

Sanitary concerns

Publication/Creation

1854-1855

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on
Sanitary Concerns

FRRC

Reports of Medical Officers
on the Sanitary Condition
of the Army in the Crimea
during the months

of Nov. & Decr. 1854 - & Jan^y
Febr^y 1855

'Sanitary concerns'

Metereological conditions in Crimea, 1822-34 (from Demidoff's Voyage)

Monthly obs^{ns} on A & S returns, June & July 1854

Turkey

Bulgaria

Cholera in French army (in notes for July 1854)

Summary of monthly returns, 1st Div Nov. 1854 & Dec. 1854

Exciting causes of Disease, Grenadier Guards, Dec. 1854

Monthly summary, 2nd Divⁿ Dec. 1854 (2 versions)

— 4th Div Dec. 1854

Monthly summary 4th Div Jan. 1855

— Light Div Jan. 1855

— Light Div Feb. 1855

— 2nd Div. Feb. 1855

Weekly report 4th Div. 17-24 Feb. 1855 & 25 Feb - 3 Mar. 1855

— 3rd Div. Mar. 1855

Rough notes on March returns Mar. 1855

Over rough notes on returns n.d.

Sickness in cavalry & artillery May - July 1855

Remarks on Dr ending 30 Sept 1855

Mean Temperature at Lympheuspo from 1st Jan'y
1822 to 1st Jan'y 1834 with an extra exposure bar shaded from
the north: at an elevation of 840 English feet above the sea. From
Severidoff's Voyages 1822 2nd Edition (The temperatures have been reduced
to Fahrenheit scale)

	Sunrise Minimum	2 to 3 p.m. Maximum	Mean of 24 hours
Jan'y	28.5	36.2	32.0
Feb'y	29.3	39.6	22.0 (So is original Fahrenheit temperature see below)
March	36.0	48.9	42.8
April	43.8	60.6	52.2
May	54.6	70.7	61.4
June	58.4	77.7	68.1
July	60.2	79.6	70.0
August	55.2	75.9	65.1
September	49.1	64.7	57.9
October	40.9	52.1	45.9
November	35.1	43.6	38.0
December	30.4	38.7	33.5
Year	<u>43.2</u>	<u>57.1</u>	<u>50.1</u>

July is usually the warmest month and January the coldest
(Facts)

The maximum of the year varies from 84° (in 1831) to 95° (in 1834)

The minimum " " " " 9° (in 1824) to 20° (in 1828)

The greatest heat is shown the 20th June and 10th August
" Cold " " 6 Sept " 15th February

The first frost was date " 8th Oct the 4th times 23rd Oct (1839) 25th Sept (1835)
" last " " 6th April " 18th March (1828) 29th April (1839)

The mean temperature at Nitcha on the South Coast in
1836-27 & 30 was 54.6 and at Sympheuspo 50.9 difference
 3.5 . Calculating from the difference of longitude between
Sympheuspo and Nitcha this gives a decrease of temperature
of 1° for every 220 feet of elevation

Corrected
Meteorological Observations
at Sympheuspo
from 1822 to 1834

On the General
State of Health
of the Troops
and causes of
any particular
disease which
may be prevalent
in reference to
the numbers
reported sick
in the several
Regiments

The general health of the Troops
serving in Turkey during the month of
June has been good, and the mortality
I think may be considered moderate.

At Gallipoli some cases of
fever occurred which assumed a typhoid
form and in several of them the disease
was complicated with affections of the
Lungs. At Scutari too the 6th Regiment,
which occupied the old position of the
Infantry Barrack had some severe and
fatal cases of fever. There was a
tendency to looseness of the Bowels towards
the end of the month but in no instance
did the complaint assume an aggravated
form.

Several complaints have been
common but as they were all brought
out from England we may look for
a gradual diminution of their number
each succeeding month. The Ratio of
Sick to well has been 1st 307 per thousand
and the ratio of deaths to strength has been
0.659 per thousand.

The causes of
any extraordinary
number of casualties
which may have
occurred in any
Regiment

The Deaths which have taken
place have been chiefly from fever
and affections of the Lungs but no
extraordinary number of deaths has
occurred in any Regiment in the
Command

Memoranda, for July 1857.
In reference to the foregoing Return.

In my observations on the Return for the month of June, I noticed that looseness of the bowels had become frequent among the men. This disposition to Diarrhoea became almost general amongst both Officers, and men in all the Camps viz and about Varna in the course of the present month, - and in the 21st Asiatic Cholera which had been prevailing for some days previous in the French Camp and Hospital, made its appearance in the General Hospital at Varna, and spread with great fatality during the remainder of the month. On the 22nd, the disease broke out in the Light Division at Deuna, the most distant Camp from Varna of any of the British force. In the Light Division the disease spread with greater rapidity, and fatality than even in the General Hospital at Varna, and it continued to devastate their ranks notwithstanding the removal of the Division to an eligible locality, called monasteria, about five miles from Deuna. Up to the end of July the Disease was confined chiefly to Varna and the Light Division; but from the close oppressive state of the weather, there is very little probability of the other Divisions remaining long exempt from it. The 4th Regiment stationed at Gallipoli, has suffered as much as any other Corps from the Disease.

In the General State of health of the Troops; - and Causes of any particular Disease, which may be prevalent in reference to the Numbers reported Sick - in the several Regiments.

The Cause of the increased mortality this month over that of the month of June has been the prevalence of Asiatic Cholera, and the 4th Foot, - 7 Fusiliers, 23 Fusiliers, 488 Regiment, have lost nearly an equal number of men from the Disease, - viz. 21: 21: 20: and 21 - Total on these Regiments 83. In the whole face 195 by Cholera.

(signed) John Stale
Insp^t Genl M^{or}phy

The Causes of any extraordinary Number of Casualties which may have occurred in any Regiment.

mean?

The French lost at Gallipoli from the outbreak of cholera in July to the 20 Aug^r 2 Generals 46 other Officers - and 808 men
Stale

Bo. Med. Officers
Monthly Notes
Observations

on the adjutant
Generals' Returns
for
June, and
July - 1854

Guadalupe Guard Camp at Tulari from 29 April to 12 June
from Malibu Bureau from 13 June to 30 June

Goldstücken für 1 Mark 12 Stück
Borne für 15 x 2 Stück
für 1 Mark

1. ^{FRN 6/2} ~~Remained from 1890~~
 while the rest remained at
 South
 and then remained toward
 the end of the 1890s and
 remained to occur

Slight but definite affections chiefly
feeling the forenoon days &
infirmities prevailed in
this group - and one case
of pneumonia in broken
down drunkard proved
fatal. Cases of gonorrhea
in various forms & the group
at large proved fatal also

Institutul Francez - Sentari Barna Same a Godeanu
from mella

Beyond some cans
of ammonia white and
hot again through
treatment - there has been
little sickness & no deaths
in this country during the 2-

42nd Highlanders — Arrived from England at Sestari
9th June - left for Parma 14th June
thence on the 15th June - Parma to 30

(95 Cases)
Numerous cases of
General brought out by
the old form of
Dysentery - from
airial plane followed
by the drug -
The case of woman pregnant
fatal - from attack of
Dysentery - similar to
that in the hospital
at the

79 Highlanders - Emb. P. at Plymouth 4 May landed at Sature 27 May -
Left Sature 130 landed at Barina 15 June
38 cases gonorrhea disease brought with them this day - but the
disease prevalent in it & no death occurred -

932 *Junco palli* - Gallipoli prom 12 April to 6 May
Santori prom 7 May to 12 Sept
barna - 13 Sept to 13 Nov

Commerce & Industry from
banking in the vicinity of Jackson
and General Court have
been the primary direct &
indirect causes of the rapidly assumed
form of development.

2nd Division

2nd Division

30 Ref^B - Embarked at Gibraltar at the beginning of May arrived at Sautari 11 May: Left Sautari for Darma 16 June - on leaving Sautari 37 sick bore trans-ferred to the General Hospital there - The Regiment has been healthy since its arrival. The fatal case of fever that occurred in it took place in a private servant who was attacked with the disease on the 14th of June and died a week after his arrival. A case of Dysentery attacking the Gun and some pit & aciculous eruption with the throat cavity proved fatal -

55 Regtth arrived from Malta at Scutari 21 May - left for barna 17 June. Primary disease
latent affections. Slight fever, & venereal lumps
no death took place in this Regt

95 *High*
June arrived at Scutari from Portmouth 24 April remained at Scutari till
17 June when it embarked for Varna. landed at Varna & some
mild form of scarlatina affections were the most prevalent complaint
& cases of small pox occurred & 1 proved fatal. The men contracted the
disease on board the *Madagascar* where a sailor was first attacked with it.
They all bore marks of vaccination. While I was on duty I think did not meet any indigenous
disease. One case of diphtheria in a confirmed drunkard proved fatal.

2nd Division

- | | | |
|-------------|---|--|
| 41 Regiment | arrived from Malta
at Scutari 13 April 1854
left for Varna about
the 18 th June | slight fever - Catarrhal
affections and catarrh of the
apparatus have been the most
prevalent complaints in
these Regts. - The number of
persons who have been
taken ill ^{in the division} is
in them, but only two casualties,
one a case of fever & the other
a case of pneumonia both in the
49 th Regt. took place - |
| 47 DO | | |
| 49 DO | | |

3rd Division

- 4th Regt - arrived at Gallipoli from Malta 10 April - and remained at Gallipoli
 at the end of June - The Regt arrived at Malta from England on the
 25 March

Rheumatic affections were common among the younger
 men who have suffered severely - and several of the
 instructions from other Corps the Surgeon seems to think contracted
 several complaints purposely before their embarkation -

- 1st Royals - arrived at Gallipoli from Plymouth 5 May - remained at Gallipoli
 till 21 June when they embarked for Varna -

The Regiment has enjoyed good health since its arrival
 in Turkey, and only one case, a case of consumption has
 proved fatal

- 4th Regt - embarked at Malta on the 4th & arrived at Gallipoli
 on the 11 April. Left Gallipoli for Varna 24 June & arrived
 there on the 28th - Common continued fever seems to have
 been the most prevalent complaint during the quarter & of these
 two died in the Garrison Hospital -
 a case of dysentery from Dunkirk also proved fatal

- 28th Regt - embarked at Malta for Gallipoli 7 April & arrived there
 on the 16 - left Gallipoli for Varna 23 June & arrived
 27 -

Fever from exposure to the sun in the works at Gallipoli
 Phlegmon & diarrhoea appear to have been the most
 prevalent complaints in this Corps - but the diseases
 have for the most part mild, and only one casualty, a
 case of fever occurred -

- 38th Regt - Stationed at Gallipoli & Varna. arrived from Dover England
 a good deal of sickness occurred in this Regt - a fever - Catarrh
 of the bowels & Venereal affections have been the most prevalent
 complaints of four cases of fever proved fatal

- 58th Regt - Landed at Gallipoli on the 12 April from England
 and left for Varna 22 June - The Regt has enjoyed remarkably
 good health - The only casualty which took place was from
 Phthisis in a man under treatment for Venereal

7th Fusiliers

2nd Division - P.2.

FRR6/3

Arrived at Scutari 22 April

The Regt enjoyed good health and only one casualty occurred. It is returned under the head of dysentery, but ought more properly to have been included under that of Pneumonia from the post mortem appearances - The soldier got badly handled some days & died 36 hours after his admission into hospital.

23rd Fusiliers - Embarked for Ist month 4 April arrived at Scutari 28 April - Left Scutari 29 May & arrived at Tarna 31 May -

The Regt has enjoyed good health - during the quarter & only one casualty has occurred in it - Several complaints have been numerous

33rd Regt - arrived at Scutari from England 17 April Embarked at Scutari for Tarna 29 May

The Regt has been remarkably healthy one casualty only having occurred a case of dysentery

19th Regt - arrived at Scutari 10 May from England ^(Gowen) Embarked for Tarna 29 May & arrived here on the 30th

A great amount of sickness has prevailed in this Regt, but the lady has two cases of dysentery & one of cholera & one proved fatal on the 17 June - This was the first case of that fearful complaint that occurred in this army.

77th Regt - arrived at Scutari from Malta on the 17 April and left for Tarna on the 29th May -

The Regt has enjoyed tolerable health since its arrival in Turkey - one casualty a case of Cholera has occurred

88th

This Regt arrived from England on the 19 April & was stationed at Scutari till the 29 May when it embarked for Tarna. Several eruptions of dysentery & several have been prevalent. Only one casualty a case of fever has occurred, but the Regt has had more sick than most others

2nd Bat R B

Left Malta for Gallipoli 31 March arrived here 4 April

This Regt has enjoyed but indiff. health & three casualties have occurred - one a case of fever - one of pneumonia & one of abscess. a case of gangrene in one of the limbs resulting from a wound of the foot & edema of the foot.

1 R^g Dragoons Disembarked from England 24 June -
no sick with the exception of 2 cases of Cholera

8 Lancers - just arrived no sick

3 L^g Dragoons do do

17 Lancers - Arrived 22 May -
Dysentery the most prevalent complaint

5 Dragoon Guards - just arrived healthy & all well

1 Troop of Horse artillery - some cases of dysentery
occurred in it

1060 Sappers - One case of Cholera returned but no remark
made as to the Provosts!

Notes concerning present
and sanitary condition
of the different divisions
of the Army in Portugal
for sanitary purposes
to June 1854

St

The French have admitted 40 cases of Cholera into Hospital 12 of which have died and 26 remain under treatment - They are chiefly from amongst the men recently arrived from Gallipoli. only a few cases have occurred in the Camp near this, and some men have been taken ill in Hospital who were laboring under Dysentery

Shall

19 July 1854

20 The French have lost 14 more men by Cholera last night, and have admitted 15 - leaving 27 under treatment - Several cases have been admitted from the camps on the low ground between the hill & the lake very few from the camp on the top of the hill - Several men have been taken in the wards into which the Cholera patients were admitted

21

The French have lost 5 cases of Cholera in the night and have 47 in Hospital -

Cholera has made its appearance in one of the ground floor wards, facing the north, of

our own Hospital - The one that had so much
feels under the Erkofloor when repaired,
one man died in the night. Private Wm Drake 95th Regt
who had been under treatment in the Hospital for 10 days
Symptoms of Cholera came on in the evening & he died at
1 1/2 a.m. This morn.

Pr. John Kilmartin 49th Regt. admitted on the 3rd with
Fever - bowels became relaxed three days ago. & early
this morn. Symptoms of Spasmodic Cholera came on
and he is in a state of perfect collapse now - died at
at 1/2 past 1 P.M.

A man of the Rifles of the name of
was admitted from the Invalid Camp near Varna about
mid-day in a state of complete collapse, and died
about 10 at night

Two slight cases were admitted into the Hospital tent
of the 28th and did well.

22nd

The French have lost nine cases of Cholera since
yesterday and have 57 under treatment today.
The case of dysentery died last night as well as the case
of Cholera and another case of Cholera, a man of the
Rifles also, has been admitted this morn. from the
Depot Camp near this place - died at 4 P.M.

A man of the Lancers of the name of Thomas - admitted
about the same hour - Case mild

23. Taken ill in the Sussial ^{camp} two men - both dangerous.
Aman of the Sappers brought in this m^{or} of ~~harrisa~~
from camp. Ironbound - Ill three days with diarrhoea
& ^{and other} ~~Diarrhoea~~
Two cases of ~~cholera~~ of the 33rd from the same bank
sent in with mild Cholera taken ill yesterday -

Three men of the ~~Harikins~~ ^{Infantry} attacked with
Cholera in camp last night - One dangerous
two doing well -

The French have admitted 39 - 24 from
camp 16 taken ill in Hospital - 19 men have
died - 82 remain under treatment

24 French have lost about a dozen bullock car-
rds inclined to give precise information from forming
they have got typhus fever in their Hospital
(my servant not good authority certainly) informs me he
was told by one of the French Hospital attendants that they
had lost 50 - Two men of the 38 taken ill in
Camp, both bad cases, The men men of the Dragons
doing well -

8 admitted from the Hospital patients, & two
from camp - and four died -

The report from Devna is that Cholera broke
out at nine o'clock am on the 22 - Since that

period up to the date of D. Alexander's report of
his no 5 49 cases had occurred &
16 Deaths leaving 33 under treatment
many of which were in a very dangerous
state -

The French have several cases of typhus
fever in Hosp

25 - 9 admitted since yesterday's report
and four have died - 12 under treatment
The French have about 100 under treat-
ment for Cholera - principally from the surrounding
camps - and they have lost 25 since yesterday
morning.

2 men taken sick in the Dept. - attended by Med. Officer
of the 50th.

26 11 admissions since ten a week yesterday, 8 died
among of the 38th died in camp yesterday, & one the day before -
a third man left behind yesterday has fallen -
a man of the 44th taken ill last night - taken to day - a very short
time in bed. despite -
Deaths 8 admissions & two deaths since yesterday two cases serious

The French have lost 15 & have about 100 under treatment
The first case appeared in a woman about the middle of June & was fatal
This man came direct from Africa & never touched at home - On
the 3rd of the present month it reappeared in the Hosp & has
continued ever since - They are getting cases from all
the camps now

Decr 1854

FRR6/5

Summary of Monthly Returns for Nov. 1854.
First Division.

The accompanying Monthly Returns of Sick shew a considerable increase of sickness during the present as compared with that of the last month and which from the reports of the different Medical Officers of the Division is attributable partly to the great amount of Duty the Men have had to perform and partly to the constant exposure to wet and cold, their clothes having scarcely been dry since the 14th of the month, the want of sufficient time and means of cooking, and lastly their flimsy habitations the Tents neither affording sufficient protection from wet or cold.

This increase of sickness it will be perceived has been chiefly in Bowel complaints Cholera, Diarrhoea, and Dysentery (and some cases of Moist Gangrene of the Toes have occurred) the former having for the most part affected Regiments and Bnfts lately arrived in the Country.

I think the Cholera in this instance more attributable to exposure to wet and cold than to epidemic influences and corroborative of this I may state that the 42nd and 79th Highlanders both of which had passed through its ordeal in Bulgaria and on their way to the Crimea, and had become quite healthy again until they were directed to occupy an exposed ridge 700 feet above the level of the Sea when they were again attacked while those of the 93rd Highlanders who were encamped at the foot of the hill and in comparative shelter have hitherto escaped the Disease. It generally runs a rapid course

colic, hanging down almost always present whilst the General symptoms vomiting and cramps, are less prominent. Collapse quickly ensues and indeed in many instances the Patient is brought to Hospital in this state, and these cases are too frequently fatal.

The Diarrhoea in many of the debilitated and cachectic looking men, is evidently of the scorbutic character, and Scurvy has shown itself in several Regiments. The greater part of these cases are usually benefited by the use of Lime juice. The appearance of Scurvy may I think be ascribed more to the want of a proper admixture of vegetables than to the want of fresh meat. I am aware that this Diarrhoea is much more extensive than appears on the face of the Returns, as perhaps fully 100. men on an average in each Regiment at least as far as the 1st Brigade is concerned labour under Diarrhoea while they continue at their Duty. The cases of Dysentery too have been of a graver character, many of them having of late proved fatal.

Duty. I have not been able to ascertain the exact amount of Duty performed by the men. Each Battalion and Regiment performs this independently, and which depends chiefly on its situation and Camp. Strength, &c. and often varies exceedingly. While some Light, French and covering parties others are employed strengthening our position in the rear.

near, on outpost duty and Vigils &c. but all admit that they are overworked that often when in the trenches they are so overcome with fatigue and sleep it is almost impossible to arouse them on any account. The Grenadier Guards have about three nights out of seven in bed. The Fusilier Guards are half on duty during the day and one third at night independent of furnishing fatigue parties and the 9th Regiment have 325 men on duty daily, causing the men to be two nights out of their beds in succession.

Rations. During the early part of November the Troops had fresh meat every other day but during the latter part they have been obliged to content themselves with salt meat. Both regard to these means of cooking their duties are so reduced that very little time could be spared for this purpose, and it is difficult to be obtained, water distant and muddy, and lastly their Camp fires have almost wholly been lost or destroyed obliging them to cook separately, each in their own cauldron.

Weather. The weather became cold and boisterous on the 9th with heavy rains on the 11th, on the 14th there was a complete hurricane, not a Tent having been left standing, and the men one and all remained exposed to its violence for many hours. This ended towards evening in frost and snow, after this high wind and heavy rains continued to the end of the

Dr. Linton's monthly report of
Sick for Nov 1887
1st Division - No. 2
Typed

the month, the Country became literally flooded the different Camps were more than ankle deep and even the interior of the Tents which were not impervious to wet were covered with thick mud. The men's clothes were scarcely ever dry and even their blankets and great coats in which they slept were completely saturated with wet. On several occasions the temperature was below the freezing point, and I may mention that they are as yet without their winter clothing, although expected daily, and many of them are minus shirts and stockings.

The Tents. The Tents are in my opinion anything but a sufficient protection against the present inclement weather, and will be much less so during the extreme cold of the approaching months, and that unless the men are both ^{more regularly fed} more warmly clothed, better housed, and their strength less over-taxed by duty, the amount of sickness, and mortality, will I doubt not be greatly increased.

Linton Mc
Deputy Surgeon D. S. General
of Hospitals.

Camp of 1st Division
 before Cabatopol
 18th January 1883

Sir

In forwarding the accompanying Monthly reports, and in accounting for the still further increase of sickness therein manifested as compared with the previous month - the prevailing diseases in each have been brief complaints. Epidemic Diarrhoea, & Dysentery, common. Continued Fever emerging in some cases into fever of typhoid type, & enteric colic, & some cases of spasmodic Cholera and latterly several cases of Gela's and also I am sorry to say of Scurvy have been added to the list.

To account for the increase of sickness generally, it is necessary, as in the previous month, to take into consideration the wet and boisterous weather, the inability on the part of the men to keep themselves dry, the insufficient protection afforded by the tents, the want of dry clothes at night, their blankets (for they have now two each) and great coat being generally wet. The immense amount of bodily labor they still undergo, which owing to the late impassable state of the roads, the uncertain supply of provisions in the camp, the transport afforded by the Commissariat being very limited - the want of

of time & too, to dig roots and cook, & blight
them off, I am told, to eat their pork in
a raw state, while all this time green
unroasted coffee continues to be issued, a
ration under present circumstances utterly
useless - ground coffee in tins, and also
Rice, are much required, nor should they
ever be without a good supply of vegetables
which would do more than any medicine to
arrest the threatenings of Scoury, now too
evident throughout the Army.

We have heard much of hats being
sent out from England for the comfort of
the soldier, but as yet I have not seen one,
and when they arrive at Balaklava
the state of the roads & transport is
such, that I cannot imagine how they
are to be brought up, - with regard to
warm clothing, I am glad to say, it
has been distributed to some Regiments, &
the others will be supplied in due course.

I may mention the great difficulty
we have, there being no available transport
of getting the sick sent to Balaklava and
for which we are entirely indebted to the
kindness of the French for lending us
weekly, their Mule Ambulances (Cacolets)
which do their work most admirably
whether in deep mud or snow - our own
Ambulances having turned out almost a
total failure, at least in the present state
of

of the roads, and only during summer
when the roads are good, and with large
horses could they ever be of any use, they
certainly did good service at the battle of
Salsburgh - But with such worn out
broken old men, that now form the
Ambulance Corps many of them without
any knowledge of horses, how could any-
thing prosper with them. - I then again
the mules selected are much too small
& not adapted for draft, for this purpose
the animal should possess height of body.

We could not in my opinion adopt
a better mode ^{of ambulance} for our army than that
of the French - they are suited to
carry sick in any weather or state
of the roads, when wheeled carriages
cannot travel, - they are excellent
for picking up the wounded in different
parts of the field of battle & carrying them
to the field hospital, - and when not
otherwise employed in carrying provisions
or ammunition, & with either a well
organized corps of young soldiers, properly
commanded, of from 3 to 10 years service
of good character, and who had been
accustomed to horses in early life, -
or a corps might be enlisted at home of
any height, as low as 5 feet - accustomed
to horses - from the farm servants,
or Irish cabmen, & those with a sufficient
number

number of good mules well looked
after - and to which may be added
a few light vans, built after the
form of the American Wagon, might
be useful in many ways during the
summer when the roads are good.

Yours truly
Lieut. Genl. W. L. G.

W. L. G.
D. S. General
of Hospitals.

1 Division. Recd 1854
Remarks on Monthly
Return of sick & dead
1854
Division

Camp before Sebastopol
December 7th/54

Sir

In accordance with Instructions received we have drawn up the following report on the four subjects referred to us.

The exciting cause of disease in our opinion has been the excessive duties that the men have had to undergo coupled with the late unpropitious state of the weather both as regards wet and cold together with the insufficiency of clothing in most cases a total want of dry things being available to them on their return wet from duty -

The duties the men have had to undergo have been both numerous severe and trying - viz daily 2 butline Picquets consisting each of 2 Sergeants and 50 Rank & File for 24 hours half of which work at Breast works or Trenches for 8 out of the 24 hours. Every day the Rear Guard is composed of 1 Sergeant & 10 Rank & File. Every second night a working party (2 Sergeants & 40 Rank & File) is occupied at the Right Siege Train generally for about 12 hours. Every third day 5 Sergeants 53 Rank & File are for Guard - Besides the above duties the men consisting of 2 Sergeants and 60 Rank & File were occupied about once a week in the Trenches at first for 24 hours

afterwards changed to 12 - On Enquiry we find the men on an average scarcely pass three nights out of the seven in Bed occasionally 2 nights consecutively on duty -

On account of the various duties of the men often they have not time to cook their Rations each man having to cook his own in his own Mess Kettle - The Rations are generally very good as to quality but not sufficiently varied we strongly recommend a more regular supply of Rice and think that the addition of dried Peas would be highly beneficial -

The Coffee now supplied being in a raw state we think it very desirable if it could be obtained ready roasted for the reasons above mentioned that the men often have not time to prepare it -

As regards whether the Tents are sufficient protection to the men against the Inclemency of a Winter Season it is our firm opinion that it will be highly injudicious - dangerous and detrimental to the health of the men to live in Tents for a much longer period knowing from experience that with the high wind and rain prevalent in this Country the latter constantly passes through and when Snow storms occur it will be

impossible to keep the Tents standing
on account of the accumulation on them.

In conclusion we think it right to
note the great increase of Scurvy
and Dysentery especially since the weather
has become continuously wet and cold
the greater proportion of the men suffering
from a relaxed state of the Bowels

The present constant heavy dews at night
cause a very considerable moisture on the
Blankets and clothing of the men in the
Tents which we think is an additional
objection to Tents being used much longer

We have the honor to be Sir
Your Obedient Servants

A. B. A. Surgeon
Grenadier Guards

Henry Lawrence
Apist Surgeon -
Grenadier Guards

7 Decr 1854 1st Division
Getting cases of disease
in the Grenadier guards
in the opinion of Mr. Suggs
Kiale & Lawrence

7/18

Camp 2nd Division -

Monthly Summary for December -

The 2nd Division during the month has continued to occupy its old encamping ground on the heights of the Inkere-mame - The Weather has been extremely severe, at first heavy and continued falls of rain, latterly, cold, high biting winds - with hard, dry frost.

The sick list shows in the majority of cases an increase over those of last month, - The prevailing diseases have been Fevers, Catarrhs, & Diarrhoea - The two former considerably on the increase - During the early part of the month a number of Cholera cases were reported but my opinion is that the majority were simply cases of Diarrhoea assuming the Choleraic type from exposure and fatigue - Some few cases of Frost bite

have occurred, and there is a tendency to Scurvy observable amongst the men. Some juice has been liberally supplied to the Hospital, as also a certain quantity of preserved Potatoes, a ration of Lime juice to every soldier as contemplated, will be of infinite value, as I am convinced the numerous cases of Diarrhoea & Dysentery arise from in a great measure the want of Vegetable and the continued use of salt meat. aggravated of course by their present fatiguing duties, and extreme exposure to the Weather.

Duties The duties of the men continue as last month. I have thought proper to advise the Outpost Duty men to be relieved every 12 hours (instead of as at present every 24 considering they will thus suffer less from exposure to cold. This suggestion is about to be put in force -

During the month 573 men have been sent to the General Hospital at Balaklava, or on board ship principally by means of the French Ambulance Corps.

Rations The Rations have been well supplied and are good in quality.

Fresh meat however, has been very seldom
issued and Rice I regret to say has altogether
during the month been withheld, I believe from
want of Commissariat Transport, I would suggest
an issue of Flour, Suet, Raisins &c &c the same
as is supplied to Troops on board ships and I feel
confident that the most decided benefit to
health would be the result. The Regiments
are now provided with Cooking Kettles, and
men are told off to cook for such as are on
duty &c. Firwood is very difficult to get, and
Charcoal from want of the means of transport
cannot be brought up from Balaklava, -
The men I regret to say have as yet no better
protection than the miserably inadequate
Belt Tent. An improvement has certainly
but to a lamentably partial extent taken place
since last month with respect to the clothing of
the men, It is painful to see men, already worn
out by hard work - going shivering about with
such imperfect means of protection, some without
boots, and with a severe winter already set in
I fear that Gangrene of the feet will deprive
the Army of the services before another month
of a great number of very valuable Soldiers -
and I only hope that a searching enquiry may
if not at present at some future day be
instituted -

Macshak
Staff Surgeon R. G. H. P.
in Fred. Chay 2nd Division

2^d Division
Remarks of Link returns
for Dec^r 1854
H. J. Longson Marshall

Camp 2nd Division
Decr 6th 1854-

During the past month the 2nd Division has remained encamped on the heights of Inkermann - The Weather during this period has been very wet, cold, & stormy. Dysentery & Diarrhoea have been the prevailing Complaints and this can easily be accounted for, from the severe fatiguing duties, imposed on the men, their exposure night and day to wet and cold, their miserably imperfect clothing, eating half cooked rations, and having on an average only two nights during the week in bed, to these may be added their living in Bell Tents, which do not afford proper shelter at this season of the year.

The duties of the men have been Guard & Picquet duty - covering and working parties and Fatigue duties - The Covering parties Guards & Picquet remain on duty for 24 hours. The working parties for 8, and the fatigue duties in camp are constant and laborious. /Rations/ The Ration has consisted of 1lb Biscuit, 1lb Salt Pork or Beef or a ration of fresh meat whenever it could be procured Sugar 1 $\frac{3}{4}$ oz Coffee 1oz (raw) Rice 2oz and 2oz of Rum twice a day with an extra 2oz when on Picquet or working duty. These Rations have been issued daily and are excellent in quality. The quantity of Sugar issued, might with

great advantage be increased. The issue of Coffee in the raw state is much to be regretted considering the short time the men have for roasting it, and the very imperfect means (generally between two stones or beating it with a tent mallet) of crushing it, an issue of Tea or Cocoa in place of Coffee under these circumstances would be infinitely better.

Vegetables have been issued during the month to a small extent and with great benefit. The means of cooking are totally inadequate. The men's Kettles are either lost or worn out. The small canteen of each individual has to be used for every thing - Fire wood is obtained with great labour, and the same is the case with water, and there is no shelter for the men cooking, these three last forcing the Rations to be eaten half cooked and sometimes during very heavy rain raw as the men could not keep in their fires -

The clothing of the men is in a most miserable condition, the men having landed without knapsacks, it was nearly the end of the month before they reached the Division consequently the men had no other clothing but what they landed in, many almost without boots or stockings, the Trowsers torn. The great Coat often nearly useless and in shreds. But with the knapsack the present clothing of the Soldier is miserably insufficient for duty in the Field and especially the present

kind of duty, an oiled cloth Cape similar to those worn by the London Police would be a very useful article of dress. From having no change of dress, the men have to allow their wet clothes to dry on their bodies and from the late incessant rain, men have been wet through and through for days together -

From these continued hardships I feel bound to say that a large proportion of the men are so worn down, as to be incapable of any very long or continuous exertion, this is a melancholy but at the same time unquestionable fact, and my firm belief is that unless some alteration is made, it will take but a short time to reduce the Division to a mere skeleton by death and disease - Two changes of very warm winter clothing, proper huts or huts and firewood or fuel are most urgently required and if possible some mitigation in their present duties

Marshall
Staff Surgeon
in Medical charge of 2nd Division

2nd Division
— November 1854

No 1 Typed.

Remarks to accompany
the Monthly Returns for
November, from the 2nd Division

Remarks and observations to accompany
the Monthly returns of Sick of 4th Division.

During the month of December frequent heavy rains occurred, varied with occasional sleet and snow, and accompanied with cold & boisterous winds - In the last week the weather was intensely cold, every thing in the tents being frozen. Exposure to this inclement weather on duty in the trenches, and living in worn out and damaged tents, with insufficient clothing, and boots unfit for the climate, and severe fatigue duties have produced a great increase of sickness in the 4th Division.

The duty in the trenches is more than an army of twice our numerical strength ought to perform, and it recurs so frequently that the men are worn out from want of rest. Deficiency in the means of transport by the Commissariat Department, has entailed on the troops the fatiguing duty of conveying from Headquarters a great proportion of their provisions, and from Balaklava, fuel, clothing, materials for constructing Hoopl tents & in fact every thing they require -

Between the duty in the trenches and these laborious fatigues, the troops are broken down and exhausted; no constitution being able to bear up against loss of rest & such heavy work, for any length of time, especially in such weather as we have had here. -

That the sickness amongst the troops is occasioned by the above mentioned causes is proved by the comparatively healthy state of the Cavalry Soldiers & those attached to the field Batteries of Artillery who are exempted from duty in the trenches and hence the use of horses to bring up what they require.

The 17th Regt joined the 4th Division on 20th Decr. and on my recommending it, were not employed in the trenches for eight or ten days to which may be attributed the comparative freedom from Cholera in that Corps. - Every Regiment on first arriving here is attacked with Diarrhoea which frequently runs into Cholera in persons predisposed to it. -

The 4th and 63rd Regts have had most cumulative, each Corps having had 66 deaths during the month, showing that the greater part of this men to General Hospital at Scutari. - In every Corps sickness increases so rapidly that despite the removal of at least 150 men every week, the number in Hospital does not decrease. The spirit of the men is broken, all anxious to get away from the camp making the most of their ailments and endeavoring to excite the commiseration of those who visit them. They have become either so debilitated or so careless & apathetic that many rather than take the trouble of using the closet stool or bed pan have deposited their excrement on the floor of the tent or under their clothes, the consequence of which is an enormous destruction of the warm clothing lately sent out, and of blankets, there being no water or means of cleansing them.

Despite many of the sick are in my opinion affected with the first symptoms of Scurvy as evinced by debility, dull pains in the limbs, aversion to meat, and other anomalous symptoms, but some of the regimental Surgeons not having had any experience in the disease fail to diagnose it, and return the cases under the head Rheumatism or some other disease, by neglecting a Dietetic. It is right to remark that with one exception the eight Medical Officers present shown the amount of sick in the Camp but those alone who are in the Hospital tent. Men who report themselves sick in the morning but who are ordered to attend at the hospital next day not being included in their returns -

Our allies have afforded us most valuable assistance by conveying sick from the Camp to Bataclara on their Ambulance Waggons had we been entirely dependent on our own resources which are removed by our own Ambulance and Artillery Waggons and by Cavalry horses, the amount of mortality in the field Hospital would have been very much greater. - Our Ambulance Carriages are useless in this Division the mules being either dead or incapable of work and the men unfit for the duty from their age and previous habit, many of them being unknown worthless characters -

January 21st 1855

J. C. Humphrey
Deputy Surgeon General of Forces

4 Division Decr 1854

Remarks and Observations
to accompany Monthly
Returns of Sick of 4th Division
for December 1854

During the month of October the weather was generally fine though cold at night. Early in Novr the rains commenced and on 14th ~~that~~ memorable storm which caused so much damage in the camp. The remaining portion of the month and the first three weeks in Decr. were cold & wet with occasional falls of snow & sleet and severe frost in the last week. The Hospital Marquee were all blown down in the storm and most of them so much damaged as to be unfit for use. The greater part of the sick were thus necessarily accommodated in Circular tents, which are very unfit for the purpose being too small, and having the skirting of insufficient depth. They all permit heavy rain to penetrate which filtering through the tent just above the skirting falls on the face or chest of the patients. The French and Turkish tents have a deeper skirting & are more roomy than ours, & some being nearly two feet lower, are less liable to be blown down by storm. The Comfort and health of the men often depends on their tent being properly pitched. A trench about 8 inches deep should ^{be} dug evenly round the tent, the skirting should be let down into it, and fastened by pegs to its inner angle. The Earth should never be heaped up against it; as it rats the tent, and in rainy weather the water percolates through the earth, & flows over the tent converting its floor into a pool of water or mud, against which the Tar paulins & water proof tent bottoms are of no avail, as they return on their surface moisture that might otherwise be absorbed by the Earth. Many of the circular tents are so much damaged that they afford any little

protection against cold, particularly those of 63 yr and they cannot be replaced as there are "none on store".

The number supplied to the Hoo 64th Div is as follows

17 th Regt. of Circulator tents	57 th Margue Portuguese 8 th and
20 5 do & 2 portuguese tents 63 1 20 10	10
21 st 5 do & 2 Masques 68	5 do
46 th 8 do & 1 Margue	Rebels 1 Margue 5 do
	Rebels. — 3.

Missing a total of 6 margues & Portuguese tents and 51 Circulator tents. Provisions were irregularly & scantily supplied for a short time but are now abundant. They have generally been of very good quality particularly the biscuit & coffee & rum. Coffee should be infused & stirred and ground; from want of means to prepare it. The men have often been obliged to go without it. Fresh meat is butted on. Fuel is now quite exhausted in the vicinity of this camp. Charcoal is supplied to those who go, & sent to Balaklava fort. The men have frequently been unable to cook their meat for want of fuel — at least that is assigned as the cause of an accumulation of salt meat in their tents. The sufferings the army has endured from cold can scarcely be conceived. The cold is quite as severe as in some parts of Upper Canada, thermometers having been observed by Lieut. McKinnon as low as 64th (of Reamur) below freezing, & generally standing at from 5 to 7 degrees below that point.

Clothing is becoming thin & worn out, particularly great coats, trousers & boots; when all are supplied with flannel drawers & jerseys the covering for their bodies will be enough, but the head, hands & feet require the same protection as they do in Canada,

The addition of a hood to the great coat is very desirable & should be adopted at once. Some of those lately arrived from the Cape so arranged that it may be converted into a hood, but that is not sufficient. The great coat should have both. Ammunition boots are well used here at this season. The men should have long boots, capable of admitting two pair of woollen socks, which should go over the trousers & be perfectly waterproof. The want of such has already occasioned many cases of frostbite, and will occasion many more.

Water is scarce, not to be procured nearer than half a mile & generally muddy. The want of it, and of vessels to contain it, causes much filth in the clothing & persons of the men (most of whom are infected with vermin) and is assigned as the cause of soot soot the salt meat previous to cooking it.

The supply of blankets & smother stretchers was most seasonable, and has afforded much comfort to the sick. 20 stretchers have been issued to each Regt in the Division. Each Margue can contain 16 and around tent 5 of them. A great improvement might be made in these by having a broad iron ring at the upper part of each iron leg into which the pole should be inserted; it would under them more steady on uneven ground, and would prevent the chafing of the pole which frequently happens now. From the prevalence of bowel complaints the mattresses of these stretchers have been in many instances soiled & rendered unserviceable, as well as a large proportion of the blankets lately issued. This is partly caused by extreme debility, but as often by apathy and the part of the men. The amount of public property

destroyed in this way, in long and calculation. —
Many of the men here, in advanced stages of disease
exhibit an appearance of fatuity quite pitiable
to witness, and scarcely know what they do or say.

Cholera, Diarrhoea, and Dysentery, have been
the most prevalent & fatal Diseases. Every
new first landing here is attacked with Cholera,
to a greater or less extent, & the other two soon
follow.

Rheumatic Complaints have been very
prevalent & some terminated fatally, by the
supervention of pericarditis.

Pulmonary inflammation has been less
frequent & severe (except in the 63^d regt) than
might have been expected. In the 63^d. on case
of disease of a severe nature progressed favor-
ably, owing to complete prostration of strength
on the men, and to their ^{weak} hosts being in every bad
condition scarcely affording protection from the disease.

Scurvy is appearing, & must under present
circumstances increase, all its causes being in
full operation here. The issue of rice, of
fresh vegetables & lime juice, has been already
recommended as a preventive measure.

The majority of the cases of wounds were received
at the battle of Inkermann and all that could
be removed were sent to General Hospital

J. C. Humphrey
Deputy Surgeon
of Troops

4 Division
Sanitary Report for
January 1855

Sund. 6 Jan^y 1855

Waller

FRR6/12

Wm. Knight, Secy. M. H. L.
5 Jan^y 1855

Summary of the Diseases in the
Light Division during the month of
December. 1854.

Strength.

6 pers. Men

222-5093.

There have been treated during the month
in the Regt^s of the Light Division, 2059
of whom 1663. were new cases. - 989
have been discharged. - 258 have died.
and 409 remain under treatment.

403 have been sent from this to Bal-
-blanca, chiefly by the French Ambulance.

The above does not include either
the Artillery or Marines. -

The principal diseases are the same
as the previous month, Cholera, Dysentery,
Diarrhoea, Fevers, &c. - Of the former,
286 have been treated. Of whom 168 have
died. - The two Regt^s. 1st and 2nd Light
Batt^{ns}, were joined the Division, viz
the 34th & 90th Regt^s have sufficient work
from Cholera, with the exception of the
23rd Fusiliers. - The former lost 31, the
90th Regt^s. 25. and the 23rd Fusiliers. 29.

The duties have been the same as
during the previous month, but there is
the Gouaches and fragments one comes but
lighter from the addition of the two Regts.
But the men speak Regt. doing a con-
-siderable portion of the month. had
to go to Balaklava, and carry up
entirely, and even there they had not
abundance of the ration of winter pork.
In sum - during the whole month
we have not been spared as a nation.

The men are somewhat better clothed,
but still not yet sufficiently, and
shelter has been issued, but the
difficulty of bringing the same from
Balaklava is much felt. -

The men are still in tents, and
the sick are either in tents or huts,
huts have been erected in Balaklava,
but not as yet occupied this place.
and perhaps huts are at once erected
for the sick, as well as the men, I fear
our present sick list, and mortality,
great as they are, will still increase.

During the month we have had
a good deal of rain as well as some
snow, against which the tents and
not sufficient protection. We have
been pretty in want during the month
for many of the most important Medi-
cines, as well as Medical comforts
for the sick.

Several cases of Scurvy, as also
gummed head occurred among the
Perss. - the former attributable to the
hardships undergone, as well as the
want of vegetables, and the frequent
use of Salt water. - the latter
to the cold and wet in the trenches,
as well as in the tents. Several de-
-bilitated men.

J. A. M. M. M.
Staff Surgeon / Capt.

Dr. Alexander
Summary of Sciences
in the Legation
for December.

1854.

Not used.

Summary of the Diseases in the
Left Division during the Month of
January, 1855. —

The total treated in the Hosp. at
Camp during the month have been 2433.
Of these, 1880 have been cured — 317 have
died and 1164 have been discharged. The
Remainder being still under treatment.

A good many drafts have joined
and of the Regts during the above
period. They are chiefly young men,
not at all adapted to the service and
harassing duties. Not one now against
them. — The strength of the Division
is given, as 5778 men, and 204 Officers.

The principal diseases have been
affections of the bowels, foot bites,
and fevers. Of the former 1158 have
been treated. Of these 162 have died
^{and} many of them were combined with
a violent diarrhoea. — Of foot bites
24 persons to wit, 359, have been treated,
28 being ⁱⁿ ~~died~~ many of them the toes and
small portions of the feet were ~~so~~ ^{very} ~~much~~
affected.

attributable to debilitated constitution, and
4 pounds to cold and wet in the trenches, &c
and being too tight boots. - The latter
supplies to hand have sent out of much
larger size from England, & as to shoes
enabled the men to have some two pairs
of stockings. - The former one of a better
durable type chiefly. - The patients
generally admitting considerable quan-
tities of bilious matter. - Several cases
of Scum have also shown themselves.
But as Lard is now used to
be issued daily to the men, and powdered
butters has also been issued. I am in
hopes that the same will be checked.
More particularly, as now the men are
not so heavily clothed, and also get
their warm clothing, and fresh meat
is occasionally issued to the Gorse.
But good long waterproof boots have
given to the men, along with the warm
clothing, ^{& boots needed} some months since - then came
the ~~scum~~. But many boys would have
been saved. &c

Buts have been brought up as Gorse, and
all Regts are now supplied with them,
and

from the 34th & 95th Regts, and having and
Royal Artillery attached to the Division.
The two former are busy getting them up.
Several huts have also been got up
by some Regts for the men, and a good
supply of Blankets, buffalo robes, water,
-dishes, waterpots, bed-covers. & with
instead of Smiths, & Chubbs. along with
trapel beds & for the sick. and also some
flour & rice. arranged with deals,
which render them more comfortable.
and as stores are now placed in them
the sick are comparatively speaking
much better off than formerly. - A good
supply of Medical comforts has also been
got. but I regret to state. not as of
Indians - Many important. guns, et.
- specially strajants men and other
officers, were being in store.

The weather from the commencement of
the month has not, yet, been very, and
very changeable - the thermometer on the
18th fell at 5.1st B. outside my window,
stood at 11. - Since the 19th ult, the weather
has been milder, and lately very fine
clear frosty weather, sun shining day
the day. which I think the men consid-
erably. The snow having previously

J. Axt. 1842

[illegible]

Camp 2^d DivisionFeb. 9th 1853

Sir

In forwarding the Monthly Returns of Sick of the Second Division I have only to remark, that the prevailing diseases have been Fever, Bowel Complaints, Catarrhs & Scorbuts, and in fact all the ailments were more or less complicated by a scorbutic diathesis, the result of want of sufficient Fresh Meat & Vegetables, and were characteristic of fresh Agnamia. Prohibiting the use of any active treatment & demanding in fact the free administration of Stimulents and Nourishing Diet. The Sick list was much augmented by the exposure of the men, during the severe Frost & Snow, both on land & in Camp as their Canvas tents were quite insufficient to protect them from such weather, and some of the Regiment were also apparently dead, but have since recovered in that respect. Some men died from the effects of cold ^{alone} and a very large number suffered from Glanders, of a bad nature in many instances, but on the whole the Health of the Division was better than might have been expected under the circumstances.

Sir Hall

Inspector General of the Militia

Heads Quarter

Glasgow

I have the honor to be Sir

Ever most obed^t ServantW^m L. Langley EsqSurgeon Gen^l R^gA. C. M. C. 2^d Division

January 1855

2^d Division

Monthly Report of
Sick & Wounded for
January 1855

See 5 Feb 55

Weekly Report, Principal Medical
Officer of 4th Division from 17th March
to 24th July 1855.

The housing of the Sick in this division
in huts, in place of Messengers, has been
so far completed that some regiments
have two ^{huts} ~~beds~~ ^{supplied} ~~with~~ ^{with}
Buffalo skins and Blankets for bedding,
with, in some instances, waterproofed
Coaclets. The Sick and Wounded will be
much better situated for treatment in these
huts than they are in Messengers. There are
several stretchers, with stretchers made
in the huts ~~and~~ or Messengers, generally
recommended for Wounded men or pro-
tracted cases.

From examination of each Medical
Officer in Charge of a Regiment I find
that, with the exception of ^{of few} articles, every
Regiment has been supplied with sufficient
quantity ^{and appliances} of Medicines, that the Surgeon's
Stores (Medical Reports) have been enough
that ^{part of} ~~part of~~ of the table list, with some articles
of clothing, have been received, and that the
Commissariat Stores (~~and~~ ^{and} fresh Meats & other
smaller rations of the Regiments) have been
abundantly supplied during the week.

Wm. J. G. Esq.
Staff Surgeon, 4th Division
P. M. O. 4th Division

4 Division
Feb 1855

J. M. Officer's
Weekly Report
of the State of
the Sick in
4th Division
ending 26th Feb 1855.

Weekly Report of Principal Medical
Office of 4th Division from 25th Sept. to
3rd March 1855.

The establishment of Huts is increasing since
the last weekly report - Some Regiments
having erected them (some canvas covered)
also the supply of domestic utensils with
appliances, by greater facility of transport
from fine weather and some increase
in the means of transport, I believe, with
the effect of adding to the resources of the
Regimental Surgeons for treating disease.

I have continued to assist, & help writing
Regimental Surgeons, by sending them
circulars (signed and returned back),
demanding therein what I thought neces-
sary to apply for for their hospitals, and
what means to exercise for the main-
tenance of health in camp generally: but
disappointments in transport and supplies
have sometimes attended their equi-
pment and brought on them addi-
tional labour and thought. The
absence of fundamental organization
of the transport equipage in proportion
to its means, and of the organization
of our means in proportion to their limits
have been sources of general trouble
and prevented our having ~~the~~ ^{our}
resources being turned to the best
advantage

both for the use of the sick and well.
However, matters are daily improving.
Better cookhouses are built and being
built for the hospitals, and cooking
has been sufficiently effective. Medicines
have been in general sufficient. Since
the establishment of a Divisional Store, and
the surgical appliances are kept up to a
certain standard: the instruments are
likewise in good order in every respect.

The use of Syphilis, Scurvy and
Scorbutic dysentery is so low that Brandy
or wine seems to have little effect. Much
advice has been given to the effect of
Porter to be given when applicable.

There appearing an indication to take
the iron in pieces I have directed quinine
to be brought to the Divisional Store,
but cannot procure it at Malabar.

There is a good supply of bisulphate of
cinchona, but not of water without power was
to appear. Some medicinal wine (with
quinine), as issued to the Navy, would be
useful and answer two purposes - those
of stimulant and tonic. *James M. M.*

*S. Surge 1st Regt
P. No. 4 Division*

*Divisional Medical
Officer Report
of the State of the
Force
with Medicines
existing 31st March
1855*

*4th Division
March 1855*

note

The site of the Hospitals of the 3rd Division was considered the most eligible in the whole Camp, and during D^r Hunt's administration of the medical concerns of the Division, it was remarkable for its healthiness and regularity - The site selected for the Hospitals, is a point of land coming out into a broad valley which opens to the sea - there is water in the valley below, and the land on which the Hospital Marquee & huts stand is dry - To the eastward of the Hospital in a ravine leading into the valley, distant four or five hundred ^{yards} is the commonest slaughtering ground, but the offal is buried - Another crooked road, also to the eastward, but close to the Hospital establishment, leads into the valley - and here all kinds of filth and abominations are allowed to accumulate under D^r Hunt's very nose tho' I have spoken to him several times on the subject; but he states he cannot get it removed - A Squadron or two of French Cavalry are encamped on the opposite side of the valley, and at one time several dead horses were collected there, but these have all long since been effectually buried, and cannot by any possibility affect the health of either the Hospitals or the 3rd Division - Finding that the Hospitals near the road I have mentioned were more unhealthy than the rest, D^r Hunt accompanied me the other day to select a new site for the Hospitals of the 18th, 38th, and 50th Regts which we did on the rising ground between the present Hospital establishment, and the lines of the 89th Regt, and the wood for the huts was put down that very day and they are now being erected - This will give more space to the Hospital establishments of the other Corps, and obviate the necessity of any being placed near the eastern extremity of the knoll

I have applied for permission to assemble a Board of Health composed of the Surgeon Intending officers of Divisions & myself to examine into the Sanitary concerns of the whole Army - which Lord Raglan has sanctioned, and it will commence with this Division on the 10th March

I Hall
1st Brig. of Corps

Weekly Report
of Sick & Wounded
3^d Division
3^d March
1855

Note on the position of the
Hospital tents, in reply to
Dr. Humes observations
H

[21855] March 9th FRR6/18

Mr Daves in his March quarter
Returns 142 cases of C. C fever of
which 16 died - but not a case of
Intermittent - In his remarks he describes
the fever "of a low type. The Liver &
Cerebrum being both greatly affected

Dr Scott Surgeon to 14th Regt. - Fever of a low type
succeeded followed. bowels affected. He
says "I have not been able to perceive any
beneficial effects from the administration
of Quinine in the early stages of this fever"
altho' after the tongue has become moist
it is most useful. -

Mr Dade Surgeon to 14th Regt. - Says in speaking
of the same form of fever

"There has apparently been less tolerance
of Quinine in these fevers than in
those met with in warm climates

Mr Dade 14th Regt. Says - The opinion published
that fevers in the Crimea were of a remittent
character and required the early liberal
exhibition of Quinine has not been
borne out by observation of the cases
under treatment."

June

The same intolerance of Quinine
Mr Dade noticed existed in the fever
cases - this observation will be of use -

Buffalo Lakes - 940 paid to Hrs. 15 hrs
2020 14 80
 4625
7585

28 October - since June landed
for the Hrs -

Date of application to Contract for fuel
found

27
 251
 17

Canabry - add Dead Strength
 From 6th to 12 May 1855 - 114 - 1 - 2916 - 109 - 9

19 do	144 - " - 2916	
26 do -	146 - 4 - 3576	1 p.p. Chobru
3 June -	168 - 5 - 3600	5 p.p. Chobru
9 June -	248 - 16 - 3655 -	15 deaths from Chobru
16 do	219 - 18 - 3726 -	14 do
23 do	218 - 14 - 3981	14 do
30 do	373 - 15 - 4204	15 do
7 July	354 - 9 - 4125	6 do
14 do	379 - 17 - 4434 -	13 do
	<u>2363</u> - <u>994</u> - <u>3743.8</u>	<u>83</u>

3743) 236300 (62.⁸⁸
 22838
 07820
 19426
 31440
 291144
 23360
 21858
 1502

3713) 9900 (2.⁶⁶
 1426
 24140
 22278
 24620

admission strength 64.86 p.p. Chobru
 Deaths do - 2-71 do

99) 8300 (83.83
 7922
 378
 297
 18502
 79380

Shy
654 The 10th Hussars, 657 strong, arrived from India in the Crimea in three divisions viz - on the 16th, 17th and 28th April 1855, and cholera broke out in the Regiment in June -

527 The 12th Lancers arrived from India, 527 strong on the 8th & 12th May 1855, and cholera made its appearance in the Regiment in June -

341 6th Dragoon Guards, 341 strong - 130 of whom joined in June

1522 Total or 41 per cent of the Cavalry force

FRR6/19

Ratio of sickness in the
Cavalry & Artillery
from May to July 1855

Strength
admitted

Dead - Rem

26. 372 : 291. 7 - 6

About the middle of July - Bowel Complaints began to spread amongst the men of the Volonté which hitherto been remarkably healthy - and towards the close of the month an epidemic form made its appearance - 6 decided cases of this disease were treated five of which proved fatal under the Calomel opium and Stimulant plan of treatment, the only case that recovered was treated simply with Coldwater, and Carbonate of soda dissolved in it -

Dr Smith says the Calomel and opium plan had a full & careful trial under his own watchful superintendence from the commencement to the termination of the disease in each case -

Ambulance Corps
admitted

254 - 20 - 56

1st Division

The ambulance corps which landed at Orma was almost immediately attacked with Cholera - and from the habits of the men proved very destructive

Fremont's Guard

Adm	Dis	Dead	Rem
23 1009	1098	48	312

The Fremont's Guard marched from Varna to Adrian 12 July 1855 and removed to Trieste 27 July - remained there until the 18 Aug when it returned to Varna and encamped on the Galata Heights until the 29th when it embarked in the American steamer for the Crimea and disembarked at old fort on the 17 Sept^r - no further remarks are made by the Medical Officer in Charge but Typhoid fever - Bowel Complaints and Cholera appear to have been the prevailing diseases - 245 cases of fever appear to have been admitted of which 12 proved fatal - 19 of the cases assumed the form of Typhus & of these 9 died - 502 cases of Diarrhoea were admitted of which only 1 died; but out of 43 admissions from Cholera 35 died -

94 cases of gunshot wounds are returned as having been admitted & 28 cases of Castration; but no deaths are put down - The wounded men of course the result of the battle of the Alma - and the wounded were sent on board ship within 40 hours - but it is curious no casualties occurred even in that short time amongst so many wounded.

Colchester Guard

22 643 607 59 157

No observations by the Medical Officer in Charge - but like the Fremont's Guard - Bowel Complaints and Cholera appear to have been the most prevalent diseases of Fever 288 cases of Typhus are returned as having been admitted of which 29 proved fatal - 192 cases of Diarrhoea were admitted of which 2 died; and of 38 cases of Cholera 27 died - 27 cases of gunshot wounds are returned but no deaths from this cause

Fusilier Guard

102 983 35 182

No observations by the Medical Officer - but the Return points out that Fever Bowel Complaints & Cholera were the prevalent Complaints - of Fever 180 were admitted of which 5 died; of Diarrhoea 475 were admitted of which none died; but of 124 cases of Cholera admitted 57 died - of 170 cases of gunshot wounds returned at Alma 24 died within the first two days -

42nd Highlanders

944 474 26 121

No observations by the Med^l Officer; but like the Guards the same diseases prevailed but neither to the same extent, nor to the same fatality - of 142 cases of fever admitted 4 proved fatal; of 140 cases of Diarrhoea none died; of 34 cases of Cholera 19 died; and of 36 cases of gunshot wounds 2 died

79th Highlanders

940 589 20 209

No observations by the Surgeon - of 207 cases of fever admitted 2 died; of 200 cases of Diarrhoea none died; of 49 cases of Cholera 15 died; and of 7 cases of gunshot wounds none died

93rd Highlanders

952 589 42 91

Of 187 cases of Fever - 5 died; of 230 cases of Diarrhoea & Colic none died; of 46 cases of Cholera 32 died; and of 40 cases of gunshot wounds 7 died -

5 men were put down the list in the Regt from gunshot wounds & all causes at 114 during the quarter

Dr Murray states that during the month of July 217 cases of disease were admitted of which 3 died; in August 410 were admitted of which 24 died - and in September 201 of which 18 died - The rest of his Report comprises a detailed Report of 5 Officers killed on the spot at Alma & 40 men wounded in the same action

549 516 27 30 34

Strength		Diseases		
Officer	Servant	Admitted	Dead	Recovered

Canabry (Division)

The Regiment suffered chiefly from Fever Cholera & Diarrhoea
 Three men died of fever but out of 48 cases treated - 19 died of cholera
 out of 25 cases - and of 179 cases of Diarrhoea none died

4 th Bn	271	331	23	16
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This Regt suffered severely from fever & Cholera and Diarrhoea
 of the first 117 cases were treated without special aid - of 55 cases of Cholera 34 died
 and of 70 cases of Diarrhoea - 1 died - This Regt was encamped close to the lake
 at Drona on most objectionable ground - Fever & Cholera broke out, and the
 Longon died - In the treatment of the cases of Cholera that occurred - Dr. Little
 on whom the Med. Staff of the Regt. consulted - says - that Calomel & Opium administered
 were largely used, but without avail - Camphor was given questionable benefit
 but purgations - was useful, and the dig. Arsenicals, a questionable remedy, he
 thinks was useful in arresting vomiting!

5 th Bn	253	296	4	21
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1 st Bn	290	153	10	10
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This Regt suffered chiefly from fever & aperiodic life - Cholera & Diarrhoea - but
 compared with the two preceding Regts appears to have enjoyed better health - On the
 19th it removed from Drona to Drona - and on Cholera appearing in some of the other Regts
 then it removed from Drona to Drona - on the 31st a case of Cholera occurred at Drona
 which proved fatal, on the 8th a second, and on the 9th 4 more all of which proved fatal
 On the 8th the camp was removed from Drona to the Drona - and on the 9th a man died - and after it reached
 Drona were attacked one of which made a good recovery - and 44 cases of Cholera
 and which added to two deaths from fever. Completely the Drona of Cholera (101)
 In the treatment of the Cholera cases - Calomel - Opium and Stimulants were had
 recourse to, but with any thing but a satisfactory result -

2 nd Bn	16	28	134	3	24
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This Regt was comparatively healthy, 96 cases of Diarrhoea occurred of which none
 died - 3 cases of Cholera all of which proved fatal

4 th Bn	19	219	296	12	57
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This Regt suffered severely from Cholera & Diarrhoea but the mortality
 was small in comparison to the number treated - all the deaths were from
 Cholera and 12 died out of 41 attacked - as many as 272 cases of Diarrhoea
 were admitted - all of which were treated with success -

6 th Bn	19	279	242	15	-
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Fever - Diarrhoea and Cholera were the prevalent diseases in this
 as in other Regts of the Canabry Brigade - of 41 cases of Diarrhoea 11
 were admitted all proved fatal - 116 cases of Diarrhoea were admitted all
 of which recovered, and of 82 cases returned as Cholera only 9 died -
 which is a greater amount of success than is returned by the other Regts

8 th Bn	19	269	217	17	7
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Fever, Diarrhoea are the most prevalent complaints - of 93 cases of Fever
 admitted 9 died: of 76 cases of Diarrhoea admitted 2 died; and of 6 cases of
 Cholera admitted 5 died

11 th Bn	244	260	12	57
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The amount of sickness in this Regt amounts to the whole strength of the Regt
 during the winter. of 93 cases of fever treated 3 died - of 15 cases of Cholera treated
 7 died, and of 83 cases of Diarrhoea treated none died - 30 men appeared in the
 return under the head of dyspepsia -
 The Regt landed at Drona on the 3rd July, marched to Drona on the 7th which it reached
 on the 9th: The dismounted men the Drona days attempted to march the Drona
 which is about 16 miles - and from this dismounted Drona they were
 sent off, and had to be carried in - On the 28th July the 11th Bn moved to
 Drona Drona in consequence of Cholera having appeared in the camp at Drona
 On the 27th Aug. the Regt returned to Drona, and embarked for the Drona on the
 4th Sept. - of the deaths from Cholera - nearly all occurred in Capt. Connelley's troops

13 th Bn	281	228	11	5
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Fever Cholera & Diarrhoea appear to have been the prevalent complaint in this
 Regt - 87 of the 1st occurred of which 1 died: 11 cases of Cholera occurred of which
 7 died; & 30 cases of Diarrhoea both of which 2 died - a case of Dysentery proved
 fatal - There is no report by Drona Drona - Drona having been in charge

17 th Bn	19	281	236	15	7
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There is no report by Drona Drona but fever - Drona complaint
 and Cholera appear to have been the most prevalent diseases
 98 cases of fever occurred of which 5 proved fatal:
 81 cases of Diarrhoea were treated of which - 2 proved fatal
 9 cases of Cholera of which - 6 proved fatal
 15

2nd Division

Ref	Officers	Men	Admitted	Died	Remarks
30 th	579	390	32	7	<p> Dysentery, Cholera and Typhus have been the most prevalent complaints during the 3rd and Cholera proved more fatal after the landing of the Regt in the Crimea than it had previously been - From a German Commission provided in July & August which Regiment was in Bulgaria but they were not of a nature from, and out of 57 that came under treatment only one proved fatal - of 12 cases of Dysentery - 2 died - 4167 cases of Dysentery 1 died; & of 16 cases of Cholera 16 died: of 75 cases of gunshot wounds which occurred at Alma 12 died - </p>
41 st	726	405	22	6	<p> The prevailing disease in the Regt were Typhus, Cholera, Dysentery & Cholera of 88 of the 1st treated - 3 died - no case of Cholera proved fatal, of 163 cases of Dysentery 1 proved fatal - of 29 cases of Cholera 13 proved fatal, & of 27 cases of wounds admitted & died The Regt landed at Varna on the 18th June and was encamped in Bulgaria until the 3rd August when it embarked for the Crimea - Bowel Complaint became common in the Regt during the month of July - & at the beginning of August Cholera made its appearance - </p>
47 th	733	503	31	1	<p> Typhus - Dysentery & Cholera were the prevailing diseases during the summer - of Typhus 71 occurred of which 2 died of Dysentery 176 came under treatment and two died of Cholera - 39 occurred and 23 proved fatal of gunshot wounds 34 were admitted and 2 died - 41 cases of wounds were also admitted Dysentery made its appearance in July, and Cholera broke out at the beginning of August - first in a man who had slept exposed to the night air - it then moved up the Regt, followed it on board the Melbourne where the men were overboarded, spreading in the Crimea where the men had neither tents nor means of conveyance - In the month of July 31 cases of Dysentery were admitted In August - 72, and 11 cases of Cholera In Sept - 169, and 28 - &c - The total number of men at Alma was 4 Officers, & 77 men of the Regt: 5 face: 1 head: 5 chest: 1 belly: 13 upper & lower: 45 lower & upper four men were killed but no officer - The day after the battle the wounded were put on board ship & sent down to Scutari </p>
49 th	891	376	15	2	<p> This Regiment appears to have been comparatively healthy, but from Dysentery & Cholera appear to have been the most prevalent complaints - 71 cases of fever were treated all of which were discharged to duty or put to rest: 24 of the number were discharged to the latter Dysentery 107 treated - none died 19 discharged to put to rest. The remainder to duty - Cholera of thirty three cases that occurred 13 died - 15 cases of wounds were treated of which two died - </p>
55 th	527	588	10	-	<p> In comparison with the number of admissions into Hospital the mortality has been small - Two cases of fever out of 110 proved fatal: 21 cases of Cholera out of 19 died, and of 211 cases of Dysentery admitted none died - 93 cases of wounds were admitted after the battle of the Alma of which two died </p>
95 th	928	621	72	4	<p> One hundred three cases of fever occurred of which 3 died of two hundred and nine cases of Dysentery none died; but of 40 cases of Cholera 22 died - 4 Officers were killed & 18 wounded at the battle of the Alma on the 20th Sept - 1000 men, 4000 horses 40 killed & 401 wounded in the same action </p>

Royal Artillery

Battery or Troop	Officers	Men	admitted	Dead	Born	
I Troop H. Artillery	6	188	197	6	41	This Troop of horse artillery suffered from Intermittent fever at Lima Reguar and from Dysentery at Drona - after its landing in the Amazon on the 17 Sept it suffered from Cholera on the line of march to Pucallpa - and lost four men by the disease and from Dysentery - It did not sustain any loss at Bomilganth where the Cavalry had previously wounded four horses killed - The Troop sustained a loss of 18 men killed - & 32 wounded
A Field Battery	12	366	67	9		This Battery lost 5 cases of fever out of 20: 1 case of Dysentery out of 38, and 3 cases of Cholera out of 45 - It does not appear however to have suffered much sickness -
L. Battery	203	170	8			Fever and Dysentery have been the most prevalent complaints, and some fatal cases of Cholera occurred - of Fevers - 1 case died out of 45 - Dysentery 48 cases no death: Cholera - 5 deaths out of 81 cases; and 2 deaths out of 5 cases of gunshot wounds
F. Battery	6	183	148	14	7	Fever Dysentery & Cholera have been the most prevalent complaints of Fevers out of 31 cases none died: 9 cases of Dysentery 78 cases 3 died; and of Cholera 10 died out of 10 attacked
P. Battery	5	188	49	1	1	This Battery was unusually healthy - The only casualty which occurred, being a case of Cholera and of Malaria from the disease

Regts
Officers
Men
Admitted
Died
Remd

3rd Division

FRR 6/21

1st Regt 26 683 363 33
Typhoid, Dysentery and Cholera were the most prevalent & fatal diseases in this Regt during the D^o - In July the Regt was remarkably healthy & typhoid, Dysentery & Cholera made their appearance & prevailed during the remainder of the D^o - of 141 cases of fever treated 6 died - & 94 cases of Dysentery 1 died. of Cholera 25 out of 39 - & one case of typhoid proved fatal also -

4th 20 499 299 57 3
Fever, Dysentery, Dysentery, & Cholera have been the most prevalent and fatal complaints, and the Regt has suffered much loss of 91 cases of fever 11 proved fatal: of 55 cases of Dysentery 2 died: of 66 cases of Dysentery & Cholera 2 died: of 53 cases of Cholera 34 died. The Regt remained at Gallipoli until the 28th Aug^r when the 1st and 2nd Divisions of the Regt was ordered to land where it arrived on the 25th and was disembarked on the 31st for service in the Crimea.

28th 23 561 589 29 5
Fever, Dysentery, & Cholera have been the most prevalent complaints this year - of 126 cases of fever two died: 288 cases of Dysentery were treated, but no casualty occurred - of 39 cases of Cholera 26 died.

38th 25 609 368 37 5
Fever, Colic & Dysentery, & Cholera have been the most prevalent diseases - of 89 of the 1st Division Dysentery 6 died: of 159 cases of fever complaints that were treated none died, but of 56 cases of Cholera admitted 31 proved fatal.

44th No return could be obtained from the Surgeon here on account of the typhoid fever.

50th 22 87 34 41 1
Fever, Dysentery & Cholera - 1 case of the 1st out of 75 treated proved fatal - of 144 cases of Dysentery 4 proved fatal and of 77 cases of Cholera 31 died - one case of hepatic disease proved fatal also.

4th Division

20th 31 827 427 17 7
Dysentery and Cholera were the prevalent diseases in this Regt. of the former 236 cases occurred - but no deaths - and of the latter 66 cases of which 15 proved fatal - a case of Dysentery, & a case of Pneumonia also proved fatal.

68th 32 524 141 28 -
Dysentery & Cholera were the prevalent complaints 35 of the former occurred but - no casualty - and 73 of the latter of which 28 died -

Light Division

Regts	Officers	Privs	Admitted	Died	Ampt	
7 th Foot	903	473	42			Fever - Diarrhoea - Cholera and wounds - 80 cases of fever were treated of which 3 died - 99 cases of diarrhoea were admitted of which none died, and 84 cases of Cholera occurred of which 38 died 172 men were wounded at the Alma - and 38 killed in action
19	359	184	28			53 cases of fever were treated of which 3 died: 78 cases of Cholera and Diarrhoea none of which died: 41 cases of Cholera of which 12 died: 246 cases of wounds occurred at the Alma - 23 of which were dangerous: 112 severe, and 73 slight - 38 men were killed in action -
23	842	477	41			Fever - Diarrhoea - Cholera however the most fatal disease 49 cases of fever were treated of which 3 died: 154 cases of Diarrhoea were admitted none of which died: but of 66 cases of Cholera admitted 38 proved fatal - at the battle of the Alma on the 20 Sept the Co's & 8 Officers of this Regt were killed, and four officers were wounded: 45 men were killed, and 153 wounded: 30 dangerously, 70 severely; & 53 slightly - Cholera broke out in a severe form at Drona on the 23 July, the division was moved on the 25 to Monastier about five miles in advance of Drona but the mischief had been done. In the place of treatment pursued a great variety of remedies it appears were used but finally Calomel - Opium - seems to have been most resorted to but Mr Hall, adm'ts with no good results - nor could it be expelled
33 rd	427	677	79			69 cases of fever were admitted of which 11 proved fatal: 209 cases of Diarrhoea were admitted of which 1 proved fatal: of 79 cases of Cholera 53 died - at the battle of the Alma 60 men were killed and 200 wounded
77 th	940	410	15	11		This Regt the serving in the same division and encamped in the same camp No 1 at Drona more distant from the mass than some others - has sustained a smaller loss than any other Regt of the Division - 129 cases of fever were treated of which none died - 174 cases of Diarrhoea were treated with equal success - the only loss the Regt sustained was from Cholera of which disease 15 out of 24 cases proved fatal -
88	23	652	722	59		106 cases of fever were treated of which 2 died: 408 cases of Diarrhoea were admitted but none died: of 93 cases of Cholera however 57 died - The disease broke out suddenly on the 23 July - The Division was removed on the 24 but it did not arrest the disease - which dogged the Regt - on board ship, and after its landing in the Crimea -
2 nd Buffs Regt	1072	615	46			176 cases of fever were treated of which 4 died: 238 cases of Diarrhoea were treated successfully: of 53 cases of Cholera treated 31 died and of 49 cases of wounds 12 died & 9 were killed in action -

Varna 1473 cases admi^d - 1642 treated 249 Died - 63⁴ 69 from fever
31 from diarrhoea out of 332 cases. 127 cases of Cholera out of 173 cases
8 from Dysentery out of 39 cases, and 14 from other diseases

Gallipoli

Strength 364 - 94 admi^d - 157 treated - 4 died - 3 from fever out of 78 cases
1 from Syphilis - 25 cases of Dysentery occurred -

Scutari - 3010 admi^d - 3426 treated 124 Died - 2038 ^{of} 3041st
41 cases of Cholera died out of 70: 29 cases of diarrhoea out of 323: 20 wounded
out of 1013 - 7 cases of fever out of 266 - 3 deaths out of 76 amputations
19 from various diseases; & 5 out of 43 cases of Dysentery

Remarks -

at the commencement of July the British Army which had
been landed ^{in the capture of the previous month} ~~at a short time~~ before at Varna in Bulgaria
was encamped on the shores of the Lake of Drava - The
1st - 2nd and 3rd Divisions a short distance from Varna,
and the Light Division at a place called Aladynce about
seven miles in advance - the Cavalry and part of the
Artillery were encamped on the Seabeach on the south side
of the Bay between the Sea and the front of the lake -
Early in July the 1st Division moved to Drava about 5 miles
in advance of Aladynce, and the 7th Division replaced
them there - The second Division moved also and encamped
on rising ground about two miles to the right of Aladynce
and the 2nd Division remained sometime longer on
the vicinity of Varna on the banks of the lake - but when Cholera
made its appearance, all but one Regt, were removed
to the Galata heights on the south side of Varna Bay
and encamped facing the Black Sea - Here they enjoyed
better health, but the 50th Regt which was left to do duty
in Varna suffered considerably ^{but} it was found necessary
to replace it with the 28th -

The valley of Drona extends from Darna to the village of that name a distance of about 15 miles and is occupied by a chain of lakes with low banks - The lakes are fed by powerful springs which rise near the village of Drona, The ground where these springs rise is boggy - and before any clear expanse of water is formed there are many acres of swampy ground. Towards the village of Drona the ground rises - and on a plateau ^{of rising elevation,} between the head of the lake and the village, the Infantry of the Light Division were encamped, the troop of horse artillery further up nearer to the village, - The Light Cavalry ~~were located~~ in the valley near the springs; and the 5th Dragoon Guards ~~were placed~~ on soft ground close to the ^{swamp at the} head of the Lake - The most significant indication of the insalubrity of this valley is, that there is not a ^{single} farmhouse, or dwelling, between Darna, and the village of Drona; and so deadly is the vicinity of the miles ^{whence} turned by the stream from the springs ~~which~~ ^{put} feed the lake, ^{considered} that during the autumn no one can be found, the Commissary put told me, to work there - Yet in the month of July, a strong and healthy division of the British Army was located on this pestiferous spot, without any evident military reason for its being ^{sent} there, and when its insalubrity was pointed out by me to the Commander in Chief my report was met by counter-statements from the ^{put} Adjutant and the Brigadiers that they were not inconvenienced by the Smell of the Swamp - Tho' to me the peculiar Smell of miasmatic emanations was perceptible enough in the early morning; but my opinion was laughed at, and ridiculed until pestilence smote the Division, and if cholera had not attacked it when it did, Pernicious, or perhaps Yellow fever would have decimated its ranks ~~at a~~ later in the season - as it was the Regt were thick and superstitious proportion to their proximity to the swampy ground - And the 5th Dragoon Guards, as might have been anticipated, ^{suffered more than any other} lost 15 surgeons and 41 men, and admitted 296 cases of disease during the quarter out of a strength of 253 - Thus the whole Corps went thro' the

3 Division

Regt Officers m^{rs} Raim^d - D. R.

R a - 2

1st Regt 25 " 902 - 0 2408 - 93 - 58 - Fever - Dysentery - Diarrhoea & Cholera have been the prevalent complaints. 2 men died of fever: 12 of Dysentery: 5 of Diarrhoea: 12 of Cholera, and five of wounds - In action M^r Raim^d the Surgeon says - The men were comparatively healthy in November & early arrived from England - but met with three sets in and Chills in a destructive form made us appear improper food - want of proper shelter - clothing - fuel - and over fatigue are the causes assigned for so much sickness -

4th foot 24 " 464 - 3 " 412 - 33 - 93 - Fever - Dysentery - Diarrhoea & Cholera were the most prevalent complaints - 1 man died of fever: 1 of Catarrh: 6 of Dysentery: 1 of Diarrhoea: 23 out of 34 cases of Cholera - and 2 of wounds
a draft 1 Serg^t & 70 men joined from England in December

9th foot 24 - 410 0: 328: 87. 95 - Diarrhoea and Cholera have been the prevalent complaints - 9 of the former - and 77 of the latter died one case of wound also proved fatal -

(Landed 27 Nov^r 1864)

The Regiment landed from Malta on the 22 November - was marched up to camp in the last of put on duty in the trenches - The day after the Reg^t reached Cholera broke out in an aggravated form and swept off 77 men before the end of Dec^r The Reg^t had suffered from fever at Malta during the autumn, and were but ill suited to the hardships of the sudden change to all the hardships and privations of a new life - and the result proves the impolicy of the trial -

28th 25: 496 - 5: 502: 40: 93 - Fever, Catarrh - Dysentery Diarrhoea & Cholera have been the most prevalent Complaints - 1 man died of fever. 1 of Dysentery, 5 of Diarrhoea 25 of Cholera - and five of wounds -
Dr. Marlow recapitulates all the heads of exciting causes of disease that have been so often mentioned -
1 Insufficient shelter: 2 Irregularity in eating -
3 Want of clothing: 4 Insufficient duty - Want of fuel - and want of transport

38th 36: 867 - 5: 469: 31: 76 - Fever Catarrh: Diarrhoea - and Cholera have been the prevailing diseases - 2 men died of fever: 9 of dysentery: 1 of Diarrhoea - 20 of Cholera 5 of wounds & 4 of spl. fever

44th 22: 500: 4: 366: 61: 53 - Fever Diarrhoea & Cholera have been the prevalent complaints - 9 men died of fever: 2 of Pneumonia: 3 of Diarrhoea - 41 of Cholera 5 of wounds, & 1 of spl. fever -

Surgeon M^r Raim^d recapitulates the several exciting causes - His patients were certainly prominent for dirt & discomfort and was compelled to speak of them more than once

50th 21: 651: 1: 382: 54: 53 - Fever Diarrhoea & Cholera the prevalent diseases - one man died of fever: 1 of Catarrh: 5 of Diarrhoea: 45 of Cholera and 11 of wounds -

89th 23: 648 0: 277: 43: 161 - Diarrhoea & Cholera have been the prevalent diseases - 40 men died from Cholera out of 450 cases - 2 men were frozen to death; and one died of wounds - The Reg^t marched into camp without a sick man on the 19 Dec^r and was attacked with Cholera the night of its arrival, which proved fatal to 40 men before the end of the month

Abstract of Regimental

Returns for Quarter Ending 31 Dec^r 1854

Observations

Reg ^t Office	men	dead	admitted	discharged	lost	Observations
1 st Divis ⁿ 3 ^d S. Guards 20	662	29	199	16	44	This return does not embrace the month of October - the leading complaint seen to have been fever & which 6 died - Dysentery & which 2 died - Diarrhoea & which 1 died, and Cholera & which 1 died also died
1 st B. Colchian- guards 23	531	1	775	48	44	Typhus fever of which 3 died out of 83 cases: Dysentery 1 death out of 19 cases - Diarrhoea 1 death out of 366 cases: 1 well out of 14 cases: 21 deaths from 47 cases of Cholera: 10 deaths out of 128 wounds 1 death out of 21 amputations - Post bites were common in Dec ^r and the means of treating them under canvas inadequate - 18 teeth were removed by the French soldiers - W ^m Hyatt derived great advantage from the use of Lame's cure for scurvy -
4 th Divis ⁿ 42 nd High landers -	897	121	459	46	166	no return Catarrh, Cholera, & diarrhoea appear to have been the most prevalent complaints - 2 men died of Typhus - 1 of Pneumonia: 1 of Catarrh: 1 of Dysentery: 2 of Cholera: 36 of Cholera & 3 of Diarrhoea at the commencement of the Dec ^r the day was on the Talam before Sebastopol; but on the 25 th it was moved to the heights of Bulaklanje where it remained the rest of the quarter - The men exchanged the felt for trousers which were changed out to them together with warm under clothing - 5 th Wood obtained a house on Andkhai at the end of October - capable of accommodating 60 men in which respect his Reg ^t was fortunate - 5 th Wood's practice in Cholera is small doses of Calomel with stimulants - Scurvy not prevalent on account of the men being able to buy vegetables on Bulaklanje
79 th High landers 31	886	4	397	50	62	Fever - Diarrhoea and Cholera have been the prevalent complaints - 1 death of fever - 2 of Pneumonia: 2 of Dysentery: 8 of Diarrhoea: 35 of Cholera: 1 of Catarrh: 1 of Typhus: 1 of Typhoid fever - 5 feet measuring the ordinary course of discomfort and disease - The site of the Camp of the 79 was imperceptibly elevated - and much sickness assumed at a later date -
93 rd -	710	91	327	28	48	Fever, Cholera, Dysentery & diarrhoea have been the most prevalent complaints - 5 deaths took place from fever & 1 from Dysentery & 1 from Diarrhoea: 12 from Cholera - 1 from disease of the heart - and one from Puerperia - Fever & tenderness to scurvy prevailed extensively in this corps, 5 th Munro the surgeon used the necessity of fresh vegetables being purchased but it was not attended to
97 th Reg ^t X:30	989	-	273	67	42	Diarrhoea & Cholera were the prevailing complaints in this Reg ^t - 8 died of the former & 58 of the latter - 1 case of fever died also - The Reg ^t arrived in Camp on the 22 nd Nov ^r and was almost immediately attacked with Cholera brought on the surgeon thinks, by wet - cold, & exposure in the trenches - a large proportion of the men discharged were sent to Genl Hospital at Scutari -

R. A. 3

(Found Poore in FRT 1/1)

57th 18. 908 10: 538: 34: 49

Catarrh: Diarrhea: Cholera & wounds have been the prevailing complaints: 1 man died of Dysentery: 10 of Diarrhea: 17 of Cholera; and 6 of wounds -

1st Bn Rifles 17: 573: 24: 641: 60: 93

Dysentery: Diarrhea: Cholera: Scoury and wounds have been the most prevalent complaints: 1 man died of Peritonitis: 2 of Dysentery: 1 of Epilepsy: 2 of Diarrhea: 10 of Cholera: 2 of Scoury; and 16 of wounds out of 155 admt^s

63

No documents left with the 18th from which a return could be furnished

Artillery

Auch

Drs

9 .. 40 0: 29: 0: 3

Catarrh, and Diarrhea the prevalent complaints - no deaths -

Siege Train

Right Battalion 22 .. 450: 6: 245: 28: 30

From Diarrhea, Cholera & wounds the most prevalent complaints - 1 man died of Fever: 6 of Diarrhea: 4 of Cholera: 1 of Dropsy; and 16 of wounds out of 86 -

Left Siege 27: 604: 18: 295: 28: 28 -

Train

Fever: Dysentery, Diarrhea, Cholera & wounds were the most prevalent complaints - 1 man died of Fever: 1 of Peritonitis: 1 of Dysentery: 1 of Diarrhea: 17 of Cholera: 18 of wounds & injuries

E. Battery 7: 169 0: 109: 5 19 -

Fever, Dysentery, Diarrhea & Cholera have been the most prevalent complaints & 1 man died of Fever: 1 of Dysentery: 1 of Cholera

A. Battery 4: 147: 0: 76: 3: 5

Diarrhea was the most prevalent complaint next to Fever of which 1 man died - Two cases of Cholera occurred of which both died -

F. Battery 6: 166: 0: 261: 10: 38.

From Diarrhea, Cholera & Rheumatism were the most prevalent diseases - 178 cases of Diarrhea were admitted of which 2 died. 10 cases of Cholera took place of which 8 proved fatal

W. Battery 6: 208: 0: 128: 3: 23

Dysentery, Diarrhea & Cholera the most prevalent diseases - 6 cases of Cholera admitted of which 3 died, these were all the casualties that occurred during the quarter

P. Battery 5: 150: 1: 158: 7: 18

From Diarrhea & Cholera have been the most prevalent complaints: 1 man died of Cholera: 1 of Epilepsy: 3 of Cholera and 2 of wounds

Artillery Cont^d

B. Battery 7 : 138 : 0 : 82 : 5 : 20

From dysentery & diarrhoea most prevalent
Complaints : 1 man died of fever : 2 of diarrhoea
1 of Cholera the only case that died & 1 of Trust Bites

G. Battery 4 : 208 : 0 : 107 : 8 : 25

From dysentery & diarrhoea, 1 wounded, 10
most prevalent of fatal complaints - 2 men died
of fever : 1 of Pneumonia : 1 of Spilopsy : 1 of Cholera
and 1 of Trust Bites

Head &
Ambulance

Camp - 34 - 120 : 0 : 30 : 1 : 0

Dysentery, and Diarrhoea the most prevalent
Complaints : 1 case of Delirium tremens from salt

H. Battery 7 : 154 : 0 : 77 : 3 : 6
R. A.

Diarrhoea the most prevalent Complaint
45 of the admissions being from it alone &
2 cases of Cholera out of three attacks proved
fatal : and a case of Rheumatism died ;
but the Battery may be considered to have
been comparatively healthy during the
2nd

I. Troop 6 : 183 : 41 : 196 : 12 : 43
H. A.

Much sickness in the Troop. From : Dysentery
Diarrhoea and Cholera the most preva-
lently Complaints : 3 men died from fever
1 from Rheumatism : 1 from Dysentery, 2 from
Diarrhoea, and 4 from Cholera

C. Troop 6 : 232 : 27 : 299 : 7 : 27
H. A.

This like I Troop had a heavy sick list
during the 2nd - From Dysentery - Diarrhoea
and Cholera being the most prominent
Complaints : 3 men died of Diarrhoea, &
4 of Cholera -

4th
Dr Guards 15 : 206 : 16 : 336 : 12 : 75

From - Rheumatism - Catarrh - Dysentery
Diarrhoea - Cholera & Scourge have been
the most prevalent Complaints : 2 men
died of fever : 1 of Pneumonia : 1 of Dysentery
one wounded - and 7 out of 8 cases of Cholera
Dr Cooper ascribes the great amount of sick-
ness to the Corps to want of proper food
shelter & clothing

5th
Dr Guards 17 : 237 : 25 : 249 : 11 : 73

This Regt. had also a heavy sick list
and the same disease were prevalent
as in the 4th B. S. : 1 man died of Dysentery
1 of Cholera - 5 of Diarrhoea : 2 of disease
of the Throat ; and 2 of wounds -

6th
Dr Guards 13 : 200 : 0 : 302 : 5 : 26

Fever, Catarrhs, Diarrhoea, Cholera &
ulcers have been the prevalent Complaints :
2 men died of fever : 1 of Diarrhoea, & 2 of
Cholera

1st
H. Dragoons 19 : 169 : 10 : 153 : 4 : 12

This Regt. has enjoyed comparative good
health, and the mortality from disease
has been small, as only one case a case
of Cholera proved fatal - the other three
deaths were from wounds -

2nd 16 : 208 : 24 : 323 : 16 : 26

Considerable sickness appears to have prevailed
in this Regt. and the principal diseases
appear to have been Fever - Dysentery - Diarrhoea

Dragoons

Cholera - Wounds - and a singular number of cases of Dropsy, 23
are returned, in all probability the swelling of Scourge - 2 men died of Fever : 1 of Catarrh
2 of Dysentery 5 of Cholera - and six of wounds out of 55 admissions -

Canalry

4th
S. Dragoons 17: 227: 8: 322: 9: 25

Much sickness prevailed in this corps, and the most prominent diseases seem to have been Fever - Cholera - Dysentery - Diarrhoea - Rheumatism - Ulcers - Wounds - Scouring - 1 man died of fever: 1 of Dysentery: 2 of Diarrhoea: 3 of Cholera out of them, 1 wounded, & 1 Various -

8th
Hussars 17: 224: 7: 222: 3: 12

This Regt. enjoyed better health, and has sustained comparatively small loss the period under precisely the same circumstances as the 4th - One man died of fever: 1 of Diarrhoea; & one of Cholera - only two cases of Cholera occurred in the Regt during the 2nd

11th
Hussars 14: 242: 57: 250: 8: 21

Dysentery - Fever - Diarrhoea - Dyspepsia - Cholera - Rheumatism - Ulcers - Wounds were the most prominent Complaints: 1 man died of Fever: 1 of Dysentery: 2 of Dyspepsia out of 14 cases: 4 of Cholera - Every case that was attacked with the disease

13th
S. Dragoons 17: 243: 41: 170: 4: 17

Fever - Diarrhoea - Cholera & Rheumatism have been the prevalent Complaints: 1 man died of fever: one of Cholera - and 2 of Diarrhoea -

17
Lancers 5: 150: 7: 239: 5: 24

Considerable sickness has occurred in this Regt. and the head of fever - Dysentery - Diarrhoea - Cholera - Rheumatism - Scouring - Mechanical injuries - 2 men died of Fever - and 3 of Cholera out of four cases which occurred -

Light Division

1st
Y. Fusiliers 13: 662: 0: 331: 52: 34

Much sickness prevailed in this corps - and Fever - Dysentery - Diarrhoea - Cholera - Wounds appear by the returns to have been the prevailing diseases as no observations accompany it: 2 men died of Fever: 2 of Rheumatism: 7 of Dysentery: 3 of Diarrhoea: 1 of Peritonitis: 28 of Cholera out of 43 attacks: 3 of Wounds; and 6 were prone to death - Besides two men found dead in their tents, and one man committed suicide

19th
Foot 19: 613: 0: 414: 69: 47

Much sickness has occurred in this Regt. chiefly affecting the Stomach & bowels, & owing to the Surgeon attributing to insufficient shelter & clothing over work - Exposure - too large a proportion of Salt meat, and that badly cooked - Cholera accompanied the Regt. - but ceased about the middle of October & appeared about the 23rd inst. and swept off 46 patients: 1 man died of fever: 8 of Dysentery: 8 of Diarrhoea; and six of Wounds

23rd Fusiliers 14: 635: 0: 445: 63: 49
X 3 of fever 132 men 22 100th
102 50 20 20th

About the same amount of sickness & mortality has occurred in this Regt. and from the same causes - 5 from fever: 9 from Dysentery: 9 from Diarrhoea: 39 from Cholera: 15 from Wounds & 1 from disease of the heart - Cholera broke out amongst the weakly young recruits and nearly all the deaths from that

③ disease - and the men of these brought have ~~subly~~ ^{subly} ~~even~~ ^{even} since
and nearly insignificant so that they have afforded little assistance in the way of duty
~~light~~ ^{light} ~~duty~~

33rd 15: 586: 11: 603: 43: 40

The ship has been most subly during the 8
one man died of fever: 2 of dysentery: 2 of diarrhoea
1 of apoplexy 19 of Cholera 17 from wounds, and
one from post bite -

34th 588: 0: 183: 32: 71 -

X arrived 9th Dec^r

This ship arrived from Copenhagen on the
9th Dec^r and was immediately attacked
with Cholera which 31 men died. 4 from
wounds -

77th Reg^t 24: 660 11: 440: 31: 60

Fever - Diarrhoea and Cholera have
been the most prevalent complaints: 4
men died of fever: 1 of Scurvy
6 of Diarrhoea: 16 of Cholera, and 4 of
wounds -

88 - 19 626: 0: 1007: 36: 85

Fever - Diarrhoea & Cholera were
the most prevalent diseases - 110 Cases
of wounds were admitted of which 8
died: 3 died of fever: 1 of apoplexy
14 of Diarrhoea: 10 - out of 12 Cases of
Cholera that were admitted -

90th 31: 764: 17: 177: 43: 39.

X

This ship landed at Malaklava on the
5th Dec^r and was immediately attacked
by Diarrhoea & Cholera - 15 died of the
fever, and 26 of the latter before the end of
the month - 1 case of fever died, one of Scurvy,
and one of bleeding of blood - 8 hindered
thinks the mortality was increased for want
of proper medicines & that comfort -
He arrived from England fully provided
with last part of his medicines & stores
on landing

2nd Reg^t 24 - 1022: 0: 619: 24: 29

Fever - Dysentery - Diarrhoea & Cholera
have been the most prevalent
complaints - 5 men died of their wounds,
1 of Scurvy: 2 of Dysentery - & 16 of
Cholera -

(Found loose in FRT 1/1)

FRR 6/24

	Sent down	Sent on Tape
September 1854	0	0
30 - 445	-	23
7 - 344	-	10
9 - 385	-	33
12 - 438	-	15
4 - 338	-	20
14 - 476	-	23
21 - 331	4 -	13
1 - 211	-	23
1 - 431	-	114
5 - 276	-	33
353	-	50 v
104 - 4030		355
		357

+ After going through most
available material together with
Subsidiary, now that the main
board is clear, I shall send the
a number of copies to the
in their health, & if the
any of our would be
forwarded to the
Seminarians & think our
Return No 2 shows so marked a decrease both in the
number and mortality of cases sent down from
the Crimea & the Scutari hospital for treatment
during the month of Feb 1855. That it is almost
superfluous to state that a favorable change in
the health of the Army had commenced before
the arrival of the Commissioners at Scutari,
but if anything further were required might
be allowed to quote the following extract from
my weekly reports to Lord Raglan of
which was written without any reference, or anticipation
of any inquiry of this kind, and may therefore be
received as an unbiased opinion on the question -

"You will be pleased to
learn that an improve-
ment has taken place
in the health of the
troops of late, the men
suffering less, and
died less while continuing
longer."

The type of fever which
prevailed on the 14th at
Batalia, and the 93
th some other Regts has
changed from the typhoid
to the remittent & remittent brought in reality appears epidemic
morbidity character for a
week or ten days previous
to the 14th. The weather has mild
and genial and the men
began to regain their health &
spirit, but on the night of the 19th
the 20th we had a violent storm
the wind changed to the north
the 21st & 22nd the storm
it has done much injury to
the sick - I only mention the
of the 21st & 22nd 1855
following paragraph

In the 2nd part of Dr Lushington's Return it will
be seen that the deaths per 1000 of cases treated is
taken from the number of sick at Scutari per
period, and not from the whole number treated -
which makes the mortality, which was lamentable
in reality, appear excessive

The 20th we had a violent storm
the wind changed to the north
the 21st & 22nd the storm
it has done much injury to
the sick - I only mention the
of the 21st & 22nd 1855
following paragraph

11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847

(Found Passes in FRT 1/1)

FRR 6/25

Hospitals at Sauter for October 1854

| | Remained
in Hospital | Admitted
from the month | Total | Discharged | Died | Remained
in Hospital | Ratio of
Deaths per
1000 of
Cases treated |
|--------------|-------------------------|----------------------------|-------|------------|------|-------------------------|--|
| October 1854 | 2277 | 1401
1401 | 3809 | 1884 | 211 | 2205 | 57.75 |
| November " | 2205 | 3611
3611 | 5393 | 1614 | 289 | 3502 | 51.36 |
| Decr " | 3502 | 3101
3101 | 6750 | 2223 | 448 | 4079 | 66.37 |
| January 1855 | 4079 | 3900
3900 | 8230 | 2236 | 1207 | 4794 | 145.80 |
| February " | | 18946 | | | 1026 | | |
| March " | | 794
794 | | | 302 | | |
| April " | | 2385
2385 | | | 421 | | |
| May " | | 448
448 | | | 134 | | |
| June " | | 1629
1629 | | | 149 | | |
| | | 138
138 | | | 52 | | |
| | | 1623
1623 | | | 79 | | |
| | | 255
255 | | | 116 | | |
| | | 1519
1519 | | | 41 | | |
| | | 328
328 | | | 5 | | |

| | Rem
in Hospital | Ad | Total | Dischd | Died |
|--------------|-------------------------|------|-------|--------|------|
| October 1854 | 2277
2277 | 1401 | 3678 | 1261 | 211 |
| Novr " | 2258 | 3611 | 5869 | 1716 | 289 |
| Decr " | 3867 | 3101 | 6968 | 1911 | 504 |
| Jan 55 | 4348
4348 | 3900 | 8248 | 2046 | 1207 |
| Feb 55 | 5145 | | 7883 | | |
| March | 4956
4956 | 2688 | 7644 | 2204 | 1328 |
| April | 4351
4351 | | 7184 | | |
| May | 4112
4112 | 2833 | 6945 | 2837 | 555 |
| June | 3792 | | 5559 | | |
| | 3553
3553 | 1767 | 5320 | 2500 | 201 |
| | 2858 | | 4736 | | |
| | 2619
2619 | 1878 | 4497 | 2333 | 95 |
| | 2368 | | 4135 | | |
| | 2669
2669 | 1847 | 4516 | 2187 | 46 |
| | 1683 | | | | |
| | 239 | | | | |
| | 1922 | | | | |

$$\begin{array}{r}
 3678 \quad 211000 \quad (57.36) \\
 \underline{18260} \\
 25746 \\
 \underline{173540} \\
 11034 \\
 \underline{25060} \\
 5867 \quad 289000 \quad (49.25) \\
 \underline{23468} \\
 56320 \\
 \underline{52803}
 \end{array}$$

$$6968 \quad 584000 \quad (72.33)$$

$$\begin{array}{r}
 48776 \\
 \underline{16240} \\
 13936 \\
 \underline{23040} \\
 20904 \\
 \underline{21360}
 \end{array}$$

$$7883 \quad 1328000 \quad (168.46)$$

$$\begin{array}{r}
 7883 \\
 \underline{53970} \\
 47298 \\
 \underline{66720} \\
 63064 \\
 \underline{36560} \\
 31532 \\
 \underline{56280} \\
 47298
 \end{array}$$

$$5559 \quad 291000 \quad (36.15)$$

$$\begin{array}{r}
 16677 \\
 \underline{134230} \\
 33354 \\
 \underline{18760} \\
 5559 \\
 \underline{32010}
 \end{array}$$

$$\begin{array}{r}
 15770 \\
 11734 \\
 \underline{34360} \\
 468 \\
 4155 \quad 46000 \quad (11.07) \\
 \underline{4156} \\
 4450 \\
 \underline{4155} \\
 29600 \\
 \underline{29085}
 \end{array}$$

$$6448 \quad 1207000 \quad (144.17)$$

$$\begin{array}{r}
 8448 \\
 \underline{36220} \\
 32792 \\
 \underline{34280} \\
 14880 \\
 \underline{8448} \\
 64320 \\
 \underline{59584} \\
 6736
 \end{array}$$

$$7184 \quad 555000 \quad (77.25)$$

$$\begin{array}{r}
 50288 \\
 \underline{52120} \\
 18320 \\
 \underline{14368} \\
 39520 \\
 \underline{35600}
 \end{array}$$

$$4736 \quad 95000 \quad (20.65)$$

$$\begin{array}{r}
 472 \\
 \underline{28000} \\
 33680 \\
 \underline{4320}
 \end{array}$$

| Name of Ship | Date of sailing | Original No. | Revised No. | |
|--------------|--------------------------|-------------------|-------------------|--|
| Quenbar | 18 Sept ^r | 10 | x22 | |
| Cambria | 20 " | 15 | 25 | 12 men died, equally divided after disembarkation and 8 during embarkation |
| Vulcan | 22 " | 15 | 18 | |
| Colombo | 22 " | 23 | x30 | 7 other deaths were in before prisoners |
| Andes | 24 " | 13 | 15 | 4 officers died on board |
| Orient | 25 " | by 26 | 33 | |
| Simandea | 30 " | $\frac{50}{18}$ | $\frac{52}{17}$ | Difference 13 - average 12 in the mounted chain |
| Schunga | 36 October | 6 | 8 | of 6 men difference |
| Australia | 27 " | 3 | 11 | Difference 8 to increase |
| Calmarston | 27 " | $\frac{11}{3}$ | $\frac{25}{11}$ | |
| Colombo | 7 November | 3 | 23 | Two officers died on board |
| Midway | 19 " | 20 | 38 | Difference 14 |
| Edendale | 20 " | $\frac{33}{2}$ | $\frac{38}{12}$ | |
| Kalinger | 29 December | 2 | 12 | |
| Lawson | 31 " | 9 | 47 | |
| Shastiglar | 7 ^x January | 31 | 27 | |
| Colombo | 10 ^x " | 21 | 7 | |
| Trent | 23 ^o November | 2 | 12 | |
| So. Sheppard | 10 December | 7 | 31 | |
| Simandea | 11 " | 20 | 20 | |
| Victoria | 11 " | 16 | 11 | |
| Sametza | 16 " | 8 | 31 | |
| Alcepatra | 12 " | 14 | 13 | |
| Ottawa | 20 " | 13 | 5 | |
| bandia | 15 " | 0 | 11 | |
| Ripon | 15 " | 10 | 15 | |
| Solan Place | 16 " | 9 | 5 | |
| Tamar | 22 " | 2 | 5 | |
| Brandon | 22 " | $\frac{2}{12}$ | $\frac{5}{10}$ | Difference 69 |
| Brandon | 20 January | 7 | $\frac{556}{414}$ | |
| x | | $\frac{414}{142}$ | | |
| Sumary | | 59 | 42 | Difference 23 |

Total 142
 Subt 139
 113

Strength of the Army in the Crimea & Turkey

270
~~27~~
 270

1 Nov^r 1854 — 34026

1 December 1854 34414

1 January 1855 38685

1 Feb^y 1855 40629

1 March - 40827

1 April - 41699

1164
 1149
 ———
 15

Found loose in FRT1/1)

FRR6/26

| Embarked from the Amers in | | Died on passage | | Mean duration of voyage - | |
|----------------------------|------------------------|---------------------|----------------------|---------------------------|-------|
| Offs | Men | Offs | Men | Days | Hours |
| September 1854 | 104 - 4030 | 5 - | 357 | 4 - | 13 |
| October " | 58 - 1774 | - | 77 | 4 - | 8 |
| November " | 111 - 1986 | 3 - | 143 | 3 - | 11 |
| December " | 57 - 4136 | 1 - | 322 | 7 - | 9 |
| | <u>210</u> <u>7896</u> | <u>4</u> <u>422</u> | <u>372</u> | | |
| January - | 23 - 3264 | - | 230 | 6 - | 7 |
| February - | 71 - 1884 | | 23 - | 3 - | 7 |
| March - | 2 - 974 | | 5 - | 2 - | 12 |
| | <u>96</u> <u>6284</u> | | <u>258</u> | | |
| April | 7 - 988 | | 5 - | 2 - | 18 |
| May | 9 - 824 | | 26 ⁶ 02 - | 3 - | - |
| June - | 25 - 1167 | | 12 - | 3 - | 10 |
| | <u>41</u> <u>3193</u> | <u>19</u> | | | |

two boat laborers that were included in the former tally = went ~~forward~~ in this

$$\begin{array}{r} 10 \overline{) 41} \\ \underline{40} \\ 1 \end{array}$$

$$\begin{array}{r} 4030 \overline{) 340000} \quad (84.87) \\ \underline{32240} \\ 17600 \\ \underline{16210} \\ 1390 \\ \underline{12090} \\ 1810 \\ \underline{15600} \\ 2510 \\ \underline{20150} \\ 4950 \end{array}$$

$$\begin{array}{r} 1774 \overline{) 77000} \quad (43.40) \\ \underline{7096} \\ 6040 \\ \underline{5322} \\ 7180 \\ \underline{7096} \\ 840 \end{array}$$

$$\begin{array}{r} 1986 \overline{) 113000} \quad (56.89) \\ \underline{9930} \\ 13700 \\ \underline{11916} \\ 17840 \\ \underline{15888} \\ 19520 \\ \underline{17874} \\ 1646 \end{array}$$

$$4136 \overline{) 322000} \quad (77.85)$$

$$\begin{array}{r} 4393 \overline{) 325000} \quad (74) \\ \underline{30751} \\ 17490 \\ \underline{1757} \\ 1572 \end{array}$$

$$3264 \overline{) 222000} \quad (68.13)$$

$$\begin{array}{r} 3264 \overline{) 222000} \quad (74.14) \\ \underline{22868} \\ 13320 \\ \underline{13236} \\ 84 \\ \underline{4640} \\ 3264 \\ \underline{1376} \end{array}$$

$$\begin{array}{r} 1884 \overline{) 23000} \quad (12.20) \\ \underline{1884} \\ 4160 \\ \underline{3768} \\ 3920 \\ \underline{3768} \\ 1520 \end{array}$$

$$\begin{array}{r} 974 \overline{) 5000} \quad (5.20) \\ \underline{4870} \\ 2000 \\ \underline{1920} \\ 800 \\ \underline{782} \\ 18 \end{array}$$

$$\begin{array}{r} 1102 \overline{) 5000} \quad (4.53) \\ \underline{4408} \\ 5920 \\ \underline{5510} \\ 410 \end{array}$$

$$\begin{array}{r} 1167 \overline{) 12000} \quad (10.28) \\ \underline{1167} \\ 3300 \\ \underline{2334} \\ 9660 \\ \underline{9336} \\ 324 \end{array}$$

$$\begin{array}{r} 236 \overline{) 525} \\ \underline{472} \\ 53 \end{array}$$

$$\begin{array}{r} 187 \overline{) 339} \\ \underline{187} \\ 152 \end{array}$$

$$\begin{array}{r} 521 \overline{) 2800} \\ \underline{1042} \\ 1758 \end{array}$$

and 1/10

With D. Milnes's Compliments
ON THE CONSTRUCTION AND SANITARY ARRANGEMENTS
OF BARRACKS AND HOSPITALS.

FRR 6/27

[Reprinted from the JOURNAL OF PUBLIC HEALTH.]

*The Memorial of the undersigned Physicians and Surgeons, to the RIGHT HON. LORD
PANMURE, K.T., Her Majesty's Secretary of State for War,*

Sheweth,—that

I. Your memorialists, in the practice of their profession as medical officers of Her Majesty's army and navy, or of the Hon. East India Company's army, or in official civil service, have long had their attention specially drawn to the investigation of the causes which affect the public health, and tend to produce disease in establishments where large numbers of persons are congregated together.

II. The health of the inmates of such establishments depends mainly upon the observance of certain hygienic conditions which the science of medicine has pointed out, and experience has proved to be necessary for the due performance of the functions of life.

III. The amount of sickness and mortality among the general population of Great Britain is at all times far greater than it ought to be, in consequence principally of the constant prevalence of different epidemic diseases, especially of fevers and bowel complaints, arising from or aggravated by the neglect of sanitary precautions within and around the dwellings of the people.

IV. The healthiness of most of the workhouses and prisons of this country has been, of recent years, very greatly increased by the sanitary improvements which have been introduced into them upon the recommendation of experienced medical officers.

In consequence of these improvements, typhus fever—the existence of which is one of the surest tests of local insalubrity—has been to a great extent banished from among their resident inmates; and the frequency and virulence of bowel disorders and other zymotic diseases have been much diminished.

V. Still more decisive evidence of the efficacy of such measures, in the prevention of disease and in lowering the rate of mortality in similar establishments, has, of late years, been afforded by the experience of the Metropolitan Association for Improving the Dwellings of the Industrious Classes.

During the three years 1850, 51, and 52, the average mortality among the residents—consisting chiefly of the better class of mechanics and artisans, and including a large number of young children, among whom the proportion of deaths is always high—was only 13 and a fraction per 1000; and in 1853, when the whole of the establishments of the Association were in full occupancy, it was much lower, while that of the metropolis generally was at the rate of 22 deaths per 1000.

Not a single case of typhus fever has occurred in any of the improved dwellings since they were first opened.

VI. This remarkable healthiness and exemption from fever have, in the opinion of your memorialists, arisen from the adoption of certain definite sanitary arrangements in the construction of these buildings, viz.:

1. The thorough subsoil drainage of the site.
2. The free admission of air and light to every inhabited room.
3. The abolition of the cesspool and the substitution of the water-closet, with complete house drainage.
4. The abundant supply of pure water.
5. Means for the immediate removal of all solid house refuse, not capable of suspension in water and of being carried off by water.

VII. The average rate of mortality among the troops in the United Kingdom is excessive, being 17 per 1,000 of the whole force, while that among the general civil population at the same period of life—viz., between 20 and 40 years of age—is not quite 12 per 1,000, notwithstanding the abounding preventible causes of ill health among the working classes, especially in large towns.

In the metropolitan police force, which consists of men of about the same age as soldiers, and who are equally exposed to frequent night duty, the rate of mortality during the 10 years 1840-49 did not exceed $7\frac{1}{2}$ per 1,000 among an average force of 4,895 men—or less than one-half the mortality among the troops.

VIII. A large amount of the mortality among the troops of the United Kingdom is caused by continued fever; which, as already stated, has been in a great measure banished even from our workhouses and prisons.

The proportionate mortality from this disease alone in the army at home is double that among the civil population of 24 large towns; and in one of the metropolitan barracks it has, on the average of 10 years, 1837-46, been as high as at the rate of 4 deaths per 1,000 of the strength—an enormous proportion, four or five times as great as that among the general population of England.

IX. The rate of mortality among the troops in the United Kingdom from diseases of the stomach and bowels, including diarrhoea and dysentery, is much higher than among the population of our towns at the same periods of life.

X. The troops in Great Britain have on several occasions suffered severely from Asiatic cholera, the fatal effects of which disease universal experience has shewn to be so intimately connected with the sanitary condition of dwellings.

During the visitation of 1849, from the beginning of July to the end of the epidemic, in a force of 4,469 men in the different barracks of the metropolis, there occurred 69 cases and 27 deaths; while not more than one case of cholera occurred among the inmates, 795 in number, of the metropolitan buildings or model-lodging houses, although several of these buildings are situated in neighbourhoods where the pestilence raged with severity, and many of the residents, being artisans, were much exposed in their daily occupations to unfavourable influences.

Moreover, in 7 of the metropolitan prisons, having between 2,000 and 3,000 inmates, there were not more than 3 cases and 2 deaths during the whole epidemic. This fact is the more worthy of notice, as some of these prisons had suffered severely in the visitation of 1832, since which time important improvements had been effected in their sanitary condition at the instance of the medical officers.

The complete exemption, too, of Bethlem Hospital, and of the Hanwell Asylum, containing together 1,361 patients besides attendants, is a striking evidence of the same nature.

XI. Besides these diseases already mentioned, other maladies, which at all times cause great mortality and a large amount of invaliding among the troops in the United Kingdom, as disorders of the respiratory organs, are much aggravated, if not directly induced, by local causes affecting the health of the soldier; and among these causes, none is so detrimental as the mal-sanitary condition of many of the existing barracks, guard-houses, &c.

XII. The different proportion of sickness and mortality in the different metropolitan barracks affords the strongest presumption that this difference arises from the operation of injurious local causes in connection with these barracks upon the health of the men.

XIII. A similar faulty state of things, as respects the barrack and other accommodation, exists in almost every colonial possession of the British crown, to the serious injury of the health, the sacrifice of much life, and the consequent impairment of the effective strength of the troops, as well as involving a very heavy expenditure to replace them.

XIV. Should your Lordship desire to be provided with specific proofs of the above allegations respecting the excessive mortality in the army both at home and abroad, your memorialists are prepared to furnish detailed information on the subject.

XV. Your memorialists are convinced that the required improvements in the barrack &c. accommodation, and other physical comforts of the troops, would not only much diminish the existing amount of sickness, invaliding and death, and thus eventually lead to a great saving of national expenditure, but would also react most advantageously on the moral and intellectual character of the soldier, and on the general efficiency and welfare of the service.

The besetting vice of drunkenness would doubtless be much diminished, from the increased salubrity of the air of his dwelling, and the consequent absence of that depression which invariably results from residence in a vitiated atmosphere.

XVI. As it has been announced in Parliament that several large barracks are about to be erected in different parts of the country, your memorialists would respectfully urge upon the Government that it is highly desirable that all the late improvements in the construction of buildings bearing upon health should be introduced, more especially as these improvements are in themselves inexpensive; and they would submit that as regards the site, preparation of the ground, and the structural arrangements and appliances of barracks, guard-houses, military hospitals, and prisons, medical men, who have paid special attention to the subject, should be consulted, in order that in a matter of so much public interest the army should have the advantage of all the experience derived from the progress of sanitary science.

(Signed) NEIL ARNOTT, M.D., F.R.S.
 B. G. BABINGTON, M.D., F.R.S.,
 JAMES BIRD, M.D., F.R.C.S., &c.
 ALEXANDER BROWNE, M.D., *Sur. h.-p. 37th Reg.*
 W. H. BURRELL, M.D.,
Staff Surgeon, late P. M. O. Eastern Army.
 JOHN DAVY, M.D., F.R.S. L. & Ed.,
Inspector-General of Hospitals.
 R. D. GRAINGER, F.R.S.,
Lecturer on Physiology St. Thomas's Hosp.
 WALLER LEWIS, M.B., F.G.S.,
Metropolitan Commissioner of Sewers.
 JOHN LIDDELL, C.B., M.D., F.R.S.,
Royal Hospital, Greenwich.
 RANALD MARTIN, F.R.S.
 J. O. M'WILLIAM, M.D., F.R.S.
 G. MILROY, M.D.,
Govern't. Med. Inspector in Jamaica, 1851.
 E. A. PARKES, M.D.,
Physician University College Hospital.
 T. SOUTHWOOD SMITH, M.D.
 G. BROWN, *Surgeon-Major Grenadier Guards.*
 J. MONRO, M.D., *Surg.-Major Coldstream Gds.*
 TH. RICHARDSON,
*Surgeon-Major Scots Fusileer Guards.**

April 11, 1855

* On the 23rd of May, Drs. Arnott, Brown, Monro, Bird, Lewis, M'William, and Milroy, had the honour of an interview with Lord Panmure upon the subject of the above memorial.

At this interview his lordship expressed his high sense of the importance of the subject, and of the value of the information and suggestions brought under his notice.

The memorial had been referred by him to Dr. Graham Balfour, of the Royal Military Asylum, for consideration, and that gentleman had on nearly all the material points confirmed the statements contained in it.

Lord Panmure said that he entirely coincided in the recommendation that no barrack or military hospital should ever be built without the plans as to the site, construction, and sanitary arrangements having been previously submitted to a medical opinion. The memorial would be transmitted to the Barrack Committee now sitting, and the attention of the committee drawn to the offer made by the memorialists to afford detailed information respecting the condition of existing barracks and hospitals at home and in the colonies, if such information was desired.

Sanitary Commission
D. Milroy
Hints for Barracks &
Hosp's in a Memorial
to Lord Palmerston,
from Sandy, M.D. & M.M.

*To Dr. Hunter, Staff Surgeon R. Corps
to be read in the Brigade.*

FRR6/28

SANITARY ARRANGEMENTS FOR THE CRIMEA AND SCUTARI.

EXTRACTED FROM THE "SANITARY JOURNAL."

PERHAPS there is no subject so deeply interesting to the public at this moment as sanitary arrangements for the seat of war. Our troops are now fed, clothed, housed, and in comparative comfort. Death no longer stares them in the face on these scores; but he does on *that* most essential of all for the coming season, namely, *sanitary wants*. Most essential, we say, for our conviction is, that unless the most energetic means be made use of to neutralise the effect of the enormous collections of animal matter of every description, which have so long lain spread around the camps and hospitals, in addition to the vast numbers of dead *bodies*, both human and other, exposed or barely covered, a pestilence will break out which will be irresistible, and act alike upon all who come within the influence even of the wind that may blow from the locality; a very plague, in fact, must arise, unless the emanations from those collections be effectually neutralised.

It is to be recollected that our army is stationary within their lines, without the power of altering the position of the troops, as is done wherever practicable in other instances. From Balaklava to the outer trench of the encampment, and within the whole area, which covers many miles, the entire surface may be said to be covered with a body of impurities, which will from henceforth begin to yield their poisons to every breath of air and every gleam of sunshine, and give them out wholesale to the glow of heat which almost invariably rises during the nights of Spring in that part of the Crimea. Unless measures be resorted to, which we are fearful are not now contemplated, we apprehend the results will be indeed deplorable—and yet, the steps which have been taken will lull the public and the authorities into fancied security.

In such a juncture, we conceive it to be the duty of all who can aid by advice or otherwise, if founded on fact, to offer it. We feel, therefore, that we could not devote our time or our pages to a better use—for the question is one of life or death to thousands.

The public is aware, that a Sanitary Commission has been sent out to investigate the state of the hospitals at Scutari, and "to employ scavengers to cleanse the camp at the Crimea." It is not our object to criticise the appointments, but there cannot be a doubt that in this case "*routine*," as in so many other cases, will be likely to mar useful results. The three commissioners have been long accustomed to one certain "*routine*" of so-called sanitary operations, namely, *sewers*, *sewer-pipes*, and *sweeping*. We can scarcely expect them to travel out of what they have always practised, and if proof of this be wanted, it is to be found in the fact, that they have specially employed a staff of overseers selected from Liverpool, who have been always accustomed to remove all nuisance of the streets, &c., by *sweeping it up and carting it away*.

Now, if this plan be followed, without means being used to disinfect the mass of matter to be swept up in the Crimea, and to destroy or prevent the exhalations which will be drawn out from the surface *after the sweeping* (for the ground will be saturated fully a foot or two in depth)—if this plan be followed, it cannot be doubted that *sweeping* alone will produce almost as much evil as good. Any one who observes a scavenger's operations in sweeping even a *paved* court or lane, where filth has been thrown, will fully understand that the atmosphere has perhaps more power of producing evil *after the sweeping* than before it.

This, then, is what has to be guarded against. Mere sweeping and carting to some general depository will not effect the purification of the atmosphere. But happily there is ample power to accomplish this, and almost without cost in the Crimea and at Scutari. If the latter were not the case, and that we recommended some particular thing that was to be supplied by, or purchased from, some particular person, it might be supposed we had a special interest in the recommendation: but, in the present instance, this is not the case: the means for fully disinfecting the whole matter to be collected at the camp, and effectually purifying the atmosphere of the hospitals at Scutari, is to be had almost without cost at all points of the seat of war, as may be seen by the papers we now publish, which have been laid before the late Government, and also transmitted to leading parties at the camp and at Scutari.

[Copy.—No. 1.]

"SUGGESTIONS FOR THE SANITARY ARRANGEMENTS AT THE SEAT OF WAR."

- "Collect throughout the camp, and from the stores for fuel, all the refuse charcoal, such as is too small for being used as firing.
- "Granulate this by pounding, or by passing over it a garden-roller, until it has the same appearance as coarse cannon gunpowder.
- "If the quantity obtained in this way be not sufficient for the purposes hereafter described, prepare it in the same way from the large pieces of charcoal, selecting that kind which is made from *soft woods*, such as alder, poplar, fir, &c.
- "Keep this protected from rain in such positions throughout the camp, &c., as may be convenient for carrying out the following arrangements:—
- "Commence the preparations for thoroughly cleansing the whole surface occupied by the troops, by digging, in such positions as will be most convenient for the purpose, trenches about ten feet in depth, and of such length, &c., as will provide for the quantity of matter to be collected from the adjacent places.

- "Into this throw the whole until it has filled within two or three feet of the ground line.
- "Over the entire of this matter then strew about two inches in depth of the *granulated charcoal*, levelling the top, and then fill in the trench with the clay dug out of it, *tramping* each layer of ten or twelve inches well with the feet.
- "Follow this course throughout the camp until all the matter is buried *with a coating, as described, of charcoal over it*, and no odour will, in any instance, escape afterwards.
- "This being done, strew over the whole surface of the camp which has been cleansed and swept, *granulated charcoal*, throwing it with the hand in about the quantity that would be used of grass seed to sow it broad-cast. !!!
- "The result of the latter will be, that any exhalation drawn out by the atmosphere from the absorption taken in by the earth or soil will be arrested, as it rises, by the charcoal resting on the surface, the affinity between the two being perfect. The atmosphere will thus be kept pure.
- "In carrying the dead, as usual in trenches, the same course as before described should be followed. When the bodies have been ranged together, two or three inches of charcoal should, if possible, intervene between them and the covering of earth, which should also be well tramped down.
- "Receptacles for the daily refuse, &c., of each regiment or company, should be prepared by simply digging a trench, with a rail running along one side longitudinally, about eighteen inches from the ground. Into the bottom of this trench should be placed about a foot in depth of granulated charcoal, and occasionally, say once a fortnight, a slight additional quantity thrown on the surface will be sufficient to prevent escape of odour. When nearly filled, it should be treated as other trenches, and a new trench dug.
- "If these suggestions be followed accurately, the atmosphere of the camp will be preserved in purity, the more especially if the charcoal used be made from the *soft woods* named, which approaches nearest in quality to that made from *peat*.

"JASPER W. ROGERS, C.E."

"Peat House, Robertstown,
County Kildare, January, 1855."

[Copy.—No. 2.]

"SUGGESTIONS FOR SANITARY ARRANGEMENTS FOR THE HOSPITALS AT SCUTARI, ETC.

- "Use the charcoal of the country in place of peat charcoal; but have it made, if possible, from soft woods, such as alder, poplar, &c., and follow the suggestions hereafter submitted.
- "Granulate the charcoal by a garden-roller, or by pounding, until it appears like coarse cannon gun-powder.
- "Strew this plentifully under the beds and over the floors of each ward, especially under the beds.
- "And have a handful or two placed in the bottom of each pan.
- "Prepare *flat cases*, made of coarse open canvas or straining cloth, from two to six feet long, one to two feet broad, and three inches thick, like the case of a mattress. Fill these with granulated charcoal, and suspend them from the ceiling by cords fastened to the corners (the edges of the cases downwards), at intervals of ten or twelve feet, from end to end of each ward.
- "The result will be that the charcoal will absorb all the gaseous impurities afloat in the whole atmosphere of the room—the affinity being so strong that they will *rush* to it even from a moderate distance.
- "Prepare similar cases about three feet square and two inches thick; place in these granulated charcoal, first sifting out of it the fine particles, so that the coarser grains will not pass through the canvas.
- "Use these as coverlets on the beds where patients have sloughing wounds, mortification, &c., and all the bad odour will be arrested before it can pass into the atmosphere.
- "If the *fine powder* of the charcoal, which is had by the sifting, be sprinkled over the dressing, poultices, &c., either in contact with such wounds or not, the odour will be taken up. *If in contact*, the wound will be cleansed, and a tendency to healing is generally produced.
- "The charcoal on the floor may remain until wetted. Let it be then removed; and if *dried* in a stove, so as simply to expel the damp without bringing it to a red heat, it will answer perfectly well for the floors again.
- "The charcoal for the cases, coverlets, &c., *required to act solely upon the atmosphere*, should be prepared without allowing water to be used in extinguishing it, and only sufficient admission of atmospheric air to produce slow combustion.
- "In submitting these suggestions, it is right I should state that they are not theories. I have had them all practically proved both in the United Kingdom and in Paris. The first chemists of the day, headed by DUMAS, BOURSSINGAULT, PAYEN, &c., have tested the properties which I point out as existing in *peat charcoal*; but when charcoal of soft woods can be had in such abundance in all parts of the seat of war, I would recommend its use, perhaps with equal effect, under existing circumstances; for the exposure of peat charcoal in sacks to the damp of a long sea voyage would lessen its powers. In any event, one can be had on the spot *almost without cost*—the other would be at considerable cost and delay.

"Peat House, Robertstown,
County Kildare, January, 1855."

"JASPER W. ROGERS, C.E."

Sanitary arrangements for the
Camp in the Crimea by
J. Rogers. C.E.