the same proportion recovered as among the white inhabitants of the towns, who possessed every advantage which the aid of medical science could suggest.

In tracing the course of various epidemics of yellow fever among our troops in other

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colonies, we have frequently noticed that all ranks were affected in nearly an equal degree; the reverse was the case, however, with cholera, particularly in Canada, for not a single officer died, and only four were attacked during the first, and three during the second epidemic. The same peculiarity was observed during the prevalence of this disease in Nova Scotia, in 1834; and in Gibraltar there were but two admissions and one death among the officers, though there were 459 admissions and 131 deaths among the troops. This leads to the inference that though little can be done to ameliorate the character of the disease when allowed to arrive at an advanced stage, yet that a generous diet, regular habits, and the degree of attention which persons in the higher ranks of life are likely to pay to its premonitory stages, have a powerful effect in diminishing their liability to its influence.

The soldiers' wives suffered to almost precisely the same extent as the troops, but there was a marked exemption of their children from the severer forms of the disease, only seven cases and four deaths having occurred among them on each occasion, though their numbers were between 700 and 800, a very large proportion, however, suffered from diarrhoea during the prevalence of the epidemic, and many were cut off by it.

The following Table, compiled from the Age and Service Returns, furnished annually to the War Office, shows the influence of age on mortality by this disease among the troops:—

Table X.
Showing the Influence of Age on the Mortality by Epidemic Cholera among Troops serving in Canada.

AGE.	Strength.		Deaths by Epidemic Cholera.		Total Strength for both years.	Total Deaths by Epidemic Cholera, in both years.	Ratio of Deaths at each age, by Epidemic Cholera.
	1832.	1834.	1832.	1834.			
Under 18	18	12	..	..	30	..	..
18 to 25	1,172	695	23	6	1,867	29	15.5
25 to 33	1,070	1,145	39	12	2,215	51	23.
33 to 40	282	297	17	4	579	21	36.3
40 to 50	38	47	3	3	85	6	70.6
Total	2,580	2,196	82	25	4,776	107	22.4

As the requisite Returns are not furnished by the Artillery, this Table refers to the deaths which took place among the troops of the line only; but combined with similar results obtained in regard to those in Nova Scotia, it is sufficient to establish that the fatal tendency of cholera increased rapidly with the advance of age.

In tracing the rise and progress of this disease, nothing is more remarkable than the regularity with which, on both occasions, it advanced along the principal channels by which the tide of emigration and of commerce flowed through the country; take, for instance, its progress along the line of the St. Lawrence and the lakes.

	Date of Appearance of the Disease.	
	1832.	1834.
Quebec	8th June	7th July.
3 Rivers, between Montreal and Quebec	Escaped	9th "
Montreal, 180 miles above Quebec	10th June	11th "
Kingston, 190 miles beyond Montreal	16th "	26th "
Toronto, 184 miles beyond Kingston	28th "	30th "
Fort George, 40 miles from Toronto	14th July	13th Aug.
Detroit and Amherstberg, at the extremity of } Lake Erie }	6th "	{End of } {August.

Here, with the single exception of Fort George, at which it appeared a few days later in 1832 than might have been expected from its geographical position, this singular disease may be said to have travelled with post-like regularity.

Along the banks of the Ottawa, another of the principal channels of emigration into Canada, it pursued the same steady course, as well as up the Richelieu, and along Lake Champlain through the United States to New York, a route which is also frequently taken by emigrants on their arrival in Quebec. These circumstances, combined with the fact of several persons having died from the disease on their passage from Ireland, in each of the years when it appeared, led to the belief of its having been imported and subsequently communicated by contagion; various precautionary measures were in consequence adopted to prevent its propagation, and strict quarantine regulations were enforced, both as regarded the troops and inhabitants; but though in some instances these were apparently effectual, in others they proved of little avail, and the contagious nature of the disease was subsequently rendered extremely questionable from the circumstance, that neither the physicians nor those in constant attendance on the sick, exhibited any peculiar liability to it.

Of course it is impossible, in a limited Report of this nature, to enter fully on all the facts and arguments bearing on the important and much-disputed topic of contagion; we can only say that all which has been adduced on either side seems to fall far short of absolute proof, and even those who have had the best opportunities of forming accurate opinions, by watching the progress of this disease, are forced to admit that its origin is still involved in mystery, or at least, that the contrariety of results can only be reconciled by supposing that under some circumstances it may be contagious, while in others it may be the reverse.

Prior to its appearance in 1832, the winter had been extremely severe, the spring cold and backward, and the average temperature of summer considerably below its usual standard. Easterly winds had also prevailed continuously for 27 days before the disease broke out; but this is by no means uncommon in spring, though in that year they were more frequent than usual, as will be seen by the following statement:—

Years.	Days of Easterly Winds in April, May, and June.	Days of Easterly Winds throughout the year.
1832	49	121
1833	38	111
1834	36	120

Except in regard to the slight difference in the prevalence of easterly winds, the season of 1833 was almost exactly the same as that of 1832, and yet there was no cholera; whereas that of 1834 was the very reverse of either. With the exception of one month the winter was open, the spring mild, the easterly winds preceding the breaking out of the cholera more rare, and the heat of summer greater than for many years previous.

Most accurate and extensive meteorological observations were made daily during the continuance of the disease, but neither variations of temperature, fluctuations of the barometer, change of wind, nor the prevalence nor absence of moisture, seemed to affect it in the slightest degree; on this point there was no difference of opinion, whatever may have existed on others connected with its origin and progress.

DISEASES OF THE BRAIN.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Inflammation of the Brain	22	5	1 in $4\frac{1}{2}$
Headache	66	..	0 „ 66
Apoplexy	82	28	1 „ 3
Paralysis	60	8	1 „ $7\frac{1}{2}$
Water in the Head	2	2	1 „ 1
Fatuity	30	1	1 „ 30
Madness	19	..	0 „ 19
Brain Fever of Drunkards	296	18	1 „ 16
Epilepsy	245	10	1 „ $24\frac{1}{2}$
Total	822	72	1 in $11\frac{2}{3}$
Annual Ratio per 1000 of Mean Strength	14	1.2	..

Both as regards the proportion of admissions and deaths, the influence of this class of diseases is almost exactly the same as in Nova Scotia and New Brunswick, and therefore no remark is necessary in addition to what has already been made in the previous part of this Report. There is a similar prevalence of *delirium tremens* (resulting from intoxication), with the exception that in Canada the cases have become less numerous and less fatal since 1832, indicating, it is to be hoped, a diminution in the vice of intemperance, whereas in Nova Scotia they appear to be on the increase.

DROPSIES.

Under this head are comprised in the preceding Table,—

	Admitted.	Died.	Proportion of Deaths to Admissions.
Subcutaneous Dropsy	75	8	1 in $9\frac{1}{2}$
Water in the Chest	8	6	1 „ $1\frac{1}{2}$
Abdominal Dropsy	45	9	1 „ 5
Total	128	23	1 in $5\frac{2}{3}$
Annual ratio per 1000 of Mean Strength	2	$\frac{4}{10}$	..

This class of diseases exhibits nearly the same results as in Nova Scotia and New Brunswick, from which we may infer that the fevers so common in Upper Canada have not that tendency to induce dropsical affections, which has been observed in the West Indies and other stations where they prevail.

We have now only to notice in a very general way the following classes of diseases, which rarely prove fatal, but are a source of considerable inefficiency in this Command, and

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in doing so we shall take occasion to advert also to their prevalence in Nova Scotia and New Brunswick, the consideration of which we formerly deferred, because, from the similarity of the results, the same remarks will now serve for both.

	Annual Ratio of Admissions per 1000 of Mean Strength in		
	Nova Scotia and New Brunswick.	Upper and Lower Canada.	United Kingdom.
By Rheumatic Affections . .	30	40	50
Venercal "	83	99	181
Abscesses and Ulcers	105	109	133
Wounds and Injuries	148	162	126
Diseases of the Eyes	51	45	19
" Skin	23	22	29
Punished	31	32	8

The first and most striking feature in this comparison is, that in a climate of which the temperature in winter is so low, and liable to such sudden alternations as that of North America, the proportion of rheumatic affections should be less than in the United Kingdom. It is even lower than in the Mediterranean or Bermuda, though there the thermometer rarely falls to the freezing point, and the atmospheric vicissitudes are comparatively trifling. Observations recently made by the Medical Association of Great Britain on the prevalence of rheumatic affections in different counties of this kingdom have given similar results, and established that these diseases are less under the influence of atmospheric agency than has generally been supposed.

Venercal affections are only about half as prevalent as in the United Kingdom; and a reference to the Abstract of Diseases, No. III. of Appendix, shows, that in Canada syphilis has of late years become almost extinct, not more than 3 in every thousand soldiers having been treated for it annually, and of these the greater proportion were recruits who had contracted the disease in this country. So far as we can learn, there are no sanatory regulations to prevent its propagation, but probably at the remote stations opportunities of contracting it are comparatively rare, to which circumstance also may be attributed the marked exemption of the detachments in the upper provinces, among whom cases are seldom or never observed.

The proportion of wounds and injuries is, in both Commands, greater than in the United Kingdom; but it must be kept in view that in North America this is considerably increased by a cause which seldom comes into operation in other Colonies, viz., frost-bite, of which 446 cases have come under treatment in Canada, and 183 in Nova Scotia and New Brunswick. These were in many instances contracted on night-duty during the inclemency of winter, but more frequently arose from heedless exposure during intoxication. Some of the cases were so severe as to terminate fatally, others rendered amputation necessary, and added considerably to the invaliding from these Commands.

Diseases of the eyes are nearly thrice as prevalent as in the United Kingdom; this is generally attributed to the reflection of the snow during the winter months, and as they are found to be most common during that season, and to exhibit nearly the same degree of prevalence in every year, that cause may probably have had considerable influence in inducing them.

None of the other classes seem to require any specific notice, except corporal punishment, of which the ratio in both Commands has been about four times as high as in the United Kingdom. In Canada the excess lies principally in the earlier years over which these observations extend, for during the last seven, that species of punishment has been quite as rare as in this country. Its diminution has not, however, been by any means so rapid in Nova Scotia and New Brunswick, as will appear from the following Table:—

Numbers corporally punished of troops stationed in—

	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.	Average
Canada	371	211	166	181	179	174	101	81	57	54	65	93	74	53	47	23	21	10	12	8	1981	99
Nova Scotia and New Brunswick	222	116	177	152	109	74	37	36	45	25	37	50	58	58	22	41	33	28	29	26	1375	69

Ratio per 1000 of Strength corporally punished in—

	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Average.
Canada	80	52	44	54	54	53	32	26	20	18	20	29	23	16	14	8	8	4	5	3	32
Nova Scotia and New Brunswick	65	46	81	71	51	34	18	17	19	11	16	22	24	23	8	17	17	14	13	12	31

Thus, though the proportion punished throughout the whole period has been almost exactly the same, it has, within the last three years, been at least thrice as high in Nova Scotia and New Brunswick as in Canada, where, though there existed the same power of infliction, it has been more rarely exercised.

IV.—NEWFOUNDLAND.

IV.
Newfoundland.

THIS island lies on the north-east side of the Gulf of St. Lawrence, and adjacent to that part of the American continent termed the Coast of Labrador. Its extreme length is 420 miles, and extreme breadth 300; but of this extensive territory the greater part is as yet unexplored. The few tracts visited by Europeans have been found hilly, and sometimes even mountainous, varied by extensive plains covered with grass or low stunted bushes, and intersected by numerous rivers and lakes. The forests are not so dense, nor the timber of such magnitude as in the Canadas, both soil and climate being less favourable to vegetation. Along the shores the coast is rocky and rugged, in many parts covered with stunted wood, and indented by deep bays, creeks, and inlets, which afford ready shelter to the numerous shipping employed on the coast.

General Description.

Towards the south-east extremity, the deep bays of Trinity and Placentia intersecting the island in opposite directions cut off a peninsular section about 78 miles in length and 75 in breadth, where the British population principally reside in several small towns and villages along the shores of the numerous bays by which that portion of the island is indented.

One of these bays between two high mountains on the east coast, and having a very narrow entrance protected by extensive fortifications, forms the harbour of St. John's, on the shores of which stands a town of that name, the capital of the island. In its vicinity are three forts where the troops are quartered; Signal Fort, built on a rock of considerable height, commanding the entrance to the harbour; Fort William, on the slope of a hill a little to the north of the town, and Fort Townsend, on the summit of the same ridge immediately behind it. Between the town and Fort William stands the hospital, a wooden building of two stories, having four wards capable of accommodating from 20 to 30 patients. The whole of these buildings are, from their situation, much exposed, but are said to be extremely healthy.

Military Stations.

The climate of the southern portion of Newfoundland is similar to that of Nova Scotia, except that the summers are colder, of shorter duration, and liable to more sudden vicissitudes, owing to the melting of the icebergs on the coast, which exerts considerable influence on the temperature; the island has also been long noted for the frequent and dense fogs which prevail along its banks, and often continue during a great part of the summer. None of these agencies, however, seem to operate prejudicially on the health of the inhabitants, among whom the mortality is on a lower scale than in any portion of the American continent, as will appear by the following Return of the population, births, and deaths, for a period of three years:—

Climate.

Years.	Population.	Births.	Deaths.
1822	52,157	1,675	725
1825	54,759	1,879	696
1827	58,088	1,800	750
Total	165,004	5,354	2,171
Average	55,001	1,785	724

According to this Table the deaths are only 1 in 76 of the population—an exceedingly low ratio indeed, especially when it is considered that upwards of 20,000 are children under 15 years of age. As the inhabitants are scattered over a great extent of coast several of the deaths may possibly have been omitted; but, even making all due allowance for that source of error, their rapid increase, without any material aid from immigration, furnishes sufficient proof that the climate, however unpleasant to the feelings, is highly favourable to the constitution.

Had we drawn our conclusions in regard to the climate, however, from the mortality among the troops at this station, we should have been led to very different conclusions. Unfortunately, we cannot extend our observations on this subject to an earlier date than 1825, because, prior to that period, the garrison having principally consisted of two companies of one of the regiments at Halifax, their Returns were frequently included with those of that station. Since 1825, however, a corps has been formed for service in this colony, consisting of three companies of Veterans, who, although for the most part aged or disabled, have been reported as fit for garrison duty. These, with a company of Artillery, have generally constituted the whole force, among whom the sickness and mortality has been as follows:—

IV.
Newfoundland.Table XI.
Showing the Sick-
ness and Mortality
among the Troops
in Newfoundland.

Years.	Newfoundland Veteran Companies.			Royal Artillery.		
	Average Strength.	Deaths.	Mean Sick.	Average Strength.	Deaths.	Mean Sick.
1825	321	18	20	61	4	·4
1826	292	7	17	56	1	1·2
1827	310	8	18	62	..	2·
1828	336	14	20	72	2	3·6
1829	275	15	12	69	1	2·
1830	258	15	16	68	3	1·
1831	239	16	16	65	3	2·
1832	205	8	24	57	1	3·
1833	189	7	10	55	..	1·3
1834	241	3	12	60	1	1·6
1835	255	11	12	66	1	2·
1836	268	10	14	71	..	2·7
Total . .	3,189	132	191	762	17	22·8
Ratio per 1000 of Strength }	..	41·	60·	..	22·	30·

From this Table it appears that the mortality among the Veterans has been upwards of 41 per thousand annually on the average of the last 12 years, while that of the Artillery has been only 22 per thousand during the same period. The high ratio among the former may in part be accounted for by their advanced age, nearly one half being between 33 and 40, and the other half above that period of life; but it appears still more attributable to the immediate effects of intemperance, as the records of that corps furnish most startling evidence of the general prevalence and destructive consequence of this vice.

In a Nominal Roll, transmitted to the Medical Department, of those who died between 1825 and 1832 in the Veteran Companies, we find the following causes of death recorded:—

Table XII.
Showing the prin-
cipal Diseases and
Causes of Death
among the Veteran
Companies in New-
foundland.

Total Deaths from 1825 to 1832 inclusive		100
Whereof—		
Died by Suffocation from drinking		10
„ Delirium Tremens		15
„ Apoplexy, principally from intoxication		15
Found dead, supposed from same cause		2
Drowned		1
Contusion		1
		— 44
Died by disease		56, viz.—
By Fevers	{ Feb. Cont. Com. 1 „ Typhus 1 Pyrexia 1	3
Diseases of the Lungs	{ Pneumonia 3 Phthisis 16 Catarrhus 17 Asthma 1	37
Diseases of the Liver	{ Hepatitis 5 Icterus 1	6
Diseases of the Sto- mach and Bowels	{ Gastritis 5 Diarrhoea 2	7
Dropsy	Ascites 3	3
Total		56

Thus little more than one-half of the mortality among the Veterans has been in any way attributable to natural causes, and as large a proportion might have occurred among persons at the same period of life, even in this country.

The Returns from this station are not sufficiently complete to admit of our detailing the diseases of the Artillery with similar minuteness, nor even to carry the investigation relative to the Veterans beyond 1832; but, as so large a proportion of the deaths has been traced to intemperance, many of the admissions into hospital are likely to have been attributable to the same cause; consequently, even if obtained, these Returns, when subject to so manifest source of error, could have afforded no accurate data for determining the influence of this climate on the constitution of our troops.

The fate of so large a proportion of this garrison, by their own imprudence in the use of spirituous liquors, affords a striking illustration of the progressive effect and ultimate consequence of long-continued habits of intemperance. In Nova Scotia, for instance, we find, that though this vice prevails to a great extent among the troops, the mortality is as low as can be expected in any climate, even among persons of abstemious habits. But there the troops are, for the most part, men in the prime of life whose excesses produce

little sickness or mortality, while they have the advantage of youth on their side; but they are silently laying the seeds of disease in their constitution, and inducing premature old age and disability, so that by the time they attain the same advanced period of life as the Veterans, a repetition of excesses, which might formerly have been indulged in with comparative impunity, hurries them to an untimely grave.

In regiments of the line the number of men at an advanced period of life being but small, the premature deaths caused by drunkenness are lost in the mass, and, as we have frequently stated, add little to the general mortality. It is only when a corps is composed of men advanced in years that the ultimate consequences of this vice can be traced to their full extent, or so strikingly manifested as in the present instance.

IV.
Newfoundland.

SECTION II.

On the Extent of Invaliding among Troops in British America.

British America.

As in several of the years there are no separate Returns of the invalids from each of the Commands included in this Report, it has been found necessary to class them all together, whether from Bermuda, Nova Scotia, the Canadas, or Newfoundland. This defect, however, can be of no great moment, in climates so nearly resembling each other in salubrity, and where the diseases by which the disabilities have been occasioned are probably so similar.

Invaliding.

From 1817 to 1825 we can supply no accurate information regarding the diseases or causes of disability, but the total numbers and ratio invalided during that period from all these Commands were as follows:—

Years.	Total Force in British America.	Numbers invalided of that Force.	Ratio per 1000 invalided of that Force.
1817	8,723	46	5.3
1818	7,288	900	123.5
1819	6,629	723	109.1
1820	6,032	237	39.3
1821	6,055	267	44.1
1822	6,053	343	56.7
1823	5,720	170	29.7
1824	5,702	12	2.1
Total.	52,202	2,698	51.7

The ratio invalided during this period appears to have been 51 $\frac{7}{10}$ per thousand of the force annually; nearly one-half of this, however, arose from the extensive reductions which took place in 1818 and 1819, when it was deemed advisable to dispense with the services of such men as were least likely to prove effective. These appear to have been all sent home as invalids, though in many instances their health was but little deteriorated, consequently no accurate deductions can be drawn as to what proportion of this invaliding really originated in disease or disabilities. The following abstract of the Returns subsequent to 1824 will, however, afford more satisfactory evidence on this head:—

Years.	Mean Strength of Troops.	Discharged, totally unfit for further Service.	Number found fit for Garrison Duty only.	Total of both Classes.	Ratio per 1000 of Strength invalided of both Classes.	Number found fit for further service and sent to their Depôts or Corps.
1825	5,879	164	..	164	27.9	30
1826	6,192	182	..	182	29.4	30
1827	6,581	82	12	94	14.3	32
1828	6,617	142	78	220	33.2	34
1829	6,701	59	20	79	11.8	19
1830	6,993	99	97	196	28.	81
1831	7,373	20	10	30	4.1	4
1832	6,728	61	4	65	9.7	6
1833	5,675	51	4	55	9.5	8
1834	5,674	101	14	115	20.3	33
1835	5,836	82	1	83	14.2	24
1836	5,783	159	5	164	28.4	12
Total.	76,032	1,202	245	1,447	19.	313

Table XIII.
Showing the Ratio discharged annually as unfit for Active Service of Troops in British America.

Thus, exclusive of 313, who, after being sent home invalided, returned fit for further service to their depôts or corps, the proportion discharged has amounted to 19 per thousand annually, being the average of the Mediterranean stations, and nearly the same as among the Dragoon Guards and Dragoons serving in the United Kingdom.

The Returns do not state the causes of disability of those found fit for garrison duty only, but the following is an abstract of the diseases of such of the invalids as have been reported totally unfit for further service:—

British America.

Table XIV.
Showing the Diseases or Causes of Disability of Invalids found unfit for further service.

	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total.
Cachexies	2	..	..	..	..	16	1	3	3	4	1	2	32
Dropsies	2	4	..	..	..	1	..	2	1	1	..	3	14
Dysentery and Hepatic	4	11	..	3	1	..	..	3	..	3	..	1	26
Eye Diseases	9	6	6	13	2	5	4	9	1	7	2	11	75
Fractures, Dislocations, Contractions, Wounds, and Ruptures	20	42	17	27	5	15	2	7	7	14	7	11	174
Mental Diseases . . . . .	..	2	1	2	3	5	2	1	2	1	1	..	20
Paralysis, Epilepsy, and Deafness	3	13	2	4	3	10	2	2	5	6	6	11	67
Pulmonic Diseases	44	35	11	22	15	27	4	13	16	20	40	51	298
Rheumatism & Chronic Pains	40	13	5	36	10	7	..	5	5	7	16	41	185
Ulcers, Varices, Scrofula, and Strictures	10	11	2	5	1	13	4	6	1	6	4	8	71
Venereal . . . . .	..	..	..	2	..	..	..	1	..	..	..	1	4
Worn-out	30	45	38	28	19	..	1	9	10	32	5	19	236
Total	164	182	82	142	59	99	20	61	51	101	82	159	1202

The following comparison of the ratio invalided for pulmonic affections in British America and the Mediterranean affords another convincing proof that the climate of the former, however severe, does not necessarily exert an unfavourable influence in this respect on the constitution:—

STATIONS.	Aggregate Force from 1825 to 1836 inclusive.	Invalided of that Force for Pulmonic Affections in same period.	Ratio per thousand Invalided Annually for Pulmonic Affections
In British America	76,032	298	$3\frac{2}{10}$
Gibraltar	40,055	155	$3\frac{2}{10}$
Malta	25,052	125	5
Ionian Islands	43,550	119	$2\frac{8}{10}$

It is thus manifest that in the mild climate of Malta one-fifth more are invalided for pulmonic affections than in British America—a sufficient reason, combined with what has previously been stated on the subject, to render extremely questionable the generally received opinions in regard to the influence of temperature in inducing or aggravating these diseases.

As many of the other causes were merely the result of age and length of service, we shall not enter further into the consideration of this branch of the subject. Enough has been stated to show that, so far as can be estimated from the extent of invaliding, the climate of British America appears to exert no particularly unfavourable influence on the constitution of our troops.

SECTION III.

On the Number constantly Sick in Hospital among the Troops in British America.

Mean Sick.

IN No. IV. of Appendix will be found a detailed statement of the sick, reported in the War Office Returns, on the muster-day of each month, from which the following Table of results has been compiled:—

Table XV.
Showing the Number constantly Sick in Hospital, of Troops in British America.

Years.	BERMUDA.		NOVA SCOTIA, &c.		CANADA.	
	Average constantly Sick.	Ratio per 1000 of Mean Strength constantly Sick.	Average constantly Sick.	Ratio per 1000 of Mean Strength constantly Sick.	Average constantly Sick.	Ratio per 1000 of Mean Strength constantly Sick.
1817	9	21	144	44	181	41
1818	18	36	84	35	163	43
1819	26	63	71	34	151	42
1820	20	60	67	34	135	42
1821	13	37	83	41	160	51
1822	16	49	87	42	127	41
1823	20	69	77	39	115	39
1824	14	67	72	36	138	46
1825	20	75	95	43	109	39
1826	38	62	71	33	101	36
1827	52	78	64	29	141	46
1828	43	61	62	29	163	53
1829	42	58	68	30	153	50
1830	35	46	76	31	150	47
1831	58	49	85	35	140	45
1832	55	48	67	29	127	46
1833	36	46	55	29	100	40
1834	41	57	65	33	101	41
1835	32	49	67	31	103	42
1836	32	49	63	30	111	45
General Average	31	53	76	34	133	44

This statement shows the proportion constantly ineffective from sickness to have been, on the average of the last 20 years, 53 per thousand for Bermuda, 44 for the Canadas, and 34 for Nova Scotia and New Brunswick; the latter, however, must be considerably under the truth, as it has not been usual to include in the Returns the sick at St. John's, St. Andrew's, Prince Edward's Island, or Cape Breton, constituting about a tenth of the whole. Even after making the necessary addition on this account, however, we find the proportion is smaller than in the United Kingdom, where, among the Dragoon Guards and Dragoons, 40 per thousand are constantly sick, and still more among Infantry.

British America.
Mean Sick.

From these data the following results are obtained:—

	Bermuda. Days.	Nova Scotia. Days.	Canadas. Days.
Average sick-time annually to each soldier	19	13½	16
Average duration of each attack	14½	16½	15

Thus, in Nova Scotia, sickness, though less frequent, is of longer duration than in the other two Commands, principally from the absence of febrile affections, and the diseases being generally of a more lingering nature.

SECTION IV.

Showing the Influence of Age and Length of Residence on the Mortality of Troops serving in British America.

In the Appendix, Nos. V., VI., and VII., will be found abstracts framed from the Returns forwarded annually to the War Office, showing the composition of each corps serving in these Commands with regard to age, and the deaths which took place, from 1830 to 1836 inclusive, at each of the following periods of life:—

General Results for Bermuda from 1st January, 1831, to 31st March, 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st January to 31st December, 1831* .	2	..	235	5	155	5	104	2	22	..	518	12
" " " " " " 1832 .	2	..	478	5	307	13	209	6	29	2	1025	26
" " " " " " 1833 to 31st March, 1834 .	3	..	207	6	119	7	68	9	19	4	416	26
1st April, 1834 " " " " " " 1835 .	5	..	252	2	182	7	54	1	9	..	502	10
" " " " " " 1835 " " " " " " 1836 .	10	..	300	5	140	7	57	4	..	..	507	16
" " " " " " 1836 " " " " " " 1837 .	4	..	231	6	127	6	55	2	..	..	477	14
Total for 6½ Years	26	..	1763	29	1030	45	547	24	79	6	3445	104
Deduct a twenty-fifth part of the deaths to ascertain the mortality of 6 years exactly . . . . .	..	..	..	1	..	2	..	1	..	..	..	4
Total for 6 Years.	26	..	1763	28	1030	43	547	23	79	6	3445	100

General Results for Nova Scotia and New Brunswick from 1st January, 1830, to 31st March, 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st January to 31st December, 1830 .	5	..	903	14	468	5	192	5	33	..	1601	24
" " " " " " 1831 .	12	..	1107	22	483	16	217	4	29	1	1848	43
" " " " " " 1832 .	23	..	901	5	899	21	289	7	13	..	2125	33
" " " " " " 1833 to 31st March, 1834 .	21	..	449	6	839	26	241	10	28	..	1578	42
1st April, 1834 " " " " " " 1835 .	24	..	575	9	1204	43	189	17	39	5	2031	74
" " " " " " 1835 " " " " " " 1836 .	20	1	557	7	1070	14	256	3	65	4	1968	29
" " " " " " 1836 " " " " " " 1837 .	11	..	411	6	816	10	176	4	34	..	1448	20
Total for 7½ Years	116	1	4903	69	5779	135	1560	50	241	10	12,599	265
Deduct a twenty-ninth part of the deaths to ascertain the mortality of 7 years exactly . . . . .	..	..	..	2	..	5	..	2	..	..	..	9
Total for 7 years	116	1	4903	67	5779	130	1560	48	241	10	12,599	256

* No Returns of Ages were received from the Bermudas for 1830, consequently the calculations for that station only extend over 6½ years.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st January to 31st December, 1830 .	12	..	1351	21	842	19	332	9	69	1	2606	50
" " " " " 1831 .	18	..	1504	25	913	22	347	10	54	..	2836	57
" " " " " 1832 .	18	..	1172	35	1070	63	282	26	38	4	2580	128
" " 1833 to 31st March, 1834 .	15	..	821	16	1198	24	293	9	41	1	2368	50
1st April, 1834 " " " " 1835 .	12	..	695	11	1145	37	297	9	47	5	2196	62
" " 1835 " " " " " " 1836 .	12	..	714	18	1150	24	301	11	55	..	2232	53
" " 1836 " " " " " " " " 1837 .	17	..	543	13	902	18	239	8	42	1	1743	40
Total for 7½ Years	104	..	6800	139	7220	207	2091	82	346	12	16,561	440
Deduct a twenty-ninth part of the deaths to ascertain the mortality of 7 years exactly . . . . .	..	..	..	5	..	7	..	3	..	..	..	15
Total for 7 Years	104	..	6800	134	7220	200	2091	79	346	12	16,561	425

Reducing these results to a common ratio, on the same principle as in previous Reports, the relative mortality at each of these periods of life is found to have been as under :—

Table XVI.
Showing the Influence of Age on Mortality among Troops in British America.

Age.	BERMUDA.			NOVA SCOTIA, &c.			CANADA.		
	Aggregate Strength in Returns of Six Years.	Total Deaths in same Returns.	Annual Ratio of Deaths per 1000 Living at each Age.	Aggregate Strength in Returns of Seven Years.	Total Deaths in same Returns.	Annual Ratio of Deaths per 1000 Living at each Age.	Aggregate Strength in Returns of Seven Years.	Total Deaths in same Returns.	Annual Ratio of Deaths per 1000 Living at each Age.
Under 18	26	..	..	116	1	9	104	..	..
18 to 25 .	1763	28	16	4,903	67	14	6,800	134	19.7
25 " 33 .	1030	43	42	5,779	130	22.5	7,220	200	27.8
33 " 40 .	547	23	42	1,560	48	30.8	2,091	79	37.8
40 " 50 .	79	6	76	241	10	41.5	346	12	35
Total .	3445	100	28.9	12,599	256	20.3	16,561	425	25.7

Thus in all the North American Commands mortality increases with the advance of age much more rapidly than in the United Kingdom or Mediterranean. This is particularly observable in the Bermudas, where, though the ratio between the ages of 18 and 25 is much the same as among the Dragoon Guards and Dragoons in this country, it is, at the subsequent periods of life, more than twice as high.

So far as regards the Bermudas this may partly be accounted for by the circumstance, that in all warm climates the constitution appears to deteriorate rapidly with the advance of age. This will not, however, account for the same feature being manifested, though in a less striking degree, on the continent of North America; perhaps the repeated attacks of febrile diseases to which the troops in Upper Canada are subject as well as the general prevalence of intemperance, though not in themselves an immediate source of mortality, may, by tending to sap the vital energies, and inducing premature old age, ultimately lead to this peculiarity.

It is necessary, however, in this branch of the subject, to keep in view that the influence of age on mortality can by no means be estimated with the same accuracy in these as in other Commands, because, owing to the numerous desertions, the number living at each age may differ very materially at the termination of the year from what it was at the commencement; and, as the deserters are principally between the ages of 18 and 25, it is possible that if due allowance could have been made for this circumstance, the ratio of mortality at that period of life would have approximated more nearly to what has been observed in this country.

To establish how little benefit is derived from acclimatization or length of residence in these Commands, it is only necessary to advert to the youngest class of soldiers enjoying so marked an exemption from the general mortality, though but few of them can have been more than a year or two in the country. This conclusion might be corroborated by ascertaining the relative proportion of deaths in every successive year of service of each corps as was done in the West India Report; but that would involve greater intricacy of calculation than the importance of the subject appears to require.

SECTION V.

On the Sickness and Mortality among the Officers serving in British America. *British America.*

Owing to the large proportion of officers detached at a distance from Head-Quarters in these Commands, and the facility of moving from one station to another in the event of bad health, the information afforded by the Medical Returns in regard to the extent of mortality among that class, is so incomplete that it has become necessary to frame our conclusions from the casualties reported in the Army List.

During the 17 years, from 1820 to 1836 inclusive, the deaths of officers of all the corps in the British American stations, including Artillery and Engineers, were as follows:—

	In Upper and Lower Canada.	In Nova Scotia, New Brunswick, Bermuda, and Newfoundland.
Died within the limits of each Command, or on Sick leave	28	27
Died from violence, or accidental causes not connected with climate . . . . .	..	4
Total Deaths	28	31
During this period the aggregate strength of Officers employed in these Commands, as stated in Returns furnished by the Adjutant-General to Parliament, was	2616	2239
The average annual strength was consequently	154	132
And the average annual ratio of mortality per thousand of the strength	11	14

From this it would appear that Nova Scotia, &c. was more fatal to the officers than Canada; but the excess arises, as before stated, from deaths by accidental causes not connected with climate.

As many of the cases of sickness among the officers in the other Commands have been omitted in the Returns, we shall restrict our calculations to those reported from Canada only, whereof an Abstract will be found in No. VIII. of Appendix, the principal results of which are exhibited in the following Table:—

CLASSES OF DISEASES.	1820 to 1836 inclusive. Aggregate Strength, 2616.		Annual Ratio Treated per Thousand of Mean Strength of Officers.	Annual ratio Admitted into Hospital per Thousand of Troops, as on p. 26.
	Number Treated.	Number Died.		
Fevers	320	3	122	216
Diseases of the Lungs	428	4	163	148
of the Liver	42	2	16	8
of Stomach & Bowels	456	..	174	155
Epidemic Cholera	7	..	3	6
Diseases of the Brain	18	2	7	14
Dropsies . . . . .	..	..	..	2
Rheumatic Affections	83	2	32	40
Venereal Affections	222	..	85	99
Abscesses and Ulcers	71	1	27	109
Wounds and Injuries	125	1	48	162
Diseases of the Eyes	34	..	13	45
of the Skin	26	..	10	22
Punished . . . . .	..	..	..	32
All other Diseases	115	2	44	39
Cause of Death unknown . . . . .	..	11	..	..
Total	1947	28	744	1097

Table XVII.
Showing the Mortality and principal Diseases among Officers serving in Canada.

As the causes of nearly one-half of the deaths cannot be ascertained, it would have been useless to enter on any calculations regarding the ratio of mortality by different diseases among the officers; we have therefore referred to their prevalence only, in order to obtain a standard for estimating their influence on that rank as compared with the troops.

From this source we learn that officers are but half as subject to fevers; on reference, however, to the Abstract of Diseases from which the preceding Table has been framed, this exemption will be found to extend only to fevers of the common continued form; the intermittents, so prevalent in the Upper Province, seem to affect all ranks in nearly an equal degree.

British America.
Sickness and Mor-
tality of Officers, &c.

Notwithstanding the greater exposure of privates on night duty, diseases of the lungs are found to be more rare than among the officers, in the proportion of 148 to 163; but those which affect the former are of a much more severe character: inflammation of the lungs, in particular, is at least thrice as common.

It is highly corroborative of our previous deductions in regard to the relative influence of the climates of the Mediterranean and America on inflammation of the lungs and phthisis, that the cases of both are more rare among officers in Canada than among those in the Mediterranean stations, for instance—

	Gibral- tar.	Malta.	Ionian Islands.	Mediterra- nean Stations generally.	Canada.
Aggregate Number of Officers serving in each Com- mand during the Years over which Report extends	2511	1772	2506	6789	2616
Total attacked by Inflammation of Lungs in that period.	34	14	48	96	28
Ditto by Phthisis ditto . . . . .	..	4	8	12	2
Ratio per 1000 of Strength attacked Annually by In- flammation of Lungs.	..	..	..	14 ¹ / ₁₀	10 ⁶ / ₁₀
Ditto ditto by Phthisis . . . . .	..	..	..	1 ⁸ / ₁₀	0 ⁸ / ₁₀

So that, in the Mediterranean, the proportion of officers attacked by phthisis annually has been more than twice as high, and by inflammation of the lungs at least a third higher than in Canada. Had we referred to the Returns from Nova Scotia and New Brunswick this would have been still more strongly marked; for there, so far as can be ascertained, not a single officer has been attacked by consumption, and only nine by inflammation of the lungs during the period under observation.

Diseases of the bowels have been, in a slight degree, more prevalent among the officers than the privates. We have already stated in previous Reports, that wherever the soldier enjoys, as he does in this Command, the same advantages in regard to a fresh meat diet as the officer, he is not likely to be more subject to these diseases: in support of that assertion, we may confidently refer to the present in addition to the many instances already adduced, especially if taken in connexion with the fact that, in the Bermudas, where the troops have hitherto been fed principally on salt rations, half of them are under treatment for diseases of the bowels annually, while among the officers only 54 cases occurred during the whole course of 14 years, being a smaller proportion than in the Canadian Provinces.

The comparative exemption of the officers from epidemic cholera has been already noticed at page 32 of this Report; and the other classes of diseases being of minor importance, it is, perhaps, unnecessary to refer to them more particularly at present.

SECTION VI.

On the Influence of the Seasons in producing Sickness and Mortality among the Troops serving in British America.

Influence of the
Seasons.

THE following Table, illustrative of this subject, has been prepared from the Returns of the Canada Command, of which an Abstract will be found in No. IX. of Appendix. In Bermuda, Nova Scotia, &c. the dates of the admissions and deaths have not been recorded with sufficient regularity to admit of similar results being exhibited on as extensive a scale, and we have therefore confined our calculations to Canada, where on account of its severity we might expect to find the influence of winter on the health of the troops very strongly manifested:—

Table XVIII.
Showing the In-
fluence of the
Seasons on the
Sickness and Mor-
tality of Troops in
British America.

Months.	Admissions into Hospital in 20 Years of Troops in Canada.				Deaths in 20 Years of Troops in Canada.			
	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	Total by all Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	Total by all Diseases.
January . . .	2,142	273	2,270	4,685	36	35	5	76
February . . .	1,918	227	2,026	4,171	31	23	3	57
March	1,950	266	1,910	4,126	31	41	3	75
April	2,551	294	2,038	4,883	33	39	1	73
May	2,820	303	2,216	5,339	28	34	2	64
June	3,063	298	2,479	5,840	58	37	9	104
July	4,183	352	2,570	7,105	53	29	8	90
August	5,144	354	2,678	8,176	103	21	4	128
September . .	4,440	332	2,436	7,208	54	24	4	82
October	3,055	241	2,280	5,576	38	27	6	71
November . . .	2,798	229	2,241	5,268	32	27	3	62
December . . .	2,252	197	2,072	4,521	35	23	3	61
Total	36,316	3,366	27,216	66,898	532	360	51	943

Thus so far from the extreme severity of the winter in Canada operating very prejudicially to the health of the troops, we find that in January, February, and March, when the minimum of the thermometer is many degrees below zero, the admissions from acute diseases, in which the influence of the seasons is most likely to be manifested, are not half so numerous as in July, August, and September, while those from chronic and surgical diseases are also lower, though not in the same proportion. In fact, so rare are the cases of sickness during winter, that not more than $5\frac{1}{2}$ per cent. of the force come under treatment monthly; whereas, during July, August, and September, the monthly admissions average more than 10 per cent of the force. The ratio of deaths follows the same law, though the influence of the cholera during the summer and autumn of 1832 and 1834 increased the relative mortality at that period in a still greater proportion than the admissions.

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The numbers reported sick on each muster-day, as stated in Abstract No. IV. of Appendix, establish the same results in regard to the comparative salubrity of the winter season, not in Canada alone, but also in Nova Scotia, New Brunswick, and Bermuda.

MEAN SICK.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Canada	124	125	124	127	123	135	144	161	162	136	124	116
Nova Scotia and New Brunswick	72	73	72	69	78	81	82	89	84	80	67	67
Bermuda	28	27	30	31	30	30	32	35	33	34	32	30

The general prevalence of febrile affections in Upper Canada during summer might be supposed to account for the preponderance of sickness there at that season; but the same peculiarity extends also to the Lower Province, where febrile diseases are more rare. The same feature is observable among the civil inhabitants, as will be seen from the following Abstract of the deaths in each month among the population of the several districts in the Lower Province, made up pursuant to an order of the House of Commons, dated 6th December, 1832.

Deaths in each Month, from 1829 to 1831 inclusive, in the following Districts of Lower Canada.

Months.	Quebec.	Montreal.	Three Rivers.	Gaspar.	St. Francis.	Total in whole Province.
January	974	1,186	194	10	1	2,365
February	986	1,241	244	16	2	2,489
March	1,005	1,325	292	10	3	2,735
April	1,012	1,293	318	6	..	2,629
May	978	1,382	392	14	6	2,772
June	1,129	1,496	307	10	1	2,943
July	1,464	2,221	368	13	2	4,068
August	1,395	2,178	358	9	5	3,945
September	1,147	1,562	240	11	1	2,961
October	956	1,392	215	15	..	2,578
November	950	1,130	186	11	2	2,279
December	1,070	1,236	176	14	2	2,498

Thus even in the Lower Province, where intermittents are comparatively rare, June, July, August, and September, prove much more fatal to the civil inhabitants than the most severe of the winter months. The preponderance of mortality during that period may in a slight degree be accounted for by the influx of emigrants in summer, but is by far too great to be entirely attributable to that source; especially as the preceding Abstract shows that it commenced prior to the month of April, while the ports were closed, and again fell to its former level in November, though many of the emigrants must have been still in the province.

In the state of New York the seasons are found to exercise a corresponding influence on mortality, even when no visitation of yellow fever is experienced. From 1816 to 1826 the dates of decease of 24,852 persons were carefully recorded, and of every thousand of these deaths the relative proportion in each month was found to have been as follows:—

Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
75	75½	74	73	72	65	95½	108½	109½	97	79½	75½	1000

From all these facts, then, we are forced to arrive at the conclusion, that the constitution of the soldier serving in these Commands is not affected in any material degree either by the extreme severity of a North American winter, or the sudden transitions he undergoes at that season in passing from a heated guard-room with the thermometer at 80°, to his sentinel duties in the open air, under a temperature 25° or 30° below zero. On the

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contrary, the degree of health enjoyed by the troops during winter is not exceeded in any quarter of the globe.

The extreme rarity of sickness and mortality among the crews of vessels employed in the arctic regions, when exposed to a lower temperature, and still more sudden vicissitudes than any we have had to record, affords a striking illustration how little the constitution of our countrymen is likely to be affected even by the severest climate to which they are exposed.

While febrile affections of the intermittent and remittent types prevail during spring and autumn, bowel complaints during summer, catarrhs and all the train of pulmonary affections during spring and the commencement of the winter, there are comparatively few diseases of any kind during the severest part of the season, except those of the eyes, induced by the reflection of the snow, frost-bites from exposure, and a few cases of acute rheumatism and pneumonia, which, however, may be said to prevail with equal severity at other periods of the year.

SECTION VII.

Deductions from the preceding Report.

Deductions from
Report.

HAVING, in the course of this Report, frequently adverted to the uniform degree of prevalence which, notwithstanding the dissimilarity of climate, has been found to exist in the proportion of pulmonary affections in Nova Scotia and Canada, compared with Malta and Gibraltar, it seems unnecessary here to recapitulate the evidence on that subject; but it may be proper to inquire whether there exists, in the moral or physical condition of the troops in the Mediterranean and American stations, any difference likely to have influenced the results on which that comparison has been founded.

In the last section of the West India Report we showed that these diseases, even under the high temperature of the tropics, prevailed to a greater extent than in the United Kingdom. But it may be argued that several circumstances, independent of climate, were there in operation to induce that peculiarity; for instance, the innutritive qualities of the diet, the limited and defective state of the barrack accommodation, and the general prevalence of intemperance, were all causes tending to affect the health of the troops in no inconsiderable degree. We are, therefore, led to inquire whether any deteriorating circumstances of a similar nature exist in the Mediterranean from which the troops in North America are exempt, and by which the tendency to these diseases may have been so far aggravated as to counterbalance the advantages otherwise resulting from its mild and equable climate.

So far, however, from this being the case, every circumstance has been more favourable to the troops in the Mediterranean. The barrack and hospital accommodation, in Malta and Gibraltar at least, is not only of a more substantial nature than in Canada and Nova Scotia, but nearly double the space is allotted to each soldier; the diet, with the exception of a greater issue of salt meat in Gibraltar during the winter months, is nearly the same, and the meals are regulated on similar principles. Intemperance, to which so much has been attributed as an exciting cause of these diseases, cannot be said to prevail to a greater extent in the Mediterranean than America, where the constant use of ardent spirits is likely to prove still more prejudicial than the low wines which form the principal medium of intoxication in the Mediterranean.

In all these respects, then, the troops in the Mediterranean have decidedly the advantage. We have yet to advert to another circumstance no less favourable to them: consumption, the most fatal of this class of diseases, is supposed to affect persons at an early period of life more than those of mature age. Now, owing to the frequency of desertion in North America, so many recruits have to be sent out from this country that nearly one-half of the force there is under 25 years of age, while in the Mediterranean, where no such necessity exists for large drafts from the depôts, the proportion under that period of life is only from a third to a fourth of the whole; consequently the composition of the force in the Mediterranean renders it much less subject to the influence of consumption, if not also of the other pulmonary diseases which frequently precede it.

When we find, notwithstanding all these circumstances apparently so favourable to the greater development of these diseases in Canada and Nova Scotia, that the troops there do not suffer from them to a greater extent than in the Mediterranean, it would manifestly be incorrect to attribute their prevalence in North America to the reduced temperature and sudden atmospherical vicissitudes incident to that quarter of the globe, seeing that the sufferings of the troops from these diseases are equally great in other climates where no such causes are in operation to induce them.

We have been thus particular on this head because, in the reports from the different medical officers in North America, we find a great portion of the sickness and mortality attributed to the severe and changeable nature of the climate inducing pulmonary affections of various kinds. It is true that many of the deaths arise from these diseases, but in this respect the troops there are by no means singular in their sufferings, for, throughout the wide extent of the British Colonies, few stations can be found where soldiers are not affected by them in an equal degree, though, perhaps, owing to the greater extent of mortality by other diseases, these are

less a subject of observation or remark. In addition to the instances already adduced on that head it will be shown, in a future Report, that even in the mild climate of the Mauritius, more soldiers are attacked by consumption, and nearly as many by inflammation of the lungs, as in the most inclement regions of North America, though we do not find that the prevalence or fatal character of these diseases attracts so much attention.

The caution necessary to be exercised in attributing to certain peculiarities of climate the prevalence of any class of diseases, is so strikingly exhibited by the proportion of Rheumatic affections ascertained to have occurred among the troops in different colonies, that the following abstract will best serve to illustrate our observations on this head:—

	Jamaica.	Nova Scotia, and New Brunswick.	Bermudas.	Malta.	Ionian Islands.	Gibraltar.	Canada.	Mauritius.	Windward and Leeward Command.	United Kingdom.	Cape of Good Hope.
Admissions from Rheumatic Af- fections annually per 1000 of mean strength	29	30	33	34	34½	38	40	46	49	50	57

Thus we find that in the mild and equable climate of the Mediterranean or the Mauritius, the proportion of rheumatic affections is even greater than in the inclement regions of Nova Scotia and Canada, and that, though some of the provinces of the Cape of Good Hope have occasionally been without rain for several years, these diseases are more frequent in the dry climate of that Command, than in the West Indies where the condition of the atmosphere is as remarkably the reverse; yet have extreme cold and atmospheric vicissitudes, coupled with excess of moisture, been assigned as satisfactory causes for their prevalence.

Considering that medical officers have hitherto possessed no means of comparing the influence of such diseases in different climates, any erroneous impressions which may be entertained on that subject need not excite surprise. The information now collected, in regard to those prevalent among troops in every colony, will best serve to counteract such impressions, and afford a surer basis for future theories on that subject.

The results of this Report, in regard to the relative prevalence at different stations in British America of remittent and intermittent fevers, add still further to the difficulty of establishing any uniform connexion between the presence of marshy ground, and the existence of those febrile diseases to which the exhalations from it are supposed to give rise. As it was formerly shown that, in some of the Ionian Islands, totally destitute of marsh and comparatively barren of vegetation, more remittent and intermittent fevers have been under treatment among the troops, than in others where these alleged sources of disease existed in the greatest abundance; so in the present Report we find it established, that yellow fever of the most aggravated form has repeatedly made its appearance at Ireland Island in the Bermudas, a rocky barren spot only a few hundred yards in breadth, containing no marsh, and with little or no vegetation except a few cedar-trees.

Conversely, again, we find that these diseases prevail to a remarkable extent along the banks of the lakes, and the margin of the streams in Upper Canada, while they are comparatively rare in similar situations in the Lower Province; that among the troops at Fredericton, living on the marshy banks of a river, surrounded by dense vegetation, scarcely a case of them is ever known, and that a similar exemption is enjoyed even by those at Annapolis and Windsor in Nova Scotia, though quartered at the embouchure of rivers daily subject to extensive inundations, and of which the banks, for the distance of several miles, exhibit that combination of mud, marsh, and decayed vegetation, which is generally supposed a most prolific source of febrile diseases.

When, in subsequent Reports, we come to investigate the operation of these diseases, on the West coast of Africa and other colonies, we shall be able to adduce still more satisfactory evidence on this subject; in the mean time, we have felt it our duty to place the preceding facts in a prominent point of view—not for the purpose of establishing any particular theory, but to show how inadequate, in many instances, is the supposed influence of emanations from a marshy soil to account for the origin of these diseases. All the evidence obtained seems only to warrant the inference that a morbid agency of some kind is occasionally present in the atmosphere, which, under certain circumstances, gives rise to fevers of the remittent and intermittent type; and that though the vicinity of marshy and swampy ground appears to favour the development of that agency, it does not necessarily prevail in such localities, nor are they by any means essential either to its existence or operation.

Notwithstanding the doubt in which this branch of the investigation is still involved, we may venture, from the facts adduced in all the Reports hitherto submitted, also to draw the conclusion, that when this morbid agency manifests itself in the epidemic form, its influence is frequently confined to so limited a space as to afford a fair prospect of securing the troops from its ravages, by removal to a short distance from the locality where it originated. The history of the epidemic fevers at Gibraltar furnishes several remarkable instances of this kind, and we have also shown that, both in the West Indies and Ionian Islands, one station has frequently suffered to a great extent from yellow fever, while others within the distance of a few miles have been entirely exempt. In the epidemic cholera at Montreal and Halifax, which seems to have been in this respect somewhat analogous in its operation, we have also had occasion to remark the sudden cessation of the disease immediately on the removal of the troops even to a short distance.

British America.
—
Deductions from
Report.

British America.
Deductions from
Report.

Instead of entering, therefore, into any discussion as to the causes which seem thus to limit the range of these epidemics to particular localities, we shall merely call the attention of medical officers to the fact, that, on the outbreak of any serious disease of that nature, they may forthwith take into consideration the expediency of removing the troops from the locality where it originated, a measure which, whenever camp equipage can readily be procured, or the necessary accommodation obtained for them, is likely to be attended with but little temporary inconvenience, and may probably lead to the happiest results. We are aware that this suggestion is by no means a new one, having already been made and acted upon in various colonies, and we only advert to it now, for the purpose of bearing testimony to its apparent efficacy, and encouraging the adoption of it whenever circumstances will permit.

Faint table with multiple columns and rows, likely containing statistical data.

Main body of text, very faint and mostly illegible due to fading or bleed-through from the reverse side of the page.

APPENDIX TO REPORT
ON THE
SICKNESS, MORTALITY, AND INVALIDING
AMONG THE TROOPS SERVING
IN
BRITISH AMERICA.

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Showing the Admissions into Hospital and Deaths among the Troops serving in NOVA SCOTIA and NEW BRUNSWICK, from 1817 to 1836 inclusive.—Extracted from the Annual and Quarterly Medical Returns.

Table with columns for Years (1817-1836), Strength, Admitted, and Died, categorized by Classes of Diseases (Fever, Eruptive Fevers, Diseases of the Lungs, etc.). Includes a Total row at the bottom.

Showing the Admissions into Hospital and Deaths among the Troops serving in CANADA, from 1817 to 1836 inclusive.

Table with columns for Years (1817-1836), Strength, Admissions, and Deaths, categorized by Diseases of the Troops. Includes sub-sections for Fevers, Eruptive Fevers, Diseases of the Lungs, Diseases of the Liver, Diseases of the Stomach and Bowels, Epidemic Cholera, Diseases of the Brain, Dropsies, Rheumatic Affections, Venereal Affections, Abscesses and Ulcers, Wounds and Injuries, Punished, Diseases of the Eyes, Diseases of the Skin, and All other Diseases. The table concludes with a Total row and an overall summary for Admitted and Died from 1817 to 1836.

Showing the Number Sick in Hospital of the Troops serving in BRITISH AMERICA on the Muster-day of each Month, from 1817 to 1836 inclusive.

I. BERMUDA.

MONTHS.	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Aggregate Sick.	Average Sick in each Month.
January .	10	9	29	18	20	15	19	21	3	35	40	40	29	37	50	61	27	42	36	27*	568	28
February .	7	10	22	14	8	10	18	25	5	35	37	55	39	28	51	50	20	42	30	28	534	27
March .	7	11	21	18	18	21	27	21	4	41	42	53	55	34	50	62	25	38	28	30	606	30
April .	12	15	23	20	14	9	21	13	5	45	69	40	54	27	47	62	30	44	37	26	613	31
May .	4	18	17	13	16	18	21	21	5	34	50	32	43	27	82	60	36	46	31	29	603	30
June .	11	21	20	20	4	18	26	17	16	28	54	48	50	30	47	51	37	44	34	24	600	30
July .	8	20	21	20	10	16	17	17	10	32	54	46	51	32	62	62	67	22	29	37	633	32
August .	11	20	54	28	10	23	14	15	25	41	65	48	48	36	58	61	45	32	30	41	705	35
September .	9	21	56	18	18	24	24	5	24	43	72	30	32	29	61	61	32	39	29	39	666	33
October .	11	23	20	28	11	19	25	2	40	44	63	36	26	24	60	69	43	67	26	36	673	34
November .	9	27	21	29	15	15	17	2	46	43	44	39	21	61	64	34	35	36	38	38	634	32
December .	13	20	13	17	11	9	11	3	57	33	32	48	54	51	62	30	35	34	34	29	596	30
Total .	112	215	317	243	155	197	240	162	240	454	622	515	502	416	694	663	432	486	382	394	7431	372
Average	9	18	26	20	13	16	20	14	20	38	52	43	42	35	58	55	36	41	32	32	620	31

II. NOVA SCOTIA AND NEW BRUNSWICK.

MONTHS.	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Aggregate Sick.	Average Sick in each Month.
January .	122	91	65	73	62	94	78	61	90	69	62	48	52	90	84	63	68	47	59	72	1450	72
February .	127	101	85	69	47	96	91	55	99	72	53	45	67	64	73	63	68	46	65	69	1455	73
March .	143	87	73	76	55	95	83	65	75	67	52	55	60	70	79	76	71	40	64	62	1448	72
April .	159	83	77	55	71	81	80	65	86	76	54	51	47	49	67	72	49	40	66	58	1386	69
May .	165	99	56	78	80	70	85	62	128	75	76	70	64	56	72	72	45	75	80	44	1552	78
June .	186	89	64	78	79	81	87	70	118	86	74	84	46	78	66	58	56	69	71	74	1614	81
July .	190	78	59	64	124	81	76	62	117	69	81	71	59	80	102	65	45	80	79	58	1640	82
August .	186	107	61	65	107	98	84	89	123	71	78	67	93	98	101	66	53	121	62	61	1791	89
September .	140	67	80	60	109	111	90	112	71	82	70	78	78	90	122	74	60	69	63	54	1680	84
October .	116	95	74	65	101	84	71	89	93	82	79	73	100	80	97	60	58	57	58	67	1599	80
November .	112	59	88	61	76	75	50	73	79	59	48	50	81	72	71	59	42	58	60	60	1333	67
December .	80	55	76	57	81	75	50	61	57	47	47	52	67	81	86	78	51	75	76	81	1333	67
Total .	1726	1011	858	801	992	1041	925	864	1136	855	774	744	814	908	1020	806	666	777	803	760	18,281	914
Average	144	84	71	67	83	87	77	72	95	71	64	62	68	76	85	67	55	65	67	63	1523	76

III. UPPER AND LOWER CANADA.

MONTHS.	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Aggregate Sick.	Average Sick in each Month.
January .	235	153	171	121	140	125	92	101	113	71	126	123	135	136	126	121	95	104	99	102	2489	124
February .	239	147	180	141	157	114	102	98	104	77	94	127	137	132	152	111	86	97	99	116	2510	125
March .	245	139	158	129	146	118	122	109	114	89	97	125	153	134	127	104	83	75	96	121	2484	124
April .	211	135	139	132	143	139	118	143	107	67	116	151	175	149	119	105	82	97	112	113	2553	127
May .	177	131	148	142	121	123	113	150	97	75	128	89	146	162	142	131	94	100	75	115	2459	123
June .	176	131	129	104	163	119	147	146	95	96	130	181	170	172	149	162	112	115	95	107	2699	135
July .	172	135	127	141	210	157	121	171	126	113	161	204	154	148	134	141	120	120	105	114	2874	144
August .	155	240	191	145	175	151	114	177	140	136	219	217	181	155	147	208	125	97	117	125	3215	161
September .	143	243	151	172	235	152	131	189	142	133	158	250	174	191	177	146	118	114	119	101	3239	162
October .	136	183	183	155	155	106	123	147	104	128	153	198	151	156	122	101	107	97	112	97	2714	136
November .	133	171	126	142	154	113	114	119	101	130	152	167	145	124	110	83	82	100	102	100	2474	124
December .	145	148	115	101	116	102	82	101	63	98	153	128	114	145	173	111	91	102	109	121	2318	116
Total .	2173	1956	1818	1625	1915	1519	1379	1651	1306	1213	1687	1960	1835	1804	1678	1524	1195	1218	1240	1332	32028	1601
Average	181	163	151	135	160	127	115	138	109	101	141	163	153	150	140	127	100	101	103	111	2669	133

IV. NEWFOUNDLAND.

MONTHS.	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Aggregate Sick.	Average Sick in each Month.
January .	20	24	20	30	23	18	18	20	13	14	12	20	232	19
February .	21	22	19	28	9	26	20	31	17	11	13	19	236	20
March .	25	29	21	32	14	19	13	42	8	14	12	20	249	21
April .	23	11	14	29	11	18	21	43	9	12	14	17	222	18
May .	19	15	17	19	12	17	15	37	6	15	12	19	203	17
June .	21	17	20	18	14	21	18	38	7	15	11	14	214	18
July .	17	20	20	26	10	17	15	29	9	18	13	15	209	17
August .	20	10	17	15	20	12	18	22	10	13	18	16	191	16
September .	21	10	17	18	10	14	25	12	12	12	15	11	177	15
October .	15	18	26	21	14	13	16	16	15	12	15	16	197	16
November .	18	22	23	19	15	16	21	13	13	12	19	17	208	17
December .	24	20	27	22	17	17	19	13	10	17	19	21	226	19
Total .	244	218	241	277	169	208	219	316	129	165	173	205	2564	213
Average	20	18	20	23	14	17	18	26	11	14	15	17	213	18

* Includes 10 Invalids embarked.

Showing the Ages of the Troops composing the Service Companies of Corps stationed in the BERMUDAS, and the Deaths at each Age, from 1st January 1831 to 31st March 1837.

YEARS.	CORPS.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
		Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1830 No returns 1831	81st Foot 37th ,, . . . . .	..	..	..	..	..	..	..	..	..	..	..	..
		2	..	235	5	155	5	104	2	22	..	518	12
1832, 10 Months ..	37th Foot 71st ,, . . . . .	..	..	266	4	156	8	104	3	25	1	551	16
		..	..	212	1	151	5	105	3	4	1	474	10
	Total	2	..	478	5	307	13	209	6	29	2	1025	26
1st Jan. 1833 to 31st March 1834	71st Foot	3	..	207	6	119	7	68	9	19	4	416	26
April to Sept. 1834	71st Foot	1	..	203	..	223	5	51	..	19	..	497	5
Sept. 1834 to March 1835	30th Foot	10	..	300	2	140	2	57	1	..	..	507	5
	Total	11	..	503	..	363	..	108	..	19	..	1004	..
These corps having been employed for half a year only, the strength of each class has been added to- gether, and the mean taken as the strength for the whole year.		5	..	252	2	182	7	54	1	9	..	502	10
1st April 1835 to 31st March 1836	30th Foot	10	..	300	5	140	7	57	4	..	..	507	16
1st April 1836 to 31st March 1837	30th Foot	4	..	291	6	127	6	55	2	..	..	477	14

General Results from 1st January 1831 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st January to 31st December 1831	2	..	235	5	155	5	104	2	22	..	518	12
" " " " " " 1832	2	..	478	5	307	13	209	6	29	2	1025	26
" " 1833 to 31st March 1834	3	..	207	6	119	7	68	9	19	4	416	26
1st April 1834 " " " " 1835	5	..	252	2	182	7	54	1	9	..	502	10
" " 1835 " " " " 1836	10	..	300	5	140	7	57	4	..	..	507	16
" " 1836 " " " " 1837	4	..	291	6	127	6	55	2	..	..	477	14
Total for 6½ Years	26	..	1763	29	1030	45	547	24	79	6	3445	104
Do deduct a 25th part of the deaths, to ascertain the mortality of 6 years exactly . . . . .	..	..	..	1	..	2	..	1	..	..	..	4
Total for 6 Years	26	..	1763	28	1030	43	547	23	79	6	3445	100

Of the above, there died at Chatham, or on their passage home, the following numbers of each class :—

25 to 33 Years.	33 to 40 Years.	Total.
2	5	7

Showing the Ages of the Troops composing the Service Companies of Corps stationed in NOVA SCOTIA and NEW BRUNSWICK, and the Deaths at each Age, from 1st January 1830 to 31st March 1837.

YEARS.	CORPS.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
		Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1830	34th Foot . . .	2	..	433	4	94	1	22	..	..	..	551	5
	96th . . .	3	..	241	6	230	2	52	..	5	..	531	8
	Rifle B ^{de} , 1st Batt.	..	..	229	4	144	2	118	5	28	..	519	11
	Total . . .	5	..	903	14	468	5	192	5	33	..	1601	24
1831	8th Foot . . .	6	..	347	7	94	4	65	2	1	..	513	13
	34th . . .	2	..	389	2	58	4	21	..	..	..	470	6
	96th . . .	4	..	173	8	206	2	46	..	4	..	433	10
	Rifle B ^{de} , 1st Batt.	..	..	198	5	125	6	85	2	24	1	432	14
Total . . .	12	..	1107	22	483	16	217	4	29	1	1848	43	
1832	8th Foot . . .	6	..	352	..	154	3	26	..	..	..	538	3
	34th . . .	5	..	231	..	288	7	7	1	..	..	531	8
	96th . . .	9	..	197	1	296	8	25	1	4	..	531	10
	Rifle B ^{de} , 1st Batt.	3	..	121	4	161	3	231	5	9	..	525	12
Total . . .	23	..	901	5	899	21	289	7	13	..	2125	33	
From 1st Jan. 1833 to 31st March 1834 . . .	34th Foot . . .	8	..	161	1	332	9	19	5	..	..	520	15
	96th . . .	11	..	158	2	347	9	20	2	4	..	540	13
	Rifle B ^{de} , 1st Batt.	2	..	130	3	160	8	202	3	24	..	518	14
	Total . . .	21	..	449	6	839	26	241	10	28	..	1578	42
From 1st April 1834 to 31st March 1835 . . .	34th Foot . . .	6	..	73	..	375	4	31	..	2	..	487	4
	83rd . . .	8	..	256	4	225	3	34	..	6	..	529	7
	96th . . .	8	..	98	1	353	17	33	4	4	1	496	23
	Rifle B ^{de} , 1st Batt.	2	..	148	4	251	19	91	13	27	4	519	40
Total . . .	24	..	575	9	1204	43	189	17	39	5	2031	74	
From 1st April 1835 to 31st March 1836 . . .	34th Foot . . .	8	..	70	1	376	1	41	..	3	..	498	2
	43rd . . .	3	..	131	1	286	3	72	1	29	1	521	6
	83rd . . .	8	1	242	4	213	2	34	..	6	..	503	7
	Rifle B ^{de} , 1st Batt.	1	..	114	1	195	8	109	2	27	3	446	14
Total . . .	20	1	557	7	1070	14	256	3	65	4	1968	29	
From 1st April 1836 to 31st March 1837 . . .	34th Foot . . .	2	..	75	..	323	4	71	2	2	..	473	6
	43rd . . .	3	..	123	2	273	2	69	2	28	..	496	6
	83rd . . .	6	..	213	4	220	4	36	..	4	..	479	8
	Total . . .	11	..	411	6	816	10	176	4	34	..	1448	20

General Results from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st January to 31st December 1830 . . .	5	..	903	14	468	5	192	5	33	..	1601	24
.. .. 1831 . . .	12	..	1107	22	483	16	217	4	29	1	1848	43
.. .. 1832 . . .	23	..	901	5	899	21	289	7	13	..	2125	33
.. .. 1833 to 31st March 1834 . . .	21	..	449	6	839	26	241	10	28	..	1578	42
1st April 1834 .. 1835 . . .	24	..	575	9	1204	43	189	17	39	5	2031	74
.. .. 1835 .. 1836 . . .	20	1	557	7	1070	14	256	3	65	4	1968	29
.. .. 1836 .. 1837 . . .	11	..	411	6	816	10	176	4	34	..	1448	20
Total for 7½ Years . . .	116	1	4903	69	5779	135	1560	50	241	10	12599	265
Deduct a twenty-ninth part of the deaths, to ascertain the mortality of 7 years exactly . . . . .	..	..	..	2	..	5	..	2	..	..	..	9
Total for 7 years	116	1	4903	67	5779	130	1560	48	241	10	12599	256

Of the above there died at Chatham, or on their passage home, the following numbers of each class:—

PERIOD.	18 to 25 Years.	25 to 33.	33 to 40.	40 to 50.	Total.
1st January to 31st December 1830 . . .	..	1	..	..	1
.. .. 1832 . . .	..	1	..	..	1
.. .. 1833 to 31st March 1834 . . .	..	1	..	..	1
1st April 1834 .. 1835 . . .	1	4	2	..	7
.. .. 1835 .. 1836 . . .	3	1	..	1	5
Total	4	8	2	1	15

Showing the Ages of the Troops composing the Service Companies of Corps stationed in UPPER and LOWER CANADA, and the Deaths at each Age, from 1st January 1830 to 31st March 1837.

YEARS.	CORPS.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
		Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1830	15th Foot . . .	3	..	398	5	106	1	16	..	13	..	536	6
	24th ,, . . .	8	..	322	8	211	2	5	..	3	..	549	10
	66th ,, . . .	..	..	296	4	191	8	31	1	5	1	523	14
	71st ,, . . .	..	..	156	2	119	4	195	6	33	..	503	12
	79th ,, . . .	1	..	179	2	215	4	85	2	15	..	495	8
	Total . . .	12	..	1351	21	842	19	332	9	69	1	2606	50
1831	15th Foot . . .	3	..	377	5	97	5	8	3	8	..	493	13
	24th ,, . . .	8	..	282	6	192	4	5	..	3	..	490	10
	32nd ,, . . .	6	..	280	8	161	2	61	..	2	..	510	10
	66th ,, . . .	..	..	266	2	164	3	26	1	4	..	460	6
	71st ,, . . .	1	..	130	2	102	5	167	1	24	..	424	8
	79th ,, . . .	..	..	169	2	197	3	80	5	13	..	459	10
	Total . . .	18	..	1504	25	913	22	347	10	54	..	2836	57
1832	15th Foot . . .	2	..	213	11	228	27	65	11	15	4	523	53
	24th ,, . . .	5	..	228	8	275	16	12	..	4	..	524	24
	32nd ,, . . .	6	..	264	9	181	5	76	7	4	..	531	21
	66th ,, . . .	5	..	243	2	220	13	29	1	3	..	500	16
	79th ,, . . .	..	..	224	5	166	2	100	7	12	..	502	14
	Total . . .	18	..	1172	35	1070	63	282	26	38	4	2580	128
From 1st Jan. 1833 to 31st March 1834 .	15th Foot . . .	..	..	144	2	242	5	31	..	5	..	422	7
	24th ,, . . .	4	..	133	1	322	7	27	1	4	..	490	9
	32nd ,, . . .	4	..	223	4	164	5	83	3	6	..	480	12
	66th ,, . . .	5	..	133	5	298	5	44	1	10	1	490	12
	79th ,, . . .	2	..	188	4	172	2	108	4	16	..	486	10
	Total . . .	15	..	821	16	1198	24	293	9	41	1	2368	50
From 1st April 1834 to 31st March 1835 .	15th Foot . . .	..	..	139	2	250	5	30	1	6	..	425	8
	24th ,, . . .	1	..	81	2	322	12	30	2	5	1	439	17
	32nd ,, . . .	4	..	216	3	155	11	77	2	7	..	459	16
	66th ,, . . .	5	..	84	2	256	4	57	1	9	1	411	8
	79th ,, . . .	2	..	175	2	162	5	103	3	20	3	462	13
	Total . . .	12	..	695	11	1145	37	297	9	47	5	2196	62
From 1st April 1835 to 31st March 1836 .	15th Foot . . .	..	..	143	1	249	7	42	3	8	..	442	11
	24th ,, . . .	5	..	99	5	301	10	43	3	3	..	451	18
	32nd ,, . . .	4	..	152	1	196	1	84	3	12	..	448	5
	66th ,, . . .	2	..	132	3	237	4	51	..	12	..	434	7
	79th ,, . . .	1	..	188	8	167	2	81	2	20	..	457	12
	Total . . .	12	..	714	18	1150	24	301	11	55	..	2332	53
From 1st April 1836 to 31st March 1837 .	15th Foot . . .	6	..	136	6	220	3	49	..	8	..	419	9
	24th ,, . . .	5	..	96	1	276	5	50	4	4	..	431	10
	32nd ,, . . .	1	..	157	3	184	3	82	2	17	1	441	9
	66th ,, . . .	5	..	154	3	222	7	58	2	13	..	452	12
	Total . . .	17	..	543	13	902	18	239	8	42	1	1743	40

General Results from 1st January 1830 to 31st March 1837.

PERIOD.	Under 18 Years.		18 to 25.		25 to 33.		33 to 40.		40 to 50.		Total of all Ages.	
	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died	Strength	Died
1st January to 31st December 1830 .	12	..	1351	21	842	19	332	9	69	1	2606	50
,, ,, 1831 .	18	..	1504	25	913	22	347	10	54	..	2836	57
,, ,, 1832 .	18	..	1172	35	1070	63	282	26	38	4	2580	128
,, 1833 to 31st March 1834 .	15	..	821	16	1198	24	293	9	41	1	2368	50
1st April 1834 ,, 1835 .	12	..	695	11	1145	37	297	9	47	5	2196	62
,, 1835 ,, 1836 .	12	..	714	18	1150	24	301	11	55	..	2332	53
,, 1836 ,, 1837 .	17	..	543	13	902	18	239	8	42	1	1743	40
Total for 7½ Years . . .	104	..	6800	139	7220	207	2091	82	346	12	16561	440
Deduct a twenty-ninth part of the deaths to ascertain the mortality of 7 years exactly . . . . .	..	..	..	5	..	7	..	3	..	..	..	15
Total for 7 Years	104	..	6800	134	7220	200	2091	79	346	12	16561	425

Of the above there died at Chatham, or on their passage home, the following numbers of each class:—

PERIOD.	18 to 25 Years.	25 to 33.	33 to 40.	Total.
1st January to 31st December 1830 .	1	2	..	3
,, ,, 1831 .	2	1	..	3
,, ,, 1832 .	1	3	2	6
,, 1833 to 31st March 1834 .	1	3	1	5
1st April 1834 ,, 1835 .	..	3	..	3
,, 1835 ,, 1836 .	2	2	..	4
,, 1836 ,, 1837 .	4	3	..	7
Total	11	17	3	31

Showing the Number of Admissions into Hospital and Deaths among the Troops serving in UPPER and LOWER CANADA, in each Month from January 1817 to December 1836 inclusive.

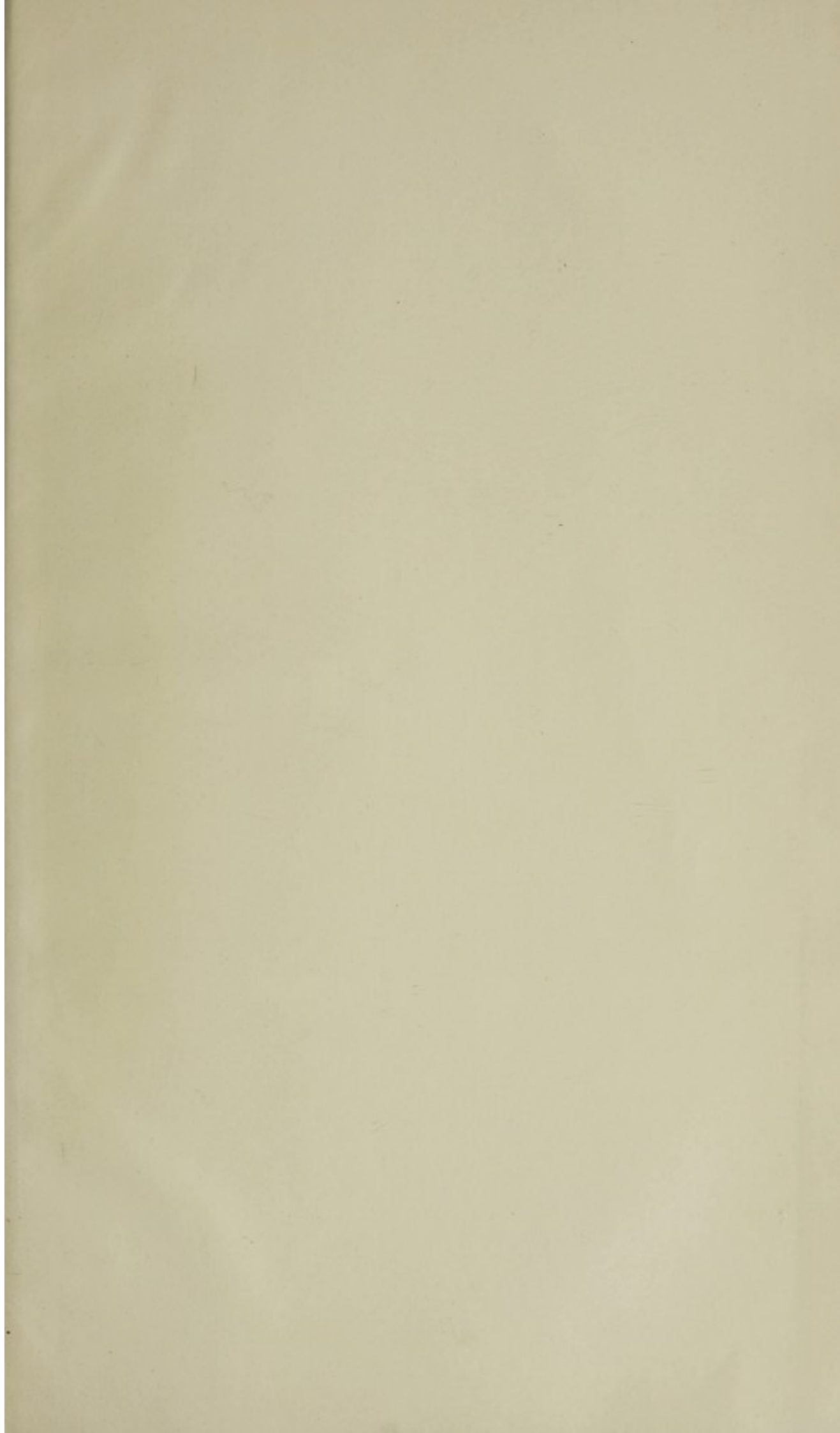
I. ADMISSIONS.

MONTHS.	By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.			By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.		
	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.
Years .	1817			1818			1819			1820			1821					
January .	138	9	208	174	11	97	97	13	144	76	34	126	68	8	116			
February .	121	8	242	154	11	87	79	12	134	61	22	108	91	12	90			
March . .	114	4	189	119	14	95	80	5	107	64	36	83	101	14	88			
April . .	170	5	163	146	19	112	82	14	125	112	57	108	155	11	107			
May . . .	136	10	166	121	7	129	159	6	120	135	30	121	224	9	114			
June . . .	181	12	200	135	18	143	87	12	115	132	18	106	207	7	163			
July . . .	225	10	170	182	25	141	140	10	129	179	19	131	209	12	178			
August . .	267	47	128	184	12	199	265	6	147	238	13	115	241	13	154			
September .	209	30	138	148	12	166	219	8	112	199	11	134	226	12	145			
October . .	137	9	118	155	11	184	123	17	108	189	15	123	157	15	116			
November .	157	8	142	116	10	155	95	8	100	134	15	113	108	8	113			
December .	146	7	122	73	5	123	75	15	124	107	13	104	99	6	106			
Total .	2001	159	1986	1707	155	1631	1501	126	1465	1626	283	1372	1886	127	1490			
Years .	1822			1823			1824			1825			1826					
January .	117	40	156	113	19	91	103	10	101	86	13	72	56	9	73			
February .	60	24	93	102	10	66	90	10	112	99	14	85	52	10	57			
March . .	89	13	94	94	17	64	82	7	86	152	16	82	76	30	50			
April . .	149	8	99	108	13	82	141	11	93	108	9	59	88	18	80			
May . . .	152	12	97	129	18	111	149	25	95	122	24	79	81	16	67			
June . . .	167	13	129	141	11	126	135	17	92	132	24	85	87	15	80			
July . . .	209	20	117	203	21	92	192	24	112	162	27	107	167	9	100			
August . .	236	19	102	183	27	142	202	40	124	160	11	97	255	19	107			
September .	212	15	107	193	35	100	191	10	94	138	13	88	182	16	99			
October . .	96	9	117	139	22	92	158	11	95	93	12	66	159	15	99			
November .	86	14	100	132	17	93	112	9	83	123	7	70	146	15	98			
December .	82	11	89	94	16	70	86	20	69	75	8	61	128	11	82			
Total .	1655	198	1300	1631	226	1129	1641	194	1156	1450	178	951	1477	183	992			
Years .	1827			1828			1829			1830			1831					
January .	125	13	101	101	7	114	143	10	127	108	9	137	121	16	134			
February .	83	9	82	100	9	96	143	8	116	103	8	138	110	16	100			
March . .	70	8	87	94	9	117	102	11	98	86	10	124	107	16	119			
April . .	141	10	94	155	14	125	188	16	115	103	9	125	109	25	96			
May . . .	152	12	113	144	10	125	172	22	139	129	12	126	123	30	152			
June . . .	205	14	105	212	22	191	175	7	122	126	18	129	135	30	149			
July . . .	226	8	175	289	23	157	242	12	176	178	14	159	200	46	115			
August . .	267	9	189	382	13	149	245	13	206	228	10	156	223	48	125			
September .	267	12	168	454	12	142	242	15	179	232	13	144	232	55	96			
October . .	216	6	160	258	11	129	164	7	143	154	7	149	186	20	109			
November .	198	5	128	249	15	135	155	13	160	122	12	152	217	18	129			
December .	148	5	123	188	10	98	145	10	138	131	9	123	109	19	156			
Total .	2098	111	1525	2626	155	1578	2116	144	1719	1700	131	1662	1872	339	1480			
Years .	1832			1833			1834			1835			1836					
January .	115	8	93	105	8	70	112	6	86	94	20	112	90	10	112			
February .	111	10	72	106	8	76	66	3	67	92	11	107	95	12	98			
March . .	116	14	78	107	12	52	77	3	64	112	8	107	108	19	126			
April . .	152	14	84	124	10	71	98	10	70	119	6	108	103	15	122			
May . . .	190	7	77	142	23	82	121	8	107	123	10	80	116	12	116			
June . . .	297	6	105	151	25	89	141	5	100	127	5	121	90	19	129			
July . . .	292	8	80	167	25	81	413	7	98	120	18	119	188	14	133			
August . .	572	8	81	184	5	92	398	7	93	195	19	125	219	15	147			
September .	325	9	70	182	12	131	279	14	101	151	15	113	159	13	109			
October . .	100	11	72	126	15	106	172	5	104	146	9	99	127	13	91			
November .	140	11	61	113	19	113	137	5	89	122	5	102	136	15	105			
December .	132	8	85	87	6	107	111	2	110	116	6	105	120	10	77			
Total .	2542	114	958	1594	169	1070	2125	75	1089	1517	132	1298	1551	167	1365			
MONTHS.																		
				Total for 20 Years.														
				Acute.	Chronic.	Surgical.												
January .				2142	273	2270												
February .				1918	227	2026												
March . .				1950	266	1910												
April . .				2551	294	2038												
May . . .				2820	303	2216												
June . .				3063	298	2479												
July . . .				4183	352	2570												
August . .				5144	354	2678												
September .				4440	332	2436												
October . .				3055	241	2290												
November .				2798	229	2241												
December .				2252	197	2072												
Total .				36,316	3366	27,216												

Showing the Number of Admissions into Hospital and Deaths among the Troops serving in UPPER and LOWER CANADA, in each Month from January 1817 to December 1836 inclusive—continued.

II. DEATHS.

MONTHS.	By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.			By Acute Diseases.			By Chronic Diseases.			By Surgical Diseases.		
	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.	By Acute Diseases.	By Chronic Diseases.	By Surgical Diseases.			
Years .	1817			1818			1819			1820			1821					
January .	6	..	2	1	2	..	..	1	..	1	2	..	1	2	..	
February .	2	1	1	1	4	..	2	1	..	..	..	..	2	..	..	
March .	4	..	..	3	2	..	1	2	..	..	1	1	..	1	1
April .	5	..	..	2	2	..	3	1	..	3	1	..	1	1	..	
May .	1	1	..	..	3	1	1	..	..	2	2	..	5	1	..
June .	2	1	4	1	4	..	..	2	1	2	2	1	..	..	..
July .	2	..	..	1	3	3	..	1	..	2	1	..	2	1	1	
August .	15	1	1	3	1	2	1	2	..	1	..	..	2	..	1	
September .	6	4	..	5	3	..	3	..	..	..	..	..	5	..	..	
October .	6	2	..	2	2	..	3	..	..	..	..	1	3	..	1
November .	4	5	..	3	1	..	2	2	..	1	1	..	2	..	..	
December .	5	2	..	1	2	1	2	2	..	1	..	..	1	1	..	
Total .	58	17	8	23	29	7	18	14	1	15	9	4	24	8	4			
Years .	1822			1823			1824			1825			1826					
January .	..	1	..	3	3	..	4	2	..	..	2	..	1	1	..	
February .	1	1	..	..	1	..	2	1	..	..	5	..	1	2	..
March .	5	5	..	6	2	..	1	3	..	..	3	..	2	6	..	
April .	1	1	..	..	2	..	2	1	..	..	1	..	1	4	..
May .	2	4	..	2	..	..	1	..	..	..	3	..	..	2	..
June .	..	1	..	1	..	..	..	2	..	1	3	..	..	..	..
July .	..	1	..	1	2	..	1	..	..	5	3	..	3	3	..	
August .	..	..	..	3	1	..	2	1	..	6	2	..	3	3	..
September .	..	..	..	2	..	..	5	1	..	2	2	..	3	1	..
October .	1	1	..	2	1	1	3	2	..	1	2	..	2	2	1			
November .	1	..	..	2	1	..	1	3	..	3	3	..	..	1	1
December .	1	..	..	3	1	..	1	1	..	2	..	..	..	1	1
Total .	12	15	..	25	14	1	23	17	..	20	29	..	16	26	4			
Years .	1827			1828			1829			1830			1831					
January .	6	4	..	2	..	..	4	1	..	1	2	..	2	2	1	
February .	2	1	..	2	..	..	2	..	..	..	..	..	3	..	..	
March .	3	3	..	..	1	..	1	1	..	1	2	..	2	4	..	
April .	3	3	..	1	1	..	5	2	..	..	..	..	..	1	..
May .	3	4	..	1	..	1	1	2	..	2	6	..	2	1	..			
June .	2	1	..	1	2	..	1	1	..	3	2	..	2	5	..			
July .	..	3	..	1	1	..	1	..	..	2	..	3	5	4	..	
August .	3	..	..	1	1	..	1	3	..	4	1	..	1	3	..	
September .	5	1	1	6	1	1	4	1	..	..	4	..	..	2	..
October .	1	..	..	1	1	1	..	2	..	2	5	..	2	4	..	
November .	1	1	..	3	1	..	..	1	..	..	..	..	1	2	..
December .	4	..	..	..	..	..	..	..	..	1	3	..	1	1	..
Total .	33	21	1	19	9	3	20	14	..	16	27	3	21	29	1			
Years .	1832			1833			1834			1835			1836					
January .	1	2	1	..	1	1	1	2	..	..	3	..	2	1	..	
February .	3	1	..	2	3	..	1	..	1	2	..	..	1	2	..	
March .	..	2	..	..	1	1	..	1	..	1	..	..	1	1	..
April .	..	6	..	1	2	..	1	..	..	2	3	1	2	5	..	
May .	1	1	..	..	2	..	1	..	..	2	..	..	1	2	..
June .	38	2	..	..	1	3	1	2	..	..	3	..	3	3	..
July .	11	1	..	..	2	..	16	3	..	..	1	..	..	..	..
August .	35	1	..	3	..	..	18	1	..	..	..	..	1	..	..	
September .	4	..	..	1	1	1	2	2	..	1	..	1	..	1	..	
October .	2	1	..	1	..	..	1	1	..	3	1	1	2	..	..	
November .	2	1	..	..	..	..	2	1	2	2	1	..	2	2	..
December .	4	2	..	2	1	..	1	1	..	2	3	..	3	2	1			
Total .	101	20	1	10	14	6	45	14	3	15	15	3	18	19	1			
				MONTHS.			Total for 20 Years.											
							Acute.	Chronic.	Surgical.									
				January .			36	35	5									
				February .			31	23	3									
				March .			31	41	3									
				April .			33	39	1									
				May .			28	34	2									
				June .			58	37	9									
				July .			53	29	8									
				August .			103	21	4									
				September .			54	24	4									
				October .			38	27	6									
				November .			32	27	3									
				December .			35	23	3									
				Total .			532	360	51									



The image shows a page with a very faint grid pattern, characteristic of a ledger or account book. The grid consists of approximately 10 columns and 20 rows. The lines are extremely light and the overall appearance is that of a blank or nearly blank page with a pre-printed structure. There is no legible text or data within the grid.

