

## **Annual report of the Sanitary Commissioner with the Government of India.**

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J. N. Radcliffe

ELEVENTH ANNUAL REPORT

OF THE

Sanitary Commissioner with the Government  
of India,

1874,

WITH

APPENDICES AND RETURNS OF SICKNESS AND MORTALITY AMONG THE BRITISH  
TROOPS IN INDIA, AND ALSO AMONG THE NATIVE TROOPS AND PRISONERS  
IN THE BENGAL PRESIDENCY, FOR THE YEAR.

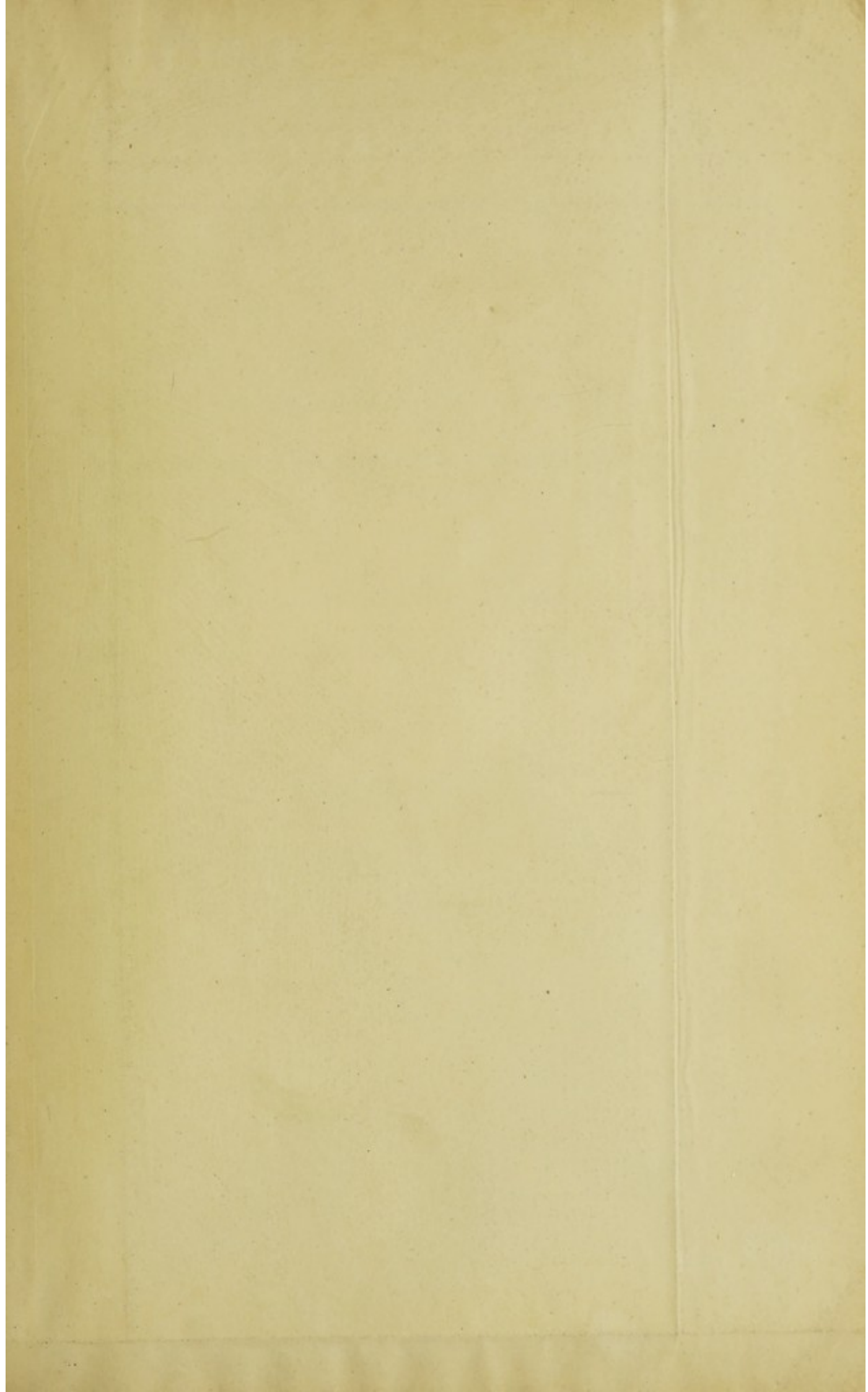


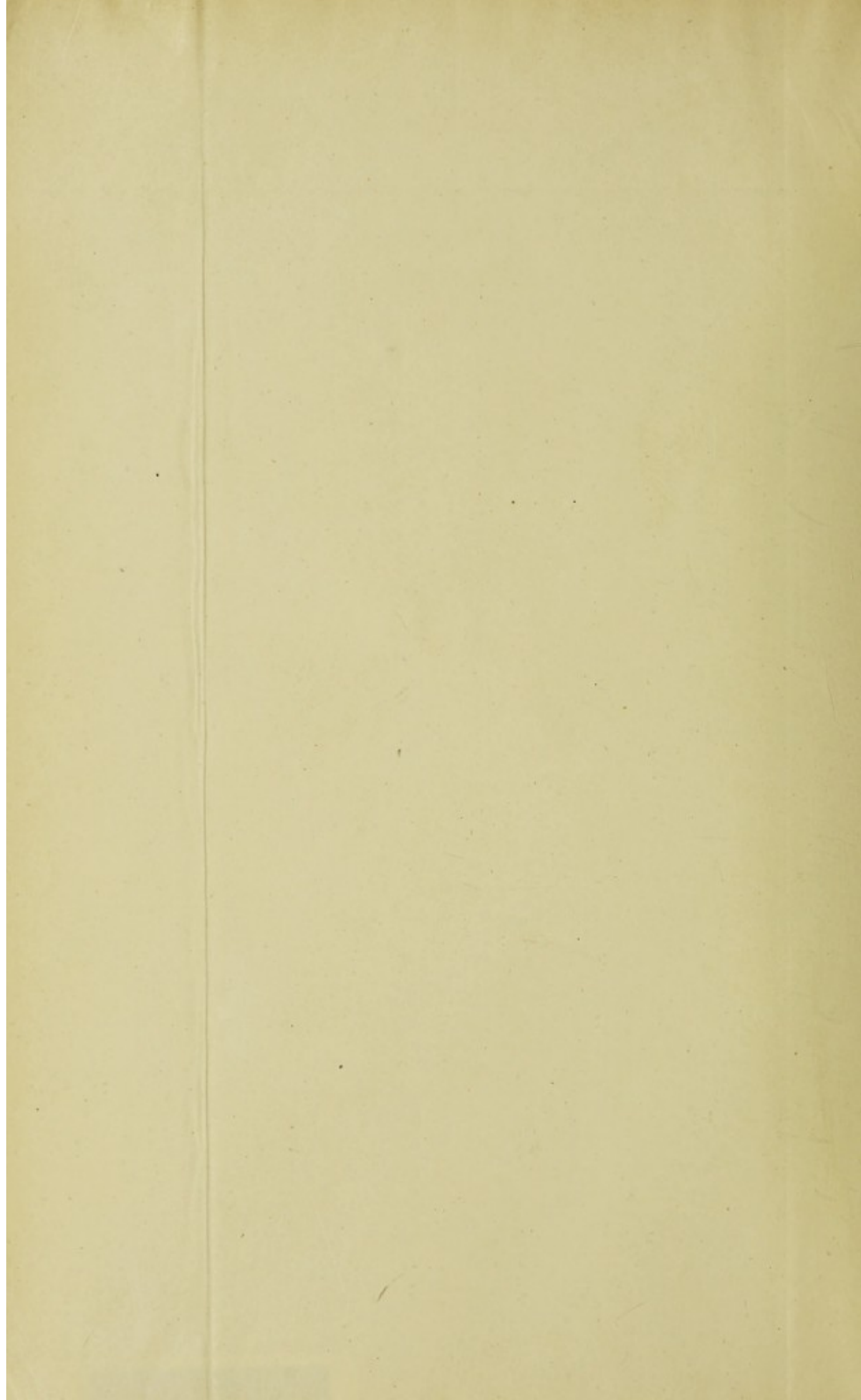
CALCUTTA:


OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING.  
1875.



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MAP  
OF  
**INDIA**  
TO ILLUSTRATE THE ANNUAL REPORT  
OF THE  
SANITARY COMMISSIONER  
WITH THE GOVERNMENT OF INDIA.  
1874.

Scale of English Miles.



NOTE.  
The figures show the areas to which the Statistical Tables  
have reference.  
Shaded area of Cholera in 1873.  
Area covered by Cholera in 1873.

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SEVENTEENTH ANNUAL REPORT

Sanitary Commissioner with the Government  
of India.

NOTE.

CHIEFLY in consequence of the authorized lists of names of places according to the new spelling not having been received in time, the new spelling has been only partially followed in this Report. In next year's Report it will be adopted in full.

J. M. CUNINGHAM, M. D.,

*Sanitary Commissioner with the Government of India.*

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1874

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The following is a list of the names of the persons who have been admitted to the membership of the Society since the last meeting. The names are given in the order in which they were admitted.

MEMBERS

ADMITTED

The following is a list of the names of the persons who have been admitted to the membership of the Society since the last meeting. The names are given in the order in which they were admitted.

ADMITTED

THE SOCIETY OF...

# ANNUAL SANITARY REPORT FOR 1874.

## SECTION I.

### EUROPEAN TROOPS.

THE sanitary history of India during 1874 is singularly favorable: speaking generally, indeed, it may be said that the public health throughout India in that year was more satisfactory than in any other year of which statistics have been recorded. In the last annual report the general results of 1873 were thus summarized: "In some parts of the country small-pox was epidemic and caused much mortality among the people during several months: generally, there was a remarkable absence of cholera, and a considerable diminution of other diseases compared with other years; it is only over a small area that cholera can be said to have been epidemic, while its dormancy over certain large tracts of country, and its almost complete absence from others, have been most striking features. The year, as a whole, has been unusually healthy."\* With some trifling exceptions, to which reference will be made hereafter, this description of 1873 applies with equal force to 1874. The comparative absence of cholera has been even more striking during the past year than it was in 1873. A brief record of the main facts in relation to those of former years will, therefore, suffice.

2. Among European troops, the results, and more particularly the low death-rate, have been very satisfactory. Since 1871, when the returns of sickness, mortality and invaliding in the three Presidencies were first collected and compiled in this office, the annual statistics stand thus:—

YEAR.	Average strength.	RATIO PER 1,000.				TOTAL LOSS.
		Admissions into hospital.	Daily sick.	Deaths.	Invaliding.	
1871 . . .	56,806	1,449	57	17.53	43.62	61.15
1872 . . .	58,870	1,497	56	24.21	43.21	67.42
1873 . . .	58,769	1,328	55	15.30	44.58	59.88
1874 . . .	59,308	1,357	57	13.58	43.78	57.36

The ratio of sickness represented by the admissions into hospital, 1,357, is somewhat higher than in 1873, but lower than in any of the other years. The daily sick-rate, 57, stands as it did in 1871, and is slightly greater than in either 1872 or 1873; but the death-rate in 1874, 13.58 per 1,000, is the minimum, and contrasts very favorably with that of any of its three predecessors. The same may be said of the total loss by death and invaliding taken together.

3. Looking at the European army of Bengal by itself, the most striking feature in the statistics is the low rate of mortality when compared with that of previous years. It is, in fact, lower than it has ever been in this Presidency before. During the 14 years, from 1860 to 1873, the death-rate has varied from a maximum of 45.93 in 1861 to a minimum of 15.40 in 1873. For 1874 it is 14.62. During the ten-year period, 1860—69, the average annual ratio was 29.98. During the last five years the average has been only 19.40. The very favorable result for 1874 is in great measure due to the almost complete absence of cholera. Out of an average of 37,278 men, only 8 were attacked

Army of Bengal: sickness comparatively slight, and mortality less than in any previous year.

\* Annual Sanitary Report for 1873, para. 1.

with this disease. All the cases proved fatal, but the loss on this account is only .21 per 1,000—a remarkable contrast to 10.66 in 1872, 13.84 in 1867, and 23.73 in 1861. Under other heads, also, there is a marked difference. Fevers contribute 3.11 deaths per 1,000, compared with 4.28 in 1870, 4.71 in 1869, and 4.85 in 1860. From heat apoplexy, again, the loss in 1874 was only .97, compared with an average annual ratio of 2.15 during the ten years, 1860—69, with 1.37 in 1873 and 1.62 in 1870. Dysentery accounts for 1.21 deaths per 1,000, which, though not quite so favorable a return as that of either 1871 or 1873, is a great improvement on 2.72, the average annual ratio of 1860—69. The deaths from hepatitis, 1.93 per 1,000, are in smaller proportion than those of any year, except 1873, when they stood at 1.80 per 1,000. In 1870 the ratio was 3.71, and for the ten-year period it averaged 3.31 annually. The loss from respiratory diseases in 1874, .54 per 1,000, was less than in any previous year. The cases of sickness, 1,443 per 1,000, are somewhat in excess of 1,349, the ratio for 1873, and of 1,412 and 1,438, the ratios for 1867 and 1868, but they are lower than those of any one of the other eleven years, and contrast favorably with 1,754, the average of the ten-year period. The diminished sickness is shewn chiefly under the head of fevers and dysentery. When tested by the average daily sick-rate, the ratio for 1874, 58 per 1,000, is somewhat higher than that of either 1872 or 1873. The years 1867 and 1868, also, both show a lower ratio in this respect, but for the ten-year period the average was 67, or nearly 10 per 1,000 above that of 1874. The general results of the past year in Bengal, as regards both mortality and sickness, may thus be regarded as highly satisfactory.

4. To the army of Madras similar remarks apply. Between 1860 and 1870, the lowest death-rate among the European troops in this Presidency, as given by the Sanitary Commissioner, was 16.3 in 1861. In 1871 the ratio was over 20; in both 1872 and 1873 it exceeded 18. In 1874 it was only 12.96. During the eleven years, from 1860 to 1870, the death-rate among European troops in Madras averaged 19.92. For the last four years the average is 17.58. Compared with those of the three preceding years, the only ones for which full statistics have been collected in this office, the results of 1874 are specially favorable as regards cholera, dysentery, and diseases of the heart. The admissions into hospital throughout Madras in 1874 equalled 1,143 per 1,000, the lowest ratio recorded in that Presidency, while the daily sick-rate, 57.3, is also lower than that of any years except 1861 and 1863. The comparative absence of cholera in Madras during the past year was even more marked than in Bengal. Out of an average strength of 11,501, only one man was attacked.

5. Among European troops in Bombay, between 1860 and 1870 the death-rate fluctuated from a maximum of 35.1 per 1,000 in 1865 to a minimum of 12.7 in 1866. During this period the average mortality was 21.10. In 1871 the death-rate was 14.02: in 1872 it was 18.86: in 1873 it was 11.72, the lowest which had up to that time been recorded. In 1874 it was only 10.64. From 1871 to 1874 the annual average has been 13.81. During 1874, in this Presidency, the admissions into hospital equalled 1,286 per 1,000 the lowest ratio excepting that of 1868, when they were only 1,148. Tested by the daily sick-rate, the results are also very satisfactory. The daily proportion of men in hospital per 1,000 of strength was, in 1874, 53, the lowest ratio of any of the previous eleven years, excepting 1868 and 1873, in each of which it was only 49. In explanation of the low ratios of mortality and sickness in the Bombay Presidency during 1874, it may be remarked that in this part of the country, as in Bengal and Madras, cholera was at a minimum. Out of an average strength of 10,529 men, there were only three cases, of which two were fatal. Under the heads of heat apoplexy, fevers, and dysentery also, the admissions and deaths were comparatively few.

6. In each of the three Presidencies, thus, the statistics of sickness and mortality among the European troops during 1874 contrast very favorably with those of previous years. In No. V of the annual tables, the results in each are placed side by side for convenient comparison. It will be seen that in the matter of daily sick, Bombay shews the lowest ratio, 53 per 1,000; Madras comes next with 57, and then Bengal with 58. In regard to admissions into hospital the order is some-

Army of Madras: similar remarks apply.

Also to the army of Bombay.

Comparison of results in three Presidencies.

what altered. Bengal again shews the highest figure, 1,443 per 1,000; but Madras has only 1,143, compared with 1,286 in Bombay. In mortality, however, Bombay again takes the first place. Here the death-rate was only 10·64, while in Madras it was 12·96, and in Bengal 14·62. The comparative losses due to invaliding in the three Presidencies will be considered in a subsequent paragraph of this report.

7. From the details given in the first section of Table V, it appears that the highest sick-rate throughout the army of India, 67 per 1,000, was attained in the month of August. This is accounted for by the largest proportion for Bengal, 71 per 1,000, having fallen in this month. In Madras the maximum, 68, was reached in November, and in Bombay the highest ratio, 65, was in October. The minimum was 43 in the Bombay Presidency during May. As usual, malarial fevers contributed by far the greatest number of admissions into hospital. The comparative incidence of these and of the other principal diseases may be thus shewn:—

BENGAL.			MADRAS.			BOMBAY.		
Admissions per 1,000.								
1. Malarial fevers ... ..	552		Venereal diseases ... ..	188		Malarial fevers... ..	439	
2. Venereal diseases ... ..	200		Malarial fevers ... ..	187		Venereal diseases ... ..	170	
3. Respiratory diseases ... ..	94		Abscess and ulcer ... ..	103		Abscess and ulcer ... ..	110	
4. Wounds and accidents ... ..	91		Wounds and accidents ... ..	96		Wounds and accidents... ..	101	
5. Abscess and ulcer ... ..	84		Hepatitis ... ..	82		Respiratory diseases ... ..	84	
6. Rheumatism ... ..	67		Dysentery ... ..	82		Rheumatism ... ..	54	
7. Diarrhoea ... ..	51		Respiratory diseases ... ..	60		Hepatitis ... ..	48	
8. Hepatitis ... ..	45		Rheumatism ... ..	54		Diarrhoea ... ..	45	
9. Dysentery ... ..	26		Diarrhoea ... ..	45		Dysentery ... ..	23	
10. Eye diseases ... ..	22		Eye diseases ... ..	13		Eye diseases ... ..	21	
Total of these ten diseases ... ..	1,232			910			1,075	
Total from all causes ... ..	1,443			1,143			1,286	

The great mass of sickness in all three Presidencies is embraced under these ten heads. Although their relative position varies slightly, they represent in each the ten chief causes of admissions into hospital. It is worthy of notice that in Madras venereal diseases head the list, not because of their greater prevalence than in the other two Presidencies—for, although higher than in Bombay, the ratio under this head is more favorable in Madras than in Bengal—but because of the comparative immunity from malarial fevers which the troops in Madras enjoyed. To this point further attention will be drawn hereafter.

8. In the army of India, as a whole, no one month in 1874 was distinguished by excessive mortality. The death-rate was highest in September, when it reached 1·66 per 1,000; but in July it was 1·45, and other months shew ratios not very much less. In Bengal the maximum loss by death, 2·01, was in September, and the smallest, ·84, was in February. In Madras February shews the highest mortality, 1·45, but January and November contribute very nearly as much. In Bombay, October gives a maximum of 1·24, and November a minimum of ·49. Ranged in the order in which they caused the mortality of the year, the ten chief diseases stand thus for each Presidency:—

BENGAL.			MADRAS.			BOMBAY.		
Deaths per 1,000.								
1. Enteric fever ... ..	2·01		Hepatitis ... ..	2·30		Hepatitis ... ..	1·71	
2. Hepatitis... ..	1·93		Dysentery ... ..	1·91		Injuries ... ..	1·43	
3. Heart diseases ... ..	1·37		Injuries ... ..	1·22		Enteric fever ... ..	1·33	
4. Injuries ... ..	1·23		Phthisis Pulmonalis ... ..	1·13		Apoplexy ... ..	1·14	
5. Dysentery ... ..	1·21		Enteric fever ... ..	1·04		Heart diseases ... ..	1·04	
6. Phthisis Pulmonalis ... ..	1·18		Heart diseases ... ..	1·04		Malarial fevers ... ..	·76	
7. Malarial fevers ... ..	1·10		Apoplexy ... ..	·70		Dysentery ... ..	·57	
8. Apoplexy... ..	·97		Respiratory diseases ... ..	·44		Respiratory diseases... ..	·57	
9. Respiratory diseases ... ..	·54		Suicide ... ..	·26		Phthisis Pulmonalis... ..	·37	
10. Suicide ... ..	·48		Malarial fevers ... ..	·17		Suicide ... ..	·19	
Total of these ten causes ... ..	12·02			11·21			9·11	
Total from all causes ... ..	14·62			12·96			10·64	



In Bombay cholera caused the same loss by death as suicide, 19; but, with this slight exception, it appears that the same ten diseases produced nearly all the mortality in each Presidency. It is remarkable that enteric fever, disease which never appeared in the returns until the last few years, and which was stated by high authority to be unknown in India, should head the list in Bengal as the chief cause of mortality among European troops during 1874. In the other Presidencies, also, it takes a prominent place.

9. Before considering the sanitary history of the troops in the different groups, it is desirable to note the meteorology of the year. Information on this point as regards all India is still scant and imperfect, for the general scheme which has now come into operation was not at work in 1874. Still important facts have been recorded. Mr. Willson, the Meteorological Reporter for Bengal, thus summarizes the meteorological phenomena of the year:—

“The first month of the year was remarkable for an abnormally high atmospheric pressure and a low temperature over the greater part of the area to which my data refer. As early as this, however, and even in the latter months of 1873, there appeared that barometric depression over Hazareebagh and parts of the North Western Provinces which further developed itself in subsequent months, and which had such an important influence on the meteorology of the year. Equally persistent throughout the year was a tendency to high atmospheric pressure at Darjeeling, in Assam, and at Chittagong. The cold weather set in very early in 1873, and lasted much longer than usual in 1874. In Bengal the early months of the year were characterized by an unusual prevalence of westerly winds. But in the end of March, with a change in the distribution of pressure and the direction of the prevailing winds, the temperature increased with remarkable rapidity; and in April and May the heat in the North Western Provinces, Behar, Chutia Nagpore, and in parts of Bengal, became excessive, while it was colder than usual in Assam. As a consequence of the abnormally low pressure over Northern India in May, especially throughout and round the region of persistent barometric depression before noticed, the sea winds were unusually powerful, and the south-west monsoon current prevailed over the Bay much earlier than its accustomed time. The rainy season appears to have commenced in Ceylon about the 2nd of May; in Eastern Bengal it commenced about the 11th; in Orissa and Western Bengal about the 23rd; and in Behar about the 1st or 2nd of June. It appears probable, from the tables of vapour tension, that the branch of the monsoon from the Bay of Bengal in the early months of the rains was somewhat deficient, at least near the surface, in its supply of moisture. And if this was the case, it may have been owing to the low temperature in the south of the Bay, where, at Port Blair, the deficiency of solar heat up to September (although the sky was less cloudy than usual) was especially remarkable. But I am not prepared to say that the quantity of vapour in the air at the surface can be regarded, under all circumstances, as an accurate measure of that which is diffused upwards. In the months of April and May, at least, it appears probable that a greater amount of vapour than usual was carried over Bengal to be deposited in other regions. But whether the excess in these other regions was less or not, on the whole, than the deficiency in Bengal in these and in subsequent months, there are, of course, no means of ascertaining.

The excessive rainfall in Assam and the adjacent hills in May was one of the most remarkable characteristics of the year. It is clear that the enormous quantity of vapour which was precipitated over these regions must have arrived in some way from the Bay of Bengal. But that it was not carried there by the surface winds will appear from the following statistics. At Sibsagar, where the excess of rainfall above the average was greatest, 71 per cent. of the observed winds were from north-easterly quarters (north to east), and only 14 from south-westerly (south to west). At Goalpara a similar classification gives 74 per cent. and 6 per cent. respectively, and at Silchar 56 and 19 per cent. It is evident, then, that the vapour, upon which the spring rains in Assam, and probably in parts of the northern and eastern districts of Bengal, depend, must be carried in an upper current. The existence of an upper westerly current from the heated plains of Northern India towards the cooler regions of Assam and the adjacent hill is probable from the circumstances of pressure and temperature at the season. In May 1874 the isothermal of 80° lay a little below Silchar and Goalpara, running from E.-S.-E. to W.-N.-W.; that of 75° passed close to Sibsagar. A very large portion of Central India was enclosed by the isothermal of 95°. The isobar of 29.70 lay to the westward of Silchar and Sibsagar; that of 29.65 passed through Dacca and a little to west of Goalpara; while the region of lowest pressure, bounded by the isobar of 29.55, extended, as has been already pointed out, from Hazareebagh towards Roorkee. It is to be remembered that the upper currents move from a region of high temperature and low surface-pressure, where the air is most expanded upwards, towards a region of low temperature and high surface-pressure where the atmosphere is most condensed into the lower strata. The inference, then, is that from the heated plains of Northern India in the hot weather months there must be an upper westerly current towards the cooler regions of Assam, above the southerly winds of the delta. It seems probable that the vapour carried from the Bay of Bengal by the southerly winds in the hot weather months is mostly diffused upwards and transferred by the westerly current to Assam, where that

current must descend, and where its vapour would be precipitated by the cold north-easterly surface winds. It is, indeed, otherwise difficult to account for what becomes of the enormous quantity of vapour which must be carried inland over Bengal by the powerful southerly sea winds in the hot weather months. Little of this vapour is precipitated over Orissa or Western or Central Bengal, except by an occasional nor'-wester, and still less finds its way to Behar or the North-Western Provinces until the rainy season has regularly set in, when the upper westerly current probably ceases, as the surface pressure in Assam diminishes and the temperature increases. If this be the true explanation of the spring rains in Assam, the excessive precipitation in that region in May 1874 is completely accounted for by the very unusual strength of the southerly sea winds over the delta in that month, by the abnormally low surface-pressure and high temperature over the plains of Northern India, and by the relatively high surface-pressure and low temperature over Assam.

In June and July, in consequence of the abnormal distribution of atmospheric pressure, as before noticed, the vapour-bearing current from the Bay of Bengal was weaker than usual. It was carried more to the westward, towards the region of low pressure, than is generally the case, and, at some distance inland, with greater velocity and steadiness than usual. This, in a great measure, accounts for the scantiness of the rainfall in Bengal, as well as its copiousness to the west and the north-west, as already fully described. There was in these months, and up to the first week in August, a persistent tendency to a relative barometric depression in Southern Orissa and the north-western region of the Bay, the effect of which must have been to arrest the vapour-bearing currents and to deprive them of a larger proportion of moisture than is generally precipitated in this region. In Southern Orissa, accordingly, the rainfall was unusually abundant, whilst throughout the Midnapore, Howrah, and Hooghly districts, it was more deficient than elsewhere in Bengal.

In September, with a general increase of pressure and a change in its relative distribution, the barometric depression, which had so long existed in Chutia Nagpore, the southern districts of Behar, and in the North-Western Provinces, was almost completely removed, and northerly and westerly land winds commenced to replace those from easterly quarters, whilst the southerly sea winds from the Bay over the delta continued steadier than usual. Thus the vapour-bearing current, which still continued from the Bay of Bengal, ceased to be carried far westwards. There was, in fact, a complete reversal of the atmospheric peculiarities which had previously contributed to the scantiness of precipitation over Bengal, and the September and October rainfall was unusually heavy. The rainy season terminated after a heavy burst on the 31st of October in Behar and the northern districts of Bengal. In Southern Bengal and in Orissa it continued for a few days later. The last month of the year was colder than usual, and the northerly monsoon was steadier and its velocity higher than is generally the case. As a consequence, in Calcutta at least, the customary cold-weather fogs were conspicuous by their absence.

Storms were of unusual frequency in the Bay of Bengal in 1874, as they had also been in 1872. On the 5th of May a cyclone was severely felt at Madras, but it broke up before reaching land. In June, July, and the first week in August, stormy weather was very prevalent in the north of the Bay, and the gales which were formed were all of a cyclonic character. On the 14th, 15th, and 16th of October, a great cyclone and one of unusual violence passed up the Bay and caused fearful destruction of life and property in the Balasore, Midnapore, and Burdwan districts of Bengal. Two cyclones were felt at Coconada: one on the 26th of October, and the other on the 2nd of November. Another cyclone broke up just before reaching southern Orissa on the 12th of November; and finally, there appears to have been a cyclone in the south of the Bay, which probably advanced some distance, but broke up before reaching Madras on the 12th of December."

The following tables of barometric pressure and temperature are taken from Mr. Willson's Report:—

Barometric monthly means for 1874 reduced to sea-level.

STATIONS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	29 ins. +	29 ins. +	29 ins. +	29 ins. +	29 ins. +	29 ins. +	29 ins. +	29 ins. +	29 ins. +	29 ins. +	29 ins. +	29 ins. +	29 ins. +
Galle	922	896	864	861	808	829	841	857	845	861	900	911	866
Colombo	952	927	893	889	831	858	868	884	871	882	929	932	893
Trincomalee	980	941	890	864	753	763	763	789	789	816	919	948	851
Jaffna	998	955	891	868	756	769	776	802	789	826	925	964	860
Nancovry	921	897	862	871	811	791	833	864	866	881	924	948	872
Port Blair	983	949	893	880	794	783	784	813	815	856	948	948	859
Madras	1055	995	908	871	714	727	735	770	767	812	965	1019	861
Vizagapatam	1063	986	893	847	689	647	632	696	729	800	977	1060	832
Akyab	1053	989	894	878	740	716	708	720	789	846	978	1019	831
False Point	1089	1000	895	819	663	613	612	629	742	815	1010	1087	831
Cuttack	1061	970	864	790	642	608	602	618	725	803	1003	1071	813
Saugor Island	1073	983	869	805	650	610	602	605	729	795	994	1054	814
Chittagong	1076	1018	918	882	736	697	688	688	782	850	965	1052	865
Calcutta	1068	975	854	788	627	608	606	601	728	810	1002	1061	811
Burdwan	1069	981	846	759	596	607	603	606	722	819	1016	1069	807
Jessore	1065	976	842	776	618	612	616	608	723	809	994	1050	808
Dacca	1070	977	854	810	656	643	643	642	741	824	993	1047	825
Silchar	1117	1022	914	865	718	681	682	686	775	844	993	1096	825
Sibssagar	1073	984	873	827	717	670	652	662	744	864	1039	1094	864
Goalpara	1073	984	862	827	690	643	634	632	732	841	1011	1062	830
Berhampore	1075	970	842	760	592	597	614	607	718	811	1008	1073	806
Monghyr	1066	970	830	739	569	570	580	593	703	804	1029	1079	794
Purneah	1066	970	830	739	569	570	583	583	703	804	1029	1079	794
Hazareebagh	1076	987	855	743	558	573	575	577	690	824	1038	1064	808
Gya	1053	956	813	715	527	523	542	549	659	805	1012	1077	770
Patna	1126	1006	847	745	557	566	577	581	687	821	1031	1066	803
Goruckpore	1052	955	832	724	540	562	564	573	685	821	1031	1066	803
Benares	1069	978	861	737	545	557	557	567	685	821	1031	1066	803
Jhansie	1084	988	849	757	586	523	544	580	613	833	1032	1066	803
Allahabad	1085	982	844	757	586	523	544	580	613	833	1032	1066	803
Lucknow	1069	968	831	739	540	534	547	569	675	820	1028	1082	783
Agra	1064	965	856	765	573	533	536	564	673	823	1036	1093	795
Bareilly	1084	980	874	732	523	557	581	580	690	832	1022	1072	795
Roorkee	1067	989	856	748	525	532	556	570	689	829	1043	1096	793
Jubbulpore	1085	991	864	762	562	580	574	638	744	886	1062	1143	793
Nagpore	1036	956	855	754	593	580	582	641	688	816	1032	1079	801
Raipore	1032	1012	862	761	574	555	575	621	683	773	1019	1087	796

Comparison of the Barometric means of 1874 with the averages of the years 1867 to 1874.

STATIONS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Galle	+033	+005	-015	+018	-028	-001	-008	+002	-031	-016	+021	+010	-001
Colombo	+046	+019	-001	+032	-011	+016	+003	+015	-019	-009	+034	+027	+013
Trincomalee	+042	+008	-015	+023	-027	+005	-012	+003	-024	-017	+006	+001	-001
Port Blair	+062	+013	-010	+025	-002	+002	-004	+013	-008	+004	-018	-040	+003
Madras	+047	+016	-019	+030	-032	+022	+001	+008	-026	-022	+011	+016	+004
Vizagapatam	+065	+029	-004	+024	-014	+011	+016	-001	+006	-024	+005	+027	+012
Akyab	+037	+030	-016	+023	-033	+014	+005	-009	+007	-015	+007	+002	+004
False Point	+037	+011	-027	-004	-057	+001	+005	-032	+015	-041	-003	+021	-006
Cuttack	+010	-004	-028	-003	-049	-006	-008	-043	-014	-075	-027	-006	-021
Saugor Island	+047	+028	-016	+018	-034	+043	+045	0	+039	-034	+007	+007	-021
Calcutta	+033	+010	-025	+006	-052	+038	+038	-019	+023	-040	+005	+010	+002
Chittagong	+060	+055	+022	+052	-004	+055	+049	+010	+035	-005	+015	+026	+031
Jessore	+043	+023	-026	+005	-060	+046	+048	-013	+018	-037	+005	+011	+005
Dacca	+052	+015	-023	+014	-049	+043	+046	+001	+019	-025	+006	+009	+009
Shibbar	?	?	+006	+033	-017	+037	+041	-002	+005	-033	?	-001	?
Hazareebagh	+019	+005	-032	+007	-055	+025	+037	-024	+011	-036	+008	+012	-002
Behampore	+041	+021	-012	+015	-046	+069	+069	-005	+017	-026	+022	+031	+016
Patna	+073	+019	-025	-015	-087	+032	+033	-030	-008	-038	+010	+020	-001
Monghyr	+032	+015	-021	-005	-080	+036	+048	-010	+015	-023	+024	+023	+004
Darjeeling	+016	+007	-024	+029	-026	+051	+050	+020	+012	+019	+027	+030	+018
Goalpara	+051	+035	0	+039	-027	+041	+047	-008	+003	-004	+020	+026	+019
Benares	+002	-009	-026	-022	-094	+020	+019	?	?	?	?	?	?
Jhansie	+030	-009	-020	+016	-028	+032	+035	-008	+010	-018	+016	?	?
Lucknow	-001	-020	-055	-014	-089	+021	+021	-022	-011	-031	+002	-002	-017
Roorkee	+028	+010	-031	+001	-078	+038	+040	-003	-006	-027	+010	+005	-001
Agra	+010	-008	-042	-002	-056	+023	+015	-018	-012	-043	-003	+003	-011
Nagpore	+025	-004	+007	+030	-033	+023	+016	+003	+006	-018	+025	+032	+009
Jabalpore	+039	-015	-028	-002	?	+040	+022	+004	+053	+011	+039	+058	?

*Monthly mean temperatures of 1874 reduced to sea-level.*

STATIONS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Galle ... ..	78.1	79.7	80.7	82.2	81.1	80.4	78.8	80.4	79.5	79.4	79.6	78.1	79.8
Colombo ... ..	79.4	79.9	81.6	83.2	82.2	81.5	80.5	81.3	80.8	80.0	79.8	79.2	80.8
Trincomaloe ... ..	79.0	80.2	81.4	84.2	84.6	84.8	84.2	84.6	82.7	82.2	81.0	77.9	82.2
Jaffna ... ..	77.7	80.0	83.1	86.0	84.0	83.3	82.5	83.1	82.8	81.7	80.2	77.8	81.8
Nanconwry ... ..	77.7	79.3	79.4	79.6	78.7	78.6	77.9	78.5	77.7	77.7	78.6	78.3	78.5
Port Blair ... ..	79.3	80.6	82.3	83.7	81.3	81.5	80.3	79.6	80.7	79.4	80.5	80.2	80.8
Madras ... ..	76.9	79.2	83.3	84.6	85.7	85.9	84.5	86.3	83.1	81.8	78.6	75.5	82.1
Vizagapatam ... ..	75.3	79.2	82.4	85.6	86.9	85.7	85.1	85.3	85.1	83.1	78.7	72.5	82.1
Akyab ... ..	67.1	72.6	76.9	82.6	85.3	81.9	81.8	80.6	81.8	81.6	78.1	70.4	78.4
False Point ... ..	69.9	75.7	79.4	83.4	85.4	85.0	84.7	82.2	84.1	81.6	73.6	66.7	79.3
Cuttack ... ..	71.3	76.6	81.7	87.3	89.3	84.1	83.6	82.0	82.7	90.0	74.4	68.4	80.2
Saugor Island ... ..	67.5	73.3	79.2	83.5	85.9	84.8	84.4	83.7	83.4	81.1	74.4	67.4	79.1
Chittagong ... ..	64.7	71.2	75.9	82.2	83.7	81.9	82.2	81.5	81.1	80.7	75.9	67.9	77.4
Calcutta ... ..	66.9	72.5	78.6	85.4	87.4	83.9	84.2	83.1	83.0	81.7	75.2	67.5	79.1
Burdwan ... ..	63.8	69.6	76.4	87.0	88.0	84.9	85.3	84.1	83.7	82.2	72.8	64.3	78.5
Jessore ... ..	63.3	70.7	77.3	85.2	87.5	83.6	83.5	82.9	82.5	81.2	73.2	64.4	77.9
Dacca ... ..	63.7	70.6	76.3	82.7	83.8	83.4	84.0	82.6	83.0	81.2	75.3	66.8	77.9
Silchar ... ..	60.8	66.7	71.6	78.1	79.7	82.5	82.7	82.7	81.4	81.7	74.6	64.1	75.6
Sibsagar ... ..	55.1	62.3	66.2	73.8	74.9	82.5	84.4	82.6	81.0	78.0	68.6	59.3	72.4
Goalpara ... ..	62.4	67.0	72.5	77.5	78.8	81.9	81.8	83.0	81.1	79.5	72.7	65.6	75.3
Berhampore ... ..	63.0	69.3	77.5	87.9	91.4	84.3	84.6	84.1	83.3	81.9	74.2	65.5	78.9
Monghyr ... ..	61.3	67.2	76.4	87.4	90.0	82.1	84.4	84.3	82.7	80.5	71.3	63.2	77.6
Hazareebagh ... ..	65.0	69.3	76.5	89.9	94.1	82.4	83.3	82.3	83.3	78.9	70.9	65.3	78.4
Gya ... ..	63.2	70.2	79.6	92.4	98.1	85.6	85.1	84.0	84.3	81.3	70.9	64.8	80.0
Dehree ... ..	64.0	69.8	80.4	93.8	98.4	86.4	84.9	83.3	83.2	81.0	72.8	65.9	80.3
Patna ... ..	61.3	67.4	76.3	89.6	94.5	85.5	85.6	85.5	84.4	81.5	71.4	62.9	78.8
Goruckpore ... ..	58.8	66.1	74.9	87.6	92.3	84.4	84.4	84.6	83.1	79.9	69.6	60.6	77.2
Benares ... ..	58.8	66.2	76.0	89.2	96.0	85.5	84.7	83.2	83.5	78.1	67.7	61.1	77.5
Jhansi ... ..	63.8	69.1	77.6	91.6	97.3	89.3	86.3	83.4	85.6	82.3	73.3	67.5	80.6
Allahabad ... ..	59.1	65.8	76.1	91.1	96.1	86.3	84.3	82.8	84.1	78.1	65.3	60.5	77.5
Lucknow ... ..	58.3	65.8	75.5	89.0	97.6	86.8	86.3	84.8	84.8	79.8	68.8	61.9	78.3
Agra ... ..	58.0	64.7	74.5	88.7	94.2	89.2	85.2	84.2	83.4	79.7	69.4	62.7	77.8
Bareilly ... ..	56.6	63.0	71.0	86.3	93.3	86.3	84.1	83.6	82.6	78.0	65.9	58.9	75.8
Roorkee ... ..	56.1	62.4	68.7	85.1	92.6	87.8	84.8	85.2	83.5	77.9	65.6	58.9	75.7
Meerut ... ..	56.1	63.9	69.6	85.6	92.4	88.6	85.3	84.8	83.6	78.0	66.1	60.3	76.2
Ajmere ... ..	62.2	69.3	78.7	91.3	97.2	92.5	88.0	84.5	?	84.2	72.5	66.2	?
Saugor ... ..	65.2	71.0	78.9	90.0	94.1	82.8	80.8	78.2	82.0	79.8	74.5	69.9	78.9
Jubbulpore ... ..	62.5	69.1	76.7	88.4	95.0	84.2	81.3	79.1	82.0	76.4	66.7	63.9	77.1
Hoshangabad ... ..	68.1	71.4	79.9	89.2	95.4	83.5	80.8	79.6	82.9	80.0	72.0	69.4	79.3
Seoni ... ..	66.9	72.2	78.4	89.0	92.6	83.3	81.2	79.2	81.2	77.2	68.5	66.9	78.0
Nagpore ... ..	70.5	75.6	82.1	93.0	95.4	84.9	81.9	80.4	81.9	80.4	71.1	69.7	80.6
Raipore ... ..	67.0	72.9	79.0	92.2	96.8	83.9	81.6	78.9	81.5	79.2	71.2	65.4	79.1
Sumbulpore ... ..	69.2	74.8	79.9	92.6	96.5	84.3	83.9	80.8	82.7	81.0	72.4	66.2	80.4
Chanda ... ..	70.7	76.1	81.7	91.3	95.3	84.7	80.8	79.9	80.4	78.2	68.6	65.6	79.4
Akola ... ..	70.3	74.0	81.2	91.3	94.1	83.6	81.4	79.9	82.3	79.1	70.5	68.9	79.7
Omraoti ... ..	71.7	75.5	81.8	91.3	90.9	83.5	82.5	75.7	80.4	79.4	71.4	70.8	79.6

Comparison of the temperatures of 1874 with the averages of 1867—74.

STATIONS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Galle	... -0.2	0	-0.8	0	-1.0	-0.3	-1.0	+0.3	-0.3	-0.8	0	-0.9	-0.4
Colombo	... -0.6	-0.6	-0.5	-0.1	-1.3	-0.3	-0.5	+0.1	-0.2	-1.0	-1.1	-1.5	-0.6
Trincomalee	... -0.1	+0.2	-1.0	-0.6	-1.3	-1.2	-1.2	-1.4	-1.2	+0.5	+1.5	-1.1	-0.6
Port Blair	... +0.2	+1.0	+0.7	-0.2	-0.5	-0.1	-0.3	-0.8	+0.7	+0.6	+0.1	+0.6	+0.1
Madras	... -0.1	-0.1	+0.5	-0.7	-2.6	-1.6	-1.6	+0.3	-1.1	+0.2	+0.1	-1.6	-0.7
Vizagapatam	... -1.2	+0.1	-0.7	-0.5	-1.4	-1.6	+0.6	-0.1	+0.3	+0.2	-1.0	-2.9	-0.7
Akyab	... -2.3	-0.5	-1.5	-0.9	+1.0	-0.2	+0.8	-0.7	-0.1	+0.2	+0.3	-1.4	-0.4
False Point	... -1.2	+0.3	-0.9	-0.5	-1.2	-1.2	0	-2.3	-0.8	-1.5	-2.9	-3.6	-1.3
Cuttack	... +0.2	+1.1	+0.3	+0.7	-0.1	-2.2	-0.1	-1.5	-0.5	-0.3	-0.4	-1.7	-0.4
Saugor Island	... -1.5	-1.0	-1.1	-0.5	+0.1	-0.8	+0.6	0	0	+0.2	-0.6	-1.0	-0.4
Chittagong	... -2.5	-0.6	-2.1	+0.4	+0.5	-0.3	+0.9	+0.1	-0.5	+0.2	+0.9	-0.7	-0.3
Calcutta	... -1.6	-0.8	-1.5	+1.1	+1.5	-0.7	-0.9	-0.1	0	0	-0.3	-1.4	-0.3
Jessore	... -2.2	-0.1	-2.1	+1.9	+1.8	-0.7	+0.4	-0.1	-0.4	+0.9	+0.4	-1.1	-0.1
Dacca	... -2.7	-1.5	-2.8	+0.6	+0.3	-0.4	+0.7	0	-0.3	-0.1	+0.2	-1.5	-0.6
Silchar	... -2.5	-1.4	-2.1	-0.1	-1.4	+0.4	+0.3	+0.5	-0.1	+1.7	+1.6	-1.4	-0.3
Berhampore	... -2.1	-1.0	-1.1	+1.9	+3.6	-1.2	+0.3	-0.1	-0.5	+0.2	0	-1.2	-0.1
Goalpara	... -1.9	-1.9	-2.0	-0.5	-0.7	+1.0	-0.4	+0.5	-0.1	+0.7	+0.5	-1.0	-0.5
Darjeeling	... -3.0	-1.3	-2.5	+0.9	+0.5	-1.2	-0.3	-0.4	-0.5	+0.6	-0.6	-0.7	-0.7
Mouhyr	... -1.5	-1.2	-1.2	+1.9	+1.9	-4.5	-0.1	+0.1	-0.7	0	-0.7	-0.9	-0.6
Hazareebagh	... -0.9	-1.0	-2.6	+2.1	+3.2	-4.0	+0.1	-0.1	+1.3	+0.2	-1.5	-0.8	-0.4
Patna	... -0.1	+0.9	-1.0	+4.1	+5.1	-2.6	+0.7	+1.1	+0.8	+1.9	+1.2	+0.3	+1.0
Benares	... -1.0	-1.4	-0.8	+1.8	+3.4	-6.0	-1.4	-2.1	-1.0	-1.2	-1.4	+0.6	-0.8
Jhansi	... +0.1	-2.0	-2.0	+2.0	+1.0	-3.8	+0.8	-0.6	+1.3	+1.2	-0.8	+1.5	-0.1
Goruckpore	... -1.6	+0.2	-0.7	+2.8	+2.5	-2.8	+0.7	+1.4	+0.3	+1.3	+0.2	-0.3	+0.3
Allahabad	... -1.8	-0.6	-1.8	+4.1	+3.4	-3.5	-0.1	-0.1	+1.1	-0.3	-3.4	-1.1	-0.3
Lucknow	... -2.1	-1.2	-1.1	+2.0	+4.4	-4.9	-0.4	-1.6	+0.4	+0.2	-0.3	+0.4	-0.3
Bareilly	... -1.8	-1.0	-3.0	+2.6	+3.1	-3.7	-1.0	-0.7	-0.6	+0.5	-1.5	-1.0	-0.7
Agra	... -2.2	-1.7	-2.1	+1.5	+0.5	-4.5	-1.8	-0.7	-0.6	-0.4	-1.3	-0.5	-1.2
Ajmere	... -0.9	-1.0	-0.4	+1.3	+1.2	-2.7	-0.7	-1.6	?	+0.7	-2.1	-1.3	?
Roorkee	... -2.9	-1.5	-3.4	+1.8	+2.2	-3.6	-1.4	-0.6	-0.8	+0.4	-0.6	-0.8	-0.9
Saugor	... -1.4	-1.4	-2.7	+1.3	+1.5	-4.7	-0.1	-1.0	+1.5	0	-0.7	+0.3	-0.6
Jubbulpore	... -2.7	-0.3	-0.8	+0.9	+1.2	-5.7	-0.3	-1.7	+0.4	-0.3	-2.5	-1.1	-1.1
Hoshungabad	... -0.8	-1.7	-1.1	-1.0	+0.1	-5.5	-0.3	-1.1	+1.0	+0.5	-1.8	-1.2	-1.1
Nagpore	... -0.6	-0.6	-1.6	+2.7	-0.2	-3.5	+0.9	-0.7	+0.7	+1.1	-2.4	-0.4	-0.4
Raipore	... -2.5	-5.3	-2.4	+2.0	+1.7	-4.1	+1.0	-2.3	0	0	-1.4	-3.5	-1.4
Chanda	... +1.1	+0.6	-0.7	+0.3	+1.6	-2.8	+0.2	-0.6	+0.3	+0.7	-3.2	-2.6	-0.5

10. In anticipation of the issue of his annual report, Mr. Elliott, the Meteorological Reporter for the North-Western Provinces, has favored me with an interesting summary of the chief characteristics of 1874, from which the following extracts are taken:—

The chief characteristic features in the atmospheric pressure during the year 1874 were—

**Barometric pressure.** 1st.—The normal deviations in the general course of the atmospheric pressure were exaggerated.

2nd.—The variations of pressure in the month of February were unusually large.

3rd.—The pressure in the month of May and preceding the rains was exceptionally low.

4th.—The occurrence of large wave-like oscillations of excessive pressure in June and July, due to the setting in apparently of stronger moisture and atmospheric currents than usual from the adjacent seas.

**Temperature.**

The most important features in the temperature of the North-Western Provinces for the year 1874 were the following:—

1st.—Exceptional cold during the first fortnight in January. The mean for this period was about 5° below the average. The night temperatures were exceptionally low during this period. The temperatures of the 11th to the 15th was in particular much below the average, and the night temperatures registered are such as seldom occur in the North-Western Provinces. On the morning of the 15th the terrestrial radiation thermometer marked 25°—seven degrees below freezing point at Roorkee.

2nd.—The March depression of temperature was much more strongly marked than usual.

3rd.—In all stations, the maximum temperature occurred in the last week of May, and was, at western stations, less than the mean maximum temperature of the last seven years.

In 1874, the elastic tension was slightly less than the average amount until the middle of May. It then increased much more rapidly than usual, and attained its maximum in the middle of July. During

the remainder of the year it varied very little from the average.

**Elastic tension.**

**Humidity.**

In 1874, the chief variations from the mean humidity were as follows:

1st.—Excessive dryness of the atmosphere during the greater part of the first four months, and more especially in May and June. This feature was most strongly marked at the Western and Sub-Himalayan stations.

2nd.—The increase due to the monsoon current commenced at least a fortnight earlier than usual, and the humidity attained its maximum height in the first week of July, instead of the last.

3rd.—There was an abnormal maximum in the month of August, apparently due to an exceptionally strong current which set in during that month. This was most strongly marked at Benares, Agra, Roorkee, and Dehra, which all showed greater humidity than in any other period of the rains.

4th.—From the beginning of October to December, humidity at all stations, except Benares, was slightly below the average.

**Rainfall.**

The leading peculiarities in the rainfall of the North-Western Provinces during the year 1874 were as follow:—

The rainfall in January was considerably below the average. During the first ten days of February rain in considerable quantities fell, and it was fairly distributed over the province. There was an unusually large fall of the barometer from the 2nd to the 10th, varying in the Gangetic plain from .45 at Goruckpore to .7 at Agra. The disturbance of the atmosphere indicated by this almost amounted to a storm on the 10th. It passed off, however, with only moderate rainfall, and that confined to the districts north-west of Meerut and Bareilly. The rainfall in this month was very slightly below the average. There were showers during the period from the 4th to the 8th, chiefly to the north and west of a line drawn from Agra through Bareilly to the hills and storms, accompanied by rain or hail, with easterly winds over the greater part of the province. No rain in measurable quantities fell during the month of April. In the month of May there were slight showers occurring during storms. The rainy season, which appears to have commenced in Eastern Bengal about the 11th of May, or three weeks earlier than usual, may be said to have begun with a sudden accession of moisture on the 3rd, 4th, and 5th of June in the North-Western Provinces. The winds veered round to east in the beginning of the month. At Benares and Allahabad the monsoon was ushered in with dust-storms on the 1st and 2nd. The amount of rain which fell was very considerably in excess of the normal quantity. At the majority of stations it was at least double the average for the month. There was a break in the rain over the whole province from the 15th to the 19th. The rainfall was particularly abundant during the last seven days of the month over the whole province.

During the month of July the rainfall was also fully up to the average, and was well distributed over the whole province. During the first fortnight the rainfall was exceptionally heavy in the Moradabad, Turai Bareilly, and adjacent districts. The rainfall during the last half of the month, though abundant, was somewhat unequally distributed, the eastern districts receiving somewhat less than the western. During the heavy rainfalls of the first ten days of the month westerly winds prevailed at Benares and the neighbourhood.

In the month of August the rainfall continued in excess, more especially at Benares, Lucknow, and Jhansie. The amount at Benares on the 25th, 26th, and 27th, was almost unprecedented for that station. In the space of 72 hours, 18·01 inches were registered at the rain-gauge of the observatory. Rain fell in moderate quantities during the first fortnight of the month of September. The amount was in excess in the Bareilly, Kumaon, Shahjehanpur, Kheree, Gonda, Farakabad, Budaon, and neighbouring districts. Between the 14th and 21st there was a general break in the rains, the wind changing to west. From the 21st to the 28th there was a partial return of the rains, and there was less than an inch over the whole of the province to the west of a line running north and south through Cawnpur. The rainfall was large over a limited area, including Mirzapore, Ghazeeপুর, and Gorakhpur, where it exceeded 4 inches. The monsoon may be said to have terminated with this fall in the western half of the province. There were heavy showers in the eastern districts in the first week of October—at Bullia 11·7" and at Ghazeeপুর 9" fell on two days, the 9th and 10th. The monsoon terminated with this for the eastern half, and westerly winds became the rule over the Gangetic plains. There was a slight rainfall again in the eastern districts in the last week of the month, accompanied by a change of wind from west to east. The month of November was free from rain. The first fall of snow at Chukrata took place on the 28th of this month. Rainfall to the extent of an inch occurred in the hill stations, and at Dehra and Roorkee and their neighbourhood, during December; but throughout the remainder of the province the amount was very slight and barely measurable.

There is little that calls for comment in the winds. The leading features are very simple.

#### Winds.

From October to the middle or end of May, westerly winds prevail. At irregular intervals during this period the westerly winds are replaced for a few days by easterly winds, which are accompanied with clouds, occasional thunder-storms and rain. During the monsoons easterly winds are the rule, but they are occasionally interrupted by westerly winds in the area including Allahabad, Benares, Lucknow. Very often the most severe falls of rain in this area are accompanied with westerly winds.

In the early months of the year westerly winds were even more frequent than usual. In April there was more of the northerly element than usual. Westerly winds continued during the greater part of May, and were replaced by the easterly breezes current from the Bay of Bengal towards the end of the month, and much earlier than usual. These winds continued with an important exception of steady westerly winds in the Benares and adjacent districts during the last week of August until the beginning of October, when they reverted to their cold weather direction.

### 11. Dr. Townsend, the Sanitary Commissioner of the Central Provinces gives the following resumé of the meteorology of 1874 in that part of the country:—

Meteorology of the Central Provinces.

"The rains of the monsoon of the previous year had been scanty and had ceased early, and the moisture and temperature of the succeeding months were below the average. In the early months of the year, or from January to April, the quantity of rain measured was below the average, and for the first three months the weather continued clear and cool, the temperature of March being considerably below the average of the four previous years. In April the temperature rose above the average, and in May although the quantity of rain was rather greater than usual, the weather continued hot and oppressive. In the early part of June the temperature was moderated by frequent storms, and the monsoon set in early with abundant rain. The rains continued heavy through the months of July and August especially over the districts north of the Satpuras and over the Mahanadi districts, but in September the fall was below the average, and in October also the rainfall was slight everywhere excepting in the Mahanadi districts. Taking the whole province the rainfall of the year exceeded the average of former years; it was however very unequally distributed. The greatest excess over the average fell over the Vindyan districts and Jabalpur, the quantity of rain measured at Sagar, Damoh, and Jabalpur, being from 36 to 48 per cent. above the average. At Narsinghpur, however, 50 miles west of Jabalpur the fall for the year was only 4 per cent. above the average, and still further west at Hoshangabad and Khandwa it was below the average. Over the Satpuras, also, the rainfall measured at the more eastern stations of Mandla, Seoni, and Chindwara was above the average, while at the more western stations of Pachmarhi and Betul it was less than the average. Over the Waingunga and Wardha country the rainfall of the year was rather below the average, but over the Mahanadi districts the excess was almost as great as over the northern districts, the quantity of rain measured at Raipur, Bilaspur, and Sambalpur being 42 and 37 per cent. above the average. In these districts also the weather continued cloudy and moist through the month of October. The excessive rainfall of August was accompanied by a low temperature, but in September the temperature rose and continued high through that and the following months. In the second week of November the temperature fell below the average, and for the remainder of that month and through December the weather continued unusually cold.

The normal direction of the wind blowing over Central India during the hot weather is from the north-west. During the hot weather of 1874 the westerly deviation was greater and more constant than in former years. The monsoon wind was of average strength, but the direction was more southerly than usual. In the month of September northerly and



north-westerly winds became prevalent and continued through the early part of October, but in the latter end of that month the wind veered more to the east, and took up its normal quarters for the cold weather, which are north and north-east.

The more remarkable features of the seasons were clear and cool weather in the early months of the year; April and May rather hot and oppressive; the monsoon setting in early and bringing an abundant rainfall; the rains falling rather short in September and October, excepting in the Mahanadi Division; the temperature continuing high in those months and falling unusually low in November and December."

12. The meteorological report for Oudh is for the official year, from 1st April 1874 to 31st March 1875\*. The barometric pressure showed no marked deviation from that of the previous year. The maximum, 29·808, was registered on the 20th December 1874, and the minimum, 28·943, on the 25th June 1874. The highest temperature in the shade was 115·3 on the 10th May 1874, and the lowest 39·3 on the 23rd January 1875. The highest temperature in the sun's rays was 167·2 on the 25th May 1874. The highest temperature on grass was 86·4 on the 29th May 1874, and the lowest 28·7 on the 23rd January 1875. The average humidity for the year was almost the same as that of the year previous. The highest degree was ·996 on the 15th June, and the lowest ·100 on the 19th May 1874. At Lucknow the total rainfall was 51·18 inches.

13. The meteorological report of the Punjab for 1874 has not yet appeared, and the information which is so far available is but scant.

14. The first five tables to which reference has been made already deal with the statistics of sickness and mortality among European troops throughout India as a whole, and in each Presidency separately. The details of the different groups of stations or areas into which these Presidencies are divided may now be examined, as set forth in Tables VI to XIX. Along with these may also be taken the particulars of the individual stations of which each group is made up, as shewn in Nos. XX to XXII. And first as regards Bengal Proper. Here, although the sickness, as indicated both by the proportion of admissions into hospital, 1,134, and of men daily under treatment, 52, was below the average of the Presidency as a whole, the death-rate, 19·93, was considerably higher. This last result is due chiefly to enteric fever and dysentery. The mortality, although it compares favorably with 29·57, the average of the ten years, 1860—69, is higher than in any one of the four years, 1870—73. The unfavorable results of the past year are due in the main to two Batteries of the 11th Brigade of Artillery at Barrackpore, which arrived from England in the early part of the year. Of the great sickness and mortality in them and in the other Batteries of this Brigade during their first year in India, more will be said hereafter. It is sufficient for the present to note that the admission rate at Barrackpore was 2,283 per 1,000, and the death-rate 27·65. At Fort William and Dum-Dum, the only other two stations of this group, the admissions were 840 and 780, while the mortality was 15·72 and 21·00

15. In the Gangetic Provinces and Oudh, sickness and mortality were both greater than the average for the army of Bengal. The admissions, 1,478, were higher than in 1873, and several other previous years, but they compare favorably with the ten-year period, in which they averaged 1,614. The mortality, 20·14, was lower than in any one of the preceding 14 years, excepting 1871, 1867, and 1862, and compares very favorably with the average of the ten years, 1860—69, which equalled 28·59. The presence of newly-arrived Batteries or Regiments at several stations of this group considerably affect the results. The 2-22nd Regiment at Hazaribagh, the C. Battery 11th Brigade at Dinapore, the D. Battery at Benares, and E. Battery at Allahabad, all suffered much. The only exception to the statement that the newly arrived regiments shewed excessive ratios of sickness and mortality, was the 13th Hussars at Lucknow. Omitting Chunar, where the strength of the garrison, only 68 men, is too small for observation, the highest ratio of admissions into hospital, 1,982, was at Dinapore. The highest sick-rate, 93, was at Cawnpore, but this was due in large measure to the excessive prevalence of venereal diseases. The greatest mortality, 35·31,

\* "Oudh Government Gazette," July 31st, 1875.

was at Hazaribagh, the result of typhoid fever, from which the 2-22nd Regiment, the only corps in the station, suffered severely. How far the results at other places were due to the new Batteries and Regiments, will be considered in a subsequent paragraph of this report.

16. In the matter of sickness, the Meerut and Rohilkhund group does not shew well. The admissions into hospital equalled 1,730, and the daily sick 61. In 1873 the admissions were in the ratio of only 1,229. For the ten-year period they averaged 1,576. The mortality, 14.75, was not heavy. During the ten years the average was 26.61. Since 1870 the death-rate has varied from 14.75 to 33.98. As Shahjahanpur was unoccupied, except during the first three months of 1874, the group embraced only six stations, and of these only two, Delhi and Meerut, suffered from any excessive sickness. At the one the ratio of admissions equalled 2,031, and at the other no less than 2,439. Turning to Table XXI, it will be seen that these results are fully explained by the great prevalence of fevers at both these places. At Delhi the cases under this head alone equalled 1,282 per 1,000, and at Meerut they amounted still higher, to 1,475—a remarkable contrast to the ratio of 195 due to this cause at Moradabad.

17. The excessive prevalence of sickness at Meerut is all the more remarkable because, until very recently, it had the credit of being one of the healthiest stations in this Presidency. In this respect it was ranked higher than it really deserved, for during the ten years, 1860—69, the admissions equalled 1,672, and the deaths 30.41 per 1,000. But during all this period the cases of fevers never rose above 606 in any one year, and they averaged only 400. Since then the admissions from fevers and all causes have been as follows:—

YEAR.	ADMISSIONS PER 1,000.	
	Fevers.	All causes.
1870	489	1,593
1871	775	1,995
1872	732	1,972
1873	686	1,575
1874	1,475	2,439

The sickness, it is to be remarked, has not been confined to the European troops. The native troops, the prisoners, and the people generally, have all suffered. Different views are entertained as to the cause of these unfortunate results. The fever is purely malarial; no fact has ever been adduced to lead to the suspicion that it is typhus or typhoid, or that it differs in any point from the fever which prevails in fens and marshes. It is a matter of fact that since canal irrigation was introduced, the water level has gradually risen. On the 31st October 1869 it was 14 feet below the surface; on the same date in 1874 it was only 9 feet 5 inches. Assuming that the measurements were taken under similar circumstances, there has thus been in five years a rise of 4 feet 7 inches. There can be no question that the water now is very much nearer the surface than it was formerly, and to this cause the increase of fever has been by many ascribed. Meerut was never well drained. The natural difficulties are great, and with a rise in the water level these difficulties must be greater than ever. It is stated that "now in the rains the soil in low-lying places is perfectly saturated with moisture."\* Dr. Moir, the Civil Surgeon of Meerut, in an interesting memorandum on the subject, which is appended to the Report of the Sanitary Commissioner of the North-Western Provinces for 1874, points out that fever has prevailed at Meerut in former times long before there was any canal, and inclines to the opinion that we are now passing through another epidemic period of the same kind. How far this opinion is correct remains to be seen. Even if it should prove to be more or less correct, it does not affect the great practical importance of improving the drainage; and to this end measures have been ordered.

\* Report of Sanitary Commissioner for North-Western Provinces for 1874, para. 48.

18. In Agra and Central India the mortality was only 11·96 per 1,000, the lowest ratio ever attained in this group. During the ten years, 1860—69, it averaged 38·48. In three of them it exceeded 63 per 1,000. The admissions, 1,461, although considerably higher than in 1873, and almost the same as those of 1872, 1,460, compare favorably with the ten-year period during which they averaged 2,169. Fevers, as usual, contributed the great bulk of the cases. The individual stations shew marked differences in the results. At Jubbulpore the cases of sickness equalled only 922 per 1,000, while at Nowgong they were 2,364; at Jhansie 2,154, and at Saugor 1,929. Both at Saugor and Nowgong, Batteries of the newly-arrived 11th Brigade of Artillery were quartered, and both suffered greatly. Owing to this cause, also, the death-rate was highest at these two stations of this group, reaching 25·81 at Nowgong and 29·81 at Saugor. At Morar the ratio was only 4·60.

19. In the Punjab sickness is represented by 1,596 admissions into hospital, and a daily sick rate of 55 per 1,000. Fevers account for more than half of the cases. Although higher than that of any one of the other groups, except Meerut and Rohilkhund, the admission rate does not compare unfavorably with that of other years in the Punjab. During the ten years, 1860—69, it fluctuated between 1,406 and 2,102. The average for the period was 1,740. In 1870 the ratio was 2,323. The death-rate of 1874, 11·48, is lower than it ever has been before. Between 1860 and 1869 it was never under 14·20: in 1861 it was 51·45; for the ten-year period it averaged 25·24. Since 1870 it has varied from 32·43 in 1872 to 11·48 in 1874. Looking at the statistics of individual stations, it will be seen that the high ratio of admissions was due to excessive sickness at a few places, notably at Meean Meer and Peshawar, where they were respectively 2,273 and 2,989 per 1,000. Other stations shew even greater sickness, but the strength of the garrison in each of them was very small, and therefore disturbs the calculation. The whole European garrison of Peshawar suffered. In the 3rd Battery 23rd Brigade, in which there was least sickness, the admissions yet equalled 1,909 per 1,000. In the 72nd Regiment they were 2,638, and in the 1-17th, 2,713. Detachments from both these regiments moved into camp with good effect. The Cherat Hill, on the other hand, shews excellent results. Here the admissions from all causes during the season equalled only 576, and there were no deaths.

20. The occupation of Cherat, in a sanitary point of view, has been most successful. The testimony of medical officers to the good effect on sickly men from Peshawar and Nowshera, which was speedily induced by the change, is very decided, and there can be no question that this hill has proved of great benefit to the health of the troops in the valley. This is well shewn by the statistics of sickness and mortality during each of the last three years as compared with those of Peshawar and Nowshera. In estimating their proper value, it must be remembered that it is the sickly men as far as possible who are selected for transfer to Cherat.

STATIONS.	1872.				1873.				1874.			
	RATIO PER 1,000.				RATIO PER 1,000.				RATIO PER 1,000.			
	Average strength.	Admissions in- to Hospital.	Daily average sick.	Deaths.	Average strength.	Admissions in- to Hospital.	Daily average sick.	Deaths.	Average strength.	Admissions in- to Hospital.	Daily average sick.	Deaths.
Nowshera ...	633	2,434	62	10·10	669	2,028	52	10·46	448	1,870	51	4·37
Peshawar ...	1,570	2,877	69	42·6	1,683	2,205	58	16·0	1,650	2,989	64	11·52
Cherat (7 months) ...	760	565	32	15·7	679	823	47	11·8	767	576	48	...

21. The hill stations, as usual, shew an amount of sickness and mortality considerably below that of the Presidency as a whole. The admissions equalled only 911 per 1,000, the daily sick 43, and the deaths 9·53. During the ten years, 1860—69, these ratios averaged 1,069, 49, and 14·78. In the later years, from 1870 onwards, the average mortality has been much disturbed by the heavy losses from cholera at many hill stations in 1872. During 1874 there has been no epidemic sickness at any of them, and the returns are generally good. At Dharmasala the admissions were high, equalling 1,270 per 1,000 during nine months' occupation, but there were no deaths. At Subathu, during eleven months, the admissions equalled only 628, and the mortality 4·84 per 1,000.

22. In the hill convalescent depôts during the season, the admissions equalled 1,112 per 1,000, and the deaths 11·59. Between 1860 and 1869, the ratios averaged 1,271 and 30·75. Murree shews a large proportion of sickness, 2,072 per 1,000, during eight months, and a death-rate of 13·63 during the same period. At Darjeeling the admissions were 1,052, and the deaths only 4·74. At Landour, with a mortality of 19·14, the admissions equalled only 803. There is less interest, however, in connecting different depôts with the proportions of sickness and mortality which appear against them than other stations, for the depôts are occupied by men who have already suffered in the plains, and the figures therefore represent not the diseases due to the hills, but those which have been acquired elsewhere.

23. During the hot season and rains of 1874 the number of men at hill stations in the Bengal Presidency averaged 4,511, and at convalescent depôts 2,157. In addition there were 767 at Cherat. But, besides these, there were also other temporary locations in the hills where soldiers and their families found a retreat from the heat and other unhealthy influences of the plains. A statement by the Quarter-Master General shews that the total number of men located in the hills of the Bengal Presidency during the summer of 1874 was 8,674, besides 754 women and 1,621 children—a considerable increase on the numbers for 1873. It may be added that during the current season the total so provided for has risen to 9,058 men, 813 women, and 1,690 children.

24. It would occupy too much space to examine in detail the various groups of stations into which Madras and Bombay have been divided, and, moreover, the materials do not yet exist for making any comparison of the results over an extended period of years. The main facts are very clearly shewn in Table XIX. From this it will be seen that in Burma and Pegu there was a minimum of sickness. The admissions here equalled only 904 per 1,000, and the daily sick only 40. The death-rate, 8·99, also was lower than that of any other group except the Deccan, where it amounted to 8·85. But in the Deccan the admissions equalled 1,252, and the daily sick 50 per 1,000. As a whole, British Burma shews a more favorable return than that of any other part of India. Among stations in the Presidencies of Madras and Bombay, Neemuch was the most unhealthy. The admissions equalled 2,037, and the daily sick 85 per 1,000—a result due chiefly to fevers, which alone contributed more than one-half of the total cases. At Rangoon the admission rate was only 807, and the daily sick 45 per 1,000. As regards mortality, Ahmedabad with Baroda suffered most; the death-rate was 33·33. At Bombay it was 27, at Cannanore 26·67, and at Neemuch 22·50. On the other hand, many places shew a very trifling loss by death; Aden only 6·74, Belgaum 2·89, and Ahmednugger 1·82.

25. The comparative absence of cholera throughout India during 1874 is very striking. The general results for each province are shewn in the following statement:—

History of the chief diseases—  
remarkable absence of Cholera over  
nearly the whole of India.

Statement showing the deaths registered from Cholera in the different Provinces during the year 1874.

Provinces.	Population under registration.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths.	Ratio of deaths per 1,000.	Ratio for 1873.
Bengal ...	59,946,314	2,165	2,263	4,435	8,089	10,727	7,232	3,289	2,755	1,396	2,142	6,524	5,859	56,876	*	*
North-Western Provinces ...	30,769,056	35	19	41	97	190	237	123	379	1,559	2,910	736	70	6,396	20	49
Punjab...	17,487,125	1	1	3	12	9	10	6	11	16	3	4	2	78	0.004	0.01
Oudh ...	11,174,785	1	9	6	4	7	1	11	10	...	1	7	11	68	0.01	0.35
Central Provinces ...	7,427,608	...	...	...	...	...	1	1	...	...	...	...	12	14	0.002	0.04
Berar ...	2,184,945	...	...	...	2	...	...	...	...	...	...	...	...	2	0.0009	...
British Barmah ...	2,738,358	358	178	63	112	90	44	62	3	4	2	7	7	960	35	2.99
Madras ...	30,360,211	32	29	13	12	17	10	57	103	25	3	5	7	313	0.01	0.02
Bombay ...	16,228,774	2	...	4	8	13	1	3	1	3	2	...	...	37	...	0.02

\* The mortality statistics of Bengal Proper are still very imperfect; ratios therefore are not shewn for this province.

Omitting the Lower Provinces and a very limited portion of the North-Western Provinces, the disease affected the people so slightly that it may be said to have been almost altogether absent as compared with other years. The actual number of deaths from this cause, which were registered in each province during 1873, were in striking contrast to that of 1872; but the results of 1874 have been still more remarkable. Leaving out Bengal Proper, where registration is too imperfect as yet to admit of any comparison being made, the figures for the three years stand thus:—

*Number of deaths from cholera registered in—*

	1872.	1873.	1874.
North-Western Provinces ...	50,565	15,268	6,396
Punjab ...	8,727	148	78
Oudh ...	26,566	3,961	68
Central Provinces ...	1,592	344	14
Berar ...	1,578	...	2
British Burma...	640	8,109	960
Madras ...	13,247	840	313
Bombay ...	15,642	283	37

The contrasts which are here presented between the cholera deaths of 1874 and those of 1872 are very great. For example, the North-Western Provinces shew 6,396 compared with 50,565; Oudh only 68 compared with 26,566, and Bombay only 37 compared with 15,642. The monthly statements received from Rajpootana and the Residency Surgeons of Central India all tell the same tale of the singular absence of cholera during 1874.

26. Since the separation of Assam into a Chief Commissionership, the returns from this part of the country are no longer included in those for Bengal Proper. From Assam no information has yet been received, and the history of cholera in this province during 1874 is thus wanting to complete the general history of the disease throughout India for that year. The ten statements appended to this section shew its distribution by months in each district. In Bengal Proper, so far as can be gathered from the imperfect statistics, cholera was prevalent in parts of the Presidency Division, and especially in Burdwan, Beerbhoom, the 24-Pergunnahs, and Nuddea, in April and May. The same remark applies to Moorshedabad, Rajshahye, and Furreedpore. In Dacca and Mymensingh, on the other hand, the disease attained its height in December. As a whole, Orissa and Behar suffered very little. In the North-West epidemic prevalence was entirely confined to the districts of Gorakhpur and Bustee, which contributed 4,952 out of the total of 6,396 deaths from cholera in the whole of these Provinces. In both the disease was at its height in October. With the exception of 13 deaths recorded at Soneput, in the Delhi district, in the month of September, the Punjab return is made up of isolated cases widely scattered over the country. The same remark also seems to apply to Oudh, but the places at which cholera deaths were recorded in this province are not given in detail. In the Central Provinces 12 of the 14 deaths occurred in the Sumbulpore district in December; the other two were in Mundla, one in June and the other in July. The returns for all other months are altogether blank. Of the two deaths attributed to cholera in the Buldana district of Berar in the month of April, the Sanitary Commissioner reports that one was not due to this cause. In British Burma, January and February shew the largest number of deaths from cholera. The disease was nowhere very prevalent. Of the 313 deaths ascribed to cholera in the Madras Presidency, 243 were registered in the district of Ganjam. The 37 deaths from cholera recorded in the Bombay Presidency were widely distributed as regards both time and place.

27. The mortality from cholera in Calcutta during 1874 exceeded that of any year since 1870. The annual deaths from this cause during the last five years have been as follows: in 1870, 1,563; in 1871, 800; in 1872, 1,142; in 1873, 1,155; and in

Some increase of cholera in Calcutta.

1874, 1,329. The number, however, in the past year still presents a very favorable contrast to that of former times. As usual, the disease was at its height in the month of April.

28. The history of cholera, as shewn by the statistics of the general population of India during the past year, is fully corroborated by the experience of the European troops. Very few cases among European troops. In no year of which there is any record have they suffered so little from this disease as in 1874. Throughout the three Presidencies, out of an average strength of 59,308, only 12 men were attacked, of whom 11 died. In Bengal, as has been already stated, there were only 8 cases, all of which were fatal. Turning to Table XXIII, it will be seen that 6 of them occurred in the Gangetic Provinces, 4 at Dinapore in June and July, 1 at Lucknow in March, and 1 at Cawnpore in May. Besides these, one man was attacked in Fort William in March, and one at Ferozepore in September. Throughout the whole Madras Presidency only one British soldier suffered. The case occurred at Thyetmyo in April. The only three cases in the Bombay Presidency were at Poona, one in May and two in July.

29. The same dormancy of the disease is evidenced by the returns of the native troops in Bengal. During 1874 there were and among Native troops. only 59 cases compared with 83 in 1873. Of these 59, 52 occurred in the lower part of Bengal, and in Assam, chiefly in March, April and May. There was one at Benares in March, one at Lalitpore in October, and one at Jhelum in June. The area over which they appeared was thus very large.

30. In the Upper Provinces the prisoners enjoyed complete immunity from cholera. In the four groups of jails which Somewhat prevalent among prisoners in the Lower Provinces. represent Central and North-Western India, not a single one was attacked with the disease. In the Gangetic provinces 96 cases occurred compared with 217 in the year previous. At Gorakhpur, in which district, as has been already stated, cholera was epidemic, there was an outbreak of some severity. Fourteen cases also are returned from the Gya Jail and 11 at Chumparun, but with these exceptions the attacks were only solitary cases. In Lower Bengal and Assam, on the other hand, many of the jails suffered from cholera to a considerable extent. The total mortality due to this cause, 7.50 per 1,000, was slightly greater than that of 1873, 6.44, and considerably in excess of what it was in either 1871 or 1872.

31. As regards importation and communication from the sick to the healthy, the facts so far as they have been reported Evidence derived from cases among the European troops. are as follow: On the 6th January 1874, a woman of the 1-14th Regiment was attacked in Fort William. No other cases were known to have occurred in the Fort at this time. Surgeon-Major Moffatt remarks: "Doubtless there might easily have been communication between these quarters and the bazaars of Calcutta by means of the native servants. I can only assert the possibility, and, I may add, the probability, of such communication." With regard to the next cases reported in the Garrison of Fort William, one on the 21st February, another on the 22nd, and a third on the 3rd March, in three different Barracks, Surgeon-Major Ferguson states: "It cannot be positively proved that there was any communication between the seat of the outbreak and any other locality where cholera previously prevailed." None of the attendants or relatives who nursed the sick were attacked. On 3rd July a child belonging to the Buffs was attacked. As regards communication there is "no information." None of the attendants suffered. Concerning four cases which occurred at Dinapore between the 9th June and 10th July 1874, there is no evidence of any importation or of communication from the sick. The disease is accounted for by Surgeon-Major Millar mainly on the ground that cholera is endemic in the locality. None of the attendants were attacked. There is nothing to connect the one case which occurred in the 73rd Regiment at Cawnpore in May with contagion, and there was no spread of the disease. Surgeon-Major Sherlock states that when a man of the 65th Regiment was attacked at Lucknow in March, "there was no cholera in the station or surrounding district; only this one case occurred." The attendants remained well. Surgeon-Major Davis states that the case in the 2-12th Regiment at Ferozepore in

September "was evidently one of those unaccountable sporadic cases of cholera."

32. The information which has been furnished regarding the cases among native troops is very scanty; indeed, the only report which has been received is from Lalitpur. A native officer of the 24th Punjab Native Infantry was attacked there on the 28th October. Of this case Dr. Saunders writes: "It appeared to be a sporadic case. The occurrence was accidental, there being no cases of cholera in the bazaars, jail, or civil station, at the time."

33. The history of cholera in 1874, so far as it can be ascertained, fully supports the conclusions in regard to this disease which were stated in last year's report. It is not desirable to enter again on the discussion of the questions of importation and contagion. It is sufficient to note the facts.

34. The widespread prevalence of cholera during the current year presents a marked contrast to its dormancy in 1874. The history of the disease in 1875 must be deferred till next annual report, but it will not be out of place very briefly to record the main facts so far as they are yet known. In the spring, the eastern districts of the North-Western Provinces and Oudh suffered severely. In the last province alone the deaths registered from cholera during the first six months of the year exceeded 15,000. Over great part of the North-Western Provinces the disease has been severe, and districts which were free from it for many months have again suffered. The Central Provinces so far have comparatively escaped, but in Berar the mortality from cholera has been very heavy, and in parts of both the Madras and Bombay Presidencies there have been outbreaks of more than usual intensity. The Lower Punjab has suffered considerably. Among the troops in Bengal cases have been reported at many stations from Dinapore to Umballa and Ferozepore; up to the 3rd September of this year there have been 175 attacks among the men, women and children of European Regiments, and of these 118 have proved fatal.

35. But the most marked feature of this epidemic has been that, so far as the troops are concerned, its violence as yet has fallen chiefly on hill stations. At Kasauli the disease commenced on the 3rd July, and there have been 56 cases and 37 deaths in the depôt.\* At Dharmasala there have been 83 cases and 33 deaths in the 1st Regiment of Goorkhas, including followers. Simla also has suffered. The total number of attacks from the 26th June to the 25th August among natives has been 316, and the deaths 170; among Europeans 25 cases and 14 deaths. The total population according to the last census is 14,848, of which 1,434 are Europeans or Eurasians. So far as these are concerned, the outbreak of 1875 was thus very slight. It is remarkable that in a period of 40 years during which Simla has been in existence as a sanitarium for Europeans, so far as can be learned, this is only the third occasion in which cholera has appeared here in an epidemic form—once in 1845, again in 1867, and now in 1875. In 1867, as stated in the Annual Sanitary Report for 1872, 16 Europeans were attacked and 6 died; of 87 natives attacked, 47 died. The fact that epidemic cholera had appeared at Simla in 1845 was not recorded in that Report as it was unknown, but an officer who was here at the time has since informed me that the people suffered much in that year. The epidemic of 1845 was one of the most wide-spread and severe epidemics in this country of which there is any record.

36. The proper mode of dealing with epidemic cholera among the people is a matter of very great importance, and the recent experience of Simla in this particular is valuable. When the disease first appeared, a cholera hospital was established, and endeavours were made to remove to it every person that was attacked. This procedure was based on the idea that cholera is contagious, that the disease is

\* It is worthy of notice that the outbreak of 1872 at this station commenced on the 2nd July.



spread by discharges, and that, therefore, the public safety would be best consulted by isolating all who are seized. But it altogether failed in practice. The people feared cholera, but they feared the cholera hospital still more. It was but natural that they should dread the removal of their friends or members of their family to a hospital to be tended by strangers, especially when there was so little hope of ever seeing them again. The consequence was that every effort was made to conceal the disease, and hence, instead of diminishing the sources of supposed contagion, they were only increased. After a time, an altogether different system was adopted. The settlement was divided into districts, each district was provided with a supply of medicines and a hospital assistant, people were encouraged to apply for remedies at the first onset of any premonitory symptoms, and the cholera hospital was reserved for those who had no friends to look after them. When it was known that those attacked would not be carried off to the cholera hospital against the wishes of their friends, applications for medicine were numerous, and in this way many cases were checked in their early stage. The sick were attended in their own houses, and measures were adopted for disinfection so far as they could be carried out. There is not the smallest ground to believe that treating the sick in this way in the least degree spread the disease. The four medical officers\* at Simla who have been brought in immediate contact with cases since the new system came into play, have all recorded that in the whole of their experience during this outbreak they have never seen any ill effects from the sick being treated in their own houses, and that in their opinion it has not in a single instance spread the disease. The sick have, in fact, not acted as sources of contagion from which others have become affected. On the other hand, there can be no question of the advantage to those attacked in being left at their homes. Not only did they meet with care, and comfort there, which they could have had nowhere else, but they were also spared the fatigue and other depressing influences of removal to hospital which are so full of danger to a cholera patient. As the attempt to remove cholera patients from their homes, which failed at Simla, has been tried elsewhere with the same want of success and the same distress to the people, it is most important that these facts should be known not only throughout India, but also in other countries where belief in the contagion of cholera has gained much ground both with the profession and the public, and where compulsory measures of isolation have been advocated in order, as it is called, to "stamp out" the disease, and that it may be seen how needless is the social misery which any such system must inevitably entail. The outbreak of cholera at Simla in 1875, and the local conditions connected with it, will be discussed in next annual report along with the general history of the epidemic of 1875.

37. Excepting the Central Provinces, where the mortality caused by small-pox was much in excess of that of the year previous, the mortuary returns shew that the disease was less prevalent in all the provinces during 1874 than it had been in 1873, as may be seen from the following summary :—

\* Surgeons-Major W. H. Adley, on special cholera duty; P. W. Sutherland, and J. C. Morice; Civil Surgeons, and A. F. Bradshaw, Surgeon to His Excellency the Commander-in-Chief.

Statement showing the deaths registered from Small-pox in different Provinces during the year 1874.

Provinces.	Population under registration.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths.	Ratio of deaths per 1,000.	Ratio for 1873.
Bengal	59,946,314	1,044	1,156	1,697	2,221	2,151	1,434	878	537	240	214	171	313	12,056	*	*
N. W. Provinces ...	30,769,056	5,381	6,714	13,165	19,120	20,560	14,034	7,240	3,434	1,148	670	661	1,111	93,247	3.03	3.15
Punjab ...	17,487,125	953	953	1,244	1,261	2,382	1,979	1,268	579	265	200	351	582	12,026	0.69	1.47
Oudh ...	11,174,785	571	682	1,560	2,618	3,747	3,008	1,636	662	204	123	151	268	15,230	1.36	1.98
Central Provinces...	7,427,608	1,048	1,280	1,893	2,134	2,310	2,420	1,823	1,193	532	365	883	1,815	17,696	2.38	1.33
Berar ...	2,184,945	168	145	168	177	140	70	78	41	34	23	35	33	1,112	.5	3.8
British Burma ...	2,738,358	192	196	169	178	109	96	69	98	21	13	20	30	1,191	.43	.52
Madras ...	30,360,211	6,020	6,246	7,590	6,150	4,492	3,515	3,359	2,741	2,285	1,988	1,898	2,079	48,343	1.5	1.7
Bombay ...	16,228,774	290	397	639	606	500	466	287	161	122	119	134	212	3,903	0.24	0.61

\* Ratios are not given for Bengal, as the statistics are most imperfect.

38. Among the European troops also there were fewer cases than in either 1872 or 1873. The total number was 44, of which 8 proved fatal. The ratio of cases equalled .8 per 1,000, and of deaths .18. As usual, the disease yielded no admissions in the rains. Dr. Bryden has shewn in his ten-year Tables\* that the liability of European troops to small-pox in this Presidency is at its maximum in April and May, reaching a percentage of 18.2 of the total for each of these

months; while from July to October, it may be represented as *nil*. Of the 44 cases in 1874, 35 occurred in Bengal, 5 in Madras, and 4 in Bombay.

39. As has been explained in former reports, the mortality ascribed to fevers among the general population cannot be accepted as by any means accurate, but the results serve to indicate the relative prevalence of this most common form of disease among the people. The ratios under this head in 1874 shew that, with the exception of the Central Provinces and Berar, they suffered less from fevers than in 1873, as may be seen in the following abstract:—

Statement showing the deaths registered from Fevers in the different provinces during the year 1874.

Provinces	Population under registration.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths.	Ratio of deaths per 1,000.	Ratio for 1873.
Bengal	59,946,314	28,586	23,642	25,032	23,159	22,336	18,544	20,742	26,980	27,793	30,970	41,415	39,622	328,721	*	*
N. W. Provinces	30,763,056	35,213	28,000	28,106	25,018	27,925	25,317	29,009	45,829	50,661	62,463	50,318	40,729	449,588	14.61	14.89
Punjab	17,487,125	17,170	12,637	12,543	11,265	15,617	13,327	11,265	14,682	16,379	23,274	20,932	21,540	190,631	10.90	12.57
Oudh	11,174,785	8,355	7,179	7,976	6,808	7,439	5,801	7,979	9,875	9,123	10,809	10,240	8,969	100,553	9.00	9.31
Central Provinces	7,427,608	7,785	6,681	8,016	8,329	9,215	7,388	8,795	12,461	10,962	13,338	13,009	12,064	118,043	15.94	12.63
Berar	2,184,945	1,869	1,530	2,054	2,147	2,223	1,738	2,186	2,952	2,744	2,815	2,296	2,178	26,732	12.2	8.8
British Burmah...	2,738,358	1,772	1,520	1,528	1,308	1,445	1,544	1,865	1,708	1,741	1,791	1,774	2,141	20,137	7.35	7.39
Madras	30,360,211	20,896	14,120	15,715	14,650	15,403	17,167	20,679	20,023	18,654	18,444	21,359	29,110	226,220	7.4	7.3
Bombay	16,228,774	17,163	13,708	15,349	13,825	13,420	13,019	13,678	14,814	13,870	17,250	19,251	18,370	183,717	11.32	11.59

\* No ratios are given for Bengal, the statistics are still very imperfect.

40. Among European Troops throughout India malarious fevers were in almost the same proportion as in 1873. The admissions were in the ratio of 461 per 1,000 compared with 456. But as usual they were very unequally distributed. For Bengal the admission rate from this cause was 552, for Bombay 439, and for Madras only 187. The different groups of stations in each presidency again shew very marked differences. In Bengal the maximum rate, 868 admissions per 1,000, was reached in Meerut and Rohilkund, and the minimum 357 in the Gangetic Provinces. In Burmah malarious fevers contributed only 116 cases per 1,000. The monthly distribution of these fevers, and the extent to which they affected individual stations are very clearly shewn in Tables XXV and XXI. In this presidency, omitting hill stations, the ratio varied from a minimum of 198 per 1,000 in Fort William and 195 in Moradabad, to a maximum of 2125 per 1,000 at Peshawar. In the other presidencies among any considerable body of men, the lowest ratios were 50 per 1,000 at Rangoon and 48 at Toungoo in British Burmah, and the highest ratio 1,160 at Neemuch.

41. Although malarious fevers contributed about one-third of the whole cases of sickness, the mortality they occasioned was only .86 per mille. From Enteric fever, on the other hand, although the admissions equalled only 4.1 per 1,000, the death-rate was 1.70. As already shewn\* Enteric fever heads the mortality list in Bengal with a ratio of 2.01, in Bombay it stands third with a ratio of 1.33, and in Madras it is fifth with a ratio of 1.04. But as pointed out in last year's report the appearance of this fever in the returns of late years as a prominent cause of mortality among European Soldiers in India, is no evidence of the existence or increased prevalence of any new disease. The statistics given in that report† shew that during the fourteen years from 1860 to 1873, the death-rate from fevers as a whole has not increased. In 1871 Enteric fever appears for the first time and shews a mortality of 1.71 per 1,000, but the total deaths from fevers instead of being increased were actually less than in the year previous. And so it is in 1874; the mortality from Enteric fever in Bengal—2.01 per 1,000—stands higher than it ever did before, but the ratio for malarial fevers is correspondingly reduced and amounts to only 1.10 per 1000, the lowest death-rate under this head which has ever been recorded. The mortality from all fevers, malarial and Enteric combined, is only 3.11, a ratio lower than that attributed to fevers in any one of the last 15 years excepting 1873, in which it stood at a minimum of 2.92.

42. Table XXIV shews the stations in which the 243 cases of Enteric among European Troops in India occurred, and also their distribution by months. Of 59 stations in Bengal 28 furnished cases. In Madras and Bombay they are returned from 15 out of 35 stations. In Bengal to which more particular reference will now be made, the disease was chiefly prevalent in the six months from April to September. Many of the Cantonments shew only one or two cases in each, but at others, especially at Barrackpore, Hazaribagh, Dinapore, Fyzabad, Lucknow, Meerut, Saugor and Peshawar they were more numerous.

43. Regarding the figures of Table XXIV in connection with the regimental statement No. XXX, some valuable facts may be learned. The seven cases of Enteric fever at Barrackpore all occurred in two Batteries of the 11th Brigade of Artillery just arrived from England. At Hazaribagh the garrison consisted of the 2-22nd Regiment, which arrived from England in December 1873. At Dinapore 4 out of the total of 9 cases were in C. Battery of the 11th Brigade during its first year in India. At Saugor all the 10 cases were in E. Battery of this same Brigade. As a rule, it will be found, as usual, that the disease was confined in the main to young soldiers during their early Indian service. Among newly-arrived regiments it will be seen from a statement to be given in a subsequent paragraph, that in 1874 the deaths from Enteric fever, which

Among the troops malarious fevers were in almost the same proportion as in 1873.

High death rate from Enteric fever, but marked diminution in the deaths from fevers as a whole.

Wide-spread distribution of Enteric fever.

Its prevalence at certain stations, chiefly among new regiments, or soldiers recently arrived.

\* Para. 8.  
† Para. 32.

equalled 2·01 in the army, as a whole, equalled 10·17 in regiments during their first year in this country. In a letter which the Surgeon-General of Her Majesty's British Forces has submitted to the Government, he states that of the total of 177 cases which occurred in Bengal, 133 were in men under 25 years of age; 100 of them were in men during their first year in India.

44. This letter also summarises the results of a special inquiry which was instituted on certain points, especially—*1st*, the original introduction of the disease by importation; *2nd*, its propagation by contagion; and *3rd*, the sanitary condition of the barracks which furnished cases, and also of their surroundings. In summing up the replies received on these points, Dr. Currie observes: "As regards evidence of the disease having been imported either from England or from one station in India to another, no facts have been adduced which can be held to give any valid support to the belief that the disease originated in this manner. The same may be said with respect to its spread by contagion. In no instance has any satisfactory evidence been recorded of the disease having been diffused after such fashion. Neither the water-supply nor any articles of food or drink used by the men have been found, after fullest inquiry, to be at fault, with the exception of the tank-water at Barrackpore, which is said to give evidence of the presence of an unusually large amount of organic matter. As regards the water-supply to troops on the line of march, it is only in one instance surmised that the disease may have been caused by it. With the exception of defective surface drainage at Umballa, the over-crowded state of the barracks occupied by the 70th Regiment at Rawul Pindi, and the leaky condition of the roofs of the barracks at Hazaribagh, no preventible sanitary defects are noticed in the reports." The mere existence of Enteric fever is in itself evidence of insanitary conditions; and it is all the more important that every such defect which is remediable should be very carefully sought out and remedied, because there are insanitary conditions inseparable from climate which can be only ameliorated.

45. Of the 143 cases of apoplexy, 87 occurred in May, June, and July. The disease was less prevalent and fatal than in either 1872 or 1873. In Bengal the admissions equalled 2·6 per 1,000, and the deaths ·97. In Bombay the proportion of attacks, 2·7, was somewhat larger. In Madras it was only 1·5. In Bombay also, the mortality from this cause was highest, 1·14, and in Madras lowest, ·70. The distribution of the cases of apoplexy by stations and months forms the subject of Table XXVI.

46. Dysentery and diarrhoea were less prevalent and fatal than usual. Throughout the whole army of India the cases equalled 36 for the one and 49 for the other—ratios which are both under those of the previous three years. The same remark applies to the death-rate which for dysentery was 1·23, and for diarrhoea ·03. In Bengal the admission rate for dysentery, 26, is lower than that of any of the previous fourteen years. Between 1860 and 1869 the ratio averaged 48. The mortality, 1·21, however, is higher than that of 1873 when it attained the minimum of ·79. The relative prevalence and fatality of dysentery in Madras, and the ratios which it presents for Bombay, are compared with the results in Bengal in the following statement:—

*Admissions and Deaths from Dysentery, 1874.*

	Bengal.	Madras.	Bombay.	India.
Admissions per 1,000 ... ..	26·2	82·2	23·7	36·6
Deaths per 1,000 ... ..	1·21	1·91	·57	1·23

47. In the Central Provinces the deaths registered as due to bowel complaints exceeded those of 1873. In Berar also there is a return to the former excessive mortality ascribed to this cause. With these exceptions, the statistics shew that, as regards this class of diseases, the public health was good in 1874.

Statement showing the deaths registered from Bowel complaints in the different provinces during the year 1874.

Provinces.	Population under registration.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths.	Ratio of deaths per 1,000.	Ratio for 1873.
Bengal ...	59,946,314	2,556	2,203	2,662	2,398	2,364	2,169	2,625	3,319	2,761	2,657	2,660	2,866	31,240	*	*
North-Western Provinces ...	30,769,056	4,680	3,541	3,653	3,714	4,200	3,973	5,140	7,017	7,198	6,691	6,127	4,931	60,865	1.98	2.26
Punjab ...	17,487,125	1,225	735	768	901	1,642	1,408	1,369	1,845	1,762	1,763	1,562	1,427	16,407	0.94	1.12
Oudh ...	11,174,785	288	240	305	275	306	252	338	487	431	535	366	401	4,224	0.38	0.41
Central Provinces ...	7,427,608	1,044	908	1,035	1,116	1,089	954	1,286	1,801	1,559	1,363	1,253	1,127	14,535	1.95	1.68
Berar ...	2,184,945	1,197	1,109	1,268	1,295	1,424	1,293	1,969	2,622	2,147	1,843	1,298	1,228	18,693	8.5	5.
British Burmah ...	2,738,358	306	277	289	342	338	393	492	458	406	332	438	289	4,360	1.59	1.93
Madras ...	30,360,211	3,223	2,343	2,413	2,463	2,691	3,202	3,959	3,559	3,144	3,292	3,402	4,002	37,693	1.2	1.2
Bombay ...	16,228,774	2,062	1,638	1,892	1,859	2,011	2,296	2,701	3,054	2,476	2,457	2,235	2,308	26,989	1.66	1.62

\* As the Registration in Bengal is still very imperfect, no ratios are given for this province.

48. Delirium tremens contributes 181 cases and 8 deaths, ratios equivalent to 3·1 and ·14 per 1,000. Bombay, in respect to this disease, furnishes the most unfavorable return as far as admissions are concerned; the ratio equals 5·1 per 1,000. In Madras the admission rate is 3, and the death-rate ·09, while in Bengal, with an admission rate of 2·5, the death-rate is ·19.

49. For the army of India, as a whole, hepatitis was, as usual, the most important cause of death. The mortality it occasioned was 2·16, a ratio, however, lower than that of any of the three previous years with which comparison can be made. Of this total Madras contributes by far the largest proportion. The ratio here was 3·30, in Bengal it was 1·93, and in Bombay only 1·71. Each of these compares favorably with the results of former years. During the ten-year period in Bengal the average annual mortality from hepatitis was 3·31.

50. The diminution of venereal diseases which took place in 1873 has not been continued. On the contrary, the ratio of admissions from those affections which stood for the army generally at 179 in 1872, and 166 in 1873, has risen to 192, very much the same as 196, the proportion for 1871. An examination of the statistics of each presidency shews that this result has been due to an increase both in Bengal and Madras. In Bombay, though the admission-rate is higher than in 1872, it is lower than it was in 1873.

51. In the Bengal army, taken separately, the admissions from venereal diseases equalled 200 per 1,000, compared with 167 in 1873 and 190 in 1872. In 1871 they were 208. A statement of details, moreover, shews an increase in the more severe forms of disease.

*European Army—Venereal Admissions detailed.*

VENEREAL DISEASES.	BENGAL.			
	1873.		1874.	
	STRENGTH, 36,817.		STRENGTH, 37,190.	
	Admissions into hospital.	Ratio per 1,000.	Admissions into hospital.	Ratio per 1,000.
Primary syphilis	1,809	49·1	2,466	66·3
Gonorrhœa	3,178	86·3	3,683	99·0
Phymosis	23	} 9·5	21	} 9·8
Stricture	133		158	
Warts	96		104	
Orchitis, gonorrhœal	97		81	
TOTAL	5,336	144·9	6,513	175·1
Secondary syphilis	660	17·9	860	23·1
Inflammation of inguinal glands	503	} 26·4	427	} 24·4
Orchitis	469		481	

Cases of primary syphilis, it will be seen, have risen from 49 to 66 per 1,000, and of gonorrhœa from 86 to 99. For secondary syphilis also, the ratio is higher than it was in the year previous. These details, it may be noted, are taken from the regimental returns, and do not altogether coincide with the total of the general statement; but this does not affect the comparison with previous years.

52. The same marked difference in the prevalence of venereal affections at different stations which was formerly noted has continued. At Cambellpore among a small body of men the admission-rate was only 60 per 1,000; at Fatehgarh it was 469. Of ten stations where there were no lock-hospitals in either 1873 or 1874, there was an increase of venereal diseases at eight, and in some this increase has been great. Twenty-eight stations where lock-hospitals existed in both years shew an increase of cases in 1874 as compared with 1873. At only 17 where the rules have been in force in 1873 and 1874, has the return for 1874 been more favorable than that of the previous year.

53. In the Madras Presidency venereal affections caused 189 admissions per 1,000, a larger proportion than in any one of the previous three years. In 1873 the minimum ratio of 152 per 1,000 was arrived at; in 1872 it was 164, and in 1871, 180. At Kamptee the ratio was 430 and at Bellary 446. Cannanore shews only 96, and Thayetmyo 88. The details of the diseases from which the men suffered do not place 1874 in a favorable light. As may be seen from the annexed statement, cases of primary syphilis increased from 62 to 79 per 1,000:—

Increase in Madras.

*European Army—Venereal Admissions detailed.*

VENEREAL DISEASES.	MADRAS.			
	1873.		1874.	
	STRENGTH, 11,413.		STRENGTH, 11,556.	
	Admissions into hospital.	Ratio per 1,000.	Admissions into hospital.	Ratio per 1,000.
Primary syphilis	715	62.6	917	79.3
Gonorrhœa	656	57	767	66.4
Phymosis	6	7.4	10	9.8
Stricture	37		50	
Warts	19		23	
Orchitis, gonorrhœal	22		30	
TOTAL	1,455	127.5	1,797	155.5
Secondary syphilis	285	24.9	348	30.1
Inflammation of inguinal glands	266	34.5	313	38.7
Orchitis	128		134	

There has, in fact, been an increase under every variety of venereal disease.

54. In Bombay, as has been already stated, the return for 1874 is more favorable than that of 1873, but not so favorable as that of 1872. The ratio of admissions from venereal diseases in this Presidency during the last four years has been for 1871, 174; 1872, 154; 1873, 181, and 1874, 170. But a more detailed comparison of the results of the last two years shews that the small reduction in 1874 as compared with 1873, has been in the less formidable affections. According to the annexed statement, gonorrhœa had declined from 89 to 70 cases per 1,000, but primary syphilis had risen from 58 to 63:—

Diminution in Bombay.

*European Army—Venereal Admissions detailed.*

VENEREAL DISEASES.	BOMBAY.			
	1873.		1874.	
	STRENGTH, 10,586.		STRENGTH, 10,507.	
	Admissions into hospital.	Ratio per 1,000.	Admissions into hospital.	Ratio per 1,000.
Primary syphilis	619	58.5	662	63
Gonorrhœa	943	89.1	740	70.4
Phymosis	8	8.9	10	7.8
Stricture	31		45	
Warts	25		13	
Orchitis, gonorrhœal	30		14	
TOTAL	1,656	156.5	1,484	141.2
Secondary syphilis	257	24.3	285	27.1
Inflammation of inguinal glands	275	34.8	271	33.9
Orchitis	93		85	

At individual stations the ratios vary from 70 at Hyderabad, where, it is worthy of notice, there is no lock-hospital, to 309 at Bombay, where also the rules for the prevention of venereal disease were not in force.



55. These results cannot be regarded as satisfactory. No doubt there has been a diminution of venereal diseases among the troops of late years. During the ten-year period, 1860—69, the average annual ratio of admissions in the Bengal Presidency equalled 265 per 1,000—a result due to the high proportion of cases during the first half of this period before lock-hospitals were established. During the last five years the average has been 194. But on reference to the statistics of former years given in a previous Annual Report,\* it will be seen that the proportion of venereal disease in those days without lock-hospitals was much less than it has ever been since. During the five years, 1852-53 to 1856-57, the average annual admission-rate was only 168 per 1,000. In estimating the exact value of these figures, the proportion of young men and of married men must be taken into consideration. On the first point statistics do not exist before 1865. Since then, so far as Bengal to which they refer is concerned, there has been no material change in the constitution of the army according to age. As regards marriage, in the Report of the Royal Commission on the sanitary state of the Army in India, it is stated (page XXIV) that “of the Royal Army 93 per cent. of all ages were unmarried men; of the Europeans of the late Company’s regiments 70 per cent. were unmarried.” In the three presidencies in 1874 the proportion of unmarried men of all grades was 89 per cent. The later returns of venereal disease in Madras shew an improvement on those of former years. Between 1860—69 the average ratio of admissions from this cause was 236 per 1,000 per annum.† There are no statistics in this office to allow of the comparison being extended to an earlier period. During the five years, 1870—74, the average is 171. In Bombay the average of the last five years, 1870—74, is 170. But between 1863 and 1869 the annual ratio given by the Surgeon-General of that Presidency is only 127.‡ Whatever view may be taken of the question, it is evident that the rules for the prevention of venereal disease among European troops have in great measure failed and the results have fallen far short of what was anticipated.

56. Table XXXII shewing the number of days spent in hospital by the men of each regiment gives an excellent idea of the comparative inefficiency in each corps. In the Bengal Presidency the B battery, XI brigade at Barrackpore, shews the maximum of 48 days. Another battery of this Brigade at the same station shews 35. It is remarkable that all the other batteries of this XI Brigade shew similar high averages; 36 days in the C battery at Dinapore; 35 in the D battery at Benares; 40 in the E battery at Allahabad; 32 in the G battery at Nowgong; and 33 in the F Battery at Saugor. The excessive sickness in this newly arrived Brigade has been already referred to. Marked contrasts to these very unfavorable returns appear in the table. For example, the average in hospital in the Buffs at Fort William was only 16 days; in 1-5th Regiment at Bareilly 15 days; in the 55th Regiment at Roorkee 14 days; in the 26th Regiment, Morar, 15 days; in the 2-25th Regiment at Jubbulpore and Saugor 16 days; in the D battery, A Brigade, at Sialkot 14 days; in No. 2 battery, 13th Brigade, Meean Meer, 15 days; in F battery, F Brigade, at Rawul Pindi 12 days; and in B battery of this same Brigade at Cambellpore only 11 days. In the other presidencies even more favorable averages appear. In the B battery, 18th Brigade at Kurrachee, the minimum of 8 days was attained.

57. The four following statements shew for the European Army in India, and for that of the Army in each presidency, the proportions of deaths among men of different ages, and also the incidence of the mortality and the causes to which it has been mainly due at each period of life. These statistics fully bear out all that has been written on this important subject of late years —

\* Annual Report of the Sanitary Commissioner with the Government of India for 1867, page 160.

† *Vide* Report of the Sanitary Commissioner with the Government of India for 1871, page 58.

‡ *Vide* ditto ditto ditto ditto page 60.

ARMY OF INDIA.

*Distribution according to age of the strength at the beginning of 1874.*

TOTAL STRENGTH.	Under 20.		20 to 24.		25 to 29.		30 to 34.		35 to 39.		40 and upwards.	
	...	...	...	...	...	...	...	...	...	...	...	...
60,347	1,893	20,773	16,140	11,971	7,843	21,541	1,727					

*Deaths of 1874, and the death-rates at the different ages.*

CAUSES OF DEATHS.	NUMBER OF DEATHS AT THE DIFFERENT AGES.						RATES PER 1,000 OF THE STRENGTH ABOVE STATED.						RATIO OF LIABILITY IN PERCENTAGES.						TOTAL.						
	Under 20.		20 to 24.		25 to 29.		30 and upwards.		Under 20.		20 to 24.		25 to 29.		30 and upwards.		Under 20.			20 to 24.		25 to 29.		30 and upwards.	
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Remittent and continued fevers	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Enteric fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Apoplexy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Delirium tremens	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Dysentery and diarrhoea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Hepatitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Phthisis pulmonalis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Heart disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
All other causes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
All causes	7	217	196	377	370	1044	1214	1750	845	2385	2773	3997	100												
All causes, excluding cholera	...	216	194	369	370	1039	1202	1713	856	2403	2780	3961	100												
Ratios of 1873, excluding cholera	...	...	...	...	...	890	1172	2278	514	1945	2562	4979	100												
" 1872, "	...	...	...	...	...	1216	1417	2565	987	2108	2457	4448	100												
" 1871, "	...	...	...	...	...	1077	1297	2668	1161	1888	2274	4677	100												

ARMY OF BENGAL.

Distribution according to age of the strength at the beginning of 1874.

TOTAL STRENGTH.	NUMBER OF DEATHS AT THE DIFFERENT AGES.				RATIO PER 1,000 OF THE STRENGTHS ABOVE STATED.				RATIO OF LIABILITY IN PERCENTAGES.			
	Under 20.	20 to 24.	25 to 29.	30 to 34.	Under 20.	20 to 24.	25 to 29.	30 and upwards.	Under 20.	20 to 24.	25 to 29.	30 and upwards.
37,517	793	12,719	10,336	7,723	13,669	4,894	1,052					

Deaths of 1874, and the death-rates at the different ages.

CAUSES OF DEATHS.	NUMBER OF DEATHS AT THE DIFFERENT AGES.				RATIO PER 1,000 OF THE STRENGTHS ABOVE STATED.				RATIO OF LIABILITY IN PERCENTAGES.				TOTAL.
	Under 20.	20 to 24.	25 to 29.	30 and upwards.	Under 20.	20 to 24.	25 to 29.	30 and upwards.	Under 20.	20 to 24.	25 to 29.	30 and upwards.	
Cholera ...	...	1	1	6	...	0.8	1.0	.44	...	12.90	16.13	70.97	100
Remittent and continued fevers ...	...	18	8	15	...	1.41	.77	1.10	...	42.99	23.48	33.53	100
Enteric fever ...	...	50	21	2	...	3.93	2.03	1.15	29.20	45.54	23.52	1.74	100
Apoplexy ...	...	14	6	16	...	1.10	.58	1.17	...	38.59	20.35	41.06	100
Delirium tremens ...	...	1	2	4	...	.08	.19	.29	...	14.29	33.93	51.78	100
Dysentery and diarrhoea ...	...	11	12	21	...	.87	1.16	1.54	41.38	14.28	19.05	25.29	100
Hepatitis ...	...	9	21	41	...	.71	2.03	3.00	...	12.37	35.36	52.27	100
Phthisis pulmonalis ...	...	13	14	17	...	1.02	1.36	1.24	...	28.18	37.57	34.25	100
Heart disease ...	...	2	9	41	...	.16	.87	3.00	...	3.97	21.59	74.44	100
All other causes ...	...	39	35	83	...	3.05	3.39	6.07	9.21	22.19	24.58	44.02	100
All causes ...	5	158	129	246	6.31	12.42	12.48	18.00	12.82	25.24	25.36	36.58	100
All causes, excluding cholera ...	5	157	128	240	6.31	12.34	12.38	17.56	12.99	25.39	25.48	36.14	100
Ratios of 1873, excluding cholera ...	...	...	...	...	4.18	9.65	10.62	21.71	9.05	20.92	23.00	47.03	100
" 1872 ...	...	...	...	...	4.95	11.26	14.75	25.30	8.79	20.02	26.22	44.97	100
" 1871 ...	...	...	...	...	8.31	10.96	13.81	26.98	13.84	18.25	22.99	44.92	100
Standard of 1865-70 ...	...	...	...	...	7.61	13.67	17.41	29.94	11.09	19.92	25.37	43.62	100





58. The influence of newly-arrived regiments in increasing the ratios of sickness and mortality in different groups and at individual stations during 1874, has already been referred to more than once. Taking them as a body, the results are very striking, especially when compared with those in the army generally. Placed side by side they stand thus—

RATIOS PER 1,000.			
	Admissions.	Daily sick.	Deaths.
Army generally ...	1,358	57	13.58
Newly-arrived Regiments *...	1,818	70	26.18

Comparing the death-rates due to the chief diseases, the comparison stands thus—

RATIOS PER 1,000				
	Enteric Fever.	Apoplexy.	Dysentery.	Hepatitis.
Army generally ..	1.70	.95	1.23	2.16
Newly-arrived Regiments	10.17	2.80	2.03	2.80

59. The Indian experience of the regiments which returned to England in 1874 after completing their term of service in this country, is summarized by Dr. Bryden in the following statement. Unfortunately, it is not complete, as only two of the batteries of the 18th Brigade of Artillery furnished the necessary returns. The results appear more favorable than those given in last year's report, but the Indian service of those which left India in 1874, averaged only 9 years, whereas those which left in 1873 had each served on an average 11 years in this country:—

*Loss during the period of Indian Service of Regiments which returned to England in 1874 among the men who landed with their Corps.*

REGIMENTS.	Service in India.	Landed with the Regiment or remained at the time of transfer to Her Majesty's service.	Embarked out of those who landed or were transferred.	To be accounted for.	DETAILS OF THE LOSS OF EACH REGIMENT.					
					Deaths from disease.	Invalided from disease.	Discharged time-expired.	Purchased their	Transferred to other Regiment.	Otherwise discharged and deserted.
5th Lancers ...	11 years...	513	187	326	111	126	26	9	54	...
26th Regiment ...	9 ,, ...	846	317	529	103	242	83	3	60	38
37th ,, ...	8 ,, ...	699	200	499	122	178	121	6	72	...
41st ,, ...	9 ,, ...	799	286	513	100	245	55	2	101	10
49th ,, ...	9 ,, ...	833	306	527	79	140	118	8	167	15
		3,690	1,296	2,394	515	931	403	28	454	63

*Loss per 1,000 during the period of Indian Service.*

By death ...	...	139.6	21.5
By invaliding ...	...	252.3	38.9
Discharged time-expired ...	...	109.2	16.8
Transferred ...	...	123.0	18.9
Otherwise removed ...	...	24.7	3.9
All Causes ...	...	648.8	100.0

60. The proportion of married soldiers in the three presidencies is shown in the following statement. The result is almost the same as in 1873:—

*Abstract Statement of married and unmarried European Non-Commissioned Officers and soldiers serving in the three presidencies on the 1st May 1874.*

CORPS.	STAFF SERGEANTS.			SERGEANTS.			RANK AND FILE.			TOTAL OF ALL GRADES.			Remarks.		
	Establishment in India.	Married.	Unmarried.	Percentage of married to actual strength.	Establishment in India.	Married.	Unmarried.	Percentage of married to actual strength.	Establishment in India.	Married.	Unmarried.	Percentage of married to actual strength.		Married.	Unmarried.
<i>Engineers.</i>															
Bengal ... ..	4	3	1	75	24	13	35	27.08	48	28	47	37.33	44	83	34.64
Madras ... ..	...	...	...	...	21	14	...	100	60	10	10	50	24	10	70.58
Bombay ... ..	2	2	...	100	4	8	1	88.88	8	17	11	60.71	27	12	69.23
Total ... ..	6	5	1	83.33	49	35	36	49.29	116	55	68	44.72	95	105	47.50
<i>Artillery.</i>															
Bengal ... ..	134	104	25	80.62	305	166	140	54.24	6,129	518	5,548	8.53	788	5,713	12.12
Madras ... ..	57	45	10	81.81	106	74	33	69.15	2,511	339	2,216	12.96	419	2,269	16.58
Bombay ... ..	54	40	11	78.43	96	49	46	51.57	2,238	928	2,046	10.02	317	2,103	13.09
Total ... ..	245	189	46	80.42	507	289	219	56.88	10,911	1,076	9,810	9.81	1,554	10,075	13.36
<i>Cavalry.</i>															
Bengal ... ..	54	35	13	72.91	186	98	73	57.30	2,490	234	2,295	9.25	367	2,38	13.33
Madras ... ..	20	14	5	73.68	50	24	23	51.96	840	90	779	10.35	128	897	13.68
Bombay ... ..	12	3	7	30	30	11	11	50	414	47	407	10.35	61	425	12.55
Total ... ..	86	52	25	67.53	266	133	107	55.41	3,744	371	3,481	9.63	556	3,613	13.33
<i>Infantry.</i>															
Bengal ... ..	256	168	51	78.71	1,312	556	686	44.76	26,706	1,997	25,125	7.36	2,721	25,862	9.51
Madras ... ..	72	56	19	74.06	369	218	135	61.75	7,524	677	6,948	8.87	951	7,102	11.80
Bombay ... ..	72	55	20	73.33	369	183	164	52.73	7,524	588	6,720	8.04	826	6,904	10.68
Total ... ..	400	279	90	75.60	2,050	957	985	49.27	41,844	3,262	38,703	7.75	4,498	39,868	10.13
<i>Total of all Arms.</i>															
Bengal ... ..	448	310	90	77.50	1,827	833	934	47.14	35,454	2,777	33,015	7.75	3,920	34,089	10.32
Madras ... ..	149	115	34	77.18	546	330	191	63.33	10,935	1,107	9,953	10.00	1,552	11,778	13.23
Bombay ... ..	140	100	38	72.46	409	251	222	53.06	10,226	880	9,184	8.74	1,231	9,444	11.53
Grand total of all Arms in the three Presidencies.	737	525	162	70.41	2,872	1,414	1,347	51.21	65,615	4,764	52,152	8.37	6,703	53,661	11.10

61. In Bengal 10,988 cases of drunkenness were reported during the year. In 1872, the number was 11,779, and in 1873, 8,976. In the cavalry, the number varies from 35 in one regiment to 75 in another; in the artillery from 5 in one battery to 90 in another, and in the infantry from 15 in one regiment to 664 in another. No great value, it is to be feared, can be placed on these statistics. The number of total abstainers in Bengal was 2,657; in Bombay the number was 516 and in Madras 445. The cases of drunkenness reported in Bombay shew a total of 3,568 compared with 4,568 in the previous year. In Madras, 5,346 cases of drunkenness were reported in 1874, an increase on 5,051 in 1873. The Madras and Bombay returns shew great discrepancies in different corps, but not so marked as in Bengal.

62. When summarizing the general results of 1874, in the second paragraph of this report, it was shewn that the total loss by invaliding throughout India equalled 43·78 per 1,000: that this was somewhat under the ratio for 1873, and that it did not differ materially from the ratios of 1871 and 1872. The loss by invaliding in the army of India, taken as a whole during the last four years, and the proportions of that loss due to men recommended for change and to those recommended for discharge, have been as follows:—

*Invaliding—Army of India from 1871 to 1874.*

YEAR.	Total number invalided.	Ratio per 1,000.	DETAILS OF TOTAL.			
			Number sent home for change.	Ratio per 1,000.	Number sent home for discharge.	Ratio per 1,000.
1871	2,381	43·62	1,692	31·00	689	12·62
1872	2,438	43·21	1,731	30·73	707	12·48
1873	2,434	44·58	1,839	33·68	595	10·90
1874	2,411	43·78	1,795	32·59	616	11·19

63. In Bengal the loss by invaliding was 40·39 per 1,000, the equivalent of 1,427 men sent home out of a strength of 35,329. Of the 1,427, 1,027 were recommended for change and 400 for discharge, giving ratios of 11·32 for discharge and 29·07 for change. Compared with the preceding 14 years, the results of 1874 as regards invaliding are favorable. The total loss due to this cause is under what it has been in any year since 1864 when it equalled 36·75. The proportion due to men recommended for discharge, 11·32, is higher than that of 1870, 8·37, but lower than that of any other of the 14 years.

64. In Madras the proportion of men invalided was 53·36 per 1,000: 607 were sent to England out of a strength of 11,375. The proportion for discharge was 11·87 and for change 41·49. The total loss by invaliding in Madras for a number of years has averaged considerably above what it has been in Bengal, but the excess is due to the large number of men sent home for change. The number recommended for discharge has been in smaller proportion than in this Presidency.

65. In Bombay the invaliding rate for 1874 was 45·07, thus occupying a place between Bengal and Madras. The ratio is the equivalent of 377 men sent home out of a strength of 8,364. It is to be observed that the strengths on which these invaliding ratios are calculated, as explained in the note at the foot of Table XXVIII, are not the average total strengths of each Presidency, but the strengths after deducting "the corps which went to England at the close of 1874 and took with them the men who would otherwise have been invalided for change." In Bombay the loss by invaliding was greater in 1874 than in any year since 1866, when it equalled 45·96, the maximum of the 15 years—1860-74. The excess of 1874 is to be ascribed to the large proportion of men sent home for change.



66. The causes of invaliding in the three Presidencies are detailed in Table XXVIII. General debility, as usual, shews the largest proportion, giving a total of 8.36 per 1,000 for the army generally and a high ratio for each Presidency, but especially for Bombay. Hepatitis comes next with 6.99, chiefly due to Madras where this disease led to the invaliding of 10.99 per 1,000. Phthisis caused much the same loss in all three Presidencies and an average of 4.07 for the whole. Diseases of the heart and large vessels, bowel complaints, palpitation and rheumatism stand next on the list in their order of importance.

67. The total loss by death and invaliding has already been shewn for the army as a whole. In each Presidency taken separately the results stand thus:—

PRESIDENCY.	PER 1,000 OF AVERAGE STRENGTH.		
	Died.	Invalided.	Total.
Bengal ... ..	14.62	40.39	55.01
Madras ... ..	12.96	53.36	66.32
Bombay ... ..	10.64	45.07	55.71
India ... ..	13.58	43.78	57.36

68. The ultimate disposal of the men invalided from India materially affects the statistics on this point. As has been shewn, the great proportion of them is returned as recommended only for change, but no information has yet been received to shew how far the recommendations of the invaliding committees in this country are acted on. This point has been under reference since the beginning of 1871, and certain changes designed to shew what became of each man after leaving India—whether he died on the voyage or at Netley, or was discharged to duty or to pension—were proposed in War Office form No. 821. These changes were approved of by the War Office in 1873, but none of the rolls of invaliding which were to have been returned from Netley have yet been received. It is of great importance that the information should be regularly furnished, as without it the statistics of invaliding must remain incomplete.

69. In 1873 the sickness and mortality among soldiers' wives were less than in any previous year. The returns of 1874 are still more favorable than those of 1873, for though in the army, as a whole, the admissions equalled 926, as compared with 925, the daily sick rate was only 35 compared with 36, and the mortality 19.47 compared with 19.92. Taking the Presidencies separately, the admissions vary from 1,018 in Bengal to 697 in Madras, and the daily sick rate from 39 in Bengal to 25 in Madras. The mortality in Bombay was lower than in either of the other Presidencies, 14.62 as compared with 20.26 in Madras and 20.69 in Bengal. Between 1860 and 1871 the lowest mortality among women in Bengal was 25.46 in 1866. During the other eleven of these years it varied from 28.53 in 1871 to 68.03 in 1860. In Madras during this same period the minimum ratio was 10.82 in 1868 and 37.20 in 1860. The Madras statistics of both women and children, it is to be remarked, include many of mixed parentage, which, to a large extent, vitiates the comparison. In Bombay the death-rate among women between 1860 and 1871 varied from 14.42 in 1866 and 60.81 in 1861. The mortality among soldiers' wives in Bengal during 1874 was lower than in any of the previous 14 years, in Bombay it was lower than in any of them except 1866, but in Madras it was somewhat greater than in any year since 1869.

70. As regards children also, the returns of 1874 shew a great improvement on other years. The admission rate stands nearly as it was in 1873—also a very favorable year—but the daily sick rate is lower and the mortality, 55·35, is very favorable when compared with 74·21 in 1871, 99·08 in 1872, and 60·29 in 1873. In Madras, as usual, the children suffered less than in either of the other Presidencies. The admissions there equalled 556 compared with 740 in Bombay and 918 in Bengal, the daily sick rate, only 18, compared with 31 in Bombay and 38 in Bengal, and the death-rate, 43·96, compared with 51·84 in Bombay and 61·56 in Bengal. The comparatively favorable results of the past year will appear from the fact that in Bengal during the 12 years 1860 to 1871 the mortality among soldiers' children was never under 71·36 per 1,000. In 5 out of the 12 it exceeded 90 per 1,000: in 1869 it reached a maximum of 145·22. In 1872 it was again very high—112·95; in 1873 it fell to 67·97. The ratio for 1874—61·56 is thus the lowest on record. In Madras the mortality among children from 1860 to 1873 varied from 37·36 in 1860 to 80·86 in 1866. In Bombay the death-rate of 1874—51·84—is more than that of 1873, when it was only 48·50. Excepting 1873, however, the mortality among children in Bombay is lower than that of any other year since 1860.

71. The causes of deaths among women and children, and the stations where they took place, are shewn in Tables IX, X, XIII and XIV of this series. They call for little remark. Throughout India the dangers connected with child-bearing account for the largest number of deaths—20 out of a total of 129. Phthisis pulmonalis comes next with 19, then malarious fevers with 17, dysentery with 14 and hepatitis with 12. There were only two deaths from cholera among the children: both occurred in Fort William. The chief diseases which proved fatal to them were diarrhœa, convulsions, teething, and atrophy.

72. As is always the case, by far the heaviest mortality was among the young children. In infants under 6 months of age it was 200·89 per 1,000, and from this maximum it gradually declines in the higher ages till between 7 and 16 years it is only 5·70. The details at different ages are shewn in the following statement in which the ratios for 1873 have also been added for comparison. The similarity between the results in the two years is remarkable.

Ratio of mortality at the different ages of the children of the three Presidencies, 1874.

AGES AS AT 1ST APRIL 1874.	ARMY OF BENGAL.			ARMY OF MADRAS.			ARMY OF BOMBAY.			ARMY OF INDIA.			1873, ARMY OF INDIA.		
	Strength.	Deaths.	Ratio per 1,000.	Strength.	Deaths.	Ratio per 1,000.	Strength.	Deaths.	Ratio per 1,000.	Strength.	Deaths.	Ratio per 1,000.	Strength.	Deaths.	Ratio per 1,000.
Under 6 months (5 months and under)	556	116	208.63	183	29	158.47	162	36	222.22	901	181	200.89	901	197	255.18
Between 6 months and 1 year...	599	102	170.28	241	34	141.08	192	32	166.66	1,032	168	162.79	1,032	172	191.32
" 12 " " 18 months	508	82	161.42	198	25	126.26	169	15	88.76	875	122	139.43	875	123	144.71
" 18 " " 2 years	461	32	69.41	211	12	56.87	152	10	65.79	824	54	65.53	824	57	72.24
" 2 years " 3 " "	672	34	50.59	307	19	61.89	234	10	42.74	1,213	63	51.94	1,213	62	52.10
" 3 " " 4 " "	627	19	30.30	287	7	24.39	217	1	4.61	1,131	27	23.87	1,131	30	26.74
" 4 " " 5 " "	561	10	17.83	252	4	15.87	226	7	30.97	1,039	21	20.21	1,039	19	19.19
" 5 " " 6 " "	528	13	24.62	256	.....	.....	201	2	9.95	985	15	15.23	985	12	13.00
" 6 " " 7 " "	467	6	12.85	203	.....	.....	158	2	12.66	828	10	12.08	828	9	11.51
" 7 " " 8 " "	413	3	.....	181	2	9.85	128	1	.....	722	6	.....	722	11	.....
" 8 " " 9 " "	362	3	.....	165	.....	.....	122	.....	.....	649	3	.....	649	4	.....
" 9 " " 10 " "	332	2	.....	134	.....	.....	110	.....	.....	576	5	.....	576	7	.....
" 10 " " 11 " "	279	1	.....	120	.....	.....	107	1	.....	505	2	.....	505	2	.....
" 11 " " 12 " "	218	.....	5.68	96	.....	2.95	65	1	10.22	380	1	5.70	380	4	9.27
" 12 " " 13 " "	172	.....	.....	73	.....	.....	46	1	.....	291	2	.....	291	3	.....
" 13 " " 14 " "	149	1	.....	62	.....	.....	41	.....	.....	252	1	.....	252	.....	.....
" 14 " " 15 " "	106	.....	.....	30	.....	.....	34	.....	.....	170	.....	.....	170	.....	.....
" 15 " " 16 " "	82	1	.....	27	.....	.....	31	.....	.....	140	1	.....	140	1	.....
	7,092	426	60.07	3,026	134	44.28	2,396	122	50.92	12,514	682	54.50	12,514	714	60.11

\* Excluding 30 still born &c., which are included in the Regimental Returns.  
 † In four cases the ages of the children who died were not ascertained.



74. During the seven years from 1868-1874, the proportion of deaths among European children in the Bengal Presidency has averaged 90·73 per annum. If the hill stations alone be taken, the ratio for the same period has averaged 66·13. The ratio of 90·73 for the Presidency as a whole includes the hill stations, and in this respect the comparison may be considered somewhat defective, but the number in the hills is too small materially to affect the general result. If the plains and hills be altogether separated, the mortality stands at 94·63 for the plains and 66·13 for the hills. There is thus a considerable difference in favor of the hills, but the mortality among children in the hills is still high. In attempting to estimate the benefits which soldiers' children would derive from being sent to hill stations, the high death-rate among them in the plains must not be contrasted with the low ratio among children in the Lawrence Asylums in the hills. The two classes cannot be compared, for the Lawrence Asylums contain very few infants and others of tender age, and it is among them, as already shown, that the death-rate is by far the heaviest. Among soldiers' children throughout the Presidency, of seven years of age and upwards, a class which corresponds with the inmates of the Lawrence Asylums, the death-rate is only from 8 to 11 per 1,000. While, therefore, the mortality among soldiers' children would, no doubt, be reduced if they were quartered in the hills, the reduction would be by no means so great as seems to be often supposed. A very high death-rate among young children is not peculiar to India. In England among children under five years of age the average annual death-rate for the 34 years (1838-71) was 62·7 per 1,000 for females and 72·6 for males.\* Between five and ten years of age it falls for each class to only 8·7 and 8·5 per 1,000. In India during 1874 the mortality among children under five years of age was in Bengal 99·15; in Madras 77·43; in Bombay 82·10, or an average of 90·66 for the army as a whole. In the eight principal towns of Scotland during the year 1872, the ratio of deaths among children under five years of age was as follows:—†

Glasgow ...	...	...	...	93·2
Edinburgh...	...	...	...	69·6
Dundee ...	...	...	...	92·2
Aberdeen ...	...	...	...	58·8
Greenock ...	...	...	...	83·6
Paisley ...	...	...	...	86·5
Leith ...	...	...	...	73·8
Perth ...	...	...	...	44·2

75. In former Reports two statements have been given to show the annual mortality among officers in this Presidency, one prepared in the office of the Adjutant General, and the other by Dr. Bryden. But the returns which reach the Statistical branch of this office are in respect to officers imperfect. They are merely regimental returns which take no account of officers on the staff, of the Engineers, or of the Medical Service. The statement furnished by the Adjutant General will therefore for the future alone be given. For 1874 it shows that out of a total of 1,972 officers of Her Majesty's British service, 27 died, or a proportion of 13·69 per 1,000, and of 1,905 belonging to the Indian service, the deaths numbered 35, or 18·89 per 1,000.

\* Report of Registrar General for England for 1872, p. XIX.  
 † Ditto ditto for Scotland for 1872, p. 17.



has been a great improvement in registration. In this province small fines have been found sufficient to enforce compliance. Military cantonments ought not to be behind in sanitary measures, but rather to offer examples for the native towns to follow.

77. During the financial year 1874-75, over £706,000 were expended on works connected with the health or comfort of the troops in the Bengal Presidency, chiefly on new buildings and on additions or repairs to those already in existence. Among the latter may be included such improvements as the provision of sunshades to barracks, clearing away portions of bazaars, removing defects in drainage, and adding pumps and filter beds to wells. At Peshawar the new water works are reported to be in progress. Water from the Calcutta municipal works is now supplied for the use of the troops at Barrackpore. As regards minor matters, references and orders on the sanitary questions connected with the health of the troops have been numerous. Among these may be mentioned the use of thermantidotes in place of tatties for cooling barracks and hospitals at Peshawar; the permanent adoption of a modified scale of diet in all military prisons in India; the sanction of double allowance of straw to such of the sick as have not doolies to sleep in; the supply of Macnamara filters in quarters for which they had not been previously allowed; the experimental trial of means for improving these filters, especially with a view to prevent the rapid corrosion which certain waters cause in them; the introduction of Crowley's improved conservancy cart, and the trial at Naini Tal and Ranikhet of coir in lieu of straw for stuffing mattresses and pillows in use with iron trestle cots. Questions connected with the raising and distribution of water by better means than those formerly in use, have also engaged much attention. Rules for the proper management of filtering tanks in military cantonments have been issued, and a standard plan of filter tank is under preparation. Metal buckets in place of "mussacks" have also been allowed for carrying water from the filter tanks to the barracks.

78. Much attention has of late been directed to the cultivation of *Eucalyptus Globulus* *lyptus globulus*, or Australian blue gum tree, as a means of counteracting malarious influences in cantonments. The results of the attempts hitherto made to grow this tree in the plains of India so far are not encouraging. In the Lower Provinces of Bengal it seems to thrive very well as a seedling, but after eighteen months it becomes sickly and generally dies before the third year. Even in Darjeeling it lives only for a few years. In the North-Western Provinces it has done well at Ranikhet, but Chakrata was found too cold for it. In the Saharanpur gardens some have been growing for upwards of twelve years, and a few seem to have thriven, but many were killed by inundation. They appear altogether unsuited for swampy land, and unable to resist the hot winds. Further trials, however, are now to be made, and the stations of Meerut, Roorkee, Sialkot, Jhelum, Rawul Pindi, Meean Meer and Peshawar have been selected for the purpose.

79. The replies of the Army Sanitary Commission to questions which I laid before them during my recent visit to England, have been circulated for general information. They relate to many matters of great sanitary importance—the diffusion of cholera and the practical measures to be taken to check it, the statistics of venereal diseases and drunkenness, meteorological observations in their bearing on disease, the drainage and water-supply of Indian stations, and the future organization of a health department for India.

80. Since last report a change has been made in the position which Drs. Lewis and Cunningham occupy. They were at first specially selected to conduct an enquiry into cholera, and the reports which they have submitted on this subject afford evidence of much careful investigation, and have attracted much attention. But in the course of this enquiry opportunities have been taken for the study of other tropical diseases, and very valuable results have been obtained in regard to them. "It was considered, therefore," to quote the orders of the Government\* "that without diverting

Army Sanitary Commission's replies to questions on sanitary subjects.

Drs. Lewis and Cunningham appointed Special Assistants to the Sanitary Commissioner with the Government of India.

their attention from the cholera enquiry, which on no account is to be relaxed, the services of these two highly-trained scientific officers would be very useful in the investigation of special diseases, such as the Burdwan fever, Delhi sores, leprosy, and the like, to enquire into which special officers have either been appointed, or might be hereafter required, and it has been determined to employ them in the investigation of the Burdwan fever and of Delhi sores whenever an opportunity offers. It had also been arranged that they should examine and report on famine fever, had this shown itself in the famine tracts. The investigation of other important diseases may be conveniently carried on along with the cholera investigation in different parts of the country, and the facts regarding them must be considered in their bearing on the history of cholera. Further, it is desirable that the examination of the difficult problems concerning disease should be entrusted to those who have already proved themselves well fitted to undertake it, rather than to untried hands. Some saving of expense would also thus be secured. Under the orders of the Government in the Financial Department, No. 7354, dated the 19th December 1874, Drs. Lewis and Cunningham have accordingly been transferred from the Military to the Home Department, as Special Assistants to the Sanitary Commissioner with the Government of India, in order that they may undertake such special enquiries into disease as the Government may decide to make."

81. The advantages of this arrangement have already become fully apparent. Cholera has continued to form the main subject of their investigations. The opportunities offered by the General Hospital and the shipping in Calcutta have afforded constant means of observation, and special scientific enquiries have also been instituted on the circumstances connected with this disease. Among these may be cited the influences of changes in soil, and also the supposed epidemic of cholera among cats at Delhi. This last matter belongs properly to the records of the current year, and will be more fully noticed in the report for 1875, but it may be mentioned that while cholera was prevalent at Delhi, there was great mortality among the cats. Hundreds of them are reported to have died with symptoms which were ascribed to cholera, and it was further believed that this disease had been directly induced in some by giving them food contaminated with cholera discharges. But from an examination of several of those that died, Drs. Lewis and Cunningham have come to the conclusion that the disease from which they suffered was not cholera. But their work has not been confined to cholera. Investigations have also been carried on as to the circumstances under which organisms of various kinds occur in the tissues and organs of animals and on the various forms of skin-diseases, especially those which are supposed to be dependent on parasites. The questions which formed subjects of report in previous years have been further examined as occasion offered. Specimens of the resting spores of the opium blight, which had not been detected when Dr. Cunningham's paper contained in last annual report was written, have since been discovered by him, and the observations made by Dr. Lewis on the relation of the haematozoa to chyluria have been abundantly confirmed by additional evidence. Among other matters relating to the public health may be mentioned the presence of entozoa in species of fish commonly brought into the Calcutta market. The information on this subject which was supplied to the municipal authorities was valuable in allaying public apprehension and in preventing the adoption of measures which might otherwise have been taken to the serious interference of trade.

82. Drs. Lewis and Cunningham's report on the disease which is known under the name of "Madura foot" which appears to be endemic in some parts of this country, and which, in consequence of the belief that it was due to a fungus, has been also called Mycetoma, forms Appendix A of this report. To this reference must be made for a full account of all their very careful and painstaking experiments and examinations, but the general conclusions they have formed may here be summarized. The disease, it appears, is found in two forms: the pale and the dark. The lesions in both have much in common, but the morbid products are unlike. In the pale variety they are chiefly fatty material in varied pathological forms; in the other variety the fatty matters

Their continued researches on cholera and other diseases.

Their report on fungus foot.



are much less abundant, and the dark material which is characteristic of it is almost entirely free from fat. But the most important conclusion at which they have arrived is, that the various bodies which have been regarded as different stages in the development of a peculiar fungus will bear no such interpretation, and that the Madura disease cannot be attributed, as has hitherto been believed, to a fungoid origin. The question is one of great importance, as the opinions which have been to a large extent accepted as to the fungoid origin of this disease have formed the basis of generalizations as to the supposed cause of other diseases.

83. Their paper on "The Soil in its relation to Disease" which forms Appendix B, and to which reference has been already made, represents a great amount of careful and patient research. Although the results are not so definite as could be wished, it is a matter of no small importance in the investigation of the causes of cholera to find that in Calcutta its prevalence is associated with marked characteristics in the condition of the soil. Their observations showing the great variations in soil changes which are to be found at places separated by only a very short space, are of great interest, and point more than ever to the importance of discovering those local conditions which are associated with the presence of disease, and especially of cholera, and which, judging from results, seem often so strangely confined within a very limited area. As a contribution to the investigation of local disease causes which are not apparent to the senses, and as opening the way for more extended observations of a like character, Drs. Lewis and Cunningham's researches on this subject have a special value.

STATEMENT I.

Statement showing the Deaths registered from CHOLERA in Bengal Proper during each month for 1874.

DISTRICTS.	Population according to census of 1872.	NUMBER OF CHOLERA DEATHS REGISTERED IN EACH MONTH.												Total deaths of the year.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
24-Pergunnahs	1,951,137	96	143	419	976	659	325	111	74	27	14	69	354	3,267
Calcutta	447,991	69	182	193	259	217	86	42	39	24	29	67	131	1,329
Suburbs of Calcutta	258,910	96	299	510	406	264	169	85	67	51	46	67	128	2,188
Howrah	731,057	86	163	122	98	94	87	76	68	78	54	86	131	1,143
Serampore	393,864	32	20	32	31	76	23	13	5	10	5	27	22	296
Hooghly	363,635	10	95	119	145	85	70	21	4	15	6	5	1	576
Nudda	1,812,795	99	333	828	1,253	807	169	14	7	15	78	743	599	4,876
Jessore	2,075,021	110	28	140	359	356	123	58	11	6	86	762	779	2,816
Burdwan	2,034,745	4	95	159	534	1,108	755	198	70	3	...	19	37	2,982
Bancoorah	526,772	7	4	38	59	248	294	194	52	23	...	...	...	912
Beerbhoom	605,921	11	131	427	764	1,235	1,123	108	45	11	21	63	57	3,996
Midnapore	2,540,963	66	213	290	320	292	523	63	46	19	9	56	95	1,962
Daoca	1,552,993	327	75	122	235	111	27	7	4	3	79	537	819	2,346
Furreedpore	1,515,821	137	73	188	422	367	37	9	29	1	112	334	352	2,061
Backergunge	1,874,291	94	63	169	422	273	106	47	29	15	21	33	158	1,412
Mymensing	2,349,217	224	188	174	173	240	285	13	17	13	51	651	826	2,255
Darjeeling	94,712	2	1	1	1	...	...	4	...	3	7	3	8	39
Julpigoree	418,665	...	...	...	...	9	19	8	21	...	...	2	1	60
Gowalparah	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Moorshedabad	1,353,626	17	2	112	483	975	633	131	21	20	178	589	283	3,444
Dinapore	1,591,924	51	...	12	35	103	103	84	1	14	12	16	5	436
Maldah	676,426	3	...	6	4	146	109	3	3	...	1	44	58	377
Rajshahye	1,310,729	98	37	116	605	852	88	11	14	2	346	339	112	2,629
Rungpore	2,149,972	...	2	11	108	157	69	116	204	49	73	117	379	1,285
Bogra	689,467	1	1	38	49	59	29	...	...	24	173	599	216	1,141
Pubna	1,211,594	101	29	44	102	77	15	...	2	...	262	731	169	1,462
Purneah	1,714,795	...	1	...	4	11	39	1	...	7	2	71	21	148
Chittagong	1,127,492	196	139	189	212	662	90	20	5	53	1	4	15	1,577
Noakhally	713,934	56	26	10	16	77	4	5	...	1	5	61	79	349
Tipperah	1,533,931	198	49	22	44	60	6	...	2	2	9	177	144	794
Cachar	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sylhet	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Durrung	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nowgong	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sebsaugor	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kamroop	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Luckimpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jynteah Hills	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Balasure	779,232	2	36	53	59	100	162	108	61	23	8	...	25	636
Cuttack	1,494,787	4	2	5	63	391	164	214	174	46	25	22	17	1,127
Poorce	769,674	3	4	...	2	10	44	319	251	48	11	...	2	694
Rajmehal } Deoghur }	1,259,287	1	2	10	27	171	189	196	65	129	95	41	4	921
Maunbhoom	995,570	3	11	29	33	494	676	273	85	17	6	...	...	1,587
Hazarebagh	771,875	...	...	...	6	4	46	50	69	13	15	8	...	211
Ranchee	1,237,123	...	2	1	2	20	12	10	37	5	3	13	1	106
Chyebassa	410,821	1	4	24	3	12	53	27	7	6	3	4	1	145
Monghyr	1,812,986	4	...	...	7	69	223	86	134	40	41	106	...	719
Bhaugulpore	1,826,290	2	...	1	...	27	47	273	409	147	146	71	...	1,123
Gya	1,949,750	1	3	1	3	...	5	87	82	82	11	9	1	285
Patna	1,559,638	4	5	10	12	40	39	113	75	82	42	27	8	455
Shahabad	1,723,974	15	1	6	...	1	...	2	10	...	29	7	...	62
Sarun	2,963,869	1	1	2	4	7	19	52	184	128	56	29	12	486
Tirhoot	4,384,706	11	...	4	26	8	2	295	62	147	53	3	14	637
Chumparun	1,440,815	...	...	...	...	25	76	19	175	112	16	6	...	429

\* No Statistics have been received from Assam.







## STATEMENT VIII.

Statement showing the Deaths from CHOLERA registered in the different Districts of the Madras Presidency during each month of 1874.

DISTRICTS.	Population according to census of 1871.	NUMBER OF CHOLERA DEATHS REGISTERED IN EACH MONTH.												Total deaths of the year.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Ganjam	1,520,088	27	27	7	3	11	9	50	95	21	...	...	...	243
Vizagapatam	2,153,199	...	...	...	...	...	...	...	...	...	...	...	...	...
Godavery	1,592,930	...	...	...	...	...	...	...	...	...	...	...	...	...
Kristna	1,452,374	...	...	...	...	...	...	...	...	...	...	...	...	...
Nellore	1,376,811	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras	397,552	...	...	...	...	...	...	...	...	...	...	...	...	...
Chingleput	938,184	...	...	...	...	...	...	...	...	...	...	...	...	...
South Arcot	1,755,817	...	1	3	1	3	...	3	2	2	2	1	1	19
Trichinopoly	1,209,448	...	...	...	...	...	...	...	...	...	...	...	...	...
Tanjore	1,973,781	5	...	3	2	2	3	3	5	2	1	3	4	33
Madura	2,266,615	...	...	...	...	...	...	...	...	...	...	...	...	...
Tinnevely	1,693,959	...	...	...	...	...	...	...	...	...	...	...	...	...
Kurnool	959,640	...	...	...	...	...	...	...	...	...	...	...	...	...
Cuddapah	1,351,194	...	...	...	...	...	...	...	...	...	...	...	...	...
Bellary	1,608,006	...	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot	2,015,278	...	1	...	...	...	...	...	...	...	...	...	...	1
Salem	1,968,995	...	...	...	...	...	...	...	...	...	...	...	...	...
Coimbatore	1,763,374	...	...	...	...	...	...	...	...	...	...	...	12	12
Neilgherries	49,501	...	...	...	...	...	...	...	...	...	...	...	...	...
South Canara	918,302	...	...	...	...	...	12	...	...	...	...	...	...	12
Malabar	2,261,250	...	...	...	6	1	3	1	1	...	...	1	...	13

## STATEMENT IX.

Statement of Deaths from CHOLERA recorded in the different Districts of British Burmah during each month of 1874.

DISTRICTS.	Population according to census of 1872.	NUMBER OF DEATHS FROM CHOLERA REGISTERED IN EACH MONTH.												Total deaths of the year.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Akyab	276,671	...	...	...	...	25	6	41	...	...	...	...	7	79
Ramree	144,177	...	...	...	...	...	...	...	...	...	...	...	...	...
Sandoway	54,725	...	...	1	...	...	...	...	...	...	...	...	...	1
Rangoon	431,069	112	53	3	17	4	1	7	3	1	...	1	...	207
Bassein	322,689	65	53	4	7	2	1	...	...	...	...	3	...	135
Henzada	476,612	19	16	15	37	...	...	...	...	...	...	...	...	87
Prome	274,872	...	...	...	...	5	...	...	...	...	...	...	...	5
Thayetmyo	156,816	...	...	...	4	...	...	...	...	3	...	...	...	7
Amherst	266,057	37	24	50	43	27	5	...	...	...	1	...	...	187
Tavoy	71,827	59	14	1	...	...	...	...	...	...	...	...	...	74
Mergui	47,192	...	...	...	...	17	10	9	...	...	1	3	...	46
Toungboe	86,166	7	...	...	...	...	...	...	...	...	...	...	...	7
Shwegyeen	129,485	59	18	14	4	10	15	5	...	...	...	...	...	125

## STATEMENT X.

Statement showing the Deaths from CHOLERA registered in Rajpootana, Hyderabad and Central India during 1874.

NATIVE STATES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Rajpootana*	...	...	...	...	...	...	...	...	...	...	...	...	...
West Malwa	...	1†	...	...	...	3‡	...	...	...	...	...	...	4
Baghelkhand	...	...	...	...	...	...	...	...	...	...	...	...	...
Indore	...	...	...	...	...	...	...	...	...	...	...	...	...
Gunah	...	...	...	...	...	...	...	...	...	...	...	...	...
Bundelkhand	...	...	...	...	...	...	...	...	...	...	...	...	...
Bhopal	...	...	...	...	...	...	...	...	...	...	...	...	...
Bhopawar	...	...	...	...	...	...	...	...	...	...	...	...	...
Lingsugur	...	...	...	...	...	...	...	...	...	...	...	...	...
Hingoli	...	...	...	...	...	...	...	...	...	...	...	...	...
Mominabad	...	...	...	...	...	...	...	...	...	...	...	...	...
Bolarum	...	...	...	...	...	...	...	...	...	...	...	...	...
Hyderabad Residency	...	...	...	...	...	...	...	...	...	...	...	...	...
Jalna	...	...	...	...	...	...	...	...	...	...	...	...	...
Aurungabad	...	...	...	...	...	...	...	...	...	...	...	...	...
Elichpur	...	...	...	...	...	...	...	...	...	...	...	...	...

\* Four cases of cholera occurred in Rajpootana during the year; 3 at Ajmere,—one on the 11th and 2 on the 12th May; and 1 at Anadra, two miles from Aboe, on the 14th idem.

† This was at Pirwa in Tonk on the 2nd.

‡ These occurred at Mhow in Silland on the 10th.



## SECTION II.

## NATIVE TROOPS.

84. Since 1864 the sickness and mortality among Native troops in this Presidency have been detailed in the tables appended to the Annual Sanitary Reports; and Dr. Bryden has now prepared a series of statements\* shewing the results during the ten-year period, from 1864 to 1873. This series has been framed on the same principles as that for European troops for the ten years, 1860—69, already published, and forms an important addition to the very valuable statistical work, for which we are indebted to Dr. Bryden.

85. Taking the regular Native army as a whole, the results of 1874 as compared with those of previous years are decidedly favourable. The admissions into hospital were 1,266, the daily sick-rate 41, and the mortality 10·94. During the ten-year period, the average ratios were 1,391, 43, and 14·25. In only one of these years was sickness less prevalent. In 1868 the admissions equalled 1,175, and the daily sick-rate 37. In the others, admissions vary from 1,287 to 1,501, and the daily sick from 41 to 47. The mortality in 1874, 10·94, is a fraction higher than that of 1868, when it was 10·89; but it is lower than that of any one of the other nine years, during which it fluctuated between 11·98 and 17·29. If deaths occurring among men when absent from their regiments be included, the total mortality for 1874 is raised to 13·50 per 1,000; but this is lower than the total mortality of any one of the preceding ten years, during which it was never under 15 and rose as high as 20 per 1,000.

86. Besides the regular Native army, which numbered nearly 39,000 men on an average present with their regiments, there are three other smaller bodies of Native troops to be taken into account,—the Central India regiments, the Punjab Frontier Field Force, and the Madras regiments serving in Bengal. The degree in which they suffered from the principal diseases varied greatly, as may be seen from the following statement :—

No.	DISEASES.	Regular Native Army.	Central India regiments.	Punjab Frontier Field Force.	Madras regiments serving in Bengal.
		Admissions per 1,000 of average strength.			
1	Fevers ... ..	644	351	1,023	701
2	Wounds and accidents ... ..	129	107	142	67
3	Abscess and ulcer ... ..	93	82	128	60
4	Dysentery ... ..	61	24	56	11
5	Rheumatism ... ..	57	54	62	52
6	Respiratory diseases ... ..	52	39	80	21
7	Veneral diseases ... ..	43	24	19	21
8	Diarrhœa ... ..	35	21	33	16
9	Eye diseases ... ..	25	72	23	37
10	Spleen disease ... ..	11	6	15	2
	Total due to these ten causes ... ..	1,150	780	1,581	988
	Total from all causes ... ..	1,266	887	1,712	1,073

In all four bodies of men the same ten varieties of sickness caused nearly the whole of the admissions into hospital, and the order in which they come is

\* Not yet printed.



singularly uniform. Among the points deserving of notice are the small proportion of cases of fever and the large proportion of eye diseases in the Central India regiments, and the prevalence of fever and of respiratory diseases in the Punjab Frontier Field Force.

Chief causes of mortality.

87. If the more important causes of mortality in the different sections of the Native army be compared, they will be found to stand thus—

No.	DISEASES.	Regular Native Army.	Central India Regiments.	Punjab Frontier Field Force.	Madras Regiments serving in Bengal.
		Died per 1,000 of average strength.			
1	Respiratory diseases ... ..	2.32	2.62	6.30	.87
2	Fevers ... ..	2.19	2.14	1.73	2.61
3	Cholera ... ..	1.11	...	...	...
4	Dysentery ... ..	.80	.48	.51	.29
5	Phthisis pulmonalis ... ..	.67	.48	.71	.29
6	Diarrhoea ... ..	.64	...	.20	.87
7	Atrophy and anaemia ... ..	.64	.24	.10	.87
8	Small-pox ... ..	.31	...	.20	...
9	Wounds and accidents ... ..	.21	.24	...	...
10	Heart disease... ..	.15	.24	.20	.29
	Total due to these ten causes ...	9.04	6.44	9.95	6.09
	Total due to all causes ... ..	10.94	9.77	12.28	8.70

In the regular Native army the diseases according to the extent of mortality which they occasioned stand in almost the same order as they did in 1873—but the proportion due to each is in every case reduced. Respiratory diseases have fallen from 3.15 to 2.32; fevers from 2.92 to 2.19; cholera from 1.12 to 1.11, and so on in every instance. The only exception is the appearance of wounds and accidents in the list for 1874, with the trifling mortality of .21 per 1,000 to take the place of spleen diseases which furnished this same small ratio in 1873. In the Central India regiments hepatitis caused three deaths, or a proportion of .71 per 1,000, which does not appear in the statement. In the Punjab Frontier Field Force the mortality due to respiratory diseases, 6.30 per 1,000, was very heavy. Omitting fevers from which the Madras regiments suffered much, the mortality under each head was trifling, and the total ratio is less than in any of the other sections of the Native army.

88. The first group of regiments of the regular Native army includes those quartered in Lower Bengal and Assam. The sickness and mortality among them were both above the average; the admissions equalled 1,530 per 1,000, the daily sick 55, and the deaths 19.10. In addition to fevers, dysentery and diarrhoea contributed largely to the sickness. The mortality was chiefly due to these, and also to cholera. The stations which compose this group are sixteen in number. Looking at the details for each, which are given in Tables XII and XIII, it will be seen that in many of them sickness was very prevalent, especially at Barrackpore, Dibrugarh, and Tezpur, where the cases equalled respectively 2,102, 2,085, and 3,031. The excess at these places represents in the main an excessive prevalence of fevers. Under this head alone, at Tezpur, the admissions were in the ratio of 1568 per 1,000. In several of these places the death-rate was heavy, especially at Sylhet, Shillong, Gauhati, and Nowgong—a result due in large measure to cholera which was prevalent in Assam. As a whole, the results of 1874 in this group accord very much with the averages of the ten-year period which are 1,574 for admissions, 54 for daily sick, and 20.99 for deaths.

Results in different groups: Bengal Proper and Assam.

89. In the Gangetic Valley and Oudh, which form the second group, the statistics of 1874 are very much more favourable than the average of the preceding ten years. The admissions were 880 compared with 1,136, the daily sick 35 compared with 38, and the deaths 5·51 compared with 9·83. In this group during 1874 the Native soldiers indeed preserved a high standard of health. There was but one case of cholera out of an average of 6,357 men, and that was not fatal: fevers were not prevalent, nor, with the exception of respiratory affections, did any single disease contribute one death per 1,000. The twelve stations in this group shew considerable variations. The admission-rate, which was only 592 at Cawnpore, was 1,544 at Fatehghurh. At Benares the mortality was 11·08, while at Dinapore and Gorakhpur it was little over 3. As a whole, the results in this group were very favourable, more so than in any one of the previous ten years.

90. In Meerut and Rohilcund during the ten-year period the cases of sickness averaged 1,036, the daily sick 33, and the deaths 10·97 per 1,000. During 1874 the ratios were 1,091, 34, and 8·78. This comparison is not unfavorable to 1874, but individual years, such as 1868, have yielded more favourable results. In three of the eight stations which make up this group, sickness was very prevalent; at Shahjahanpur the admission-rate was 1,188: at Delhi 1,480, and at Meerut 2,284. At the two last fevers were the great cause, but at the first it was due in a considerable measure to venereal diseases, which caused 172 admissions per 1,000; a very unusual proportion among Native troops. From Table XII, however, it will be seen that even this high ratio was exceeded at a few other places, and especially at Benares, where it equalled 326. The average for the army, as a whole, was only 43.

91. In the seven cantonments which make up the fourth group, there was no excessive sickness, while on the other hand in none of them were the ratios of admissions so low as in many of the stations of other groups. Owing to prevalence of fever the admissions at Morar reached a maximum of 1,373 per 1,000. Omitting Lalitpur, where among a very small body of men one single death gives a mortality of 13·70 per 1,000, Agra shews the highest ratio of mortality, 11·71. At Deolee and Nowgong there were no deaths. Taken as a whole, the admissions into hospital in this group equalled 1,239, the daily sick 43, and the deaths 8·43. During the ten-year period the ratios averaged 1,704, 53, and 9·60; so that compared with these, the results of 1874 have been very favourable. Looking at the individual years of this ten-year period they are still more satisfactory. In no one of them was sickness so little prevalent; in six the mortality was higher than in 1874.

92. Among the regular Native troops in the Punjab, which numbered on an average 15,405 during the year, the cases of sickness were in the proportion of 1,362, the daily sick 39, and the deaths 9·54 per 1,000. These figures also are much more favourable than those of the ten-year period, which yields an average of 1,430 for admissions, 40 for daily sick, and 13·84 for deaths; but individual years of this period shewed less sickness and mortality. Of these, the most notable was 1866, in which, with an admission-rate of 1,299, the mortality was only 5·84—a very marked contrast to 1869, in which the admissions equalled 1,724 and the deaths exceeded 20 per 1,000. The mortality from respiratory diseases in 1874, although high, 3·57 per 1,000, is little over the average of the ten years, 3·23, and much under that of either 1870 or 1871, in which it amounted to 5·75 and 7·29 per 1,000. At several of the stations of this group the Native soldiers suffered much from fevers, especially at Ferozepur, Mooltan, and Peshawar, where the cases of sickness under this head alone were in the proportion of 1,297, 1,538, and 1,390 per 1,000. At none of them was the mortality heavy. At Jullundur, out of an average of 557 men, there was not a single death.

93. In the Punjab Frontier Field Force sickness was very prevalent during 1874. The admission-rate was 1,712, the daily sick-rate 47, and the death-rate 12·28. Neither Murdan nor Abbottabad shews any great prevalence of sickness, but at the other five stations the cases varied from 1,718 at Kohat to 2,207 at Dera Ghazee Khan, due in the main to fevers which alone at the last-named place caused nearly

1,600 admissions per 1,000. More than one-half of the deaths was due to respiratory affections, which caused a mortality of 6·30 per 1,000. On reference to the sixth section of Table XVI, it will be seen how different regiments and stations suffered from these diseases. In the 5th Punjab Infantry at Dera Ghazee Khan, 14 out of the total of 17 deaths were ascribed to pneumonia and pleurisy; in the 2nd Punjab Infantry at the same station they account for only one out of four. All the five deaths in the 6th Punjab Infantry at Dera Ismael Khan are entered under this head. The ten-year tables shew that the mortality due to respiratory diseases in the Punjab Frontier Field Force has increased considerably of late years. Between 1864 and 1869 the ratio varied from 3·71 to 1·51. With the exception of 1864, it was always under 2 per 1,000. In 1870 it was 5·00; in 1871, 7·09; in 1872, 5·49; in 1873 4·42; and in 1874, as already stated, it reached the maximum of 6·30. For the ten-year period the statistics are not satisfactory. They shew an annual average of 1,576 admissions, of 44 daily sick, and of 14·47 deaths per 1,000.

94. Under the orders of the Government of the Punjab the great sickness and mortality among the men of the Punjab Frontier Field Force was made the subject of special inquiry by the Sanitary Commissioner of that Province. The defects in each station have been reported on, and attention has been drawn not only to them but also to what Dr. DeRenzy believes to be one common and serious cause of sickness at all of them—the heavy night duty. Further reference to this report will be deferred until the orders of the Punjab Government upon it have been issued.

Special inquiry into the great sickness and mortality in the Punjab Frontier Field Force.

## SECTION III.

## JAILS.

95. The statistics of the jails for 1874 shew that there has been a marked increase in the number of prisoners. The number of persons in confinement averaged 72,060, a large excess over 67,037, the number in 1873, which again was much above that of previous years. Looking back on the figures of the past sixteen years, it appears that the number of prisoners in the Bengal Presidency in 1859 averaged only 46,733. With some fluctuations the number gradually rose to nearly 62,000 in 1869. The next marked advance was in 1873 when, as already stated, it reached 67,037, but the average for 1874 shews an increase of 5,023 over that of 1873. This rise has not been confined to any one part of the country. It is shewn in each group of jails, but more particularly in the second, the fourth, and the sixth.

96. Although both sickness and mortality have been less in previous years, the general results are not unfavorable when compared with those hitherto attained. The admissions into hospital, 1,027 per 1,000, were slightly less than the proportion for 1873, but somewhat higher than those of any other year since 1867. Between 1867 and 1874 the ratio has varied from 1,079 in 1867 to 927 in 1871. During the eight years 1859 to 1866, the proportion was never under 1,133, and in 1860 equalled 1,491. A similar difference is to be observed both in the daily sick and also in the mortality during these two eight-year periods. In 1874 the sick rate was 34, a slight increase on that of any one of the other years since 1866, during which the minimum was 29 and the highest proportion next to that of 1874 was 32. Between 1859 and 1866, one year, 1866, shews a daily sick rate of only 33, but in the others it varied from 35 to 57. The death-rate of 1874, 39·90 per 1,000, is higher than that of 1867, 38·32, of 1868, 30·28 and of 1871, 34·52, but lower than that of any of the other years. During the last 8 years the death-rate has ranged between 30·28 and 43·58. In the previous eight years the range was between a minimum of 57·66 and a maximum of 110·81. While, therefore, the results of 1874 shew higher proportions both of sickness and mortality than certain other years, and such fluctuations are to be expected, the general history of the prisoners in the Bengal Presidency continues to evidence in a most marked manner the great advantages that are derived from improved sanitary conditions.

97. What were the chief forms of disease from which the prisoners suffered in 1874? What diseases mainly contributed to the mortality? How were these diseases distributed in the several provinces and in individual jails? And what local insanitary conditions existed with which any excessive sickness or mortality may be associated, and to which is it to be ascribed? The first three of these questions are very fully answered in Dr. Bryden's annual tables. In regard to them it will suffice to draw attention to the main points. The last, and, in a practical point of view, the most important question will be answered so far as the reports of the Medical Officers afford the requisite materials.

98. Taking the Presidency as a whole, the diseases in the order in which the prisoners chiefly suffered from them stand thus: it will be useful at the same time to compare the

Large increase in the number of prisoners.

Results comparatively favorable, and amply evidence the value of sanitary improvements.

Points deserving attention.

Chief forms of sickness.

ratios for 1874 under each head with those of the preceding year and of 1863 which may be taken as a fair average sample of the former period:—

No.	DISEASES.	ADMITTED PER 1,000 OF AVERAGE STRENGTH.		
		1863.	1873.	1874.
1	Fevers ... ..	557	450	445
2	Abscess and ulcer ... ..	116	110	106
3	Dysentery ... ..	282	109	101
4	Diarrhœa ... ..		107	96
5	Respiratory diseases ... ..	34	44	45
6	Wounds and accidents ... ..	36	42	44
7	Rheumatism ... ..	27	16	19
8	Venereal diseases ... ..	*	13	15
9	Atrophy and anœmia ... ..	15	19	14
10	Eye diseases ... ..	22	13	12
	Total ... ..	1,089	923	897
	Total admission-rate of the year ... ..	1,368	1,042	1,027

\* Not shown separately.

The figures for 1874 and 1873 run together very closely. At first sight they may not afford any remarkable contrast to those of 1863, but it is to be remembered that a diminution of over 300 per 1,000 really represents a very large reduction of sickness.

99. But the difference is more striking if the mortality of these years be placed side by side as they are in the following statement:—

No.	DISEASES.	DIED PER 1,000 OF STRENGTH.		
		1863.	1873.	1874.
1	Dysentery and diarrhœa ... ..	36·53	16·63	16·38
2	Respiratory diseases ... ..	3·63	7·00	6·02
3	Fevers ... ..	17·40	5·47	3·72
4	Phthisis pulmonalis ... ..	2·08	2·33	2·51
5	Cholera ... ..	14·33	2·97	2·48
6	Atrophy and anœmia ... ..	3·65	1·94	2·37
7	Dropsy ... ..	1·60	·55	·85
8	Wounds and accidents ... ..	·52	·73	·69
9	Spleen disease ... ..	·34	·33	·37
10	Apoplexy ... ..	·40	·81	·31
	Total ... ..	80·48	38·76	35·70
	Total death-rate of the year ... ..	85·54	43·08	39·90

In 1863 the deaths from fevers were very high on account of the prevalence of the jail fever which caused so much mortality among the prisoners, but of which, with very few exceptions, there has been no recurrence of late years. The marked diminution in the deaths from dysentery and diarrhœa is alone evidence of the great improvement which has taken place.

100. The comparative incidence of the sickness and mortality in the different groups and the diseases to which these have been due are very clearly and conveniently shewn in Table VIII. Each group will be considered separately in subsequent paragraphs; but meantime, the prevalence of the chief diseases and the mortality which these occasioned in them may be briefly com-

General distribution of the sickness and mortality.

pared. Under the head of fevers, considerable differences are observed. The admission-rate, which was only 296 in the Gangetic Provinces, was 615 in the Punjab. The deaths from this cause which equalled 6·70 per 1,000 in the Punjab were only ·80 per 1,000 in the Agra and Central India group. Even more marked is the difference in the distribution of bowel complaints. As regards them, the Punjab shews a minimum of 82 cases and 5·88 deaths per 1000, while in Lower Bengal the cases equalled 400 per 1,000, and the deaths 20·57. With a much smaller admission-rate the mortality under this head in other groups was very high, varying from 12·78 in Agra and Central India to 19·70 in the Gangetic Provinces and Oudh. Respiratory affections again attained their maximum of 77 cases and 10·81 deaths per 1,000 in the Punjab, and their minimum of 29 cases and 3·57 deaths per 1000 in the second group. Cholera, as has already been remarked, was striking chiefly by its complete absence in Upper and Central India and by its comparative dormancy in the Lower and Gangetic Provinces.

101. In the first group which comprises the jails of Lower Bengal and Assam, sickness and mortality were both greater than they have been for some years. The admission rate, 1412 per 1,000, is higher than that of any year since 1866, when it equalled 1,616. In the intervening years it has fluctuated from 1,408 in 1867 to 1178 in 1870. Between 1859 and 1865 the returns were much higher, varying from 1,704 in 1863 to 1,636 in 1864. The daily sick-rate, 39 per 1,000, is a considerable advance on 36, the ratio for 1873, but compares favorably with the average, and especially with the ratios of the years immediately following 1859, in which they were never under 56 and reached as high as 61. As respects the mortality again, the ratio for 1874, 52·24, is higher than it has been since 1868, the intermediate years shewing death-rates varying from a minimum of 40·42 in 1871 to a maximum of 50·14 in 1869. Between 1859 and 1867 the mortality was never under 56·65, and in 1860 attained the very high ratio of 136·10.

102. Turning to tables IX and X, the details of sickness and mortality in each of the 45 jails which make up this first group will be found. With few exceptions there was much sickness among the prisoners confined in them. In only fifteen of them was the admission rate under 1,000. Among these the jail at Monghyr presents the minimum of 448. In 22 jails the admission rate varied between 1,000 and 2,000. In 6 it exceeded 2,000, but was under 3,000, and in 2 it was over 3,000 per 1,000. High daily sick rates do not necessarily accompany high admission rates. In the Presidency Jail for example with 3,082 cases per 1,000, the daily sick rate was 51, while in Baraset with less than half that proportion of cases the sick rate was 101. The statistics in respect to this point may be influenced to some extent by the comparative severity of the cases of illness, but seem dependent also on the system adopted by the medical officers in charge. Similar marked differences are to be observed in the mortality. In two of the small jails there were no deaths, but in five the deaths exceeded 100 per 1,000, and in one of them they equalled the high ratio of 227·37 per 1,000.

103. In the Presidency Jail, where sickness attained the maximum of 3,082 per 1,000, the mortality was only 26·69. The only sanitary defect noted by the Superintendent is overcrowding. The jail ought properly to hold only 900 prisoners, but the average during the year was 1,049. During the months from May to December the jail was overcrowded, at one time the strength was 1,252. Both in the Alipore Jail and in its Russa Branch, where the female convicts are confined, the water supply, owing to the scanty rain fall of 1873, was very indifferent in the early months of 1874. There was also some crowding at Russa. Overcrowding is the most common defect noted, and it has occurred in many of the jails. At Rungpore, where sickness was considerable and the mortality amounted to 161·29 per 1,000, the overcrowding was relieved by the erection of sheds. The neighbourhood of this jail is described as "water logged." The district generally has the reputation of being very unhealthy. In several cases the increased sickness and mortality are associated with epidemics which were not confined to the jail but also affected the general population. In others again they are attributed to the advanced age and previous

Results in different groups and individual jails of each group—Lower Bengal and Assam.

Great sickness and mortality in many jails of this group.

Sanitary defects noted in individual jails of this group.

ill-health of prisoners on admission. Information as to the local conditions which favored sickness and mortality among the prisoners is, in many of the reports, very scanty.

104. In the second group both sickness and mortality were much under what they were in Lower Bengal. The results of 1874 in this group, moreover, compare favorably with those of other years, and shew the same marked improvement during the last eight years as contrasted with the great sickness and mortality which characterized the other eight years which commence with 1859. Between 1867 and 1874 the admissions have varied from 869 to 727 per 1,000; in 1874 they equalled 788. Between 1859 and 1866 they were never under 902, and rose as high as 1,460. A similar contrast is presented by the sick rates. As regards mortality also, the change is very satisfactory. In the eight years from 1859 to 1866, the deaths annually ranged between 51·31 in 1862, and 140·15 in 1860. The mortality of 1874, 37·05 per 1,000, though lower than that of either 1872 or 1873, is greater than it was in 1871.

105. Among the 42 jails which compose this group, many present most favorable statistics. At Ghazee-pore for example, the cases of sickness equalled only 242 per 1,000; at Baraich they were only 213. Out of the 42, 31 shew an admission-rate of less than 1,000. In only three did it exceed 2,000, and the highest ratio is 2,957 in the old jail at Pertabghur. But with a much lower admission-rate, 788 compared with 1,412 per 1,000, the daily sick-rate in this group was higher than in the 1st group—42 compared with 39. This daily sick-rate presents very marked contrasts in the different jails of this second group. At Ghazee-pore and Baraich it was only 6 per 1,000; at Chyebassa it was 88, and between these extremes are all manner of gradations. The lowest mortality was 3·61 at Oonao, the highest 183·58 at Gorakhpur, but of this a considerable portion was due to cholera. The deaths, however, are mainly entered as caused by dysentery and diarrhœa.

106. In the Chyebassa jail, where the sickness was great although attended with no very high mortality, the medical officer states—"The insalubrious condition of the wards during the rainy months is the only cause I can assign for the great sickness in these months. The floors become damp, the roofs leak, and the rain beats in on the prisoners, who can under the circumstances with difficulty keep themselves dry." In the Gyah jail, where the admissions equalled 2,115, and the deaths 173·76 per 1,000, there was some over-crowding, but to what extent, or for how long it lasted, does not appear from the report. The medical officer states that "this enormous sickness and mortality was in a great measure due to the low physical state of many of the prisoners when they were admitted into jail." In the Patna jail there was "unusual over-crowding." In regard to Chumparun, where the sickness equalled 1,250, and the mortality 152·78 per 1,000, the medical officer remarks "it cannot be a matter of surprise that the jail continues to be an unhealthy one, and unfortunately, owing to the defective site, most of the conditions are unalterable." The Mozufferpore jail, where the prisoners died in the ratio of 102·52 per 1,000, was "over-crowded during the whole of the year." Of the 27 prisoners who died in the Jounpore jail during 1874, "seven only were in good health at the time of their admission." The jail at Gorakhpur suffered from cholera in common with the district in which, as already stated, the disease was very prevalent. But cholera accounts for only 33·07 per 1,000 of the total death-rate of 183·58. Other diseases were very fatal, and especially bowel complaints. The very unfavorable results of the year are ascribed in part to the inundations, and in part to the low vitality of the people coming from a part of the country in which scarcity prevailed. The same influences were at work in Busti.

107. The excessive mortality in the jails of Behar, which are included in this second group, has long been a source of deep anxiety to the Government, and in the early part of this year, a Special Committee was assembled to visit these jails and report on the causes to which this mortality appeared to be due. Of the nine jails, which form the subject of their report, three, those at

The Gangetic Provinces and Oudh.

Marked differences in the statistics of individual jails in this group.

Sanitary defects in individual jails.

Report of Special Committee on the Behar Jails.

Gyah, Mozufferpore and Chumparun had already been condemned as hopelessly bad, and in this opinion the committee acquiesced. In regard to the other six—Patna, Sarun, Arrah, Monghyr, Bhaugulpore and Purneah—they made certain suggestions for improving their sanitary condition in respect to the arrangement of the buildings, drainage, ventilation, bathing places, raised beds, clothing, water-supply, coservancy and food, and also for the relief of over-crowding, which has often been very great. In accordance with their recommendations, orders have been issued at once to carry out all the improvements indicated by the committee on matters affecting the sanitary arrangements of the several jails they visited. The construction of the new jails required is under consideration, and in the meantime, to relieve over-crowding, temporary encampments are to be provided.

108. The fifteen jails which form the third group do not call for much remark. The total number of prisoners averaged only 2,445, and with two exceptions none of them con-

*The third group.*

tained as many as 200 prisoners. These jails were arranged in the jail statistics as a new group in 1870. Compared with the previous four years, the results of 1874 are on the whole favorable. In some of them sickness was prevalent; in seven the admission-rate exceeded 1,000; in two it was over 2,600. But in none was the mortality very heavy. In three of the jails there were no deaths. The highest death-rate was 67.42 at Raepore.

109. In the fourth group the results, as a whole, have been very favorable.

*The fourth group.*

The admissions into hospital have averaged only 841, the daily sick 33, and the deaths 28.96 per 1,000. In only 4 out of the nine jails of which this group is made up, did the cases of sickness exceed 1,000. At Jhansi the ratio was only 364. Muttra, although returning 788 per 1,000, shews the minimum sick-rate of 18. At Saugor there was a maximum of 69 per 1,000 always in hospital. At Lullutpore, there were no deaths. At Dumoh, on the other hand, among a very small body of prisoners, the mortality was 46.15. In the Jubbulpore jail 11 deaths were due to sloughing ulcers. With reference to them and the other cases, Dr. Rice remarks—"I do not consider this sickness due to any cause proper to the jail, and preventible. It is exactly of the same character and prevalent at the same time as in the free population resident in the neighbourhood."

110. The fifth group, as it has unfortunately done for some years past, suffered much in 1874. The statistics of these jails during the last sixteen years, when taken as a whole

*The fifth group.*

divide themselves into three periods. From 1859 to 1863 both sickness and mortality in them were excessive; the admissions annually varied from 1292 to 1868 per 1,000, and the deaths from 82.80 to 183.68. From 1864 to 1868, there was a marked improvement, the admissions, commencing with 969, gradually fell to 489, and the deaths from 73.81 to 16.87. But with 1869 sickness and mortality increased and the increase has continued; in 1874 the admissions equalled 913 and the deaths 46 per 1,000. But on reference to Table IX it will be seen that, as usual, these unfavorable results have been due to a very few jails. In 12 out of the 17 there was but little sickness. In only six did the death-rate exceed 40 per 1,000. The heavy mortality at Bolundshuhur 82.05, in the Meerut central jail 128.37, and in the Meerut district jail 54.66, is deserving of special attention.

111. Mention has already been made in the first section of this report,

*Great sickness and mortality in certain jails of this group.*

of the unhealthy character of Meerut during recent years, and this is fully borne out by the experience of the prisoners. The Meerut central prison, in common with the whole station, has labored under defective drainage. The prisoners suffered much from fever, dysentery and sloughing ulcers. So great was the sickness, that over 20 per cent. of them on an average were either on the sick or convalescent list daily throughout the year, and from July to October over 300 were constantly in hospital. In the Meerut district jail, though sickness was very prevalent, the mortality was not nearly so high as in the central prison, and the returns are more favorable than those of late years. In the Bolundshuhur jail the increased sickness is reported to have been associated with the universal prevalence of fever in the district; and to have been intensified by the crowding together of a great number of old and infirm



prisoners. Over-crowding was not confined to Bolundshuhur; it was frequent and great in many of the jails of this group, though in the Meerut central prison, where the prisoners suffered most, they are reported to have had the full allowance of space.

112. The health of the prisoners in the Punjab during 1874 was fairly good when compared with other years. Both as regards sickness and mortality there was considerable improvement on 1873. In 18 of the 30 jails in this province, the ratio of admissions was under 1,000. In all the others, except Bunnoo, where it attained a maximum of 2,594, it varied between 1,000 and 2,000. Only four shew any great mortality—Delhi, Lahore Central Jail, Bunnoo and Rawul Pindee, where the death-rates stood respectively at 85·80, 53·07, 141·51, and 85·03.

113. As regards Delhi, the civil surgeon is of opinion that "the deaths have been mainly caused by malarial fever of a somewhat unusually severe type, and its sequelæ acting on constitutions reduced below par by some adverse circumstances. The year has been a very unhealthy one in Delhi, among the general population fever having been very prevalent." In the Lahore central prison the sickness and mortality are ascribed by the Superintendent, Dr. Henderson, to deficient clothing between the 1st November and 1st April, and to sleeping on the cold ground. Fevers, bowel complaints, and respiratory diseases account for the great mass of the deaths. The Bunnoo jail is very small, the average strength confined in it was 106, but this was much in excess of the proper number. It is said that "the chief cause of mortality has been remittent fever, since diagnosed to have been typhus." The great mortality in the Rawulpindee jail was due to one of those epidemics of fever from which it has unhappily suffered on several occasions. It commenced in September 1873, and lasted till March 1874. A special committee assembled by the Government of the Punjab reported that in their opinion it was relapsing fever, and that its origin and propagation were in all probability due to contagion. The recommendations of the committee, and the orders which have been issued on their report, have therefore reference chiefly to measures designed to prevent the introduction of contagious disease, such as quarantine and disinfection. It is to be remarked that the jail has been over-crowded, and that the condition of the prisoners in respect to personal cleanliness as described by the Superintendent was very far from satisfactory.

SECTION IV.  
GENERAL POPULATION.

114. The sanitary history of the people of India during 1874 has been, in a great measure, anticipated by the statistics already given in the first section of this report, shewing the mortality from cholera, small-pox, fevers and bowel complaints. The deaths recorded under the head of injuries are tabulated in the annexed statement. In nearly every province the ratios for 1874 approximate very closely to those of 1873; in Madras and Berar they are not only the same, but are also identical for the two years.

Statement shewing the deaths registered from INJURIES in the different Provinces during the year 1874.

PROVINCES.	Population under registration.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths.	Ratio of deaths per 1,000.	Ratio for 1873.
Bengal	59,946,314	550	563	774	1,156	1,803	2,295	2,860	2,691	2,532	2,566	1,007	676	19,469	*	*
North-Western Provinces	30,769,056	722	729	788	1,985	1,300	1,806	2,333	2,148	2,050	1,405	916	747	16,029	52	49
Punjab	17,487,125	220	251	272	323	398	542	812	749	512	338	268	224	4,904	28	27
Oudh.	11,174,785	222	227	280	347	487	658	832	897	781	495	294	254	5,814	52	39
Central Provinces	7,427,698	172	165	215	292	287	345	385	329	340	229	196	164	3,029	40	42
Berar	2,184,945	48	54	53	72	80	68	64	77	105	57	55	60	793	4	4
British Burmah	2,738,358	42	36	45	36	45	44	61	35	51	45	44	29	526	19	18
Madras	30,300,211	983	915	1,062	1,133	1,143	1,070	1,158	1,193	1,173	1,183	1,045	1,007	13,065	4	4
Bombay	16,228,774	381	359	498	483	617	713	646	641	671	544	368	343	6,165	38	37

\* The statistics of Bengal are still very imperfect—no ratios, therefore, are given for this province.

115. The details of deaths due to injuries show the number recorded under the various heads of suicide, wounding, accident, and snake-bite, or killed by wild beasts. To this last cause, snakes and wild beasts taken together, 21,105 deaths are ascribed—a number very nearly the same as that shewn for 1873, in which it stood at 21,461.

Statement showing details of deaths from INJURIES registered in the different provinces during the year 1874.

PROVINCES.	Population under registration.	DETAIL OF DEATHS FROM INJURIES.				TOTAL.
		Suicide.	Wounding.	Accident.	Snake-bite or killed by wild beasts.	
Bengal ...	59,946,314	2,149	1,360	7,800	8,160	19,469
North-Western Provinces ...	30,769,056	1,511	1,348	9,338	3,832	16,029
Punjab ...	17,487,125	250	206	3,301	1,147	4,904
Oudh ...	11,174,785	636	270	3,434	1,474	5,814
Central Provinces ...	7,427,608	524	196	1,339	970	3,029
Berar ...	2,184,945	139	76	363	215	793
British Burmah ...	2,738,358	63	82	201	180	526
Madras ...	30,360,211	1,876	828	7,762	2,599	13,065
Bombay ...	16,228,774	768	457	2,412	2,528	6,165

116. Under "all other causes" the ratios for 1874 do not materially differ from those of the year previous.

Deaths from all other causes.

Statement shewing the deaths registered from ALL OTHER CAUSES in the different provinces during the year 1874.

Provinces.	Population under registration.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths.	Ratio of deaths per 1,000.	Ratio for 1873.
Bengal . . . . .	59,946,314	4,504	3,734	4,530	4,234	4,290	3,959	4,691	5,276	5,063	5,983	4,981	5,313	56,618	*	*
North-Western Provinces . . . . .	30,769,056	3,868	3,006	3,115	2,935	3,010	3,130	3,603	5,226	5,498	4,975	4,129	3,639	46,134	1.50	1.60
Punjab . . . . .	17,487,125	8,491	7,099	7,377	6,171	7,585	6,443	6,463	7,812	8,054	9,083	8,762	9,477	92,667	5.30	4.98
Oudh . . . . .	11,174,785	409	309	417	365	368	364	574	618	651	727	635	655	6,062	0.54	.37
Central Provinces . . . . .	7,427,608	1,925	1,654	1,773	1,490	1,553	1,519	1,725	2,154	1,727	1,816	1,989	1,804	21,129	2.85	2.67
Berar . . . . .	2,184,945	924	800	871	799	934	923	1,393	1,825	1,540	1,386	1,078	1,042	13,465	6.2	4.7
British Barmah . . . . .	2,738,358	507	352	434	478	470	530	505	546	536	495	415	495	5,763	2.10	2.23
Madras . . . . .	30,360,211	18,725	14,072	14,347	14,179	15,493	16,923	19,712	18,344	17,849	17,796	18,188	21,640	207,268	6.8	6.7
Bombay . . . . .	16,228,774	4,745	3,936	4,450	4,189	4,454	4,960	5,429	5,739	5,098	5,026	4,844	4,971	57,841	3.56	3.72

\* The statistics of Bengal are still very imperfect—no ratios, therefore, are given for this province.

117. The total mortality in each province is shewn in the following statement. In the N. W. Provinces, the Punjab, Oudh, British Burmah, and Bombay, there has been more or less reduction of the death-rate as compared with that of 1873. Both the Central Provinces and Berar, on the other hand, show a considerable increase; and in Madras there was also a slight advance on the ratio of the previous year.

Statement shewing the deaths registered from ALL CAUSES in the different provinces during the year 1874.

PROVINCES.	Population under registration.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths.	Ratio of deaths per 1,000.	Ratio for 1873.
Bengal ... ..	59,946,314	39,405	33,558	39,190	41,257	43,670	35,633	35,085	41,558	39,785	44,532	56,758	54,549	504,980	*	*
N. W. Provinces ... ..	30,769,056	49,899	42,000	48,868	52,969	57,185	48,497	47,457	64,033	68,114	79,114	62,887	51,227	672,259	21.84	22.91
Punjab ... ..	17,487,125	28,060	21,676	22,107	19,933	27,633	23,709	21,183	25,678	26,988	34,615	31,879	33,252	316,713	18.11	20.42
Oudh ... ..	11,174,785	9,846	8,646	10,544	10,387	12,354	10,124	11,370	12,549	11,190	12,690	11,693	10,558	131,951	11.81	12.81
Central Provinces ... ..	7,427,608	11,974	10,688	12,632	13,271	14,454	12,627	14,015	17,938	15,120	17,111	17,330	16,986	174,446	23.48	18.79
Berar ... ..	2,184,945	4,206	3,638	4,414	4,492	4,801	4,092	5,690	7,517	6,570	6,074	4,762	4,541	60,797	27.9	22.8
British Burmah ... ..	2,738,358	3,177	2,550	2,558	2,454	2,497	2,651	3,057	2,848	2,759	2,678	2,698	3,001	32,937	12.02	15.22
Madras ... ..	30,360,211	49,879	37,735	41,140	38,587	39,239	41,887	48,924	45,963	43,130	42,706	45,867	57,845	532,902	17.5	16.9
Bombay ... ..	16,228,774	24,643	19,999	22,742	20,970	21,015	21,455	22,744	24,410	22,240	25,398	26,832	26,294	278,652	17.17	17.92

\* The statistics of Bengal are still very imperfect—no ratios, therefore, are given for this province.



119. In the special areas of Bengal which were selected for carrying out the registration of deaths and births in a more efficient manner than seemed to be as yet possible over the country generally, the results so far have not been very satisfactory. The total death-rate for these areas in 1874—24·72 per 1,000—is, no doubt, much nearer the truth than the results for districts as a whole, but the marked discrepancies in different places among males and females, at different ages and in different classes of the population, shew that the registration is still very imperfect. Steps are now being taken with a view of making it compulsory within municipalities under the provision of Act IV (B. C.) of 1873, which, although passed two years ago, has not yet been acted on. In other provinces, also, attention has been drawn to the importance of bringing into operation the bye-laws on this subject, which though they have nominally existed for years, have in most places been little better than a dead letter. The only part of the country in which such bye-laws have been acted on to any extent is the Punjab, where, Dr. DeRenzy reports, that much assistance has been derived from them.

120. In order to carry out a suggestion made by the Army Sanitary Commission, the various Local Sanitary Commissioners were requested to supply a statement shewing the number of villages, the population, the total deaths, and the deaths from fever and cholera in each registration circle; and also the number of villages attacked in each circle during 1873. The information as regards attacks could be gathered only from those places where either fever or cholera had proved fatal. But even with this limitation the data collected are very scanty. They, however, contain some items of much interest. In Berar the only village attacked with cholera was one out of 105 in the Mulkapur circle. In the North-Western Provinces details can be given only regarding cholera in Basti. This, as has been already stated, was one of the two districts in those Provinces which alone suffered from cholera to any extent in 1874. Basti contains 7,555 villages. Of its 28 registration circles, 14 returned deaths from cholera. The details regarding them are shewn in the following statement:—

NAME OF CIRCLE.	Number of villages in Circle.	Population of Circle.	Number of deaths from Cholera.	Number of villages attacked by Cholera.
Minhdawal (Town) ... ..	...	8,124	13	1
Chilliah ... ..	257	77,352	70	10
Ooska ... ..	251	49,247	164	27
Lowtun ... ..	167	30,286	39	6
Mesrowlia ... ..	177	38,605	5	2
Bansi ... ..	504	81,927	25	7
Rudhauri ... ..	347	49,503	16	4
Majhra ... ..	300	52,911	133	19
Dudhowra ... ..	286	58,767	128	16
Minhdawal ... ..	337	61,454	159	26
Basti ... ..	659	99,341	23	6
Khalilabad ... ..	312	58,686	74	12
Mohuli ... ..	323	54,878	79	15
Badhabad ... ..	189	42,500	36	4

The fractional proportion of villages attacked in each circle is very striking. Similar facts might be tabulated for Oudh. In the Barabanki district, for example, of a total of 2,019 villages, 4 were attacked and 8 deaths from cholera reported. In the Fyzabad district, of 4,402 villages, 10 were attacked and 21 deaths from cholera reported. In the Central Provinces again, there are 28,024 villages: cholera appeared in 4 of them—2 in the Mundla, and 2 in the Sumbulpore district. The number of villages in the circles to which these villages belong is not stated. Endeavours will be made to obtain more complete details of this nature for the current year.

121. Among the important practical questions which have come under consideration since last report, may be mentioned the advisability of instituting quarantine as a pro-

Quarantine as a protection from cholera and other diseases.

tection from cholera and other diseases. The proposal to institute such a system in the port of Bombay has been negatived. Apart from all the hardships and inconvenience which it must entail, it appeared unreasonable to attempt to interfere with the few such cases that might occur among the shipping, when any surveillance over the large city of Bombay and the numbers of people constantly entering it by land is altogether impracticable. Moreover, as regards cholera, against which the proposed rules were in a great measure aimed, there is no reason to suppose that any epidemic of this disease has ever attacked Bombay from the sea-board; still less that it has been due to importation by ships. It has therefore been determined that "when disease of an epidemic character is present on board a ship, measures shall be taken for affording hospital accommodation and treatment for the sick;" and also, that "if a vessel has come from any port where Asiatic plague exists, as a measure of special precaution which is not likely to be often required and which can do no harm, not only should the sick be cared for, but the vessel should be fumigated." Beyond this no interference seems advisable. The possible introduction of plague into India has been suggested by its recent prevalence in Mesopotamia, but the whole history of this epidemic as given by Dr. Colvill, the Civil Surgeon of Baghdad, is that of a disease localized under grave insanitary conditions within a circumscribed area, and even within this area confined to those villages which are in the most filthy and ill-drained state. Similar views have been expressed with reference to the application of quarantine rules at Mauritius to Indian emigrants. A health officer has lately been sanctioned for the port of Calcutta, whose duty it will be to look after the sanitary condition of the port and shipping; but quarantine is to form no part of the regulations under which he will act. As regards the possibility of protecting cantonments by means of quarantine, important facts have been elicited by the experience of the present year; but any examination of them must be deferred until more complete details have been obtained.

122. In connection with Dr. Vandyke Carter's special mission to Norway, and the great success which has attended Dr.

*Special enquiry into leprosy.*

Dougal's treatment of lepers in the Andamans by means of gurjun oil, special attention has been lately directed to leprosy. The proposal made to attempt to eradicate this disease by isolating all the lepers in India did not commend itself to the Government. Even if the theoretical views on which this recommendation was based had been proved to be correct beyond all doubt, which is very far from being the case, the difficulties of carrying any such system into practice are insuperable. Much remains to be learned regarding leprosy in India, and a special enquiry has accordingly been ordered. The Local Sanitary Commissioners have been requested, with the aid of the Civil Surgeons, to collect all the facts they can regarding the extent to which it exists among the people in each district; if localized, the locality in which it is chiefly found; the special peculiarities of this locality, if there are any, and the special conditions in other respects under which the people in this locality live; and to illustrate from individual cases the circumstances under which they seem to have arisen, whether by contagion or hereditary taint, or any other cause. The microscopic and scientific portion of the enquiry will be taken up by Drs. Lewis and Cunningham.

123. Further enquiry has also been directed on the influence of soil

*Further enquiry on the relation between disease and the conditions of the soil.*

conditions on the prevalence of disease. For some years, observations have been taken on the variations in sub-soil water level in connection with cholera, but, as a whole, no very definite results have yet been obtained. In order to obviate the defects hitherto observed, it is desired that the observations shall in future be confined to a few places in each province representative of the most marked characteristics of its different portions; that the well in each of the selected stations should be chosen, so that the variations of water level occurring in it may be indicative of the varying amount of sub-soil moisture over a certain area; that the rainfall should be accurately measured, and that the fluctuation in disease over this area, as represented by the mortuary registration and other information available, may be carefully watched and recorded. The important bearing of water level and other soil conditions on the comparative prevalence of cholera



is amply illustrated by the results of Drs. Lewis and Cunningham's researches in Calcutta, as detailed in Appendix B, to which reference has been already made, and there can be little doubt that much valuable information on this subject might be added if such observations were made in other parts of India.

124. For a statement of works of sanitary improvement in towns and villages, I must refer to the reports of the local sanitary commissioners. In all the provinces such matters are engaging much attention, but the want of funds in many cases offers a very serious obstacle to progress. Schemes of water-supply and drainage are in hand, and uniform testimony is borne to the fact that in municipal towns great improvements have already been effected. Compared with former years, there is undoubted activity in all matters connected with the improvement of the public health. The importance of making use of the municipalities as centres from which education in sanitary matters may emanate and spread among the people has been pressed on the attention of local Governments and Administrations\* and it has been observed that "there is no more important duty for the sanitary commissioner to discharge than that of encouraging, and, if practicable, of creating the desire for sanitary improvements in the various centres of population, and of seeing that the money allotted to all such schemes is spent in the way calculated to produce the greatest benefit to health. The following orders issued by the Chief Commissioner of the Central Provinces as to the manner in which supervision in such matters may best be exercised by the Sanitary Commissioner are of a very practical character, and a similar system might be generally adopted with great advantage:—

The sanitary commissioner, after carefully inspecting a municipal town, should submit a report to the district officer, pointing out in detail all the sanitary defects in the town, in its drainage, water-supply and conservancy arrangements, and what are the dangers peculiar to its position, at the same time indicating in what direction improvements are most urgently required, and the plan on which they may be best carried out.

The district officer would on the first opportunity lay the sanitary commissioner's report before the municipal committee and recommend for execution such of the improvements as the sanitary commissioner considers most urgently required, and for the execution of which funds are available. The committee would then, after discussion, adopt such resolutions on the proposals as it may deem fit; copies of these resolutions should then be forwarded to the sanitary commissioner, who would forward them, together with a copy of his report and any remarks on the resolutions he may think requisite, to the Chief Commissioner. At the end of each year the civil medical officer (who always is, or should be, a member of all municipal committees in his district), should include in his Annual Sanitary Report a detailed account showing the extent to which the plan of improvement recommended by the sanitary commissioner and resolved on by the municipal committee has been acted on. An abstract of these reports would appear in the annual report of the sanitary commissioner, and if that officer has been able to inspect the town in the course of the year, he will remark on the character of the work done, and how far the plan laid down has been adhered to. In this way sanitary improvement in municipal towns will be carried on more systematically, and the limited funds available laid out to the best advantage.

The system also should be adopted with regard to non-municipal towns and villages. The sanitary commissioner after his tour of inspection in a district should submit a concise report of the villages that most urgently require attention, and the nature of the defects that require remedy, and at the end of the year the deputy commissioner would forward to the sanitary commissioner a list of the villages in which he has been enabled to effect the required improvements.

\* \* \* \* \*

J. M. CUNINGHAM, M. D.,

*Sanitary Commissioner with the Government of India.*

\* Resolution of the Government of India, Home Department, No. 45—1668, dated 12th June 1874.

APPENDIX A.

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THE FUNGUS-DISEASE OF INDIA.

A REPORT OF OBSERVATIONS

BY

T. R. LEWIS, M.B., AND D. D. CUNNINGHAM, M.B.,

SPECIAL ASSISTANTS TO THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA.

APPENDIX A

THE TEACHER-DISEASES OF INDIA

A REPORT OF OBSERVATIONS

T. R. LEITCH, M.B., AND P. R. CHANDLER, M.D.

## APPENDIX A.

### THE FUNGUS-DISEASE OF INDIA.

BY

T. R. LEWIS, M.B., AND D. D. CUNNINGHAM, M.B.

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#### CHAPTER I.

##### THE NATURAL HISTORY OF PARASITIC FUNGI GENERALLY.

THE importance of undertaking a series of systematic observations with a view to elucidate the nature of the connection between certain disease-processes and growths of a vegetable character has for a long time been impressed upon us, and we have for several years past kept records of investigations bearing more or less directly on this subject. Hitherto, however, our reports on fungi and allied organisms have referred to the question of the actual presence of any such vegetations, not palpably adventitious, in connection with certain special diseases and particularly with cholera. Having failed to satisfy ourselves of the existence of sufficient evidence to support the doctrine that any such growths are necessarily associated with these particular classes of disease, we decided on ascertaining, if possible, whether in the diseased conditions in which characteristic fungoid growths are known to exist beyond dispute, the latter are to be regarded as the actual cause of the particular malady. In undertaking this work we were aware that it was taking a step backward—treading the ladder a step lower down than that on which we commenced our work. We saw no alternative, however, but to do this, as personal observation had taught us that certain fundamental data, which we had originally taken for granted as established, were not entitled to such unreserved reliance. Some of these observations we now propose to detail.

We are desirous that it should be understood that it is not our intention to discuss the purely botanical questions which, though so intimately associated with phyto-pathological studies, belong, nevertheless, more to the province of the professional botanist than to that of the pathologist: such questions, for example, as the relation existing between fungi and algæ. The true character of the vegeta-

tions which occupy debatable land between fungi and algæ—aquatic fungi, *Achlya*, *Saprolegnia*, and the like—is of itself a question sufficiently difficult to occupy the undivided attention of botanical experts for years to come, so that we do not consider it necessary to offer any excuse for leaving such questions to those in whose province they lie, and restricting ourselves to their pathological bearings. We are the more inclined to this course, as there are, unfortunately, only too many examples on record of the great hindrance to the advancement of our knowledge of the causation of diseases which has been occasioned by pathologists and botanists having trespassed on each other's domains. This is an evil which it shall be our endeavour to avoid.

It will be convenient for many reasons to restrict ourselves to the employment of one term whilst describing the particular vegetations under discussion; and as it is only very rarely that what, in the present state of our knowledge, are regarded as 'algæ' manifest truly parasitic proclivities, we shall refer to them as 'fungi' simply.

The term 'fungus' adopted as being the most convenient in describing epi- and endo-phytic growths.

The opinion that fungi are endowed with the power of inducing disease is not an unnatural one, seeing that they are the most constant of all the attendants on disease and decay. Their germs are known to be universally distributed, and were it not for the peculiar conditions required for their development, their depredations would be past conception. Fortunately, nature has fixed a very potent barrier between a sporule and the organised material upon which it may chance to settle, and which, were it not for this barrier, it would speedily appropriate to its own use. This barrier is healthy life. It has yet to be shown that the living matter of the tissues of any animal, so long as it retains its vitality undiminished, is liable to succumb to the attacks of a fungus. Should a spore be brought into contact with bioplasm whose vitality is impaired, however, the changes in the latter which such impairment implies may be of a kind to transform it into most suitable pabulum for the nourishment of the former. The impairment of vitality may be due either to disease, or be a normal process, the result of age: whether the change be normal or abnormal matters little to the fungus—it grows and multiplies wherever it finds material exactly suited to it.

It is the less vitalized portions of animals that are prone to epiphytic attacks—portions which have little or no power of repair. Hence the epidermic tissues, the wing covers and articular plates of flies and insects, branchial plates of fishes, and the like, are the parts on which fungi are most commonly found. In such cases the vegetable organisms do not attack the living material, but what has ceased to undergo any active nutritive changes and is virtually dead, excreted material. With regard to those instances in which it is known that fungi are associated with the existence of disease during life, it is far from proven in any single case that the disease was not present prior to the fungus. For example, it is most strongly maintained by many observers that it is only the sickly silkworm that is ever attacked by fungi, and that inoculation can only be effected after the worm has sickened.

There is another barrier to the unlimited development of fungi, although of less import so far as the growth of the mere vegetative portion of the fungus is concerned, and that is the adaptability of the soil for its nourishment. Even with regard to animal parasites this feature is particularly evident, not only with respect to the entozoa, but epizoa also are limited to certain animals and even to certain defined areas of the body. This law applies as strictly with regard to fungi as to the higher plants; one spore will sprout and rapidly cover a surface with mould where another will not manifest the slightest indication of growth.

Some leaves become the hosts of certain fungi only—their entire surface being equally liable to attack; whereas it is only on a very limited area of other leaves that another species will develop at all. In Calcutta, for instance, the leaves of *Hibiscus rose sinensis*, at particular times of the year,

Probability of certain plants producing secretions specially adapted to the growth of certain fungi.

almost invariably present a fungus on their surface, the growth of which is strictly limited to the point on the under surface, where the petiole enters the lamina of the leaf, and which does not spread beyond this spot notwithstanding the production of an abundant development of mycelium and sporular elements. It is evident that at this spot a peculiar secretion is present which furnishes suitable pabulum for the nourishment of the particular fungus.

As already mentioned, even some animals, just as in the case of the leaf, while in perfect health, appear to furnish a secretion which throughout life, and without detriment to their health, supports the growth of some particular fungus at a particular spot; and it is not improbable that the morbid secretions resulting from disease in others furnish the special pabulum necessary for the development of the particular kinds of fungi constantly forming so prominent a feature in the appearance of such animals both before and after death.

Probability of certain diseases producing secretions specially adapted to the growth of fungi.

Of animal tissues none are more frequently affected by fungi during life than the bodies of insects of various kinds; but whether the tissues are ever attacked during perfect health is, as already mentioned, a question still warmly disputed. This point, although it may appear, at first sight, to be of very trifling moment, is nevertheless of the utmost importance in estimating the nature and the extent of the influence which fungi exert on the production and maintenance of disease. The fact that the entire bodies of flies, beetles, bees, and such like, when affected with fungi, are found, when examined after death, to have been permeated through and through by mycelial threads, would be most significant were it known beyond doubt that the tissues in question were not diseased before the advent of the fungus—that the fungus did not follow the disease as the roots of a plant creep towards a stream.

Flies and insects attacked by fungi.

Should it, however, be demonstrated that in any disease the growth of a fungus in a living subject can be limited not only to certain tissues, but to certain completely isolated portions of such tissues, the question would be very much simplified: such evidence would point to the dependence of the fungoid growths on some peculiar condition in those localised spots. It would, further, be evident that, however extensive, in some cases, the modification in the aspect and effects of the disease by the development of a fungus might be, the interpretation to be put upon the rôle of the latter in the malady must be in accordance with the fact that its development depended upon some previous change in the normal tissues.

The inferences which would be natural were isolated growths of fungi in the tissues demonstrated.

What our own conclusions are with regard to this matter in connection with the disease in which we have specially studied it, will be gathered from the following account of a series of observations extending over a period of several years. We have endeavoured to curtail the narrative as much as appears to be consonant with the desire that readers may be able to infer the extent and to know exactly the character of these observations, and thus be able to judge whether or not we have worked at the subject in such a way as to entitle us to form an independent opinion.

## CHAPTER II.

## THE EVIDENCE RECORDED IN FAVOUR OF THE FUNGAL ORIGIN OF THE MADURA-FOOT- AND HAND-DISEASE, OR FUNGUS-DISEASE OF INDIA.

THE disease which we have selected as being the most suitable for the purpose we had in view—the ‘Fungus-disease of India’—has been investigated with the greatest diligence and care by Dr. H. Vandyke Carter of Bombay, to whom the profession is indebted for by far the fullest information it possesses with regard to the affection, and who certainly was the first to describe accurately the minute characters of the black particles frequently found in connection with it. His published observations date as far back as March 1860, since which period several communications have appeared from his pen.\* These he has summarised and supplemented in a very able monograph on the subject published during the past year.†

Dr. E. W. Eyre also has written a concise description of the disease, as witnessed by himself (*Indian Annals of Medical Science* No. XII, pp. 513 and 813, 1860). He mentions that Garrison-Surgeon Godfrey of Madras was the first to call attention to the affection, under the designation of “Tubercular disease of the foot,” and that he published an account of some cases observed by him since 1844, in the *Lancet*, 10th June 1846. The malady has, therefore, been known to the profession for more than thirty years.

No special interest was, however, taken in the matter until Dr. Vandyke Carter, as already mentioned, the Reverend M. J. Berkeley,‡ and Mr. H. J. Carter, F. R. S.,§ published the result of their personal observations. The papers of these distinguished observers were followed by those of many others, so that the bibliography of the disease at present occupies no inconsiderable space in our medical literature. Those of our readers who may desire further details on this point will find a careful *resumé* of the greater part of what has been written concerning the disease in Dr. Carter’s valuable monograph. It will be sufficient for our purpose merely to refer, generally, to what the three writers above mentioned have written, more especially to the writings of Dr. Vandyke Carter and Mr. Berkeley, with whom chiefly rest alike the credit and the responsibility which is attached to the observations and the deductions which have been promulgated with regard to the disease.

According to Dr. Carter, the affection manifests itself under two forms, each presenting a different stage of the same disease: (1), the *black* or *melanoid*, and (2), the *pale* or *ochroid*, varieties. There is, further, a phase of the disease characterised by the presence in the tissues of pink granules, so that, practically, the malady has been described as presenting three varieties. Although the phase of the disease last mentioned is of rare occurrence, it is, nevertheless, of great significance in connection with the theory of the origin of the disease now commonly accepted—a view typified in the name “Mycetoma” given to it by Dr. Carter and adopted by the London Royal College of Physicians in its ‘Nomenclature of Diseases.’

As far as external appearances go, the two leading forms have much in common. There is considerable distortion of the foot or hand affected, an increase of size, more or less marked, in all directions; there are numerous, somewhat mammillated,

\* *Transactions of the Medical and Physical Society of Bombay*, vol. VI, 1860.  
Ditto ditto vol. VII, 1860.  
Ditto ditto vol. VIII, 1862.

† *Transactions of the Pathological Society of London*, vol. XXIV, 1873.  
‡ “Mycetoma,” or the Fungus-disease of India—London: J. and A. Churchill, 1874.

§ *Intellectual Observer*, No. X, November 1862.  
*Journal of Linnean Society*, vol. VIII, p. 135, 1865.

§ *Annals and Mag. Nat. Hist.*, vol. IX, 1862.  
*Journal of the Linnean Society*, vol. VIII, 1865.

apertures, communicating with cavities of various sizes and channels of various lengths in the subjacent tissues. The materials which escape through these apertures differ in the two forms: in the dark variety the fluid which oozes from the foot frequently contains brownish-black granules, in appearance not unlike the rougher description of gunpowder; whereas in the pale variety little particles, bearing a considerable resemblance to fish-roe, are very commonly seen.

On section also the state of the hard and soft tissues presents much in common:—(a) numerous lined cavities generally communicating with each other by means of sinuous channels; (b) softening and excavations, more especially of the tarsal and carpal bones, but frequently also involving the long bones; and (c) the packing of these cavities with a hard, dark substance in the black variety, and with a more or less soft, yellowish, fatty or gelatinous substance mixed with globular roe-like particles in the other.

It is with reference to the nature of these two substances, so different in appearance to the naked eye, that Dr. Vandyke Carter's observations and deductions are of such importance; not only of importance in relation to the particular malady in which these peculiar substances are found, but to that class of diseases—a class at present very large and still on the increase—whose *existence* and *extension* is attributed solely to the pernicious influence of vegetable parasites.

Briefly stated, Dr. Carter describes the dark material in the first variety of the affection as consisting almost entirely of a fungus in its sclerotial form, *i. e.*, one of the 'resting' states common to fungi and somewhat analogous to the 'resting' states of perennial plants—examples of which are furnished by bulbs and tubers of various kinds. The substance found filling the cavities in the pale variety is considered to be indicative of an advanced stage of the disease due to "a change—seemingly a degeneration—" of the darkened masses.

The fact that a pink mould has been developed in connection with specimens of both varieties has served as a link between the dark and the pale material; and this link has, so to speak, been completed by the circumstance that Dr. Carter has observed a case of the disease—practically forming, as before mentioned, a third variety, in which a pink coloration of the tissues, associated with innumerable pink particles—'fungus-bodies,' were its characteristic features. Here, therefore, we seem to have the key to the arch which sustains the hypothesis that the Madura-foot and hand-disease is originated and propagated by means of a peculiar fungus.

It is consequently of importance that all who desire to form a correct estimate of the value of so important and popular a doctrine—of importance were it only because of its popularity—and absolutely incumbent on such as by their writings promulgate views based, as far as the human subject is concerned, almost entirely on this peculiar malady, to examine this particular point closely. To the best of our knowledge, the following particulars comprise all that have been published with regard to the pink mould and the pink particles. With regard to these two sets of observations, it may be noted that, in the first instance, attention was arrested by the occurrence of pink particles comparable to "red-pepper grains" in the diseased tissue, accompanied by some pink staining.

Some time subsequently it was observed that a pink or crimson coloured mould had developed on separate specimens of the ochroid variety on two different occasions, and on particles of it placed in boiled rice-paste:—(1) on the exposed portion of a foot which had been macerating in water for eighteen months—the growth extending "even to the sides of the bottle;" (2) on a preparation which "had been put into a bottle with some fresh spirit" for preservation about two months previously: the part of the specimen which was above the surface of the fluid, owing to the evaporation of the spirit, ac-



quired "a red tinge and soon after there appeared a thick layer of crimson mould"; and (3) in connection with some soft particles from a foot which had been placed in some boiled rice-paste a day after amputation: ten days afterwards buff and green moulds were observed, and a few days later a red tint was distinguishable, and stained filaments were traced to the particles.

A similar mould was obtained on four occasions in connection with fragments of black particles obtained from specimens of the dark or melanoid variety:—

The pink mould developed in connection with the Black variety.

(1). Some of these particles from a newly amputated foot were mixed with a little *cotton soil* 'moistened with animal juices' and kept for two years and nine months unopened. It was then observed that a thin reddish film had appeared on the still moist surface like that noticed on the salt pans in the marshes near Bombay.

(2). During the same period similar fresh particles, obtained from the same source as in the foregoing experiment, were placed on rice-paste and set aside in a corked bottle. This preparation also remained unchanged for nearly three years, 'when, on opening the bottle and removing its contents into an open glass-cell, a *red mould* speedily made its appearance and spread luxuriantly: it had not, however, a clear connection with the fungus particles, but seemed to spring up independently of them upon the rice wherever this was exposed to the air.'

(3). Black particles were taken directly from another foot and placed in some moist ground rice. About six months afterwards a reddish tinge, passing on to crimson, was observed on the rice starch. '*The black particles have remained unchanged* to all appearance, and the red stains do not surround them, but may spring up unconnectedly.' (The italics are ours.)

(4). A set of three experiments was undertaken:—(a) black particles and rice-paste, (b) rice-paste only, and (c) black particles which had been kept dry in a box for two or three years (mixed with rice-paste?).

When examined within a month the first was unchanged; the second, *i. e.*, the rice-paste alone, presented a suspicious reddish tinge in one part; and the third was covered with a pink growth which grew 'equally and spread everywhere, but its commencement had no more apparent connection with the unaltered black masses than in the other cases'.

A fifth series was undertaken, but as the specimens were lost, details have not been given.

With regard to these observations, Dr. Carter writes that at first he did not appreciate the significance of this pink tinted growth until he had learnt Mr. Berkeley's opinion that the peculiar mould was 'the perfect condition of the species'.

Mr. H. J. Carter made somewhat similar observations, and both observers communicated their results to the Revd. Mr. Berkeley, who, as being the most experienced and distinguished mycologist in England, was of all persons the most likely to be able to throw light on the nature of the growth.

Mr. Berkeley also undertook some cultivation-experiments with material obtained from Bombay—Dr. Vandyke Carter supplied some alcohol-preserved specimens, and

The Revd. Mr. Berkeley's observations regarding the pink mould.

Mr. H. J. Carter some fragments of the material preserved in dried rice-paste. No peculiar growth was developed in connection with the former, but a pink mould appeared on some rice-paste to which some of the dried fragments had been added. Although the growth of this mould did not proceed sufficiently far to bring all its fruit to perfection, still, taking into consideration the experience gained by the observers in Bombay as well as his own, Mr. Berkeley felt himself justified in pronouncing the mould to be new to science. Though having many points in common with *Mucor*, it, nevertheless, did not accurately coincide with all the characters of that genus, but approached more nearly to the genus *Chionyphe*—every hitherto known species of which had only been observed to grow on melting snow. This pink mould was consequently added to the list of species of this genus and named *Chionyphe Carteri*.

As already intimated, it is not our intention to discuss the purely botanical phase—the phase which Mr. Berkeley naturally restricts himself to—but with regard to the assumed relation of this pink mould to the disease under

consideration, the opportunity may be taken of pointing out here (1) that it was observed to grow without any appreciable connection with the black particles—the only substance associated with the malady in which the existence of fungoid elements has been definitely established; (2) that these particles themselves were, on every occasion, found to be wholly unchanged; and (3) that the pink mould grew as luxuriantly in connection with preparations which had been preserved in spirit as in connection with specimens of the morbid tissues which had not been subject to the influence of any preservative fluid.

### CHAPTER III.

#### A DESCRIPTION OF SPECIMENS ILLUSTRATIVE OF THE PALE VARIETY OF THE FUNGUS-DISEASE OF INDIA.

THE materials forming the subject of examination were derived from entire preparations of both upper and lower extremities affected by the disease, and from numerous smaller specimens of the morbid tissues from other cases. Considering the rarity with which the disease attacks the upper extremity, we were fortunate in obtaining two excellent specimens in which it was so localised. Taken together, the specimens presented a series of typical examples of various degrees of both the so-called pale and dark varieties of the

disease, while one of them afforded an abundant supply of the peculiar red particles which are only very rarely found in association, with it—in fact, there appears to be only one well authenticated case hitherto recorded—so that we believe that we have had what may be regarded as very fair opportunities for the study of the morbid appearances present, and of the lesions and pathological changes affecting the tissues.

It is a matter of regret to us that we have had no opportunity of studying the disease during life owing to its extreme rarity in Calcutta—apparently it is not endemic in this part of India, and consequently only presents itself in the form of isolated imported cases. We hope, however, that we may yet be able to complete our observations in this respect at some future period in one or other of the endemic areas of the disease, for we feel that the careful study of the specimens which have been at our disposal have rendered us much better prepared for the clinical study of the disease and the investigation of the conditions under which it is developed than we could otherwise have been.

We owe the materials which we have examined to the kindness of Dr. Cornish, the Sanitary Commissioner for Madras; Dr. Gamack, Civil Surgeon of Madura; Dr. Mark Robinson, at present acting for Dr. Gamack; Dr. Kenneth McLeod; Dr. Downie, Ulwar; and to the Civil Surgeon of Cuddapah; all of whom have, from time to time, either themselves supplied us with valuable specimens, or have induced others to do so. We wish, also, specially to acknowledge the obligation which we are under to Dr. McConnell, the Professor of Pathology in the Calcutta Medical College. He has not only aided us by supplying us with numerous specimens of the disease, but has placed the valuable collections in the Pathological Museum under his care at our disposal for purposes of examination and comparison.

The amount and variety of the labor involved in working out the subject has been considerable. Not only has it been necessary carefully to study the condition of the tissues and the nature of the morbid materials present in the various forms under which the disease presents itself, but a close examination

of other morbid tissues and products in other diseases affecting similar anatomical regions has had to be undertaken, together with a study of the nature and properties of various natural and artificial oleaginous compounds and concretions; and numerous and varied attempts at cultivation of the morbid materials, with study of the resultant organisms and of the effects of re-agents on them and other vegetable growths.

We take up the consideration of the Pale or Ochroid variety of the disease first as, in many ways, less obscure and complicated in character than that in which the black coloring of the morbid material forms such a striking and characteristic feature. It will, perhaps, be best in

Reasons for beginning the report with a description of observations on the Pale variety of the disease.

the first place to give a brief description of the appearances presented by some of the specimens which we have examined, and subsequently to consider the common features occurring in them all and, apparently, essentially connected with the disease. We shall then be in a position to state our views in regard to the pathology of the affection together with the grounds on which these are based.

**SPECIMEN I.**—This consisted of a foot and ankle. The foot was much thickened, especially towards the ankle, and was straightened on the latter so as to point in a manner resembling that in cases of *Talipes equinus*. The toes presented much less distortion and tendency to be turned upwards on the foot than is, in our experience, usually the case in specimens of the disease. The general appearance of the specimen is shown in the accompanying woodcut (Fig. 1).



Fig. 1.—Outline sketch of a specimen of the Pale Variety of the Fungus-Disease of India.

Numerous openings surrounded by raised margins, or opening on the summits of elevated tuberculations, were present on both upper and under surfaces of the foot. They communicated with channels lined with smooth membranous tissue and leading into the substance of the foot. On making a section, the knife passed readily through the tarsal and metatarsal bones and through the lower extremity of the tibia. All these bones were extremely soft and opened-out in texture. The degree of softening varied in different places; in many it had proceeded so far as to render the bones quite spongy and so friable as to be easily broken up under the finger-nail even on the surface, and in some places the softening had proceeded to such an extent as to replace the bone-texture entirely by a soft greasy pulp. In those cases in which the softening was only partial the outline of the bones could yet be traced, but in other places the latter were quite indistinguishable from the surrounding degenerated tissues. One or two examples of cavities in the substance of the bones were also present,—smooth, and lined by a distinct membrane. Close to several of the articulations there was some slight roughness of the surfaces of the bones. The muscular and tendinous structures of the foot were well preserved and apparently unaffected by the disease; but there was a general thickening of the areas normally occupied by fat and connective tissue, and all the structures were much obscured by the extreme abundance of fatty matter present. There were numerous cavities in the substance of the foot, lined by smooth membrane and containing oily and fatty material. Some of them were quite isolated, but others communicated with one another, and with the exterior, by means of the channels previously alluded to. One cavity of large size was situated immediately above the metatarsal bones; it was lined by a gelatinous pulp of orange yellow colour and contained a large quantity of oily matter.

Description of Specimen I—Greasy aspect of the preparation.

The extremely oily condition of all the tissues was most remarkable, the bones were reduced to mere masses of soft fat penetrated and supported by remains of the osseous tissue; and it was impossible to touch the preparation without smearing the fingers, knives, and other instruments with a thick coating of greasy oil, while the spirit in which it was preserved was covered with a thick layer of large yellow oil globules. The oily matter was throughout generally more or less fluid, but in some places both in the bones and soft tissues there was an abundance of distinct small glistening particles of a white colour and composed of dense radiating masses of acicular fat crystals. Nowhere was there the slightest indication of the presence of any brown or black matter, or of any peculiar substance save the profusion of oily matter. The amount of thickening in the masses of connective tissue rendered it probable that a certain amount of elephantoid condition had coincided with the pathological changes proper to the disease under consideration, and the distortion of the foot was in this case to be ascribed in great part to this, although, no doubt, the action of the tendons and muscles on the softened fatty bones also contributed to cause the distortion.

Careful microscopical examinations were made of all the tissues and materials present, but in no case did they afford the faintest evidence of the presence of any fungal or fungoid bodies, or of anything save degenerations of the normal elements of the tissues.

**SPECIMEN II.**—This preparation, which has already been referred to by Dr. Fayer in his "Clinical and Pathological Observations in India," consisted of a foot and ankle.

The foot was much distorted: there was great thickening anteriorly, and the toes were elevated and curved upwards from their bases. Numerous crater-like openings on the surface communicated with channels, lined by smooth membrane and leading into the interior of the foot. It was carefully divided longitudinally,

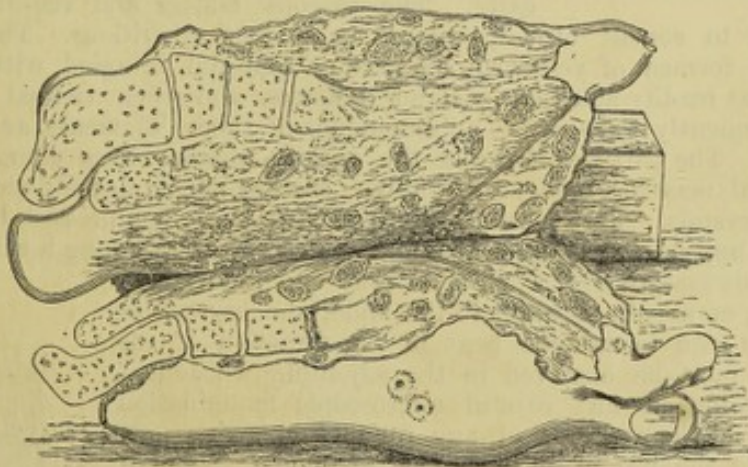


Fig. 2.—Section of a foot affected with the Pale variety of the disease.

the knife passing readily through the bones of the tarsus. As may be observed in the accompanying figure of the specimen (Fig. 2), the line of section passed through the centre of the *os calcis* posteriorly, and between the second and third toes anteriorly, passing between the metatarsal bones of these toes and through the remains of the middle cuneiform and scaphoid bones. On examining the divided surfaces, the foot was seen to be greatly thickened below the line of the bones. The thickening had occurred both below and above the plantar fascia, foci of degeneration being present in both situations, although more abundantly below than above the fascia.

These foci consisted of cavities lined by smooth membrane and containing gelatinous and caseous matter, or distinct roe-like masses of minute rounded particles. These roe-like aggregations were quite free in the cavities, and were surrounded with more or less mucoid or gelatinoid semi-fluid

Cavities in the tissues: their nature and contents.

material. In some instances the cavities appeared to have penetrated the plantar fascia, or rather, perhaps, to have passed between the several strips of its tissue. They presented a curiously symmetrical arrangement in some places, especially immediately beneath the skin, where the normal series of fat masses was in great part replaced by a row of cavities containing roe-like bodies. These cavities in many cases coincided in size and form with the loculi usually occupied by fat—their lining membrane, although somewhat thicker, being composed of the same anatomical elements as those normally separating and limiting the masses of fat, and only differing from the normal partitions in being denser and containing a somewhat larger proportion of common connective tissue in relation to the elastic fibres. In some cases the cavities were perfectly isolated, occurring among healthy fat-masses, in others they were close to one another, only separated by their limiting membranes; in others they communicated directly or indirectly with one another, and in some cases two or more appeared to have coalesced entirely, so as to form one large, frequently somewhat irregular, cavity. In almost all instances the openings on the surface of the foot were found to lead by means of channels into such cavities, whilst another series of channels connected cavities or sets of cavities with one another. Similar cavities containing degenerate material were also present in the subcutaneous fat of the dorsal aspect of the foot.

The bones, although softened and oily in texture, were in great part distinctly traceable, especially towards the inner half of the foot, but even here the base of the second metatarsal bone was disorganised and completely obscured by the degeneration. The muscular and tendinous structures were little, if at all, affected, and appeared to have contributed to the deformity of the foot by their action on the soft and weakened bones, although the greater part of the extreme flattening of the foot was, no doubt, due to the extent of the disease in the fat and connective tissue.

The membranous lining of the cavities and the various materials contained in the latter were carefully examined microscopically. The caseous matter and roe-like masses were found to consist of oily matter in various conditions. The caseous matter was formed of yellowish amorphous material mingled with oil globules; it was readily acted on by liquor potassæ, and when treated with this re-agent frequently gave rise to an abundance of tubes, filaments, and globules of myeline. The particles forming the roe-like masses were composed of a large central mass or nucleus of similar caseous matter densely clothed with radiating crystals. These, when the particles were compressed beneath a cover-glass, appeared as fringes of a feathery aspect surrounding a central mass of amorphous matter, and when a current was induced by the addition of a drop of water to the slide, the crystalline fringes were seen to become bent in the direction of the current, as may be observed in the adjoining woodcut—Fig. 3. Prolonged and careful microscopic examination failed to reveal the presence of any fungoid elements notwithstanding the use of most various re-agents. Some of the particles having been first treated with chloroform were immersed in liquor potassæ and kept under observation during several weeks. They appeared at first to be partially dissolved, and were subsequently deposited in the form of a whitish gelatinous layer on the side of the test tube in which they were kept. The material of this layer was found to consist almost entirely of beautiful tubes, filaments, and cysts of myeline of every conceivable form, affording an excellent opportunity for the study of the many curious and complex forms which matter of such nature is capable of assuming (*vide* Fig. 4, page 88.)

Microscopic examinations.

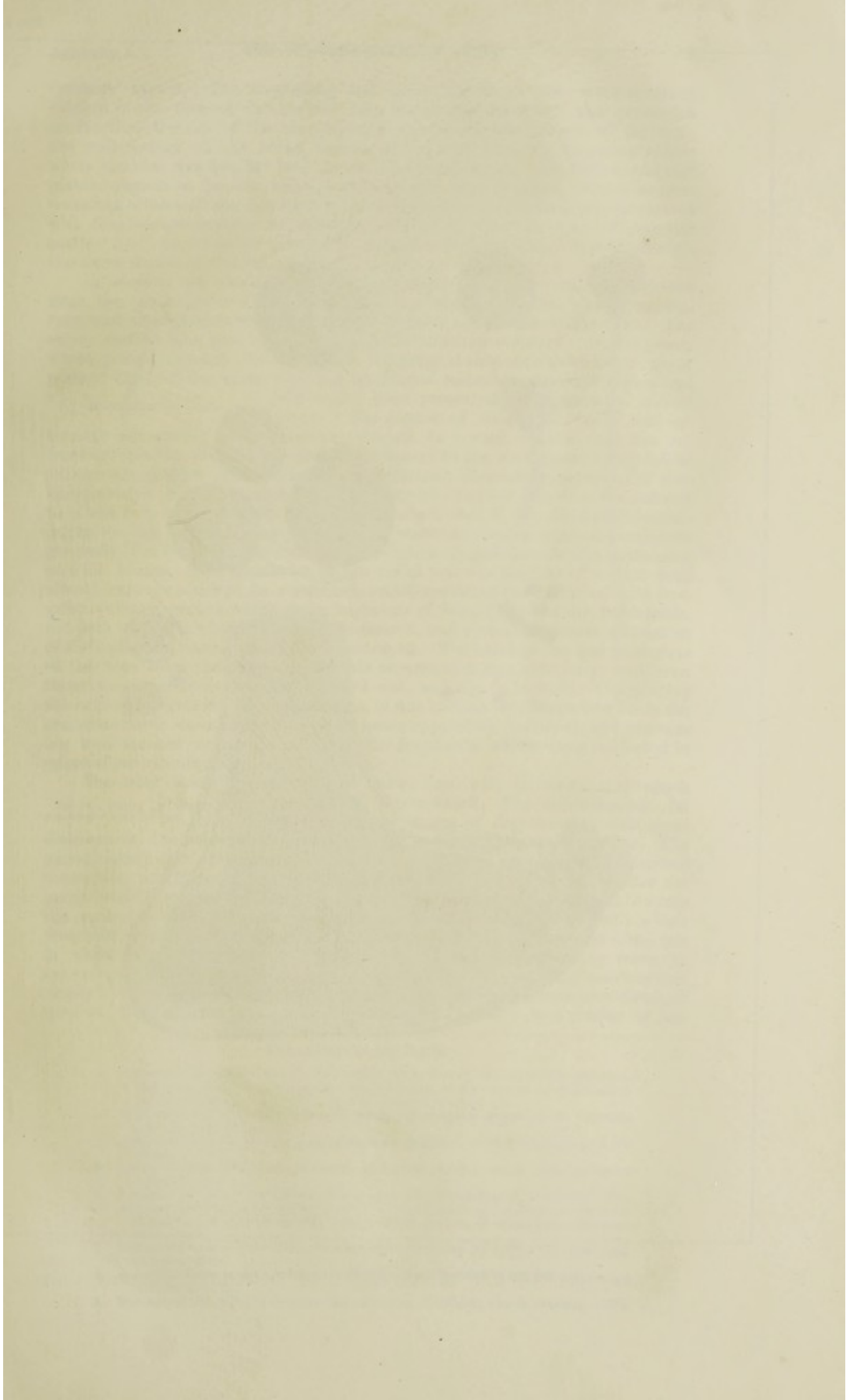
Condition of the bones.

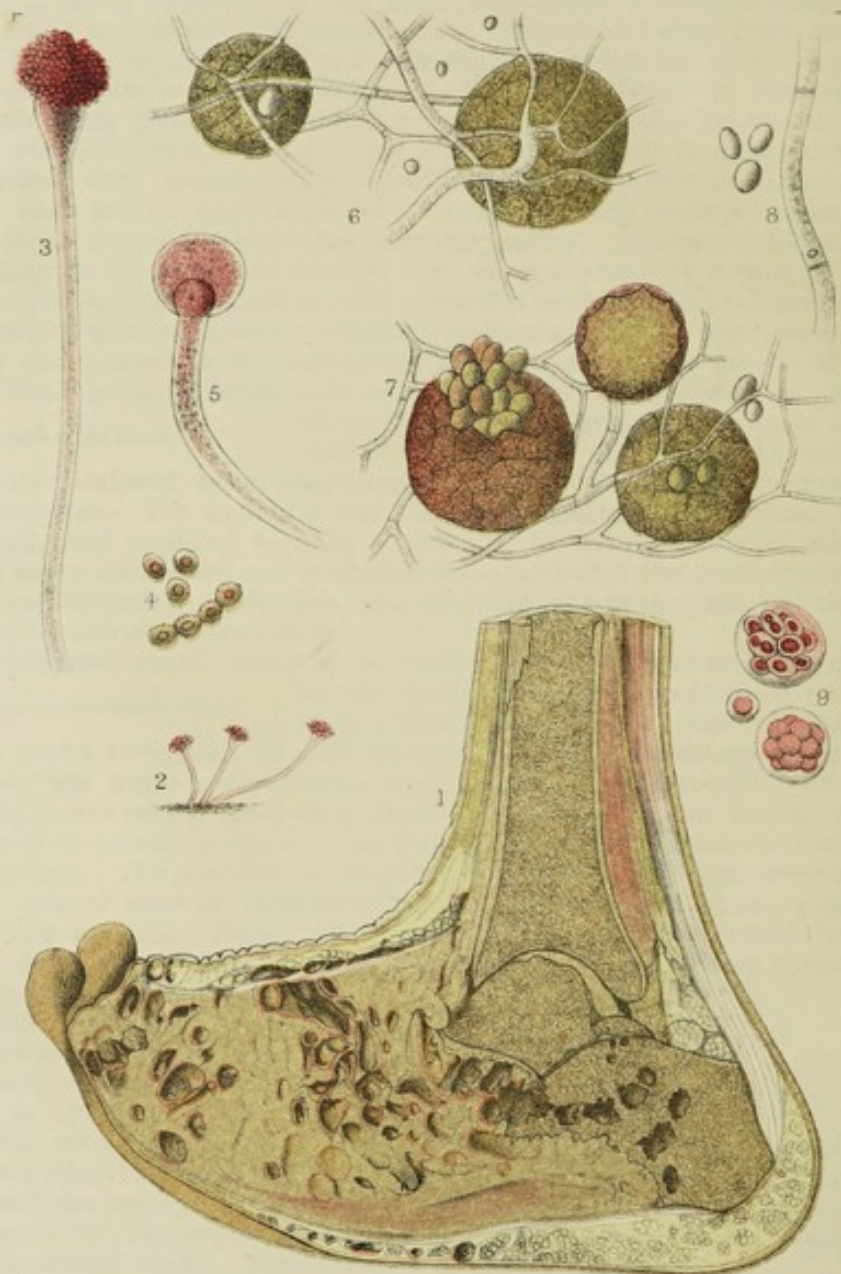


Fig. 3.—A roe-like particle under a moderate power, with feathery crystals adherent to it; the latter curved at one part owing to a current being induced on the slide.  $\times 100$ .

**SPECIMEN III.**—A foot and ankle-joint (Plate I, Fig 1.) This foot was enormously enlarged transversely, and the toes were shortened, turned upwards, and more or less drawn backwards into the foot, so that the latter presented a peculiarly thick,

Description of Specimen III—Roe-like bodies and chalky crystalline masses.





THE FUNGUS - DISEASE OF INDIA  
PALE VARIETY &c.

'stumpy' aspect. The shortening and upturning of the toes were specially marked in the case of the second one, where the distortion had proceeded so far that the tip of the toe projected upwards on the dorsum of the foot; the nail resting on the dorsal surface of the foot and only becoming visible when the toe was forcibly bent forwards in some degree. On both dorsal and plantar aspects of the foot, there were numerous mammillated projections surrounding orifices of the diameter of crow or goose-quills, which communicated with channels penetrating the substance of the foot, and from which soft granular matter could be forced by pressure. Amputation had been performed through the lower fourth of the leg.

A section was carried completely through the foot, dividing the tissues from the space between the second and third toes to the centre of the calcaneum and thence upwards through the astragalus and middle of the tibia. The entire section was performed with a knife from an ordinary dissecting case, which passed through the bones with the greatest ease save towards the upper portion of the tibia, where a certain amount of resistance was experienced and

Condition of the bones.

where the bone presented an apparently normal aspect. The disease of the tarsal bones was extremely advanced. The astragalus retained its normal outline, but was extremely open in texture internally, the spaces in the bony tissue being full of yellow oily matter, and here and there containing distinct aggregations of roe-like particles. The greater portion of the front half of the os calcis was reduced to a soft pulp containing irregular excavations bathed in oily fluid and abounding in roe-like particles. The posterior half resembled the astragalus in condition generally, but contained several distinct cavities of considerable size containing roe-like bodies. The remainder of the tarsal bones in the line of section were almost entirely reduced to a softened, undifferentiated mass, riddled with irregular cavities, and in which mere fragments of bone remained distinguishable, the arch of the foot being entirely obliterated, and even the faintest indications of the individual bones having been destroyed. The bases of the first phalanges of the toes were the first recognisable osseous elements anteriorly, and even these were extremely softened, opened out, and oily in texture. Considering the extreme degree of the degeneration, it was curious to observe how little the muscular tissue was affected, the fibres being apparently unaltered, and presenting well marked striæ in almost all the fragments which were subjected to microscopic examination.

The fatty tissue throughout the entire foot was, however, very much altered and degenerated. The subcutaneous fat showed various stages of degeneration with great distinctness, the nests of fat-cells appearing in three distinct forms: (a) The normal loculi of connective tissue filled with apparently healthy fat, the capsule containing the fat being seemingly unaltered, and the cells of the latter not being readily separable from it. This condition was specially present towards the posterior portion of the sole and behind the heel. (b) Loculi which presented pretty much the same appearances as those in the previous form, but in which the contents were more or less gelatinous, caseous, or waxy in appearance and consistence; in many cases, in fact, approaching more or less closely in their characters to those presented by the ceruminous secretions of the ear. Two or more loculi were here and there blended to a greater or less

Various stages of degeneration among the fatty tissues.

EXPLANATION OF PLATE I.

1. Section of a foot affected with the Pale variety of the disease, showing cavities and channels in the substance of the tissues. Isolated masses of subcutaneous fat of the sole of the foot are seen to be affected by the degeneration (*vide* page 11.)
2. Rose-colored variety of *Aspergillus* developed on the roe-like masses of the degeneration (*vide* page 109.)  $\times 60$ .
3. Separate filament of the *Aspergillus* more highly magnified, showing the staining of the plasma.  $\times 250$ .
4. Spores of *Aspergillus* from the same cultivation, showing normal and rose-colored varieties.  $\times 950$ .
5. Young head of *Mucor* from the same cultivation, showing red-coloring of the contents.  $\times 250$ .
6. *Eurotium* developed on the surface of a fluid in which portions of the degenerate material from a foot affected with the pale variety of the disease, were immersed (*vide* page 107.)  $\times 400$ .
7. Rose-colored variety of the same *Eurotium* occurring beneath the fluid in the same cultivation.  $\times 400$ .
8. Specimens of spores and a portion of a filament from *Eurotium* developed on cartilage in Calcutta.  $\times 600$ .
9. Rose-colored cells (*Alga?*) developed in a cultivation of choleraic excreta in water.  $\times 300$ .





There were numerous slight elevations on the surface of the skin, beneath which minute dark coloured points could be seen. These were hard to the touch, and in some cases small openings could be detected leading inwards towards them from the surface. On dissecting down upon them, these points were found to consist of isolated dull, yellowish, more or less spherical bodies of firm, waxy consistence (*vide* Plate II, Fig. 5). They were easily compressible, and spread out into a greasy smear on the surface of the glass on which they were examined. Both as regards microscopical appearance and effects of re-agents they coincided exactly with the ceruminous masses of the previous specimen (page 84) or with the nuclei of the common roe-like particles. The subcutaneous fat was carefully examined under a low magnifying power, and a sprinkling of similar bodies was detected in and removed from it. It was quite evident that these were local degenerations of portions of the normal fatty tissue, lobules or aggregations of fat cells being discovered in various stages of modification from mere slight condensation of the contents of the cells up to the formation of firm, waxy grains or concretions, which, in the more advanced cases, had lost all organic connection with the surrounding tissues, and were manifestly only capable of acting as foreign bodies (Plate II, Figs. 5-6).

Microscopic examinations here too failed to show any traces of the presence of vegetable organisms, the degenerated material consisting solely of waxy, amorphous matter. No distinct roe-like particles were to be found by the unaided senses, and the microscope showed an entire absence of fringes or other crystalline forms in connection with the concretions. In this case the degeneration was evidently merely commencing, and had not yet advanced so far as to pass on to the formation of crystals, but as the case was one of comparatively short duration—the patient had only suffered from the disease for one year—this was only what might, perhaps, have been expected, and the probability is that the absence of the characteristic roe-like particles was due to this, and not to any peculiarity in the morbid process.

**SPECIMEN V.**—A collection of the roe-like particles discharged from the foot in a case previous to amputation.

These presented no special peculiarities, and were composed of the usual aggregations of masses of fatty matter of waxy consistence fringed with feathery crystals. No signs of fungal or other vegetable elements could be detected in them.

**SPECIMEN VI.**—A specimen of diseased tissues from a foot, comprising both bones and soft parts, which had been dried in the sun. This was obtained in order to provide materials for cultivation, and presented nothing in any way peculiar. It contained an abundance of the characteristic roe-like bodies, and, as usual, was devoid of all fungal elements.

**SPECIMEN VII.**—This consisted of transverse sections through the lower portion of the leg in a case of this form of the disease.

All the fatty and fibrous tissues were extremely gelatinous, and the preparations were characterised by an extreme profusion of minute, bright rose-coloured bodies, which were sprinkled over the surface of the tissues and formed an abundant deposit at the bottom of the fluid in which the specimen was preserved. They were so abundant as to give the sections the appearance of having been sprinkled with red pepper, and at once to attract attention to their presence even whilst still in the bottle in which they were preserved. On careful examination they appeared to be mainly, if not wholly, confined to the surfaces of the sections, as in no instance could it be clearly ascertained that they were present in freshly exposed portions of the tissues. As a rule, they appeared to be quite loose in the softened gelatinous matter of the degenerated tissues, but here and there they seemed to be entangled amongst, or attached to filaments of, connective tissue. Their intimate nature will be described farther on, but it may in the meantime be stated that they showed no signs of containing any fungal elements, or of being in any way related to such bodies; and that we are strongly inclined to believe that the number of them present in the specimen increased whilst it remained in our hands.

## CHAPTER IV.

## PHYSICAL CHARACTERS AND RELATION TO SURROUNDING TISSUES OF THE MORBID PRODUCTS USUALLY ASSOCIATED WITH THE PALE VARIETY OF THE AFFECTION.

Having now given some examples of the materials illustrative of this form of the disease which we have examined, and which have formed the basis for our views regarding its nature and causation, we may next proceed briefly to state what these views are. We shall confine our attention at present to it and leave the question of its relation to the other variety to be discussed at a subsequent page. We have, as the above illustrative cases may serve to show, totally and absolutely failed to identify the presence of any

The degeneration may occur without the local presence of any parasitic organisms. fungal or other parasitic elements in any of the specimens which we have examined, and we believe that we have good grounds for denying the necessary coincidence, and consequently, much more the causative connection of the presence of any parasitic organisms at all with the morbid changes present.

We have studied very various stages of the disease, and in all alike has there been an absence of any demonstrable parasites; but more than this, we have been able to trace out a series of modifications of the elements of the normal tissues terminating in lesions and degenerations which are quite capable of accounting for all the appearances present in the most advanced stages, and which, therefore, render the assumption of the essential agency of a parasite not merely unnecessary, but even inadmissible. Why this degeneration should occur, and why it should be specially localised in the extremities, we cannot say, but we believe that we have good grounds for the assertion that this variety of the disease primarily is essentially a degeneration of the fatty tissues independent of the local presence or influence of any parasites whatever.

In a very early stage of the disease, as, for instance, in Specimen IV (page 85), The disease essentially a degeneration of the fatty tissues. we found mere alterations in the normal fat, and in more advanced cases we have been able to trace such degenerative changes onwards. That the degeneration is essentially one of the fatty tissues, is not only evident from the nature of its ultimate products, but from the localisation of the primary foci of the diseased action. These foci are invariably situated in localities abounding in fat, in the sub-cutaneous adipose tissue, in the sub-fascial or inter-muscular connective tissue, and in the cancellated tissue of bones, and specially in spongy bones abounding in fatty matter.

Nature of the degenerative process. The degenerative process appears to consist in a gradual condensation and inspissation of the contents of the fat cells, with a coincident diminution and disappearance of the vascular supply of the lobes and lobules of the adipose tissue, and an ultimate solution of the interstitial connective tissue and cell membranes. The latter process appears to occur by mucoid or gelatinoid softening, and to result in the formation of the gelatinous matter in which the altered constituents of the fat are so frequently found to be embedded. Whether the affection, however, primarily originates in the fat itself, the connective tissue, or the lymph-spaces, we are not in a position to state. Once such a degenerative process has occurred, the masses of fatty concretions and gelatinous substance resulting from it are virtually portions of dead matter, really external to, and unconnected with, the economy, and little prone to change save in so far as the fatty constituents tend towards the assumption of crystalline forms. Such foreign extraneous substances must naturally tend to excite a certain amount of irritation in the surrounding tissues, causing a thickening of the connective tissues around them, and the gradual formation of cyst-like cavities so characteristic of the disease. A further progress of the irritant action may ultimately lead these cysts to open into one another, thereby forming irregular cavities, and cause the

formation of channels lined with a membrane of connective tissue, and in many cases opening externally and allowing of the escape of the products of the degeneration.

The degree to which the degeneration may proceed varies greatly in different instances, as also does the proportion which the fatty and gelatinous products bear to one another. In some cases we find roe-like masses and other crystalline elements in comparatively small proportion, while the tissues are bathed in an abundance of oleo-gelatinous fluid. In other instances the separation of the fatty and gelatinoid materials is found to have advanced to a high degree, and distinct cavities containing roe-like masses of fatty concretions characterise the tissues. Once, however, the gelatinoid degeneration of the connective tissues and an alteration in the fat cells with obliteration of the vascular supply have occurred, it is not necessary that distinct concretions should form in order to cause the degenerate matter to act as a foreign body and lead to the formation of cavities, with channels and openings for its discharge. Specimen I (page 8) afforded a characteristic example of this; for in it, although the degeneration was widely diffused and the characteristic openings were present on the surface, the amount of roe-like, crystalline concretions was comparatively small.

The amount and nature of deformity present in different instances vary with the degree in which the various tissues have been involved, and in which an hypertrophy of the fat and connective tissues has coincided with the degeneration. In almost all cases there is an apparent thickening of the affected extremities, which is sometimes real and due to thickening of the masses of connective tissue in some places, and to their being opened out into cavities in others. An apparent thickening may, however, be to a great extent independent of any hypertrophic changes, being in many cases due to a folding or crushing together of the tissues induced by the action of the muscles and tendons on the softened non-resistant bones. In the case of the lower extremity, the mere mechanical weight of the body in many cases contributes to the production of deformity, as may frequently be seen in cases where the calcaneum has been much affected by the degeneration. The precise nature of the deformity is, of course, determined by the degree in which all these factors come into play; but one of the most common results of their action on the lower extremity (in which the disease most frequently occurs) is an obliteration of the arch of the foot and a turning upwards, or even backwards, of the toes. The latter phenomenon is due to muscular action, and may cause it to appear as though a great amount of thickening of the tissues of the sole had occurred, when, in fact, little or nothing of the kind has taken place.

In describing the specimens, reference has been already made to the characters of the various morbid products constituting the ultimate results of the degeneration, and this may suffice in so far as the majority of them are concerned. There are, however, one or two points regarding which somewhat fuller details appear to be necessary. These refer to the ordinary fatty concretions, and specially to the character and nature of the peculiar coloured particles which occurred in such abundance in Specimen VII (page 85).

In so far as the common fatty concretions are concerned, it is rather a caution as to the interpretation of phenomena connected with them than any further description which we wish to give here. As previously mentioned, these concretions, under the influence of various re-agents, very readily give origin to an abundance of that curious and ill-defined substance which Virchow has termed myeline. A development of myeline is specially prone to occur where portions of the fatty matter, roe-like masses, &c., freshly removed from an alcoholic preparation, are subjected to the action of liquor potassæ. The multifarious and highly complex forms of tubes, filaments, globules, and cysts, which may frequently be observed to become developed—shooting out, and, as it were, growing from the globules and aggregations of fatty matter, are

wonderful, and such that they could hardly be believed to owe their origin to any such process or material were not their development distinctly traceable through all its stages.

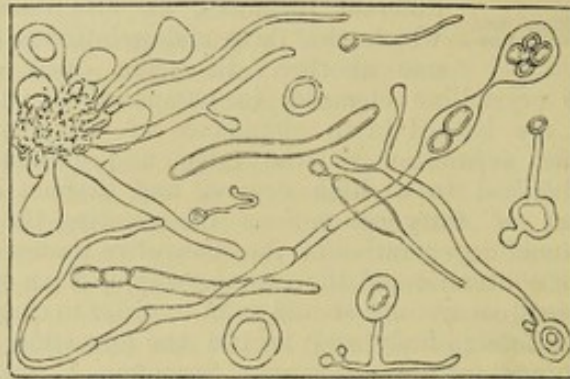


Fig. 4.— Various fungi-like forms assumed by 'Mycoline'  $\times 500$ .

From the extremely organised nature of their appearance, they are, as the accompanying figure will show, peculiarly liable to be mistaken for fungal growths, especially by those who are unused to the practical study of such bodies and to the various appearances presented by complex oily compounds, and it is necessary that very great caution should be exercised in the interpretation of such phenomena. Bodies of this nature are usually very transitory, but they may persist for weeks, as was exemplified in the preparation referred to in the description of Specimen II (page 80), and they may in some cases be even suffered to dry up more or less completely without losing their peculiar forms.

The physical conditions, moulding a plastic semi-fluid material into peculiar forms, probably produce much the same effects, whether the material acted upon be endowed with vitality or not, so that the close resemblance of these organic to truly organised forms need be no special cause for surprise. We have, however, in the course of investigation been more and more strongly impressed with the necessity of caution in deciding on the nature of equivocal bodies merely from their outward appearance and morphological characters, and we believe that this necessity is one which holds good, not only in regard to the morbid products of the disease forming the subject of the present report, but also with equal force to the interpretation of the appearances present in many other cases, and specially in the so-called parasitic skin diseases.

Often difficult to distinguish vitalised from non-vitalised products.

## CHAPTER V.

PHYSICAL CHARACTERS AND INTIMATE NATURE OF THE RED PARTICLES  
OCCASIONALLY ASSOCIATED WITH THE PALE VARIETY OF THE FUNGUS-  
DISEASE OF INDIA.

The peculiar red particles referred to as being present in Specimen VII (page 85) demand more special consideration. As previously mentioned, on consulting the literature of the subject, it will be found that they are of such rare occurrence in connection with the disease, that they can hardly be regarded as characteristic of it. Considerable weight has, however, been laid on their occasional presence, in favour of the fungal or parasitic nature of the degeneration, and we therefore gladly availed ourselves of the excellent opportunities which we had of closely investigating their nature.

In the present case, the red coloring was absolutely confined to the particles; there was no staining of the tissues in connection with which they occurred. The particles, as previously stated, immediately attracted attention, as an abundant sprinkling of minute, bright, red points or grains scattered over the tissues and deposited on the sides and bottom of the vessel containing the preparation. Their size varied considerably in different instances, but in the greater number ranged from  $\frac{1}{120}$ "  $\times$   $\frac{1}{120}$ " to  $\frac{1}{90}$ "  $\times$   $\frac{1}{120}$ ". Their outline was generally rounded or oval, but many more or less irregular forms also occurred; these might, however, be almost always ascribed to the occurrence of fracture or rupture of the commoner forms, or to the union of several particles into an aggregate (*vide* Plate II, Figs. 3—4).

The figures in the plate show the principal varieties of forms present, and that they were all modifications of the round or oval primary one. Many of them, in place of having an even surface, were more or less tuberculated or knotted; others were constricted in the middle, or even actually separated into two portions with an intervening space; others were aggregated longitudinally in a moniliform fashion, or formed irregular heaps; whilst others, again, were ruptured and, as it were, unfolded. The colour, when fully developed, appeared bright vermilion to the naked eye, and under the microscope passed from this into a rosy carmine, according to the degree of magnifying power employed. The colour of the particles was, however, by no means uniform in intensity in all instances, a faint red or pinkish tinge being all that could be determined in many, whilst in others the red colouring was entirely absent, and they were of a dull buff or yellowish hue. The latter particles did not, in other respects, in any way differ from the most highly colored particles in appearance. In some cases, as fractured specimens showed, the particles were solid and seemingly homogeneous throughout, but in others they appeared to contain a central cavity—an appearance which, as will appear farther on, was not a deceptive one.

When examined under comparatively high powers, from 400 to 1,500 diameters linear, they appeared to be composed of a finely molecular material. In some instances they presented a homogeneous aspect, but in others they had more or less of a cellular appearance, being marked out into areas by obscure double lines. This appearance was, in some cases, not dependent on any true cellular structure, but was due to the existence of irregular fissures running through the substance of the particle and extending from the central cavity when the latter was present. In other instances, however, the phenomenon appeared to be of a different nature, and the structure of the particles seemed yet to retain the traces of the fat cells out of which they had been formed.

Beyond these characters nothing could be ascertained regarding the nature of these particles by microscopic examination alone, and recourse was accordingly had to the use of re-agents. In working at the chemistry of the subject, we had the great benefit of the advice of an accomplished chemist, Mr. C. H. Wood, the Quinologist to Government, who not only suggested the use of various tests, but also tried some of them for us himself. We shall now give an account of the effects produced by the various methods and re-agents employed, and shall subse-

quently state the conclusions at which we have arrived in regard to the nature of these curious bodies. It was very easy to procure large numbers of the particles free from other materials, as, owing to the fact that their specific gravity is very high, they were rapidly deposited when shaken up with water and allowed to subside.

1. *Liquor Potassæ*.—This at once changed the rosy color to a dull buff-yellow, but produced no further effect when the ordinary pharmacopoeial preparation was used; even when the particles remained for prolonged periods immersed in an excess of the re-agent. When, however, a concentrated solution was resorted to, the particles were slowly dissolved.

2. *Liquor Ammoniacæ*.—The effects produced by this re-agent were precisely similar to those of the dilute liquor potassæ.

3. *Hydrochloric Acid*.—This when dilute produced no effect, save somewhat brightening the red colour in some instances. When applied to specimens which had been previously treated with potash or ammonia, the red coloring was in general at once restored, and the processes of discharge and restoration of colour could be frequently repeated by means of alternate applications of the alkaline and acid re-agents.

4. *Nitric Acid*.—The effects of this when dilute were precisely similar to those of the previous re-agent.

5. *Sulphuric Acid*.—This when weak acted similarly to the other acids. When strong, it broke up and partially dissolved the particles.

6. *Acetic Acid*.—The action of this was precisely similar to that of the weak mineral acids.

7. *Chromic Acid*.—This at once destroyed the colouring of the particles on coming in contact with them. A development of bubbles of gas then, generally, occurred within the substance of the particles, more especially in those containing a distinct cavity in their interior, and the formation of such bubbles, followed by their gradual expulsion through fissures, where such were present, continued for some time. Short tubes and globules resembling myeline were then gradually given off from the surface of the particle, and, growing outwards, ultimately were detached from it. After this the mass became more and more obscure and dimly molecular, and finally remained as an indistinct molecular flake.

8. *Liquor Iodi*.—This produced no effect, save somewhat browning the bright rosy tint of the particles where it came into contact with them.

9. *Benzene*.—Some particles having been carefully prepared by successive washings with water, alcohol and ether, were then subjected to the action of boiling benzene for more than half an hour. Their colour, which had been partially discharged by the action of the alcohol and ether, entirely disappeared and they assumed a somewhat fatty aspect. They were, however, otherwise unaltered and showed no tendency towards solution.

11. *Chloroform*.—This produced much the same effects as benzene.

12. *Sulphide of Carbon*.—The action of this resembled that of the two previous re-agents.

13. *Heated Oil*.—Prolonged immersion in olive oil at 212° F. produced no effect on the particles, save, perhaps, a slight alteration in their colour.

14. *Heat*.—On placing particles on a capsule or sheet of platinum and exposing them cautiously to the heat of a spirit lamp, they were found to become blackened almost immediately, their surfaces assuming a jet black color

Effects of heat on the red particles.

and glistening appearance, as though they were partially melted. At the same time their outline frequently became somewhat irregular, and a distinct but very transitory smell resembling that of burned feathers was given off. On subsequently applying the blow-pipe and subjecting them to a bright red heat for a moment, the particles were found on examination to have become partially white—in many cases almost entirely so—a mere sprinkling of minute black points remaining on the surface. When still further heated, all blackness finally disappeared, and the particles were either pure white, or partially white and partially rusty brown, in colour. Though possibly somewhat smaller than they had been previous to exposure to heat, they yet retained their characteristic forms almost intact, and by careful manipulation could be removed entire and submitted to microscopic examination. They were then found to consist of shells or skeletons of inorganic matter, the particles of which had a more or less crystalline aspect.

Their outlines, and general forms under the microscope, too, were very frequently almost identical with those of the original red particles. The material of which they were composed was either entirely colourless, or more or less stained, of a bright rusty-brown or yellowish tint. When the former was the case, they were entirely soluble in weak acids, the solution varying in rapidity in different instances. In some cases it was accomplished quietly and without any evolution of gas, whilst in others effervescence occurred in various degrees. When, however, any rusty-brown matter was present, this remained in great part unaffected by dilute acids, but was readily soluble in strong hydrochloric acid, and if ferrocyanide of potassium were then added to the solution, an immediate development of blue colour took place. The presence of considerable quantities of iron in the ash of the particles may, perhaps, be even more strikingly demonstrated, in many instances, by treating the skeletons of the particles with weak acid whilst still on the platinum, and then adding the ferrocyanide, when each particle immediately becomes of a deep Prussian blue.

Such have been the result of our investigations into the structure and composition of these peculiar bodies, and we have now to consider the question of their real nature. Save in regard to some vague points of form, they present nothing which can in any way suggest that they are of a vegetable or parasitic nature. Even in regard to form, too, they show nothing which may not frequently be found in concretions of various kinds; for, although some of the appearances may in some degree appear to suggest a process of multiplication by cell division, they may all be readily accounted for by mere mechanical processes of aggregation and fracture. Taking everything into consideration, we have no hesitation in affirming them to be mere concretions, containing varying proportions of mineral matter in the form of phosphates and carbonates, and, in many cases, combined with a considerable quantity of iron. The presence of carbonates, phosphates, and of iron, was clearly demonstrated by the action of re-agents.

To what their brilliant rosy coloration is due, we are unable satisfactorily to determine; but, as we shall hereafter see, the fatty matter of the degenerate tissues in the pale variety of the Madura disease has, under certain circumstances, a tendency to give rise to the development of such colouring. The red colouring is, moreover, not an essential character in the concretions; for, as previously mentioned, numerous specimens occurred of precisely similar nature to the most highly coloured ones, save in being of a buff or yellowish hue in place of bright carmine, whilst many other intermediate forms were present showing various degrees of staining. The specimen in which they occurred was preserved in strong glycerine, and there appeared to be a gradual but considerable increase in their numbers whilst it was kept under observation. In studying the conditions under which a development of red colouring matter occurs in connection with the fatty products of the ochroid variety of the Madura disease, we have observed that one of them appears to be the existence of more or less decided acidity, and it is noteworthy that, in the present instance, the glycerine was distinctly acid in re-action. The results of attempts at cultivation of the red particles will be given subsequently, but in the meantime we would repeat that they appear to us to be mere concretions, probably formed from the degenerated tissues—the proportion of constituents furnished by the latter varying in different instances. Possibly they owe their red hue to a substance analogous to the colouring matter of the blood—just as other pigmentary substances are believed to do.



## CHAPTER VI.

## A DESCRIPTION OF SPECIMENS ILLUSTRATIVE OF THE DARK VARIETY OF THE FUNGUS-DISEASE OF INDIA.

Having given a minute description of several examples of the pale variety of the fungus-disease, we now proceed to give a similar description of a few typical specimens of the dark variety. Instead, however, of giving a full account of the peculiar substance which is characteristic of all of them, we shall defer the details of the more minute investigations of it until the general appearance of the specimens has been described. This will economise space without sacrificing exactness, for this dark substance does not materially vary in the different specimens.

**SPECIMEN I.**—A glance at the accompanying sketch of a longitudinal section of the left foot of a native will convey a more accurate conception of the state of the tissues in this disease than any verbal description. An ordinary scalpel was made to pass through the tissues from the inter-digital space between the second and third toe in a line towards the middle of the tibia and through the centre of the ankle joint. The scalpel passed readily through all the tissues, except the tibia and the portion of the astragalus articulating with it. The foot is en-

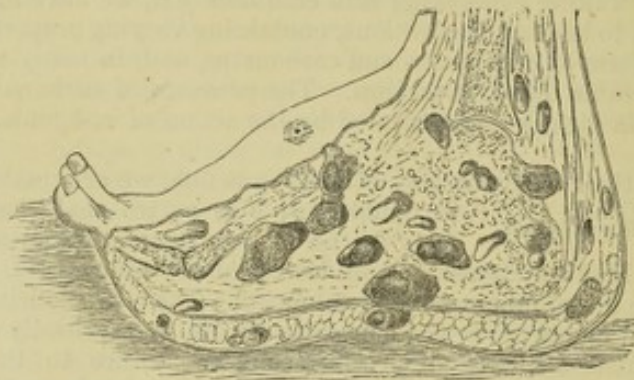
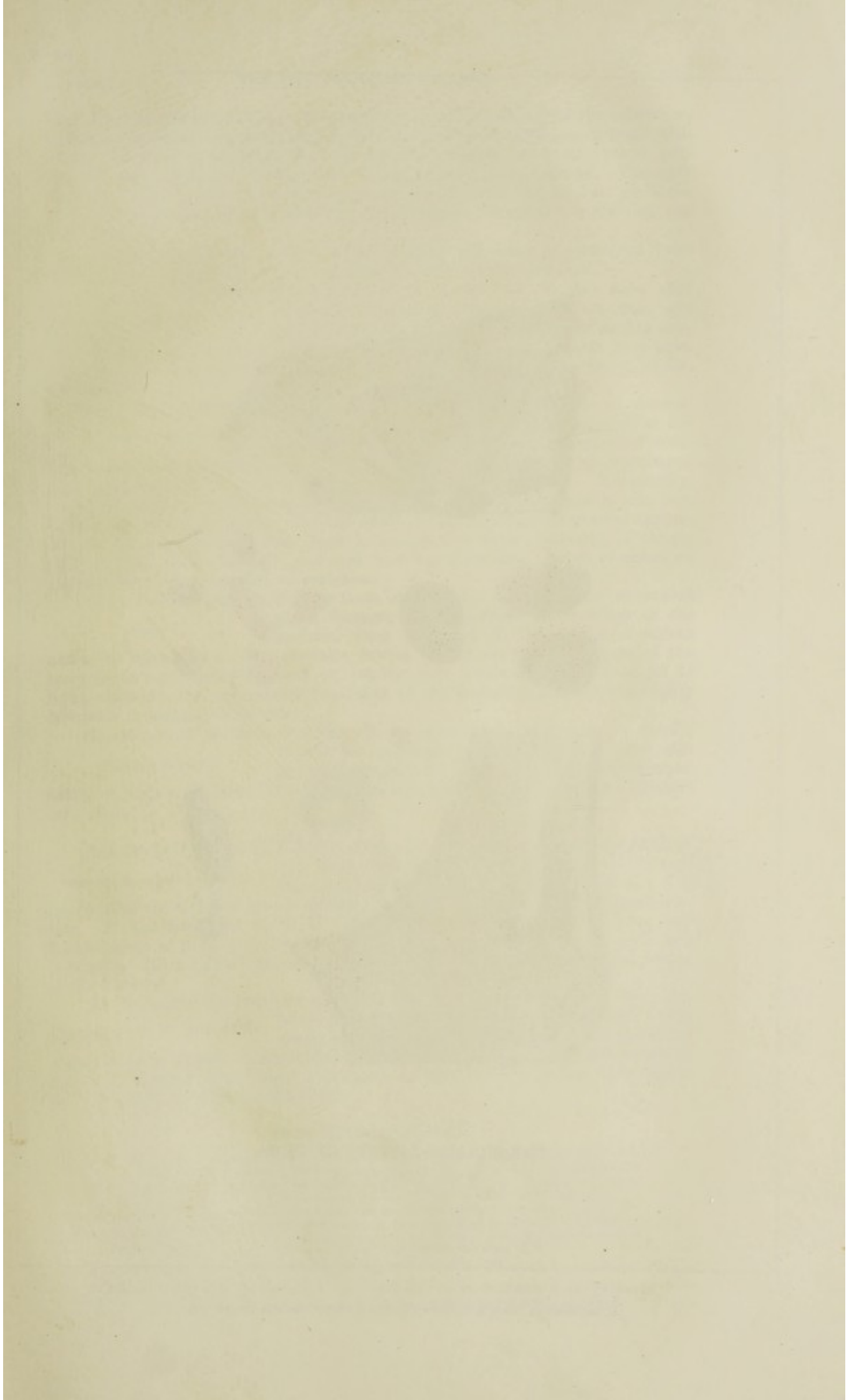


FIG. 5.—A section through an affected foot showing numerous cavities with dark masses *in situ*. Isolated areas of affected tissue in the subcutaneous fat of the sole are also distinguishable.

larged in all directions; the toes are turned upwards in the same manner as may be observed in the Specimen in Plate I, delineating the pale variety; and there are several openings on the surface which may generally be found to be continuous with a cavity in the tissue below. Some of the orifices are plugged, more or less completely, by irregular-shaped little aggregations of black substance which can be picked out. On examining the section, the outlines of the tarsal bones cannot be made out; but, as the figure shows, the bones occupy an irregular space, perforated by numerous excavations in all directions. The middle portion of the metatarsal bone, exposed by the section, is found to be broken down, and the arch of the foot completely given way, so that the natural direction of the longer bones of the foot and the toes has become altered. Between the first phalanx of the second toe and its corresponding metatarsal bone, a new articulating surface has been formed on the dorsal surface of the latter.

The cavities are in some cases isolated, but in others they communicate by means of one or more channels with adjoining cavities, the cavities and channels being everywhere lined by a more or less dense, smooth membrane of tough fibrous tissue. The cavities are of very unequal size; they vary from being just large enough to contain a pellet of small-shot to being sufficiently capacious to hold a bullet with





THE FUNGUS-DISEASE OF INDIA  
DARK VARIETY &c.

ease. They almost invariably contain irregular lumps of a dark granular substance, which, more or less completely, fills the cavities and the channels continuous with them. Frequently, however, the dark material occupies but a very small portion of the cavity, even though the cavity be completely isolated. The fatty padding of the sole of the foot appears to be normal, but in two or three places small groups of the lobules have been replaced by cavities containing the dark material.

Numerous fragments of tissues immediately adjoining the cavities were subjected to careful microscopic examination, with results as follow:—

(1.) Muscular tissue from various parts of the foot: for the most part in a tolerably normal condition; at one spot only could distinctly disintegrated fibres be distinguished. All the samples were subjected to the influence of various re-agents, including the free use of liquor potassæ, but nothing peculiar could be distinguished.

(2.) The membranous lining of the cavities and channels or sinuses. This consists of ordinary fibrous tissue, and is microscopically in no way to be distinguished from similar tissue lining cavities in other abnormal conditions. Such specimens were purposely obtained with a view of instituting comparisons. Frequently, re-duplications of fibrous tissue formed septa, so as to separate a cavity into partially distinct compartments. Neither could we distinguish any unusual appearance in the tissue forming these septa, although they were necessarily in immediate contact with the dark material in every direction. Every re-agent we could think of was resorted to here also.

(3.) Small fragments of bone from immediately adjoining the excavated parts, forming in fact the osseous boundary of the cavities, were subjected to the action of potash under the microscope. The granular matter filling up the interstices of the bony tissue was rapidly disposed of, but no new structures were brought to light, although the opened-out condition of the cancellated tissue was highly favorable to accurate inspection.

The nature of the dark material will be considered further on in detail; it will be sufficient here to state that, after subjecting fragments of it to more or less prolonged action of liquor potassæ, numerous filaments and cellular bodies were brought into view.

**SPECIMEN II (Plate II, Fig. 2).**—This preparation consisted of the right heel and ankle—amputation having been performed through the lower fourth of the tibia and fibula. The fore part of the foot had been removed. It was in an excellent state of preservation. It had been put up by Dr. Mark Robinson of Madura in brine, and forwarded to us without delay, as a specimen of the affection which, although possessing distinct black granules, was not one in which the tissues are extensively diseased.

Dr. Robinson also favoured us with a note as to the condition of the limb before amputation. His words are:—‘Right ankle much enlarged, and on both the inner and outer side numerous sinuses—a slight elevation round each opening. A thin yellowish discharge exuded from these openings: no dead bone to be felt by probing. He was unable to walk on this foot.’

#### EXPLANATION OF PLATE II.

1. Section of a specimen of the dark variety of the disease, showing a large mass in the substance of the second metatarsal bone, with cavities and channels containing black masses in the soft tissues. An isolated lobule of subcutaneous fat affected by the degeneration is present beneath the base of the first phalanx of the toe (*vide* page 97).
2. Section of another specimen in which the disease was principally developed around the ankle, showing the freedom of the tendons from degeneration, although surrounded by diseased tissue. In the subcutaneous fat of the dorsum of the foot several isolated spots of degeneration have been exposed by the section (*vide* page 21).
3. Red particles from a specimen of the disease (*vide* page 85),  $\times 40$ .
4. Similar bodies more highly magnified,  $\times 92$ .
- 5 6. Specimens showing transition of the subcutaneous fat into the caseous matter forming the concretions in the pale variety of the disease (*vide* page 13)—slightly magnified.

'After removal of the foot, a cut was made through the soft tissues of the ankle, and it was found that they were infiltrated with a yellowish gelatinous substance; the darker patches containing small black granules, the muscular tissue very dark in colour. No section was made through the bones, but they did not appear to be diseased. In the tibio-astragaloid joint there were some flakes of lymph, but the articular surfaces were smooth and bright.'

The lower part of the tibia was softened and the cancellated tissue pinkish, especially beneath the cartilage. The shaft was dense, normal in texture, and apparently healthy. The structure of the os calcis and the astragalus was, generally, very dense. The posterior portion of the astragalo-tibial articular surface was excavated and occupied by masses of black substance; there was also a cavity in the anterior part of the os calcis of the size of a small bullet, which was bounded by some very open bone texture. The cartilaginous portion of the os calcis was also eroded and the space occupied by black matter; but the cartilage was not affected to the same extent as the bones, so that projecting portions of it bridged over the hollow occupied by the black matter.

The remaining tarsal bones were softened so as to be cut easily with a scalpel, and in some places the texture was much softened and opened out.

The pad of fat usually found between the tendo Achilles and the posterior surface of the tibia surrounding the deep tendons, was completely converted into a mass of black matter continuous with that in the astragalus and os calcis. The deep tendons, although surrounded by this material, were unaffected and perfectly healthy.

The muscular tissue also was wholly unaffected.

There were various mammillated openings leading into cavities containing black granules on the surface of the foot and ankle.

On making sections through the skin of the foot, numerous perfectly isolated collections of black granules, like grains of coarse gunpowder, were found to occupy the loculi in the sub-cutaneous cellular tissue usually occupied by fat. In some an entire lobule of fat appeared to have been converted into a black mass and surrounded by a distinct firm capsule, and in others the lobules were only partially affected—a few black grains, each invested with a capsule, lying among the clusters of cells of the unchanged fatty tissue. This condition will be more minutely described in a subsequent chapter (Chapter VII, page 99).

**SPECIMEN III.**—A hand amputated about 3 inches above the radio-carpal articulation. The cut ends of the two bones of the fore-arm are unaffected. There are several openings on the dorsal surface of the hand, on the front of the wrist, on the ball of the

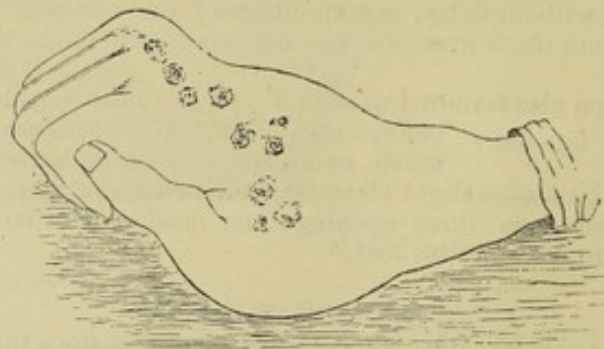


Fig. 6.—Peculiar distortion of the Hand in a specimen of the Dark variety of the affection.

thumb, and a few along the line of the superficial palmar arch. The hand is swollen and peculiarly distorted, as may be seen from the engraving (Fig. 6). The fingers are not themselves distorted, but are flexed and turned outwards owing to the action of the flexor muscles being continued after the disorganisation of the carpal bones. The nails are unaffected.

A section was made by means of a scalpel in a line extending from the space between the junction of the second and third phalanx to the point of junction of the ulna with the radius at the wrist. The knife passed readily through the os magnum, the semi-lunar bone, and the outer articular edge of the radius. The distal end of the os magnum was found to be completely disintegrated, and between it and the upper end of the second metacarpal bone was lodged a mass of dark-brown substance, the brown tint predominating towards the centre, where it might almost be described as presenting a dark-red tint. Several other aggregations of dark material were found lying between this mass and the flexor tendons.

In the sub-cutaneous tissue along the back of the radius, there were several isolated little cavities, or cysts, containing aggregations of a cheesy, fatty substance mixed with black granules. They could be picked out separately for examination: in the dark masses filaments could be distinguished after prolonged immersion in potash; but in the yellowish, roe-like particles, picked out of the same cavities and similarly treated, no such filaments could be demonstrated when the particles were carefully selected. These isolated cavities were limited to the sub-cutaneous areolar tissue between the extensor tendons and the skin of the back of the wrist.

**SPECIMEN IV.**—Another hand, also amputated a short distance above the wrist joint. The hand was considerably thickened and the wrist swollen: the palmar surface was puffed up, and numerous openings both there, on the dorsal surface, and between the fingers, communicated with a large cavity within. A scalpel was carried longitudinally through the middle of the hand, the bones that still remained being readily divided, as well as the end of the radius for a short distance. All the carpal, together with a great part of the metacarpal bones, were destroyed, the basal half being the portions in the latter most affected. The phalanges were somewhat softened, but were not eroded, and contained no black matter. The metacarpal bone of the third finger was eaten out and rough, the destruction having proceeded so far as to separate the bone into two rough, irregular fragments. There was not much thickening on the uneroded surfaces. The cavities in the bones were not lined, and the bone presented the appearance of ordinary caries. The cancellous tissue of the end of the radius, and of such portions of the carpal bones as remained, was very porous and widely opened out. Where, however, the cavities were located among the soft tissues, they were lined by a membrane. The tendons were not affected.

The large cavity, referred to as communicating with the surface by means of various channels, occupied the space normal to the carpal bones, and was filled with fragments of these bones mixed with black granular material, which also extended into the channels alongside of the tendons.

The black material, after prolonged immersion in liquor potassæ, was found to contain filaments, but they were by no means so plentiful as ordinarily observed.

Not the slightest indication of any such filaments could be demonstrated in any of the parts, recognisable as tissues, whether diseased or healthy.

**SPECIMEN V** (Plate II, Fig. 1).—This was a portion of the left foot of a native, which had been removed by Chopart's amputation. There were several openings, with elevated margins, both on the dorsal and plantar surfaces of the foot, out of which dark granules could be picked. There was scarcely any thickening of the tissues of the dorsum.

The preparation was divided longitudinally into four segments. The appearance presented by the first section is delineated at Plate II: the scalpel is seen to have been carried through the middle line of the bones of the second toe. The central portion of the second metatarsal bone was, in great part, occupied by a dark-brown, spherical mass about an inch in diameter, shaped something like a potato and presenting a slightly radiating, finely-striated appearance on section. It was moulded to the cavity in which it was lodged, and its projecting nodules fitted accurately into adjoining cavities in the surrounding tissues. The upper portion

Specimen V—Anterior portion of the foot.

The preparation divided into four segments: Appearance of first section.

of the bone was curved, its tissue thickened and hardened, and the lower portion fractured, a splinter being carried in front and behind the dark globular mass, thus aiding in the formation of the cavity. The latter communicated with both the dorsal and plantar surfaces of the foot by means of irregular channels containing small black masses. The middle cuneiform bone was somewhat softened below.

There was another large cavity (visible in this line of section) situated somewhat behind the one just described and above the plantar fascia. It also contained dark tuberculated masses, and opened into several small cavities which communicated with the surface on the sole of the foot. There were other cavities of smaller size.

The second line of section was carried from behind forwards through the middle of the cuboid bone, the base of the fourth metatarsal, and the line between the latter bone and the third metatarsal. In this section the outer boundary of the large cavity was distinguished: it consisted of a delicate fibrous membrane just sufficient to partition off the cavity from another group of cavities and channels. This group appeared to have originated with a cavity in the third metatarsal bone. The base of this bone was intact at its articular surface, and for about a third of an inch forwards, but then became covered with rough, warty nodules of hard bone extending along the entire length of the shaft, the sclerosis being specially marked towards the basal extremity of the bone. Its under and inner surfaces were involved in the large cavity, and were more or less scooped out. Like the second metatarsal, this bone was also arched; the phalanx of the third toe was articulated to the dorsal aspect of the corresponding metatarsal bone; the toe was consequently directed upwards.

The third line of section was carried through the scaphoid, internal cuneiform, and the longer bones of the great toe. There were other centres of disease here also. A similar excavation had taken place in the metatarsal bone of this segment, and the cavity was occupied by a dark globular mass. As in the other bones, the upper surface of this was likewise curved, and the texture extremely dense, and its outer aspect presented a hard nodulated surface. The bones of the phalanges were unaffected. The scaphoid and cuneiform bones were reddish in the centre, as if from blood staining: the colour faded on exposure to air. Nothing peculiar could be detected in the reddish substance when examined under a microscope.

The tubercles along the affected metatarsal bones consisted of small, hollow, closed cavities, which could be shaved from the surface of the bone. Some were rounded elevations, like miniature limpet shells; others were elongated and even tubular. Their osseous walls were thin and very dense, and sometimes projecting spicules of bone were given off from them internally. Their contents consisted mainly of fat with a mixture of fibrous and connective-tissue corpuscles.

The black material was microscopically identical with the similar substance in other preparations—that is to say, it contained the usual filaments, but none of these could be found in either the muscular, osseous, or fibrous tissues of the surrounding parts, although carefully searched for by every known method.

## CHAPTER VII.

## PHYSICAL CHARACTERS AND RELATIONS TO SURROUNDING TISSUES OF THE BLACK MATERIAL FREQUENTLY ASSOCIATED WITH THE FUNGUS-DISEASE OF INDIA.

It must strike even the most casual reader, that the occurrence of these peculiar lumps of black substance in the midst of the tissues referred to in the last chapter, and especially in connection with Specimen V (page 97), is very remarkable; and no one will wonder that it has been found very difficult, or rather impossible, satisfactorily to account for their presence. It will have been observed that these masses have been found, speaking generally, under three conditions: (1), in small completely isolated cavities; (2), in large cavities more or less accurately moulded to their walls; and (3), as broken fragmentary masses lodged in irregular cavities and channels communicating freely with the surface.

As there is less disturbance of the surrounding tissues where the dark masses are found enclosed in minute cysts, they will present fewer complications, and are therefore more instructive than the large tumours described in connection with the last specimen, with all the extensive alterations which had taken place in connection with them; in other words the significance of the larger masses will become more evident after examination of the smaller ones which are found under less complicated conditions.

Whilst describing specimens of the pale variety, Chapter III (Specimen IV, page 80), and Specimens II and III (pp. 95,96) of the dark variety of the disease in the last chapter, attention has been drawn to the fact, that certain of the fat lobules in the sub-cutaneous tissues had undergone some alteration; whereas other, immediately adjoining, fat lobules were apparently in the normal state, or only altered to a trifling extent. Some of these altered lobules found in preparations of the dark variety of the disease have contained dark granules. The accompanying wood-cut of a dissection under a low power of a little group of this kind will more clearly convey our meaning. A little of the sub-cutaneous tissue from over the ankle joint of Specimen II (page 95) was removed and spread out under the dissecting microscope for the purpose of examining a minute dark speck in the midst of what seemed to be normal adipose tissue, and which seemed likely to prove to be the peculiar dark substance found in connection with the malady, enclosed in a capsule. This encysted little mass was found lying between two somewhat hardened, otherwise normal, healthy encysted aggregations of fat, as delineated in the engraving (Fig. 7), in which the lining membrane surrounding the dark material is represented as torn open. This capsule was, however, more dense than the capsules surrounding the ordinary fat masses, although it resembled them in general appearance. Microscopically it consisted of connective tissue, but with a smaller proportion of elastic fibres than those of the normal capsules. It was easily teased out. The material enclosed by the capsule consisted of an aggregation of smooth, black, ova-like particles, each of which was contained in a separate fibrous capsule similar in structure to the general investing capsule, so that the bodies were, although closely aggregated, quite distinct from one another. The black matter could be readily pressed out from the capsules, leaving the latter more or less empty.

Whatever may be the nature of the agent which determined the formation of this minute saccule of dark granules in the midst of saccules of fat cells, it can scarcely be doubted that it must be essentially identical in character with the agent which determined the formation of the large nodular masses in the midst of the bones and areolar tissue of the same pre-



Fig. 7.—Three encysted masses of altered adipose and connective tissue. The centre one torn open and showing the characteristic black granules.  $\times 6$ .



paration—the darkened material being in the two cases of precisely similar composition.

There are, moreover, many gradations in the character and extent of the changes between the two extremes just referred to. The accumulation of granules may considerably increase in size and the fibrous envelope become stronger (Fig. 8); this condition may become more and more marked, until eventually large portions of the ordinary tissue of a part become replaced by the black masses and their tough fibrous receptacles.



Fig. 8.—A fragment of the affected tissue from a foot, showing the thickened fibrous septa forming the cavities, some of which are seen to contain the black substance: a few particles of the latter are seen below, out of the cavities.

The physical characters of this peculiar dark substance are, briefly, these :

The variations in tint and the specific gravity of the dark material.

The colour varies from brownish-yellow to reddish-brown and black. The consistence of the different masses also varies somewhat, apparently according to the relative proportion of unchanged fatty material associated with it, upon which also the variations in colour appear to depend. The specific gravity also varies; generally it may be referred to as being somewhat greater than water. Some of the lumps, however, sink almost as readily as a stone when placed in this fluid. We have never seen examples of the substance that would float either in spirit or in water.

When placed under the blow-pipe it burns into a flame, giving off fumes suggestive of burnt feathers. After being subjected to this heat for some minutes, a very light dirty-white ash remains, portions of which under the microscope present a reticulated semi-cellular aspect. The ash dissolves slightly in water, and the solution yields a strongly alkaline re-action to test paper. The greater portion of what remains undissolved by the water is speedily dissolved by dilute hydrochloric acid, and the solution gives with sulphuric acid the characteristic re-action of a lime compound.

A fragment of bone from the same foot was similarly burnt, and the ash was found to yield very similar re-actions, except, perhaps, that the solution of the ash in water was less alkaline to test paper.

The dark material is insoluble in water and spirit, and only sparingly so in ether, but is almost completely soluble in potash. Weak acids do not materially affect it.

Since these remarks were in type we have received a note from Mr. C. H. Wood, at present the Officiating Professor of Chemistry at the Medical College, and whose assistance we have already had occasion to acknowledge in this Report, giving a brief account of the result of examinations of fragments of the black substance which he kindly undertook at our request. According to Mr. Wood, the material yielded—

Analysis of the black material by Mr. C. H. Wood.

Moisture (by drying at 100° C)	...	...	...	76.7
Mineral matter	...	...	...	1.4
Organic matter (containing a trace of fat soluble in ether)	...	...	...	21.9
				<hr/> 100.0 <hr/>

“In the dry state” Mr. Wood writes, “it is quite brittle and may be powdered. The ash is of a red colour from the presence of oxide of iron, but consists chiefly of calcium phosphate. The substance is unaffected by boiling water or acetic acid. Dilute hydrochloric acid gradually extracts a little colour from it, but the alkalis are its only solvents. It forms with potash a brown solution and softens in ammonia undergoing partial disintegration. In its chemical characters this substance somewhat resembles elastic tissue.”

The solution of the black material obtained, after subjecting the substance to prolonged ebullition in distilled water, does not yield any characteristic appearance when examined with the spectroscope; nor does a similar solution when treated with sulphuric acid. When, however, some of the material has been dissolved in caustic potash and examined with the spectroscope, it is found that the solution obscures the violet end of the spectrum as far as about the middle of the green, the violet and nearly all the blue being completely absorbed. Blood treated with potash yields a very similar spectrum, but we could not make out the absorption bands of hæmatine in any of the numerous solutions in which the darkened substance had been macerated.

It is the microscopical appearance of this material, however, which presents the most marked peculiarity; that is to say, its microscopical appearance after a more or less prolonged immersion in liquor potassæ. The most satisfactory method of procedure is to crush a lump of the material about the size of a hazel nut, and place it in a test tube with about half an ounce of a strong solution of potash: when set aside for three or four days, it will generally be found that the granular consistence of the substance has disappeared, the fluid has become of a dark color, which subsequently passes into a pale sherry color, and that a small flocculent sediment has subsided in the tube—not more than one-fiftieth, however, of the amount of material introduced. A little of this should be carefully transferred on to a drop of water placed on a glass slide, very gently spread out by means of needles, a covering glass applied and the slide examined under a power of from three to five hundred diameters.

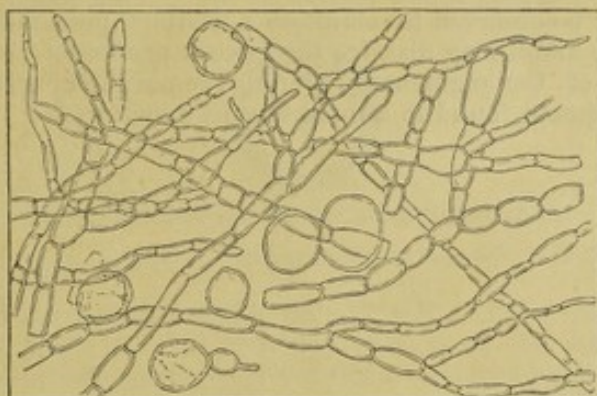


Fig. 9.—Fungoid filaments and capsules obtained after prolonged maceration of the black substance in caustic potash.  $\times 500$ .

The accompanying wood-cut very accurately represents what will, in all probability, be observed (Fig. 9), *viz.*, numerous branching filaments, septate and perfectly translucent, mixed to a greater or less extent with empty looking cellular bodies. Morphologically, these filaments are not distinguishable from those of fungi, but they do not appear to contain any plasma.

They are capable of withstanding the influence of a large number of powerful re-agents, as the following list will indicate:—

*Potash* has no destructive influence upon the filaments, or on the capsules associated with them.

*Carbolic Acid and Alcohol*.—No effect after 15 minutes, nor did the subsequent addition of potash alter the appearance of the preparation.

*Bisulphide of Carbon*.—No effect.

*Benzene*.—Filaments were boiled in this fluid for several hours, and also in *chloroform*, without producing any marked change.

*Olive Oil and Animal Fat* (butter).—Various specimens were boiled in these substances without result, except that, eventually, the filaments became charred owing to the high heat to which the oils had been subjected. Some specimens were subjected to being treated in oil for 12 hours over a water bath.

*Tincture of Iodine* stains them yellow, and sometimes appears by its reaction to suggest that the tubes and cells are not void of plasma, as they appear to be prior to the addition of the iodine. It never communicates a blue tint to any of these structures, not even when combined with sulphuric acid.

*Sulphuric Acid* destroys the filaments, so does concentrated hydrochloric acid, perhaps owing to the presence of sulphuric in it.

*Oxalic Acid* also, when concentrated, causes the filaments to disappear.

*Carminé*.—After prolonged immersion in an ammoniacal solution of this material, the filaments and cells become stained.

Filaments of various fungi, when treated with the foregoing re-agents, were found to manifest pretty much the same properties as the filaments above referred to as having been obtained from the dark substance after maceration in caustic potash.

Occasionally particles are observed in the field in connection with preparations of the black material, which readily strike a blue, or dark blue, tint on the addition of iodine; but we have not been able to satisfy ourselves that such starchy compounds had not been derived accidentally—from poultices and what not—so that we are not disposed to lay any special stress on the circumstance.

The only other fact which the microscope reveals worthy of special mention in connection with this dark substance, as far as we have been able to see, is the more or less marked presence of black pigment-particles which may frequently be distinguished among the filaments after maceration in the potash solution. These particles sometimes appear as if deposited within the filaments, and occasionally the filaments may be observed to manifest a distinct pigmentary staining; so that, although the alkali may dissolve the greater portion of the pigment in the substance, some of the pigmentary granules remain unaffected, as is the case with the black pigment found in animal tissues generally.

Amylaceous particles occasionally found associated with preparations.

The black pigment.

## CHAPTER VIII.

## CULTIVATIONS OF THE VARIOUS MORBID PRODUCTS OF THE DISEASE.

Having now given an account of our investigations into the nature of the changes and degenerations caused by the disease and the characters of their morbid products, we shall next state briefly the results of our attempts at cultivations of these products. In doing this, we shall in some degree depart from the order which we have hitherto followed in the consideration of the different forms of the disease; for it appears advisable to consider those cultivations in which the material experimented with contained distinct fungoid elements, before those in which there was no evidence of the presence of any such bodies.

In undertaking cultivation-experiments of this character, the principal difficulty usually consists, not in selection of ingredients favourable to the growth of the object under observation, but in the isolation of the latter. To follow the growth of a single spore or a speck of plasma may seem a very simple matter to such as have never undertaken such an experiment, but the task is in reality very difficult if the germ experimented upon be given a fair chance of growth—at least as far as light, heat, air and moisture are concerned. The appliance which we have devised, and for some time adopted, to meet this difficulty, is very simple, and may be constructed by any one desirous of working out for themselves problems of this character. A glance at the woodcut will be sufficient to convey a clear conception of its construction. (Fig. 10.)

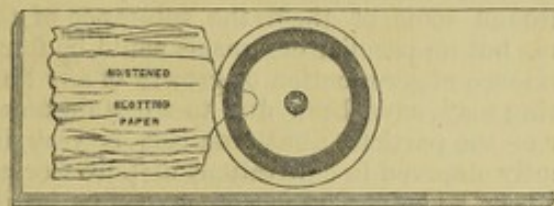


Fig. 10.—A growing-cell adapted for supplying the preparation with moist-air.

It consists of an ordinary glass slide  $3'' \times 1''$ , with a ring of bees' wax (softened by the addition of a little oil) pressed on its surface towards the middle. Intervening between the wax and slide—clamped by it—is a narrow slip of blotting-paper; and above the wax a thin cover-glass is placed with a drop of fluid containing the spore or germ to be watched. The preparation will now be hermetically sealed except at the spot where the blotting-paper is inserted, the latter serving as an excellent channel for the air and moisture necessary to the perfect growth of the object under cultivation. There is no danger of dust being introduced, and the gases which the nutritive fluid may generate can readily escape.

*A.—Cultivations of the Black material from the second form of the Madura-Disease.*

The materials employed in these experiments were obtained from various specimens, and consisted in some instances of portions of the black matter, which had been discharged from the tissues previous to the removal of the affected extremities, and which had been preserved by being simply dried. In other cases the material was obtained from specimens which had been preserved for longer or shorter periods in alcohol, glycerine, and other preservative media. The following may serve as examples of such cultivations and of the results obtained from them.

CULTIVATION I.—Portions of black matter discharged from the foot previous to amputation in a case of the disease, and which were subsequently dried, were set in some freshly prepared rice-paste beneath a bell glass. The cultivation was commenced in the month of April.

Forty-eight hours after it had been set, the cultivation was everywhere covered with a dense crop of *Mucor*, bearing an abundance of ripe, black sporangia. At various points in the paste, patches of a greenish discoloration had appeared; and in one place there was a faint indication of a pinkish tint present. As, however, appearances of a similar nature were also present in a simultaneous cultivation of pure rice-paste, and were there associated with the occurrence of changes and developments precisely similar to those here present, the coloration being, moreover, much more distinctly marked, a fuller description of them is deferred until the particulars of that cultivation are given. There were, in addition, several patches of young *Aspergillus* heads of a white color. During the next few days there was a rapid increase in the growth of *Mucor*, the loose filaments of which obscured the surface of the paste with the other fungal elements occurring on it.

Six days after the commencement of the cultivation, this loose overgrowth was cleared off and a luxuriant crop of *Aspergillus* was exposed to view. This consisted of two species of the above-mentioned genus—the first, the common yellow *Aspergillus*; the second, another species, of very frequent occurrence in Calcutta, in which the heads are of a rich brown colour and the spores of very minute size. The latter arise from sterigmata, which are not, as in the yellow species, inserted directly on the globose extremity of the fertile filament, but are arranged in fours on the broad extremities of large cuneiform processes intervening between them and the latter. A dense felt of mycelial filaments and fallen spores covered the surface of the paste, and on carefully removing this, the black particles were found, to all appearance, entirely unaltered.

Immediately around some of them the substance of the paste was of a brownish orange hue, but no peculiar organisms could be found in such places, and there was no evidence of germination or growth of any kind from the black matter. This staining may have been due to a certain amount of solution of the coloring matter of the particles; but even this is very doubtful, as similar staining was frequently observed in cultivations of pure rice-paste to which no black particles had been added. The felt of mycelium having been removed as thoroughly as possible, the specimen was again set aside. It soon became covered anew with yellow and brown *Aspergilli*, together with a smaller re-growth of *Mucor*, whilst patches of *Penicillium glaucum* also began to make their appearance here and there.

Subsequently, one or two patches of dull reddish discoloration appeared, consisting of a granular basis through which colorless mycelial filaments ramified, but they were of the same nature as those which occurred in other instances on pure rice-paste and showed no signs of being in any way organically connected with the black particles. The cultivation was kept under observation for three weeks, and at the close of that time was almost entirely covered with a dense layer of *Penicillium glaucum*, with a small quantity of *Mucor* still occurring here and there. The black particles showed all their characteristic features under microscopical examination, and afforded no evidences of any attempts at germination nor any signs of vitality on the part of the fungoid elements present in them.

CULTIVATION II.—Contemporaneously with the above cultivation another Corrective cultivation of pure rice-paste. Development of a pink mould. was carried out in which a portion of the same rice-paste was set beneath a separate bell glass without the addition of any foreign matter.

This also became rapidly covered with a crop of *Mucor*; ripe fructification, however, appearing not quite so rapidly as in the previous case. The substance of the paste forty-eight hours after the commencement of the experiment was everywhere discolored by dull green patches, whilst here and there minute points of brilliant carmine pink were present. The latter were carefully examined with the following results. The masses of pink matter were mainly composed of a gelatinous basis full of minute particles, and both of these ele-

ments were of a bright rosy colour. Where filaments of mycelium penetrated such masses, their contents also were frequently of a similar bright pink, and this coloration of the protoplasm in many cases was not confined to those portions which were absolutely within, or in contact with, the colored material, but continued for some distance farther, rendering the affected filaments very conspicuous, as pink or carmine bands among the surrounding colorless mycelial and bacterial elements, and gradually fading off so as to leave them in their original condition.

The pink coloring was not confined to the living bodies present in the cultivation, but also affected portions of the tissue of the rice grains in the paste. The pink color was confined to the protoplasm of the mycelium, and did not affect the walls of the filaments, for, when the former was made to contract under the influence of re-agents, the latter, which were then more or less widely separated from it, were seen to be perfectly colorless.

These patches of pink color were of a very transitory nature; they had entirely disappeared in forty-eight hours after they were first observed, and there was no recurrence of them afterwards, although the cultivation was kept for several weeks under observation. The *Mucor* never showed such a luxuriance of growth and fructification in this as in the former cultivation, and the paste ultimately became covered with a dense coating of *Penicillium glaucum*, and of a form of *Helminthosporium* with a dark brown mycelium. A few orange-colored stains, like those in Cultivation I, also appeared on the paste, but these showed no special peculiarities on microscopical investigation.

It is needless to repeat the details of numerous other experiments on cultivation of the black masses, as the results were in all cases essentially similar to those described above, and this both where the materials had and had not been subjected to preservation in alcohol, or other preservative agents.\* The only variations observed concerned the species of common moulds which were developed in different instances, and the relative proportions which the indivi-

General results of cultivation of the black matter in rice-paste.

dual species bore to one another in the different cultivations. It may be sufficient to state that in no case did any forms of fungi or other organisms appear in cultivations in which the black material was employed, which did not also occur where rice-paste alone was employed, and that in no instance did any of the fungoid elements of the black matter exhibit the faintest indication of any tendency to germinate. On the contrary, one of the most remarkable features in connection with the cultivation was the extremely persistent and seemingly inert nature of the material, the masses being found to all appearance entirely unaltered in character and contents after weeks of immersion in paste (and at all times of the year), in which the most luxuriant development of fungi had occurred.

### CULTIVATION III.—Cultivation of the black matter in water.

As the peculiar mould, characteristic of, and peculiar to, the diseased tissues, is stated to have been originally observed in a maceration of a specimen of the disease, we tried numerous experiments with the view of ascertaining whether any such development would occur in the instance of the materials at our disposal. A portion of cancellous bone, containing characteristic black masses, was removed from a foot preserved in spirit and set in water in the month of April. The water was at first, on several successive days, poured off and renewed with a view to get rid of the spirit, and when this had been, apparently, thoroughly

Results of maceration of the black matter in water.

accomplished, the maceration was allowed to go on continuously. The specimen was kept under observation for several weeks. No fungi were developed in connection with it, but an abundance of active and still bacterial elements soon made their appearance, and these, together with some maggots which subsequently aided them, rapidly removed all the soft tissues and oily matter connected with the bone, and left the latter and the masses of black matter behind. The black matter never showed any tendency to germinate or to be altered in any way, and on microscopic examination at the close of the experiment, presented all its characteristic features entirely unchanged.

\* When the material had been preserved in spirit, &c., it was always carefully washed and immersed in water for several days before being set in the paste.

CULTIVATION IV.—This was precisely similar in its nature to the previous cultivation, and was carried on at the same time of year.

In this case, also, an abundant development of *Bacteria* occurred. The soft tissues of the specimen became gradually disintegrated, and a film of a yellowish color and considerable density formed on the surface of the fluid. This was found to consist of a dense layer of *Bacteria* and granular matter, with innumerable active and encysted specimens of several forms of ciliated infusoria. A few colorless, slender mycelial filaments were also present, and here and there were lumps or concretions of fatty matter of a distinctly pinkish tint. There were, however, no evidences of the presence of any peculiar algoid or fungoid organisms, and the black masses remained seemingly quite unaltered during the entire course of the experiment.

Numerous other experiments of a like nature, conducted at the same and at other seasons of the year, and with materials derived from different specimens obtained from different localities, gave similar negative results. There was a uniform and entire absence of evidence in favour of the presence of any growth of the elements contained in the black matter or of any other signs of vitality in them, and the only remarkable feature presented by the material in this, as in the former series of experiments, was its extreme persistence and apparent resistance to disintegrative changes.

Whilst, however, these experiments not only entirely failed to demonstrate the existence of any living fungoid organisms in the black matter of the disease, but even seemed to indicate that it did not form a favourable basis for the growth of extrinsic fungi, we have on other occasions frequently observed specimens of the masses become mouldy. This has occurred after the rains have fairly set in, and during periods of very damp weather. At such times there is frequently a development of a white mould on the surface of dried specimens of the material; but as this is due to the growth of the common *Aspergillus* on the surface, and not to any germination of the elements of the substance of the masses, it is obviously a matter of no special importance or interest, save as affording a new example of the varied nature of the substrata on which this ubiquitous mould will occur.

#### B.—Cultivations of the Morbid products of the Pale variety of the affection.

The next series of cultivations regarding which some particulars must be given, are those in which the material experimented with consisted of the roe-like masses and other morbid products and tissues obtained from specimens of the ochroid variety of the disease.

The cultivations of such materials on rice paste need not be specially alluded to, as they gave results which differed in no essential particulars from those in the experiments with the black matter. Some of the cultivations or rather macerations in water, however, presented some peculiarities and points of interest.

CULTIVATION V.—Some of the cancellated tissue and oily matter were removed from the bones in a specimen described in the present report as Specimen I (page 78) of the pale variety of the disease, and set in a wide-necked bottle of water beneath a bell-glass. The water was once or twice changed at first in order to get rid of the spirit in which the specimen had been preserved and was then allowed to remain undisturbed. No noteworthy change occurred for some time. After the lapse of a fortnight, the mouth and neck of the bottle were observed to have become covered with a thin layer of mould, which had also spread over a considerable portion of the surface of the fluid. It did not, however, penetrate beneath

the surface and was widely remote from the diseased tissues at the bottom of the bottle. When first observed, the mould was of a whitish and greyish tint, and consisted solely of mycelial filaments without any fructification, but subsequently the mycelium gave rise to a crop of poor, partially aborted heads of common *Penicillium* and *Aspergillus*. The bone and fatty matter at the bottom of the fluid remained to all appearance entirely unaltered.

During several weeks no further change was observed, save a gradual evaporation of the water and a proportional spread of the mould downwards over the interior surface of the bottle as the latter became exposed to the air. The fragments of tissue at the bottom now gradually assumed a distinct pale pink hue, and light flocculi

of a similar color could be seen attached to them, loosely adherent to the sides of the bottle beneath the water, or forming a light deposit at the bottom. On examining this cloudy flocculent matter microscopically, it was found to be principally composed of a granular basis, which, whenever in mass, presented a distinct pink tint; whilst even the thinnest flakes of it when examined slightly out of focus were more or less characterised by a similar color. A few mycelial filaments were also present, together with myriads of active *Bacteria* and *Vibriones*, numerous active and encysted *Paramecia*, and a sprinkling of large active *Rotifers*. All these organisms, animal as well as vegetable, were in many instances of a distinct pink color, which was more marked, the larger the mass of the organism affected by it; and, specially bright in some of the *Rotifers*. As time went on, this pink staining continued gradually to increase in intensity, and ultimately the deposit became entirely of a dull brick-red mingled with patches of rosy pink.

The most marked changes observed by aid of the microscope consisted in a great increase in the amount of mycelial filaments in the deposit. These were found in special abundance in the flocculent patches adhering to the sides of the bottle, and where they were present in abundance, the brightest rosy colour also generally prevailed. Among and attached to the filaments, in many places, numerous large cyst-like bodies were found on carefully teasing out the flocculi (Plate I, Fig. 7.) These

were rounded, of diameters ranging on an average from  $\frac{1}{80}$ " to  $\frac{1}{60}$ ", and in many cases were full of roundish or oval spore-like bodies of considerable size. In color, like the filaments with which they were connected, they varied greatly; for, while many were colorless, or exhibited various shades of buff or yellowish, others were of a bright pink or rosy hue. They frequently showed traces of a cellular structure, more or less distinctly. These could, in general, be made out readily by examining the cysts in rather deep focus, so as to bring the profile of their broadest portions into view. The constituent cells of the walls were then clearly brought out, giving rise to an appearance of a looped double outline bounding the mass of the cyst. The cellular structure was also seen to advantage in many cases where rupture of the cyst had occurred, with more or less complete evacuation of the contents. The latter were, like their envelopes, frequently stained of a pink color. The precise nature of the connection of the cysts to the filaments, and their mode of development, could not be thoroughly ascertained, as they were so closely entangled among the meshes and covered by the ramifications of the mycelium as to render it a matter of great difficulty to free them for examination, but it was clearly ascertained in several instances that an organic connection existed between them.

The nature of these bodies was for some time a matter of great doubt and obscurity, but they were ultimately ascertained to be imperfectly developed *Eurotia* of the common yellow *Aspergillus* growing on the sides of the bottle and surface of the fluid. Some of them having been observed in many respects very closely to resemble in structure and form the eurotial structures, which we had frequently obtained on the mycelium of *Aspergillus* when submerged or grown on very moist substrata, suggested the renewed examination of the mould on the surface of the water and sides of the bottle—above the fluid in this instance. On doing so, no doubt could remain as to the nature of the submerged bodies. Some of the patches of mould on the sides of the bottle, and which extended from above downwards into the fluid, showed normal yellow specimens of the *Eurotium* of



the common yellow *Aspergillus* in their upper portions, and a series of transition forms lower down, until in the submerged parts specimens were present which were precisely similar to the cysts of the deposit, save that none of them were of a pink color, but all colorless or pale yellow (Plate I, Fig. 6.) As, however, the presence and degree of coloring in the cysts below was not a uniform phenomenon, and as other organisms present in the cultivation both at the surface and bottom of the fluid showed a pink tint only in those specimens in the latter situation, this difference did not appear to be of any importance. It certainly could not weigh against the numerous points of resemblance or identity in regard to form, size, and structure of the cysts, the nature of their contents, and their relations to the filamentous mycelium with which they were connected.

The only question of any importance regarding the submerged specimens related to their development. Were they, and the mycelium bearing them, developed beneath the fluid, or were the submerged flocculi mere fragments of the mould developed above in contact with the air and which had become detached and had subsequently acquired their pink color beneath the fluid? The latter is, perhaps, the more probable of the alternatives; but either mode of development may readily have taken place, as there was an abundance of spores produced by the *Aspergillus* heads originally developed, and these may either have germinated above or at the bottom of the fluid. The spore-like bodies produced within the cysts were peculiar, being unlike those in the *Eurotia* of some other forms of *Aspergillus* and no asci were observed. They may possibly not have been true spores, but merely abortive asci; as, however, similar bodies may be observed in *Eurotia* developed on other substrata, as will be pointed out subsequently, this is a matter of no special importance in so far as the object of the cultivation in the present instance is concerned.

The cultivation was kept under observation for several months, but the only further change of any importance which was observed to occur in it was a gradual increase in the depth and intensity of the coloring of the deposit, which ultimately became in great part of a bright vermilion hue. The coloring matter was tested with liquor potassæ at various stages of its development, but in no case did it show any signs of being affected by the re-agent in a manner similar to that exhibited by the coloring matter of the red concretionary particles of the diseased tissues.

With regard to the development of *Aspergillus* in connection with the products of the disease in the above cultivation, it may be remarked that species of that genus may very frequently be observed in Calcutta on such materials as skin, cartilage, &c., after the rainy season has set in. We have recently had a striking example of this in regard to one of the commonest species of *Aspergillus*. The costal cartilages adherent to the skeleton of a dog were observed to present a mouldy aspect, and this on closer examination was found to be dependent on the presence of an abundance of minute white points. Under a low magnifying power these were found to consist of perithecia, presenting the normal features characterising those of *Eurotium*. They were connected with a thin web of white creeping mycelium which formed a net-work over the surface of the cartilage. The perithecia showed the normal cellular structure and were full of roundish or fusiform spores. The perithecia varied considerably in size, ranging from  $\frac{1}{4}\frac{1}{8}$ " to  $\frac{1}{2}\frac{1}{8}$ " in diameter, and the spores measured on an average  $\frac{1}{4}\frac{1}{8}$ " by  $\frac{1}{5}\frac{1}{8}$ ", or when circular  $\frac{1}{4}\frac{1}{8}$ " (*vide* Plate I., Fig. 8). No asci could be detected.

A portion of the cartilage was removed and set in a moist chamber for further examination. Some of the perithecia assumed a yellowish tint, but the majority remained unchanged, and the principal growth observed occurred in the mycelium. The filaments of this became greatly developed, ramifying and anastomosing over the cartilage and forming closely adherent net-works over the surfaces of the perithecia. They presently gave origin to an abundance of erect filaments bearing the ordinary fructification of *Aspergillus*. In many instances these filaments appeared to arise directly from the perithecia, but this was apparently due rather to their origin from adherent mycelial

filaments than to the germination of the spores in the interior of the perithecia, or any outgrowth from their walls. The heads of the *Aspergillus* were at first white, and ultimately assumed the bright green tint characteristic of *Aspergillus glaucus*. Spores which had escaped from ruptured perithecia also quickly germinated, and the specimen rapidly became so obscured by a dense growth of mycelium and fructification as to be no longer fit for examination.

Various other macerations of the morbid products of the ochroid variety of the disease were kept under observation during various periods, but in none of them did a development occur as in the case described, nor were any special organisms observed to occur in connection with them which did not equally occur in macerations or other cultivations of other substrata.

C.—Cultivations in which the morbid products of the pale variety had been intentionally inoculated with various spores, &c.

Another series of cultivations was conducted with similar materials, but in which these were intentionally inoculated with the conidia and mycelia of various species of fungi. The following may serve as an example of such experiments and of the results occurring in them.

CULTIVATION VI.—Cultivation of inoculated materials. A mass of roe-like bodies, collected from the cavities in Specimen No. III (page 80) of the present report, were immersed in water for several days, the fluid being occasionally changed in order to remove the spirit. It was then set in a moist chamber, and inoculated with some of the black-capsuled *Mucor* and brown and yellow *Aspergilli*, previously described as occurring abundantly in some of the other cultivations. The fungi rapidly grew and spread over the substratum, covering it with a thick crust principally composed of the fructification of the *Aspergilli*—the brown species occurring in considerable excess of the yellow one.

A month after the inoculation had been performed, this crust was broken up and a layer of bright red matter, varying from rosy pink to strong carmine in color, was found beneath it on the surface of substratum. On microscopic examination, this colored layer was found to be due to a diffused staining of the substratum where the mycelium had penetrated it. Where this had occurred, the material was also softened, but the penetration of the mycelium, the staining and the softening, were all quite superficial, extending only to a very inconsiderable distance beneath the surface of the mass, which elsewhere retained its ordinary characters entirely unaltered. In many instances the fungal filaments and masses of fallen conidia, although embedded in this colored basis, did not participate in the staining, but in others the fungal elements were dyed in all shades from pale pink to bright carmine.

In some places filaments and growing heads of both the species of *Aspergillus* were found *in situ*, the stems, rounded heads, sterigmata and spores being stained of the brightest carmine, and one or two similarly dyed specimens of *Mucor* filaments and capsules were likewise encountered (Plate I, Figs. 2—5). In the case of the *Aspergilli*, various degrees of staining could be traced among the innumerable heads and conidia present, and a careful determination of the measurements and forms of the latter clearly showed that the rose-colored specimens were mere varieties of the common yellow and brown species along with which they occurred. The coloring was, as usual, confined to the protoplasmic contents of the cells and filaments, whilst the material forming the cell-walls was quite colorless. On testing the coloring matter of the substratum and fungi

it was found to resemble that of the red concretions, in being partially bleached and rendered brownish by alkalis and generally restored to its original condition by the sub-

Results of other cultivations of the products of the pale variety of the disease.

Cultivation in which fungi were purposely introduced.

Appearance of a red layer in it.

Red *Aspergillus*

Coloring matter resembled that of the red concretions in its reactions.

quent addition of acids. The re-action of the colored layer was distinctly acid. This red coloring was not of long duration in the cultivation, only remaining visible for about a week after its first appearance. The surface of the substratum then became again covered with a dark-brown coating, principally composed of the spores of the brown *Aspergillus*, mingled with a felt of mycelium belonging to that and the yellow species.

The principal points of interest in this cultivation were—1st, the demonstration afforded of the fact that common moulds, usually occurring on vegetable substances, found the conditions suitable for their abundant growth and fructification when cultivated on the material of the roe-like masses of the degeneration; 2nd, the development of red coloring matter in the substratum and the coincident staining of the fungal elements. It was specially interesting to obtain colored specimens of the common conidial fructification of *Aspergillus* in this cultivation in connection with the occurrence of similarly colored specimens of the Eurotial or sexual fructification of the same genus in the experiment previously detailed.

Numerous other similar experiments with inoculated materials were tried with varying results. In none, however, was any development of red coloring observed to occur. The fungi employed usually grew and fructified freely, ultimately covering the surface of the substratum. All the observations agreed in showing that the fungal elements remained quite superficial, never penetrating deeply into the mass of the material, and that the latter was very persistent and remained to all appearance unaltered during long intervals of time.

(d).—*Cultivations in connection with the RED PARTICLES.*

Besides the above-mentioned attempts at cultivation of the black masses, roe-like material and other morbid products of the common varieties of the disease, numerous other experiments of a like nature were also carried on in reference to the red concretions. These, however, do not call for any detailed description, as, although carried out at various times, on various substrata, and under very various conditions, they only agreed in showing the entire absence of any development of peculiar organisms and the extremely inert and resistant nature of the concretions. They were never observed to undergo any perceptible change, save a slight alteration of color in some instances, even when kept for weeks under observation.

## CHAPTER IX.

## LESSONS TO BE DERIVED FROM THESE CULTIVATION EXPERIMENTS.

It will be evident from the above brief account of the results of our attempts at cultivation of the various morbid products of the disease, that we have entirely failed in obtaining the development of any special species of fungi or other organisms from the latter. The forms which made their appearance in connection with them were only those which are prone to occur indiscriminately on substrata of most miscellaneous nature, and the only feature characteristic of the specimens developed on these special substrata was the fact that, in some instances, they were stained of a red color. This, however, is a phenomenon not confined to cultivations on such materials—we have observed its occurrence under very various conditions and in very dissimilar media, among others in solutions of choleraic excreta (Plate I, Fig. 9)—and, even had it been so, the circumstance would have been of no value as an indication of specific peculiarities in the colored organisms.

Any one who has studied the varied developments of common moulds, or other low vegetable organisms, must be well aware that mere color, independent of structural peculiarities, is as untrustworthy a basis for the determination of specificity in regard to them as it is in regard to higher organisms. It may, however, be argued that allowing that our experiments showed no evidence of the presence of any peculiar specific forms in the products of the disease, it is sufficient that varieties characterised by certain features, such as color, were developed. It may be affirmed that the presence of peculiar colors implies a difference of constitution, and a corresponding difference of properties in the colored varieties, as compared with the ordinary ones, and that the peculiarity of coloring in the varieties with which we are at present concerned coincides with the peculiar property of inducing the 'Madura Disease.'

We believe, however, that there are points in our observations which negative any such belief, and which justify us in ascribing the peculiarities of coloring to the nature of the substratum, and not to that of any peculiar varieties of organisms present, or assumed to be present in it. In one experiment in which the color was peculiarly well marked, it was not confined to any special vegetable forms, nor even to vegetable organisms, but appeared equally in the ciliate infusoria and *Rotifers*; whilst, in another cultivation, various species of fungi artificially introduced into the morbid materials became equally highly colored whilst growing in and on them. It can hardly be supposed that the colored varieties of *Rotifers* had any connection with the morbid products of the disease, save occurring in the water along with them, and possibly deriving their nourishment from them.

As to the colored fungi of the other cultivation, it is manifest that their peculiarities were dependent on the conditions under which they were developed or to which they were subjected, for the species affected were not only among the commonest forms of moulds, but only acquired their peculiar characters as to color when artificially exposed to the influences of the substratum. It would certainly be unwarrantable to assume that varieties arising in such a way under the influence of certain substrata are necessarily endowed with the power of reproducing similar materials elsewhere.

The fact that the coloring matter present in one of the cultivations was identical in its re-actions (with acids and alkalis) with the red coloring matter of the concretions, also points to its dependence on the chemical composition of the morbid material, and not to any inherent special property of the fungal elements accidentally or wilfully developed in association with it. Moreover, as was observed in the case of the cultivation of rice-paste forming the second in the series of cultivations here described, and as we have frequently observed in other

instances, pink coloration of the elements of various moulds is by no means an uncommon phenomenon in this country, and it is one which is assuredly not confined to cultivations connected with the morbid products of this or any other disease—indeed, we have seen it to develop on a dish of drying crystals of lactate of lime, far removed from the place where these cultivation-experiments were being conducted; so that the mere occurrence of it in connection with the affection cannot be regarded as affording any satisfactory evidence in favour of the dependence of the disease on a peculiar species, or even on peculiar varieties of fungi.

It appears to us that the original observations on the occurrence of red colored fungi in connection with the products of the disease, point very forcibly in the same direction as the results of the present cultivations, and indicate that, whatever the nature of the organisms observed may have been—whether they belonged to peculiar genera, or species, or not—they were quite unconnected with the fungoid elements of these products. It is a remarkable fact that in some instances the colored moulds were observed, as in our cultivations, in connection with the products of the pale variety of the disease, that is, in connection with materials in which the presence of fungoid elements has never been demonstrated. Moreover, they showed no unequivocal evidences of specific identity in the different cases; at all events, in so far as descriptions and illustrations go, we fail to see that they did so; more than all, they occurred indifferently as developments in cultivations where the materials had been subjected to prolonged preservation in spirit, and in others in which no preservative agent had been employed.

It has been denied that there is any evidence that spores, or other fungal elements, may not retain their vitality and power of germination in spite of prolonged exposure to the influence of alcohol. In spite of the weight justly attached to the opinion of those holding such views, we would enquire whether there be any evidence showing that they are endowed with any such faculty? We are not aware of any; and although by no means wishing to found any sweeping generalisations on limited data, we can only state that the results of our own observations and experiments have been directly opposed to the assumption of the actual existence of such a resisting power.

In connection with the cultivations described in the present report, we have tried numerous careful experiments on the effects of alcohol on the spores and mycelium of fungi, and have never observed such bodies show any signs of having retained their vitality after even very short exposure to the re-agent. In regard to cultivations of the morbid products of the disease, Mr. Berkeley's experience is strongly in support of this, for he states that he entirely failed in obtaining any development from the preserved specimens which were submitted to him, and only obtained a growth of pink mould when working, not with the original morbid materials, but with rice-paste on which similarly colored fungi had previously occurred in Bombay.

Taking everything into consideration, it appears to us that all that has yet been shown by means of cultivations is, that fungi and other organisms developed in connection with the morbid products of the 'Madura Disease,' occasionally present themselves in pink or red colored varieties; and that this coloring is due to the nature of the material, and not to any specific properties in the organisms. The phenomenon, therefore, is one which cannot be cited as a proof of the fungal origin of the disease, or of the presence of fungal elements in materials such as those of the pale variety of the disease, affording no other evidences of their existence.

## CHAPTER X.

## CONCLUSIONS.

It now only remains for us to summarise the principal points in connection with the peculiar affection of the feet and hands which we have referred to in detail in the preceding pages. It has been seen that the disease appears in two principal forms; that the lesions produced, the particular tissues affected, and the general course of the disease present much in common; but that the morbid products, whether examined chemically or microscopically, are found to be most dissimilar.

In the pale variety this product is for the most part of a fatty nature, abounding in many of the various modifications of fat known to pathologists; whereas in the dark variety, the fatty matter forms a far less prominent feature in some cases; indeed, the dark material may often be referred to as being almost completely devoid of fat—at all events it must have undergone such extensive changes as to be no longer recognisable as such.

It is extremely difficult to account for the discrepancy in the composition of the morbid products of the disease. The inference that the pale is a later stage of the dark variety of the affection, as advocated by Dr. Vandyke Carter, is, in our opinion, untenable from the fact that, as has been shown on a previous page, the progress of the disease may, in some cases, be traced through all its stages in a single specimen, just as in a tuberculised lung areas may often be distinguished presenting the most recent deposits of tubercle in the midst of tissue far advanced in the degeneration. In specimen III (page 80) for example, the various steps in the degenerative process could be followed with the greatest ease. Well defined areas could be seen in the midst of, apparently, healthy, connective and fatty tissues, and the various stages of the process, trifling consolidation of defined areas of tissue, slight discoloration, nests of roe-like bodies associated or not with crystalline formations, and other changes, could be readily identified, but without any indication of the previous existence of the black substance.

On the other hand we have seen specimens of the Dark variety in such a recent stage of the development of the malady, as to negative any idea of its being a later stage of the pale; the dark granules not larger than grains of gunpowder being deposited here and there among the tissues; the only concomitant alterations of the part being slight hardening and trifling discoloration of isolated lobules in the sub-cutaneous tissue. In one case (Specimen II, pages 95 and 99), we were able to trace, what appeared to us to be the progressive stages, in this variety also, of the malady—from the yellowish-brown ceruminous nodule, to the almost perfect black granular lump.

It is nevertheless quite possible, and indeed probable, judging from the great similarity in the lesions produced, the course pursued by the disease, and its duration in the two forms, that the original cause may be very closely allied if not identical. Pathology has not yet progressed sufficiently to be able to determine why it is that certain degenerations will take very different courses in different persons; nor is the science sufficiently advanced to enable us to refer definitely to the direct cause of almost any single degenerative process. For the most part our etiological conceptions are hypothetical. Consequently we are no further behind in our knowledge of the etiology of this comparatively new disease than we are with reference to the causation of the various cancerous and other morbid processes which have been known for centuries.

But do we know *more* as to the cause of this disease than we do of most others? Certainly the forms under which the disease manifests itself are in many ways different from those ordinarily met with: it is characterised by being localised to certain districts, and by the fact that only certain parts of the body, as far as we at present

know, are liable to be affected; and more than all, the morbid product of one, or rather of two, of its varieties, the black and the pink, are so peculiar, as to enable it to be distinguished at once from all other affections. But that these peculiarities should of themselves be sufficient ground for forming any conclusions with reference to the *cause* of the affection, is not supported by the observations which we have made.

The reader of the foregoing chapters will have observed that three of the peculiar morbid products described as various stages in the development of a peculiar fungus, the assumed cause of the disease, have been very carefully investigated, *viz.*, the roe-like bodies; the pink particles, and the black masses.

The first of these we have shown to be fat in various modified forms; the second were found to be pigmented concretions—not the slightest trace of a fungus or of other vegetable organisms being present in either; and the third we have shown to consist of degenerated tissue, mixed to a greater or less extent with black pigment and fungoid filaments. To account for the presence of the two latter ingredients is in reality the most difficult problem connected with the affection.

As regards the actual lesions produced in the tissues, it will have been observed that neither of these two latter ingredients are essential, seeing that, with the exception of the physical characters of the morbid products, no marked distinction exists between the pale and the black varieties. Similar tissues are affected in both, the cavities and channels are alike, and the similarity extends even to the peculiar mammillated orifices by which they open on the surface. These circumstances of themselves absolutely negative, in our opinion, the view that anything which may be found in connection with one variety, and not in connection with the other, can be referred to as the specific cause of either. Why these morbid substances should present these anomalies is a totally different question, and one which is not within our province to discuss.

The occurrence of pigmentary deposits in animal tissues is by no means a rare circumstance. Our knowledge as to whence the pigment is derived is not yet very exact, but it is generally believed to be derived from the blood. Its behaviour under the influence of re-agents is, however, well known, and we have found that the pigment in the dark substance, when treated with re-agents, manifests properties similar to those of ordinary pigment. The presence of iron in the pigmented substance of the Madura-disease, which both Mr. Wood's analysis and our own revealed, is a significant fact, seeing that iron is a constant component of black pigment, a circumstance which, in our opinion, points, almost unequivocally to the fact that the pigmented substance under consideration originates from the same material as the pigmentary deposits ordinarily met with in animal tissues.

We have already given full particulars regarding the microscopical and chemical properties of the fungoid elements associated with the pigment; they resist the action of weak acids and strong alkalis, and manifest all the properties of ordinary fungal forms except vitality; and we believe that it will be generally conceded that it has been shown that on no single occasion has any one been able to coax the fungoid elements in this substance to germinate, much less to develop anything approaching to mature fruit; hence any propositions which may have been advanced with regard to the causation of the Madura-disease on the grounds that the new or peculiar fungus has been developed from the morbid products amongst the tissue are, apparently, without good foundation and must be carefully reconsidered in the light of the facts now adduced. It is for botanists to decide whether the '*Chionyphe Carteri*' is what is termed a "good species" or not; all we have to do with it is restricted to its purely pathological significance, and, in connection with that, we unhesitatingly express our convictions that not only does it not cause the disease, but that it cannot be developed from the fungoid elements contained in the morbid product.

The real nature of the Roe-like and Pink particles, and the Black masses.

No etiological significance can be attributed to the presence of pigment and filaments in the Dark variety.

Probable nature and source of the Pigment.

The fungoid elements in the Dark substance not genetically connected with '*Chionyphe Carteri*'.

Although we have failed in inducing these fungoid elements to grow, it does not follow on that account that they are not, and never have been, vitalised. It is true that a great many purely physical products are found which so closely resemble those which have been moulded under the influence of vitality as not to be distinguishable, or only distinguishable with difficulty; such, for example, as the concretions of Mr. Rainey—the *calcospherites* of Professor Harting—the *myeline* of Virchow, and the amylaceous corpuscles known to all microscopists; still, the optical and physical characters of the filaments and capsules seem to us to agree so perfectly with what we have seen in undoubted fungi, that we look upon them as such until the contrary can be demonstrated.

To account for their presence in the tissues—deeply imbedded and far removed from anything that could suggest the existence of a channel of communication between the spot and the exterior for any such immobile object as a spore, is most puzzling. The supposition that a sporule had managed to insinuate itself by means of some natural, or artificially produced pore, is untenable from the simple fact that perfectly independent *foci* of the affection may be distinguished—so distinctly defined as to necessitate the inference that each localised pigmentary deposit had derived its origin from the introduction (through the cutaneous tissues) into that particular part of a foreign body capable of germinating.

To us it appears much more reasonable to infer that localised spots in the tissues undergo a degenerative change into a substance *peculiarly* adapted to the development of filamentous growths. We ourselves have shown, and it has been shown by others, that under certain conditions—the principal being the absence of vitality, or vitality greatly depressed—every tissue in the body is capable of giving rise to the abundant development of complex organisms.

We reproduce a figure (Fig. 11) of some of the leading forms of these growths for convenience of reference from a report which we submitted last year bearing on this matter, as we have since that period undertaken several experiments of a like nature and which have a very direct bearing on the point now under consideration. The object of the experiments was to ascertain whether, by interfering with the vascular supply of certain tissues and organs of the body of an animal without injuring the isolated tissue, we should be able within the course of some hours to detect organisms in those parts in the same manner as we had been able to do when an animal had been killed under chloroform and set aside in a warm place.\* We found

\* In connection with this subject the question naturally presents itself as to the degree in which results of this nature are influenced by the conditions of the locality where the experiments are carried out—whether the results which are obtained under the influence of the temperature of a tropical climate are likely to occur in temperate localities with lower temperatures. We believe that they are, and this on the ground of the following experiment:—

Two men were executed in the Presidency Jail in the month of December 1874. The bodies were removed to the dead-house immediately after having remained suspended for the prescribed period. The following statement shows the temperatures registered at various intervals during the following 24 hours by thermometers inserted into the substance of the liver and the muscles of the thigh in both bodies, compared with the coincident atmospheric temperature.

Body.	Time after death.	TEMPERATURE.			
		Liver.	Thigh.	Air.	
No. 1	1 hour ...	93°5	88°	62°	Body on a lead-covered table.
	4-5 "	91°9	86°5	67°	
	8 "	87°0	82°0	68°5	
	15 "	84°0	74°0	64°5	
	24 "	76°0	69°0	59°	
No. 2	1 hour ...	95°	91°	62°	Body on a wooden table.
	4-5 "	92°	86°	67°	
	8 "	87°	81°	68°5	
	15 "	84°	74°	64°5	
	24 "	76°	69°	59°	

The loss of temperature is so gradual even when the external temperature is moderate, that in so far as conditions of temperature are concerned, the body, save in exceptional cases, must, for many hours after death, itself provide a suitable temperature for the rapid development of organisms.



that such was the result, and that a kidney, for example, when carefully ligatured without interfering with its position in the abdomen, would be found

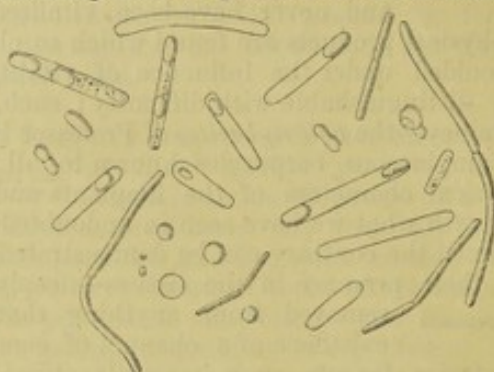


Fig. 11.—Organisms found in the tissues of *healthy* animals a few hours after death  $\times 1,500$ .

after some hours to contain precisely similar organisms; whereas the other kidney—whose circulation had not been interfered with—contained no trace of any vegetation whatever.

Taking everything into consideration, it seems probable to us that some local degeneration takes place in the Madura-disease, giving rise to a product which is, in one of its varieties, peculiarly adapted to the development of vegetable organisms. All microscopists know how frequently the most trifling alteration in the composition of a nutritive medium decides the advent of peculiar growths.

CALCUTTA,  
September 1875. }

## APPENDIX B.

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THE SOIL IN ITS RELATION TO DISEASE.

A REPORT OF OBSERVATIONS

BY

T. R. LEWIS, M.B., AND D. D. CUNNINGHAM, M.B.,

SPECIAL ASSISTANTS TO THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA.

APPENDIX B

THE SOIL IN ITS RELATION TO DISEASE

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T. R. LITTLE, M.D., AND D. D. CHICKERING, M.D.

PHILADELPHIA: LEA AND FEBEN, 1880.

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# THE SOIL IN ITS RELATION TO DISEASE.

## A REPORT OF OBSERVATIONS

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The present Report embodies the results of observations which have been carried out with a view of determining to what extent peculiar conditions or changes of condition in the soil in Calcutta affect the prevalence of disease in general, and of certain diseases in particular.

The phenomena forming the subjects of observation were:—

- (1) The amount of moisture in the soil;
- (2) The temperature of the soil; and
- (3) The amount of carbonic acid in soil-air.

As is well known, marked attention has lately been directed to the importance of soil-meteorology as affecting the prevalence of disease, and it formed one of the subjects to which our attention was directed by the Army Sanitary Commission and by Dr. Parkes. Most careful observations have been published by Dr. Max von Pettenkofer and other savants regarding it—indeed, it was at the special suggestion of Dr. von Pettenkofer that some of the observations here recorded were undertaken.

Observations on the varying conditions of soil-moisture as indicated by water-level and rain-fall have been carried out in many places in India for some years, and although, owing to the difficulties incident on the beginning of any entirely new series of

observations, the results have not as yet been so generally satisfactory as might have been desired, still a large number of thoroughly trustworthy data have been already accumulated regarding the matter. These will be made the subject of a special Report hereafter; in the meantime, we have limited ourselves to the consideration of the phenomena observed during a complete year in Calcutta, where the observations have been conducted so as to furnish data for comparison with similar observations which have been, and may still be, recorded elsewhere in India.

Observations on the temperature and carbonic acid-contents of the soil have never, so far as we are aware, been carried out in this country, and even in Europe they have been made only in a few isolated localities. We would therefore take the present opportunity of pointing out their value and of pressing on the attention of the Meteorological Department the importance of investigating and recording some of the more prominent features of sub-soil phenomena.

From an etiological point of view it is obviously quite insufficient to be informed merely of atmospheric meteorology and to remain in total ignorance of telluric conditions. This view of the case is becoming more and more realized in Europe, and the value and importance of acquiring the necessary data in this country cannot be over-estimated.

We have thought it better to confine our attention to the consideration of the phenomena presented by a period during which our observations on soil-conditions were most numerous and of the most varied nature, but data regarding water-level and soil temperature for a considerably longer period are given in the accompanying tables.

The period specially considered ranges from the month of July 1873 to August 1874, and for this period full details are given regarding the temperature and carbonic acid-contents of the soil at 3 and 6 feet from the surface. The coincident phenomena of rain-fall, atmospheric temperature, and velocity of wind are also given, together with the statistics of total mortality; of mortality from cholera; and of the prevalence of fever and dysentery.

Figures regarding all these phenomena will be found in the tables (I—VI) and the relations which they bear to one another are, moreover, graphically represented in a series of diagrams of graduated curves. An additional diagram has also been constructed showing the monthly fluctuation in the carbonic acid of the soil-air as compared with the results of the experiments conducted in Munich by von Pettenkofer.

#### (1.)—Mode in which the Observations have been conducted and the sources of the various Data.

It will be convenient, before proceeding to describe the results of the observations, to give a brief account of the sources from which the data were derived and the means by which they were obtained.

##### (a)—Carbonic Acid of the Soil-Air.

The data on this point were obtained by our own observations. During a considerable portion of the period under review the experiments were made with regard to one locality only, but subsequently another series was undertaken so as to ascertain the amount of carbonic acid in two localities separated from each other by about 50 yards.

The depths selected for observations were in both cases 3 and 6 feet respectively: observations at a lower level were not attempted, as it did not seem to be desirable to go deeper into a soil such as that of Calcutta where the water-level is for a considerable portion of the year so superficial as to cause saturation of the soil at a short distance beneath the surface.

The method adopted for conveying the air from the soil at these depths was very simple. Two lead tubes were procured, and at one end of each a hollow perforated bulb was soldered. A pit was dug in the soil—the ordinary alluvial soil of Calcutta—perfectly free from all sources of surface pollution, and which had probably

Temperature of the soil and carbonic acid in the soil-air.

Period specially reviewed.

Means adopted in estimating the amount of carbonic acid in the soil-air.

Description of apparatus employed to obtain the air from the soil;

not been disturbed for a quarter of a century. One of these tubes was passed through the bottom of an ordinary flower pot, inverted, and perforated in numerous places. Below and surrounding this pot fragments of earthen-ware were arranged so as to keep the earth from plugging the orifices in the bulbous extremity of the leaden tube. The pit was now filled up to within 3 feet of the surface and the other tube introduced and similarly protected from being plugged by the fine soil; the earth was then heaped up and well beaten down, until it reached the level of the surface.

The other pit was of a similar kind, and the leaden pipes were introduced and protected in the same manner. The observations in each case were not undertaken until a considerable period had elapsed, so as to allow the soil to regain its ordinary condition.

The tubes were then conducted into a room and attached to an aspirator capable of holding thirty-eight and a half litres.

The remarks made by Dr. von Pettenkofer with reference to the ease with which air could be made to pass either way through the tubes which he had introduced into the earth apply with equal force to our own tubes. Air could be blown through the tubes with the greatest ease, so much so that we could not for certain distinguish the pipes which had been lodged in the earth from a pipe of similar length placed alongside them, but with both its ends opening into the free air, by blowing alternately through them. This fact of itself testifies to the readiness with which intercommunication occurs between the atmosphere and the sub-soil air.

Attached to the aspirator—intervening between it and the pipe leading and to determine the amount of carbonic acid present in it. into the soil—were the usual appliances for estimating the amount of carbonic acid by the Baryta process, as devised by von Pettenkofer many years ago, and which is fully explained in all modern treatises on chemistry. Briefly described, the method consists in causing the air under examination to pass through a flask containing a solution of baryta of known alkalinity, and subsequently ascertaining how much of the alkalinity has disappeared (by the passage through it of air containing carbonic acid) by means of a standard solution of oxalic acid—turmeric paper being employed in preference to litmus for ascertaining the precise stage when the solution becomes neutral.

This information having been obtained, the precise amount of carbonic acid was calculated by the method usually adopted in connection with volumetric analyses. As it is unnecessary to reproduce all these figures, we have confined ourselves to giving tables of the amount of carbonic acid per 1,000 volumes of soil-air at 0° C. and at 760 m. m. barometric pressure. Our acknowledgments are due to Mr. C. H. Wood, the Officiating Professor of Chemistry at the Medical College, for valuable aid in indicating the simplest and most accurate method of recording the data required in connection with this matter.

#### (b)—Soil Temperature.

The data recorded on this point are also the result of our own observations and were obtained in the following manner:—A shallow shaft or well was sunk to a depth of slightly over 6 feet in the ordinary alluvium of Calcutta. The shaft having been made of sufficient capacity to allow of easy entrance, was lined with bricks and mortar. An opening was left in the floor to allow of easy drainage of any surface water which might obtain entrance, and two openings were left in the brick-work of one side of the shaft at depths of 3 and 6 feet, respectively, leading into wide tubes of perforated zinc, which penetrated the soil horizontally from the outer surface of the brick-work and terminated in open extremities in the earth.

These tubes were of sufficient diameter to allow of a narrow board, carrying the thermometers, being pushed into them. The thermometer board had a wooden plug and handle which fitted into the mouth of the tube whilst the opening in the brick-work was closed by an accurately adjusted wooden cover, and further secured by being coated externally with moist clay.

A thick wooden lid, covered by a layer of turf, closed the mouth of the shaft, and the entrance of rain or access of sun to the cover was prevented by means of a thatch roof about 5 feet above the ground.

Observations were made daily at 11 A. M., and the thermometers immediately returned to their places in the perforated zinc tubes let into the earth, care being taken to raise the temperature of the minimum and to depress that of the maximum, respectively, considerably above and below the temperature of the soil.

(c)—*Open-Air Temperature*; (d)—*Rain-fall*; and (e) *Wind-velocity*.

The figures in Tables I—VI, upon which the charts are based, of daily and average weekly atmospheric temperature; of rain-fall; and of the velocity of the wind were obtained from the "Abstract of the Results of the Hourly Meteorological Observations taken at the Surveyor General's Office, Calcutta" as published in the Proceedings of the Asiatic Society of Bengal; but the monthly statements in Table VII of the atmospheric temperature and rain-fall are from the Annual Reports of the Meteorological Reporter to the Government of Bengal.

(f)—*Water-level*.

The observations on the fluctuation in the water-level are those which have been registered under the superintendence of Dr. Sidney Lynch at the Alipore Jail. The data extend from February 1872 to the present time. The *weekly* averages in the variations of level for one year's observations, the year specially under review, have been given; but only the monthly fluctuation for the remaining periods (Table VII page 142) as the daily figures, or even those of the weekly mean of the observations, would occupy too great space.

(g)—*Statistics of Disease*.

The figures of general mortality and of mortality from cholera which are given in Tables I to VI are those furnished to the Office of the Health Officer of Calcutta. Those regarding fever and dysentery are derived from the Hospital Registers of the Presidency and Alipore Jails; they represent, not the mortality, but the number of cases, and were selected as being presumably more accurate than those furnished by the Police to the Municipality. As the population of the jails averages only about 3,000, it was not considered large enough to furnish information with regard to the general prevalence of cholera with sufficient distinctness. We are under great obligations to both Dr. Sidney Lynch of the Alipore, and Dr. Coull Mackenzie of the Presidency Jails, for the valuable aid which they have given us on very many occasions in connection with our work and for the many data which they have always most readily placed at our disposal.

Having made these introductory explanations with regard to the data which we have brought together, we now proceed to consider the result of the observations as shown in the accompanying tables and diagrammatic charts.

Weekly averages of the amount of Carbonic Acid in the Soil; Soil Temperature, &c., in relation to disease—Table I, July and August 1873.

DATE.	VOL. OF CARBONIC ACID PER 1,000 VOL. OF SOIL-AIR.		TEMPERATURE OF THE SOIL.				Mean temperature (open air).	Rainfall in inches.	Distance of water-level from surface in feet and inches: weekly averages (at Alipore.)	Weekly returns of deaths from Cholera. (Total reported in Calcutta.)	WEEKLY RETURNS OF SICKNESS FROM		Weekly returns of deaths from all causes in Calcutta per 1,000 population.
	At 3 feet from surface.	At 6 feet from surface.	At 3 feet from surface.		At 6 feet from surface.						Dysentery. (In Presidency and Alipore Jails.)	Malarious fevers. (In Presidency and Alipore Jails.)	
			Maximum.	Minimum.	Maximum.	Minimum.							
1873			° F.	° F.	° F.	° F.	° F.						
July													
1	...	...	...	...	...	...	85.2	0.09					
2	...	...	...	...	...	...	83.7	0.13					
3	...	...	84.8	81.8	82.5	81.4	83.0	0.51					
4	3.342	7.411	84.8	81.4	82.7	80.8	83.1	0.16					
5	3.488	6.394	84.2	81.1	82.6	81.4	81.5	0.42	15' 0"	13	22	12	19.24
6	...	...	83.9	81.0	82.7	81.5	83.0	0.04					
7	...	...	83.6	80.7	82.5	81.4	83.8	0.35					
8	...	...	83.6	80.5	82.5	81.3	83.8	0.42					
9	3.923	8.573	83.8	80.7	82.5	81.3	83.5	...					
10	5.667	8.664	83.5	80.6	82.7	81.0	84.8	0.41					
11	5.522	7.847	84.0	80.4	82.1	81.0	83.3	0.5					
12	3.923	7.411	83.5	80.7	82.4	81.0	82.4	1.10	14' 11"	11	22	25	19.76
13	4.068	7.266	...	...	...	...	82.8	0.10					
14	5.086	7.411	...	...	...	...	81.3	0.19					
15	5.667	7.701	82.9	80.4	82.5	80.6	82.6	0.16					
16	5.958	7.701	82.5	80.1	82.5	80.6	84.0	1.07					
17	5.667	7.266	82.8	80.1	82.9	81.5	84.5	0.48					
18	5.667	7.266	...	...	...	...	80.5	1.80					
19	6.248	7.701	82.5	80.2	82.5	81.2	83.6	0.31	14' 6"	14	34	27	19.76
20	...	...	82.7	80.1	82.0	81.4	85.5	0.07					
21	6.380	8.573	82.8	80.1	82.0	81.3	84.2	0.66					
22	4.923	7.701	83.1	80.3	81.9	81.6	85.6	...					
23	5.376	7.411	82.8	80.4	81.8	81.4	83.4	0.33					
24	6.394	6.830	...	...	...	...	83.6	0.38					
25	6.248	7.266	82.8	80.2	81.8	81.3	83.9	0.02					
26	6.248	7.120	...	...	...	...	85.1	...	14' 2"	15	35	26	19.24
27	...	...	82.9	80.3	82.2	81.2	82.4	2.05					
28	6.539	7.120	83.5	80.0	81.8	81.2	81.1	3.26					
29	6.539	7.556	82.6	80.0	82.2	81.3	81.8	0.73					
30	5.958	6.103	82.8	79.8	82.0	81.1	84.4	...					
31	5.958	7.701	82.3	79.5	81.8	81.0	83.0	...					
August													
1	...	...	82.5	79.6	82.2	81.0	81.8	0.74					
2	6.539	7.411	82.0	79.6	81.7	81.0	82.5	0.08	13' 5"	15	23	50	19.24
3	...	...	...	...	...	...	83.6	0.13					
4	7.266	7.266	...	...	...	...	84.5	0.07					
5	9.009	9.155	82.7	79.5	81.9	80.8	82.3	0.11					
6	9.300	10.608	82.1	79.6	81.8	81.8	81.2	0.34					
7	10.317	10.463	82.3	79.7	81.6	81.0	81.3	0.05					
8	9.881	10.027	82.3	79.5	81.7	80.9	82.7	...					
9	10.027	9.736	...	...	...	...	83.3	...	12' 9"	4	55	34	19.76
10	9.881	9.737	81.9	79.5	82.2	80.5	80.9	0.3					
11	9.445	9.591	...	...	...	...	80.2	1.12					
12	9.300	9.736	82.2	79.2	81.9	80.6	79.5	1.61					
13	9.155	10.608	81.5	79.0	81.6	80.4	80.2	1.27					
14	9.881	11.044	81.5	78.8	81.7	80.5	82.1	0.70					
15	9.881	11.188	81.6	78.8	81.9	80.3	83.3	0.11					
16	10.753	12.206	82.1	78.9	81.8	80.0	84.2	0.07	11' 7"	14	46	44	23.92
17	10.027	11.196	81.5	79.0	81.4	80.4	84.9	...					
18	...	...	81.8	79.0	81.1	80.4	83.3	0.10					
19	10.753	12.061	81.8	79.2	81.5	80.5	84.0	0.93					
20	10.899	12.352	81.8	79.1	82.0	80.5	83.9	0.37					
21	11.625	13.514	82.0	79.3	82.0	80.5	86.5	...					
22	11.770	13.660	81.5	79.5	81.8	80.5	86.0	...					
23	10.608	11.916	81.9	79.6	82.1	80.5	83.8	0.04	11' 0"	3	34	55	24.96
24	10.608	12.206	81.8	79.6	81.5	80.4	85.3	...					
25	11.334	11.770	81.8	79.7	81.2	80.5	86.1	0.14					
26	12.642	12.497	82.3	79.7	81.7	80.5	85.5	0.04					
27	11.334	12.497	82.1	79.9	81.5	80.6	85.7	...					
28	10.753	12.206	82.0	79.4	81.3	80.7	83.2	0.31					
29	12.642	12.061	82.3	79.7	81.2	80.8	82.7	0.70					
30	11.044	10.463	82.7	79.7	81.2	80.8	83.0	0.40	10' 8"	4	23	41	27.04
31	...	...	...	...	...	...	84.3	0.48					



Weekly averages of the amount of Carbonic Acid in the Soil; Soil Temperature, &c., in relation to disease—Table II, September and October 1873.

DATE.	VOLS. OF CARBONIC ACID PER 1,000 VOLS. OF SOIL-AIR.		TEMPERATURE OF THE SOIL.				Mean temperature (open air).	Rainfall in inches.	Distance of water-level from surface in feet and inches: weekly averages (at Alipore).	Weekly Returns of deaths from Cholera. (Total reported in Calcutta.)	WEEKLY RETURNS OF SICKNESS FROM		Weekly Returns of deaths from all causes in Calcutta per 1,000 of population.
	At 3 feet from surface.	At 6 feet from surface.	At 3 feet from surface.		At 6 feet from surface.						Dysentery. (In Presidency and Alipore Jails.)	Malarious fevers. (In Presidency and Alipore Jails.)	
			Maximum.	Minimum.	Maximum.	Minimum.							
1873.			° F.	° F.	° F.	° F.	° F.						
September 1 ...	11-189	11-770	82-5	79-8	81-4	80-8	83-9	0-09					
" 2 ...	10-899	12-352	81-8	79-8	81-4	80-9	83-0	0-10					
" 3 ...	10-608	12-206	82-5	79-8	81-3	80-7	84-0						
" 4 ...	10-899	11-916	81-8	79-8	82-1	80-5	83-4	0-11					
" 5 ...	10-753	11-916	82-3	79-8	81-6	80-1	82-7	0-70					
" 6 ...	11-916	11-625	82-6	79-8	81-5	80-1	78-6	2-32	10' 5"	5	22	37	23-40
" 7 ...	11-480	12-352	82-5	79-5	81-4	80-7	82-0	0-19					
" 8 ...	10-899	12-061	82-1	79-4	81-3	80-4	85-0						
" 9 ...	...	...	81-8	79-6	81-5	80-4	86-0						
" 10 ...	11-625	12-061	82-5	79-8	81-5	80-5	85-0	0-29					
" 11 ...	11-625	12-497	82-3	79-9	81-3	80-7	84-6	0-29					
" 12 ...	...	...	82-2	80-0	81-2	80-8	82-1	0-72					
" 13 ...	11-044	12-206	82-7	80-0	81-7	80-9	81-7	0-75	9' 9"	9	25	52	23-40
" 14 ...	...	...	...	...	...	...	81-3	0-13					
" 15 ...	11-334	11-916	...	...	...	...	83-5	0-15					
" 16 ...	11-625	12-497	82-5	79-8	81-7	80-6	84-9	0-06					
" 17 ...	11-480	12-642	81-8	79-9	81-4	80-8	84-0						
" 18 ...	10-899	...	81-8	80-0	81-7	80-5	84-6						
" 19 ...	11-770	12-352	82-2	81-7	81-3	80-5	84-8						
" 20 ...	11-770	12-788	81-9	80-1	81-4	80-6	85-0		10' 1"	4	20	51	24-96
" 21 ...	...	...	...	...	...	...	86-1						
" 22 ...	12-061	12-788	82-8	80-1	81-5	81-0	86-6						
" 23 ...	11-916	11-625	82-2	80-1	81-5	80-7	86-8						
" 24 ...	12-206	12-788	...	...	...	...	87-0						
" 25 ...	11-334	12-061	82-2	80-3	81-5	81-0	83-7						
" 26 ...	10-753	10-899	82-2	80-4	81-6	80-9	85-8						
" 27 ...	10-463	11-334	82-3	80-4	81-4	80-9	86-6		10' 3"	6	8	45	23-92
" 28 ...	...	...	82-2	80-5	81-4	80-6	86-5						
" 29 ...	...	...	82-6	80-6	81-5	80-9	86-6						
" 30 ...	...	...	...	...	...	...	84-6						
October 1 ...			82-3	80-3	81-6	80-9	84-9						
" 2 ...			82-3	80-5	81-6	81-0	84-8						
" 3 ...			82-5	80-0	81-5	81-0	85-7	2-05					
" 4 ...			81-8	78-1	81-4	80-8	83-9	...	10' 8"	8	20	38	27-56
" 5 ...			...	...	...	...	84-4						
" 6 ...			81-7	79-5	81-4	80-9	82-6						
" 7 ...			...	...	...	...	82-1						
" 8 ...			81-7	78-9	81-3	80-6	81-1						
" 9 ...			80-5	78-4	81-4	80-3	81-5						
" 10 ...			79-9	78-3	81-2	80-2	82-6						
" 11 ...			80-0	78-2	81-0	80-2	79-4	0-20	10' 11"	6	16	53	24-96
" 12 ...			80-1	78-1	80-9	80-1	80-4	0-07					
" 13 ...			80-1	77-9	80-8	80-0	80-9	0-08					
" 14 ...	9-685	11-705	...	...	...	...	81-2						
" 15 ...			80-1	77-9	80-8	79-9	82-3						
" 16 ...			79-5	77-8	80-7	79-9	82-9						
" 17 ...			79-7	77-8	80-8	79-8	82-6						
" 18 ...			79-8	77-8	80-5	79-8	83-5		11' 9"	5	22	47	25-67
" 19 ...			...	...	...	...	83-7						
" 20 ...			79-8	77-9	80-5	79-6	84-3						
" 21 ...			...	...	...	...	84-6						
" 22 ...			79-6	77-9	80-5	79-8	83-8						
" 23 ...			...	...	...	...	81-8						
" 24 ...			79-6	78-0	80-4	79-6	81-9						
" 25 ...			80-1	78-0	80-4	79-0	82-0		12' 3"	4	14	42	27-04
" 26 ...			79-4	78-0	80-3	79-0	80-4						
" 27 ...			79-8	78-0	80-8	79-3	80-6						
" 28 ...			78-9	77-8	80-1	79-0	77-5						
" 29 ...			78-6	77-4	80-1	79-1	77-8						
" 30 ...			78-3	77-0	79-9	79-0	78-3						
" 31 ...			77-7	76-5	79-8	78-7	77-8						

Weekly averages of the amount of Carbonic Acid in the Soil; Soil Temperature, &c., in relation to disease—Table III, November and December 1873.

DATE.	VOLS. OF CARBONIC ACID PER 1,000 VOLS. OF SOIL-AIR.		TEMPERATURE OF THE SOIL.				Mean temperature (open air).	Rainfall in inches.	Distance of water-level from surface in feet and inches; weekly averages (at Alipore).	Weekly Returns of deaths from Cholera. (Total reported in Calcutta.)	WEEKLY RETURNS OF SICKNESS FROM		Weekly Returns of deaths from all causes in Calcutta per 1,000 of population.
	At 3 feet from surface.	At 6 feet from surface.	At 3 feet from surface.		At 6 feet from surface.						Dysentery. (In Presidency and Alipore Jails.)	Malarious fevers. (In Presidency and Alipore Jails.)	
			Maximum.	Minimum.	Maximum.	Minimum.							
1873.			° F.	° F.	° F.	° F.	° F.						
November 1 ...			77.5	75.8	79.6	78.8	76.2	...	12' 4"	4	13	38	27.04
" 2 ...			77.2	75.2	79.4	78.2	78.2						
" 3 ...			76.5	74.7	79.1	78.0	78.1	0.01					
" 4 ...			76.6	74.9	79.2	78.0	80.8						
" 5 ...			76.9	75.0	78.9	78.0	82.0						
" 6 ...			77.2	75.4	79.5	78.1	82.5						
" 7 ...			77.6	75.7	79.5	78.1	82.6						
" 8 ...			77.8	76.1	79.1	78.0	81.4	...	12' 4"	2	21	56	27.56
" 9 ...			...	...	...	...	79.2						
" 10 ...	9.685	11.705	77.8	76.2	79.1	78.0	75.8						
" 11 ...			77.6	75.7	79.1	77.9	73.9						
" 12 ...			77.1	75.0	79.2	77.8	74.3						
" 13 ...			76.5	74.5	78.7	77.5	74.9						
" 14 ...			75.8	74.1	78.7	77.5	75.3						
" 15 ...			75.5	73.8	78.6	77.1	76.2	...	12' 11"	5	22	45	30.9
" 16 ...			75.6	73.9	78.3	77.1	74.5						
" 17 ...			75.2	73.7	77.5	77.0	74.3						
" 18 ...			75.4	73.3	78.1	76.9	72.9						
" 19 ...			75.7	73.0	78.5	76.8	74.0						
" 20 ...			75.6	72.8	78.6	76.8	73.5						
" 21 ...	10.172	11.480	74.5	72.8	77.8	76.5	73.0						
" 22 ...	8.719	10.899	...	...	...	...	73.0	...	13' 4"	5	24	63	35.88
" 23 ...	8.137	10.608	74.3	72.4	77.6	76.0	72.6						
" 24 ...	7.556	9.881	74.5	72.5	77.3	75.9	74.2						
" 25 ...	7.120	10.172	74.5	72.2	77.4	75.0	74.5						
" 26 ...	7.120	11.625	74.1	72.3	77.5	75.4	75.0						
" 27 ...	7.556	12.788	74.2	72.4	77.1	75.7	73.7						
" 28 ...	7.847	11.625	74.5	72.2	77.3	75.5	71.9						
" 29 ...	7.266	11.625	74.5	70.4	77.1	75.5	69.4	...	13' 5"	5	31	44	35.88
" 30 ...	7.556	11.625	73.7	72.0	76.8	75.0	69.0						
December 1 ...	6.975	11.770	73.8	71.5	76.8	75.0	73.1						
" 2 ...	7.266	12.206	73.5	71.6	76.7	75.1	74.4						
" 3 ...	6.975	11.916	73.6	71.7	76.9	75.0	73.9						
" 4 ...	7.120	11.625	73.7	71.9	76.5	74.8	72.8						
" 5 ...	6.975	11.916	73.8	71.8	76.8	74.9	71.9						
" 6 ...	7.411	11.480	73.8	71.8	76.6	74.9	71.8	...	13' 8"	9	28	50	34.84
" 7 ...	...	...	73.5	71.5	76.5	74.5	72.8						
" 8 ...	6.539	12.206	73.5	71.5	76.5	74.6	71.0						
" 9 ...	6.830	12.061	73.7	71.4	76.1	74.5	71.8						
" 10 ...	6.830	11.770	73.5	71.0	76.1	74.6	72.7						
" 11 ...	6.975	11.916	73.2	71.1	75.0	74.6	72.3	0.82					
" 12 ...	6.975	11.770	73.1	71.5	76.1	74.5	73.8						
" 13 ...	7.120	11.334	73.1	71.3	76.0	73.9	69.9	...	13' 10"	5	32	42	30.16
" 14 ...	...	...	73.1	71.0	75.8	74.2	68.4						
" 15 ...	6.830	11.916	72.5	70.5	75.8	74.0	68.7						
" 16 ...	7.120	11.625	72.1	69.9	75.7	73.9	69.7						
" 17 ...	6.539	11.334	71.8	69.8	75.6	73.4	69.6						
" 18 ...	...	...	71.3	69.4	75.5	73.5	69.6						
" 19 ...	6.975	11.334	71.3	69.2	75.5	73.5	69.3						
" 20 ...	...	...	71.3	69.0	75.1	73.5	69.4	...	14' 2"	3	39	34	30.9
" 21 ...	6.975	11.625	70.8	68.9	75.1	73.0	69.1						
" 22 ...	7.120	12.261	...	...	...	...	67.5						
" 23 ...	6.975	12.061	70.7	68.8	74.9	73.0	68.0						
" 24 ...	7.266	11.770	70.6	68.4	74.9	72.8	67.8						
" 25 ...	...	...	70.7	68.2	74.8	72.8	66.9						
" 26 ...	...	...	70.1	68.2	74.5	72.6	67.6						
" 27 ...	7.701	11.770	70.1	67.9	74.4	72.6	68.1	...	14' 1"	12	28	40	30.16
" 28 ...	...	...	69.6	68.0	74.3	72.5	69.8						
" 29 ...	...	...	70.7	68.0	74.1	72.1	67.3						
" 30 ...	7.266	10.753	69.9	68.1	74.3	72.0	63.9						
" 31 ...	...	...	70.1	68.0	74.0	72.0	63.4						

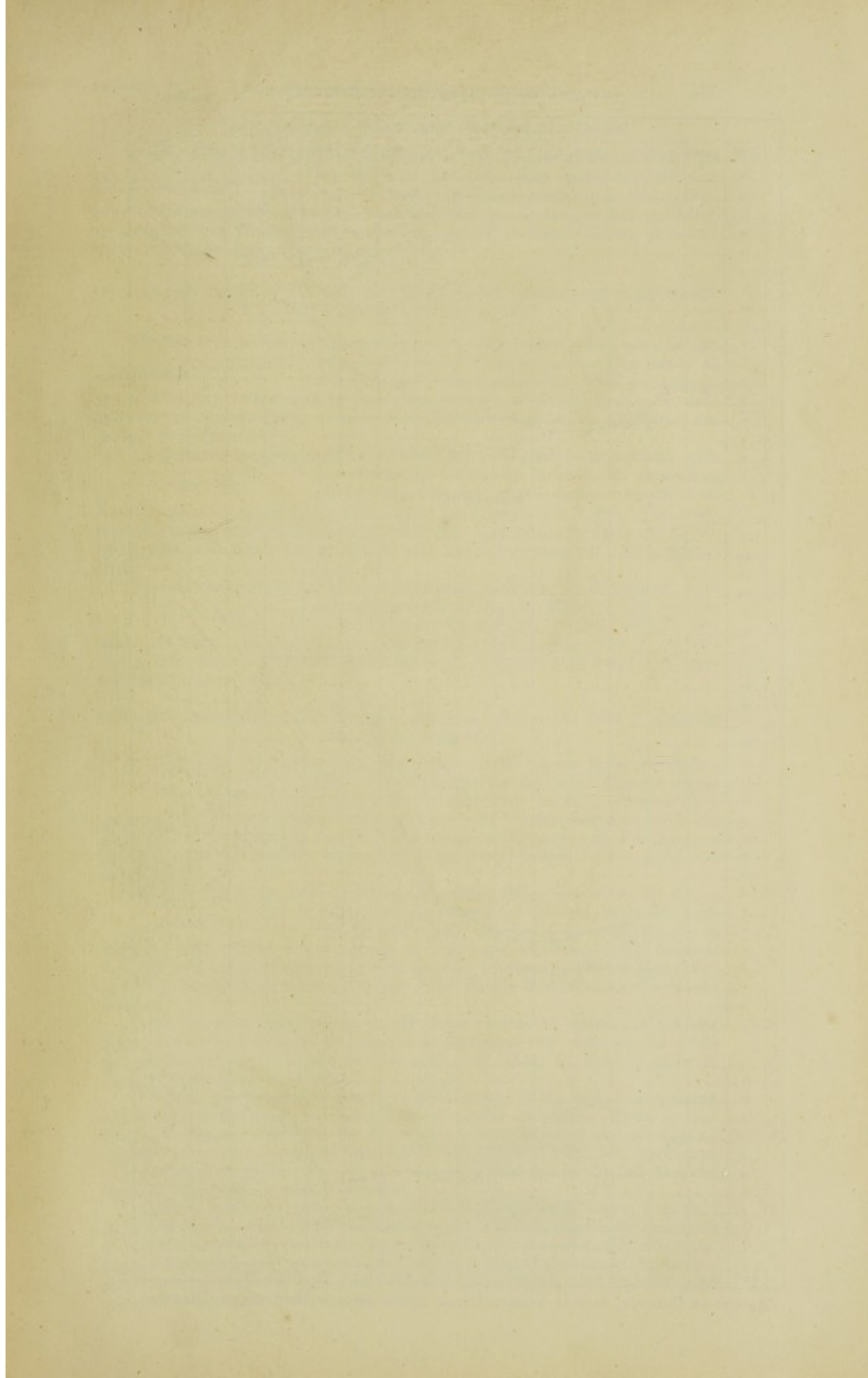
Weekly averages of the amount of Carbonic Acid in the Soil; Soil Temperature, &c., in relation to disease—Table IV, January and February 1874.

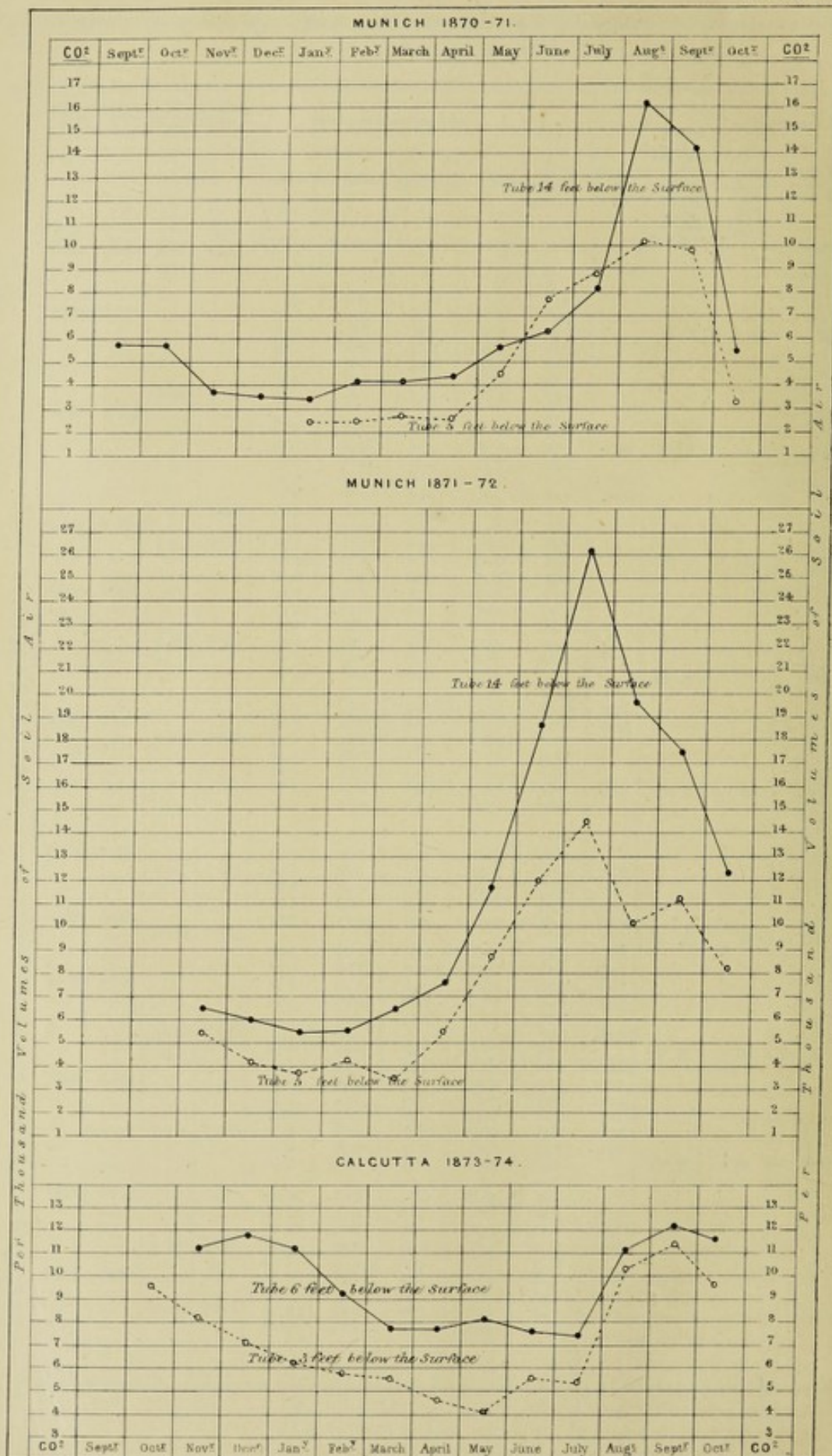
DATE.	VOL. OF CARBONIC ACID PER 1,000 VOL. OF SOIL-AIR (ESTIMATED IN TWO LOCALITIES, NOS. 1 & 2.)				TEMPERATURE OF THE SOIL.				Mean temperature (open air).	Rainfall in inches.	Distance of water-level from surface in feet and inches: weekly averages (at Allipore).	PREVALENCE OF VARIOUS DISEASES.			
	No. 1.		No. 2.		At 3 feet from surface.		At 6 feet from surface.					Weekly Returns of deaths from Cholera. (Total reported in Calcutta.)	Weekly Returns of sickness in the Presidency and Allipore Jails from	Weekly Returns of deaths from all causes per 1,000 of population in Calcutta.	
	3 feet from surface.	6 feet from surface.	3 feet from surface.	6 feet from surface.	Maximum.	Minimum.	Maximum.	Minimum.							
1874.															
Jan. 1	5.736	10.608	...	...	...	...	...	...	61.4	...	...	...			
" 2	...	...	5.376	7.701	70.2	67.4	73.8	71.9	67.1	...	14' 4"	7	30	36	27.04
" 3	...	10.899	...	...	69.6	67.3	73.7	71.9	69.9	...	...	...	...	...	...
" 4	...	...	...	...	69.6	67.4	74.0	71.8	68.2	...	...	...	...	...	...
" 5	...	...	6.539	7.847	69.7	67.8	73.8	71.5	64.5	...	...	...	...	...	...
" 6	6.394	10.172	...	...	69.5	67.5	73.5	71.3	61.9	...	...	...	...	...	...
" 7	...	...	5.958	7.120	69.5	68.8	73.2	70.5	61.0	...	...	...	...	...	...
" 8	6.103	10.899	...	...	68.8	66.3	73.4	70.8	61.7	...	...	...	...	...	...
" 9	...	...	6.394	7.120	68.2	66.0	72.8	70.7	62.3	...	...	...	...	...	...
" 10	6.884	11.044	...	...	67.7	65.6	72.7	70.2	65.3	...	14' 6"	11	18	46	25.67
" 11	...	...	...	...	68.2	65.5	72.7	70.0	69.0	...	...	...	...	...	...
" 12	...	...	6.830	7.701	68.9	65.7	72.7	70.5	71.9	...	...	...	...	...	...
" 13	7.411	12.206	...	...	68.2	66.0	72.9	70.7	68.2	...	...	...	...	...	...
" 14	...	...	6.103	7.847	68.9	66.6	72.8	70.5	61.4	...	...	...	...	...	...
" 15	6.975	12.061	...	...	...	...	...	...	61.0	...	...	...	...	...	...
" 16	...	...	6.394	8.283	68.2	65.5	72.7	69.8	63.3	...	...	...	...	...	...
" 17	6.684	12.206	...	...	68.3	65.2	72.4	69.5	65.9	...	14' 9"	6	12	27	27.56
" 18	...	...	6.539	7.701	68.1	65.5	72.1	70.0	65.2	...	...	...	...	...	...
" 19	6.394	12.061	...	...	67.9	65.7	72.5	69.9	66.6	...	...	...	...	...	...
" 20	...	...	5.812	7.847	67.5	65.4	72.1	69.4	64.6	...	...	...	...	...	...
" 21	6.684	12.206	...	...	67.8	65.6	71.9	69.4	67.4	...	...	...	...	...	...
" 22	...	...	5.958	7.266	67.7	65.4	72.1	69.9	69.9	...	...	...	...	...	...
" 23	6.539	12.642	...	...	67.8	65.9	72.1	69.8	72.5	...	...	...	...	...	...
" 24	...	...	5.958	7.701	68.9	66.4	72.5	69.6	72.3	...	14' 9"	23	18	29	27.54
" 25	...	...	...	...	69.7	67.6	72.6	70.0	63.6	0.49	...	...	...	...	...
" 26	5.376	11.044	4.359	6.248	69.5	67.6	72.8	70.0	64.8	...	...	...	...	...	...
" 27	5.086	10.608	...	...	69.8	67.1	72.7	70.0	65.4	...	...	...	...	...	...
" 28	...	...	3.342	5.812	70.8	66.8	72.7	69.9	66.9	...	...	...	...	...	...
" 29	4.940	10.317	...	...	68.7	66.5	72.7	69.8	69.7	...	...	...	...	...	...
" 30	...	...	...	...	68.7	66.4	72.6	70.0	71.8	...	...	...	...	...	...
" 31	...	10.463	...	6.248	69.3	66.5	72.8	70.0	73.1	...	14' 10"	27	13	28	27.04
Feb.															
1	...	...	...	...	69.8	67.4	72.8	70.0	68.2	0.80	...	...	...	...	...
" 2	4.650	10.463	6.830	4.068	70.0	68.0	72.8	70.0	70.0	0.15	...	...	...	...	...
" 3	...	...	...	...	70.3	68.5	72.8	70.3	71.0	...	...	...	...	...	...
" 4	5.376	10.463	4.650	5.958	70.1	68.1	72.7	70.1	70.5	...	...	...	...	...	...
" 5	...	...	...	...	69.8	67.9	73.1	70.2	67.4	2.01	...	...	...	...	...
" 6	5.522	10.463	...	...	70.2	67.7	72.8	70.3	64.8	0.16	...	...	...	...	...
" 7	...	...	4.214	6.539	70.6	67.4	73.0	70.0	66.1	...	14' 10"	46	18	30	28.00
" 8	...	...	...	...	69.8	67.0	72.9	70.0	66.4	...	...	...	...	...	...
" 9	...	10.027	...	...	69.4	66.6	72.9	70.0	68.2	...	...	...	...	...	...
" 10	...	...	3.342	6.103	68.8	66.8	72.5	69.8	73.4	...	...	...	...	...	...
" 11	4.940	10.027	...	...	68.9	67.3	72.8	70.0	76.5	...	...	...	...	...	...
" 12	...	...	...	...	69.8	68.4	72.8	70.0	77.3	...	...	...	...	...	...
" 13	5.231	7.411	...	...	71.2	68.8	72.8	70.3	71.1	...	...	...	...	...	...
" 14	...	...	4.940	5.522	71.5	68.1	72.8	70.5	71.2	0.63	14' 10"	47	21	25	27.58
" 15	6.103	8.719	...	...	...	...	...	...	66.3	...	...	...	...	...	...
" 16	...	...	4.795	6.684	70.7	68.1	72.8	70.0	66.7	...	...	...	...	...	...
" 17	6.539	7.992	...	...	70.4	67.4	72.7	70.0	68.8	...	...	...	...	...	...
" 18	...	...	5.086	6.103	69.4	66.7	72.6	69.8	71.1	...	...	...	...	...	...
" 19	...	8.573	...	...	69.4	67.0	72.8	70.0	74.6	...	...	...	...	...	...
" 20	...	...	5.231	6.103	69.6	67.0	72.8	70.1	75.5	...	...	...	...	...	...
" 21	5.522	9.736	...	...	70.3	67.7	73.2	70.1	78.0	...	14' 10"	43	16	41	27.04
" 22	...	...	...	...	71.2	68.3	73.2	70.2	78.2	...	...	...	...	...	...
" 23	...	...	4.504	6.248	71.5	69.0	73.5	70.6	76.5	...	...	...	...	...	...
" 24	6.394	8.573	...	...	72.0	69.8	73.4	70.6	75.0	...	...	...	...	...	...
" 25	...	...	...	5.376	71.8	70.0	73.1	70.7	77.2	...	...	...	...	...	...
" 26	6.103	9.591	...	...	71.9	70.2	73.5	70.9	77.4	0.02	...	...	...	...	...
" 27	...	...	4.214	7.120	72.8	70.2	73.5	70.9	77.4	...	...	...	...	...	...
" 28	...	...	...	...	72.5	70.3	73.5	71.1	75.9	...	14' 10"	37	23	37	22.54

Weekly averages of the amount of Carbonic Acid in the Soil; Soil Temperature, &c., in relation to disease—Table V, March and April 1874.

DATE.	VOL. OF CARBONIC ACID PER 1,000 VOL. OF SOIL-AIR (ESTIMATED IN TWO LOCALITIES, Nos. 1 AND 2).				TEMPERATURE OF THE SOIL.				Mean temperature (open air).	Rainfall in inches.	Distance of water-level from surface in feet and inches: weekly averages (at Allpore).	PREVALENCE OF VARIOUS DISEASES.					
	No. 1.		No. 2.		At 3 feet from surface.		At 6 feet from surface.					Weekly Returns of deaths from Cholera. (Total reported in Calcutta.)	Weekly Returns of sickness in the Presidency and Allpore Jails from		Weekly Returns of deaths from all causes per 1,000 of population in Calcutta.		
	3 feet from surface.	6 feet from surface.	3 feet from surface.	6 feet from surface.	Maximum.	Minimum.	Maximum.	Minimum.					Dysentery.	Malarious fevers.			
1874.					° F.	° F.	° F.	° F.	° F.								
March 1	6.539	8.137	...	...	72.5	70.6	73.8	70.7	74.5								
" 2	...	...	4.650	5.958	72.3	70.7	73.8	71.0	75.8								
" 3	6.394	...	...	...	73.1	70.5	73.6	71.0	76.7								
" 4	...	...	4.795	6.830	...	...	...	...	78.2								
" 5	5.958	8.428	...	...	73.8	70.5	74.1	71.0	76.7								
" 6	...	...	4.795	5.958	73.7	71.3	74.0	71.0	75.2								
" 7	6.394	8.428	...	...	73.8	71.7	74.2	71.5	76.7	0.41	14' 10"	40	18	44			
" 8	...	...	...	...	...	...	...	...	75.5	0.78							
" 9	...	...	4.214	5.667	73.3	68.7	74.2	71.2	78.3								
" 10	4.940	6.539	...	...	73.9	71.4	74.5	71.8	79.0	0.09							
" 11	...	...	4.650	5.812	73.7	72.4	74.3	71.4	76.3								
" 12	4.650	8.573	...	...	73.8	72.1	74.6	71.6	74.0								
" 13	...	...	5.376	5.667	73.9	71.5	74.8	71.6	74.1								
" 14	5.667	8.137	...	...	73.4	71.1	74.8	71.5	76.8		14' 11"	38	26	46			27.56
" 15	...	...	...	...	73.4	71.0	74.3	71.8	79.8								
" 16	...	...	4.940	6.103	...	...	...	...	72.8	0.40							
" 17	5.231	6.539	...	...	73.8	71.0	74.7	72.0	74.6	0.10							
" 18	...	...	4.940	5.958	...	...	...	...	78.7								
" 19	5.959	7.266	...	...	...	...	...	...	78.0								
" 20	...	...	5.086	6.103	73.7	71.6	74.7	71.8	77.2								
" 21	6.684	8.283	...	...	73.7	71.9	74.7	72.0	78.6		15' 0"	44	26	50			27.04
" 22	...	...	...	...	...	...	...	...	79.0								
" 23	...	...	4.940	5.958	...	...	...	...	79.6								
" 24	...	...	...	...	75.3	72.7	74.9	72.1	81.5	0.16							
" 25	5.086	6.830	...	...	75.7	73.1	75.1	72.4	82.7								
" 26	...	...	4.359	5.667	75.8	73.6	75.0	72.6	81.8								
" 27	...	...	...	...	76.3	74.0	75.2	73.1	81.8								
" 28	4.940	7.556	...	...	76.6	74.4	75.2	72.9	80.5		15' 0"	40	18	49			27.58
" 29	...	...	...	...	76.8	74.7	75.5	72.8	81.9								
" 30	...	...	5.086	5.667	76.4	74.5	75.7	73.0	83.6								
" 31	5.376	8.283	...	...	77.1	74.9	75.9	73.1	84.0								
April 1	...	...	4.795	5.958	77.5	75.2	75.8	73.3	84.5								
" 2	4.940	7.992	...	...	77.6	75.1	76.1	73.5	84.3								
" 3	...	...	4.795	5.812	77.7	76.1	76.2	73.5	82.6								
" 4	...	...	...	...	78.5	76.0	76.5	74.0	84.6		15' 1"	58	20	41			28.62
" 5	5.086	7.992	...	...	79.2	76.7	76.3	74.0	83.8								
" 6	...	...	4.940	6.394	78.7	77.1	76.8	74.0	82.8								
" 7	...	...	...	...	79.1	76.8	76.8	74.2	82.5								
" 8	4.940	7.847	...	...	79.7	76.8	77.0	74.7	82.4								
" 9	...	...	...	...	79.3	77.2	77.1	74.3	83.7								
" 10	...	...	5.231	6.684	79.3	77.4	77.3	74.8	84.7								
" 11	4.795	7.266	...	...	79.7	78.0	77.5	75.0	86.7		15' 0"	60	25	30			27.55
" 12	...	...	...	...	79.8	78.2	78.0	75.1	88.3								
" 13	...	...	...	...	80.8	78.3	78.1	75.0	86.8								
" 14	...	...	...	...	81.5	79.0	77.9	75.2	87.4								
" 15	...	...	5.231	6.103	81.9	79.0	78.2	75.5	86.2								
" 16	4.504	7.847	...	...	81.8	79.5	78.1	75.9	85.6								
" 17	...	...	5.522	6.830	81.7	79.5	78.7	76.0	86.7								
" 18	4.214	7.992	...	...	81.9	79.7	78.5	76.0	87.1		15' 2"	36	26	29			26.52
" 19	...	...	...	...	...	...	...	...	86.4								
" 20	...	...	...	...	82.3	80.0	79.0	76.0	86.2								
" 21	...	...	...	...	82.6	80.2	79.0	76.2	85.8								
" 22	...	...	5.522	5.812	82.5	80.3	79.1	76.7	87.3								
" 23	4.940	8.283	...	...	82.9	80.7	79.2	76.9	87.5								
" 24	...	...	...	...	82.8	80.9	79.5	77.0	84.8								
" 25	...	...	5.812	6.830	82.8	80.9	79.5	77.0	87.5	0.20	15' 1"	54	21	37			28.08
" 26	...	...	...	...	...	...	...	...	85.3								
" 27	...	...	...	...	82.7	80.8	79.9	77.1	84.3	0.25							
" 28	...	...	...	...	82.8	80.8	79.8	77.2	80.8	0.21							
" 29	4.795	6.830	...	...	81.9	80.3	79.9	77.5	84.3								
" 30	...	...	6.103	6.830	81.9	79.8	79.8	77.4	82.8	0.81							







AMOUNT OF CARBONIC ACID AT VARIOUS DEPTHS IN THE SOIL OF MUNICH AND CALCUTTA.

## (2).—The fluctuations in the amount of Carbonic Acid in the Soil.

It may be premised that the estimation of the amount of carbonic acid in the soil was not undertaken under the idea that this gas itself exerts much influence on the prevalence of disease, but because its amount may be taken as a convenient and fairly accurate index of the degree of the various organic processes taking place between the water-level and the surface.

## (a)—Average amount of Carbonic Acid in the Soil of Calcutta as compared with that of Munich.—(Diagram I.)

The levels at which the observations were made were not the same in the two localities, those in Calcutta being made at 3 and 6 feet from the surface; those in Munich at 5 and 14 feet. This must be taken into account in the comparison; still, allowing all due weight to this circumstance, very considerable differences are evident in the results.

In Calcutta, the *maximum* in the upper layer occurred in September, with 11 volumes per 1,000. In Munich, the *maxima* in the two years shown in the diagram occurred in August and July respectively, with 10 and 14 volumes per 1,000. The *minimum* in the upper layer in Calcutta occurred in May with 4 volumes per 1,000. In Munich, in January and in March, with 2 and 3 volumes per 1,000, respectively.

The *maximum* in the lower layer occurred in Calcutta in September, with 12 volumes per 1,000. In Munich, the *maxima* occurred in August and July, with 16 and 26 volumes per 1,000. In Calcutta, the *minimum* occurred in July with 7 volumes per 1,000; but in Munich in January and February with 3 and 5 volumes per 1,000, respectively.

## (b).—The fluctuations in the amount of Carbonic Acid in the Soils of Calcutta and Munich compared.

In Calcutta, beginning with November, in the upper layer we find a gradual and continuous fall until May; a slight rise in June; a slight fall in July followed by a great and rapid rise in August and September. In Munich, beginning with the same month, we find slight falls to the minima in January and February; a slight rise and fall in March and April, respectively, followed by a rapid rise to the maxima.

In Calcutta, in the lower layer, again starting from November, we find a slight rise in December followed by a fall until March and April, succeeded by a slight rise in May and a fall thence to a minimum in July; the minimum being followed by a rapid rise to the maximum in September. In Munich, there is first a fall to the minima in January and February, and thence a continuous rise to the maxima.

Both localities agree pretty closely in the period at which the maxima occur, but the course of the fluctuations is otherwise very different, for while the minima in Calcutta occur in May and July, those in Munich occur in January, February and March,

There is also an agreement in the approximation of the periods of maxima and minima in the upper and lower layers of the two localities. There is considerable difference in regard to the relative amounts which the volumes of carbonic acid in the upper and lower levels bear to one another, but this cannot be regarded as of any importance, as it may have been due to the fact that the levels of observation were not identical.

There is, however, one point in regard to this relation in which a distinct difference can be traced in the two localities, for, whilst in Munich the quantities of carbonic acid in the two layers approach one another most closely when low, and are most remote when at a maximum, the reverse is the case in Calcutta—the difference in amount being least during the period of maxima, and great when the amount of carbonic acid is low.



In Munich, the points of maxima and minima appear to be determined by temperature, whereas in Calcutta, as we shall see further on, this is not the case—moisture being the apparent determinant.

(c)—*The quantities of Carbonic Acid present at different times in the Upper and Lower Layers of Soil in Calcutta.*—(Diagrams II and IV.)

The diagram illustrating the proportion of carbonic acid present in the layers of soil of the first locality selected for observation (Tubes No. 1) shows the weekly averages of the gas in 1,000 volumes of soil-air. There is not much calling for comment on this point, as the principal phenomena of the fluctuations in amount of carbonic acid have been already pointed out.

One curious phenomenon appears in regard to both layers of soil, namely, a sudden short rise in the amount of carbonic acid during the month of January. The amount of carbonic acid present in the upper layer in July 1874 was almost identical with that at the corresponding period of the previous year; while that in the lower layer was greater in the second than in the first year. In the upper layer a rapid rise is visible in June 1874, whilst in the lower the amount continued low until the close of the observations. So far as the evidence goes, it would appear that the period of minimum begins later, and is continued to a later date in the lower than in the upper layer.

The sudden depression in the upper layer in May is very remarkable, and no corresponding phenomenon occurred in the case of the lower layer. Various of these special phenomena characterising the separate layers may, apparently, be explained, as will appear further on, but in the meantime attention is merely directed to them.

The relations between the quantities of carbonic acid estimated in the upper and lower layers of soil in the second locality selected for observation—the set of tubes No. 2, Diagram IV—resembled those in the former locality, in so far that the amount of gas present in the lower layer of soil continuously exceeded that in the upper one. The absolute differences in the quantities present in the layers were, however, less.

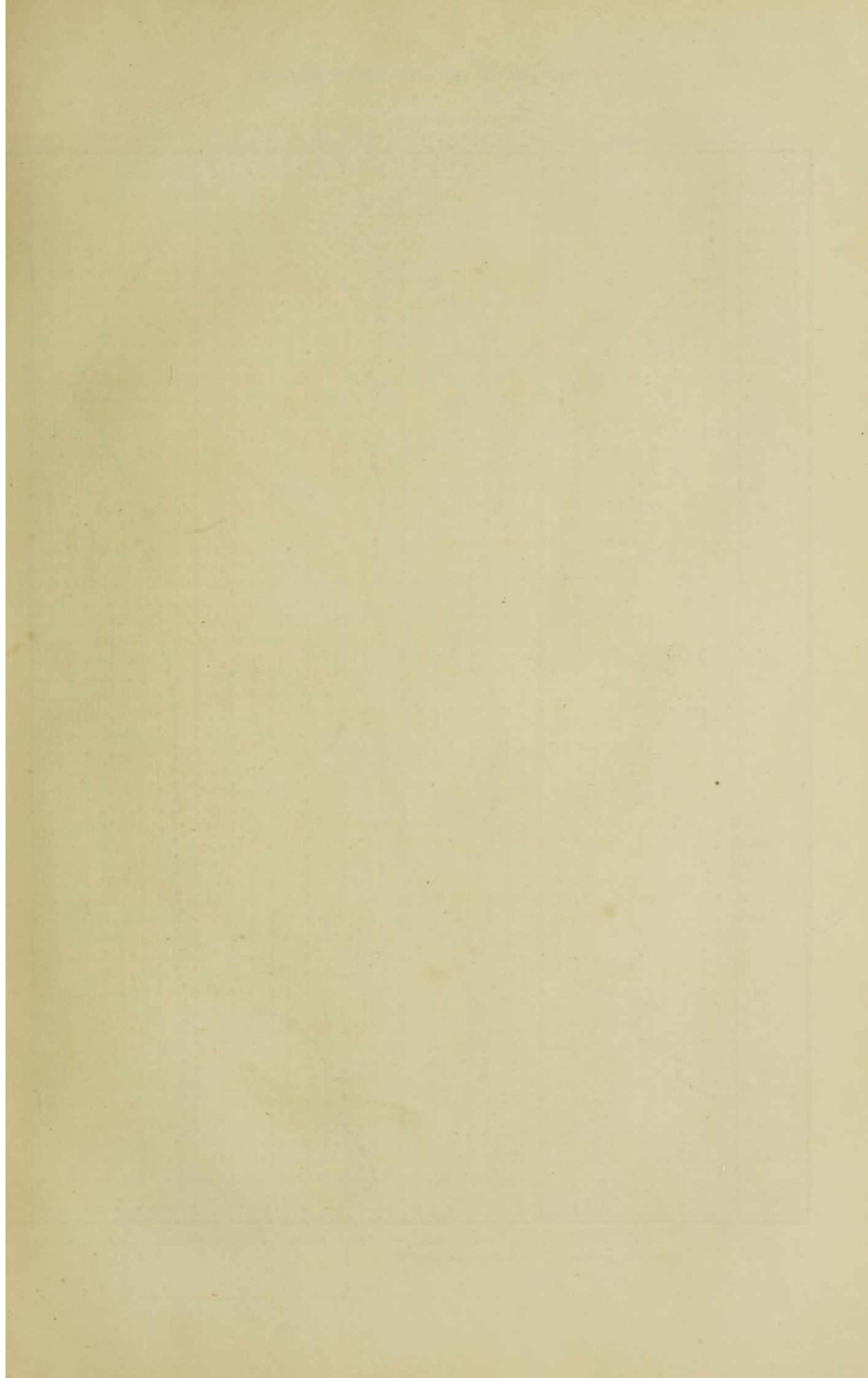
The absolute minimum in the upper layer occurred in January with 3·8 volumes per 1,000, but second periods of extreme depression occurred in February and July. The maximum for the period of observation occurred in January—6 volumes per 1,000.

There were two periods of maximum amounts of carbonic acid in the lower layer, the first in January—7 volumes per 1,000; the second in May, also with 7 volumes per 1,000.

The absolute minimum occurred in August with 5 volumes per 1,000, but there was a previous period of depression in January and March, also with 5 volumes per 1,000. In both layers there was a rise in January.

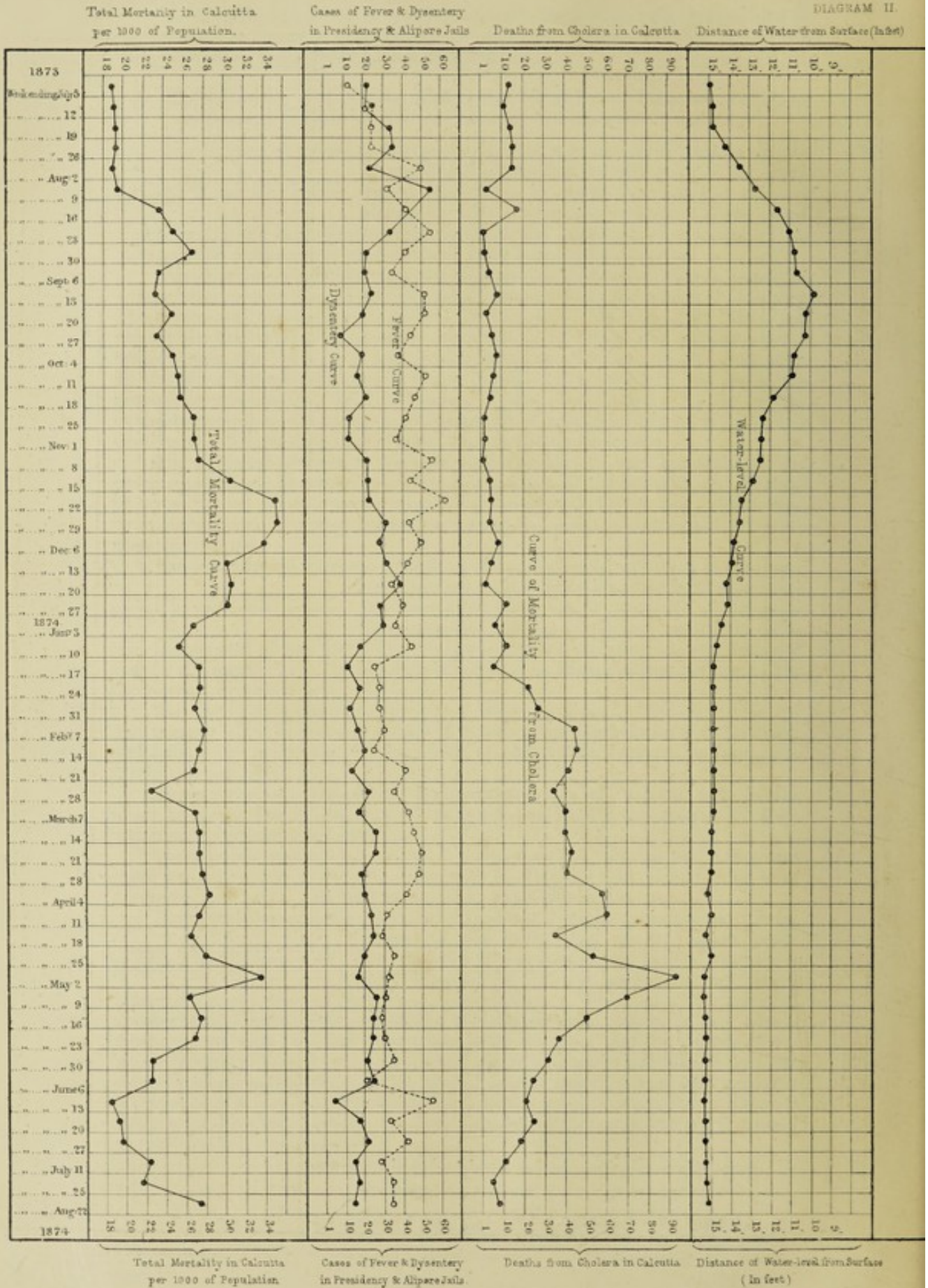
Both localities agreed in constantly showing a larger quantity of carbonic acid in the lower than in the upper layer. For purposes of more exact comparison, attention must be confined to the period during which both localities were subjected to observation. When this is done it appears that the absolute quantities of carbonic acid present in the second locality were, as a rule, less than those in the first, but that the periods of relative depression and elevation in amount of carbonic acid exhibited a general coincidence in both places. In the second locality not only were the amounts of carbonic acid less, but the fluctuations in the quantities present at different times were also less than in the first locality. This comes out very clearly in the following statement:—

Layer.	First Locality.		Second Locality.	
	Maximum. Vols. per 1000.	Minimum. Vols. per 1000.	Maximum. Vols. per 1000.	Minimum. Vols. per 1000.
Upper	7	3	6	3
Lower	12	7	7	5



THE SOIL IN ITS RELATION TO DISEASE.

DIAGRAM II.



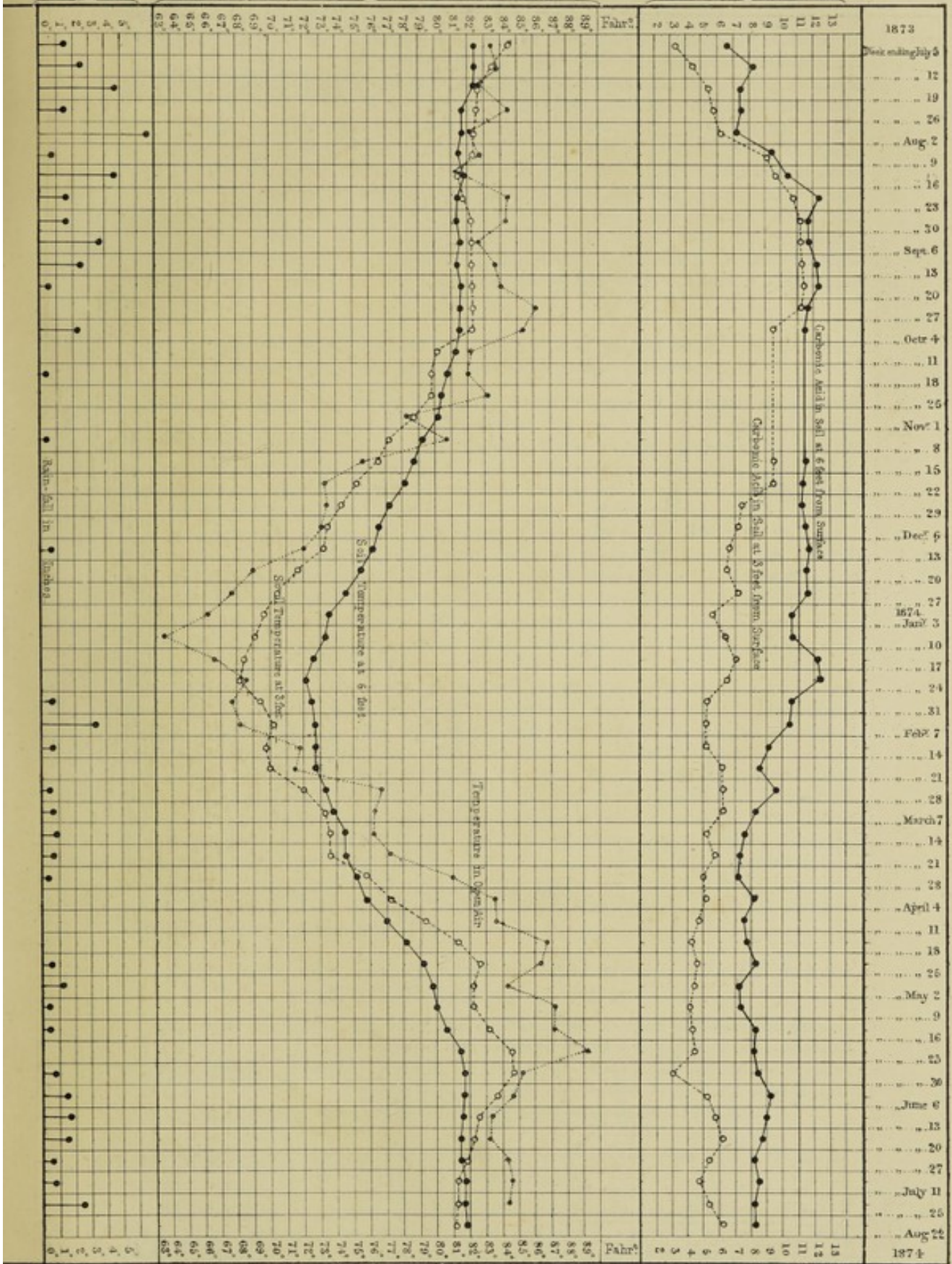
THE SOIL IN ITS RELATION TO DISEASE.

DIAGRAM III.

Rain-Fall in Inches.

Weekly Variations of the Temperature of the Soil and of Open Air

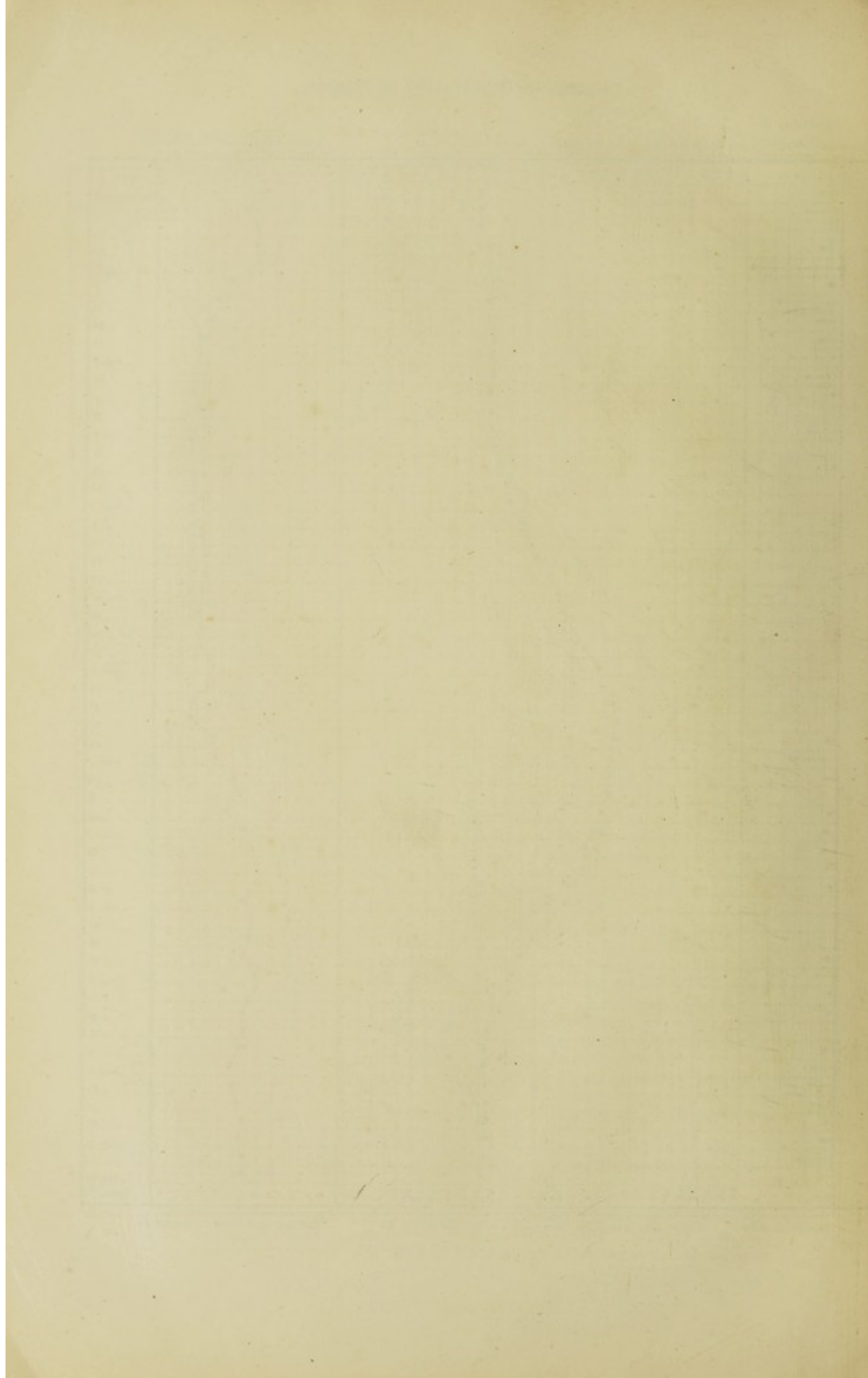
Carbonic Acid per 1000 Vols of Soil-Air



Rain-Fall in Inches

Weekly variations in the Temperature of Soil and of Open-Air

Carbonic Acid per 1000 Vols of Soil-Air



The only point of interest which calls for special remark in regard to this comparison is the demonstration which it affords of the occurrence of local variations in the amount of carbonic acid present in the soil of localities in close proximity to one another, and to all appearance extremely similar in their nature. The sites of observation were not more than 50 yards apart, and were both situated at similar and corresponding distances from the walls of one and the same building. The processes going on in the soil in the two places must have differed materially, in degree at all events, if not in kind; and if such processes occurring in the soil have any influence on health, it is obvious that people inhabiting one end of the building must have been exposed to different hygienic conditions from those living at the other end. Such an observation is of special interest in connection with the extremely marked, and frequently apparently inexplicable, localisation in the distribution of cholera within narrow limits—even within the limits of individual buildings.

Importance of observations showing difference in processes occurring in the soil of adjacent localities.

(d)—*Comparison of the amount of Carbonic Acid present in the Soil with the Temperature of the Soil at similar depths.—(Diagram III.)*

On consulting the tables and diagrams it becomes at once clearly evident that the amount of carbonic acid present in the soil at various times is not determined by the mere coincident temperature of the soil. Maximum temperature coincides with minimum amount of carbonic acid at one period, and with a very large amount of carbonic acid at another. The lines of temperature neither directly nor conversely correspond with those of carbonic acid. There is, however, one curious phenomenon which comes out very distinctly during the period over which the observations extend, and this is that the periods of maximum difference in the quantities of carbonic acid in the two layers of soil coincide with the periods of maximum difference of temperature in these layers. The minimum difference in the quantities of carbonic acid occurred in August and September, and during the same period the minimum difference of temperature also occurred. The two periods of maximum difference between the amounts of carbonic acid in the two layers of soil were first in December, January and February, and second in May; at both of these periods maximum differences in temperature were also present. Whether this be a mere coincidence we do not feel prepared to say, but it may be pointed out that if the conditions of temperature be in any way causatively related to the differences between the quantities of carbonic acid present in the layers of soil, the essential element is the *difference* of temperature, not the absolute temperature of either layer individually. The coincidence of maximum differences of temperature and carbonic acid occurred at one time when the temperature of the lower layer of soil exceeded that of the upper one, and at another when the reverse relation prevailed.

Amounts of carbonic acid not determined by soil-temperature.

(e)—*Comparison of the amount of Carbonic Acid present in the Soil with the Atmospheric Temperature.—(Diagram III.)*

No clear relation of any kind can be observed to exist between the atmospheric temperature and the amount of carbonic acid present in the soil—periods of extreme elevation and depression of the latter occurring coincidentally with conditions of temperature showing no corresponding changes.

Absence of connection between atmospheric temperature and amount of carbonic acid in the soil.

(f)—*Comparison of the amount of Carbonic Acid in the Soil with the Rain-fall.—(Diagram III.)*

In this case a general coincidence of conditions appears very distinctly, the principal periods of rain-fall coinciding with the principal periods of elevation in amount of carbonic acid, and the main periods of depression in the latter coinciding with periods of drought. This general coincidence is, however, much closer and more marked in reference to the carbonic acid in the upper than to that in

Connection of carbonic acid in the soil with rain-fall;

the lower layer of soil, for the amount of carbonic acid in the latter continues high long after the cessation of the rains, and shows no immediate rise corresponding with their commencement in the following season.

(g)—*Comparison of the amount of Carbonic Acid in the Soil with Water-Level.*—  
(Diagrams II—III.)

Here also a general coincidence appears, but in this case the coincidence is closer in regard to the lower than to the upper layer, as was seen to be the case with the rain-fall. and with water-level. The elevation of water-level begins later and lasts longer than the period of extreme elevation in the carbonic acid of the upper layer of soil.

(h)—*Comparison of the amount of Carbonic Acid with the Velocity of the Wind.*—(Diagram IV.)

The velocity of the wind does not appear to exert any very distinct influence on the amount of carbonic acid in the soil. Influence of velocity of wind slight, if any. It is, however, possible that the extreme and continued elevation in velocity of the wind during April and May may have been influential in producing the sudden depression in the amount of carbonic acid in the upper layer of the soil of the first locality in the latter month. There was no corresponding depression in the upper layer of the other locality, but as the latter was much more sheltered than the first locality, the discrepancy rather goes to support the idea that the wind may have had some effect. The question also arises, whether the marked elevation in amount of carbonic acid in both localities in January may not have been partially dependent on the long continuance of still weather, and consequent diminished ventilation of the soil, which preceded it.

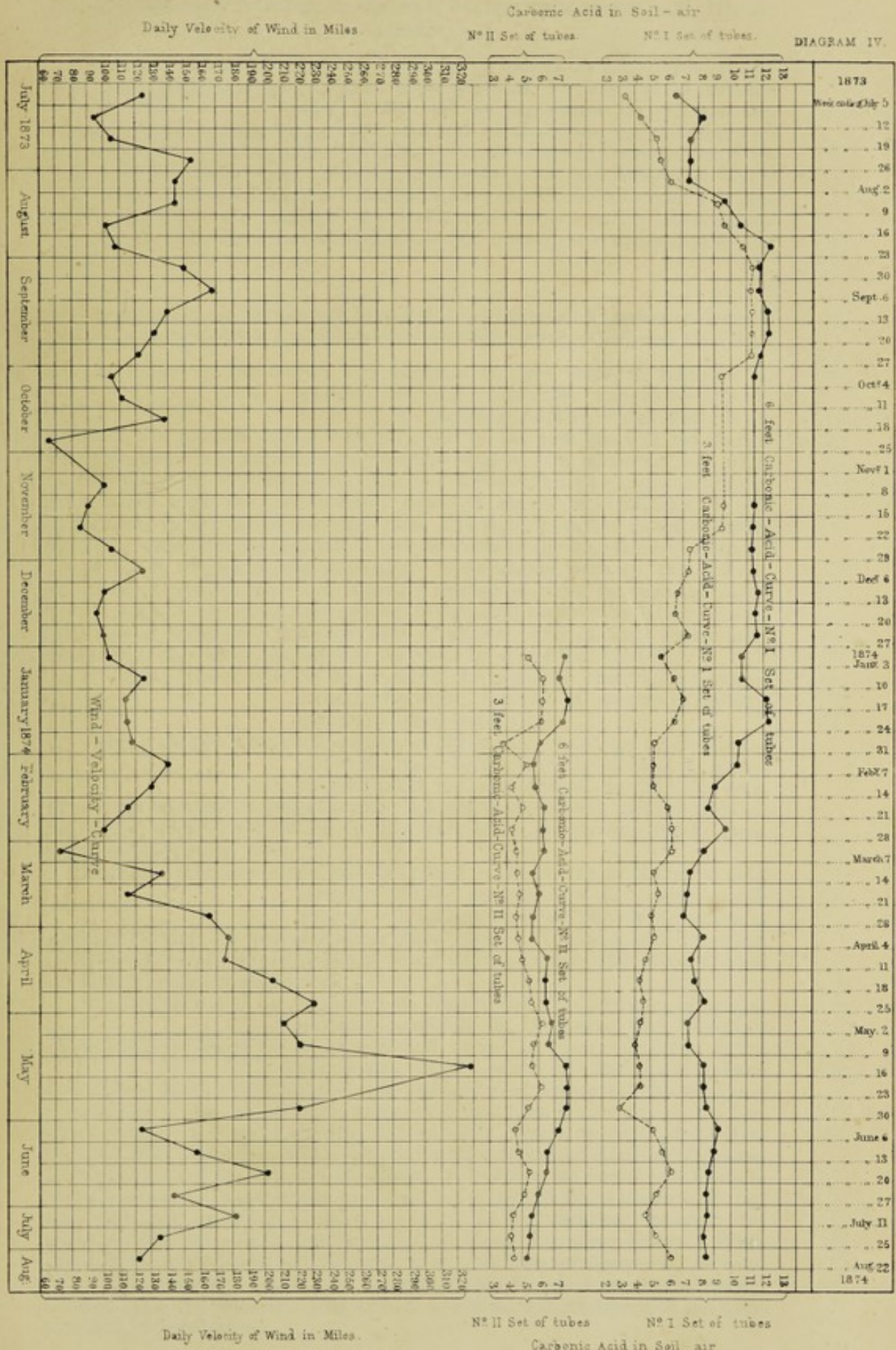
(3.)—*Temperature of the Soil.*—(Diagram III.)

Little need be said regarding this, as the principal phenomena appear very clearly in the diagram. So long as the weather remains dry, the fluctuations in temperature in the upper layer of soil follow those of atmospheric temperature very regularly; but on the occurrence of rain this correspondence ceases. Relations of temperature in the upper and lower layers of soil. The fluctuations in the temperature in the lower layer are naturally much less marked and sudden, and the line of elevation and depression follows a long, gentle curve. The maxima of temperature in the two layers approach more closely than the minima, a point in which the relations of temperature correspond with those of carbonic acid. During the cold weather the temperature of the lower layer considerably exceeds that of the upper one. These relations are reversed during the hot weather. A period ensues on the onset of the rains, in which the temperatures of both layers are nearly alike—sometimes one, sometimes the other showing a slight excess—and this is followed by a prolonged and continuous fall of the temperature of the upper layer beneath that of the lower until the maximum difference is attained in January and February, coincident with the minimum absolute temperature.

(4.)—*Water-Level.*—(Diagram II.)

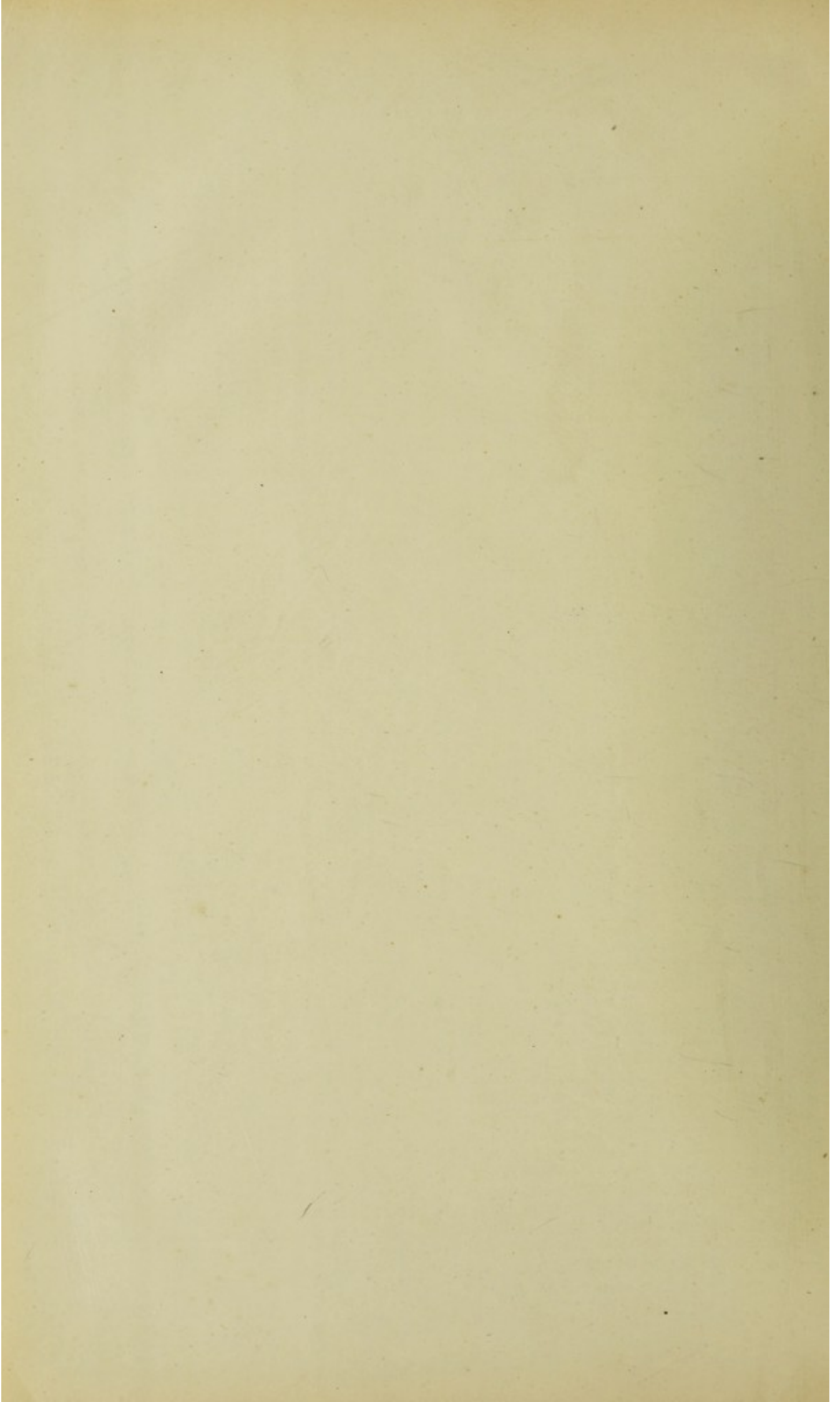
The only point calling for special notice here is the demonstration afforded by the diagram, that the water-level in Calcutta is really essentially dependent on the local rain-fall. Water-level in Calcutta dependent on local rain-fall. In so far as weekly averages are concerned, the influence exerted by the tides is so slight as to be almost inappreciable, and the same holds in regard to drainage into the delta from the melting of the snows on the Himalaya, and other non-local supplies of water, which might have been expected to produce very evident effects in a soil such as that in and around Calcutta. The three years' Table (No. VII) demonstrates the same fact for a longer period.

THE SOIL IN ITS RELATION TO DISEASE.



THE RELATION OF THE VELOCITY OF THE WIND TO THE AMOUNT OF CARBONIC ACID IN SOIL-AIR.





## (5)—Relations which the different conditions of Soil bear to one another.—(II, III, IV Diagrams.)

The most important point to be noted in regard to this subject is the Relations of various conditions of soil to one another. apparent dependence of the amount of carbonic acid in the soil on the degree of soil-moisture. When the latter is high, the carbonic acid is at its maximum, and the minimum periods of both also coincide generally. The facts already pointed out in regard to the behaviour of the carbonic acid-contents of the individual layers in reference to the rain-fall and water-level, very clearly indicate such a dependence; for, whilst the carbonic acid of the upper layer coincides more closely with the rain-fall than with the water-level, the reverse relation appears in the case of the lower layer of soil.

## (6.)—Comparison of the prevalence of Disease with the occurrence of various conditions of Soil in regard to Carbonic Acid, Temperature and Water-Level.—(Diagrams II—III.)

On comparing the figures and diagrams on this point in reference to Prevalence of cholera. cholera, the only remarkable coincidence appears to lie in the converse relation which water-level, and in a less marked degree rain-fall, bear to the prevalence of the disease. When the latter is at a maximum, the water-level is at a minimum, and when the water-level is at a maximum, the prevalence of cholera is at a minimum. There is no such close coincidence either in regard to conditions of soil-temperature or amount of carbonic acid, although, in so far as soil-moisture appears to determine the amount of carbonic acid in the soil, there is a general coincidence in regard to the latter also. The relations between rain-fall and prevalence of cholera are not so strongly marked as those between the latter and the water-level; and it even appears as though the converse relation between conditions of water-level and prevalence of cholera were in some degree more distinct than the direct one between the water-level and the rain-fall.

The greatest prevalence of fevers during the period of observation occurred Prevalence of fevers. coincidentally with the period of maximum carbonic acid and highest water-level.

There were two maximum periods of dysentery, one occurring during the Prevalence of dysentery. rise in the water-level, and the other at a corresponding point in the course of its fall. No coincidence can be traced in regard to the other conditions of soil, save the carbonic acid of the upper layer which in this part of its course very closely corresponds with the water level.

No very clear connection can be traced between the statistics of total General mortality. mortality and the prevalence of any special conditions of soil. There were two periods of maximum mortality during the period of observation—one in November and December, coincident with marked prevalence of fever and dysentery; the other in April and May with maximum cholera.

The comparison of the prevalence of disease with the existence of special Data regarding certain soil-conditions for three years. Reasons for the absence of Mortuary statistics. physical conditions is, of course, very imperfect when confined, as in the present instance, to the phenomena of one year. We had hoped to have been able to furnish data regarding the prevalence of disease and the existence of conditions of soil-temperature, water-level, &c., for a longer period, and had indeed drawn up a table showing the monthly figures on these points from February 1872 to August 1874. On coming to examine the statistics of disease in the Returns of the Calcutta Municipality, however, we found such inexplicable discrepancies in the figures contained in two sets of tables prepared in the same office, that we had to abandon the idea. In the meantime, we insert the figures in this table with the exception of those regarding disease. With regard to our other tables and diagrams, it is, of course, necessary that the condition of the mortuary statistics of Calcutta should be taken into consideration in comparing the total mortality and the prevalence of cholera with the data regarding physical facts.

Monthly Means of Soil-Temperature, Water-level, &c., from February 1872 to August 1874—  
Table VII.

MONTH.	MEAN MAXIMUM TEMPERATURE OF SOIL IN CALCUTTA.		Rain-fall in Calcutta.	Average Temperature [open air].	Distance of water-level from surface in feet. [At Allpore.]
	3 feet from surface.	6 feet from surface.			
1872.					
February	70°7' Fahr.	71°0' Fahr.	2.82 inches.	72°9' Fahr.	13.8"
March	75°2'	75°6'	0.21 "	83°1'	14.2"
April	82°1'	79°1'	1.83 "	85°9'	14.4"
May	84°3'	81°2'	1.99 "	87°0'	14.7"
June	85°3'	83°3'	9.45 "	85°4'	14.7"
July	82°2'	83°0'	5.55 "	83°3'	13.9"
August	82°0'	82°5'	11.52 "	83°1'	12.7"
September	82°0'	82°0'	8.42 "	83°2'	10.7"
October	88°8'	81°5'	8.93 "	81°6'	10.7"
November	75°7'	77°8'	0.02 "	76°6'	11.2"
December	72°3'	75°4'	0.09 "	70°3'	13.0"
1873.					
January	68°0'	72°4'	...	68°3'	13.7"
February	70°5'	72°5'	...	74°5'	14.4"
March	75°8'	76°1'	1.18 "	80°3'	14.7"
April	81°8'	79°4'	1.84 "	84°4'	14.9"
May	83°4'	80°5'	3.78 "	87°0'	15.0"
June	84°8'	82°1'	4.30 "	88°2'	15.0"
July	83°3'	82°3'	14.76 "	83°5'	14.7"
August	82°0'	81°2'	10.23 "	83°5'	11.9"
September	82°3'	81°4'	5.82 "	84°5'	10.2"
October	80°1'	8°7'	2.40 "	82°1'	11.5"
November	76°2'	78°4'	0.14 "	76°0'	12.9"
December	72°0'	75°5'	0.82 "	70°2'	14.0"
1874.					
January	68°8'	72°8'	0.94 "	66°9'	14.7"
February	70°4'	73°0'	3.77 "	72°5'	14.10"
March	74°3'	74°6'	1.94 "	78°6'	15.0"
April	80°7'	78°1'	1.20 "	85°4'	15.0"
May	83°4'	81°0'	1.16 "	87°4'	15.2"
June	82°4'	81°7'	6.89 "	83°9'	15.2"
July	81°5'	81°7'	8.89 "	84°2'	15.2"
August	81°0'	81°6'	10.19 "	83°1'	15.1"

#### (7.)—General Conclusions regarding the Observations.

It may appear to many that the result of all these observations on conditions of soil is not commensurate with the time and labour expended in obtaining it. In so far as arriving at any definite determination of the influence of soil-conditions on health is concerned, the results as they stand at present are, no doubt, not so conclusive as might be desired. It is only on prolonged and continuous observations in various localities that definite conclusions can be based.

Even as it is, however, the determination of the coincidence of prevalence of cholera in Calcutta with the existence of certain marked characteristics in the conditions of the soil is of great importance. It has, no doubt, been known for a long time that the ordinary course of cholera in Calcutta was similar to that shown in this Report, and that the prevalence of the disease was related to local conditions of season; but in regard to this phenomenon, attention has hitherto been almost entirely directed to the conditions of atmospheric meteorology, and this is almost the first attempt which has been made to ascertain whether any definite relations exist between the prevalence of the disease and special telluric phenomena.

We believe that the present observations, although confined to a very limited period, may serve a good purpose in attracting attention in this country to the importance of the subject and to the desirability of obtaining data regarding it. We have, in so far as our own work is concerned, by their means obtained standards of comparison which will be of very great value in examining the conditions of soil present in other localities during the pre-

Definite results regarding the relation of conditions of soil and disease only attainable by means of prolonged observation.

The observations in Calcutta may serve as a standard for comparison, and may serve to attract attention to the subject.

valence of special diseases; but it is greatly to be desired that systematic observations of a similar nature should be carried out in various localities throughout the country. Observations from a large number of places are not necessary, and they might readily be conducted at any good meteorological station.

CALCUTTA,            )  
*September 1875.*    )

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...

ANNUAL RETURNS

OF THE

EUROPEAN ARMY OF INDIA

AND OF THE

NATIVE ARMY

AND

JAIL POPULATION OF THE BENGAL PRESIDENCY

FOR THE YEAR

1874.

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COMPILED AND SYSTEMATICALLY ARRANGED FROM THE ORIGINAL DOCUMENTS BY

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ANNUAL REPORT

PROBATION DEPT OF INDIA

NATIVE ARMY

THE POPULATION OF THE BENGAL PRESIDENCY

1871

W. L. G. B. S. P.

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(Statement showing the Gain and Loss in Strength of the Regular Army follows Table XVI.)

(Statement showing the Gain and Loss of the Regiments of the Central India Force and Punjab Frontier Force, is appended to Tables VII and VIII.)

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(This Table concludes the series for 1874.)

The following table shows the population of the United States in 1870, by sex, color, and age. The total population was 38,555,955.

POPULATION

The population of the United States in 1870 was 38,555,955. The population was divided into three main groups: white, colored, and Chinese. The white population was 28,142,142, the colored population was 3,709,814, and the Chinese population was 603,999. The population was also divided into males and females. The male population was 19,142,142 and the female population was 19,413,813.

POPULATION

The following table shows the population of the United States in 1870, by sex, color, and age. The total population was 38,555,955.

EUROPEAN TROOPS, 1874.

EUROPEAN TROOPS, 1874.











# EUROPEAN TROOPS, 1874.

## V.

COMPARATIVE STATEMENT of the RATIOS of SICKNESS and MORTALITY in the ARMIES of the THREE PRESIDENCIES for the Year 1874.

					RATIOS PER 1,000 OF STRENGTH.				
					Army of Bengal.	Army of Madras.	Army of Bombay.	Army of India.	
<b>I.—AVERAGE DAILY SICK-RATE OF EACH MONTH.</b>									
January	...	...	...	...	491	541	511	505	
February	...	...	...	...	506	545	477	508	
March	...	...	...	...	476	447	493	473	
April	...	...	...	...	535	502	465	516	
May	...	...	...	...	581	490	435	538	
June	...	...	...	...	626	514	475	565	
July	...	...	...	...	644	577	579	619	
August	...	...	...	...	714	607	509	673	
September	...	...	...	...	652	643	502	694	
October	...	...	...	...	656	669	632	658	
November	...	...	...	...	601	684	570	612	
December	...	...	...	...	544	663	541	566	
AVERAGE OF THE YEAR					587	573	532	575	
<b>II.—COMPOSITION OF THE ADMISSION-RATE OF THE YEAR.</b>									
Cholera	...	...	...	...	2	1	3	2	
Enteric Fever	...	...	...	...	47	30	30	41	
Intermittent Fever	...	...	...	...	3587	687	3348	2982	
Remittent and Continued Fevers	...	...	...	...	1941	1184	1045	1635	
Apoplexy	...	...	...	...	26	15	27	24	
Delirium Tremens	...	...	...	...	25	30	51	31	
Dysentery	...	...	...	...	292	822	237	399	
Diarrhoea	...	...	...	...	514	456	456	492	
Hepatitis	...	...	...	...	452	825	480	630	
Spleen Disease	...	...	...	...	64	25	82	59	
Respiratory Diseases	...	...	...	...	946	603	644	826	
Phthisis Pulmonalis	...	...	...	...	81	107	68	83	
Rheumatism	...	...	...	...	575	542	545	626	
Veneral Diseases	...	...	...	...	2001	1889	1708	1027	
Eye Diseases	...	...	...	...	224	138	217	204	
Abscess and Ulcer	...	...	...	...	847	1030	1109	929	
Wounds and Accidents	...	...	...	...	919	962	1016	945	
All other Causes	...	...	...	...	1825	2093	1798	1873	
ADMISSION-RATE OF THE YEAR					14478	11439	12962	13577	
<b>III.—COMPOSITION OF THE DEATH-RATE OF THE YEAR.</b>									
Cholera	...	...	...	...	21	99	19	18	
Enteric Fever	...	...	...	...	201	104	133	170	
Intermittent Fever	...	...	...	...	119	17	76	86	
Remittent and Continued Fevers	...	...	...	...	97	70	114	95	
Apoplexy	...	...	...	...	19	99	...	14	
Delirium Tremens	...	...	...	...	121	191	57	123	
Dysentery	...	...	...	...	95	...	...	93	
Diarrhoea	...	...	...	...	193	330	171	216	
Hepatitis	...	...	...	...	93	...	...	91	
Spleen Disease	...	...	...	...	54	44	57	52	
Respiratory Diseases	...	...	...	...	137	104	104	125	
Heart Diseases	...	...	...	...	118	113	37	103	
Phthisis Pulmonalis	...	...	...	...	123	122	143	127	
Injuries	...	...	...	...	48	26	19	39	
Suicidal Deaths	...	...	...	...	212	157	134	186	
All other Causes	...	...	...	...					
DEATH-RATE OF THE YEAR					1462	1296	1664	1568	
<b>DIED OUT OF EACH HUNDRED CASES TREATED.</b>									
<b>IV.—MORTALITY RELATIVE TO THE NUMBER TREATED.</b>									
Cholera	...	...	...	...	10000	...	6667	9167	
Enteric Fever	...	...	...	...	4277	3530	4375	4156	
Remittent and Continued Fevers	...	...	...	...	59	15	64	56	
Apoplexy	...	...	...	...	3673	4706	4286	3976	
Delirium Tremens	...	...	...	...	761	286	...	442	
Dysentery	...	...	...	...	401	233	290	336	
Hepatitis	...	...	...	...	427	400	356	404	
Respiratory Diseases	...	...	...	...	56	72	88	93	
Phthisis Pulmonalis	...	...	...	...	1462	1057	563	1232	







# EUROPEAN TROOPS, 1874.

## IX.

*TABLE showing the SICKNESS and MORTALITY among the EUROPEAN TROOPS serving in the AGRA DISTRICT and in CENTRAL INDIA during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.*

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS IN HOSPITAL.															Died out of Hospital.					
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent.	Fever, Continued.	Apoplexy.	Delirium Tremens.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Diseases.	Phthisis Pulmonalis.		Dropsy.	Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.
						...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...
January	3,770	183	48.5	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	
February	3,931	219	55.7	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
March	4,213	203	48.2	6	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
April	4,201	237	56.4	3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
May	4,206	214	50.9	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
June	4,200	195	46.4	6	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
July	4,182	200	47.8	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
August	4,168	250	60.0	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
September	4,172	275	65.9	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
October	4,156	296	71.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
November	3,994	207	51.8	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
December	3,953	233	58.8	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
						...	4	8	1	3	1	2	1	2	...	7	...	2	4	3	...	1	...	1	5	4
						Died per 1,000 of the Average Strength.																				
For the year	4,096	230	56.1	49	11.96	...	'07	1'95	1'22	'49	'25	'49	...	1'70	...	'49	'97	'74	...	'25	...	'25	1'22	'97	...	

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.		
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.					
	...	...	...	...	...	...	...	...	...	...	...	...				...	
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	11	...	27	36.36
Smallpox	1	1	...	...	...	...	...	...	...	...	...	...	...	21	...	51	38.10
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever, Intermittent	64	60	66	62	47	51	146	270	489	445	286	174	2,160	...	527.3	...	
"  Remittent	2	6	6	2	7	7	18	24	29	6	3	4	105	...	100.1	...	
"  Continued	4	8	29	40	31	16	30	29	32	45	30	11	305	...	...	...	
Apoplexy	...	...	...	...	...	...	...	...	...	...	...	...	...	11	...	27	18.18
Delirium Tremens	...	...	...	...	...	...	...	...	...	...	...	...	...	7	...	17	14.29
Dysentery	3	3	4	3	8	7	8	14	13	4	...	3	74	...	18.1	2.70	
Diarrhoea	1	2	10	13	13	16	48	43	13	13	11	10	192	...	46.9	...	
Hepatitis	14	11	12	14	19	15	22	21	41	19	21	19	228	...	55.7	3.07	
Spleen Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	19	...	4.6	...
Respiratory Diseases	26	26	50	50	43	24	29	32	31	18	28	41	398	...	97.1	5.0	
Phthisis Pulmonalis	...	...	...	...	...	...	...	...	...	...	...	...	...	17	...	4.1	17.65
Scurvy	1	...	...	...	...	...	...	...	...	...	...	...	...	4	...	1.9	25.00
Rheumatism	17	14	22	29	14	9	26	26	21	16	15	29	238	...	58.1	...	
Veneral Diseases	85	109	108	84	51	42	51	41	63	45	50	68	797	...	194.6	...	
Eye Diseases	9	5	6	5	3	3	10	19	11	7	6	6	90	...	22.0	...	
Abscess and Ulcer	19	22	38	24	42	36	43	27	16	17	23	29	336	...	82.0	...	
Wounds and Accidents	20	27	34	31	25	32	36	22	32	24	24	48	355	...	86.7	...	
All other Causes	19	27	42	51	54	71	76	53	77	60	42	48	620	...	151.4	...	
	286	322	436	417	366	338	553	623	865	728	556	500	5,988				
	Admitted per 1,000 of the Average Strength in each Month.																
	75.8	81.9	103.5	99.3	87.0	89.5	132.2	149.5	207.3	174.7	140.3	125.5	1461.9				









# EUROPEAN TROOPS, 1874.

## XIII.

*TABLE showing the SICKNESS and MORTALITY among the EUROPEAN TROOPS serving in RAJPOOTANA, MALWA, SCINDE and ADEN during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.*

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS IN HOSPITAL.													Died out of Hospital.							
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent.	Fever, Continued.	Apoplexy.	Delirium Tremens.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.		Heart Diseases.	Phthisis Pulmonalis.	Dropsy.	Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.
						January	5,742	302	5.26	6	...	...	1	...	...	...	...	1		...	1	...	1	...	...	...
February	5,653	244	4.31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
March	5,629	257	4.56	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	...	...	...	1	...			
April	5,484	238	4.34	7	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...			
May	5,462	236	4.32	4	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1			
June	5,444	238	4.37	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...			
July	5,549	298	5.37	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...			
August	5,546	326	5.88	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...			
September	5,515	343	6.22	10	...	...	4	...	1	...	1	...	...	1	...	...	...	...	...	...	...	1	...			
October	5,477	383	7.00	9	...	...	3	...	...	...	...	1	...	1	...	...	...	...	...	...	1	...	...			
November	5,117	291	5.68	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...			
December	4,978	268	5.39	3	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...			
						...	...	13	...	3	1	8	...	4	...	6	...	4	4	2	...	1	...	1	5	12
						Died per 1,000 of the Average Strength.																				
For the year	5,464	287	5.25	64	11.71	...	...	2.38	...	.73	1.46	...	.73	...	1.10	...	.73	.73	.37	...	.18	...	.18	.92	2.20	

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.										
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.													
	Cholera	...	...	...	...	...	...	...	...	...	...	...				...	...	2	...	4	...				
Smallpox	1	...	...	...	1	...	...	...	...	...	...	...	...	25	...	4.6	52.00								
Enteric Fever	1	...	5	1	1	...	1	6	5	2	...	2	...	151	...	2.7	...								
Fever, Intermittent	133	76	105	69	74	108	195	183	343	330	252	179	2,047	374.6	...	...									
" Remittent	3	3	6	3	7	10	16	14	29	51	3	6	151	...	...	...									
" Continued	21	6	8	16	17	29	24	33	28	41	13	12	278	...	78.5	...									
Apoplexy	2	1	1	...	...	10	2	1	3	2	...	...	20	...	3.7	40.00									
Delirium Tremens	...	...	3	3	4	1	2	1	3	1	...	1	26	...	4.8	...									
Dysentery	9	10	7	4	8	4	3	11	22	16	8	12	114	...	2.09	3.51									
Diarrhoea	12	14	19	9	13	9	30	27	22	7	9	13	184	...	3.37	...									
Hepatitis	19	15	33	25	30	29	33	27	33	18	31	18	322	...	5.93	1.90									
Spleen Disease	4	5	3	7	6	9	10	4	5	12	2	3	70	...	1.28	...									
Respiratory Diseases	51	42	45	16	17	14	35	18	12	14	21	23	368	...	6.74	1.30									
Phthisis Pulmonalis	4	4	3	1	3	2	4	3	3	1	5	2	35	...	6.4	5.71									
Scurvy	...	...	...	...	...	2	...	...	...	...	...	...	3	...	...	...	...								
Rheumatism	17	21	31	14	21	18	31	27	29	13	17	24	261	...	4.77	...									
Veneral Diseases	67	77	74	60	65	69	60	53	62	44	39	68	728	...	13.32	...									
Eye Diseases	15	15	19	15	12	14	14	12	13	2	6	4	141	...	2.58	...									
Abscess and Ulcer	39	45	56	56	52	71	79	69	51	34	35	51	611	...	11.18	...									
Wounds and Accidents	62	43	75	39	49	49	66	35	40	40	34	57	569	...	10.41	...									
All other Causes	65	55	82	54	86	66	87	104	109	66	59	89	922	...	16.87	...									
Admitted per 1,000 of the Average Strength in each Month.																									
													899	76.5	88.6	67.8	86.3	94.6	124.7	111.6	151.4	126.9	104.9	112.5	1244.0









# EUROPEAN TROOPS, 1874.

## XVIII.

*COMPARATIVE STATEMENT of the RATIOS of SICKNESS and MORTALITY among the EUROPEAN TROOPS serving in the various PROVINCES of the BENGAL PRESIDENCY during the Year 1874.*

	RATIO PER 1,000 OF STRENGTH.						
	Bengal Proper.	Gangetic Provinces.	Rohilkund and Meerut.	Agra and Central India.	Punjab.	Hill Stations.	ARMY OF BENGAL.
<b>I.—AVERAGE DAILY SICK-RATE OF EACH MONTH.</b>							
January	364	576	519	485	492	492	491
February	365	534	550	557	481	388	506
March	314	594	461	482	458	265	476
April	473	716	441	564	417	437	535
May	489	733	537	509	511	469	581
June	575	701	608	464	585	461	606
July	638	786	602	478	619	502	644
August	678	905	774	609	631	494	714
September	657	898	797	659	618	446	692
October	611	752	728	688	681	409	636
November	533	656	727	674	651	414	691
December	470	643	609	585	566	382	544
AVERAGE OF THE YEAR	523	712	613	561	554	435	587
<b>II.—COMPOSITION OF THE ADMISSION-RATE OF THE YEAR.</b>							
Cholera	5	7	...	...	7	...	2
Smallpox	...	16	13	27	...	16	47
Enteric Fever	59	96	56	51	25	151	357
Intermittent Fever	493	1663	7594	5273	4331	1541	1841
Remittent and Continued Fevers	3168	1911	1419	1091	3238	466	1841
Apoplexy	20	26	36	27	34	2	26
Delirium Tremens	5	34	49	17	17	13	25
Dysentery	598	449	231	181	166	106	262
Diarrhoea	568	718	612	469	427	376	514
Hepatitis	254	482	575	557	471	321	452
Spleen Disease	5	34	41	46	105	40	64
Respiratory Diseases	449	859	697	971	1109	1069	946
Phthisis Pulmonalis	120	119	51	41	68	55	81
Scarvy	...	7	...	19	3	2	4
Rheumatism	449	519	554	581	819	869	675
Veneral Diseases	1534	3337	2911	1946	1279	1459	2091
Eye Diseases	109	395	165	220	197	118	224
Abscess and Ulcer	922	1073	849	879	798	625	847
Wounds and Accidents...	797	887	938	867	949	1044	919
All other Causes	1753	2163	1744	1514	1896	1244	1812
ADMISSION-RATE OF THE YEAR	11340	14781	17302	14619	15966	9118	14438
<b>III.—COMPOSITION OF THE DEATH-RATE OF THE YEAR.</b>							
Cholera	50	70	...	...	99	...	21
Smallpox	...	23	...	97	...	...	19
Enteric Fever	289	457	192	195	112	66	261
Remittent and Continued Fevers	117	51	122	122	155	66	110
Apoplexy	199	196	178	49	112	...	97
Delirium Tremens	...	12	25	25	26	22	19
Dysentery	299	176	254	49	87	...	121
Diarrhoea	...	51	...	...	...	...	95
Hepatitis	150	258	407	170	112	66	193
Spleen Disease	...	...	...	...	...	...	93
Respiratory Diseases	...	12	51	49	78	90	54
Heart Diseases	199	117	76	97	155	133	137
Phthisis Pulmonalis	249	187	76	74	35	111	118
Injuries	...	23	...	...	...	...	98
All other Causes	349	187	192	147	155	256	193
Deaths from violence out of Hospital	199	269	192	97	112	133	163
DEATH-RATE OF THE YEAR	1993	2014	1475	1196	1148	953	1462
<b>DIED OUT OF EACH HUNDRED CASES TREATED.</b>							
<b>IV.—MORTALITY RELATIVE TO THE NUMBER TREATED.</b>							
Cholera	...	100.00	...	...	...	...	100.00
Enteric Fever	60.00	47.56	18.18	28.10	41.83	42.46	42.37
Remittent and Continued Fevers	...	61	36	88	37	194	50
Apoplexy	100.00	49.91	50.00	18.18	33.33	...	36.73
Delirium Tremens	...	3.45	5.56	14.29	15.00	16.67	7.61
Dysentery	5.00	3.92	10.99	2.70	5.21	...	4.91
Hepatitis	5.88	5.34	7.68	3.97	2.60	2.97	4.27
Respiratory Diseases	...	14	73	29	71	89	56
Phthisis Pulmonalis	29.83	17.92	15.00	17.65	5.13	29.00	14.62

# EUROPEAN TROOPS, 1874.

## XIX.

*COMPARATIVE STATEMENT of the RATIOS of SICKNESS and MORTALITY among the EUROPEAN TROOPS serving in the various PROVINCES of the BOMBAY and MADRAS PRESIDENCIES during the Year 1874.*

	RATIO PER 1,000 OF STRENGTH.						
	Rajpootana, Malwa, Scinde, and Adu.	Deccan and Nagpore.	Southern India.	Burmah and Pegu.	ARMY OF MADRAS.	ARMY OF BOMBAY.	ARMY OF INDIA.
<b>I.—AVERAGE DAILY SICK-RATE OF EACH MONTH.</b>							
January	52.6	54.7	53.5	32.2	54.1	52.1	50.5
February	50.9	51.5	52.8	36.3	54.5	47.7	50.8
March	45.6	47.8	47.9	33.1	44.7	49.5	47.3
April	43.4	44.3	55.5	38.1	50.2	49.5	51.6
May	43.7	38.9	51.2	38.3	49.0	43.5	53.8
June	43.7	42.8	53.6	36.6	51.4	47.5	56.5
July	57.7	53.3	69.7	45.7	57.7	57.9	61.9
August	58.8	52.4	67.7	47.0	60.7	59.9	67.3
September	58.6	53.8	69.5	47.5	64.3	59.2	66.4
October	70.0	55.2	76.7	44.2	66.9	65.2	67.8
November	57.8	58.9	80.5	41.2	68.4	57.0	61.2
December	53.9	52.8	73.1	49.1	66.3	54.1	56.6
AVERAGE OF THE YEAR	52.5	50.7	62.3	40.2	57.3	53.2	57.5
<b>II.—COMPOSITION OF THE ADMISSION-RATE OF THE YEAR.</b>							
Cholera		4		5	1	3	2
Smallpox	4	3	9		4	4	5
Enteric Fever	4.6	1.7	4.6	1.9	3.0	3.0	4.1
Intermittent Fever	374.6	218.0	23.2	25.5	68.7	334.6	294.2
Remittent and Continued Fevers	78.5	121.9	155.0	91.3	118.4	104.5	163.5
Apoplexy	3.7	9	2.1	9	1.5	2.7	2.4
Delirium Tremens	4.8	4.5	2.5	4.8	3.9	5.1	3.1
Dysentery	20.9	38.9	73.3	117.9	82.2	23.7	36.6
Diarrhoea	33.7	51.9	313.3	52.1	45.6	45.6	49.2
Hepatitis	55.3	59.4	78.1	93.2	82.5	48.0	53.0
Spleen Diseases	12.8	1.7	4.9	9	2.5	8.2	5.9
Respiratory Diseases	56.4	73.2	51.1	47.3	69.3	61.4	87.6
Phthisis Pulmonalis	6.4	6.7	10.5	4.3	10.7	6.4	8.3
Scurvy	8	1	2	2	2	4	4
Rheumatism	47.7	56.2	48.6	43.1	54.2	54.5	67.8
Veneral Diseases	133.2	215.9	215.9	107.9	184.9	179.8	192.7
Eye Diseases	25.8	14.8	15.6	3.3	13.8	21.7	29.6
Abscess and Ulcer	111.8	98.8	126.6	89.0	103.0	110.9	92.9
Wounds and Accidents	164.1	161.4	166.6	66.7	46.2	191.6	34.5
All other Causes	168.7	195.1	219.8	163.8	208.7	179.9	189.1
ADMISSION-RATE OF THE YEAR	1244.0	1552.8	1163.0	904.4	1143.9	1286.2	1357.7
<b>III.—COMPOSITION OF THE DEATH-RATE OF THE YEAR.</b>							
Cholera		25		47	99	19	18
Smallpox			21		96		11
Enteric Fever	2.38	56	1.27	95	1.04	1.33	1.70
Remittent and Continued Fevers	7.3	50	21		17	76	86
Apoplexy	1.46	62	84		70	1.14	36
Delirium Tremens			21		99		14
Dysentery	7.3	50	190	284	1.91	57	1.23
Diarrhoea							93
Hepatitis	1.10	2.86	1.95	1.89	3.90	1.71	2.16
Spleen Disease							91
Respiratory Diseases	7.3	12	21		44	57	52
Heart Diseases	7.3	1.25	1.47	47	1.04	1.04	1.25
Phthisis Pulmonalis	3.7	6.2	84	47	1.13	37	1.03
Injuries	1.8					10	97
All other Causes	1.10	1.13	1.47	95	1.48	1.34	1.72
Deaths from violence out of Hospital	2.20	59	2.11	95	1.48	1.52	1.59
DEATH-RATE OF THE YEAR	11.71	8.85	13.69	8.99*	12.96	10.64	13.58
<b>DIED OUT OF EACH HUNDRED CASES TREATED.</b>							
<b>IV.—MORTALITY RELATIVE TO THE NUMBER TREATED.</b>							
Cholera		60.67				66.67	91.67
Enteric Fever			27.27		35.39	43.75	41.56
Remittent and Continued Fevers	52.00	28.57	14	50.00	1.5	94	46
Apoplexy	40.00	71.43	40.00		47.06	42.86	39.16
Delirium Tremens			8.33		2.85		4.42
Dysentery	3.51	1.28	2.59	2.41	2.23	1.40	3.36
Hepatitis	1.99	5.69	3.77	2.63	4.09	3.58	4.08
Respiratory Diseases	1.30	1.7	4.1		7.2	8.8	6.3
Phthisis Pulmonalis	5.71	9.26	8.00	11.11	10.57	5.63	12.32

\* Including absent Deaths, 13.72 per 1,000.



# EUROPEAN TROOPS, 1874.

## XX.

TABLE showing the GENERAL STATISTICS of SICKNESS and MORTALITY in the PRINCIPAL MILITARY STATIONS of the THREE PRESIDENCIES.

STATIONS.	Period of Observation.	Average Strength during the period of observation.	DAILY SICK PER 1,000 OF THE AVERAGE STRENGTH IN EACH MONTH.												Average Daily Sick per 1,000 of Strength for the period of occupation.	Admission-rate per 1,000 of Strength for the period of occupation.	DIED PER 1,000 OF THE AVERAGE STRENGTH.			
																	A. Cholera.	B. All other Causes.		C. All Causes.
			Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				1. In Hospital.	2. Out of Hospital.	
<b>BENGAL PROVINCES.</b>																				
Fort William	For the Year	954	430	347	510	489	390	506	589	568	582	474	343	461	840.7	1.05	11.53	9.14	15.72	
Dum Dum	"	619	422	316	246	346	363	541	528	546	394	370	378	40.4	...	...	19.58	1.62	27.05	
Barrackpore	"	431	325	135	497	590	676	1054	1025	671	842	559	550	82.9	...	...	27.65	...	27.65	
<b>GANGHAR PROVINCES.</b>																				
Hardyburgh	11 Months, Jan. to Nov.	878	529	523	568	690	678	237	776	893	751	567	359	62.6	1688.9	...	29.61	5.79	35.31	
Dum Dum	For the Year	929	535	370	574	789	927	845	837	671	682	772	709	79.2	1987.8	3.23	22.69	3.23	29.66	
Bowman	"	478	172	113	554	810	713	794	873	1052	856	762	662	71.1	1577.4	29.41	23.91	21.9	25.10	
Chunar	"	68	513	597	896	597	448	896	625	696	299	448	149	58.8	1970.9	...	14.71	44.12	18.70	
Pyabad	"	2,139	498	461	797	651	819	870	876	628	489	485	62.1	62.1	1241.4	...	7.13	8.15	18.11	
Lucknow	"	5,419	513	419	218	299	697	699	681	703	491	627	63.4	63.4	1298.9	...	16.5	2.96	18.11	
Shapur	"	631	457	863	760	896	896	757	867	946	867	197	81.1	81.1	1896.9	...	4.75	3.17	7.92	
Patilgarh	"	279	482	380	354	497	679	897	912	947	561	976	66.0	66.0	1896.9	...	14.34	...	14.34	
Awampore	"	1,018	616	889	849	711	813	1077	1124	1113	1170	926	38.3	38.3	1443.9	...	14.73	2.95	18.66	
Alambud	For the Year	1,050	863	618	842	849	817	873	833	967	784	716	542	80.6	1594.1	...	16.51	1.94	18.15	
<b>BOMBAY AND MERRUT.</b>																				
Shahjahanpur	3 Months, January to March	167	556	375	322	388	458	481	556	496	352	148	27.4	35.9	1083.5	...	4.71	...	4.71	
Bareilly	For the Year	850	454	652	458	330	388	458	481	556	496	352	148	42.4	880.0	...	10.66	...	10.66	
Muzaffar	"	200	374	328	219	154	283	221	619	569	448	260	25.0	49.4	1341.6	...	19.14	...	19.14	
Roorkhee	"	360	179	423	412	429	363	371	470	523	35.5	35.5	18.12	75.2	249.6	...	18.12	2.91	2.91	
Muzaffar	"	1,400	613	579	208	358	442	698	646	874	1022	1071	88.4	88.4	2631.8	...	13.11	1.87	14.58	
Delhi	"	434	126.5	477	367	411	577	484	442	88.8	61.2	761	89.9	61.6	1671.4	...	13.13	...	13.13	
Muzaffar	"	407	47.5	651	646	526	714	83.5	747	837	778	791	88.4	53.3	...	...	...	...		
<b>AGRA AND CENTRAL INDIA.</b>																				
Agra	For the Year	1,027	437	359	571	669	684	595	615	577	694	573	547	57.4	1431.3	...	7.79	...	7.79	
Meerut	"	1,087	293	341	385	428	456	478	524	562	615	642	611	47.6	1216.9	...	4.69	...	4.69	
Gwalior	"	371	824	831	535	493	413	287	298	319	621	548	401	59.0	1948.5	...	16.17	...	16.17	
Jhansi	"	402	754	1024	813	659	571	448	449	674	516	623	59.4	60.7	2151.2	...	12.44	...	12.44	
Nowgong	"	210	322	328	312	314	397	796	976	1019	1023	858	78.1	83.9	2611.5	...	22.58	...	22.58	
Sauger	"	539	534	522	514	504	504	504	504	504	504	504	504	62.3	1823.5	...	27.10	...	27.10	
Jubbulpore	"	539	534	522	514	504	504	504	504	504	504	504	504	45.3	922.7	...	7.55	...	7.55	
<b>TELEJAR.</b>																				
Umballa	For the Year	1,480	516	588	491	461	547	579	586	735	684	571	656	55.5	1628.4	...	8.11	...	8.11	
Jubbulpore	"	839	542	558	377	535	763	824	763	781	1075	673	55.6	66.7	1889.4	...	5.66	...	5.66	
Meerut	"	1,034	471	626	457	493	453	552	721	653	848	770	691	50.7	1179.1	...	29.21	...	29.21	
Dehra Dooab	"	869	515	662	690	690	690	690	690	690	690	690	690	61.2	3561.2	...	16.29	...	16.29	
Dehra Dooab	"	98	470	475	475	475	475	475	475	475	475	475	475	7.05	1169.8	...	7.05	...	7.05	
Amritsar and Gwalior	"	284	372	495	203	343	621	761	993	1259	1294	1084	83.0	3.22	2052.8	...	38.18	...	38.18	
Fort Lahore	"	110	734	182	89	180	155	273	357	273	182	182	9.2	27.3	1645.5	...	18.18	...	18.18	
Rawalpindi	"	1,195	872	622	512	498	598	721	755	655	485	719	51.7	70.7	2272.1	...	17.66	...	17.66	
Rawalpindi	"	1,674	475	480	373	526	354	496	458	402	465	477	492	44.8	1100.3	...	7.77	...	7.77	
Chandernagore	"	166	362	290	229	230	115	250	259	347	253	359	244	50.9	256.2	...	12.93	...	12.93	
Attack	"	449	273	360	174	443	382	382	382	382	382	382	382	51.3	1879.3	...	31.25	...	31.25	
Nowshera	"	787	185	374	443	376	382	382	382	382	382	382	382	45.2	1216.3	...	4.37	...	4.37	
Cherra	"	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Peshawar	6 Months, May to October	1,650	377	306	384	468	712	752	614	484	571	1931	1652	88.2	2697.7	...	8.83	...	8.83	



# EUROPEAN TROOPS, 1874.

## XXI.

*TABLE showing the RATIO in which the PRINCIPAL DISEASES have contributed to make up the ADMISSION-RATE of the YEAR in the CHIEF MILITARY STATIONS of the THREE PRESIDENCIES.*

STATIONS.	Average Strength during the period of occupation.	ADMITTED INTO HOSPITAL PER 1,000 OF AVERAGE STRENGTH.										Admitted per 1,000 of the Average Strength from all Causes.	
		Cholera.	Heat Apoplexy.	Fevers.	Dysentery.	Diarrhœa.	Measles.	Rheumatism.	Veneral Diseases.	Diseases of the Respiratory Organs.	Ophthalmia.		All other Causes.
<b>BENGAL PROVER.</b>													
Fort William	954	1.1	1.1	198.1	22.0	33.5	10.8	52.4	160.4	43.0	9.4	302.9	840.7
Dum-Dum	619	...	...	232.6	43.6	35.6	22.6	17.8	111.5	22.6	11.3	282.7	780.3
Barrackpore	434	...	6.0	949.3	165.0	188.3	48.4	60.8	198.2	80.6	9.2	619.8	2284.4
<b>GANGETIC PROVINCES.</b>													
Hazârîbhîgh (11 months)	878	...	...	200.8	23.0	39.0	26.2	26.2	184.5	80.0	93.4	333.1	1088.9
Dinapore	929	4.3	3.2	850.4	58.1	104.4	79.7	47.3	265.0	82.0	66.0	430.6	1932.8
Benares	478	...	8.4	350.6	52.3	144.4	5.2	50.2	418.4	29.3	20.0	447.7	1577.4
Chunar	68	...	20.4	603.0	44.1	132.4	29.4	73.5	323.5	73.5	...	611.8	1970.3
Pyzabad	982	...	...	209.8	49.0	58.0	47.9	35.6	333.0	30.6	21.4	458.2	1242.4
Lucknow	2,429	4	1.2	310.8	42.0	79.0	46.0	35.8	298.1	70.2	34.2	373.4	1298.0
Sitapur	631	...	...	277.3	33.3	33.3	34.9	120.4	380.3	80.8	68.2	467.5	1496.0
Fatehgarh	279	...	...	367.0	78.0	23.1	60.0	90.8	460.5	60.5	7.2	336.0	1498.2
Cawnpore (10 months)	1,018	1.0	3.0	239.7	54.0	70.7	32.4	51.1	397.8	134.6	15.7	442.1	1443.0
Allahabad	1,030	...	5.8	395.1	30.1	50.5	50.5	61.2	352.4	129.1	26.2	462.2	1594.1
<b>ROHILCUND AND MEERUT.</b>													
Shâhjahânpur (3 months)	167	...	...	12.0	...	6.0	6.0	29.9	35.9	18.0	...	71.8	179.6
Bareilly	850	...	2.4	137.6	12.0	30.6	53.3	38.8	250.6	82.4	12.0	360.6	1082.5
Moradabad	260	...	...	195.6	10.0	65.0	50.0	35.0	253.0	45.0	15.0	310.0	980.0
Roorkee	360	...	...	488.0	22.2	33.3	30.6	33.3	200.0	61.1	13.0	758.3	1241.6
Meerut	1,400	...	6.0	1475.8	40.0	80.0	70.1	63.8	184.6	78.2	20.8	412.1	2436.6
Dehi	534	...	5.6	1282.8	13.1	78.7	18.7	78.8	168.8	82.4	11.2	353.9	2031.8
Muttra	457	...	...	260.2	4.4	28.5	91.9	54.7	258.8	30.6	19.7	297.6	1074.4
<b>AGRA AND CENTRAL INDIA.</b>													
Agra	1,027	...	1.0	360.0	21.4	47.7	49.7	54.5	208.4	125.6	1.5	345.7	1434.3
M. Far	1,087	...	9	448.0	7.5	20.7	50.8	82.8	191.3	56.1	17.6	337.6	1219.0
Gwalior Citadel	371	...	10.8	23.5	32.3	64.7	27.0	45.8	167.1	70.1	70.1	336.1	1048.5
Jhâosi	402	...	5.0	1169.1	22.4	27.4	57.2	69.0	287.6	11.9	24.0	378.1	2154.3
Nowgong	310	...	...	1071.0	25.8	154.8	77.4	48.4	266.8	141.0	32.3	516.1	2944.5
Saugor	369	...	...	1240.3	32.5	62.3	80.4	56.0	94.0	78.6	2.7	262.0	1929.5
Jubbulpore	530	...	3.8	344.0	6.7	15.1	62.3	20.7	135.8	117.0	7.6	239.8	921.7
<b>PUNJAB.</b>													
Umballa	1,480	...	4.1	557.4	14.2	82.4	27.7	79.3	179.1	124.3	30.4	538.5	1628.4
Jullundur	839	...	...	429.1	9.5	19.1	46.5	71.5	122.8	78.7	9.5	302.7	1089.4
Ferozepore	1,034	1.0	1.0	388.8	5.8	21.3	55.1	129.8	164.7	89.0	15.5	315.3	1173.1
Mooltan	689	...	6.0	469.4	3.4	19.6	33.4	166.0	92.1	55.2	13.8	256.6	1147.3
Dera Ismael Khan	98	...	10.2	1809.2	...	61.2	122.5	91.8	214.3	224.5	20.4	837.1	3561.2
Sialkot	603	...	...	429.0	22.2	41.3	44.3	76.5	64.5	103.7	9.1	319.2	1109.8
Amritsar and Govindgarh	284	...	...	1103.7	28.2	21.1	49.3	14.1	401.4	91.5	7.0	246.5	2032.8
Fort Lahore	110	...	18.2	963.6	...	36.4	27.3	45.5	72.7	181.8	27.3	272.7	1643.5
Meeran Meer	736	...	9.5	1120.0	25.8	112.8	47.6	163.1	123.6	176.6	34.0	459.2	2273.1
Rawalpindi	1,074	...	3.6	332.1	7.8	16.1	60.0	73.5	102.7	101.0	15.5	387.1	1100.3
Campbellpore	166	...	...	247.0	12.1	30.1	60.2	48.2	60.2	42.2	6.0	415.7	921.7
Attock	160	...	6.3	1812.5	43.7	37.5	37.5	31.2	37.5	56.3	...	200.7	2336.2
Nowshera	448	...	...	1180.7	22.0	44.0	15.6	73.0	62.5	87.1	25.7	337.1	1870.3
Cherat (6 months)	767	...	...	135.6	28.7	53.5	23.5	15.8	61.1	40.4	5.2	212.5	676.3
Peshâwur	1,650	...	4.8	2125.5	26.6	33.2	43.9	37.6	101.2	158.2	30.3	436.4	2989.7
<b>HILL STATIONS.</b>													
Darjeeling (11 months)	83	...	12.0	373.5	...	12.0	72.0	36.2	265.1	12.0	...	301.2	1084.3
Ranikhet	797	...	...	145.5	13.8	50.2	27.6	84.1	184.4	50.0	3.8	269.7	838.1
Chakrâta	733	...	...	100.4	5.5	23.2	51.8	125.5	128.2	143.2	33.2	330.2	937.2
Daghai (11 months)	969	...	...	176.5	5.2	27.8	19.4	71.2	85.6	87.7	13.4	231.2	711.0
Solon (7 months)	304	...	...	583.5	13.2	49.3	19.7	46.1	52.6	63.8	...	250.0	1082.2
Saldâta (11 months)	817	...	...	135.4	6.0	20.6	24.2	60.5	78.6	87.1	7.2	269.2	628.8
Jalozh	94	...	...	95.7	...	42.6	42.6	42.6	117.0	188.3	...	436.1	914.0
Kangra	49	...	...	440.0	...	...	...	20.4	122.5	20.4	...	224.4	830.7
Dhurmsala (9 months)	122	...	...	303.4	8.2	49.2	16.4	123.0	163.9	147.5	16.4	352.5	1270.5
Dalhousie (7 months)	121	...	...	165.3	...	33.1	...	49.6	16.5	67.8	...	157.0	478.3
Murree (10 months)	894	...	...	167.4	20.1	17.4	39.2	38.0	209.2	91.7	13.4	312.1	849.0

STATIONS.	Average Strength during the period of occupation.	ADMITTED INTO HOSPITAL PER 1,000 OF AVERAGE STRENGTH.											Admitted per 1,000 of the Average Strength from all Causes.
		Cholera.	Heat Apoplexy.	Fever.	Dysentery.	Diarrhoea.	Hepatitis.	Rheumatism.	Veneral Dis-eases.	Diseases of the Respiratory Organs.	Ophthalmia.	All other Causes.	
CONVALESCENT DEPÔT.													
Darjeeling Depôt (9 months)	211	...	...	297.0	4.7	80.6	56.9	9.5	436.0	52.1	9.5	165.8	1052.1
Naini Tal " (9 months)	320	...	...	218.8	46.9	18.7	46.9	28.1	243.7	96.9	3.1	403.1	1106.2
Landsur " (9 months)	209	...	...	248.8	28.7	19.2	52.6	52.6	57.4	52.6	14.4	277.5	803.8
Kasauli " (8 months)	532	...	7.5	308.3	15.0	80.8	11.3	116.5	124.1	131.6	7.5	439.9	1242.5
Dalhousie " (8 months)	346	...	...	374.6	11.6	14.5	34.7	104.0	132.9	26.0	2.9	176.3	777.5
Murree " (8 months)	449	...	...	861.4	13.6	22.7	120.5	125.0	104.5	179.5	2.3	643.2	2072.7
RAJPOOTANA, MALWA, SCINDE, AND ADEN.													
Nusserabad	613	...	...	208.8	14.7	52.2	21.2	35.9	124.0	35.9	14.7	319.7	827.1
Neemuch	400	...	10.0	1160.0	22.5	32.5	85.0	62.5	210.0	67.5	20.0	377.5	2037.5
Indore	97	...	...	711.3	...	61.9	...	92.8	216.5	41.2	20.6	283.7	1433.0
Mhow	1,401	...	...	541.8	8.6	28.6	104.9	68.5	163.4	74.9	45.7	491.1	1327.5
Deesa (10 months)	708	...	7.1	331.5	28.2	22.6	76.2	45.1	153.1	84.6	43.7	313.1	1107.2
Ahmedabad and Baroda	300	...	6.7	713.3	2.0	36.7	33.3	56.7	146.7	56.7	13.3	550.0	1623.4
Kurrachee and Ghizree	774	...	3.9	217.0	41.3	40.1	16.8	33.6	86.6	33.6	11.6	423.8	917.3
Hyderabad	428	...	9.3	608.8	25.7	21.0	14.0	23.4	70.1	42.1	18.7	425.2	1250.3
Aden	742	...	2.7	273.6	20.2	29.6	33.7	37.7	90.3	39.1	8.1	374.7	908.7
DECCAN AND NAGPORE.													
Bombay	443	...	2.3	720.1	60.9	51.9	81.2	128.7	309.3	85.8	11.3	437.9	1889.4
Asseerghar	101	...	...	524.8	...	9.9	...	89.1	108.9	59.4	59.4	316.5	1198.0
Ahmednuggur	549	...	...	211.3	3.6	61.9	21.9	63.8	239.5	71.0	16.4	309.7	989.1
Poona and Kirkee	2,302	1.4	9	510.9	31.8	56.3	34.5	45.4	235.2	73.6	20.9	469.1	1411.0
Sattara	173	...	...	265.9	11.6	...	5.8	23.1	109.8	63.6	...	173.4	633.2
Belgaum	1,637	...	...	23.7	8.7	39.5	28.9	52.1	173.6	64.6	8.7	490.8	1050.6
Secunderabad	2,468	...	1.2	147.9	69.7	59.6	82.7	60.8	117.1	64.4	12.1	412.5	1628.0
Kamptee	1,049	...	1.0	467.3	28.6	43.9	42.9	40.0	430.0	100.1	13.3	429.4	1583.4
SOUTHERN INDIA.													
Bellary	916	...	...	229.2	15.3	19.6	38.2	17.5	446.5	28.4	27.3	331.9	1153.9
Bangalore	1,778	...	6	116.4	55.7	29.8	56.3	62.4	191.2	42.7	17.4	451.1	1014.6
Cannanore	600	...	1.7	220.0	168.3	95.0	183.3	70.0	96.7	86.7	8.3	475.0	1405.0
Malliapooram	98	...	...	20.4	163.3	71.4	163.3	40.8	...	10.2	...	285.7	755.1
Calicut	99	...	...	60.6	111.1	59.5	202.0	89.8	70.7	151.5	10.1	596.0	1333.3
Tri-chinopoly	237	...	19.5	336.2	93.4	31.1	35.0	19.5	168.8	73.9	...	375.9	1430.3
St. Thomas' Mount	354	...	2.8	282.5	101.7	65.0	59.8	14.1	160.7	36.7	6.7	559.8	1276.8
Madras	646	...	3.1	173.4	72.8	4.6	97.5	61.9	161.9	63.5	15.5	577.4	1239.7
BURMAN AND PROU.													
Rangoon	885	...	2.3	50.9	109.6	35.0	80.2	62.1	113.0	49.7	4.5	309.6	807.9
Toungoo	430	...	...	48.8	246.5	62.8	118.6	32.6	151.2	32.6	...	276.7	969.8
Thayetmyo	692	1.4	...	263.0	63.6	72.3	99.7	31.8	82.2	67.9	4.3	365.6	1037.8
Port Blair	106	...	...	28.3	18.9	18.9	66.6	...	18.9	28.3	...	273.3	443.4
HILL STATIONS AND DEPÔTS.													
Taraghur, Ajmere (6 months)	72	...	...	625.0	41.7	41.7	13.9	41.7	152.7	55.5	41.7	361.1	1375.0
Mount Abo	107	...	...	850.5	84.1	67.2	28.0	112.1	56.1	140.2	18.7	448.6	1785.9
Poorundhur	89	...	33.7	209.7	...	22.5	56.2	123.6	157.3	78.6	44.9	977.5	1764.0
Puchmeeree Madras Troops, 8 months)	149	...	...	409.8	...	47.0	...	20.1	154.4	26.8	...	367.4	1080.5
Ramandroog	49	...	...	306.1	40.8	59.4	132.5	20.4	428.6	81.6	40.8	478.2	1469.4
Wellington	492	...	...	144.3	30.5	30.5	16.2	95.5	117.9	97.6	44.7	536.6	1113.8







STATIONS.	Average Strength.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Number of Deaths.	Death-rate per 1,000 of Strength.							
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.											
Troops marching, Bombay Presidency	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deolalee Depôt, (Bombay Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Khandala " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Colaba " "	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Troops marching, Madras Presidency	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poonamallee and Presidency Depôts	195	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deolalee Depôt (Madras Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poona and Bombay Depôts (Madras Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nusseerabad	613	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Noemuch	400	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Indore	97	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mhow	1,401	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deesa	709	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ahmedabad and Baroda	309	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kurrachee and Ghizree	774	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hyderabad	428	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Aden	743	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	5,464	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bombay	443	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Asseerghur	101	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ahmednuggur	549	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poona and Kirkee	2,902	...	...	...	1	...	2	...	...	...	...	...	...	...	...	3	...	...	2	...	...	...	...	...
Sattara	173	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Belgaum	1,037	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Secunderabad	2,468	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kamptee	1,049	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	8,022	...	...	...	1	...	2	...	...	...	...	...	...	...	3	4	...	2	...	...	...	...	...	25
Bellary	916	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bangalore	1,778	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cannanore	600	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mallipooram	98	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Calicut	96	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trichinopoly	257	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Thomas' Mount	354	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras	646	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	4,748	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rangoon	885	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Toungoo	430	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thayetmyo	692	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...
Port Blair	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	2,113	...	...	...	1	...	...	...	...	...	...	...	...	...	1	5	...	1	...	...	...	...	...	47
Taraghur, Ajmere (6 months)	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mount Abo	107	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poorundhur	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puchmuree (Madras Troops, 8 months)	149	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ramandroog	49	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wellington	492	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
AS FOR 12 MONTHS	880	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

ARMIES.	Average Strength.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Number of Deaths.	Death-rate per 1,000 of Strength.	
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.					
ARMY OF BENGAL	37,278	...	...	2	...	1	2	2	...	1	...	...	...	...	8	2	8	21
ARMY OF MADRAS	11,501	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	1	39
ARMY OF BOMBAY	10,529	...	...	...	...	1	...	2	...	...	...	...	...	...	3	3	2	19
ARMY OF INDIA	59,308	...	...	2	1	2	2	4	...	1	...	...	...	...	12	2	11	18





STATIONS.	Average Strength for the period of occupation.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Number of Deaths.	Death-rate per 1,000 of Strength.		
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.						
Troops marching, Bombay Presidency	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deollee Depôt (Bombay Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Khandala "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Colaba "	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Troops marching, Madras Presidency	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poonamallee and Presidency Depôts	195	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deollee Depôt, (Madras Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poona and Bombay Depôts, (Madras Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nusseerabad	613	...	...	...	1	1	...	...	...	1	1	...	...	...	3	...	3	...	...
Neemuch	490	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...
Indore	97	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mhow	1,461	...	...	...	2	...	...	...	4	2	1	2	...	...	11	...	5	...	...
Deesa	789	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ahmedabad and Baroda	380	1	...	...	...	1	...	...	...	...	1	...	...	...	3	...	2	...	...
Kurnachee and Ghizee	774	...	...	3	...	...	...	1	1	2	...	...	...	...	7	...	2	...	...
Hyderabad	428	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Aden	742	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	5,864	1	...	5	1	1	1	1	6	5	2	2	...	...	25	46	13	238	...
Bombay	443	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
Asserghur	101	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ahmednuggur	549	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poona and Kirkee	2,202	...	...	...	...	...	...	...	4	2	...	...	...	...	6	...	1	...	...
Sattara	173	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Belgaum	1,037	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Secunderabad	2,668	...	...	...	...	...	...	1	1	...	...	...	1	...	3	...	2	...	...
Kanpotee	1,049	...	...	...	...	...	...	3	1	...	...	...	...	...	4	...	1	...	...
	8,022	...	...	...	...	...	...	8	4	...	...	...	2	...	14	17	4	90	...
Bellary	916	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bangalore	1,778	...	3	3	4	2	...	3	...	2	...	...	...	...	17	...	3	...	...
Cannanore	600	...	...	...	...	...	...	1	...	1	1	...	...	...	3	...	2	...	...
Mallapooram	98	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Calicut	99	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trichinopoly	257	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
St. Thomas' Mount	354	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras	646	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...
	4,748	...	3	4	4	2	...	4	...	3	1	1	...	...	22	46	6	127	...
Rangoon	885	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Toungoo	430	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thayetmyo	692	...	...	...	...	...	2	...	...	...	...	1	1	...	4	...	2	...	...
Port Blair	106	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	2,113	...	...	...	...	...	2	...	...	...	...	1	1	...	4	19	2	95	...
Taraghur, Ajmere (6 months)	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mount Abu	107	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poorundhur	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puchmurree (Madras Troops, 8 months)	149	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bamandroog	49	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wellington	492	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...
AS FOR 12 MONTHS	790	...	...	...	...	1	...	...	...	...	...	...	...	...	1	11	1	114	...

ARMIES.	Average Strength.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Number of Deaths.	Death-rate per 1,000 of Strength.
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				
ARMY OF BENGAL	37,278	9	6	6	20	18	18	22	20	27	11	6	14	177	47	75	201
ARMY OF MADRAS	11,501	...	3	4	4	2	1	6	4	5	1	2	2	34	39	12	104
ARMY OF BOMBAY	10,329	1	...	5	1	1	1	10	7	2	2	1	31	39	14	133	
ARMY OF INDIA	59,308	10	9	15	25	21	20	29	34	39	14	10	17	243	41	101	170

# EUROPEAN TROOPS, 1874.

## XXV.

TABLE showing the PREVALENCE of FEVER in each MONTH and the DISTRIBUTION of FEVERS by STATIONS and PROVINCES.

(Excluding Enteric Fever, which is shown separately in Table XXIV.)

STATIONS.	Average Strength for the period of occupation.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Number of Deaths.	Death-rate per 1,000 of Strength.
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				
Deolalee Depôt (Bengal Troops)	...	...	1	4	2	...	1	2	3	3	...	2	10	28	...	...	...
Poona and Bombay Depôts (Bengal Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Troops marching, Bengal and N. W. P.	...	36	14	9	...	...	...	...	...	...	3	13	36	111	...	2	...
Recruits, Invalids, &c., Bengal and N. W. P.	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Fort William	154	5	8	7	9	6	25	57	25	23	5	6	12	188	...	...	...
Dum-Dum	619	11	6	7	12	3	5	23	29	21	11	5	9	142	...	...	...
Barrackpore	434	5	1	24	13	26	182	52	22	45	9	16	10	405	...	...	...
	2,007	21	15	38	34	35	212	182	76	89	25	27	31	735	366.1	...	...
Haziribâgh (11 months)	878	5	8	16	18	17	10	23	20	43	21	13	3	197	...	...	...
Dinapore	929	2	15	94	164	115	82	96	47	25	40	63	28	781	...	2	...
Benares	478	4	7	12	16	13	28	17	17	26	12	7	8	167	...	1	...
Chunar	68	6	7	4	2	4	5	1	1	3	5	2	41	...	...	...	...
Fyzabad	982	4	7	18	27	16	18	41	14	22	7	10	12	196	...	...	...
Lucknow	2,429	9	28	101	79	74	54	91	100	105	59	36	23	735	...	1	...
Sitapur	631	9	4	16	25	25	8	23	14	25	13	6	6	175	...	...	...
Fatehgarh	279	4	4	3	5	8	4	8	11	19	10	7	18	101	...	...	...
Cawnpore (10 months)	1,018	1	12	11	24	29	28	24	24	43	37	9	11	253	...	3	...
Allahabad	1,030	21	14	26	26	22	19	35	34	79	52	31	46	405	...	1	...
	8,540	65	106	391	356	323	256	339	282	396	234	187	157	3,052	357.4	10	1.17
Shahjahanpur (3 months)	169	1	1	...	...	...	...	...	...	...	...	...	...	2	...	...	...
Bareilly	850	15	1	15	26	24	27	26	30	24	5	3	6	202	...	...	...
Moradabad	290	...	...	2	5	5	7	5	8	2	...	...	...	3	...	...	...
Roorkee	390	3	3	14	12	10	8	24	37	41	16	6	2	176	...	...	...
Meerut	1,480	27	45	46	62	105	96	200	394	522	307	209	173	2,177	...	1	...
Delhi	534	17	16	12	17	38	54	61	134	184	16	40	17	685	...	...	...
Muttra	457	2	2	1	9	11	18	19	20	11	18	17	6	134	...	1	...
	3,933	65	68	90	158	183	208	337	619	790	424	206	207	3,415	868.3	2	2.1
Agra	1,027	31	35	38	32	29	28	63	84	102	60	38	36	575	...	...	...
Morar	1,987	13	16	13	12	14	15	49	78	101	94	54	30	488	...	...	...
Gwalior Fortress	371	2	1	3	5	1	1	6	10	30	13	8	7	87	...	1	...
Jhansi	402	5	9	10	9	11	...	9	20	102	135	102	52	464	...	...	...
Nawabpore	319	1	1	13	21	11	14	14	34	65	75	54	28	378	...	1	...
Saugor	369	10	6	14	21	14	11	39	80	97	87	47	25	451	...	...	...
Jubbulpore	534	8	6	10	4	6	5	14	18	44	34	17	11	177	...	2	...
	4,096	70	74	101	104	85	74	194	323	541	496	319	189	2,570	627.4	5	1.22
Umballa	1,480	26	27	32	35	56	66	79	150	171	100	42	34	818	...	...	...
Jullundur	839	32	19	18	13	32	68	47	35	36	10	24	26	369	...	...	...
Ferozapore	1,034	7	8	15	35	51	37	87	75	39	25	9	15	401	...	9	...
Mooltan	869	38	23	22	13	6	11	30	47	166	64	41	33	434	...	4	...
Iera Ismael Khan	98	2	1	1	2	4	7	16	13	45	54	36	11	192	...	...	...
Sialkot	903	62	22	30	26	59	47	49	26	41	18	4	42	426	...	2	...
Amritsar and Govindgarh	284	5	4	2	2	13	18	31	72	86	45	25	36	339	...	...	...
Fort Lahore	110	14	7	6	7	12	13	15	16	10	3	...	...	3	...	...	...
Meean Meer	736	159	104	102	96	32	46	63	72	41	56	73	49	824	...	...	...
Rawal Pindi	1,074	26	19	10	59	71	106	79	63	39	28	32	32	552	...	...	...
Campbellpore	166	...	2	...	1	4	4	11	4	4	5	2	4	41	...	...	...
Attock	160	5	6	3	9	20	22	33	31	48	43	29	38	287	...	...	...
Nowshera	448	...	2	39	44	37	41	40	52	56	93	89	41	533	...	...	...
Cherat (6 months)	767	...	...	...	...	30	17	10	18	24	5	...	...	104	...	...	...
Peshawar	1,650	82	57	27	74	375	307	255	125	317	618	822	434	3,494	...	3	...
Troops marching, Punjab	...	34	29	...	2	...	...	...	...	...	...	...	...	14	14	...	...
Recruits, Invalids, &c., Punjab	...	...	...	...	...	...	...	...	...	...	...	...	...	7	...	...	...
	11,587	492	321	307	349	792	810	854	799	1,069	1,166	1,240	803	9,002	776.9	15	1.55
Darjeeling (11 months)	83	...	3	9	5	6	2	2	3	...	...	...	...	1	31	...	...
Ranikhet	797	4	2	7	6	11	12	15	14	21	11	7	2	112	...	1	...
Chakrata	735	4	...	1	10	11	13	10	4	13	4	5	3	78	...	...	...
Dagshai (11 months)	969	6	5	4	15	24	31	39	14	15	10	8	3	174	...	...	...
Solon (7 months)	304	...	...	...	19	37	47	48	10	10	4	3	...	178	...	1	...
Salathu (11 months)	827	5	7	8	14	18	21	9	8	13	5	4	...	112	...	...	...
Jutogh	94	...	...	3	3	2	1	...	...	...	...	...	...	9	...	...	...
Kangra	49	...	...	...	...	...	...	4	1	4	3	7	3	22	...	...	...
Dhurnasda (9 months)	122	...	...	...	8	5	4	6	4	6	5	6	3	47	...	...	...
Dalhousie (7 months)	121	...	...	...	6	2	1	3	2	6	...	...	...	26	...	...	...
Murree (10 months)	894	3	6	1	4	9	29	13	12	11	6	1	...	95	...	1	...
As for 12 Months	4,511	22	23	33	90	125	161	149	72	99	48	41	15	878	194.7	3	.66
Darjeeling Depôt (9 months)	211	...	...	...	9	9	6	15	4	5	2	...	...	50	...	...	...
Naini Tal (9 months)	320	1	...	...	17	21	8	5	2	7	1	6	2	70	...	...	...
Landour (9 months)	209	...	...	...	13	9	5	5	3	8	4	2	2	51	...	...	...
Kassauli (8 months)	532	...	...	...	17	34	27	29	33	18	4	1	2	165	...	...	...
Dalhousie (8 months)	346	1	1	...	26	13	17	14	8	9	3	5	...	97	...	1	...
Murree (8 months)	440	...	1	...	7	69	79	67	69	43	33	12	2	382	...	...	...
For Season of Occupation	2,157	2	2	...	89	135	142	135	119	90	47	26	8	815	369.2	1	.46
BENGAL PRESIDENCY	97,278	773	824	884	1,182	1,798	1,864	2,182	2,293	3,068	2,443	2,139	1,456	29,607	332.8	41	1.20

ARMY REPORT

STATIONS.	Average Strength for the period of occupation.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Number of Deaths.	Death-rate per 1,000 of Strength.		
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.						
Troops marching, (Bombay Presidency)	...	...	...	...	...	...	...	...	...	...	...	...	...	13	3	16	...	...	...
Deollee Depôt, (Bombay Troops)	...	...	1	3	19	8	12	10	11	4	8	2	7	76	1	...	...	...	...
Khandala "	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Colaba "	35	1	2	3	2	...	...	...	...	...	...	...	...	2	10	...	...	...	...
Troops marching, (Madras Presidency)	...	13	7	...	...	...	...	...	...	...	...	...	...	...	...	29	...	...	...
Poonamallee and Presidency Depôts	195	...	2	...	3	1	16	6	...	...	6	1	3	38	...	...	...	...	...
Deollee Depôt (Madras Troops)	...	...	...	...	...	...	...	...	1	...	1	...	1	3	...	...	...	...	...
Poona and Bombay Depôts (Madras Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nusseerabad	413	2	6	7	11	8	19	15	15	25	16	...	1	125	...	...	...	...	...
Neemuch	400	19	13	12	4	7	9	20	41	114	116	55	53	463	...	...	...	...	...
Indore	97	5	3	10	7	3	4	9	9	10	4	5	1	69	...	...	...	...	...
Mhow	1,491	35	21	32	30	41	56	103	98	151	162	45	36	748	...	...	...	...	...
Deesa (10 months)	709	31	12	19	2	1	11	29	5	33	70	29	11	235	...	...	...	...	...
Ahmedabad and Baroda	300	16	5	7	4	8	10	24	18	37	48	16	17	211	...	...	...	...	...
Kurrachee and Ghizree	574	10	11	17	16	6	16	16	15	29	16	12	12	161	...	...	...	...	...
Hydrabad	428	4	1	1	3	4	3	...	11	29	45	102	58	291	...	...	...	...	...
Aden	742	39	13	23	10	20	19	33	18	11	5	4	8	293	...	...	...	...	...
	5,464	157	85	119	88	98	147	235	230	430	422	268	197	2,476	453.1	4	73	...	...
Bombay	443	16	8	7	9	6	8	15	16	76	88	35	34	318	...	...	...	...	...
Aden	101	6	...	1	1	...	1	...	11	10	10	12	1	53	...	...	...	...	...
Ahmednuggur	549	12	12	9	7	10	12	16	10	8	7	4	9	116	...	...	...	...	...
Poona and Kirkee	2,202	45	42	275	120	48	59	79	76	124	125	80	55	1,119	...	...	...	...	...
Sattara	173	3	2	1	2	4	1	5	5	9	3	8	3	44	...	...	...	...	...
Belgaum	1,037	24	31	50	11	12	20	30	21	22	13	22	6	232	...	...	...	...	...
Secunderabad	2,468	53	35	33	27	29	19	28	21	24	32	34	27	362	...	...	...	...	...
Kamptee	1,949	51	55	25	16	17	36	52	36	99	34	20	49	481	...	...	...	...	...
	8,022	210	185	371	193	126	147	225	196	363	312	215	184	2,727	339.9	4	70	...	...
Bellary	916	5	1	9	8	4	8	18	13	25	15	62	42	210	...	...	...	...	...
Bargalore	1,778	5	10	37	19	11	10	18	14	29	15	13	21	180	...	...	...	...	...
Cannanore	600	3	9	11	10	2	9	16	17	16	14	5	17	129	...	...	...	...	...
Mallapooram	98	...	...	1	...	...	...	1	...	...	...	...	2	6	...	...	...	...	...
Calicut	99	...	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...
Trichinopoly	257	...	1	17	45	8	12	9	1	3	2	1	1	98	...	...	...	...	...
St. Thomas' Mount	354	7	3	19	36	7	4	7	5	6	3	2	1	160	...	...	...	...	...
Madras	646	1	5	6	9	7	13	31	19	7	3	10	9	111	...	...	...	...	...
	4,748	21	29	99	128	39	56	96	69	78	52	93	95	846	178.2	1	21	...	...
Rangoon	855	1	...	5	4	3	5	1	5	3	1	2	15	45	...	...	...	...	...
Toungoo	430	3	2	1	2	2	2	1	2	...	3	2	1	21	...	...	...	...	...
Thayetmyo	692	...	1	8	6	5	6	11	14	21	37	37	32	178	...	...	...	...	...
Port Blair	106	...	...	...	...	...	1	...	1	...	1	...	...	3	...	...	...	...	...
	2,113	4	3	14	12	10	14	13	22	24	42	41	48	247	116.8	...	...	...	...
Taraghur, Ajmere (6 months)	72	...	...	...	2	3	6	8	13	13	...	...	...	45	...	...	...	...	...
Mount Aboo	167	...	4	6	4	12	10	9	7	12	11	12	91	...	...	...	...	...	...
Poorundhur	89	...	...	10	3	1	...	...	...	5	3	1	24	...	...	...	...	...	...
Puchmuree, (Madras Troops, 8 months)	149	...	...	4	2	9	9	18	8	10	10	...	...	70	...	...	...	...	...
Ramadroog	49	...	...	2	4	...	...	...	1	2	6	...	...	15	...	...	...	...	...
Wellington	492	4	3	7	8	9	11	11	4	3	4	3	70	...	...	...	...	...	...
AS FOR 12 MONTHS	880	4	7	21	23	22	36	36	39	32	45	44	36	315	358.0	...	...	...	...

ARMIES.	Average Strength.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Number of Deaths.	Death-rate per 1,000 of Strength.
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				
ARMY OF BENGAL	37,278	773	624	884	1,182	1,708	1,864	2,182	2,293	3,968	2,443	2,130	1,456	20,697	552.8	41	1.10
ARMY OF MADRAS	11,501	146	134	178	260	111	161	215	162	228	182	209	226	2,152	187.1	2	.17
ARMY OF BORRAY	10,529	264	187	452	259	194	267	406	367	703	706	458	330	4,623	439.1	8	.76
ARMY OF INDIA	69,308	1,183	945	1,514	1,641	2,013	2,292	2,803	2,862	3,999	3,331	2,797	2,012	27,382	461.7	51	.86

# EUROPEAN TROOPS, 1874.

## XXVI.

TABLE showing the PREVALENCE of APOPLEXY and SUNSTROKE in each MONTH, and the DISTRIBUTION of these DISEASES by STATIONS and PROVINCES.

STATIONS.	Average Strength for the period of occupation.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Number of Deaths.	Death-rate per 1,000 of Strength.
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				
Deolace Depôt (Bengal Troops)	...	...	...	3	...	...	...	...	...	...	...	...	...	3	...	...	...
Poona and Bombay Depôts (Bengal Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Troops marching, Bengal and N. W. P.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Recruits, Invalids, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fort William	954	...	...	...	...	...	1	...	...	...	...	...	...	1	...	1	...
Dum-Dum	619	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barrackpore	434	...	...	...	1	1	1	...	...	...	...	...	...	3	...	3	...
	2,007	...	...	...	1	1	1	1	...	...	...	...	...	4	20	4	199
Hazâribâgh (11 months)	878	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Binapore	929	...	...	...	...	3	...	...	...	...	...	...	...	3	...	2	...
Benares	478	...	...	...	...	...	2	2	...	...	...	...	...	4	...	1	...
Chunar	68	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...
Fyzabad	982	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lucknow	2,429	...	...	...	...	1	...	...	1	1	...	...	...	3	...	...	...
Sitapur	631	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fatehgarh	279	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cawnpore (10 months)	1,018	...	...	...	1	1	2	1	...	...	...	...	...	4	...	3	...
Allahabad	1,090	...	...	1	1	1	2	1	...	...	...	...	...	6	...	3	...
	8,540	...	...	1	2	6	7	4	...	1	1	...	...	22	20	9	106
Shâhjahânpur (3 months)	169	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bareilly	850	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...
Moradabad	200	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Boruckee	300	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Meerut	1,499	...	...	...	1	1	1	1	...	3	...	1	1	9	...	4	...
Delhi	534	...	...	...	...	...	1	1	...	1	...	...	...	3	...	2	...
Muttra	467	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	3,933	...	...	...	1	1	2	2	...	4	...	2	2	14	36	7	178
Agra	1,027	...	...	...	...	...	...	2	...	...	...	...	...	2	...	1	...
Morar	1,087	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Gwalior Fortress	371	...	...	...	...	2	1	1	...	...	...	...	...	4	...	1	...
Jhânsi	402	...	...	...	...	1	...	...	...	...	...	...	...	2	...	...	...
Nowgong	316	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sangor	289	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jubbulpore	433	...	...	1	...	...	...	...	...	1	...	...	...	2	...	...	...
	4,096	...	...	1	...	4	1	4	...	1	...	...	...	11	27	2	49
Umballa	1,480	1	1	...	...	1	2	...	1	...	...	...	...	6	...	2	...
Jullundur	839	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ferozepore	1,734	...	...	...	...	1	1	...	...	...	...	...	...	2	...	1	...
Mooltan	869	...	...	...	...	...	5	1	...	...	...	...	...	6	...	2	...
Dera Ismael Khan	98	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...
Sialkot	663	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Amritsar and Govindgarh	284	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fort Lahore	110	...	...	...	...	...	...	2	...	...	...	...	...	2	...	1	...
Meeran Meer	736	...	...	...	...	3	2	1	1	...	...	...	...	7	...	3	...
Rawal Pindi	1,674	...	...	2	3	1	...	...	...	...	...	...	...	6	...	...	...
Campbellpore	168	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Attock	160	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...
Nowshera	448	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cherat (6 months)	767	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peshawur	1,650	...	...	...	...	...	...	8	...	...	...	...	...	8	...	3	...
Troops marching, Punjab	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Recruits, Invalids, &c., Punjab	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	11,587	1	1	2	3	6	5	18	3	...	...	...	...	39	34	13	112
Darjeeling (10 months)	83	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...
Ranikhet	797	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chakrata	733	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Daghal (11 months)	969	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Solon (7 months)	804	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Subâthn (11 months)	827	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jutoogh	94	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kangra	49	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dharmasâla (9 months)	122	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dalhousie (7 months)	121	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Murree (10 months)	894	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
AS FOR 12 MONTHS	4,511	...	...	...	...	...	1	...	...	...	...	...	...	1	2	...	...
Darjeeling Depôt (9 months)	211	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Naini Tal " (9 months)	320	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Laudour " (9 months)	209	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kasauli " (8 months)	532	...	...	1	...	1	1	1	...	...	...	...	...	4	...	1	...
Dalhousie " (8 months)	346	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Murree " (8 months)	440	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
FOR SEASON OF OCCUPATION	2,157	...	...	1	...	1	1	1	...	...	...	...	...	4	19	1	46
BENGAL PRESIDENCY	37,278	1	1	7	8	18	17	31	4	6	1	2	2	98	26	36	97

STATIONS.	Average Strength for the period of occupation.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Number of Deaths.	Death-rate per 1,000 of Strength.	
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.					
Troops marching, Bombay Presidency	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...
Deolalee Depôt (Bombay Troops)	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...
Khandala " "	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Colaba " "	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Troops marching, Madras Presidency	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poonamallee Presidency Depôts	185	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
Deolalee Depôt (Madras Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poona and Bombay Depôts (Madras Troops)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nusseerabad	613	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Noemuch	400	...	1	...	...	...	...	2	...	1	...	...	...	...	4	...	...	...
Indore	97	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mhow	1,401	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deesa	709	...	...	1	...	...	3	...	...	...	1	...	...	...	5	...	2	...
Ahmedabad and Baroda	300	...	...	...	...	...	1	...	...	1	...	...	...	...	2	...	1	...
Kurrachee and Ghizree	774	...	...	...	...	...	2	...	1	...	...	...	...	...	3	...	1	...
Hyderabad	428	...	...	...	...	...	3	...	...	...	1	...	...	...	4	...	2	...
Aden	742	...	...	...	...	...	1	...	...	1	...	...	...	...	2	...	2	...
	5,464	...	1	1	...	...	10	2	1	3	2	...	...	...	20	37	8	1.40
Bombay	443	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	1	...
Asserghur	101	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ahmednuggur	549	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poona and Kirkee	2,302	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...	1	...
Sattara	173	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Belgaum	1,937	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Secunderabad	2,468	...	1	1	...	1	...	...	...	...	...	...	...	...	3	...	2	...
Kamptee	1,049	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...
	8,022	...	1	2	2	1	...	...	1	...	...	...	...	...	7	9	5	.62
Bellary	916	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bangalore	1,778	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...
Cannanore	600	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mallikpoorum	98	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Calicut	99	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trichinopoly	257	...	...	...	1	2	...	1	...	1	...	...	...	...	5	...	2	...
St. Thomas' Mount	354	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Madras	646	...	...	...	...	...	1	1	...	...	...	...	...	...	2	...	2	...
	4,748	...	...	1	2	2	1	2	...	2	...	...	...	...	10	21	4	.84
Rangoon	885	...	...	1	...	...	...	...	...	...	1	...	...	...	2	...	...	...
Toungoo	430	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thayetnoo	692	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Port Blair	106	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	2,113	...	...	1	...	...	...	...	...	...	1	...	...	...	2	9	...	...
Taraghur, Ajmere (6 months)	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mount Aboo	107	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poorundhur	89	...	...	...	1	1	...	1	...	...	...	...	...	...	3	...	...	...
Puchanree (Madras Troops, 8 months)	149	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ramandroog	49	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wellington	492	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
As for 12 MONTHS	880	...	...	...	1	1	...	1	...	...	...	...	...	...	3	34	...	...

ARMIES.	Average Strength.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Number of Deaths.	Death-rate per 1,000 of Strength.
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				
ARMY OF BENGAL	37,378	1	1	7	8	18	17	31	4	6	1	2	2	88	2.6	36	.97
ARMY OF MADRAS	11,501	...	1	4	2	4	1	2	...	2	1	...	...	17	1.5	8	.70
ARMY OF BOMBAY	10,329	...	1	2	3	1	10	3	2	3	2	...	1	28	2.7	12	1.14
ARMY OF INDIA	69,308	1	3	13	13	23	28	36	6	11	4	2	3	143	2.4	56	.95

# EUROPEAN TROOPS, 1874.

XXVII.

TABLE showing in DETAIL the CAUSES of DEATH in the ARMIES of the THREE PRESIDENCIES.

TOTAL LOSS OF THE ARMY OF INDIA BY DEATH 805. PER 1,000 OF AVERAGE STRENGTH 1358.									
CAUSES OF DEATHS.	BENGAL.		MADRAS.		BOMBAY.		ARMY OF INDIA.		
	Deaths in Hospital.	Deaths out of Hospital.	Deaths in Hospital.	Deaths out of Hospital.	Deaths in Hospital.	Deaths out of Hospital.	Deaths in Hospital.	Deaths out of Hospital.	Died per 1,000 of the Average Strength.
Cholera	8	...	1	...	2	...	11	...	18
Smallpox	7	...	1	...	...	...	8	...	14
Pyæmia	2	...	...	...	...	...	2	...	...
Hydrophobia	2	...	...	...	...	...	2	...	...
Erysipelas	4	...	1	...	...	...	5	...	...
Enteric Fever	75	...	12	...	14	...	101	...	170
Intermittent Fevers	5	...	...	...	1	...	6	...	...
Remittent and Continued Fevers	36	...	2	...	7	...	45	...	86
Acute Rheumatism	1	...	...	...	1	...	2	...	...
Secondary Syphilis	3	...	2	...	...	...	5	...	...
Cancer, mediastary of neck	...	...	1	...	...	...	1	...	...
"    of pylorus	2	...	2	...	...	...	4	...	...
"    abdominal and peritoneal	1	...	1	...	1	...	3	...	...
Phthisis Pulmonalis	44	...	13	...	4	...	61	...	103
Tuberculosis Mesenterica	1	...	...	...	1	...	2	...	...
Hip-joint disease	...	...	...	...	1	...	1	...	...
Scurvy	1	...	...	...	...	...	2	...	03
Diabetes	3	...	...	...	1	...	4	...	...
General Dropsy	1	...	...	...	...	...	1	...	...
Meningitis	2	...	...	...	...	...	2	...	...
Myelitis	2	...	...	...	...	...	2	...	...
Encephalitis, Abscess	1	...	...	...	...	...	1	...	...
"    Softening of brain	4	...	1	...	2	...	7	...	...
"    Tumour of brain...	2	...	...	...	...	...	2	...	...
Epilepsy	1	...	1	...	...	...	2	...	...
Apoplexy, Heat	32	...	6	...	11	...	49	...	96
"    Sanguineous	2	...	1	...	...	...	3	...	...
"    Congestive	2	...	1	...	1	...	4	...	...
Pericarditis	...	...	1	...	...	...	1	...	...
Tumour of Pericardium	1	...	...	...	...	...	1	...	...
Angina pectoris	1	...	...	...	...	...	1	...	...
Embolism	...	...	1	...	...	...	1	...	...
Valve Disease of Heart	13	...	6	...	3	...	22	...	...
Hypertrophy	4	...	1	...	...	...	5	...	...
Fatty Heart	7	...	1	...	...	...	8	...	125
Rupture of Heart	1	...	...	...	...	...	1	...	...
Aortic Aneurism	26	...	4	...	8	...	38	...	...
Aneurism of Cerebral Artery	1	...	...	...	...	...	1	...	...
Bronchitis	1	...	...	...	...	...	1	...	...
Pneumonia	17	...	4	...	5	...	26	...	52
Gangrene of Lung	...	...	...	...	1	...	1	...	...
Pleurisy	2	...	1	...	...	...	3	...	...
Enteritis	1	...	...	...	...	...	1	...	...
Peritonitis	7	...	1	...	4	...	12	...	...
Iliac Abscess	...	...	1	...	...	...	1	...	...
Hæm	...	...	1	...	...	...	1	...	...
Hernia	1	...	...	...	1	...	1	...	...
Dysentery	45	...	22	...	...	...	73	...	123
Diarrhoea	2	...	...	...	...	...	2	...	03
Hepatitis	72	...	38	...	18	...	128	...	216
Amyloid degeneration of Liver	2	...	...	...	...	...	2	...	...
Cirrhosis	11	...	...	...	1	...	12	...	...
Ascites	1	...	...	...	...	...	1	...	...
Spleen Disease	1	...	...	...	...	...	1	...	01
Nephria	7	...	1	...	...	...	8	...	...
Abscess of Kidney	1	...	...	...	...	...	1	...	...
Stricture of Urethra	3	...	...	...	...	...	3	...	...
Caries of Skull	...	...	1	...	...	...	1	...	...
Synovitis of Knee joint	...	...	1	...	...	...	1	...	...
General Debility	...	...	...	...	1	...	1	...	01
Delirium Tremens	7	...	1	...	...	...	8	...	14
Accident	4	19	...	2	...	3	5	24	...
Drowning	...	12	...	8	1	...	...	24	...
Died while drunk	...	6	...	...	...	4	...	8	...
Suffocated while drunk	...	3	...	1	...	1	...	5	127
Murder	...	1	...	1	...	...	...	4	...
Executed	...	1	...	1	...	...	...	4	...
Suicide by Gunshot	...	15	...	2	...	12	...	19	...
"    Cut Throat	...	1	...	...	...	...	...	1	...
"    Hanging	...	1	...	...	...	...	...	1	...
"    Poison	...	1	...	1	...	...	...	1	30
"    fall from Upper Storey of Barrack	...	1	...	...	...	...	...	1	...
Cause not ascertained	1	1	...	1	...	...	1	2	...
Ratio per 1,000 for all causes not specially calculated	...	...	...	...	...	...	...	...	108
<b>Total</b>	<b>484</b>	<b>61</b>	<b>131</b>	<b>17</b>	<b>90</b>	<b>16</b>	<b>711</b>	<b>94</b>	<b>1358</b>





# EUROPEAN TROOPS, 1874.

## XXIX.

*STATEMENT showing the GAIN and LOSS in STRENGTH of the REGIMENTS composing the ARMY of INDIA during 1874.*

A.—GAIN AND LOSS OF THE DIFFERENT ARMS.

		Artillery.	Cavalry.	Infantry.	Army of India.
<i>Strength at the beginning of the Year.</i>					
At Head Quarters and on Detachment at the beginning of 1874 ...	...	11,006	3,869	41,715	56,590
Recruits from England in India on march to join ...	...	...	...	41	41
On Staff employment ...	...	16	14	34	64
In Military and other Prisons ...	...	38	13	270	321
Elsewhere, Sick in other Hospitals, and Men remaining at Convalescent Depôts ...	...	275	198	1,180	1,653
<b>Total Strength in India at the beginning of 1874</b> ...	...	<b>11,335</b>	<b>4,094</b>	<b>43,240</b>	<b>58,669</b>
<i>Additions during the Year.</i>					
Transfers received from other Regiments ...	...	817	20	107	944
Transferred from Regiments leaving India by volunteering ...	...	166	43	881	1,090
Recruited in India ...	...	30	8	71	109
... { New Soldiers	...	2	...	...	2
... { Time-expired men	...	923	138	2,279	3,340
Received from England, landed after 1st January ...	...	1	9	184	194
... { Recruits	...	9	2	16	27
Deserters rejoined ...	...	...	...	...	...
... { Invalids recovered	...	...	...	...	...
<b>Total Additions of the Year</b> ...	...	<b>1,948</b>	<b>220</b>	<b>3,538</b>	<b>5,706</b>
<i>Loss during the Year.</i>					
Transfers given to other Regiments ...	...	1,020	124	975	2,119
Time-expired Men who have left the Service ...	...	189	56	1,032	1,277
Men who have purchased their discharge ...	...	13	21	115	149
Men discharged otherwise ...	...	...	...	32	32
Invalided ...	...	112	26	477	615
... { For discharge	...	388	142	1,265	1,795
... { For change of climate	...	24	4	60	88
Dismissed by Sentence of Court Martial ...	...	14	3	47	64
Deserted ...	...	180	36	592	718
Died at Head Quarters and on Detachment ...	...	6	2	24	32
Died absent from the Regiment ...	...	12	4	29	45
... { At Convalescent Depôts	...	...	...	...	...
... { In other Hospitals	...	...	...	...	...
<b>Total Loss of the Year</b> ...	...	<b>1,958</b>	<b>418</b>	<b>4,558</b>	<b>6,934</b>
<b>Strength remaining towards the close of 1874</b> ...	...	<b>11,325</b>	<b>3,896</b>	<b>42,220</b>	<b>57,441</b>
<b>ABSTRACT.</b>					
		Artillery.	Cavalry.	Infantry.	Army of India.
Remained at the beginning of 1874 ...	...	11,335	4,094	43,240	58,669
Added during 1874 ...	...	1,948	220	3,538	5,706
<b>Total</b> ...	...	<b>13,283</b>	<b>4,314</b>	<b>46,778</b>	<b>64,375</b>
Deduct Loss during 1874 ...	...	1,958	418	4,558	6,934
<b>Remain towards the close of 1874</b> ...	...	<b>11,325</b>	<b>3,896</b>	<b>42,220</b>	<b>57,441</b>

E.—GAIN AND LOSS OF THE ARMY OF EACH PRESIDENCY.

	Army of Bengal.	Army of Madras.	Army of Bombay.	Army of India.
<i>Strength at the beginning of the Year.</i>				
At Head Quarters and on Detachment at the beginning of 1874	35,462	10,782	10,346	56,590
Recruits from England in India on march to join	41	...	...	41
On Staff employment	38	20	6	64
In Military and other Prisons	155	94	72	321
Elsewhere, Sick in other Hospitals, and Men remaining at Convalescent Depôts	1,059	424	170	1,653
<b>Total Strength in India at the beginning of 1874</b>	<b>36,755</b>	<b>11,320</b>	<b>10,594</b>	<b>58,669</b>
<i>Additions during the Year.</i>				
Transfers received from other Regiments	612	152	180	944
Transferred from Regiments leaving India by volunteering	521	345	224	1,090
Recruited in India	66	32	11	109
		2	...	2
Received from England, landed after 1st January	2,289	549	502	3,340
	187	5	2	194
Deserters rejoined	18	7	2	27
<b>Total Additions of the Year</b>	<b>3,693</b>	<b>1,092</b>	<b>921</b>	<b>5,706</b>
<i>Loss during the Year.</i>				
Transfers given to other Regiments	1,242	234	643	2,119
Time-expired Men who have left the Service	839	247	191	1,277
Men who have purchased their discharge	88	41	20	149
Men discharged otherwise	32	...	...	32
Invalided	399	135	81	615
	1,027	472	296	1,795
Dismissed by Sentence of Court Martial	57	17	14	88
Deserted	27	26	11	64
Died at Head Quarters and on Detachment	497	118	103	718
Died absent from the Regiment	23	8	1	32
	16	22	7	45
<b>Total Loss of the Year</b>	<b>4,247</b>	<b>1,320</b>	<b>1,367</b>	<b>6,934</b>
<b>Strength remaining towards the close of 1874*</b>	<b>36,201</b>	<b>11,092</b>	<b>10,148</b>	<b>57,441</b>
<b>ABSTRACT.</b>				
	Bengal.	Madras.	Bombay.	Army of India.
Remained at the beginning of 1874	36,755	11,320	10,594	58,669
Added during 1874	3,693	1,092	921	5,706
<b>Total</b>	<b>40,448</b>	<b>12,412</b>	<b>11,515</b>	<b>64,375</b>
Deduct Loss during 1874	4,247	1,320	1,367	6,934
<b>Remain towards the close of 1874</b>	<b>36,201</b>	<b>11,092</b>	<b>10,148</b>	<b>57,441</b>

\* This Statement has reference only to those regiments and batteries which have spent the year 1874 in India. The strength shown here as remaining is the strength of these corps, and not of the Army, which, as the rule, is reinforced from home before the end of the year.

## ABSTRACT of the RETURNS showing the ADMISSIONS, DEATHS, and

This Table does not include the Statistics of Regiments present for short fragmentary periods. Hence the Totals of the Strength, Admissions and Deaths Month, and therefore afford a complete record. It is also to be noted, that the figures of this Table must not be regarded as exhibiting with accuracy on the Regimental Rolls who are in India,

1.—REGIMENTS of										
REGIMENTS & BATTERIES, & STATIONS of 1874.			YEAR OF ARRIVAL		Date of Arrival from Station previously occupied.	Average Strength during 1874.	Admission-rate of 1874 per 1,000 of Average Strength.	LOSS PER 1,000		
			In India.	In the Bengal Presidency.				By Deaths.	By Invaliding.	
1	1-3rd Regiment, Fort William ...	...	1867	1867	January 1874, from Sitapur and Benares...	876	8996	1598	3653	
2	V Brig., 3 Battery, R. Art., Fort William ...	...	1867	1871	January 1874, from Darjeeling ...	82	13049	2439	3659	
3	{ 62nd Regiment, Dum-Dum, with Detachment of 175 } { men at Barrackpore ... }	...	1869	1869	November 1872, from Lucknow ...	865	8497	1734	1850	
4	XI Brig., A. Battery, R. Art., Barrackpore (10 months)	...	1874	1874	March 1874, from England ...	151	23841	5298	3974	
5	XI Brig., B. Battery, R. Art., Barrackpore (10 months)	...	1874	1874	March 1874, from England ...	155	25677	2581	6452	
REGIMENTS OF BENGAL PROPER						...	2,078	11492	2069	3274
2.—REGIMENTS OF BEHAR,										
1	2-22nd Regiment, Hazirbâgh ...	...	1874	1874	December 1873, from England ...	878	11651	2645	2164	
2	{ 109th Regiment, Dinapore, with Detachment of 67 } { men at Chunar ... }	...	...	...	February 1874, from Roorkee and Delhi...	1,000	172000	2400	4100	
3	XI Brig., C. Battery, R. Art., Dinapore (10 months) ...	...	1874	1874	March 1874, from England ...	150	23133	4667	3333	
4	1-14th Regiment, Wing, Benares ...	...	1868	1868	January 1874, from Fort William ...	370	11757	1081	2703	
5	XI Brig., D. Battery, R. Art., Benares (10 months) ...	...	1874	1874	March 1874, from England ...	160	19250	4375	1250	
6	51st Regiment, Fyzabad ...	...	1873	1873	November 1872, from England ...	918	12863	980	4248	
7	XIX Brig., D. Battery, R. Art., Fyzabad ...	...	...	...	December 1873, from Dinapore ...	151	10331	662	3011	
8	13th Hussars, Lucknow (11 months) ...	...	1874	1874	February 1874, from England ...	445	13326	1798	1798	
9	40th Regiment, Lucknow ...	...	1873	1873	November 1872, from England ...	919	13667	2068	3917	
10	65th Regiment, Lucknow ...	...	1871	1871	February 1874, from Agra ...	935	9647	1711	3102	
11	A. Brigade, B. Battery, R. H. Art., Lucknow ...	...	1866	1866	February 1874, from Rawal Pindi ...	150	18267	1333	4000	
12	XIX Brig., G. Battery, R. Art., Lucknow ...	...	...	...	December 1873, from Nowgong ...	169	13432	1183	5917	
13	XXIII Brig., 7 Battery, R. Art., Lucknow...	...	...	...	February 1874, from Allahabad ...	88	12773	3409	7955	
14	1-14th Regiment, Head Quarters, Sitapur ...	...	1868	1868	January 1874, from Fort William ...	521	14876	192	5758	



TABLE

REGIMENTS of BEHAR.									
REGIMENTS & BATTERIES, & STATIONS of 1874.	YEAR OF ARRIVAL		Date of Arrival from Station previously occupied.	Average Strength during 1874.	Admission-rate of 1874 per 1,000 of Strength.	Loss per 1,000			
	In India.	In the Bengal Presidency.				By Deaths.	By Invaliding.		
15 XIX Brig., E. Battery, R. Art., Sitapur	...	...	January 1874, from Allahabad	147	1523.8	34.01	54.42		
16 73rd Regiment, Cawnpore	1874	1874	February 1874, from Ceylon	902	1545.5	22.17	34.37		
17 XIX Brig., F. Battery, R. Art., Cawnpore	...	...	January 1874, from Agra	157	1005.1	...	19.11		
18 2-10th Regiment, Allahabad	1863	1869	November 1871, from Fort William	851	1419.5	11.75	47.00		
19 XI Brig., E. Battery, R. Art., Allahabad (10 months)	1874	1874	March 1874, from England	154	1980.5	25.97	25.97		
20 XXIII Brig., 6 Battery, R. Art., Allahabad	...	...	January 1874, from Lucknow	89	1269.7	11.24	33.71		
REGIMENTS OF BEHAR, BENARES, OUDH AND CAWNPORE				8,964	1432.3	19.52	37.48		
3.—REGIMENTS of									
1 { 1-5th Regiment, Bareilly, with Detachment of 200 men at Moradabad	1867	1867	February 1872, from Nowshera	963	1654.0	9.35	46.73		
2 XIX Brig., C. Battery, R. Art., Bareilly	...	...	January 1874, from Mooltan	153	1183.0	6.54	45.75		
3 55th Regiment, Head Quarters, Roorkee	1864	1864	February 1874, from Peshawur	435	1075.9	16.00	43.68		
4 41st Company R. Engineers, Roorkee	...	...	...	33	...	...	...		
5 15th Hussars, Meerut	1869	1873	January 1873, from Mhow	475	2155.8	14.74	50.53		
6 { 85th Regiment, Meerut, with Detachment of 279 men at Fatehgarh	1868	1868	November 1872, from Dugshai	874	2069.8	13.73	48.06		
7 C. Brig., A. Battery, R. H. Art., Meerut	1873	1873	March 1873, from England	158	2249.5	25.32	44.30		
8 F. Brig., E. Battery, R. H. Art., Meerut	...	...	February 1872, from Umballa	157	1649.7	12.74	63.70		
9 VIII Brig., B. Battery, E. Art., Meerut	1866	1866	March 1873, from Dinapore	141	2215.3	27.78	83.33		
10 VIII Brig., F. Battery, E. Art., Meerut	1868	1868	February 1874, from Barrackpore	160	3025.0	43.75	37.50		
11 55th Regiment, Wing, Delhi	1864	864	February 1874, from Peshawur	474	1934.6	14.77	46.41		
12 XXIII Brig., 2 Battery, R. Art., Delhi	...	...	February 1872, from Morar	89	1741.6	22.47	33.71		
13 10th Hussars, Muttra	1873	1873	March 1873, from England	491	1044.8	14.26	36.66		
REGIMENTS OF ROHILCUND AND MEERUT				4,567	1646.4	15.33	47.08		

BENARES, OUDE, and CAWNPORE,—(continued).

		CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.																														
Total Admissions and Loss of the Year by Deaths and Invaliding.		Cholera.	Small-pox.	Dengue.	Euteric Fever.	Intermittent Fever.	Remittent and Continued Fever.	Rheumatism and Rheumatic Affections.	Primary Venereal Affections.	Secondary Venereal Affections.	Erysipelas.	Scurvy.	Anæmia and Debility.	Phthisis Pulmonalis.	Apoplexy and Sunstroke.	Epilepsy and other Brain Affections.	Neuragic Affections.	Delirium Tremens.	Ophthalmia.	Heart Disease and Aneurism.	Tonsillitis, Bronchitis, and Asthma.	Pleurisy and Pneumonia.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Functional derangement of the Digestive System.	Diseases of the Urinary System.	Diseases of the Genes-ative System.	Abscess and Ulcer.	Injuries and Accidents.	All other Causes.
15	{ Admissions 224 Deaths ... 5 Invaliding .. 8	...	...	...	...	23	14	4	57	24	6	...	...	3	3	5	4	1	...	2	3	1	4	8	3	4	...	2	20	21	12	
16	{ Admissions 1,394 Deaths ... 20 Invaliding .. 31	1	1	...	3	73	121	41	355	45	7	2	19	8	4	1	9	3	20	30	123	10	55	73	35	2	47	1	17	104	58	126
17	{ Admissions 252 Deaths ... 10 Invaliding .. 3	...	...	...	1	38	19	4	52	12	...	...	1	1	...	4	...	1	2	16	3	3	15	3	...	7	1	3	14	29	23	
18	{ Admissions 1,308 Deaths ... 10 Invaliding .. 40	5	1	...	...	88	185	38	236	40	3	11	14	1	4	7	1	23	8	113	3	25	25	52	8	63	...	18	104	57	76	
19	{ Admissions 395 Deaths ... 4 Invaliding .. 4	2	...	1	21	56	4	67	2	...	...	...	...	5	4	1	3	...	3	10	...	3	25	2	2	33	1	3	29	17	14	
20	{ Admissions 113 Deaths ... 1 Invaliding .. 3	1	...	...	21	...	3	27	4	2	1	...	...	1	1	1	1	1	...	3	...	5	6	3	1	5	1	1	11	11	3	
	{ Admissions 12,839 Deaths ... 175 Invaliding .. 336	6	15	...	82	1423	1509	340	2381	333	38	5	244	93	23	34	67	27	360	93	691	75	372	635	412	34	548	37	135	944	786	807

ROHILCUND and MEERUT.

1	{ Admissions 1,015 Deaths ... 9 Invaliding .. 45	4	1	56	184	26	225	17	3	...	18	5	...	1	3	5	12	3	71	4	10	37	47	6	44	5	8	69	76	78	
2	{ Admissions 181 Deaths ... 1 Invaliding .. 7	...	...	46	7	7	29	1	...	1	2	...	1	...	1	...	1	...	7	...	3	4	14	...	6	...	15	31	6		
3	{ Admissions 468 Deaths ... 7 Invaliding .. 19	...	...	136	44	9	64	7	6	5	...	...	...	4	3	5	5	30	3	8	8	11	2	25	...	8	37	27	21		
4	{ Admissions 21 Deaths ... 1 Invaliding ..	...	...	10	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	4	...	...	...	1		
5	{ Admissions 1,024 Deaths ... 7 Invaliding .. 24	1	4	609	36	22	47	5	1	7	1	5	3	...	1	10	2	27	6	24	37	23	2	12	...	8	44	51	36		
6	{ Admissions 1,809 Deaths ... 12 Invaliding .. 42	3	9	965	11	51	277	19	1	23	3	...	10	2	11	3	44	6	49	39	41	1	63	...	8	51	55	64			
7	{ Admissions 354 Deaths ... 4 Invaliding .. 7	...	...	7	183	19	12	18	...	2	5	2	...	1	...	1	6	1	...	7	6	37	...	10	1	...	14	12	10		
8	{ Admissions 259 Deaths ... 2 Invaliding .. 10	...	...	103	9	4	13	...	...	3	...	2	1	3	1	5	...	12	1	2	8	8	2	22	...	2	15	29	14		
9	{ Admissions 319 Deaths ... 4 Invaliding .. 12	...	...	91	70	8	18	2	1	11	1	1	...	1	1	1	...	12	1	2	18	20	1	18	...	1	14	15	11		
10	{ Admissions 484 Deaths ... 7 Invaliding .. 6	...	...	1	98	136	6	23	4	...	10	...	1	2	3	1	7	...	22	...	6	39	12	3	35	...	9	21	29	16	
11	{ Admissions 917 Deaths ... 7 Invaliding .. 22	...	...	587	12	24	42	9	1	2	5	3	2	3	2	8	1	26	3	4	40	13	1	22	...	7	28	55	17		
12	{ Admissions 155 Deaths ... 2 Invaliding .. 3	...	...	84	...	11	3	...	...	4	...	3	...	3	...	3	...	13	1	4	3	2	...	3	...	11	5	5			
13	{ Admissions 513 Deaths ... 7 Invaliding .. 18	...	...	30	49	92	22	112	6	...	1	...	...	...	...	...	9	...	16	2	2	16	40	3	23	1	4	36	16	31	
	{ Admissions 7,519 Deaths ... 70 Invaliding .. 215	8	30	22	3017	622	263	871	70	15	...	86	21	14	18	29	19	70	29	281	27	121	257	269	21	280	7	55	346	401	310

TABLE

4. — REGIMENTS of AGRA								
REGIMENTS & BATTERIES, & STATIONS of 1874.	YEAR OF ARRIVAL		Date of Arrival from Station previously occupied.	Average Strength during 1874.	Admission-rate of 1874 per 1,000 of Strength.	LOSS PER 1,000		
	In India.	In the Bengal Presidency.				By Deaths.	By Invaliding.	
1 59th Regiment, Agra ...	1869	1874	{ January 1874, from Nussourabad and } { Neemuch ... }	827	13797	8.47	33.86	
2 XIX Brig., A. Battery, R. Art., Agra ...	...	...	December 1873, from Cawnpore ...	158	16862	6.33	...	
3 XXIII Brig., 5 Battery, R. Art., Agra ...	...	...	December 1871, from Meer Meer ...	82	14146	...	48.78	
4 26th Regiment, Morar ...	1865	1868	December 1872, from Fyzabad ...	716	16307	9.78	...	
5 A. Brig., E. Battery, R. H. Art., Morar ...	1865	1865	January 1873, from Sialkot ...	151	9733	...	86.09	
6 XIX Brig., B. Battery, R. Art., Morar ...	...	...	January 1874, from Ferotepore ...	161	15696	12.42	4.48	
7 XXIII Brig., 1 Battery, R. Art., Morar ...	...	...	November 1871, from Delhi ...	91	12747	10.90	65.93	
8 XXIII Brig., 4 Battery, R. Art., Gwalior Fortress ...	...	...	February 1872, from Darjeeling ...	79	8228	...	56.63	
9 { 63rd Regiment, Jhansi, with Detachments of 291 } { men at Gwalior Fortress, and 185 at Nowgong ... }	1871	1871	December 1873, from Hazaribagh ...	933	17816	18.22	28.91	
10 XI Brig., G. Battery, R. Art., Nowgong (19 months) ...	1874	1874	March 1874, from England ...	151	22450	26.45	13.74	
11 XI Brig., F. Battery, R. Art., Saugor (10 months) ...	1874	1874	March 1874, from England ...	152	23750	46.05	32.86	
12 { 2-25th Regiment, Jubbulpore, with Detachment of } { 226 men at Saugor ... }	1868	1868	December 1871, from Bareilly ...	787	10356	8.89	17.78	
REGIMENTS OF AGRA AND CENTRAL INDIA ...				4,338	14328	12.51	31.32	

and CENTRAL INDIA.

		CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.																														
Total Admissions and Loss of the Year by Deaths and Invaliding.		Cholera.	Smallpox.	Dysent.	Enteric Fever.	Intermittent Fevers.	Remittent and Continued Fevers.	Rheumatism and Rheumatic Affections.	Primary Venereal Affections.	Secondary Venereal Affections.	Erysipelas.	Scoury.	Anemia and Debility.	Phthisis Pulmonalis.	Apoplexy and sunstroke.	Epilepsy and other Brain Affections.	Neuralgic Affections.	Delirium Tremens.	Ophthalmia.	Heart Disease and Aneurism.	Tonsillitis, Bronchitis, and Asthma.	Pleurisy and Pneumonia.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Functional derangements of the Digestive System.	Diseases of the Urinary System.	Diseases of the Genesive System.	Abscess and Ulcer.	Injuries and Accidents.	All other Causes.
1	{ Admissions 1141 Deaths 7 Invaliding 28	1	8		383	54	34	142	2	4	5	6	1	1	1	7		14	1	113	7	25	37	36	4	31	6	6	64	67	57	
2	{ Admissions 268 Deaths 1 Invaliding		5	1	40	60	11	60	3		3							1	1	5		13	1	12	5	1	9	3	17	22	15	
3	{ Admissions 116 Deaths Invaliding 4				25	31	2	3		1								1	1	1	1		1	9	1	13	1	3	6	13	3	
4	{ Admissions 738 Deaths 7 Invaliding 1	3			302	37	21	92	23		26	1		1		8	1	9	9	25		4	9	16	2	33	3	5	40	43	36	
5	{ Admissions 147 Deaths Invaliding 13		2		19	11	16	7		1	7					3						10	2	11	6		12		7	28	5	
6	{ Admissions 301 Deaths 2 Invaliding 7	1			43	18	24	44	5		5		1		5	2	8		17		4	10	26		20	2	4	29	24	9		
7	{ Admissions 116 Deaths 1 Invaliding 6	2			31	5	1	18	6		1	1							1		6		1	7		7		9	14	6		
8	{ Admissions 65 Deaths Invaliding 4				6	3	4	11	1		6		1		1						1		1			6		7	8	9		
9	{ Admissions 1,605 Deaths 17 Invaliding 27	1	6	688	62	40	222	32	6	2	12	4	5	5	7		46	5	97	4	23	50	52	4	44	7	8	104	70	51		
10	{ Admissions 339 Deaths 4 Invaliding 2	1	4	81	44	9	33	3	6	1			1		1	3		21	1	8	35	9		18	3	2	23	11	18			
11	{ Admissions 361 Deaths 7 Invaliding 5		10	23	42	8	10	3	2		3		1	1				15		3	13	17	6	3		1	4	11	5			
12	{ Admissions 815 Deaths 7 Invaliding 14	2			303	39	16	84	18		4	1	2		5	2	5	7	7	9	13	17	49	1	48	2	13	43	47	15		
	{ Admissions 6,072 Deaths 53 Invaliding 111	13	13	21	2,124	496	186	706	121	19	4	70	15	11	8	38	8	92	23	389	22	81	200	232	19	234	23	45	333	367	229	



TABLE

3.—REGIMENTS of							
REGIMENTS & BATTERIES & STATIONS of 1874.	YEAR OF ARRIVAL		Date of Arrival from Station previously occupied.	Average Strength during 1874.	Admission-rate of 1874 per 1,000 of Strength.	LOSS PER 1,000	
	In India.	In the Bengal Presidency.				By Deaths.	By Invaliding.
1 11th Hussars, Umballa	1866	1868	November 1872, from Muttra	450	1541.7	4.39	26.32
2 4th Battalion, Rifle Brigade, Umballa	1874	1874	December 1873, from England	864	1503.7	8.10	50.09
3 A. Brigade, A. Battery, R. H. Art., Umballa	1866	1866	February 1874, from Meean Meer	162	1925.9	18.52	43.21
4 A. Brigade, C. Battery, R. H. Art., Umballa	1866	1866	January 1874, from Peshawar	157	2152.8	6.37	63.69
5 {54th Regiment, Jullundur, with Detachment of 50 } men at Kangra and 120 at Bhagesa }	1872	1872	December 1871, from England	932	713.5	6.44	62.23
6 VIII Brig., A. Battery, R. Art., Jullundur	...	...	January 1874, from Peshawar	160	1818.8	...	56.25
7 9-12th Regiment, Ferozepore	1864	1864	December 1872, from Sahāthu	860	1101.3	19.56	40.28
8 VIII Brig., E. Battery, R. Art., Ferozepore	1868	1868	February 1874, from Sangor	153	1555.6	52.29	78.43
9 XIII Brig., 3 Battery, R. Art., Ferozepore	1872	1872	December 1871, from England	79	1151.9	...	63.30
10 {92nd Regiment, Mooltan, with Detachment of 98 } men at Dera Ismael Khan }	1868	1868	January 1874, from Chakrata	843	1431.8	13.05	32.03
11 VIII Brig., C. Battery, R. Art., Mooltan	1866	1866	March 1874, from Lucknow	149	1053.7	29.14	33.56
12 5th Lancers, Sialkot (10 Months)	1864	1864	February 1870, from Lucknow	440	543.2	4.54	...
13 {1-6th Regiment, Sialkot, with Detachment of 208 } men at Amritsar and 120 at Bankhet during the hot season }	1868	1868	March 1873, from Peshawar	929	1481.4	7.54	33.37
14 A. Brig., D. Battery, R. H. Art., Sialkot	1865	1865	February 1873, from Campbellpore	148	1649.5	6.76	54.05
15 XIII Brig., 4 Battery, R. Art., Amritsar	1872	1872	November 1871, from England	85	2503.9	1.18	117.6
16 30th Regiment, Head Quarters, Meean Meer	1864	1864	March 1873, from Rawalpindi	539	2469.1	14.84	51.95
17 F. Brigade, A. Battery, R. H. Art., Meean Meer	...	...	January 1874, from Lucknow	166	1969.0	19.23	51.28
18 VIII Brig., D. Battery, R. Art., Meean Meer	1866	1866	January 1874, from Benares	151	1602.6	33.11	52.98
19 XIII Brig., 2 Battery, R. Art., Meean Meer	1872	1872	February 1874, from Fort William	85	1741.2	11.76	23.53
20 4th Hussars, Rawalpindi	1868	1868	January 1873, from Meerut	464	1071.1	4.31	47.41
21 70th Regiment, Rawalpindi	1872	1872	December 1871, from England	873	1169.7	11.45	35.51
22 F. Brigade, F. Battery, R. H. Art., Rawalpindi	...	...	February 1874, from Umballa	146	1169.7	...	68.49
23 VIII Brig., H. Battery, R. Art., Rawalpindi	1868	1868	November 1873, from Meean Meer	153	1934.6	13.07	52.29
24 F. Brigade, B. Battery, R. H. Art., Campbellpore	...	...	February 1873, from Morar	156	859.0	12.82	38.46

the PUNJAB.

CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.

	Total Admissions and Loss of the Year by Deaths and Invaliding.	CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.																														
		Cholera.	Smallpox.	Dyspepsia.	Enteric Fever.	Intermittent Fever.	Remittent and Continued Fever.	Rheumatism and Rheumatic Affections.	Primary Venereal Affections.	Secondary Venereal Affections.	Erysipelas.	Scurvy.	Anæmia and Debility.	Phthisis Pulmonalis.	Apoplexy & Sinus-stroke.	Epilepsy and other Brain Affections.	Neuralgic Affections.	Delirium Tremens.	Ophthalmia.	Heart Disease and Aneurism.	Tonsillitis, Bronchitis, and Asthma.	Pleurisy & Pneumonia.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Functional derangements of the Digestive System.	Diseases of the Urinary System.	Diseases of the Genitive System.	Abscess and Ulcer.	Injuries and Accidents.	All other Causes.
1	(Admissions 703 Deaths 2 Invaliding 12)	...	...	...	2	85	136	34	45	9	...	7	2	3	1	5	...	8	...	55	2	2	28	19	...	39	2	12	64	198	35	
2	(Admissions 1,351 Deaths 7 Invaliding 26)	...	1	...	4	143	277	33	147	27	...	18	4	3	5	7	5	35	14	137	3	6	83	5	...	70	...	7	87	72	158	
3	(Admissions 312 Deaths 3 Invaliding 7)	...	...	...	...	122	4	10	30	3	...	8	...	1	1	2	...	5	2	13	...	12	7	8	4	11	...	5	17	27	21	
4	(Admissions 338 Deaths 1 Invaliding 10)	...	...	...	1	136	9	32	33	10	...	5	2	...	2	...	2	...	1	10	2	2	9	9	3	11	...	10	12	28	9	
5	(Admissions 665 Deaths 6 Invaliding 58)	...	...	...	1	202	21	61	79	22	...	8	9	...	3	3	...	8	13	47	6	4	15	24	5	26	3	6	34	36	30	
6	(Admissions 291 Deaths ... Invaliding 9)	...	...	...	...	151	4	7	10	6	...	1	1	...	1	2	...	3	...	6	2	4	5	6	5	19	1	1	19	26	11	
7	(Admissions 957 Deaths 17 Invaliding 35)	...	1	...	...	59	259	90	84	7	1	31	8	...	2	20	...	12	4	80	2	5	22	51	4	44	3	11	31	55	65	
8	(Admissions 238 Deaths 8 Invaliding 12)	...	...	...	...	38	38	7	54	6	2	10	...	2	1	10	...	4	2	6	1	1	1	13	...	8	...	2	13	11	8	
9	(Admissions 91 Deaths ... Invaliding 5)	...	...	...	...	3	9	10	32	...	...	2	...	...	2	...	...	...	...	1	...	...	1	3	...	8	1	3	7	1	8	
10	(Admissions 1,307 Deaths 11 Invaliding 27)	...	1	...	...	372	207	138	72	8	1	41	...	7	4	5	1	10	5	55	4	4	19	35	...	26	...	29	58	44	61	
11	(Admissions 157 Deaths 3 Invaliding 5)	...	...	...	...	54	4	4	24	2	2	1	2	...	...	...	1	4	...	2	1	1	4	5	...	2	1	1	21	17	4	
12	(Admissions 239 Deaths 2 Invaliding ...)	...	...	...	...	24	52	20	13	1	...	1	...	...	1	...	1	4	4	9	1	7	1	11	1	26	...	6	26	24	6	
13	(Admissions 1,379 Deaths 7 Invaliding 31)	...	...	...	...	501	121	61	137	38	6	10	3	...	1	8	1	8	...	123	7	17	40	31	7	29	2	16	75	79	52	
14	(Admissions 154 Deaths 1 Invaliding 8)	...	...	...	...	34	12	10	3	...	...	2	...	...	...	...	...	1	...	6	...	7	11	13	...	11	...	1	17	20	6	
15	(Admissions 213 Deaths 1 Invaliding 19)	...	...	...	...	119	...	1	27	3	...	...	2	...	3	...	...	...	...	12	...	2	4	8	1	4	1	...	5	8	11	
16	(Admissions 1,326 Deaths 8 Invaliding 28)	...	...	...	...	718	38	88	61	8	5	15	2	3	...	7	...	13	...	133	...	11	36	22	11	17	2	12	59	38	27	
17	(Admissions 234 Deaths 3 Invaliding 8)	...	...	...	...	1	62	2	4	20	...	4	...	2	...	3	...	11	...	5	...	15	18	9	1	14	...	2	11	35	15	
18	(Admissions 242 Deaths 5 Invaliding 8)	...	...	...	2	...	56	1	19	28	1	...	4	...	1	...	2	10	3	12	...	5	22	5	1	12	...	...	17	25	15	
19	(Admissions 148 Deaths 1 Invaliding ...)	...	...	...	...	67	...	3	4	...	...	...	1	2	...	1	...	3	2	4	...	3	15	3	...	5	...	3	6	12	14	
20	(Admissions 497 Deaths 2 Invaliding 22)	...	...	...	1	27	42	32	26	5	6	1	7	6	6	2	7	1	4	2	55	23	1	8	20	26	20	...	6	48	81	32
21	(Admissions 1,010 Deaths 10 Invaliding 31)	...	...	...	3	135	259	41	104	14	3	7	9	...	1	3	...	9	6	66	2	20	20	78	5	55	1	7	50	44	78	
22	(Admissions 168 Deaths ... Invaliding 19)	...	...	...	...	36	13	6	3	2	...	2	1	...	...	1	1	4	...	12	1	...	3	11	4	9	...	6	15	31	7	
23	(Admissions 296 Deaths 2 Invaliding 8)	...	...	...	...	119	24	8	15	2	4	...	3	1	...	1	...	5	...	22	2	3	2	6	5	5	...	3	15	38	13	
24	(Admissions 134 Deaths 2 Invaliding 6)	...	...	...	...	19	1	3	11	1	1	4	...	...	...	3	...	1	...	7	1	2	5	9	...	15	...	3	19	21	8	

TABLE

REGIMENTS & BATTERIES, & STATIONS OF 1874.		YEAR OF ARRIVAL		Date of Arrival from Station previously occupied.	Average Strength during 1874.	Admission-rate of 1874, per 1,000 of Strength.	LOSS PER 1,000	
		In India.	In the Bengal Presidency.				By Deaths.	By Invaliding.
25	XIII Brigade, 5 Battery, R. Art., Attock	1872	1872	January 1872, from England	81	2017.3	49.38	61.73
26	{ 39th Regiment, Nowshera, with Detachment of 103 } men at Attock §	1869	1869	March 1874, from Peshawur	93	1847.3	6.45	27.96
27	1-17th Regiment, Peshawur §	1870	1870	May 1874, from Lucknow	877	2713.8	12.54	61.57
28	72nd Regiment, Peshawur §	1871	1871	December 1873, from Umballa	866	2638.4	8.08	64.67
29	F. Brigade, C. Battery, B. H. Art., Peshawur §	...	...	December 1873, from Umballa	155	2599.6	6.45	77.42
30	VIII Brigade, G. Battery, R. Art., Peshawur §	1868	1868	November 1873, from Jullundur	157	2293.8	25.48	89.17
31	XXIII Brigade, 3 Battery, R. Art., Peshawur §	...	...	November 1871, from Lucknow	83	1906.1	11.36	34.09
REGIMENTS OF THE PUNJAB					12,245	1616.9	11.11	46.19

## 6.—REGIMENTS cantoned during

1	XIII Brigade, 7 Battery, R. Art., Darjeeling	1872	1872	February 1874, from Meera Meer	86	1139.5	...	23.26
2	2-1st Regiment, Banikhet	1866	1870	• • •	878	869.0	15.94	20.50
3	1-8th Regiment, Chakrata	1868	1872	March 1874, from Cawnpore	927	906.1	12.94	64.73
4	37th Regiment, Dagshai	1867	1867	March 1873, from Meera Meer	851	641.6	7.05	... †
5	38th Regiment, Wing, Solon (9 months)	1864	1864	April 1874, from Meera Meer	417	1280.6	11.99	26.38
6	1-11th Regiment, Subáthú	1865	1865	February 1873, from Morar	885	661.0	5.65	21.47
7	XIII Brigade, 6 Battery, R. Art., Jutogh	1872	1872	March 1872, from England	92	889.4	21.74	...
8	2-60th Regiment, Murree Hills	1867	1867	April 1873, from Nowshera	954	819.3	14.37	27.72
9	XIII Brigade, 1 Battery, R. Art., Murree Hills	1872	1872	December 1871, from England ‡	92	1304.4	10.87	86.96
HILL STATIONS OF THE BENGAL PRESIDENCY					5,098	856.2	11.57	34.14

## 7.—INVALID GARRISON, ROAD-MAKING

1	Invalid Garrison, Chunar	...	...	...	23	...	...	...
2	Road-making Parties, Murree Hills, (See 2-60th Regiment, Section 6)	...	...	...	...	...	...	...
3	Detachments at Pachmarhi, from April to November	...	...	...	149	1080.5	...	...
4	Detachments from Peshawur, at Cherat, from May to October	...	...	...	767	576.3	...	...

\* The Detachment from Sháhjáshpur joined Head Quarters on 2nd April.

† Took home its invalids.

‡ At Rawalpindi during the cold season.

§ Detachment to Cherat during the hot season—See Section 7.

the PUNJAB,--(continued).

		CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.																																
Total Admissions and Loss of the Year by Deaths and Invaliding.		Cholera.	Smallpox.	Dengue.	Enteric Fever.	Intermittent Fever.	Remittent and Continued Fever.	Rheumatism and E Rheumatic Affections.	Primary Venereal Affections.	Secondary Venereal Affections.	Erysipelas.	Anæmia and Debility.	Phthisis Pulmonalis.	Apoplexy and Sun-stroke.	Epilepsy and other Brain Affections.	Neuralgic Affections.	Delirium Tremens.	Ophthalmia.	Heart Disease and Aneurism.	Tonsillitis, Bronchitis, and Asthma.	Pleurisy and Pneumonia.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Functional derangements of the Digestive System.	Diseases of the Urinary System.	Diseases of the Gen-erative System.	Abscess and Ulcer.	Injuries and Accidents.	All other Causes.			
25	{ Admissions 163 Deaths 4 Invaliding 5	3	86	11	2	10	4	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	{ Admissions 1,718 Deaths 6 Invaliding 26	924	158	45	63	7	2	1	15	10	4	4	1	20	4	83	2	20	41	27	6	54	3	74	87	53	1	6	1	1	1	1		
27	{ Admissions 2,380 Deaths 11 Invaliding 54	2	995	6	31	86	15	5	53	11	2	1	12	1	23	6	85	23	13	48	34	20	52	3	11	75	57	70	1	1	1	1	1	
28	{ Admissions 2,285 Deaths 7 Invaliding 56	2	113	1,245	38	110	11	1	76	15	1	4	9	1	23	11	151	7	45	46	35	18	42	6	15	78	65	117	1	1	1	1	1	
29	{ Admissions 389 Deaths 1 Invaliding 12	3	155	110	7	5	7	3	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	{ Admissions 346 Deaths 5 Invaliding 14	5	143	87	8	9	10	1	10	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	{ Admissions 168 Deaths 1 Invaliding 3	79	20	9	8	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	{ Admissions 19,799 Deaths 136 Invaliding 548	2	1	2	28	5,777	3,804	862	1,353	215	38	3,351	95	42	34	120	18	296	83	1232	96	223	536	529	138	646	29	185	697	1136	962	11	10	94

the year at HILL STATIONS.

1	{ Admissions 98 Deaths Invaliding 2	32	1	4	17	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	{ Admissions 793 Deaths 14 Invaliding 18	4	92	38	45	142	28	1	15	2	2	21	4	2	48	2	13	47	26	4	41	6	14	35	76	55	4	3	1	1	1	1	1	1	
3	{ Admissions 849 Deaths 12 Invaliding 60	3	116	15	84	114	15	1	16	14	1	15	19	8	113	2	5	20	44	2	25	2	17	34	96	59	3	4	1	1	1	1	1	1	
4	{ Admissions 546 Deaths 6 Invaliding	53	12	55	65	18	1	5	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	{ Admissions 534 Deaths 5 Invaliding 11	284	5	25	38	4	8	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	{ Admissions 585 Deaths 5 Invaliding 19	68	54	46	68	9	5	6	6	2	5	7	8	3	66	14	4	22	21	2	30	1	7	38	69	26	1	3	1	1	1	1	1	1	
7	{ Admissions 81 Deaths 2 Invaliding	2	7	2	10	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	{ Admissions 798 Deaths 14 Invaliding 27	2	70	19	49	168	13	2	1	11	1	1	4	3	12	9	98	8	8	12	44	4	21	3	21	68	113	34	4	2	2	2	2	2	
9	{ Admissions 120 Deaths 1 Invaliding 8	8	2	6	19	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	{ Admissions 4,365 Deaths 59 Invaliding 145	9	725	153	316	641	85	23	1	57	26	1	15	57	6	57	29	445	37	40	151	169	20	165	14	69	286	514	244	8	9	15	15		

PARTIES, and PACHMARHI and CHERAT SANITARIA.

1	{ Admissions 15 Deaths 1	3	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	{ Admissions Deaths																																		
3	{ Admissions 180 Deaths None	67	3	4	34	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	{ Admissions 442 Deaths None	52	52	12	47	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

TABLE

				8.—CONVALESCENT				
CONVALESCENT DEPOTS.				Period of Occupation.	Average Strength during the period of occupation.	Admission-rate of Season 1875 per 1,000 of Strength.	Loss per 1,000	
							By Deaths.	By Invaliding.
1	Darjeeling	...	...	Nine months, April to December	211	1000 0	474	...
2	Naini Tal	...	...	Nine months, April to December	320	1103 8	12 50	...
3	Landour	...	...	Nine months, April to December	209	631 6	19 14	...
4	Kasauli	...	...	Eight months, April to November	532	1299 0	13 16	...
5	Dalhousie	...	...	Eight months, April to November	346	884 4	6 67	...
6	Murree	...	...	Eight months, April to November	440	2111 4	13 64	...
CONVALESCENT DEPOTS OF THE BENGAL PRESIDENCY, FOR THE SEASON					2,157	1112 2	11 59	...
EUROPEAN ARMY OF THE BENGAL PRESIDENCY					37,190	1424 6	14 41	40 39

## ANNUAL RELIEF OF THE

ARTILLERY.							
13th Brigade	3 Battery	From Ferozepore	To Attock	...	...	Arrived	January 1875.
	4 Battery	" Amritsar	" Peshawur	...	...	Arrived	December 1874.
	5 Battery	" Attock	" Ferozepore	...	...	Arrived	December 1874.
23rd Brigade	3 Battery	" Peshawur	" Amritsar	...	...	Arrived	January 1875.
CAVALRY.							
5th Lancers		From Sialkot	To England	...	...	Embarked	November 1874.
9th Lancers		" England	" Sialkot	...	...	Arrived	March 1875.
INFANTRY.							
2-1st Regiment		From Ránkhet	To Meer Meer	...	...	Arrived	March 1875.
1-5th Regiment		" Bareilly	" Allahabad	...	...	Arrived	November 1874.
2-9th Regiment		" England	" Rawalpindi	...	...	Arrived	January 1875.
1-11th Regiment		" Subáthá	" Jubbulpore and Saugor	...	...	Arrived	January 1875.

## ANNUAL RELIEF OF THE

ARTILLERY.							
5th Brigade	2 Battery	From Rangoon	To Secunderabad	...	...	Arrived	March 1875.
	4 Battery	" Toungoo	" St. Thomas' Mount	...	...	Arrived	March 1875.
	5 Battery	" Secunderabad	" Madras	...	...	Arrived	March 1875.
	7 Battery	" Madras	" Toungoo	...	...	Arrived	February 1875.
6th Brigade	7 Battery	" St. Thomas' Mount	" Rangoon	...	...	Arrived	February 1875.
9th Brigade	D Battery	" Kirkee	" Trichinopoly	...	...	Arrived	March 1875.
18th Brigade	G Battery	" Trichinopoly	" England	...	...	Embarked	November 1874.

## ANNUAL RELIEF OF THE

ARTILLERY.							
9th Brigade	D. Battery	From Kirkee	To Trichinopoly	...	...	Arrived	March 1875.
	E. Battery	" Kirkee	" Neemuch	...	...	Arrived	November 1874.
18th Brigade	(A-F. Batteries)	" Bombay Presy.	" England	...	...	Embarked	November 1874.
4th Brigade	Head Quarters	" England	" Ahmedabad	...	...	Arrived	February 1875.
	A. Battery	" England	" Baroda	...	...	Arrived	February 1875.
	I. Battery	" England	" Deesa	...	...	Arrived	March 1875.
	C. Battery	" England	" Beiganz	...	...	Arrived	March 1875.
	D. Battery	" England	" Kurrachee	...	...	Arrived	March 1875.

DEPOTS.		CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.																														
Total Admissions and Loss of the Year by Deaths and Invaliding.		Cholera.	Smallpox.	Dysentery.	Enteric Fever.	Intermittent Fever.	Remittent and Continued Fever.	Rheumatism and Rheumatic Affections.	Primary Venereal Affections.	Secondary Venereal Affections.	Erysipelas.	Scurvy.	Anæmia and Debility.	Phthisis Pulmonalis.	Apoplexy and Stroke.	Epilepsy and other Brain Affections.	Neuragic Affections.	Belium Tremens.	Ophthalmia.	Heart Disease and Aneurism.	Tonsillitis, Bronchitis, and Asthma.	Pleurisy and Pneumonia.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Functional derangements of the Digestive System.	Diseases of the Urinary System.	Diseases of the Genitive System.	Abscess and Ulcer.	Injuries and Accidents.	All other Causes.
		1	{ Admissions 230 Deaths 1 Invaliding 1	...	...	...	50	...	...	...	...	...	1	...	...	...	...	...	...	...	2	...	10	2	1	15	13	...	3	...	...	13
2	{ Admissions 382 Deaths 4 Invaliding 34	...	2	...	1	60	10	8	75	8	10	...	13	9	...	3	2	...	1	4	36	2	15	9	17	1	8	2	4	26	25	31
3	{ Admissions 132 Deaths 4 Invaliding 15	...	...	...	1	35	2	8	11	...	4	...	6	...	...	2	...	...	2	...	7	1	5	2	12	1	4	...	2	6	13	8
4	{ Admissions 691 Deaths 7 Invaliding 11	...	3	...	1	158	7	59	46	27	3	1	23	2	4	1	6	1	5	16	69	3	10	44	7	2	10	3	6	45	52	77
5	{ Admissions 306 Deaths 3 Invaliding ...	...	...	...	...	80	17	36	25	28	...	11	1	...	...	...	...	...	1	...	11	2	5	6	12	2	12	4	6	14	18	15
6	{ Admissions 629 Deaths 6 Invaliding ...	...	...	...	383	2	43	50	5	...	1	15	22	...	3	13	...	1	3	77	5	6	9	15	15	10	2	6	33	26	144	
	{ Admissions 2,670 Deaths 25 Invaliding ...	5	3	766	38	156	263	106	18	2	68	36	4	7	23	1	12	23	210	15	42	87	116	21	47	11	24	137	149	280		
	{ Admissions 52,982 Deaths 536 Invaliding 1,422	9	37	45	172	1320	721	1987	6513	800	134	13	845	274	95	118	319	89	835	255	3128	209	953	1892	1661	233	1,990	123	528	3110	3308	2722
	{ Deaths 536 Invaliding 1,422	8	7	...	76	5	35	1	...	3	4	1	1	44	35	12	...	6	...	53	1	17	44	2	71	1	...	10	...	63	36	
	{ Invaliding 1,422	...	...	2	23	10	102	...	52	...	258	143	3	22	13	...	26	116	...	49	8	52	12	209	21	17	14	4	14	38	214	

\* Invaliding took place after the return of the men to their Regiments.

## ARMY OF BENGAL, 1874-75.

### INFANTRY,—continued.

1-18th Regiment	From England	To Bareilly	...	Arrived	November	1874.
2-19th Regiment	" Allahabad	" Benikhet	...	Arrived	March	1875.
2-22nd Regiment	" Hazaribagh	" Ranikhet and Shahjahanpore	...	Arrived	April	1875.
2-25th Regiment	" Jubbulpore and Saugor.	" Aden	...	Arrived	December	1874.
26th Regiment	" Morar	" England	...	Embarked	December	1874.
36th Regiment	" Meean Meer	" Subathu	...	Arrived	April	1875.
37th Regiment	" Dagshai	" England	...	Embarked	December	1874.
39th Regiment	" Nowshera	" Dagshai	...	Arrived	March	1875.
54th Regiment	" Jullundur	" Morar	...	Arrived	November	1874.
70th Regiment	" Rawalpindi	" Peshawur	...	Arrived	January	1875.
72nd Regiment	" Peshawur	" Nowshera	...	Arrived	January	1875.
81st Regiment	" Gibraltar	" Jullundur	...	Arrived	November	1874.

## ARMY OF MADRAS, 1874-75.

### INFANTRY.

1-21st Regiment	From Madras	To Rangoon	...	Arrived	March	1875.
45th Regiment	" Rangoon	" Bangalore	...	Arrived	March	1875.
89th Regiment	" Bangalore	" Madras	...	Arrived	February	1875.

## ARMY OF BOMBAY, 1874-75.

### ARTILLERY,—continued.

4th Brigade E. Battery	From England	To Kirkee	...	Arrived	March	1875.
F. Battery	" England	" Ahmedabad	...	Arrived	February	1875.
G. Battery	" England	" Nusserabad	...	Arrived	March	1875.

### INFANTRY.

2-15th Regiment	From England	To Poona	...	Arrived	March	1875.
2-25th Regiment	" Bengal Presidency	" Aden	...	Arrived	March	1875.
41st Regiment	" Aden	" England	...	Embarked	March	1875.
49th Regiment	" Mhow	" England	...	Embarked	December	1874.
65th Regiment	" Poona	" Mhow	...	Arrived	December	1874.

## ABSTRACT of the RETURNS showing the ADMISSIONS, DEATHS and

SEE NOTE PEE

## 1.—REGIMENTS of RAJPOOTANA.

REGIMENTS & BATTERIES, & STATIONS OF 1874.	Date of Arrival in India.	Date of Arrival from Station previously occupied.	Average Strength during 1874.	Admission-rate of 1874 per 1,000 of Strength.	LOSS PER 1,000	
					By Deaths.	By Invaliding.
1 { 108th Regiment, Nusseerabad, with Detachment of 275 men at Neemuch ... }	...	December 1873, from Deesa	841	1236.6	13.08	29.73
2 XVIII Brig., E. Battery, R. Art., Nusseerabad (10 months)	...	February 1873, from Kirkee	154	1701.3	6.50	...
3 XVIII Brig., D. Battery, R. Art., Neemuch (10 months)...	...	January 1871, from Kirkee	139	1632.4	21.58	...
4 { 49th Regiment, Mhow, with Detachment of 95 men at Indore (11 months) ... }	December 1865	December 1871, from Poona	810	1003.7	9.17	...
5 3rd Hussars, Mhow	December 1868	January 1873, from Ahmednuggur	496	1921.2	12.12	90.90
6 C. Brig., E. Battery, R. H. Art., Mhow	March 1873	March 1873, from England	158	1917.7	...	126.38
7 VI Brig., 2 Battery, R. Art., Mhow	February 1869	December 1872, from Bombay	81	2000.0	24.69	98.76
8 { 83rd Regiment, Deesa, with Detachment of 78 men at Mount Abu and 116 men at Ahmedabad ... }	April 1870	January 1874, from Poona and Bombay	965	1297.4	27.80	49.07
9 XVIII Brig., C. Battery, R. Art., Ahmedabad (10 months)	...	March 1872, from Belgaum	164	835.4	12.20	...
10 { 56th Regiment, Kurrachee, with Detachment of 250 men at Hyderabad ... }	April 1871	January 1874, from Poona	927	904.0	14.02	23.73
11 XVIII Brig., B. Battery, R. Art., Kurrachee (10 months)	...	January 1874, from Hyderabad	148	628.5	...	...
12 IX Brig., B. Battery, R. Art., Hyderabad	December 1869	February 1874, from Kurrachee	164	1652.5	...	36.58
13 41st Regiment, Aden	December 1865	February 1874, from Mooltan	580	874.1	1.72	...
14 VI Brig., 1 Battery, R. Art., Aden	February 1869	January 1873, from Mhow	81	716.0	12.34	46.38
15 VI Brig., 6 Battery, R. Art., Aden	February 1869	January 1873, from Bombay	80	1025.0	37.50	55.00
REGIMENTS OF RAJPOOTANA, MALWA, SCINDE AND ADEN			5,669	1231.6	12.35	49.84

## 2.—REGIMENTS of the

1 VI Brig., 3 Battery, R. Art., Bombay	February 1869	February 1871, from Aden	86	2081.9	34.88	69.76
2 VI Brig., 4 Battery, R. Art., Bombay	February 1869	February 1873, from Aden	85	1847.1	23.53	35.29
3 VI Brig., 5 Battery, R. Art., Bombay	February 1869	February 1873, from Aden	83	2596.0	24.10	48.20

\* Took home their invalids.

# TROOPS, 1874.

## XI.

INVALIDING of each REGIMENT of the ARMIES of MADRAS and BOMBAY for the YEAR.

FIXED TO TABLE XXX.

### MALWA, SCINDE and ADEN.

CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.

Total Admissions and Loss of the Year by Death and Invaliding.	CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.																															
	Cholera.	Smallpox.	Dengue.	Enteric Fever.	Intermittent Fever.	Remittent and Continued Fever.	Rheumatism and Rheumatic Affections.	Primary Venereal Affections.	Secondary Venereal Affections.	Erysipelas.	Scurvy.	Anemia and Debility.	Pulchra Pulmonalis.	Apoplexy and Sunstroke.	Epilepsy and other Brain Affections.	Neuralgic Affections.	Delirium Tremens.	Ophthalmia.	Heart Disease and Aneurism.	Tonsillitis, Bronchitis, and Asthma.	Pleurisy and Pneumonia.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Functional derangements of the Digestive System.	Diseases of the Urinary System.	Diseases of the Genurative System.	Abscess and Ulcer.	Injuries and Accidents.	All other Causes.	
1 { Admissions 1,040 Deaths 11 Invaliding 25	1			3	376	114	25	92	35			21	11	2		4	4	12	1	28	2	11	33	35		54	1	3	64	71	37	
2 { Admissions 292 Deaths 1 Invaliding					68	25	5	18	9			4		1	1	6	1	4		13		10	19	7	1	15		1	20	29	14	
3 { Admissions 213 Deaths 3 Invaliding				1	79	13	9	17	6					2			1	1		8	1	4	3	16	1	3		1	13	30	4	
4 { Admissions 813 Deaths 5 Invaliding				2	275	29	24	84	27			26	1		1	11	1	20	1	39	4	1	15	14	3	56		9	40	86	43	
5 { Admissions 951 Deaths 6 Invaliding 45				8	157	106	33	41	64			29	8		5			34	3	34		3	28	101	36	65	1	4	78	68	49	
6 { Admissions 303 Deaths Invaliding 20				1	139	2	14	7	4	1		4					6		12		16	2	3	28	5	5	5		18	17	11	
7 { Admissions 162 Deaths 2 Invaliding 8					92	4	2	6		1		5	3			1			2	8		2		12	2	5		2	4	4	7	
8 { Admissions 1,252 Deaths 22 Invaliding 57	1			2	316	92	38	130	14	5	1	33	14	7	4	9	2	38	15	72	13	35	32	72	25	67		9	92	53	71	
9 { Admissions 137 Deaths 2 Invaliding				1	22	34	6	9				1		2			3	1	1	6		1	1	1		9		1	13	13	12	
10 { Admissions 838 Deaths 13 Invaliding 22	1			5	206	17	22	71	4	4		35	2	7		2		14	1	34		37	43	11	1	40	2	8	146	79	46	
11 { Admissions 93 Deaths Invaliding				2	25	3	1	12	1			2					1			1	1	3	2	1		4		2	12	16	4	
12 { Admissions 271 Deaths Invaliding 6					151	3	3	7				7					2	2	4		7		2	2	2		12		1	40	18	8
13 { Admissions 507 Deaths 1 Invaliding					122	22	20	37	6	2	1	2	4		3	6	5	6	3	31	2	9	8	23	6	22	2	6	63	65	31	
14 { Admissions 58 Deaths 1 Invaliding 4					8	3	5	6				2			2		1						8	4		4		2	3	7	3	
15 { Admissions 82 Deaths 3 Invaliding 2					8	2	2	20	2			1			1		3			2		4	1	4		5			9	17	2	
{ Admissions 6,982 Deaths 79 Invaliding 189	3			26	2044	469	214	647	172	13	2	163	43	21	16	47	24	146	27	299	2	125	198	331	80	350	11	49	624	664	342	

### DECCAN and NAGPORE.

1 { Admissions 179 Deaths 3 Invaliding 6					80	2	13	19	2			4	1			1	1			8		5	3	12		4			11	8	5
2 { Admissions 157 Deaths 2 Invaliding 3				1	49		9	22	5			4				2		2	2	6		10	2	7	2	7	6		12	3	6
3 { Admissions 298 Deaths 2 Invaliding 4					115	6	12	17	4	1		3	1				3		1	5		2	3	1		2		2	8	17	5



TABLE

REGIMENTS of the DECCAN								
REGIMENTS & BATTERIES & STATIONS OF 1874.	Date of Arrival in India.	Date of Arrival from Station previously occupied.	Average Strength during 1874.	Admission-rate of 1874 per 1,000 of Strength.	Loss PER 1,000			
					By Deaths.	By Invaliding.		
4 1-2nd Regiment Ahmednuggur	October 1866	January 1874, from Belgaum	915	1043.7	10.93	24.04		
5 IX Brig., E. Battery, R. Art., Ahmednuggur	November 1869	December 1873, from Deesa	161	1441.0	...	31.06		
6 Sappers and Miners, Kirkee	...	.....	32	406.2	...	62.50		
7 C. Brig., D. Battery, R. H. Art., Kirkee	February 1873	December 1873, from Ahmednuggur	165	1188.0	12.12	54.54		
8 IX Brig., D. Battery, R. Art., Kirkee	November 1869	January 1873, from Nusseerabad	171	1339.2	5.85	49.94		
9 IX Brig., F. Battery, R. Art., Kirkee	November 1869	March 1872, from Ahmedabad	152	1164.5	...	6.58		
10 XVIII Brig., F. Battery, R. Art., Kirkee (10 Months)	...	March 1871, from Neemuch	157	890.0	12.74	...*		
11 2-7th Regiment, Poona	November 1873	November 1873, from England	853	1901.5	8.21	51.58		
12 68th Regiment, Poona	March 1872	March 1872, from England	934	1117.8	8.57	38.54		
13 XVIII Brig., A. Battery, R. Art., Belgaum (10 Months)	...	March 1872, from Ahmedabad	157	770.7	...	...*		
14 69th Regiment, Belgaum	April 1870	{ January 1874, from Kurrachee and } { Hyderabad }	913	1128.1	4.38	53.67		
15 { 44th Regiment, Kamptee, with Detachment of 140 men } { at Pachmarhi }	November 1871	November 1871, from England	826	1692.5	6.05	35.11		
16 XX Brig., E. Battery, R. Art., Kamptee	...	February 1874, from Bangalore	163	1135.0	36.67	42.95		
17 XX Brig., G. Battery, R. Art., Kamptee	...	February 1873, from Bangalore	160	1612.5	37.50	18.75		
18 18th Lancers, Secunderabad	September 1865	January 1872, from Bangalore	468	933.8	4.28	57.69		
19 76th Regiment, Secunderabad	January 1864	{ March 1871, from Thayetmyo and } { Toungoo }	665	1129.5	12.72	83.24		
20 107th Regiment, Secunderabad	...	December 1872, from Dum-Dum	846	989.4	14.19	76.83		
21 C. Brig., B. Battery, R. H. Art., Secunderabad	February 1873	February 1873, from England	170	1458.8	...	100.00		
22 V Brig., 5 Battery, R. Art., Secunderabad	November 1867	February 1872, from Rangoon	88	522.7	11.36	11.36		
23 IX Brig., A. Battery, R. Art., Secunderabad	November 1869	February 1873, from St. Thomas' Mount	166	1204.8	24.10	42.17		
24 XX Brig., F. Battery, R. Art., Secunderabad	...	March 1874, from Thayetmyo	152	800.2	6.58	26.32		
REGIMENTS OF THE DECCAN AND NAGPORE			8,742	1248.1	10.66	48.65		
3. — REGIMENTS of								
1 VI Brig., 7 Battery, R. Art., St. Thomas' Mount	...	February 1872, from Secunderabad	82	1109.8	12.20	60.98		
2 XX Brig., A. Battery, R. Art., St. Thomas' Mount	November 1869	November 1869, from England	155	961.3	19.35	12.90		
3 XX Brig., C. Battery, R. Art., St. Thomas' Mount	...	February 1873, from Secunderabad	162	1370.4	6.17	6.17		

\* Took home their Invalids.

Detachments of 220 men at Bombay, 100 men at Asserghur, and 175 men at Sattara.

and NAGPORE,—(continued).

CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.

	Total Admissions and Loss of the Year by Death and Invaliding.	CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.																													
		Cholera.	Smallpox.	Dengue.	Enteric Fever.	Intermittent Fever.	Remittent and Continued Fever.	Rheumatism and Rheumatic Affections.	Primary Venereal Affections.	Secondary Venereal Affections.	Erysipelas.	Scurvy.	Anæmia and Debility.	Phthisis Pulmonalis.	Apoplexy and Sub-stroke.	Epilepsy and other Brain Affections.	Neuralgic Affections.	Delirium Tremens.	Ophthalmia.	Heart Disease and Asthenia.	Tonsillitis, Bronchitis, and Asthma.	Pleurisy and Pneumonia.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Functional derangement of the Digestive System.	Diseases of the Urinary System.	Diseases of the Genitive System.	Abscess and Ulcer.	Injuries and Accidents.
4	{ Admissions 955 Deaths 10 Invaliding 22	...	...	...	235	80	43	176	16	7	1	24	6	1	4	7	7	15	4	64	3	15	23	28	3	31	6	3	91	43	29
5	{ Admissions 132 Deaths ... Invaliding ...	...	...	...	45	6	12	35	3	...	...	4	...	...	4	...	...	...	...	10	...	...	26	2	...	28	...	1	16	29	9
6	{ Admissions 13 Deaths ... Invaliding ...	...	...	...	6	1	...	1	...	...	...	1	...	...	...	...	...	...	...	3	...	...	1	...	...	...	...	1	...	...	
7	{ Admissions 196 Deaths ... Invaliding ...	...	...	...	1	49	...	1	38	9	...	8	3	...	2	...	...	5	...	10	4	1	7	5	...	10	...	3	12	19	9
8	{ Admissions 229 Deaths ... Invaliding ...	...	...	...	50	1	10	41	23	3	...	4	5	3	...	1	...	6	1	4	1	...	3	6	1	9	...	...	23	27	7
9	{ Admissions 177 Deaths ... Invaliding ...	...	...	...	31	1	2	58	14	...	...	...	...	...	1	...	...	2	...	1	1	2	6	6	1	5	...	4	13	20	9
10	{ Admissions 135 Deaths ... Invaliding ...	...	...	...	1	46	...	3	16	8	...	...	...	...	...	...	...	...	1	5	1	...	4	6	1	2	2	2	16	13	8
11	{ Admissions 1,622 Deaths ... Invaliding ...	3	1	...	2	322	434	32	138	10	1	24	...	1	1	5	...	10	...	105	2	17	104	21	...	122	3	4	108	100	32
12	{ Admissions 1,044 Deaths ... Invaliding ...	...	...	...	2	190	17	44	199	3	1	40	2	...	4	4	30	1	44	3	52	52	46	...	35	2	12	126	97	38	
13	{ Admissions 121 Deaths ... Invaliding ...	...	...	...	7	5	8	25	7	...	1	...	...	...	1	...	...	...	5	...	3	5	3	...	6	3	...	10	21	11	
14	{ Admissions 1,030 Deaths ... Invaliding ...	...	...	...	127	98	43	142	9	11	39	10	...	4	7	11	8	5	62	1	8	37	28	1	124	3	8	82	97	65	
15	{ Admissions 1,398 Deaths ... Invaliding ...	...	...	...	4	443	10	15	324	46	1	21	3	...	1	9	2	11	12	86	3	19	49	24	...	98	...	6	65	55	92
16	{ Admissions 185 Deaths ... Invaliding ...	...	...	...	8	15	2	54	1	...	1	1	1	...	2	...	3	2	7	...	7	1	9	...	11	1	11	24	14	10	
17	{ Admissions 162 Deaths ... Invaliding ...	...	...	...	5	16	11	37	6	...	3	1	...	...	5	1	...	...	10	2	2	5	11	...	5	1	2	22	15	2	
18	{ Admissions 437 Deaths ... Invaliding ...	...	...	...	22	27	26	29	13	...	10	3	2	6	4	7	4	2	24	11	47	16	40	2	37	1	8	25	58	13	
19	{ Admissions 977 Deaths ... Invaliding ...	1	...	3	28	106	77	110	32	3	44	7	...	...	18	1	17	9	44	5	58	49	57	...	105	1	8	69	87	38	
20	{ Admissions 837 Deaths ... Invaliding ...	...	...	...	1	5	143	35	44	14	5	48	27	1	2	2	1	9	4	67	3	63	26	6	2	60	1	6	70	85	47
21	{ Admissions 248 Deaths ... Invaliding ...	...	...	...	2	24	7	15	4	1	...	1	...	...	...	...	...	4	6	...	19	44	50	1	20	...	3	10	28	9	
22	{ Admissions 46 Deaths ... Invaliding ...	...	...	...	1	5	...	2	...	...	1	...	1	...	1	...	...	3	...	1	2	2	...	6	...	2	1	13	5	...	
23	{ Admissions 200 Deaths ... Invaliding ...	...	...	...	3	19	2	16	4	...	14	1	...	...	2	...	3	...	13	1	24	19	9	...	19	...	1	20	21	9	
24	{ Admissions 123 Deaths ... Invaliding ...	...	...	...	1	5	1	23	2	...	...	...	...	...	1	...	1	...	3	...	7	15	16	...	6	...	3	26	10	3	
	{ Admissions 10,911 Deaths ... Invaliding ...	3	2	...	15	1870	1021	405	1580	235	34	1297	72	8	22	75	39	132	47	592	41	363	501	455	14	752	30	90	803	890	472

SOUTHERN INDIA.

1	{ Admissions 91 Deaths ... Invaliding ...	...	...	...	4	16	...	8	...	...	4	...	...	2	...	...	1	3	1	12	6	2	...	11	...	2	6	9	5	
2	{ Admissions 149 Deaths ... Invaliding ...	...	...	...	2	17	2	24	2	...	3	3	...	1	...	1	1	1	4	...	14	9	8	...	4	...	3	18	20	13
3	{ Admissions 222 Deaths ... Invaliding ...	...	...	...	8	53	2	22	1	...	1	...	1	1	...	1	1	3	...	9	10	10	1	16	...	9	36	24	13	

TABLE

REGIMENTS of							
REGIMENTS & BATTERIES & STATIONS of 1874.	Date of Arrival in India.	Date of Arrival from Station previously occupied.	Average Strength during 1874.	Admission-rate of 1874 per 1,000 of Strength.	Loss per 1,000.		
					By Deaths.	By Invaliding.	
4 { 1-21st Regiment, Madras, with Detachment of 148 men at Trichinopoly	March 1869	December 1872, from Bangalore	897	1143.8	14.49	75.81	
5 V Brig., 7 Battery, R. Art., Madras	...	December 1871, from Bellary	91	1472.5	21.98	153.85	
6 XVIII Brig., G. Battery, R. Art., Trichinopoly (10 Months)	...	February 1874, from Bellary	145	1275.9	13.79	...	
7 { 43rd Regiment, Cannanore, with Detachments of 98 men at Mallisporum and Calicut	November 1872	November 1872, from England	883	1282.0	15.59	90.00	
8 V Brig., 1 Battery, R. Art., Cannanore	January 1867	November 1871, from St. Thomas' Mount	78	1397.4	64.10	76.02	
9 18th Hussars, Bangalore	September 1864	January 1872, from Secunderabad	456	1098.7	13.16	26.32	
10 89th Regiment, Bangalore	November 1870	November 1872, from Cannanore	956	949.6	5.40	58.32	
11 C Brig., C. Battery, R. H. Art., Bangalore	February 1873	February 1873, from England	174	1310.3	5.75	80.40	
12 IX Brig. C. Battery, R. Art., Bangalore	November 1869	February 1873, from Kamptee	165	1254.5	36.36	72.72	
13 XX Brig., D. Battery, R. Art., Bangalore	...	March 1874, from Kamptee	165	915.2	6.06	42.42	
14 48th Regiment, Bellary	March 1872	March 1872, from Malta	918	1165.6	11.98	16.34	
15 XX Brig., B. Battery, R. Art., Bellary	...	February 1874, from Trichinopoly	157	866.2	19.11	12.74	
REGIMENTS OF SOUTHERN INDIA			5,435	1143.0	13.25	55.00	
4.—REGIMENTS of							
1 { 45th Regiment, Rangoon, with Detachment of 107 men at Port Blair.	June 1868	{ January 1874, from Thayetmyo and { Toungoo	869	848.1	12.66	39.13	
2 V Brig., 2 Battery, R. Art., Rangoon	January 1867	December 1871, from Madras	82	719.5	...	24.39	
3 V Brig., 6 Battery, R. Art., Rangoon	January 1867	January 1872, from St. Thomas' Mount	78	923.1	38.46	17.82	
4 67th Regiment, Wing, Toungoo	December 1872	January 1874, from Rangoon	368	1187.5	13.59	...	
5 V Brig., 4 Battery, R. Art., Toungoo	November 1867	November 1871, from Rangoon	82	878.0	12.20	36.59	
6 67th Regiment, Hd. Qrs. Thayetmyo	December 1872	January 1874, from Rangoon	569	1135.3	12.30	42.69	
7 IX Brig., G. Battery, R. Art., Thayetmyo	December 1869	January 1874, from Secunderabad	169	763.3	11.84	17.75	
REGIMENTS OF BURMAH AND PEGU			2,217	970.7	13.08	37.44	
1 ARMY OF BENGAL	...	...	37,190	1424.6	14.41	40.30	
2 ARMY OF MADRAS	...	...	11,556	1123.0	12.81	53.90	
3 ARMY OF BOMBAY	...	...	10,597	1263.9	10.56	45.07	
4 ARMY OF INDIA	...	...	59,253	1337.3	13.42	43.78	

\* Took home its invalids.

† See Head Quarters.

See Note to Table XXVIII.

SOUTHERN INDIA—(continued).

CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.

Total Admissions and Loss of the Year by Deaths and Invaliding.	CAUSES OF ADMISSIONS INTO HOSPITAL, OF DEATHS IN AND OUT OF HOSPITAL, AND OF THE INVALIDING OF 1874.																													
	Cholera.	Smallpox.	Dysentery.	Enteric Fever.	Intermittent Fevers.	Remittent and Continued Fevers.	Rheumatism and Rheumatic Affections.	Primary Venereal Affections.	Secondary Venereal Affections.	Erysipelas.	Scoury.	Anemia and Debility.	Phthisis Pulmonalis.	Apoplexy and Strokes.	Epilepsy and other Brain Affections.	Neuralgic Affections.	Delirium Tremens.	Ophthalmia.	Heart Disease and Anæmism.	Toxæmia, Bronchitis, and Asthma.	Pleurisy and Pneumonia.	Dysentery.	Diarrhœa.	Hepatitis.	Spleen Disease.	Functional derangements of the Digestive System.	Diseases of the Urinary System.	Diseases of the Genitally System.	Abscess and Ulcer.	Injuries and Accidents.
4 { Admissions 1,026 Deaths 13 Invaliding 68	...	...	...	1	23	151	41	138	8	1	62	11	5	5	5	1	11	3	54	1	65	7	62	9	80	...	22	84	72	97
5 { Admissions 134 Deaths 2 Invaliding 14	...	...	...	...	...	5	6	14	2	...	14	5	...	...	3	1	1	...	7	...	5	1	17	...	19	...	5	8	12	9
6 { Admissions 185 Deaths 2 Invaliding ...	...	...	...	1	1	52	5	17	2	...	2	...	3	...	1	...	1	3	8	...	6	7	7	...	12	...	32	18	7	...
7 { Admissions 1,352 Deaths 12 Invaliding 80	...	1	...	1	24	129	44	71	14	5	21	13	1	7	13	1	9	10	72	5	124	80	134	2	91	2	4	103	48	103
8 { Admissions 169 Deaths 5 Invaliding 6	...	...	...	2	...	8	5	10	...	1	2	...	...	...	...	2	...	...	5	...	20	2	22	...	6	...	1	9	6	8
9 { Admissions 501 Deaths 6 Invaliding 12	...	...	...	2	7	49	46	52	5	1	12	1	1	...	10	1	6	3	17	2	26	12	15	1	20	...	6	70	104	32
10 { Admissions 871 Deaths 5 Invaliding 54	...	2	...	1	4	72	39	181	42	...	50	8	...	2	8	3	2	10	50	1	41	11	62	7	66	1	8	74	94	51
11 { Admissions 228 Deaths 1 Invaliding 14	...	...	...	6	6	14	16	24	10	...	5	2	...	...	1	...	5	1	4	3	25	4	28	1	8	...	9	27	22	7
12 { Admissions 297 Deaths 6 Invaliding 12	...	2	...	7	17	11	1	18	4	...	10	3	...	3	1	1	8	1	5	...	17	12	8	1	10	1	...	20	27	19
13 { Admissions 151 Deaths 1 Invaliding 7	...	...	...	1	17	3	1	17	3	...	2	3	...	...	4	2	19	1	1	...	9	3	13	...	8	1	1	16	15	11
14 { Admissions 1,670 Deaths 11 Invaliding 15	...	1	...	16	200	15	337	73	1	1	7	6	...	1	2	...	31	...	32	4	17	17	33	...	37	2	13	133	60	31
15 { Admissions 136 Deaths 3 Invaliding 2	...	...	...	11	11	2	24	3	...	1	4	1	...	...	...	1	2	...	2	2	3	2	10	...	7	...	3	30	15	2
{ Admissions 6,212 Deaths 72 Invaliding 292	...	4	2	72	188	91	216	937	109	9	2,193	6	11	23	48	12	97	34	267	19	393	183	431	22	394	7	86	996	546	608

BURMAH and PEGU.

1 { Admissions 737 Deaths 11 Invaliding 34	...	...	...	26	14	44	68	22	2	...	17	4	2	...	8	4	4	11	41	1	107	32	93	1	74	3	11	44	48	66	
2 { Admissions 39 Deaths ... Invaliding 2	...	...	...	...	3	1	7	4	...	1	2	...	...	...	...	1	...	...	...	9	2	8	...	3	...	2	9	5	2	...	
3 { Admissions 72 Deaths 3 Invaliding 1	...	...	...	2	7	3	5	4	...	...	...	...	1	1	3	...	...	...	8	3	6	1	6	...	1	9	4	8	...	1	
{ Admissions 437 Deaths 5 Invaliding ...	...	...	...	...	18	15	39	18	7	...	3	4	...	...	2	...	1	14	1	136	25	54	...	9	1	3	40	12	35	...	
5 { Admissions 72 Deaths 1 Invaliding 3	...	...	...	5	2	4	11	2	...	1	1	...	...	...	...	1	...	...	11	7	10	...	3	...	...	6	6	2	...	...	
6 { Admissions 646 Deaths 7 Invaliding 40	...	4	3	18	146	15	48	7	2	...	6	...	...	1	...	4	...	2	4	39	1	39	51	62	...	15	...	7	60	53	59
7 { Admissions 129 Deaths 2 Invaliding 3	...	...	...	3	14	3	9	...	...	2	2	...	...	...	4	1	1	...	11	1	5	2	16	...	7	...	16	20	11	...	
{ Admissions 2,152 Deaths 29 Invaliding 83	...	4	4	54	294	85	187	57	11	...	39	13	2	5	13	11	7	17	105	4	315	122	249	2	117	4	24	184	118	173	

{ Admissions 52,982 Deaths 536 Invaliding 1,422	9	37	45	172	13200	7214	1987	6513	860	134	13	845	274	95	118	319	89	835	255	3128	290	953	1892	1661	233	1990	123	525	3110	3385	2722
{ Admissions 12,977 Deaths 148 Invaliding 607	1	5	6	34	710	1365	477	1797	348	30	2	367	117	17	38	104	36	166	80	635	48	955	531	964	29	878	16	160	1182	1080	809
{ Admissions 13,280 Deaths 111 Invaliding 377	3	4	...	33	3396	1111	446	1484	285	37	3	318	71	25	28	79	50	226	45	628	41	341	473	502	89	741	36	80	1132	1058	586
{ Admissions 79,239 Deaths 795 Invaliding 2,496	13	46	51	239	17396	9690	2910	9794	1493	201	18	1539	462	137	184	502	175	1217	389	4391	349	2149	2895	3127	351	3609	175	777	5444	5596	4117

\* See Head Quarters.

# EUROPEAN TROOPS, 1874.

XXXII.

*TABLE showing the NUMBER of DAYS spent in HOSPITAL by the MEN of each REGIMENT.*

BENGAL PRESIDENCY.									
STATION.	Regiment.	Average Strength for the Year.	Aggregate of the Number of Days spent in Hospital.	Average Number of Days per Man.	STATION.	Regiment.	Average Strength for the Year.	Aggregate of the Number of Days spent in Hospital.	Average Number of Days per Man.
FORT WILLIAM	13rd Regiment	876	13,870	15.8	UMBALLA	11th Hussars	456	9,709	21.3
	V Brigade, 3 Battery	82	2,093	24.8		4th Battalion, Rifle Brigade...	864	16,552	19.1
P O M D O M AND BARRACKPORE	62nd Regiment	865	17,367	20.1	A Brigade, A Battery	162	3,504	21.6	
					A Brigade, C Battery	157	4,326	28.8	
BARRACKPORE	XI Brig. A Battery (10 months)	151	5,425	35.9	JULLUNDUR	54th Regiment	932	19,564	21.0
	XI Brig. B Battery (10 months)	125	7,437	48.0		VIII Brigade, A Battery	160	4,249	26.6
HAZARIBAGH	2-32nd Regiment	878	19,983	22.8	FEROZEPOR	2-12th Regiment	869	20,130	23.2
DINAPORE	109th Regiment	1000	22,962	23.0	VIII Brigade, E Battery	153	4,249	27.8	
	XI Brig., C Battery (10 months)	159	5,410	36.1	XIII Brigade, 3 Battery	79	1,669	19.9	
BENARES	1-14th Regiment, Wing	370	8,074	21.8	MOOLTAN	92nd Regiment	843	19,079	22.6
	XI Brig., D Battery (10 months)	100	5,597	35.0		VIII Brigade, C Battery	149	3,322	22.3
FYZABAD	51st Regiment	918	21,991	24.0	SIALKOT	5th Lancers (10 months)	433	4,918	11.1
	XIX Brigade, D Battery	161	2,632	17.4		1-6th Regiment	929	19,783	21.3
LUCKNOW	13th Hussars, (11 months)	445	11,395	25.6	A Brigade, D Battery	148	2,117	14.3	
	49th Regiment	919	21,554	23.5	AMRITSAR	XIII Brigade, 4 Battery	85	2,098	24.7
	65th Regiment	965	20,348	21.8	MIRAN MEER	36th Regiment (Head Qrs.)...	875	13,028	22.7
	A Brigade, B Battery	150	5,000	24.0	F Brigade, A Battery	156	2,800	16.7	
	XIX Brigade, G Battery	169	3,511	20.8	VIII Brigade, D Battery	151	3,248	21.5	
XXIII Brigade, 7 Battery	88	1,618	18.4	XIII Brigade, 2 Battery	85	1,278	15.9		
SITAPUR	1-14th Regiment, (Head Quarters)	521	16,064	30.8	RAWAL PINDI	4th Hussars	461	7,057	15.2
	XIX Brigade, E Battery	147	4,867	33.1	70th Regiment	873	17,713	20.3	
CAWNPORE	73rd Regiment	902	30,790	34.1	F Brigade, F Battery	146	1,776	12.1	
	XIX Brigade, F Battery	137	4,088	26.0	VIII Brigade, H Battery	153	2,774	18.1	
ALLAHABAD	2-19th Regiment	851	22,010	25.9	CAMPBELLPORE	F Brigade, B Battery	156	1,763	11.3
	XI Brig., E Battery (10 months)	154	6,229	40.4	ATOCK	XIII Brigade, 5 Battery	81	1,277	15.8
	XXIII Brigade, 6 Battery	89	2,737	30.8	NOWSHERA	36th Regiment	930	19,162	20.6
BAREILLY	1-5th Regiment	963	14,167	14.7	PESHAWUR	1-17th Regiment	877	21,882	24.9
	XIX Brigade, C Battery	153	2,544	16.6		72nd Regiment	866	19,868	22.9
ROOSEE	55th Regiment, (Head Quarters)	471	6,607	14.0		F Brigade, C Battery	155	3,212	20.8
						VIII Brigade, G Battery	157	2,312	14.7
						XXIII Brigade, 3 Battery	89	1,068	12.0
					CHEERAT	Detachments, (6 months)	767	(6,850)	8.9
MEERUT	16th Hussars	475	14,290	30.1	DARJEELING	XIII Brigade, 7 Battery	86	1,710	19.9
	86th Regiment	874	23,700	27.1	RANIKHET	2-1st Regiment	878	12,178	13.9
	C Brigade, A Battery	128	4,500	28.5	CHAKRATA	1-8th Regiment	927	14,256	15.4
	F Brigade, E Battery	157	2,270	14.5	DAGSHAI	37th Regiment	851	10,300	12.1
	VIII Brigade, B Battery	144	3,121	21.7	SOLOH	36th Regiment (Wing) (9 months).	313	7,066	22.6
	VIII Brigade, F Battery	160	3,467	21.7	SUBATHU	1-11th Regiment	885	12,155	13.7
DELHI	55th Regiment, Wing	474	10,237	21.6	JUTOOH	XIII Brigade, 6 Battery	92	1,598	17.4
	XXIII Brigade, 2 Battery	89	2,909	32.6	MURREE HILLS	2nd Battalion, 60th Regiment	974	13,531	14.0
MUTTRA	16th Hussars	491	11,717	23.8	XIII Brigade, 1 Battery	92	1,825	19.8	
AGRA	59th Regiment	827	17,246	20.9					
	XIX Brigade, A Battery	158	3,808	24.1					
	XXIII Brigade, 5 Battery	82	1,971	24.0					
MORAR	26th Regiment	716	10,913	15.2					
	A Brigade, E Battery	151	2,539	16.9					
	XIX Brigade, B Battery	161	4,065	25.2					
	XXIII Brigade, 1 Battery	91	2,098	23.1					
FORTRESS GWALIOR	XXIII Brigade, 4 Battery	79	1,947	24.6					
	Detachment, 63rd Regiment								
JHANSI	63rd Regiment	933	21,120	22.6					
	Detachment, 63rd Regiment...								
NOWGONG	XI Brig., G Battery (10 months)	151	4,909	32.4					
SATGON	XI Brig., F Battery (10 months)	152	5,037	33.1					
JERSEYPORE AND SATGON	2-25th Regiment	787	12,483	15.9					

MADRAS PRESIDENCY.					BOMBAY PRESIDENCY.				
STATION.	Regiment.	Average Strength for the Year.	Aggregate of the Number of Days spent in Hospital.	Average Number of Days per Man.	STATION.	Regiment.	Average Strength for the Year.	Aggregate of the Number of Days spent in Hospital.	Average Number of Days per Man.
KAMPTER	44th Regiment	826	22,090	26.8	NUSSEERABAD	108th Regiment	841	13,651	16.2
	XX Brigade, E Battery	163	3,511	21.5		XVIII Brigade, E Battery	154	1,829	11.2
	XX Brigade, G Battery	199	3,434	21.5					
SECUNDERABAD	10th Lancers	468	7,450	15.9	NERMUCH	XVIII Brigade, D Battery	139	2,485	17.9
	76th Regiment	865	17,465	20.2					
	107th Regiment	846	11,246	13.3	MHOW	3rd Hussars	495	16,700	33.7
	C Brigade, B Battery	170	3,543	22.6		49th Regiment	810	17,277	21.3
	V Brigade, 5 Battery	88	702	8.5		C Brigade, E Battery	158	4,707	29.7
	IX Brigade, A Battery	166	3,446	20.7		VI Brigade, 2 Battery	81	2,201	27.2
XX Brigade, F Battery	152	2,380	15.7						
MADRAS	1-21st Regiment	897	20,688	23.1	DEESA	83rd Regiment	965	19,843	20.6
	V Brigade, 7 Battery	91	2,774	30.5	AMMEDARAD	XVIII Brigade, C Battery	164	1,789	10.9
ST. THOMAS' MOUNT	VI Brigade, 7 Battery	82	1,610	19.6	KURLECHEE	56th Regiment	927	14,225	15.3
	XX Brigade, A Battery	155	2,828	18.2		XVIII Brigade, B Battery	148	1,152	7.8
	XX Brigade, C Battery	162	3,193	19.7					
TRICHINOPOLY	XVIII Brigade, G Battery	126	4,406	35.0	HYDERABAD	IX Brigade, B Battery	164	2,424	14.8
BANGALORE	18th Hussars	456	7,870	17.3	ADEN	41st Regiment	580	5,621	9.7
	86th Regiment	936	20,659	22.3		VI Brigade, 1 Battery	81	1,241	15.3
	C Brigade, C Battery	174	5,091	29.2		VI Brigade, 6 Battery	80	1,793	22.4
	IX Brigade, C Battery	165	4,435	26.9					
	XX Brigade, D Battery	165	3,723	22.6	BOMBAY	VI Brigade, 3 Battery	86	2,296	26.7
BELLARY	48th Regiment	918	20,809	22.7	VI Brigade, 4 Battery	85	1,832	21.5	
	XX Brigade, B Battery	137	2,312	14.7	VI Brigade, 5 Battery	83	1,733	20.9	
CANNANORE	43rd Regiment	883	19,893	22.5	AHMEDNUGGER	1-2nd Regiment	915	14,173	15.5
	V Brigade, 1 Battery	78	1,891	24.2	IX Brigade, E Battery	161	2,555	15.9	
RANGOON	45th Regiment	869	14,655	16.9	POONA	2-7th Regiment	853	19,456	22.8
	V Brigade, 2 Battery	82	1,217	14.8		68th Regiment	894	17,595	18.8
	V Brigade, 6 Battery	78	1,434	18.4					
TOUNGOO	67th Regiment, (Wing)	368	7,635	20.8	KIRKER	C Brigade, D Battery	165	3,223	19.5
	V Brigade, 4 Battery	82	1,063	13.0		IX Brigade, D Battery	171	3,393	19.3
						IX Brigade, F Battery	152	2,227	14.6
				XVIII Brigade, F Battery	157	1,874	11.9		
THAYETMYO	67th Regiment, (Hd. Qrs.)	569	7,961	14.0	BELGAUM	66th Regiment	913	16,119	17.6
	IX Brigade, G Battery	169	2,227	13.2		XVIII Brigade, A Battery	157	1,555	11.8

Aggregate of Hospital Diets (Days in Hospital) derived from the Weekly Returns of 1874 ... .. Army of Bengal ... 799,597  
 " " Madras ... 240,628  
 " " Bombay ... 293,396

ARMY OF INDIA ... 1,243,621

Aggregate Number of Days spent in Hospital derived from the Regimental Returns contained in this Table ... .. Army of Bengal ... 799,993  
 " " Madras ... 233,963  
 " " Bombay ... 195,179

ARMY OF INDIA ... 1,228,235

It is probable that, in some instances, the time spent in Hospital by men at Convalescent Depôts and elsewhere, has been left out in making up this Statement.

# EUROPEAN TROOPS, 1874.

XXXIII.

*DISTRIBUTION of the EUROPEAN ARMY of the BENGAL PRESIDENCY on 26th June 1874.*

STRENGTH OF THE ARMY OF BENGAL ON 26th JUNE 1874, 37,422.					
	STATION.	STRENGTH.		STATION.	STRENGTH.
<b>ARTILLERY.</b>			<b>INFANTRY.</b>		
A Horse Brigade, Head Quarters	Umballa	5	1st Regiment, 2nd Battalion	Ranikhet	632
A Battery	Umballa	119	3rd " 1st "	Fort William	889
B " "	Lucknow	145	5th " 1st "	Bareilly	704
C " "	Umballa	121	6th " 1st "	Moradabad	211
D " "	Sialkot	138	" " " "	Sialkot	398
E " "	Morar	143	" " " "	Amritsar	295
C Horse Brigade, A Battery	Meerut	136	" " " "	Dalhousie Hills	121
F Horse Brigade, Head Quarters	Peshawur	4	8th " 1st "	Chakrata	905
A Battery	Meean Meer	148	11th " 1st "	Subáthú	868
B " "	Campbellpore	153	12th " 2nd "	Ferozepore	808
C " "	Peshawur	126	14th " 1st "	Sitapur	501
D " "	Meerut	149	" " " "	Benares	351
E " "	Rawalpindi	134	17th " 1st "	Peshawur	548
F " "	Fort William	82	" " " "	Cherat	276
3th Brigade, 3 Battery	Meerut	8	19th " 2nd "	Allahabad	668
8th Brigade, Head Quarters	Jullundur	142	" " " "	Fort Allahabad	150
A Battery	Meerut	130	22nd " 2nd "	Haziribágh	882
B " "	Mooltan	138	23rd " 2nd "	Jubbulpore	534
C " "	Meean Meer	138	" " " "	Saugor	251
D " "	Ferozepore	146	26th " " "	Morar	717
E " "	Meerut	158	36th " " "	Meean Meer	396
F " "	Peshawur	129	" " " "	Fort Lahore	90
G " "	Rawalpindi	123	" " " "	Dagshai	113
H " "	Barrackpore	7	" " " "	Solon	396
11th Brigade, Head Quarters	Barrackpore	150	37th " " "	Dagshai	915
A Battery	Barrackpore	156	39th " " "	Nowshera	413
B " "	Dinapore	148	" " " "	Attock	103
C " "	Benares	183	" " " "	Campbellpore	20
D " "	Allahabad	154	40th " " "	Lucknow	829
E " "	Saugor	156	51st " " "	Fyzabad	836
F " "	Nowgong	151	54th " " "	Jullundur	643
G " "	Meean Meer	7	" " " "	Dhumsfála	120
12th Brigade, Head Quarters	Murree Hills	87	" " " "	Kangra	51
1 Battery	Meean Meer & Fort Lahore	77	55th " " "	Roorkee	352
2 " "	Ferozepore	77	" " " "	Delhi	459
3 " "	Gorindgarh	84	59th " " "	Agra	804
4 " "	Attock	67	2-60th " " "	Murree Hills	894
5 " "	Jutogh	90	" " " "	Rawal Pindi	34
6 " "	Darjeeling	85	62nd " " "	Dum-Dum	626
7 " "	Lucknow	6	" " " "	Barrackpore	298
19th Brigade, Head Quarters	Agra	151	63rd " " "	Jhansi	403
A Battery	Morar	150	" " " "	Nowgong	188
B " "	Bareilly	150	" " " "	Gwalior Fortress	394
C " "	Fyzabad	144	65th " " "	Lucknow	885
D " "	Sitapur	145	70th " " "	Rawal Pindi	592
E " "	Cawnpore	151	72nd " " "	Peshawur	506
F " "	Lucknow	158	73rd " " "	Cawnpore	994
G " "	Morar	81	85th " " "	Meerut	511
23rd Brigade, Head Quarters	Delhi	72	92nd " " "	Fatehgarh	286
1 Battery	Peshawur	48	" " " "	Mooltan	706
2 " "	Fortress Gwalior	109th	" " " "	Dera Ismael Khan	98
3 " "	Agra	75	" " " "	Dinapore	868
4 " "	Allahabad	78	4th Battalion, Rifle Brigade	Chunar	67
5 " "	Lucknow	78	Detachments from Peshawur	Umballa	739
6 " "	Roorkee	32	General Detachments	Cherat	477
7 " "			CONVALESCENT DEPOTS	Murree Hills	299
Sappers and Miners, &c.			.....	Darjeeling	211
CAVALRY.			.....	Naini Tal	327
4th Hussars	Rawalpindi	345	.....	Landour	210
5th Lancers	Sialkot	410	.....	Kassuli	568
10th Hussars	Muttra	456	.....	Dalhousie	352
11th " "	Umballa	399	.....	Murree	486
12th " "	Lucknow	422	.....	Colaba	11
14th " "	Meerut	419	.....		
			BOMBAY DEPOT		
			MILITARY PRISONS		

DISTRIBUTION of the EUROPEAN ARMY of MADRAS and BOMBAY on 26th June 1874.

STRENGTH OF THE ARMY OF MADRAS ON 26th JUNE 1874, 11,431.			STRENGTH OF THE ARMY OF BOMBAY ON 26th JUNE 1874, 10,582.		
	STATION.	STRENGTH.		STATION.	STRENGTH.
<b>ARTILLERY.</b>			<b>ARTILLERY.</b>		
C Horse Brigade, Head Quarters	Bangalore	11	C Horse Brigade, D Battery	Kirkee	156
B Battery	Secunderabad	162	E "	Mhow	137
C "	Bangalore	165	6th Brigade, 1 Battery	Aden	81
5th Brigade, Head Quarters	St. Thomas' Mount	15	2 "	Mhow	75
1 Battery	Cannanore	78	3 " and Head Quarters	Bombay	82
2 "	Rangoon	80	4 "	Bombay	84
4 "	Toongoo	68	5 "	Bombay	52
5 "	Secunderabad	84	6 "	Aden	76
6 "	Rangoon	74	9th Brigade, B Battery	Hyderabad	162
7 "	Madras	70	D " and Hd. Quarters	Kirkee	169
6th Brigade, 7 Battery	St. Thomas' Mount	73	E "	Ahmednuggur	160
9th Brigade, A "	Secunderabad	154	F "	Kirkee	147
C "	Bangalore	148	18th Brigade, A Battery	Belgaum	158
G "	Thayetmyo	159	B "	Kurrachee	151
18th Brigade, G Battery	Trichinopoly	141	C " and Hd. Quarters	Ahmedabad	167
20th Brigade, Head Quarters	Secunderabad	10	D "	Neemuch	123
A Battery	St. Thomas' Mount	134	E "	Nusseerabad	127
B "	Bellary	148	F "	Kirkee	156
C "	St. Thomas' Mount	135	Detachment of Artillery	Baroda	31
D "	Bangalore	150	Sappers and Miners	Kirkee	37
E "	Kamptee	148			
F "	Secunderabad	140			
G "	Kamptee	131			
<b>CAVALRY.</b>			<b>CAVALRY.</b>		
16th Lancers	Secunderabad	406	3rd Hussars	Mhow	471
18th Hussars	Bangalore	431			
<b>INFANTRY.</b>			<b>INFANTRY.</b>		
21st Regiment, 1st Battalion	Madras	584	2nd Regiment, 1st Battalion	Ahmednuggur	384
" " "	Trichinopoly	152	" " "	Sattara	174
43rd " "	Cannanore	554	" " "	Asseerghur	100
" " "	Mallipoorum	109	" " "	Bombay	226
" " "	Calicut	97	7th " 2nd Battalion	Poona	805
44th " "	Kamptee	685	41st " "	Aden	580
" " "	Seetabaldee	47	49th " "	Mhow	724
" " "	Pachmarhi	149	56th " "	Indore	94
45th " "	Rangoon	748	56th " "	Kurrachee	628
" " "	Port Blair	108	60th " "	Hyderabad	268
48th " "	Bellary	792	60th " "	Belgaum	905
67th " "	Thayetmyo	663	68th " "	Poona	902
" " "	Toongoo	384	83rd " "	Deesa	740
76th " "	Secunderabad	747	108th " "	Ahmedabad	116
80th " "	Bangalore	870	" " "	Nusseerabad	471
107th " "	Secunderabad	747	" " "	Neemuch	279
<b>DEPOTS.</b>			<b>DEPOTS.</b>		
	Ramandroog	46		Poorundhar	90
	Wellington	578		Mount Abo	88
				Tarangbur, Ajmere	73
				Ghizree	18
	Poonamallee	175			
	Madras	10		Poona	12
				Bombay	20
				Deolalce	83



THE NATIONAL BUREAU OF STANDARDS

No.	Description	Quantity	Remarks
1	...	...	...
2	...	...	...
3	...	...	...
4	...	...	...
5	...	...	...
6	...	...	...
7	...	...	...
8	...	...	...
9	...	...	...
10	...	...	...
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	...	...	...

WOMEN AND CHILDREN OF EUROPEAN  
REGIMENTS, 1874.



# WOMEN AND CHILDREN OF EUROPEAN REGIMENTS, 1874.

## II.

*TABLE showing the SICKNESS and MORTALITY among the CHILDREN of the EUROPEAN REGIMENTS composing the ARMY of INDIA during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.*

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths in each Month.	Death-rate of each Month per 1,000 of Strength.	CAUSES OF DEATHS.																				
						Cholera.	Smallpox.	Measles.	Whooping Cough.	Scarlet Fever.	Enteric Fever.	Intermittent Fevers.	Remittent and Continued Fevers.	Heat Apoplexy.	Dentition.	Convulsions.	Meningitis and Hydrocephalus.	Tuberc Mesenterics.	Phthisis Pulmonalis.	Dysentery.	Diarrhoea.	Anæmia and Atrophy.	Bronchitis and Pneumonia.	Croup and Diphtheria.	All other Causes.	
						..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
January	11,909	262	220	36	3.02	..	1	1	..	..	1	1	..	4	3	..	..	1	1	1	1	6	10	3	..	..
February	12,290	262	214	27	2.21	..	..	..	..	..	..	..	..	2	9	..	..	..	..	1	1	4	4	4	1	..
March	12,963	229	210	50	4.53	..	..	..	..	..	..	..	..	10	12	..	..	..	..	3	3	6	6	8	1	..
April	12,334	366	297	64	5.19	..	1	1	..	..	..	..	..	8	9	..	..	..	..	1	1	13	6	8	1	..
May	12,384	404	326	67	5.41	..	..	11	..	..	..	..	..	17	18	..	..	..	..	11	9	9	9	10	1	..
June	12,432	451	363	52	4.18	..	..	..	..	..	..	..	..	8	6	..	..	..	..	3	3	3	3	3	3	..
July	12,461	561	450	94	7.54	..	..	..	..	..	..	..	..	17	18	..	..	..	..	11	11	10	10	10	1	..
August	12,512	600	479	92	7.35	..	..	..	..	..	..	..	..	13	12	..	..	..	..	6	6	6	6	6	4	..
September	12,530	496	388	59	4.71	..	..	..	..	..	..	..	..	10	9	..	..	..	..	10	11	11	11	11	4	..
October	12,589	439	349	33	2.62	..	..	..	..	..	..	..	..	4	6	..	..	..	..	3	3	3	3	3	4	..
November	12,650	366	290	48	3.79	..	..	3	..	..	..	..	..	5	9	..	..	..	..	3	3	3	3	3	3	..
December	12,316	313	254	58	4.71	..	..	6	..	..	..	..	..	9	7	..	..	..	..	9	7	7	6	3	3	..
						2	1	31	4	..	5	10	34	5	93	111	21	26	3	35	116	78	47	25	39	..
						Died per 1,000 of Strength.																				
For the year	12,380	397	320	686*	55.35	16	08	2.50	32	..	40	3.55	40	7.50	8.06	1.70	2.10	24	3.82	9.36	6.30	3.79	2.02	3.15	..	..

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.					
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.								
	..	..	..	..	..	..	..	..	..	..	..	..								
Cholera	..	2	..	..	..	..	1	..	..	..	..	..	3	..	2	66.67				
Smallpox	10	3	9	4	2	..	..	..	..	..	..	..	28	..	2.3	3.57				
Dengue	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Measles	39	70	84	128	92	43	19	..	2	6	29	147	659	..	53.2	4.70				
Whooping Cough	10	..	11	11	13	17	18	..	6	9	16	5	18	134	..	1.98				
Scarlet Fever	..	..	..	..	1	1	..	..	1	..	..	..	2	..	..	..				
Enteric Fever	..	..	..	1	1	..	..	3	4	..	1	1	11	..	9	45.45				
Intermittent Fevers	51	30	34	55	97	73	108	115	196	215	177	96	1,247	100.6	80	..				
Remittent and Continued Fevers	25	1	61	99	124	120	97	114	153	160	130	85	1,175	94.8	2.89	..				
Heat Apoplexy	..	8	10	..	1	..	3	1	2	2	1	..	10	..	8	59.00				
Dysentery	7	26	51	86	95	93	185	141	88	40	41	51	214	17.3	16.35	..				
Diarrhoea	1	1	2	2	1	3	1	1	1	1	1	1	16	..	1.6	12.65				
Spleen Disease	..	2	2	2	1	3	1	..	..	..	2	3	21	..	1.7	..				
Respiratory Diseases	62	46	76	42	45	38	57	57	74	62	50	57	696	53.7	10.81	..				
Eye Diseases	22	15	32	128	71	162	602	406	186	67	46	21	1,758	141.9	..	..				
Anæmia and Debility	83	82	104	84	112	122	196	74	103	81	119	101	1,201	96.9	6.60	..				
Tubercular Diseases	2	4	7	9	7	6	12	7	9	7	5	3	78	6.3	35.90	..				
Meningitis and Hydrocephalus	..	1	3	6	5	2	6	3	1	3	3	1	34	2.7	61.77	..				
Convulsions	6	9	17	18	14	9	22	14	11	12	14	9	155	12.5	71.61	..				
Dentition	30	20	25	51	62	50	70	71	52	32	38	42	641	43.8	17.13	..				
Abscess and Ulcer	10	9	16	10	19	22	20	22	26	16	14	11	195	15.7	..	..				
Injuries	24	16	15	14	18	18	19	10	20	21	11	15	201	16.2	4.00	..				
All other Causes	34	44	66	44	52	65	50	48	44	48	34	39	678	46.6	..	..				
	443	405	625	814	856	869	1,450	1,139	1,012	791	729	711	9,983	..	..	..				
						Admitted per 1,000 of the Average Strength in each Month.														
	37.2	33.1	50.6	66.0	69.1	69.9	117.1	91.0	80.8	62.8	57.6	57.7	79.0	..	..	..				

\* Excluding 30 deaths, which appear in the Regimental Returns, of stillborn children and premature children who survived their birth for a short time.















# WOMEN AND CHILDREN OF EUROPEAN REGIMENTS, 1874.

## IX.

TABLE showing the DISTRIBUTION by STATIONS of the DEATHS of the WOMEN of EUROPEAN REGIMENTS.

STATIONS.	Average Strength, for the period of observation.	CAUSES OF DEATHS.													Total Deaths of the Year.	DIED PER 1,000 OF STRENGTH.				
		Cholera.	Smallpox.	Enteric Fever.	Intermittent Fevers, Remittent and Continued Fevers.	Heat Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Phthisis Pulmonalis.	Respiratory Diseases.	Heart Diseases.	Atrophy and Anæmia.	Childbirth and Abortion.		All other Causes.	A. Cholera.	B. All other Causes.	C. All Causes.	
Deolalee Depôt, Bengal Troops Women on the march	...	...	...	...	...	1	...	...	1	...	...	1	...	...	3	...	...	...		
Fort William	94	1	...	...	...	...	...	...	...	...	...	...	...	...	1	10.64	...	10.64		
Dum-Dum	64	...	...	...	1	1	1	...	...	...	...	...	...	...	3	...	...	46.88		
Barrackpore	56	...	...	...	2	1	...	1	...	...	...	...	...	...	4	...	...	71.43		
	214	1	...	...	3	1	1	1	1	...	...	...	...	...	8	4.67	32.71	37.38		
Hazáribágh	67	...	...	1	...	...	...	...	...	...	...	...	1	...	2	...	...	29.85		
Dinapore	110	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	18.18		
Benares	47	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	21.28		
Chunar	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Fyzabad	124	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Lucknow	284	...	...	1	...	...	1	1	1	1	...	...	2	1	8	...	...	28.17		
Sitapur	50	...	...	...	...	...	...	...	1	...	...	...	1	...	2	...	...	40.00		
Fatehgarh	24	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	41.67		
Cawnpore	54	...	...	1	1	...	...	...	...	...	...	...	...	...	2	...	...	37.04		
Allahabad	118	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	16.95		
	880	...	...	2	1	1	1	1	1	2	1	1	1	6	2	20	...	22.73		
Sháhjáshápur (3 months)	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Bareilly	77	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Moradabad	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Borokce	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Meerut	202	...	...	...	1	...	...	1	2	...	...	...	...	...	4	...	...	19.80		
Delhi	55	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	18.18		
Muttra	73	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	13.70		
	469	...	...	...	2	...	...	1	2	1	...	...	...	...	6	...	...	12.79		
Agra	93	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	...	21.51		
Morar	100	...	...	...	1	...	1	...	1	...	...	...	1	...	4	...	...	40.00		
Gwalior Citadel	35	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	28.57		
Jhánsi	42	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	23.81		
Nowgong	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Saugor	23	...	...	1	...	...	...	...	...	...	...	...	...	...	2	...	...	86.86		
Jubbulpore	58	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
	396	...	...	1	2	...	1	...	2	...	...	...	1	1	2	10	...	25.25		
Umballa	141	...	...	...	1	...	...	...	...	...	...	...	1	...	2	...	...	14.18		
Jullundur	98	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	10.20		
Ferozepore	107	...	...	...	1	...	...	...	...	...	...	...	1	1	3	...	...	28.04		
Mooltan	90	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Sialkot	134	...	...	...	1	...	...	...	1	...	...	...	...	...	3	...	...	22.39		
Amritsar	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Fort Lahore	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Meeran Meer	85	...	...	...	2	...	...	...	...	...	...	...	...	...	3	...	...	35.29		
Rawalpindi	224	...	...	...	...	...	...	...	1	...	...	...	...	...	2	...	...	8.93		
Campbellpore	34	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	29.41		
Attock	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Nowshera	58	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Pesháwar	159	...	...	...	...	...	...	...	1	1	...	...	...	...	2	...	...	10.05		
Cherat (6 months)	70	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	14.29		
	1,233	...	...	...	5	...	1	...	2	5	1	...	2	...	2	18	...	14.00		
Darjeeling	17	...	...	...	1	...	1	...	...	...	...	...	...	...	2	...	...	117.65		
Naini Tal	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Landsoor	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Ranikhet	54	...	...	...	...	...	...	1	1	1	1	...	1	...	3	...	...	35.71		
Chakráta	53	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	37.73		
Kasauli	49	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	33.90		
Dagshai	91	...	...	...	...	...	1	...	1	...	...	...	1	2	1	...	...	43.96		
Subáthn	83	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Jutogh	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Dharmasfa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Dalhousie	14	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	71.43		
Murree Hills (10 months)	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Murree	78	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
	558	...	...	...	1	...	3	1	...	2	1	1	3	2	14	...	...	29.09		
<b>BENGAL PRESIDENCY</b>	<b>3,866</b>	<b>1</b>	...	<b>3</b>	...	<b>14</b>	<b>2</b>	<b>8</b>	<b>4</b>	<b>8</b>	<b>11</b>	<b>4</b>	<b>3</b>	<b>8</b>	<b>10</b>	<b>4</b>	<b>80</b>	<b>26</b>	<b>10.43</b>	<b>20.09</b>

STATIONS.	Average Strength, for the period of observation.	CAUSES OF DEATHS.													Total Deaths of the Year.	DIED PER 1,000 OF STRENGTH.			
		Cholera.	Smallpox.	Enteric Fever.	Intermittent Fevers, Remittent and Continued Fevers.	Heat Apoplexy.	Dysentery.	Diarrhœa.	Hepatitis.	Phthisis Pulmonalis.	Respiratory Diseases.	Heart Diseases.	Atrophy and Anæmia.	Childbirth and Abortion.		All other Causes.	A. Cholera.	B. All other Causes.	C. All Causes.
Women on the march, Bombay Presidency	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...		
Deolalee Depôt, Bombay Troops	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...			
Poona Depôt	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Colaba Depôt	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...		
Women on the march, Madras Presidency	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Poonamallee and Presidency Depôts	...	...	...	...	...	...	...	...	1	2	...	...	...	...	3	...	...		
Deolalee Depôt, Madras Troops	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...		
Poona and Bombay Depôts, Madras Troops	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Nusserabad	89	...	...	...	...	...	...	...	...	...	...	...	1	1	...	11.24			
Neemuch	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Indore	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Mhow	178	...	...	...	...	1	...	...	...	...	...	...	...	1	...	5.62			
Deesa	55	...	...	...	...	1	...	...	...	...	...	...	...	1	...	18.18			
Ahmedabad and Baroda	29	...	...	...	...	...	...	...	...	...	1	1	2	...	68.97				
Kurrachee and Ghizree	109	...	...	...	...	...	...	...	...	...	1	...	1	...	9.17				
Hyderabad	41	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Aden	66	...	...	...	...	...	...	...	...	...	1	...	1	...	15.15				
	597	...	...	...	...	2	...	...	...	...	...	3	2	7	...	11.72			
Bombay	49	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Asseerghur	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Ahmednuggur	50	...	...	...	...	...	...	...	...	...	1	...	2	...	28.57				
Poona and Kirkee	303	...	...	...	2	...	...	1	...	...	1	1	5	...	16.50				
Sattara	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Belgaum	113	...	...	...	...	1	...	...	...	...	...	...	...	1	...	8.85			
Secunderabad	286	...	...	...	...	2	...	2	...	...	1	1	1	7	...	24.48			
Kamptee	146	1	...	...	1	...	...	1	...	...	...	2	...	5	...	24.25			
	965	1	...	...	3	3	...	2	3	...	1	5	2	20	...	29.10			
Bellary	123	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Bangalore	291	...	1	...	...	1	...	2	1	2	...	...	...	7	...	24.05			
Cannanore	84	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Mallipoorum	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Calicut	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Trichinopoly	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
St. Thomas' Mount	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Madras	95	...	...	...	...	...	...	...	...	...	...	2	...	2	...	21.05			
	718	...	1	...	...	1	...	2	1	2	...	...	...	9	...	12.53			
Rangoon	127	...	...	...	...	...	1	...	...	...	...	1	...	2	...	15.75			
Toungoo	39	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Thayetmyo	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Port Blair	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
	242	...	...	...	...	...	1	...	...	...	...	...	...	2	...	8.27			
Taraghur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Mount Aboo	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Poorundhur	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Wellington	65	1	...	...	...	...	...	...	1	...	...	1	1	4	...	47.06			
Ramandroog	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
	129	1	...	...	...	...	...	1	...	...	...	1	1	4	...	33.33			
ARMY OF BENGAL	3,506	1	3	14	2	8	4	8	11	4	3	8	10	4	80	26	20.43	29.69	
ARMY OF MADRAS	1,530	2	1	1	3	1	4	5	4	...	1	6	4	31	...	...	29.26		
ARMY OF BOMBAY	1,231	...	...	2	3	...	...	3	...	...	2	5	3	18	...	...	14.62		
ARMY OF INDIA	6,627	1	2	4	17	2	14	5	12	19	8	3	11	20	11	129	15	19.32	19.47

# WOMEN AND CHILDREN OF EUROPEAN REGIMENTS, 1874.

## X.

TABLE showing the DISTRIBUTION by STATIONS of the DEATHS of the CHILDREN of EUROPEAN REGIMENTS.

STATIONS.	Average Strength for the period of observation.	CAUSES OF DEATHS.														Total Deaths of the Year.	DIED PER 1,000 OF STRENGTH.								
		Cholera.	Smallpox.	Measles.	Whooping Cough.	Scarlet Fever.	Enteric Fever.	Intermittent Fevers.	Remittent and Continued Fevers.	Heat Apoplexy.	Dentition.	Convulsions.	Meningitis and Hydrocephalus.	Tubercle Mesenterica.	Phthisis Pulmonalis.		Dysentery.	Diarrhea.	Anæmia and Atrophy.	Bronchitis and Pneumonia.	Croup and Diphtheria.	All other Causes.	A. Cholera.	B. All other Causes.	C. All Causes.
Deolalee Depôt, Bengal Troops...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	3	1	...	...	...	6	...	...	...
Children on the march	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	5	...	...	...
Fort William	179	2	...	3	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	9	11.17	39.11	50.28	
Dum-Dum	138	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	12	...	...	80.96	
Barrackpore	91	...	...	...	...	...	...	...	...	1	...	...	...	...	3	4	1	3	...	...	12	...	...	131.87	
	408	2	...	3	...	...	2	...	4	3	...	...	...	3	5	4	4	2	1	...	33	4.90	75.98	80.88	
Hazribagh	85	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	3	...	...	35.29	
Dinapore	177	...	6	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	3	...	15	...	...	84.75	
Benares	66	...	...	...	...	...	...	...	...	...	2	...	...	...	...	6	...	...	...	...	10	...	...	151.51	
Chunar	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Fyzabad	160	...	...	...	...	...	...	1	4	1	...	...	...	...	1	...	...	...	...	...	11	...	...	68.75	
Lucknow	454	...	1	...	...	...	6	...	2	15	...	1	...	1	13	1	4	...	...	...	43	...	...	94.71	
Sitapur	105	...	...	...	...	...	...	1	...	2	15	...	...	...	1	...	...	...	...	...	8	...	...	76.19	
Fatehgarh	41	...	...	...	...	1	...	...	...	...	3	...	...	...	...	...	...	1	...	...	2	...	...	48.78	
Cawnpore	96	...	...	...	...	...	...	...	1	3	...	...	...	...	...	4	...	...	...	...	10	...	...	104.17	
Allahabad	208	...	...	...	...	...	...	...	...	6	...	4	...	...	...	1	...	...	...	...	12	...	...	57.69	
	1,400	...	7	...	...	1	8	1	11	20	...	6	...	2	28	8	11	2	3	...	114	...	...	81.45	
Shshjahanpur (3 months)	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Barilly	143	...	...	...	...	...	...	...	1	1	1	...	...	1	...	...	...	...	...	...	6	...	...	41.96	
Moradabad	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	41.67	
Koorkee	70	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	14.29	
Meerut	389	...	...	...	...	...	4	1	...	3	...	...	...	3	5	4	1	...	4	...	23	...	...	59.13	
Delhi	112	...	2	...	...	...	...	...	...	3	...	...	...	...	6	...	...	...	...	...	14	...	...	125.00	
Muttra	109	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	...	...	3	...	...	30.00	
	845	...	2	...	...	2	1	...	2	8	1	...	1	3	12	4	4	4	4	...	48	...	...	56.80	
Agra	189	...	...	...	...	...	1	...	...	2	...	...	...	...	1	...	...	...	...	...	4	...	...	21.16	
Morar	191	...	...	...	...	...	...	3	...	1	...	...	...	...	...	9	...	...	...	...	7	...	...	39.46	
Gwalior Citadel	60	...	...	...	...	...	1	...	1	1	...	...	...	1	1	1	...	...	1	...	6	...	...	100.00	
Jhansi	96	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	2	...	...	20.83	
Nowgong	47	...	...	...	...	...	1	...	...	1	...	...	...	...	1	3	...	...	...	...	6	...	...	127.66	
Saugor	37	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	3	...	...	81.98	
Jubbulpore	109	...	1	...	...	...	...	...	1	...	...	...	...	...	2	...	1	...	3	...	8	...	...	73.99	
	732	...	1	...	1	...	4	...	7	3	2	...	...	...	5	7	2	...	4	...	35	...	...	49.18	
Unbetta	262	...	...	...	...	...	...	3	1	...	1	...	1	...	1	...	...	...	2	...	9	...	...	34.35	
Jullundur	166	...	2	...	...	...	...	...	...	...	...	...	...	...	3	...	1	...	...	...	11	...	...	66.26	
Ferozapore	175	...	1	...	...	...	...	...	...	5	1	...	...	3	1	...	...	...	1	...	12	...	...	68.57	
Mooltan	209	...	...	...	...	...	1	...	2	1	...	...	...	3	3	1	...	...	...	...	11	...	...	57.63	
Sialkot	262	...	...	...	...	1	3	...	1	3	1	...	...	2	1	...	2	1	3	...	18	...	...	68.70	
Amritsar	16	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	2	...	...	125.00	
Fort Lahore	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Meeran Meer	142	...	...	...	...	...	1	...	1	...	...	...	...	1	3	1	...	...	...	...	7	...	...	49.30	
Rawalpindi	409	...	9	...	...	3	...	5	5	...	1	...	2	2	1	1	3	1	...	...	33	...	...	80.08	
Campbellpore	59	...	...	...	...	...	...	...	...	...	3	...	...	1	...	...	...	...	...	...	6	...	...	101.70	
Attock	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	153.84	
Nowshera	121	...	...	...	...	...	2	...	4	...	...	...	...	...	1	...	...	...	...	...	9	...	...	74.38	
Peshawar	315	...	...	...	...	4	1	2	2	7	...	1	...	2	2	1	1	3	...	...	26	...	...	82.54	
Cherat (6 months)	154	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	6	...	...	38.96	
	2,228	...	10	2	...	1	4	11	2	20	25	6	6	1	8	18	17	8	7	8	162	...	...	68.22	
Darjeeling	37	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Naini Tal	50	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	2	...	...	40.00	
Landour	48	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	70.83	
Ranikhet	161	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	3	...	...	18.63	
Chakrata	95	...	...	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...	3	...	...	31.58	
Kassali	136	...	...	...	...	...	...	...	...	2	...	...	...	...	1	...	...	...	...	...	5	...	...	36.76	
Dagshai	156	...	...	...	...	...	...	...	1	...	...	...	...	...	3	...	...	...	...	...	4	...	...	25.64	
Sul4thu	168	...	...	...	...	...	...	...	1	...	...	...	...	...	2	...	1	...	1	...	5	...	...	29.76	
Jutogh	9	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	50.00	
Kangra	28	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	71.43	
Dalhousie	63	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	15.81	
Murree Hills (10 months)	197	...	...	...	...	...	...	2	1	...	...	...	...	1	...	...	...	...	...	...	7	...	...	35.53	
Murree Depôt	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	1,157	...	...	...	...	1	...	5	4	2	2	...	1	13	...	2	...	4	...	...	34	...	...	29.39	
BENGAL PRESIDENCY	6,933	2	23	5	...	2	9	28	3	49	67	11	15	2	17	84	44	32	15	24	428	2.9	61.27	61.56	

STATIONS.	Average Strength for the period of observation.	CAUSES OF DEATHS.														Total Deaths of the Year.	DEATHS PER 1,000 OF STRENGTH.									
		Cholera.	Smallpox.	Measles.	Whooping Cough.	Scarlet Fever.	Enteric Fever.	Intermittent Fevers.	Remittent and Continued Fevers.	Heat Apoplexy.	Dentition.	Convulsions.	Meningitis and Hydrocephalus.	Tuberc Mesenterica.	Phthisis Pulmonalis.		Dysentery.	Diarrhoea.	Anaemia and Atrophy.	Bronchitis and Pneumonia.	Croup and Diphtheria.	All other Causes.	A. Cholera.	B. All other Causes.	C. All Causes.	
		Children on the march, Bombay Presidency Deolalee Depôt, Bombay Troops Poona Depôt Colaba Depôt	...	...	...	...	...	...	...	1	...	...	...	1	...		...	...	...	...	...	...	1	1	1	1
Children on the march, Madras Presidency Poonamallee and Presidency Depôts Deolalee Depôt, Madras Troops Poona and Bombay Depôts	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2	1	...	...	...	1	5	1	...	...	...	...
Nusserabad Nasruch Indore Mhow Deesa Ahmedabad and Baroda Kurrachee and Ghizree Hyderabad Aden	190 57 8 321 121 81 180 82 117	...	...	...	...	...	...	...	...	1 1 3 6 1 1 2	1 1 6 3 3 3 3	...	...	...	...	...	3 1 1 1 1 1 1	1 1 1 1 1 1 1	...	...	...	9 5 15 10 1 13 5 6	...	...	47.37 87.72 ...	
	1,158	...	...	...	...	...	4	1	16	14	1	5	1	3	7	8	2	1	1	64	...	...	55.27	...	...	...
Bombay Asseerghur Ahmednuggur Poona and Kirkee Sattara Belgaum	94 23 150 565 42 206	...	...	...	...	...	...	...	...	1 1 2 3 1 3	...	...	...	...	1 3 1 1 2	...	...	...	...	...	3 4 29 1 10	...	...	31.91 130.43 26.67 51.33 23.81 48.54		
Secunderabad Kamptee	588 254	...	...	1	1	...	...	...	...	3 5	5 1	1	...	...	3 3	3 6	6 8	1	1	22 21	...	...	37.41 82.68			
	1,022	...	1	3	1	...	3	1	9	18	4	2	...	8	13	15	7	4	4	93	...	...	48.29	...	...	...
Bellary Bangalore Cannanore Mallipoorum Calicut Trichinopoly St. Thomas' Mount Madras	264 616 137 4 8 64 149 192	...	...	...	...	...	1	...	...	2 6 2 1 1 2 2	1 1 1 1 1 1 1	...	...	...	3 1 1 1 1 1 1	2 2 1 1 1 1 1	...	...	1 1 1 1 1 1 1	13 14 7 ...	...	...	49.24 24.73 51.09 ...			
	1,454	...	...	...	...	...	3	...	13	4	4	3	...	2	7	6	3	3	3	51	...	...	35.57	...	...	...
Rangoon Toungoo Thayetmyo Port Blair	248 71 133 ...	...	...	4	...	...	...	...	...	3 1 2	3 2	...	...	...	3 1 1	1 1 1	2 ...	...	1 1 1	18 3 4	...	...	72.58 42.25 30.07			
	452	...	...	4	...	...	...	...	5	5	...	...	...	3	3	1	2	...	2	25	...	...	55.31	...	...	...
Tarapur Mount Aboo Poonrindur	43 22 ...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	2	...	...	46.51	...	...	...
Wellington Ramanthroog	192 21 ...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	1	1	...	2	7	1	...	...	36.46 47.62		
	279	...	...	1	...	1	...	1	1	...	...	...	...	...	1	1	1	1	2	10	...	...	35.84	...	...	...
ARMY OF BENGAL	6,953	2	...	23	3	...	2	9	26	3	49	67	11	15	2	17	84	44	32	15	24	428	29	61.27	61.96	
ARMY OF MADRAS	3,048	...	...	6	1	...	...	...	3	...	23	22	5	5	...	11	19	16	9	5	9	134	...	...	43.96	
ARMY OF BOMBAY	2,392	...	1	2	...	...	3	1	5	2	21	22	5	6	1	7	13	18	6	5	6	124	...	...	51.84	
ARMY OF INDIA	12,393	2	1	31	4	...	5	10	34	5	93	111	21	2	...	35	116	78	47	25	39	696	16	53.19	55.35	

# WOMEN AND CHILDREN OF EUROPEAN REGIMENTS, 1874.

## XIII.

The Cholera Tables XI and XII have not been printed. The Note to Table I. gives the details of the four Cases and three Deaths which occurred in 1874 among the Women and Children of the Army of India.

### DETAIL of the CAUSES of the ADMISSIONS and DEATHS of the WOMEN of EUROPEAN REGIMENTS.

		BENGAL.		MADRAS.		BOMBAY.		ARMY OF INDIA.			
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	RATIO PER 1,000 OF STRENGTH.	
								Admitted.	Died.	Admitted.	Died.
Women of the Army of Bengal—Strength ...		3,866		Admission-rate per 1,000 ...		1618.6		Death-rate per 1,000 ...		20.60	
" " Madras " ...		1,430		" " " ...		697.4		" " " ...		20.26	
" " Bombay " ...		1,231		" " " ...		922.8		" " " ...		14.62	
" " India " ...		6,627		" " " ...		926.7		" " " ...		19.47	
Dengue	...	2	...	1	...	...	...	3	...	5	...
Cholera	...	1	1	...	...	...	...	1	1	1	15
Smallpox	...	2	...	3	2	...	...	5	2	8	30
Chickenpox	...	1	...	1	...	...	...	2	...	...	...
Measles	...	3	...	...	...	...	...	3	...	...	...
Mumps	...	2	...	1	...	...	...	3	...	...	...
Erysipelas	...	12	...	...	...	...	...	12	...	...	...
Pyæmia	...	...	...	...	...	1	1	...	1	...	...
Enteric Fever	...	5	3	1	1	...	...	6	4	9	60
Intermittent Fevers	...	841	...	41	...	271	...	1,153	...	174.0	...
Remittent and Continued Fevers	...	632	14	120	1	80	2	832	17	125.5	257
Rheumatism	...	71	...	27	...	28	...	126	...	19.0	...
Secondary Syphilis	...	1	...	...	...	3	...	4	...	...	...
Scrofula	...	8	...	...	...	6	...	14	...	...	...
Phthisis Pulmonalis	...	36	11	10	5	11	3	57	19	8.6	267
Hæmoptysis	...	4	...	...	...	...	...	4	...	...	...
Hipjoint Disease	...	...	...	1	...	...	...	...	1	...	...
Anæmia	...	123	...	24	...	28	...	175	...	...	...
General Dropsy	...	1	...	1	...	...	...	2	...	...	...
Scurvy	...	1	...	1	...	...	...	2	...	...	...
Heat Apoplexy	...	2	2	...	...	...	...	2	2	3	30
Encephalitis	...	1	...	...	...	...	...	1	...	...	...
Paralysis	...	1	...	1	...	1	...	3	...	...	...
Tumour of Brain	...	...	...	...	...	...	1	...	1	...	...
Epilepsy	...	11	...	2	...	1	...	14	...	...	...
Chorea	...	1	...	...	...	...	...	1	...	...	...
Hysteria	...	18	...	5	...	6	...	29	...	...	...
Tetanus	...	1	...	...	...	...	...	1	...	...	...
Delirium Tremens	...	1	...	...	...	2	...	3	...	...	...
Mania	...	4	...	2	...	...	...	6	...	...	...
Melancholia	...	3	...	1	...	...	...	4	...	...	...
Dementia	...	...	...	...	...	1	...	2	...	...	...
Ophthalmia	...	302	...	51	...	77	...	430	...	61.9	...
Otitis	...	9	...	5	...	3	...	17	...	...	...
Varix	...	3	...	...	...	...	...	3	...	...	...
Palpitation	...	3	...	3	...	...	...	6	...	...	...
Angina Pectoris	...	...	...	1	1	...	...	1	1	...	...
Heart Disease	...	7	3	...	...	...	...	7	3	...	45
Pericarditis	...	1	...	1	1	...	...	2	1	...	...
Influenza	...	2	...	2	...	1	...	5	...	...	...
Tonsillitis	...	45	...	5	...	16	...	66	...	...	...
Bronchitis	...	102	2	35	1	41	...	178	3	41.5	1.21
Asthma	...	3	1	6	...	...	...	9	1	...	...
Pleurisy	...	2	...	2	1	3	...	7	1	...	...
Pneumonia	...	7	1	3	2	...	...	10	3	...	...
Gastritis	...	...	...	1	...	...	...	2	...	...	...
Enteritis	...	1	...	...	...	...	...	1	...	...	...
Peritonitis	...	1	...	...	...	...	...	1	...	...	...
Dyspepsia	...	232	...	108	...	91	...	431	...	...	...
Constipation	...	6	...	3	...	2	...	11	...	...	...
Colic	...	37	...	9	...	6	...	52	...	...	...
Hæmorrhoids	...	10	...	2	...	6	...	18	...	...	...
Hæmatemesis	...	1	...	...	...	...	...	1	...	...	...
Melena	...	2	...	...	...	...	...	2	...	...	...
Tapeworm	...	16	...	5	...	3	...	24	...	...	...
Jaundice	...	13	...	...	...	4	...	17	...	...	...
Hepatitis	...	65	8	19	4	32	...	117	12	17.7	1.81
Spleen Disease	...	16	...	1	...	3	...	20	...	3.0	...
Dysentery	...	97	8	65	3	27	3	189	14	28.5	2.11
Diarrhœa	...	255	4	40	1	75	...	340	5	51.3	5.6
Nephritis	...	2	2	...	...	...	...	3	2	...	...
Cystitis	...	1	...	...	...	...	...	1	...	...	...
Aménorrhœa	...	6	...	4	...	4	...	14	...	...	...
Dysmenorrhœa	...	11	...	3	...	1	...	15	...	...	...
Menorrhagia	...	29	...	14	...	8	...	51	...	...	...
Ovaritis	...	7	...	3	...	1	...	11	...	...	...
Ovarian Tumour	...	2	...	...	...	...	...	2	...	...	...
Uterine Uleer	...	6	...	4	...	4	...	14	...	...	...
Uterine Cancer	...	1	...	...	1	...	...	1	1	...	...
Prolapsus Uteri	...	5	...	1	...	6	...	12	...	...	...
Retroversion of Uterus	...	2	...	...	...	...	...	2	...	...	...
Polypus of Uterus	...	1	...	...	...	...	...	1	...	...	...
Leucorrhœa	...	17	...	5	...	6	...	28	...	34.9	3.02
Stinging of Vagina	...	...	1	...	...	...	...	...	1	...	...
Vaginal Fistula	...	1	...	...	...	...	...	1	...	...	...
Phlegmasia Dolens	...	1	...	...	...	1	...	2	...	...	...
Metritis	...	6	1	...	...	...	...	6	1	...	...
Hæmorrhæe	...	20	1	5	...	4	...	29	1	...	...
Puerperal Peritonitis	...	1	1	3	2	2	2	6	5	...	...
" Fever	...	4	4	1	1	1	...	6	5	...	...
" Mania	...	1	...	...	...	1	1	2	1	...	...
Childbirth	...	...	2	...	1	...	2	...	5	...	...
Abortion	...	84	1	15	1	27	...	126	2	19.0	...
Periostitis	...	2	...	1	...	...	...	3	...	...	...
Caries	...	3	...	...	...	...	...	3	...	...	...
Synovitis	...	5	...	...	...	1	...	6	...	...	...
Abscess	...	72	...	13	...	21	...	106	...	...	...
Uleer	...	38	...	19	...	9	...	66	...	...	...
Bolls	...	12	...	3	...	8	...	23	...	29.7	...
Carbuncle	...	1	...	1	...	...	...	2	...	...	...
Skin Diseases	...	12	...	4	...	3	...	19	...	...	...
Itch	...	...	...	1	...	...	...	1	...	...	...
Gulæa-worm	...	...	...	...	...	1	...	1	...	...	...
Tumour	...	2	...	...	...	...	...	2	...	...	...
General Debility	...	546	8	336	1	179	2	1,061	11	186.5	1.66
Injuries	...	39	...	21	...	16	1	76	1	11.5	...
Homicide	...	...	1	...	...	...	...	1	...	...	...
Ratio for all causes not specially calculated	...	...	...	...	...	...	...	...	...	108.5	1.66
		3,938	80	1,067	31	1,136	18	6,141	129	936.7	19.47

# WOMEN AND CHILDREN OF EUROPEAN REGIMENTS, 1874.

## XIV.

*DETAIL of the CAUSES of the ADMISSIONS and DEATHS of the CHILDREN of EUROPEAN REGIMENTS.*

Children of the Army of Bengal—Strength ...		Admission-rate per 1,000 ...		Death-rate per 1,000 ...						
" " Madras ..	6,953	" " Bombay ..	918.2	" " India ..	61.56					
" " Madras ..	3,048	" " Bombay ..	550.7	" " India ..	43.96					
" " Bombay ..	2,392	" " India ..	749.8	" " India ..	51.42					
" " India ..	12,393	" " India ..	785.0	" " India ..	55.27					
CAUSES OF ADMISSIONS AND DEATHS.	BENGAL.		MADRAS.		BOMBAY.		ARMY OF INDIA.		RATIO PER 1,000 OF STRENGTH.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Cholera ...	3	2	4	...	7	1	3	2	2	16
Smallpox ...	17	...	19	...	17	...	88	...	1	78
Chick-pox ...	51	...	133	6	69	2	659	31	53.2	250
Measles ...	467	23	32	1	19	...	134	4	16.8	32
Hooping Cough ...	83	3	9	1	4	...	22	1	...	2
Mumps ...	9	...	...	...	...	...	2	...	2	...
Scarlatina ...	2	...	...	...	1	1	3	2	...	...
Diphtheria ...	2	1	...	...	...	...	1	...	...	...
Hydrophobia ...	1	...	...	...	...	...	1	...	...	...
Erysipelas ...	9	2	...	...	4	...	13	2	...	...
Enteric Fever ...	6	2	...	...	5	3	11	5	9	40
Intermittent Fevers ...	866	9	47	...	334	1	1,247	10	100.6	3.55
Remittent and Continued Fevers ...	831	26	169	3	175	5	1,175	34	94.8	...
Rheumatism ...	19	...	1	...	8	...	28	...	...	...
Secondary Syphilis ...	3	...	1	1	1	1	5	2	...	...
Scrofula ...	12	...	5	1	5	1	22	2	...	...
Tabes Mesenterica ...	25	15	6	5	10	6	41	26	...	...
Phthisis Pulmonalis ...	4	2	3	...	4	1	11	3	6.3	250
Hæmoptysis ...	2	...	...	...	...	...	2	...	...	...
Hip-joint Disease ...	3	...	1	...	...	...	4	...	...	...
Anæmia ...	129	...	5	...	23	...	167	...	...	...
Cancerum Oris ...	2	1	1	1	...	...	3	2	...	...
Gangrene of leg ...	1	1	...	...	...	...	1	1	...	...
General Dropsy ...	1	...	2	1	...	...	3	1	...	...
Rickets ...	...	...	1	1	...	...	1	1	...	...
Scurvy ...	1	1	...	...	...	...	2	2	...	...
Stroke ...	8	3	...	...	2	2	10	5	8	40
Hysteria ...	1	...	...	...	...	...	1	...	...	...
Epilepsy ...	2	...	...	...	4	...	6	...	...	...
Tetanus ...	1	1	...	1	...	...	2	2	...	...
Paralysis ...	2	...	...	...	...	...	2	...	...	...
Neuralgia ...	1	...	...	...	...	...	1	...	...	...
Meningitis ...	13	10	6	5	3	3	22	18	2.7	170
Hydrocephalus ...	5	1	2	...	5	2	12	3	...	...
Convulsions ...	96	67	31	22	28	22	155	111	12.5	890
Ophthalmia ...	1,305	...	172	...	281	...	1,758	...	141.9	...
Otitis ...	14	...	1	...	10	...	25	...	...	...
Disease of Mastoid Cells ...	...	...	...	...	...	1	...	1	...	...
Epistaxis ...	2	...	...	...	...	...	2	...	...	...
Hæmorrhage from frænum lingue ...	1	1	...	...	...	...	1	1	...	...
Syncope ...	1	...	...	...	...	...	1	...	...	...
Heart Disease ...	4	1	2	1	...	...	6	2	...	...
Pericarditis ...	1	...	...	...	...	...	1	...	...	...
Palpitation ...	2	...	...	...	...	...	2	...	...	...
Influenza ...	1	...	...	...	1	...	2	...	...	...
Tonsillitis ...	79	4	8	...	17	1	104	5	...	...
Stomachic Sore Throat ...	...	...	...	...	...	...	...	1	...	...
Bronchitis ...	245	25	139	9	83	6	467	17	53.7	381
Croup ...	45	10	10	5	10	2	65	...	...	...
Asthma ...	1	...	1	...	1	...	2	...	...	...
Pleurisy ...	19	6	2	...	...	...	21	1	...	...
Pneumonia ...	6	...	5	...	1	...	12	...	...	...
Aphtha ...	4	1	1	...	...	...	6	...	...	...
Stomatitis ...	2	...	...	...	...	...	2	...	...	...
Hæmatemesis ...	1	1	...	...	1	...	2	1	...	...
Enteritis ...	1	...	...	...	...	...	2	...	...	...
Pleurisy ...	1	...	...	...	...	...	1	...	...	...
Peritonitis ...	1	1	...	...	...	...	1	1	...	...
Dyspepsia ...	28	...	6	...	7	...	41	...	...	...
Constipation ...	5	...	1	...	2	...	8	...	...	...
Colic ...	10	...	2	...	1	...	13	...	...	...
Hæmorrhoids and Prolapsus Ani ...	3	...	5	...	...	...	8	...	...	...
Hernia ...	3	...	3	...	1	...	7	...	...	...
Worms ...	4	...	24	...	7	...	35	...	...	...
Tapeworm ...	36	...	10	...	21	...	67	...	...	...
Jaundice ...	9	1	1	...	1	...	11	1	1.3	...
Hepatitis ...	3	...	5	...	8	...	16	...	...	...
Hydatid of Liver ...	...	1	...	...	3	1	1	1	...	...
Spleen Disease ...	15	...	...	...	...	...	21	...	...	...
Dysentery ...	166	17	70	11	38	7	214	35	17.3	282
Diarrhoea ...	553	84	187	19	184	13	924	116	74.6	936
Nephritis ...	1	...	1	1	...	...	3	...	...	...
Cystitis ...	4	...	...	...	...	...	4	...	...	...
Calculus ...	1	...	...	...	...	...	1	...	...	...
Lithotomy ...	2	...	...	...	...	...	2	...	...	...
Phymosis ...	2	...	...	...	3	...	5	...	...	...
Gonorrhœa ...	1	...	1	...	1	...	2	...	...	...
Orchitis ...	3	...	...	...	1	...	4	...	...	...





## 2. NATIVE TROOPS, 1874.

The regimental strength upon which the actual death-rate for the year is calculated is 44,433. The total deaths, absent and present, amount to 600, and this number, with a strength of 44,433, represents a loss of 13.50 per 1,000. The deaths of men present with their regiments amounted to 425, giving a ratio of 10.94 in relation to a strength of 38,851, the average present during the year.

## 2. NATIVE TROOPS, 1874.

The total strength of the native troops for the year is estimated to be 1,100. The total number of men present during the year is estimated to be 1,100. The total number of men present during the year is estimated to be 1,100. The total number of men present during the year is estimated to be 1,100.

# NATIVE TROOPS, 1874.

## I.

*TABLE showing the SICKNESS and MORTALITY among the NATIVE TROOPS serving in the BENGAL PRESIDENCY during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.*

(This Statement is for the Regular Native Army only, and for men present from month to month with their Regiments,—(See Introductory note).)

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS IN HOSPITAL.															Died out of Hospital.				
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent and Continued.	Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Disease.	Phthisis Pulmonalis.	Dropsy.	Scurvy.		Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.	
January	42,880	1,525	35.6	45	1.05	1	1	...	5	2	...	2	...	2	...	18	1	2	1	...	2	...	4	1	1
February	42,796	1,492	34.9	33	.77	...	...	...	3	3	...	1	...	1	...	10	...	1	1	...	1	...	3	1	1
March	42,452	1,402	33.0	43	1.01	...	...	...	3	3	...	1	...	1	...	4	...	2	1	...	1	...	3	1	1
April	37,695	1,243	33.0	43	1.14	8	...	...	3	3	...	...	...	...	...	5	...	1	1	...	...	...	1	1	1
May	35,510	1,242	35.0	43	1.21	16	4	...	1	3	1	...	1	...	...	5	...	1	1	...	...	...	1	1	1
June	35,332	1,397	37.0	20	.57	2	...	...	...	1	1	...	1	...	...	3	1	1	1	...	...	...	2	2	2
July	36,071	1,434	39.8	31	.86	1	...	...	...	1	1	...	4	...	...	5	1	1	1	...	...	...	1	1	4
August	36,438	1,683	46.2	22	.60	...	...	...	4	2	1	4	...	...	...	2	...	1	1	...	...	...	1	1	4
September	36,735	1,847	51.4	35	.95	1	...	3	6	3	...	5	5	...	...	4	...	1	1	...	...	...	3	3	1
October	37,906	2,146	56.9	26	.69	3	...	...	5	2	...	3	...	...	...	2	...	3	1	...	...	...	3	3	1
November	40,699	2,060	50.6	24	.59	...	...	...	4	4	1	1	1	...	...	6	...	1	...	...	...	...	3	3	1
December	41,732	1,886	45.2	60	1.44	2	...	...	5	...	...	8	...	...	...	24	1	4	...	...	...	5	5	3	1
						43	12	5	47	33	5	31	25	6	3	99	6	26	4	...	25	8	36	20	
						Died per 1,000 of the Average Strength.																			
For the year	38,821	1,669	41.4	425	10.94	1.11	.31	2.19	.13	.89	.61	.15	.08	2.32	.15	.67	.10	...	.64	.21	.92	.52			
Absent deaths 175. Ratio of 600 deaths, 1350 per 1,000 of the total regimental strength.																									

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.	
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				
Cholera	...	...	11	14	22	3	...	1	3	...	1	59	1.5	72.88		
Smallpox	7	2	15	13	6	3	1	...	1	...	2	50	1.3	21.00		
Enteric Fever	...	...	3	...	...	...	...	2	4	...	...	11	.3	45.45		
Fever, Intermittent	1,112	806	1,068	1,076	1,208	1,356	2,013	2,626	4,132	4,111	2,877	2,159	24,544	631.7	'19	
Fever, Remittent and Continued	35	31	32	33	55	39	41	31	61	56	30	25	469	12.1	7.04	
Apoplexy	...	...	...	3	1	1	...	1	...	...	...	...	6	2	83.33	
Dysentery	154	107	161	179	217	173	191	218	236	211	223	304	2,374	61.1	1.50	
Diarrhoea	85	54	115	137	150	113	149	119	122	81	91	146	1,361	35.0	7.41	
Hepatitis	9	3	8	3	7	12	13	3	6	5	6	6	81	2.1	6.5	
Spleen Disease	20	20	32	18	27	35	34	30	58	54	52	81	461	11.9	4.45	
Respiratory Diseases	280	234	245	127	93	89	142	89	108	110	177	336	2,020	52.0	35.62	
Phthisis Pulmonalis	3	4	6	6	5	2	8	12	5	8	11	3	73	1.9	25.00	
Dropsy	1	2	1	...	2	1	...	2	1	...	...	...	16	.4	...	
Scurvy	6	8	3	3	7	5	8	3	5	4	13	7	70	1.8	...	
Rheumatism	294	251	217	123	125	129	176	161	159	164	176	273	2,239	57.6	...	
Veneral Diseases	139	129	179	118	124	128	198	128	155	198	139	162	1,689	43.5	...	
Eye Diseases	47	34	55	61	91	100	144	116	98	81	75	79	981	25.2	...	
Abscess and Ulcer	256	243	214	192	212	279	461	392	396	279	330	387	3,641	93.7	...	
Wounds and Accidents	463	349	410	330	357	378	469	356	440	419	511	567	5,031	129.5	...	
All other Causes	513	247	346	300	289	293	410	365	397	336	361	380	4,031	103.7	...	
	3,224	2,507	3,112	2,736	2,988	3,137	4,453	4,649	6,376	6,032	5,072	4,921	49,207			
	Admitted per 1,000 of the Average Strength in each Month.															
	75.2	58.6	73.3	72.7	84.1	89.8	129.4	127.6	173.6	159.1	124.6	117.9	1206.5			















# NATIVE TROOPS, 1874.

## VIII.

*TABLE showing the SICKNESS and MORTALITY among the NATIVE TROOPS composing the PUNJAB IRREGULAR FORCE during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.*

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS IN HOSPITAL.														Died out of Hospital.							
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent and Continued.	Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Diseases.	Phthisis Pulmonalis.	Dropsy.		Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.			
January	11,236	557	49.6	14	...	...	...	...	1	...	...	...	...	9	...	1	...	...	...	...	2	...					
February	11,177	565	50.5	13	...	...	...	...	4	...	2	...	...	4	...	1	...	...	...	...	3	...					
March	10,943	378	34.7	9	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...					
April	9,904	228	23.0	4	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...					
May	8,908	230	25.8	9	...	...	...	...	1	...	1	...	...	1	...	...	1	...	...	...	1	...					
June	8,892	241	27.1	3	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	2	...					
July	9,123	277	30.4	9	...	...	...	...	1	...	1	...	...	1	...	1	...	...	...	...	1	...					
August	9,066	392	43.2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...					
September	9,161	594	65.3	5	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...	...	1	...					
October	9,167	890	97.3	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...					
November	9,896	748	75.6	17	...	...	...	...	2	...	...	...	...	10	...	1	1	...	...	...	1	...					
December	10,907	643	58.8	40	...	...	...	...	...	1	1	...	...	39	1	...	...	1	...	...	2	1					
									2	2	1	14	...	5	2	...	2	62	2	7	1	1	1	...	15	4	
Died per 1,000 of the Average Strength.																											
For the year	9,859	466	47.3	121	12.28	...	20	173	...	51	20	...	20	630	20	71	10	10	10	...	152	41					

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.															
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.																		
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Fever, Intermittent	481	332	403	237	259	343	381	882	2,106	2,130	1,435	1,001	9,960	1013.3	...	...	...	...	...	...	...	...	...	...	...	...	...			
Fever, Remittent and Continued	13	10	8	1	4	3	...	3	6	12	18	16	94	9.5	...	...	...	...	...	...	...	...	...	...	...	...	...			
Apoplexy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Dysentery	41	41	15	23	25	37	29	43	99	67	72	60	554	56.2	...	...	...	...	...	...	...	...	...	...	...	...	...			
Diarrhoea	25	24	23	21	27	22	37	29	31	19	31	42	331	33.6	...	...	...	...	...	...	...	...	...	...	...	...	...			
Hepatitis	3	2	...	2	1	6	5	2	2	1	5	4	30	3.1	...	...	...	...	...	...	...	...	...	...	...	...	...			
Spleen Disease	11	9	...	12	6	5	5	8	15	13	21	38	153	15.5	...	...	...	...	...	...	...	...	...	...	...	...	...			
Respiratory Diseases	169	107	107	23	31	18	31	16	59	29	70	177	790	80.1	...	...	...	...	...	...	...	...	...	...	...	...	...			
Phthisis Pulmonalis	4	3	2	1	4	2	4	...	2	3	...	5	30	3.1	...	...	...	...	...	...	...	...	...	...	...	...	...			
Dropsy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Scurvy	4	3	5	...	5	1	...	4	4	4	5	...	42	4.2	...	...	...	...	...	...	...	...	...	...	...	...	...			
Rheumatism	71	88	54	31	31	40	38	41	44	29	49	99	616	62.5	...	...	...	...	...	...	...	...	...	...	...	...	...			
Veneral Diseases	14	21	16	5	21	18	20	15	12	12	13	21	188	19.1	...	...	...	...	...	...	...	...	...	...	...	...	...			
Eye Diseases	8	12	15	11	12	29	32	28	28	22	18	19	234	23.7	...	...	...	...	...	...	...	...	...	...	...	...	...			
Abscess and Ulcer	102	89	69	55	72	101	205	147	126	82	109	127	1,266	128.4	...	...	...	...	...	...	...	...	...	...	...	...	...			
Wounds and Accidents	123	99	85	86	97	109	156	132	107	100	134	180	1,468	142.8	...	...	...	...	...	...	...	...	...	...	...	...	...			
All other Causes	81	115	110	83	92	81	100	88	112	62	74	144	1,142	115.8	...	...	...	...	...	...	...	...	...	...	...	...	...			
	1,143	965	915	593	689	812	1,049	1,439	2,714	2,583	2,048	1,806	16,881	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Admitted per 1,000 of the Average Strength in each Month.																														
	101.7	85.4	83.9	69.0	77.4	91.3	115.0	158.7	298.2	281.3	206.9	177.0	1712.2																	

Calculated on a strength of 12,228, the total strength absent as well as present, the death-rate of the year is 13.66 per 1,000—the equivalent of 167 deaths.

The Gain and Loss Statement for the Frontier Force for the year is as under:—

Strength borne on the Regimental rolls on 1st January 1874	12,244
Additions received during the year	1,526
<b>TOTAL</b>	<b>13,770</b>
Deaths at Head-quarters and in Detachments 121; died while on furlough and sick leave 46; invalided for discharge 470; transfers given 35; discharged otherwise 788	1,460
Remaining on the rolls at the close of 1874	12,310



# NATIVE TROOPS, 1874.

## X.

*COMPARATIVE STATEMENT of the RATIOS of SICKNESS and MORTALITY among the NATIVE TROOPS serving in the various PROVINCES of the BENGAL PRESIDENCY for the Year 1874.*

	RATIOS PER 1,000 OF STRENGTH.							
	Bengal Proper and Assam.	Gangetic Provinces.	Rohilkund and Meerut.	Agra and Central India.	Punjab.	Regular Native Army.	Punjab Frontier Force.	Central India Force.
<b>I.—AVERAGE DAILY SICK-RATE OF EACH MONTH.</b>								
January	40.2	35.0	26.7	43.4	35.9	35.6	49.6	34.3
February	42.6	33.8	24.7	43.0	32.9	34.9	45.2	31.3
March	44.2	34.3	24.2	39.2	29.4	33.9	34.7	26.9
April	51.5	31.6	24.4	37.0	25.8	33.0	23.9	25.9
May	59.2	32.3	29.2	33.3	23.3	35.0	25.8	24.1
June	62.2	37.9	28.3	32.2	29.8	37.0	27.1	24.4
July	66.7	31.9	28.7	37.8	31.0	39.8	30.4	27.4
August	66.0	39.6	47.1	49.1	37.7	46.2	43.2	29.6
September	61.0	39.4	64.9	48.9	48.0	51.4	65.3	25.5
October	58.2	39.3	54.5	60.9	62.9	60.9	87.3	42.5
November	69.5	36.9	35.2	53.4	57.8	50.6	75.6	33.4
December	57.1	35.2	39.8	52.4	47.6	45.2	58.8	37.3
<b>AVERAGE OF THE YEAR</b>	<b>55.5</b>	<b>35.1</b>	<b>34.3</b>	<b>43.2</b>	<b>39.1</b>	<b>41.4</b>	<b>47.3</b>	<b>31.2</b>
<b>II.—COMPOSITION OF THE ADMISSION-RATE OF THE YEAR.</b>								
Cholera	6.9	2	...	3	1	1.5	...	...
Intermittent Fever	688.6	323.1	531.7	671.0	768.3	631.7	1613.3	329.8
Remittent and Continued Fevers	20.7	3.3	16.1	6.3	11.8	12.1	9.5	21.7
Apoplexy	...	...	2	5	1	2	1	2
Dysentery	135.0	38.1	37.9	36.6	48.4	61.1	56.2	24.3
Diarrhoea	81.3	22.8	16.1	15.9	25.1	35.0	33.6	21.7
Hepatitis	2.2	1.7	3.9	1.8	2.1	2.1	3.1	1.7
Spleen Disease	19.8	5.4	18.2	8.7	10.2	11.9	15.5	6.0
Respiratory Diseases	56.4	32.7	45.4	35.0	64.8	52.9	89.1	39.5
Phthisis Pulmonalis	2.6	1.7	2.1	2.4	1.4	1.9	3.1	1.4
Scurvy	4.5	...	7	3	2.0	1.8	4.2	2
Rheumatism	68.9	44.9	46.5	69.9	60.3	57.6	62.5	54.1
Veneral Diseases	33.2	76.1	49.2	53.2	13.8	43.5	19.1	24.5
Eye Diseases	14.2	27.7	31.7	23.4	28.9	25.2	23.7	77.5
Abscess and Ulcer	87.5	92.3	83.5	117.7	93.0	93.7	128.4	82.7
Wounds and Accidents	129.4	135.6	116.0	131.2	126.6	129.5	142.8	107.2
All other Causes	179.2	75.0	93.1	74.5	93.7	165.7	117.0	99.6
<b>ADMISSION-RATE OF THE YEAR</b>	<b>1530.4</b>	<b>880.6</b>	<b>1091.4</b>	<b>1239.7</b>	<b>1362.6</b>	<b>1206.5</b>	<b>1712.2</b>	<b>887.1</b>
<b>III.—COMPOSITION OF THE DEATH-RATE OF THE YEAR.</b>								
Cholera	4.74	...	...	26	0.7	1.11	...	...
Fever	3.16	7.9	2.35	2.38	2.21	2.19	1.73	2.14
Apoplexy	13	...	4.5	2.6	0.7	1.3	...	2.4
Dysentery	2.59	1.6	2.6	2.6	3.2	3.0	5.1	4.5
Diarrhoea	2.37	...	4.3	2.0	1.9	2.4	2.0	...
Hepatitis	1.3	1.6	4.3	2.6	0.7	1.5	...	7.1
Spleen Disease	4.0	...	...	...	...	0.8	2.0	...
Respiratory Diseases	6.6	1.25	2.14	1.85	3.67	2.32	6.30	2.62
Heart Diseases	1.3	...	...	...	2.5	1.5	2.0	2.4
Phthisis Pulmonalis	1.19	7.9	4.3	8.0	4.5	6.7	7.1	4.8
Atrophy and Anæmia	1.45	4.7	4.3	8.0	4.5	6.4	1.0	2.4
All other Causes	1.84	1.42	1.07	5.2	1.14	1.33	1.92	1.90
Wounds and Accidents	...	3.1	2.1	2.6	1.3	2.1	...	2.4
Deaths out of Hospital	4.0	1.6	...	5.2	7.8	5.2	4.1	4.8
<b>DEATH-RATE OF THE YEAR</b>	<b>19.10</b>	<b>5.51</b>	<b>8.78</b>	<b>8.43</b>	<b>9.54</b>	<b>10.94</b>	<b>12.28</b>	<b>9.77</b>
<b>INCLUDING ABSENT DEATHS</b>	<b>25.97</b>	<b>8.98</b>	<b>9.09</b>	<b>13.28</b>	<b>12.23</b>	<b>15.50</b>	<b>13.66</b>	<b>9.18</b>
<b>DIED OUT OF EACH HUNDRED CASES TREATED.</b>								
<b>IV.—MORTALITY RELATIVE TO THE NUMBER TREATED.</b>								
Cholera	69.23	...	...	...	...	72.88	...	...
Intermittent Fever	23	10	16	24	17	19	...	30
Remittent and Continued Fevers	4.46	14.29	9.33	12.50	7.70	7.94	14.50	5.49
Apoplexy	...	...	...	50.00	...	83.33	...	...
Dysentery and Diarrhoea	2.25	2.6	2.38	1.00	7.1	1.50	7.9	1.94
Hepatitis	5.88	9.09	14.29	14.29	3.12	7.41	...	42.86
Spleen Disease	2.0	...	...	...	...	6.5	1.31	...
Respiratory Diseases	1.17	3.85	4.72	5.26	5.51	4.55	7.85	6.62
Phthisis Pulmonalis	49.00	45.45	20.00	33.33	36.36	35.62	23.23	37.33
Scurvy	...	...	...	...	...	...	2.38	...

# NATIVE TROOPS, 1874.

## XI.

TABLE showing the DAILY AVERAGE SICK-RATE of each STATION in each MONTH.

STATIONS.	Average Strength for the period of observation.	DAILY SICK PER 1,000 OF AVERAGE STRENGTH IN EACH MONTH.												Average Daily Sick per 1,000 of Strength during the period of observation.	Ratio for each Province.		
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.				
Fort William	627	296	413	526	514	486	440	502	487	557	661	521	603	494	55.5		
Alipore	885	688	513	449	404	615	608	617	612	626	692	579	683	581			
Dum-Dum	127	148	182	91	...	182	91	182	273	273	209	331	370	236			
Barnackpore	1,011	694	682	786	1052	968	720	630	616	674	742	844	1008	772			
Berhampore	160	252	200	84	464	408	420	552	483	329	514	629	686	477			
Dacca	271	360	521	449	276	335	335	407	319	454	498	648	445	406			
Cachar and Outposts	645	297	274	288	282	298	328	384	399	322	325	370	385	326			
Sylhet (9 months)	82	1000	1143	713	714	1286	588	800	790	300	...	...	...	731			
Shillong	837	247	406	534	449	545	654	815	788	794	775	817	883	633			
Gauhati	630	375	337	330	213	370	491	456	375	278	241	262	268	329			
Tezpur	257	672	200	1071	757	1187	1174	944	769	648	673	665	800	778			
Nowgong	72	465	319	465	698	232	400	267	274	274	822	...	...	555			
Dibrugarh	723	233	219	175	431	392	483	829	1026	892	790	942	593	553			
Buxa	574	627	659	683	1136	1457	1487	1582	1509	1312	1054	896	581	1063			
Jalpaiguri (10 months)	27	...	...	...	...	...	...	...	...	...	...	...	...	...			
Rizalpur	605	154	131	293	149	150	383	229	245	249	218	221	215	198			
Dinapore	624	225	263	270	333	395	417	316	479	397	327	293	321	337			
Segowli (10 months)	104	...	...	...	...	...	...	...	...	...	...	...	...	385			
Benares	361	496	348	984	1056	994	710	664	765	829	849	506	612	665			
Chunar	70	286	143	429	429	286	429	429	143	286	286	286	429	286			
Gorakhpur	649	378	436	493	376	365	285	284	378	482	393	269	373	354			
Fyzabad	737	348	379	265	292	377	183	293	437	343	342	412	294	312			
Lucknow	1,486	399	384	492	396	336	203	227	325	374	382	432	417	350			
Sitapur	356	157	131	133	256	324	245	314	256	264	318	343	323	253			
Fatehgarh	136	522	483	345	489	410	410	660	793	810	552	467	452	515			
Cawnpore	910	197	270	179	187	296	194	236	298	258	390	265	187	231			
Allahabad	848	368	312	452	536	338	353	452	323	368	390	365	334	389			
Nagode	94	1034	702	367	270	286	432	127	513	779	1053	874	476	532			
Shahjahanpur	180	625	187	189	267	598	794	733	774	523	424	690	634	590			
Bareilly	929	218	129	191	152	183	177	135	135	192	133	114	127	151			
Moradabad	416	149	192	130	272	334	397	279	277	332	277	269	199	240			
Almora	628	481	414	440	344	346	274	368	493	530	413	449	389	414			
Dehra	649	354	353	339	314	382	399	321	419	447	493	519	495	491			
Roorkee	463	126	149	282	286	241	34	183	221	349	333	251	291	216			
Meerut	778	393	316	218	212	290	552	353	829	1756	1342	492	527	399			
Delhi	626	193	239	277	188	234	243	244	778	816	734	432	347	527			
Agra	939	879	736	641	424	393	317	320	351	558	718	695	643	564			
Morar	1,522	390	327	334	391	375	498	459	462	509	616	633	570	434			
Jhansi	622	469	327	198	161	235	150	249	292	306	392	374	411	280			
Nowgong	155	172	168	275	318	290	275	396	290	362	692	383	328	292			
Sipsi, Ulwar, and Sambhar	274	...	...	...	...	...	...	...	...	...	...	...	...	194			
Lalitpur	73	411	274	137	548	274	137	411	695	548	695	695	411	411			
Deoli	212	376	577	621	591	518	519	594	594	737	795	548	583	566			
Umballa	797	187	191	159	260	249	491	348	647	1025	698	377	395	402			
Simla (5 months)	31	...	...	...	...	...	...	...	...	...	...	...	...	...			
Phillour	39	...	...	...	...	...	...	...	...	...	...	...	...	...			
Ludhiana	108	185	278	183	93	185	...	93	370	463	556	463	370	278			
Jullundur	557	548	637	510	143	140	296	448	573	600	546	583	613	485			
Ferozapore	616	935	1004	916	387	278	241	275	396	367	44	300	428	593			
Mooltan	1,02	499	439	312	240	290	329	280	699	1522	1529	724	501	609			
Sialkot	1,001	411	473	414	349	366	416	398	291	347	366	340	340	370			
Dharmasala	639	294	223	259	318	342	419	392	440	317	382	619	391	364			
Bakloh	638	450	336	330	221	322	240	272	394	240	273	277	288	282			
Amritsar	295	312	236	...	193	211	213	212	359	376	280	351	258	244			
Meeran Meer	1,392	324	315	391	274	171	267	154	246	219	594	224	653	323			
Jhelum	1,562	219	197	174	182	165	298	218	192	224	264	402	398	295			
Rawal Pindi	1,594	245	165	268	300	296	357	359	380	332	317	317	330	306			
Talaguan	697	211	70	101	119	126	188	148	163	161	314	284	156	165			
Attock	141	168	168	116	119	175	379	214	156	395	625	704	476	284			
Murree (7 months)	38	...	...	...	...	...	...	...	...	...	...	...	...	172			
Nowshera	692	439	493	697	431	391	350	627	430	614	1014	...	...	592			
Cherat (8 months)	190	...	...	...	...	...	...	...	...	...	...	...	...	316			
Peshawar	3,483	374	282	227	260	269	399	334	397	551	988	1012	795	485			
CENTRAL INDIA FORCE.																	
Augur	250	372	317	280	295	221	227	225	362	317	279	245	182	240	31.2		
Goonah	249	112	149	142	129	135	134	86	39	210	336	273	144	161			
Sirdarpore	389	343	275	223	290	241	257	234	334	343	348	460	368	308			
Kherwarrah	478	576	526	453	493	359	390	377	348	464	548	254	298	418			
Erinpoorah	790	135	227	156	191	217	209	290	278	441	445	422	431	282			
Deoli	622	516	542	381	335	299	298	355	397	351	692	483	608	434			
Sehore and Indore	797	157	116	116	134	132	66	136	157	143	184	133	147	138			
Ajmere and Beaur	631	488	362	415	360	322	490	430	452	543	597	399	604	460			
PUNJAB FRONTIER FORCE.																	
Murdan	784	615	400	375	297	348	417	483	484	494	696	560	570	472		47.3	
Abbottabad	1,441	356	313	267	293	196	295	252	371	328	343	424	546	319			
Kohat	2,389	364	329	273	188	223	245	222	271	490	662	593	450	360			
Buttan	1,649	866	725	434	255	232	292	321	538	477	1009	1052	893	580			
Dera Ghazi Khan	1,430	369	393	311	214	230	214	258	617	1180	972	652	499	476			
Dera Ismail Khan	1,687	499	699	451	257	299	342	369	529	764	1149	862	568	557			
Rajampur	488	509	527	377	390	497	338	504	755	1279	2091	1790	875	820			

# NATIVE TROOPS, 1874.

## XII.

TABLE showing the *RATIO* in which the *CHIEF DISEASES* have contributed to make up the *ADMISSION-RATE* of each *STATION*.

STATIONS.	Average Strength during the period of occupation.	ADMITTED INTO HOSPITAL PER 1,000 OF AVERAGE STRENGTH.										Admitted per 1,000 of Strength during the period of observation.	
		Cholera.	Fever.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Ophthalmia.	Rheumatism.	Veneral Diseases.	Disease of the Respiratory Organs.		All other Causes.
Fort William	627	16	3732	1116	463	...	32	271	239	415	734	3620	10638
Alipore	895	...	9520	2223	1564	...	78	212	369	458	951	2749	18174
Dum-Dum	127	...	8110	551	551	...	473	...	315	...	157	1181	11338
Barrackpore	1011	30	10099	1048	1098	10	712	158	1345	415	425	5688	21028
Berhampore	160	62	4750	688	875	...	...	125	675	812	437	1563	9057
Dacca	271	37	2066	960	516	...	...	148	922	221	960	4391	10221
Cachar and Outposts	645	15	5597	636	202	46	93	15	977	217	512	2310	10620
Sylhet (9 months)	82	244	7561	122	732	...	...	244	244	266	732	2663	12928
Shillong	837	60	7116	1575	382	48	299	95	621	311	609	5090	16236
Gauhati	639	313	5008	1424	1142	16	78	47	219	175	204	2081	10657
Tezpur	257	39	15680	3463	2685	156	156	233	895	117	1712	5175	30311
Nowgong	72	417	6327	1528	694	...	139	...	694	417	417	5159	15972
Dibrugarh	723	180	11770	1342	395	14	138	166	747	484	553	4869	20858
Buxa	574	...	4408	923	392	52	122	209	749	174	140	7718	15987
Jalpaiguri (10 months)	27	...	...	...	...	...	...	...	...	...	...	...	...
Bhagalpur	695	17	1862	595	115	...	83	99	628	331	231	3049	5950
Benares	634	...	4135	369	278	...	80	176	176	353	240	1715	7432
Segooli (10 months)	184	...	2118	288	769	...	...	481	677	865	288	3558	8642
Benares	261	28	1440	55	28	28	55	360	332	3269	78	2133	7756
Chunar	70	...	6572	714	1143	143	...	571	429	2600	571	2714	14857
Gorakhpur	649	...	2989	524	231	...	...	185	398	1371	262	2650	8320
Fyzabad	737	...	2809	515	692	41	68	448	312	353	597	3326	9661
Lucknow	1486	...	2906	494	168	7	101	209	525	834	411	3346	9011
Sitapur	356	...	1348	281	...	...	...	590	618	337	253	3090	6517
Fatehgarh	136	...	5735	441	221	74	147	368	1838	735	809	5673	15443
Cawnpore	910	...	2846	154	99	22	11	220	165	296	209	1901	5923
Allahabad	848	...	5177	542	142	24	47	224	672	295	259	3868	11250
Nagode	94	...	5831	106	...	...	...	213	1383	851	213	3830	12447
Shahjahanpur	180	...	2333	556	56	...	56	278	500	1722	222	6166	11889
Bareilly	929	...	1295	172	65	...	11	226	86	108	161	2110	4144
Moradabad	416	...	2404	745	337	24	...	288	72	691	377	2260	7398
Almora	628	...	3312	430	127	...	...	235	971	1370	319	3611	9396
Dehra	619	...	2018	169	139	139	385	847	663	324	385	2928	8197
Roorkee	463	...	1857	108	86	21	65	238	454	713	238	4168	7948
Meerut	278	...	16427	578	273	13	437	283	553	64	630	3573	22841
Delhi	626	...	9617	511	176	32	128	96	463	393	1022	2460	14808
Agra	939	...	5751	330	224	11	42	234	554	373	394	4679	11992
Morar	1522	...	8712	486	184	39	151	256	835	618	368	2689	13738
Jhansi	62	...	6945	370	48	...	...	177	257	740	402	3038	11077
Nowgong	274	...	4915	219	73	...	73	182	492	478	109	5474	10985
Sipri, Ulwar, and Sambhar	155	...	4615	65	...	...	...	645	452	516	516	3032	9671
Lalitpur	73	137	4247	...	411	...	274	137	822	137	274	6449	13288
Deoli	212	...	5472	189	142	...	94	47	566	283	94	4658	11745
Umballa	797	...	6625	276	151	12	25	665	966	339	457	2898	12499
Phillaur	31	...	...	...	...	...	...	...	...	...	...	...	...
Ludhiana	39	...	...	...	...	...	...	...	...	...	...	...	...
Jullundur	108	...	2407	278	93	...	185	93	926	370	185	1944	11481
Ferozepore	557	...	4542	251	36	...	162	99	1347	287	287	3662	10700
Mooltan	616	...	12971	243	471	...	114	260	691	97	243	1795	16705
Sialkot	1602	...	13879	489	140	30	139	559	479	260	649	3712	21747
Dharmala	1691	...	2318	370	290	19	19	439	1354	370	849	3796	9610
Bakloh	659	...	4052	243	106	...	45	577	850	152	470	3718	10213
Amritsar	638	...	2414	188	172	31	47	592	972	235	580	4028	9169
Meer Meer	205	...	9049	634	244	...	...	49	244	195	1863	1463	12341
Jhelum	1392	...	6621	184	108	15	376	138	469	182	1198	2696	11997
Hawal Pindi	1262	6	2721	455	128	45	26	256	282	307	230	2029	6485
Talgaon	1594	...	2826	539	173	7	73	173	399	292	651	3557	8690
Attock	607	...	4860	66	132	16	49	231	297	132	395	3937	10115
Murree (7 months)	141	...	8794	1135	567	...	71	355	213	142	71	1915	13263
Nowshera	58	...	1724	345	862	...	...	...	345	172	345	1379	5372
Cheer (8 months)	692	...	7370	491	217	72	130	246	535	161	611	4470	14407
Peshawar	190	...	6195	1080	684	...	...	158	474	421	368	3474	12684
	3483	...	13992	836	431	17	103	215	471	313	683	2969	15940
CENTRAL INDIA FORCE.													
Angur	259	...	2600	360	80	...	200	680	480	320	160	1040	5920
Goamah	249	...	1694	201	...	...	40	40	201	...	80	683	2329
Sirdarpore	389	...	3291	103	386	26	51	488	386	231	488	3599	9049
Kherwarrah	478	...	3422	21	21	21	21	523	395	125	628	4435	9142
Erampoomh	780	...	3859	167	333	38	64	1026	398	179	436	2898	8808
Deoli	622	...	3858	177	145	16	64	1061	659	643	611	4470	11794
Schore and Indore	797	...	3488	494	276	...	...	339	339	213	125	793	5847
Ajmere and Beaur	631	...	4453	349	253	16	111	1093	1553	143	460	4693	13296
PUNJAB FRONTIER FORCE.													
Murdan	784	...	4885	76	421	76	217	689	855	421	689	4413	12742
Abbottabad	1441	...	5260	206	243	76	83	333	784	229	1222	3703	11839
Kohat	2389	...	10059	716	510	25	205	134	707	213	837	3747	17183
Dumoo	1640	...	11549	895	274	30	116	207	470	98	780	3738	18667
Dera Ghazi Khan	1490	...	15930	545	293	7	147	293	413	168	699	3762	22977
Dera Ismail Khan	1687	...	10871	679	329	...	172	169	694	172	699	4560	18328
Rajampur	488	...	10984	295	123	29	123	295	294	41	635	4672	17692

# NATIVE TROOPS, 1874.

## XIII.

*TABLE showing the MORTALITY in each STATION, the CAUSES of DEATHS, and the RATIO of DEATHS to STRENGTH.*

STATIONS.	Average Strength for the period of observation.	CAUSES OF DEATHS IN REGIMENTAL HOSPITALS.																		TOTAL DEATHS.		DIED PER 1,000 OF AVERAGE STRENGTH.				
		Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent and Continued.	Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Diseases.	Phthisis Pulmonalis.	Dropsy.	Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.	Died out of Hospital.	Of men present with their Regiments.		Of men absent from their Regiments.			
																					A.	B.	With their Regiments.			B. All Deaths, absent and present.
																					a.	b.	c.			
Troops marching in Bengal and N.-W. Provinces																										
Troops employed in the Famine Districts		5	1		2			1																		
Fort William	627																							11.16	11.16	
Allpore	895				1		2		1															11.17	11.17	
Dum-Dum	127				1																			23.62	23.62	
Barrackpore	1,011	4			1			2		6														11.87	15.83	
Berhampore	160																									
Dacca	271																							7.38	7.38	
Cachar and Outposts	645	1			1	3		1														1.95	13.95	15.50		
Sylhet (9 months)	82																					12.20	11.20	24.39		
Shillong and Outposts	837	1			5		1		3	2		1										1.20	22.69	23.89		
Gauhati	639	19	3		2				1		3		1									29.73	25.94	54.77		
Tezpur	237																							7.78	7.78	
Nowgong	72	3			1																	41.87	27.77	69.44		
Dibrugarh and (Upper Assam)	725	6			2			4														8.30	11.06	19.36		
Buxa	574				6			1		5														27.87	27.87	
Jalpaiguri (10 months)	27																									
Bhagalpur	635	1																				1.65	1.65	3.31		
Duffa Force								1																		
	7,591	36	6	5	12	7	1	19	18	1	3	5	1	9	1		11		7	3	145	474	14.36	19.10		
Dinapore	624				1																			3.21	3.21	
Segowli (10 months)	104																							9.62	9.62	
Benares	361																							11.08	11.08	
Cumna	70																									
Gorakhpur	649																							3.08	3.08	
Fyzabad	737																							5.43	5.43	
Lucknow	1,486			2		1	1																	6.73	6.73	
Sitapur	356																							5.62	5.62	
Patehgarh	136																									
Cawnpore	910					1																		4.40	4.40	
Allahabad	848				1		1																	7.98	7.98	
Nagode	94																									
	6,357		3		3	2		1		1		8		5	1		3		5	1	35	551	5.61	5.61		
Shahjahanpur	189																									
Bareilly	929					1																		3.23	3.23	
Moradabad	416						1																	2.40	2.40	
Almora	628							1																3.19	3.19	
Dehra Dun	649																							9.25	9.25	
Roorkee	463					1	2			1														12.96	12.96	
Meerut	778					3	3			2														19.28	19.28	
Delhi	626					1	1			1														12.78	12.78	
	4,670				4	7	2	4	2	2		10		2	1		2		4		41	878	8.78	8.78		
Agra	939					3	1			1														11.71	11.71	
Morar	1,522		1			4			1															5.20	9.20	
Jhansi	622																							9.04	9.04	
Nowgong	274																									
Sipri, Ulwar, and Sambhur	155																									
Lalitpur	73	1																						13.70	13.70	
Deoli	212																									
	3,796	1	1			6	3	1	1	1	1		7		3		3		1	2	32	26	8.17	8.43		
Umballa	797					2																		8.78	8.78	
Simsa (5 months)	31																									
Phillour	39																									
Ludhiana	108																									
Jallundur	557																									
Ferozpour	616					1																		1.62	1.62	
Mooltan	1,002					1																		10.98	10.98	
Sinkot	1,401									2														10.00	10.00	
Dharmasala	659									1														7.59	7.59	
Bakloh	638																							6.27	6.27	
Amritsar	205																							9.76	9.76	
Meera Meer	1,302						4			1														14.59	14.59	
Jhelum	1,562	1																						8.12	8.76	
Rawal Pindi	1,594					4																		6.68	6.68	
Talagoon	607																							3.29	3.29	
Attock	141					1																		21.28	21.28	
Murree (7 months)	58																									
Nowshera	692						5																	23.12	23.12	
Chehat (8 months)	190																									
Peshawar	3,483					1		8	5	1	1													10.62	10.62	
outposts of																										
Troops marching in the Punjab						1																				
	15,405	1	1			20	14	1	5	3	1		55	4	7	1		4	2	10	12	147	1.07	9.47		
Army of the Presidency	38,851	43	12	5	47	33	5	31	25	6	3	90	6	26	4		25	8	36	20	425	175	1.11	9.83		
Central India Force	4,197					4	5	1	2		3		11	1	2	1		1	1	8	1	41	11	9.77	9.77	
Punjab Frontier Force	9,859			2	2	1	14		5	2		2	63	2	7	1	1	1	1	14	3	121	46	12.28	13.06	

\* For details, see Regimental Table No. XVI.



# NATIVE TROOPS, 1874.

## XIV.

TABLE showing the PREVALENCE of CHOLERA in each MONTH, and the DISTRIBUTION of the DISEASE by STATIONS and PROVINCES.

STATIONS.	Average Strength during the period of occupation.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength for each Province.	Total Deaths of the Year.	Death-rate per 1,000 of Strength for each Province.	
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.					
Troops marching in Bengal and N.-W. Provinces	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	5	...
Troops in the Famine Districts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Fort William	627	...	...	...	2	1	1	...	...	...	...	...	...	...	...	...	...	...
Alipore	885	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dum-Dum	727	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barrackpore	1,011	...	...	...	3	...	...	...	...	...	...	...	...	...	3	...	4	...
Berhampore	160	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Decca	271	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Caohar and Outposts	645	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...
Sylhet (9 months)	82	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Shillong	837	...	...	...	1	...	2	1	...	...	...	...	...	...	1	...	1	474
Gauhati	639	...	...	...	8	2	10	...	...	...	...	...	...	...	20	...	19	...
Tezpur	257	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Nowgong	72	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...
Dibrugarh	723	...	...	...	7	5	...	...	...	...	...	...	...	...	13	...	6	...
Buxa	574	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jalpaiguri (10 months)	27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bhawalpur	605	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...
Duffa Field Force	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dinapore	634	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Segowli (10 months)	104	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Benares	361	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Chunar	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gorakhpur	649	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fyzabad	737	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lucknow	1,486	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sitapur	356	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Patehgarh	136	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cawnpore	910	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Allahabad	848	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nagode	94	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Shahjahanpur	180	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bareilly	999	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Moradabad	416	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Almora	828	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dehra Dun	649	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Roorkee	463	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meerut	778	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Delhi	626	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Agra	939	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Morar	1,522	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhansi	622	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nowgong	274	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sipri, Utwar, and Sambhur	155	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lalitpur	73	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...
Deoli	212	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Umballa	797	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Simsa (5 months)	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phillour	39	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ludhiana	108	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jullundur	557	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ferozepore	616	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mooltan	1,002	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sialkot	1,001	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dharmasala	659	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bakloh	638	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Amritsar	705	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meeran Meer	1,302	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhelum	1,562	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...
Rawal Pindi	1,504	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Talagang	607	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Attock	141	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Murree (7 months)	58	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nowshera	692	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cherat (8 months)	196	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peshawar	3,483	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Troops marching in the Punjab	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>TOTAL</b>	<b>38,851</b>	...	...	11	14	22	3	4	...	1	3	...	1	59	15	41*	111	
<b>CENTRAL INDIA FORCE.</b>	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Augur	250	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Goonah	249	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sirdarpore	269	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kherwarrah	478	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erispoorah	780	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deoli	622	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Schore and Indore	797	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ajmere and Besar	631	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>TOTAL</b>	<b>4,197</b>	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>PUNJAB FRONTIER FORCE.</b>	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Murdan	784	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abbottabad	1,441	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kohat	2,389	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bannoo	1,640	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deza Ghazi Khan	1,439	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deza Ismail Khan	1,657	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rajanpur	488	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>TOTAL</b>	<b>9,826</b>	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

\* In several instances the admissions of detachments have not been returned. Hence in some cases, the deaths, taken from the Annual Regimental Roll, exceed the number of admissions.

# NATIVE TROOPS, 1874.

## XV.

TABLE showing the PREVALENCE of FEVER in each MONTH, and the DISTRIBUTION of FEVERS by STATIONS and PROVINCES.

STATIONS AND AVERAGE STRENGTH DURING THE PERIOD OF OCCUPATION.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admissions of the Year.	Admission-rate per 1,000 of Strength.	Admission-rate for each Province.	Total Deaths of the Year.	Death-rate for each Province.				
	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.									
Fort William ...	627	16	8	12	19	19	23	44	22	18	13	16	26	234	373.2	...	...	...	...	...	...
Alipore ...	895	69	32	35	28	77	64	87	88	77	91	127	832	932.0	...	1	...	...	...	...	...
Dum-Dum ...	127	6	4	1	...	9	2	13	7	7	17	20	17	103	811.0	...	1	...	...	...	...
Barrackpore ...	1,011	114	46	134	244	79	54	69	53	64	51	51	71	1,021	1,009.9	...	1	...	...	...	...
Berhampore ...	169	2	1	4	1	1	...	7	6	19	18	11	6	76	475.0	...	...	...	...	...	...
Dacca ...	271	6	4	9	3	5	6	6	5	6	2	2	2	56	206.6	...	...	...	...	...	...
Cachar and Outposts ...	645	14	16	11	12	16	38	45	48	54	30	42	35	361	559.7	...	...	...	...	...	...
Sylhet (9 months) ...	82	5	5	6	8	12	3	13	5	5	...	...	...	62	756.1	710.6	...	4	...	...	316
Shillong ...	837	33	31	37	23	66	79	75	82	69	46	25	38	604	721.6	...	6	...	...	...	...
Gauhati ...	639	24	26	23	19	35	57	36	27	39	4	10	330	800.8	...	2	...	...	...	...	...
Tezpur ...	257	5	2	4	8	12	20	39	42	57	71	63	80	403	1563.0	...	...	...	...	...	...
Newong ...	72	9	4	4	4	3	4	4	2	7	2	4	...	47	652.7	...	...	...	...	...	...
Dibrugarh ...	723	19	21	10	35	17	32	82	298	209	87	77	54	851	1177.0	...	2	...	...	...	...
Pusa ...	574	12	14	28	33	34	26	33	17	15	8	20	13	253	449.8	...	6	...	...	...	...
Jalpaiguri (10 months) ...	27	...	...	1	...	...	4	10	7	2	...	...	...	24	...	...	...	...	...	...	...
Bhagalpur ...	605	6	13	17	6	2	10	9	18	7	8	15	8	109	180.2	...	1	...	...	...	...
<b>MONTHLY PERCENTAGE OF THE TOTAL</b>	<b>6.3</b>	<b>4.0</b>	<b>6.3</b>	<b>8.2</b>	<b>6.9</b>	<b>7.8</b>	<b>10.9</b>	<b>12.0</b>	<b>11.9</b>	<b>8.4</b>	<b>8.2</b>	<b>9.1</b>	<b>...</b>	<b>180.0</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
Dinapore ...	624	1	6	19	29	20	18	32	48	15	32	22	16	258	413.5	...	1	...	...	...	...
Seegowli (10 months) ...	104	...	...	...	1	3	1	4	4	1	2	2	4	22	211.6	...	...	...	...	...	...
Benares ...	361	8	3	...	2	1	...	7	7	9	7	1	6	52	144.0	...	...	...	...	...	...
Chunar ...	70	1	...	10	6	2	2	6	2	2	9	5	1	46	657.2	...	...	...	...	...	...
Gorakhpur ...	649	7	8	9	5	9	9	22	16	27	18	24	40	194	288.9	...	...	...	...	...	...
Fyzabad ...	737	14	23	13	9	5	1	39	15	27	32	15	14	207	280.9	...	...	...	...	...	...
Lucknow ...	1,486	44	24	21	13	23	17	55	61	66	41	41	11	417	28.6	326.4	...	2	...	...	79
Sitapur ...	356	1	3	4	1	3	2	4	3	14	6	4	3	48	134.8	...	...	...	...	...	...
Fatehgarh ...	136	6	5	5	6	10	4	4	1	4	16	6	11	78	573.5	...	...	...	...	...	...
Cawnpore ...	910	8	8	11	10	19	19	37	39	50	21	14	259	284.6	...	...	...	...	...	...	...
Allahabad ...	848	16	10	21	10	16	20	44	35	83	96	39	40	439	517.7	...	1	...	...	...	...
Nagode ...	94	8	1	1	...	...	...	...	8	12	12	10	3	55	585.1	...	...	...	...	...	...
<b>MONTHLY PERCENTAGE OF THE TOTAL</b>	<b>5.5</b>	<b>4.4</b>	<b>6.5</b>	<b>4.5</b>	<b>5.3</b>	<b>4.5</b>	<b>12.2</b>	<b>10.7</b>	<b>14.4</b>	<b>15.5</b>	<b>9.2</b>	<b>8.3</b>	<b>...</b>	<b>100.0</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
Shahjahanpur ...	180	1	4	...	1	2	4	10	6	4	6	3	1	42	233.3	...	...	...	...	...	...
Bareilly ...	929	7	3	10	5	1	4	13	17	25	11	8	8	112	120.5	...	1	...	...	...	...
Moradabad ...	416	10	10	12	4	15	9	12	9	9	6	2	2	100	240.4	...	...	...	...	...	...
Almora ...	628	6	11	13	8	13	16	20	33	39	22	10	17	208	331.2	...	...	...	...	...	...
Dehra Dun ...	649	9	2	7	9	14	12	17	9	14	16	11	11	131	201.8	548.0	...	3	...	...	236
Roorkee ...	463	2	4	3	9	11	...	16	6	12	7	10	6	86	184.7	...	...	...	...	...	...
Meerut ...	778	34	24	15	22	40	47	109	209	359	231	80	67	1,278	1,642.7	...	6	...	...	...	...
Delhi ...	626	20	10	21	13	33	16	49	158	129	88	35	30	602	961.7	...	1	...	...	...	...
<b>MONTHLY PERCENTAGE OF THE TOTAL</b>	<b>3.5</b>	<b>2.6</b>	<b>3.2</b>	<b>2.8</b>	<b>5.1</b>	<b>4.2</b>	<b>9.6</b>	<b>19.8</b>	<b>22.7</b>	<b>14.7</b>	<b>6.2</b>	<b>5.6</b>	<b>...</b>	<b>100.0</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
Agra ...	939	28	27	28	9	34	33	35	33	131	105	45	32	540	575.1	...	3	...	...	...	...
Morar ...	1,522	23	32	32	21	54	46	101	146	290	319	108	124	1,326	871.2	...	4	...	...	...	...
Jhansi ...	622	6	28	22	12	9	7	31	27	55	89	45	45	376	604.5	...	2	...	...	...	...
Nowgong ...	274	4	2	3	4	1	6	12	11	24	25	19	8	110	401.5	677.3	...	2	...	...	238
Sipri, Ulwar, Sambhur, &c. ...	155	...	...	1	1	3	1	11	8	16	12	14	5	72	464.5	...	...	...	...	...	...
Lalitpur ...	73	2	1	...	1	1	...	2	1	2	12	6	3	31	424.7	...	...	...	...	...	...
Deoli ...	212	4	2	4	3	2	3	13	23	28	19	5	10	116	547.2	...	...	...	...	...	...
<b>MONTHLY PERCENTAGE OF THE TOTAL</b>	<b>2.6</b>	<b>3.6</b>	<b>3.5</b>	<b>2.0</b>	<b>4.0</b>	<b>3.7</b>	<b>8.0</b>	<b>9.7</b>	<b>20.1</b>	<b>22.6</b>	<b>11.4</b>	<b>8.8</b>	<b>...</b>	<b>100.0</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
Umballa ...	797	25	17	11	12	22	45	36	107	122	84	26	21	328	602.5	...	2	...	...	...	...
Simla (5 months) ...	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phillour ...	39	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ludhiana ...	108	...	3	3	2	4	2	3	13	25	17	8	2	80	749.7	...	...	...	...	...	...
Jullundur ...	557	11	11	15	4	3	12	17	40	79	36	18	16	253	454.2	...	1	...	...	...	...
Ferozepur ...	616	120	69	69	17	33	35	62	90	110	65	64	75	799	1297.1	...	1	...	...	...	...
Mooltan ...	1,062	35	20	29	29	51	82	26	227	578	315	118	43	1,539	1,533.9	...	...	...	...	...	...
Sialkot ...	1,011	17	12	20	20	16	19	23	26	28	29	39	8	242	231.8	...	...	...	...	...	...
Dharmasala ...	659	7	8	16	24	25	38	36	23	33	34	16	7	267	403.2	...	2	...	...	...	...
Bakloh ...	628	12	4	11	10	12	13	14	23	33	11	6	5	154	241.4	789.1	...	2	...	...	221
Amritsar ...	205	...	2	2	7	11	3	13	31	40	22	22	6	165	804.9	...	4	...	...	...	...
Meesa Meer ...	1,302	37	40	53	64	43	24	26	96	116	185	122	86	862	662.1	...	...	...	...	...	...
Jhelum ...	1,562	12	10	35	26	22	32	40	17	52	71	36	72	425	272.1	...	...	...	...	...	...
Rawal Pindi ...	1,504	9	7	39	32	23	59	45	58	55	45	33	21	425	232.6	...	4	...	...	...	...
Talagran ...	667	3	5	5	15	25	11	12	21	33	106	44	14	295	486.9	...	1	...	...	...	...
Attock ...	141	1	...	5	6	4	3	8	6	14	32	31	14	124	879.4	...	...	...	...	...	...
Murree (7 months) ...	58	...	...	...	2	2	2	1	2	3	...	...	...	10	172.4	...	...	...	...	...	...
Nowshera ...	692	50	26	24	13	22	69	84	17	83	113	4	5	510	737.0	...	5	...	...	...	...
Cerat (8 months) ...	191	...	...	14	2	10	13	20	11	24	22	...	...	116	619.5	...	...	...	...	...	...
Peshawar and Outposts ...	3,483	137	86	115	156	187	188	227													

ABSTRACT of the RETURNS showing the ADMISSIONS,  
(The Statistics of this Table must not be regarded as showing with

		1.—REGIMENTS of BENGAL										
REGIMENT AND STATION OF 1874.	Date of Arrival from Station previously occupied.	REGIMENTAL STRENGTH.			INVALIDED.		DIED.		LOSS PER 1,000			
		Number borne on the Rolls.	Average Strength present during 1874.	Admission-rate of 1874 per 1,000 of the Average Strength.	To their homes for change of air.	For Discharge.	With the Regiment.	Absent from the Regiment.	By Invaliding for Discharge.	By Deaths.		
1	37th Native Infantry, Fort William	...	November 1872, from Bhálgampur...	682	692	1108.0	5	48	7	3	70.38	14.66
2	28th Native Infantry, Alipore	...	January 1873, from Ferozepore ...	679	587	1707.0	22	43	7	5	63.33	17.67
3	Body-Guard, Ballgunj	...	.....	87	79	1506.8	4	2	...	1	23.00	11.50
4	39th Native Infantry, Wing, Alipore	...	} January 1874, from Jhánsi ...	695	627	2413.1	13	54	7	1	77.70	11.51
5	{ 39th Native Infantry, Head-Quarters, Barrackpore	...										
6	10th Native Infantry, Barrackpore	...	February 1872, from Cawnpore ...	673	614	1721.5	16	55	15	3	81.72	26.74
7	16th Native Infantry, Wing, Dacca	...	{ March 1872, from Sháhjáhan- pur and Moradabád }	337	271	1025.8	...	...	2	2	...	11.87
8	3rd Native Infantry, Cachar	...	November 1872, from Meerut ...	694	645	1065.1	1	16	10	2	23.05	17.29
9	43rd Native Infantry, Shillong and Outposts	...	January 1874, from Gáuhati ...	882	829	1407.7	7	11	19	8	12.47	30.61
10	42nd Native Infantry, Gáuhati	...	April 1874, from Upper Assam ...	869	811	1122.1	16	9	37	6	10.36	49.48
11	{ 16th Native Infantry, Head-Quarters, Gáuhati and Tezpur	...	December 1873, from Jalpáiguri ...	379	313	2942.5	48	31	2	5	44.69	18.47
12	44th Native Infantry, Upper Assam	...	April 1874, from Shillong ...	871	854	2068.4	14	18	21	4	20.67	28.70
13	38th Native Infantry, Buxa	...	March 1873, from Fyzabád ...	674	575	1502.6	24	29	16	9	43.03	37.09
14	4th Native Infantry, Bhálgampur	...	December 1872, from Cachar ...	698	638	587.8	14	20	2	3	28.65	7.16
REGIMENTS OF BENGAL PROPER AND ASSAM				8,220	7,445	1524.8	184	337	145	52	41.00	23.97
		2.—REGIMENTS of BEHAR, BENARES,										
1	2nd Native Infantry, Dinapore	...	April 1872, from Jalpáiguri ...	707	607	759.5	5	25	2	2	35.36	5.06
2	{ 13th Native Infantry, Benares (Detach- ments at Berhampur and Chunar)	...	November 1872, from Fort William	695	664	942.8	7	19	11	1	27.34	17.27
3	1st Native Infantry Gorákhpur	...	November 1872, from Agra ...	696	611	887.1	7	18	2	1	25.86	4.31
4	{ 2nd Bengal Cavalry, Fyzabád (Detachments at Segowál, Gorákhpur, Benares, and Dina- pore)	...	March 1874, from Bareilly ...	456	382	850.0	4	10	2	1	21.93	6.58
5	8th Native Infantry, Fyzabád	...	January 1873, from Alipore ...	691	572	912.6	7	10	4	8	14.47	17.36
6	19th Bengal Cavalry, Lucknow	...	February 1873, from Mooltan ...	459	390	841.0	8	5	...	1	10.59	2.18
7	6th Native Infantry, Lucknow	...	November 1873, from Morar ...	685	564	801.4	18	9	11	5	13.14	23.36
8	41st Native Infantry, Lucknow	...	May 1873, from Buxa ...	714	549	1051.0	6	21	1	1	29.41	2.80
9	7th Bengal Cavalry, Sitapur	...	{ April 1872, from Nowgong and Nagode }	454	399	631.6	4	6	2	...	13.22	4.41
10	1st Bengal Cavalry, Cawnpore	...	February 1872, from Morar ...	456	373	836.5	7	14	1	3	30.70	8.77
11	35th Native Infantry, Cawnpore	...	February 1872, from Meean Meer...	697	584	500.0	10	36	4	1	51.65	7.17
12	18th Bengal Cavalry, Allahabád	...	March 1873, from Meean Meer ...	451	372	1524.2	10	28	2	...	62.08	4.43
13	33rd Native Infantry, Allahabád	...	November 1870, from Morar ...	633	594	1032.0	13	67	4	...	105.84	6.32
REGIMENTS OF BEHAR, BENARES, OUDE, AND CAWNPORE				7,794	6,061	881.4	106	268	46	24	34.30	8.98

# TROOPS, 1874.

## VI.

DEATHS, and INVALIDING of each REGIMENT for the Year.  
 (accuracy the relation to Locality of the Sickness and Mortality of Regiments.)

### PROPER, BHOOTAN, and ASSAM.

Total Admissions into Hospital, and Deaths in Hospital during the year.		CAUSES OF ADMISSIONS INTO HOSPITAL, AND OF DEATHS IN HOSPITAL DURING THE YEAR.																									
		Cholera.	Fever.	Veneral Affections.	Rheumatism.	Scurvy.	Anæmia and Debility.	Dropsy.	Phthisis Pulmonalis.	Apoplexy and Sunstroke.	Neuragic Affections.	Eye Diseases.	Heart Disease.	Bronchitis and Asthma.	Pneumonia and Pleurisy.	Dysentery and Diarrhoea.	Spleen Disease.	Hepatitis.	Diseases of the Digestive System.	Diseases of the Urinary System.	Diseases of the Generative System.	Scabies and Skin Diseases.	Gulmen-worm.	Abscess and Ulcer.	Injuries.	Foot-sore.	All other Causes.
1	{ Admitted ... 667 Died ... 7	1	234	27	10	8	12	...	...	...	17	...	43	6	99	2	...	22	4	10	13	1	43	58	45	12	
2	{ Admitted ... 1,002 Died ... 7	...	507	32	11	...	9	...	1	...	5	19	...	59	5	206	6	...	15	...	2	13	...	61	24	6	21
3	{ Admitted ... 119 Died ... 3	...	80	2	1	...	...	...	...	...	...	...	10	2	7	1	...	1	...	2	1	...	2	9	...	1	...
4	{ Admitted ... 452 Died ... 3	...	258	4	11	2	1	...	3	...	2	1	...	9	...	102	...	3	...	...	6	...	29	3	2	16	
5	{ Admitted ... 1,061 Died ... 4	2	375	25	113	...	38	...	...	...	12	6	...	32	2	149	30	1	102	...	7	15	...	41	45	39	27
6	{ Admitted ... 1,057 Died ... 15	1	647	19	13	12	81	...	3	...	2	4	...	15	3	81	47	...	22	...	1	13	...	22	19	31	21
7	{ Admitted ... 278 Died ... 2	1	57	6	21	...	17	...	1	...	4	4	...	27	...	41	...	51	...	1	3	...	11	10	1	22	
8	{ Admitted ... 687 Died ... 10	1	350	18	52	...	15	1	4	...	7	2	...	31	3	54	6	3	12	...	5	28	...	40	25	7	14
9	{ Admitted ... 1,107 Died ... 19	7	521	31	26	...	33	1	8	...	5	8	...	35	13	150	19	4	14	2	3	19	...	69	49	126	24
10	{ Admitted ... 910 Died ... 37	15	429	18	23	...	28	1	1	...	2	5	...	31	3	183	10	3	8	1	6	24	...	63	32	7	17
11	{ Admitted ... 921 Died ... 2	1	483	1	15	...	16	1	...	...	5	5	...	25	4	234	3	2	17	...	7	...	33	27	17	25	
12	{ Admitted ... 1,772 Died ... 21	19	965	44	58	1	34	...	1	...	13	13	...	46	4	155	17	1	31	...	10	52	...	125	76	64	63
13	{ Admitted ... 864 Died ... 16	...	253	12	33	9	57	...	...	...	7	13	1	8	1	87	7	3	6	...	6	45	2	58	162	18	76
14	{ Admitted ... 375 Died ... 2	1	111	20	35	...	4	...	...	...	4	6	...	14	1	46	5	...	4	...	6	13	...	39	14	34	18
	{ Admitted ... 11,352 Died ... 145	49	5,279	259	422	32	345	4	21	1	68	103	1	385	47	1,594	153	17	308	7	59	252	3	636	553	397	357

### OUDE, and CAWNPORE.

1	{ Admitted ... 461 Died ... 2	...	297	19	9	...	11	...	...	...	2	11	...	12	3	37	5	...	6	...	3	2	...	37	19	20	8
2	{ Admitted ... 626 Died ... 11	5	198	162	30	...	6	...	3	1	4	22	3	11	...	49	2	1	14	1	6	19	4	28	22	13	22
3	{ Admitted ... 542 Died ... 2	...	190	88	15	...	7	...	3	...	4	12	...	5	8	49	...	...	4	...	1	21	...	52	25	35	23
4	{ Admitted ... 327 Died ... 2	...	97	10	10	1	3	...	1	...	16	...	10	5	25	...	2	10	3	2	7	...	59	49	5	12	
5	{ Admitted ... 522 Died ... 4	...	142	23	17	...	2	...	1	...	2	22	...	28	...	77	5	2	19	...	5	11	...	34	22	79	31
6	{ Admitted ... 328 Died ... 1	...	115	15	14	...	...	...	...	...	9	15	...	13	3	9	2	1	10	...	2	6	...	31	73	4	6
7	{ Admitted ... 452 Died ... 11	...	156	67	12	...	3	...	...	...	2	9	...	18	3	21	10	...	4	2	4	4	...	47	25	42	25
8	{ Admitted ... 577 Died ... 1	...	153	50	31	...	5	...	1	...	2	9	...	19	6	56	3	...	8	...	2	12	4	93	32	71	20
9	{ Admitted ... 252 Died ... 2	...	53	14	18	...	...	...	...	...	4	22	...	4	6	11	...	...	2	2	1	8	...	24	71	2	10
10	{ Admitted ... 312 Died ... 1	...	159	7	11	...	2	...	...	...	1	5	...	6	4	13	...	1	2	...	5	...	36	55	2	3	
11	{ Admitted ... 292 Died ... 4	1	123	28	5	...	14	...	1	...	1	15	...	11	3	29	1	...	2	...	1	3	...	46	6	6	5
12	{ Admitted ... 567 Died ... 2	1	233	11	30	8	6	...	...	...	3	11	1	7	2	39	3	1	7	1	2	11	2	56	87	29	16
13	{ Admitted ... 613 Died ... 4	...	304	13	29	...	18	3	1	...	1	12	...	12	...	37	...	...	6	...	2	7	1	45	36	63	23
	{ Admitted ... 5,871 Died ... 46	7	2,189	507	231	9	77	3	11	1	35	181	4	156	43	443	31	8	94	9	31	116	11	588	522	371	292

\* Forty-three admissions from Goltra.

3.—REGIMENTS of ROHILCUND										
REGIMENT AND STATION OF 1874.	Date of Arrival from Station previously occupied.	REGIMENTAL STRENGTH.			INVALIDED.		DIED.		LOSS PER 1,000	
		Number borne on the Rolls.	Average Strength present during 1874.	Admission rate of 1874 per 1,000 of the Average Strength.	To their homes for change of air.	For Discharge.	With the Regiment.	Absent from the Regiment.	By Invaliding for Discharge.	By Deaths.
1 45th Native Infantry, Wing, Sháhsháhnpur ...	February 1872, from Mooltan ...	700	194	1149.5	21	41	1	1	58.57	2.86
2 45th Native Infantry, Wing, Moradabad ...			365	775.3						
3 { 16th Bengal Cavalry, Bareilly (with a Detachment of 50 men at Moradabad) ... }	January 1874, from Pesháwar ...	456	400	400.0	8	16	1	1	35.09	4.39
4 11th Native Infantry, Bareilly ...	February 1872, from Dum-Dum ...	700	577	426.3	1	41	2	...	55.57	2.86
5 3rd Goorkhas, Almora ...	.....	715	628	939.1	7	26	2	3	36.36	7.00
6 2nd Goorkhas, Dehra Dún ...	.....	708	645	809.3	12	18	6	4	25.42	14.12
7 { Sappers and Miners, Roorkee (with Detachments at Rawal Pindi, Pesháwar, and Cherat) ... }	.....	1,151	968	1391.7	17	12	7	2	10.43	7.82
8 { 4th Bengal Cavalry, Meerut (with Detachments at Delhi and Agra) ... }	{ January 1874, from Secowli, Gorákhpur, and Benares ... }	447	374	1721.9	2	36	3	...	80.54	6.71
9 { 5th Native Infantry, Meerut (with a Detachment of 250 men at Umballa for 8 months ...) }	November 1872, from Benares ...	702	644	2500.0	4	24	13	1	34.19	19.94
10 20th Native Infantry, Delhi ...	January 1872, from Talagón ...	689	582	1407.2	12	22	7	3	31.93	14.51
REGIMENTS OF ROHILCUND AND MEERUT ...		6,268	5,377	1182.3	84	236	42	15	37.65	9.09
4.—REGIMENTS of AGRA										
1 { 18th Native Infantry, Agra (with Detachments at Fatehgarh and Ulwar) ... }	December 1872, from Gorákhpur	698	547	1451.6	7	21	5	4	30.09	12.89
2 { 36th Native Infantry, Agra (with Detachments at Fatehgarh and Ulwar) ... }	March 1873, from Pesháwar ...	673	579	1129.9	17	92	10	8	136.70	26.75
3 6th Bengal Cavalry, Morar ...	February 1872, from Cawnpore ...	457	360	1153.3	18	27	2	2	59.08	8.75
4 9th Native Infantry, Morar ...	January 1874, from Lucknow ...	700	629	1583.5	26	30	6	2	42.86	11.43
5 34th Native Infantry, Morar ...	November 1870, from Lucknow ...	692	634	1285.5	11	25	9	1	36.13	14.45
6 { 24th Native Infantry, Jhansi (with Detachments at Lalitpur and Sipi) ... }	February 1874, from Meean Meer..	703	627	1030.3	4	11	9	1	15.65	14.22
7 { 2nd Bengal Cavalry, Nowgong (with a Detachment of 94 men at Nagode) ... }	March 1874, from Jhelum ...	447	368	1135.9	2	48	...	4	107.38	8.95
8 { 9th Bengal Cavalry, Deol (with a Detachment of 119 men at Jhansi and 44 men at Sambhar) ... }	January 1874, from Rawal Pindi... ..	449	372	1260.8	12	8	...	1	17.82	2.23
REGIMENTS OF AGRA AND CENTRAL INDIA ...		4,819	4,116	1266.5	97	262	41	23	54.37	13.28
5.—REGIMENTS of										
1 { 15th Bengal Cavalry, Umballa (with Detachment of 70 men at Jullundar) ... }	April 1873, from Pesháwar ...	458	386	764.2	10	2	1	...	4.37	2.18
2 32nd Native Infantry, Umballa* ...	February 1872, from Rámkhet ...	680	555	1768.2	8	55	11	2	80.88	19.12
3 { 7th Native Infantry, Jullundar (with 148 men at Ludhiana and Phillour) ... }	March 1872, from Lucknow ...	700	631	1290.0	13	27	...	3	38.57	4.29
4 40th Native Infantry, Ferozepore ...	December 1872, from Agra ...	699	586	1754.3	10	28	1	2	40.06	4.29
5 13th Bengal Cavalry, Mooltan ...	January 1873, from Lucknow ...	456	386	2481.9	11	21	5	...	46.05	10.96
6 31st Native Infantry, Mooltan ...	November 1871, from Nowshera ...	605	615	1955.4	1	15	6	2	21.58	11.51
7 17th Bengal Cavalry, Sialkot ...	March 1872, from Sitapur ...	456	372	1845.7	28	21	2	...	46.05	4.39
8 13th Native Infantry, Sialkot ...	February 1873, from Pesháwar ...	698	631	645.0	22	49	8	4	70.20	17.19
9 1st Goorkhas, Dharnasála ...	.....	730	644	1043.5	5	6	5	...	8.22	6.85
10 4th Goorkhas, Bakloh ...	.....	713	638	920.1	3	13	4	...	18.23	5.61
11 11th Bengal Cavalry, Meean Meer ...	December 1872, from Allahabad ...	463	363	994.4	8	3	6	1	6.48	15.12
12 { 17th Native Infantry, Head Quarters, Meean Meer, with Wing at Amritsar ... }	February 1872, from Delhi ...	702	645	1064.1	13	9	12	5	12.82	24.22
13 25th Native Infantry, Meean Meer ...	February 1874, from Rawal Pindi... ..	697	581	1386.6	8	15	2	...	21.32	2.87
14 5th Bengal Cavalry, Jhelum ...	December 1871, from Nowshera ...	457	404	695.5	4	7	2	2	15.32	8.75
15 22nd Native Infantry, Jhelum ...	April 1872, from Dacca ...	685	616	665.6	7	31	3	1	45.26	5.84
16 23rd Native Infantry, Jhelum ...	February 1873, from Hazara ...	692	625	753.6	5	37	4	1	53.47	7.23

\* On service in the Famine Districts for seven months.

and **MERUT.**

		CAUSES OF ADMISSIONS INTO HOSPITAL, AND DEATHS IN HOSPITAL DURING THE YEAR.																									
Total Admissions into Hospital, and Deaths in Hospital during the year.		Cholera.	Fever.	Veneral Affections.	Rheumatism.	Scary.	Anæmia and Debility.	Droopy.	Phthisis Pulmonalis.	Apoplexy and Strabismus.	Neurologic Affections.	Eye Disease.	Heart Disease.	Bronchitis and Asthma.	Pneumonia and Pleurisy.	Dysentery and Diarrhœa.	Spleen Disease.	Hepatitis.	Diseases of the Digestive System.	Diseases of the Urinary System.	Diseases of the Generative System.	Scabies and Skin Diseases.	Guinea-worm.	Abscess and Ulcer.	Injuries.	Foot-sore.	All other Causes.
1	{ Admitted ... 223 Died ...	...	44	35	7	...	3	...	...	...	3	6	...	3	1	12	1	...	12	...	1	4	...	44	28	7	2
2	{ Admitted ... 281 Died ... 1	...	85	22	1	...	...	...	1	1	11	2	19	6	43	...	1	2	...	2	7	3	46	13	...	8	
3	{ Admitted ... 160 Died ... 1	...	44	7	2	2	9	...	1	...	11	...	1	7	6	...	...	...	...	...	...	4	32	33	...	3	
4	{ Admitted ... 246 Died ... 2	...	73	5	2	...	2	...	2	...	5	10	...	2	4	18	1	...	3	...	2	5	33	23	46	10	
5	{ Admitted ... 590 Died ... 2	...	208	86	50	1	15	...	...	...	8	16	...	12	7	34	...	...	25	...	6	10	46	33	14	19	
6	{ Admitted ... 522 Died ... 6	...	129	21	39	...	...	1	5	...	2	53	...	15	8	20	38	9	28	1	...	5	30	70	33	15	
7	{ Admitted ... 1,260 Died ... 7	...	455	109	70	2	18	...	1	...	11	18	1	31	9	112	4	3	35	...	4	32	1	87	162	60	26
8	{ Admitted ... 644 Died ... 3	...	465	4	18	...	7	...	...	...	3	10	...	9	2	25	3	...	4	1	1	10	4	32	37	...	9
9	{ Admitted ... 1,610 Died ... 13	...	1,191	5	27	...	51	...	2	...	6	22	...	41	5	51	32	...	12	...	3	18	1	41	27	61	14
10	{ Admitted ... 819 Died ... 7	...	512	21	23	...	14	...	1	3	6	...	59	4	39	9	2	...	8	...	...	5	4	62	9	17	17
	{ Admitted ... 6,357 Died ... 42	...	3,216	315	230	5	173	1	12	1	42	163	3	192	53	300	88	15	129	2	19	98	13	453	435	157	123
		...	11	1	...	2	...	2	2	...	...	1	2	8	6	...	2	...	...	...	...	...	...	...	1	...	4

and **CENTRAL INDIA.**

1	{ Admitted ... 794 Died ... 5	...	403	11	33	...	10	...	3	1	7	27	...	17	3	36	4	2	18	...	3	9	...	64	58	60	20
2	{ Admitted ... 619 Died ... 10	...	244	37	29	...	10	...	1	...	3	8	1	20	16	36	1	...	9	...	3	13	3	107	20	73	15
3	{ Admitted ... 426 Died ... 2	...	206	28	8	...	2	...	1	...	5	2	...	7	1	8	2	3	5	...	...	2	2	11	34	...	9
4	{ Admitted ... 996 Died ... 6	...	558	43	97	...	...	...	3	...	7	16	...	25	4	55	12	2	7	...	1	16	2	46	76	...	26
5	{ Admitted ... 815 Died ... 9	...	557	32	10	1	1	...	1	...	2	22	1	14	13	55	12	2	7	...	3	4	1	39	25	4	9
6	{ Admitted ... 646 Died ... 9	...	326	34	11	...	5	...	...	...	1	8	2	20	10	15	2	...	9	...	1	10	...	119	37	18	17
7	{ Admitted ... 418 Died ...	...	165	20	21	...	...	...	...	...	5	7	1	4	1	9	2	...	10	1	1	15	2	46	96	1	11
8	{ Admitted ... 469 Died ...	...	244	23	14	...	1	...	...	...	3	8	...	5	...	21	2	...	4	...	1	8	...	66	62	2	6
	{ Admitted ... 5,213 Died ... 41	...	2,798	227	223	1	29	...	9	1	33	98	5	112	48	235	37	9	60	1	13	77	10	498	408	158	113
		...	11	...	...	3	...	3	1	...	...	1	2	8	4	...	1	...	...	...	...	...	...	...	4	...	2

the **PUNJAB.**

1	{ Admitted ... 295 Died ... 1	...	130	3	20	...	2	1	1	...	1	27	...	19	4	15	2	...	5	1	...	4	...	27	28	...	5
2	{ Admitted ... 946 Died ... 11	...	334	72	73	...	20	...	1	9	28	...	11	3	84	3	3	16	...	7	15	...	141	111	2	18	
3	{ Admitted ... 814 Died ...	...	420	70	85	...	6	...	1	...	2	9	...	15	3	19	12	3	21	...	4	7	...	64	44	66	13
4	{ Admitted ... 1,028 Died ... 1	...	798	5	34	1	1	...	1	...	4	18	1	15	...	44	7	...	3	1	2	3	...	43	26	16	5
5	{ Admitted ... 958 Died ... 5	...	636	11	13	6	4	...	...	...	3	37	...	25	7	18	6	...	16	4	1	11	...	44	88	15	9
6	{ Admitted ... 1,221 Died ... 6	...	803	8	27	3	24	...	1	...	5	19	...	17	15	45	7	3	11	...	...	5	1	62	31	16	17
7	{ Admitted ... 575 Died ... 2	...	144	13	55	1	2	...	...	...	12	24	...	38	5	32	1	...	56	1	2	4	1	72	81	3	28
8	{ Admitted ... 497 Died ... 8	...	89	26	51	2	3	1	2	...	16	21	...	22	19	34	...	1	16	...	1	8	1	46	13	2	13
9	{ Admitted ... 672 Died ... 5	...	267	12	53	...	3	...	...	...	2	36	...	19	12	25	3	...	13	3	7	4	...	35	130	36	14
10	{ Admitted ... 587 Died ... 4	...	154	17	58	1	8	...	1	...	2	33	...	30	6	22	3	2	13	...	5	6	...	17	92	23	94
11	{ Admitted ... 359 Died ... 6	...	172	10	21	...	9	...	...	...	2	5	...	21	1	11	5	2	4	...	...	2	...	32	35	2	5
12	{ Admitted ... 667 Died ... 12	...	379	5	22	1	11	...	3	...	2	1	48	36	29	7	...	6	...	1	3	...	35	21	52	11	
13	{ Admitted ... 807 Died ... 2	...	469	13	12	...	14	...	...	...	15	12	...	67	7	14	22	...	18	1	3	15	...	46	36	28	15
14	{ Admitted ... 281 Died ... 2	...	130	21	12	...	...	...	...	...	2	13	...	7	3	20	...	4	6	2	...	2	3	17	45	...	4
15	{ Admitted ... 410 Died ... 3	...	149	19	18	...	10	...	...	...	1	4	...	12	4	54	2	1	3	...	1	16	2	52	23	29	10
16	{ Admitted ... 471 Died ... 4	...	251	14	10	1	4	1	...	...	1	28	...	10	1	33	2	1	6	1	1	14	...	44	19	20	8
		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...

\* Seventy-five admissions from Mumps.

		5.—REGIMENTS of											
REGIMENT AND STATION OF 1874.	Date of Arrival from Station previously occupied.	REGIMENTAL STRENGTH.			INVALIDED.		DIED.		LOSS PER 1,000.				
		Number borne on the Rolls.	Average Strength present during 1874.	Admission-rate of 1874 per 1,000 of the Average Strength.	To their homes for change of air.	For Discharge.	With the Regiment.	Absent from the Regiment.	By Invaliding for Discharge.	By Deaths.			
17	14th Bengal Cavalry, Rawal Pindi	...	February 1874, from Deoli	...	453	385	1171.4	4	16	4	1	35.32	11.04
18	21st Native Infantry, Rawal Pindi	...	March 1874, from Peshāwar	...	684	596	756.7	14	20	13	7	29.24	29.24
19	14th Native Infantry, Rawal Pindi	...	April 1872, from Jullundur	...	682	604	725.2	2	13	6	...	19.06	8.80
20	19th Native Infantry, Talagon	...	November 1871, from Peshāwar	...	693	625	900.4	4	22	3	2	31.75	7.21
21	10th Bengal Cavalry, Nowshera	...	November 1871, from Sialkot	...	454	381	1800.5	5	7	6	1	15.42	15.42
22	27th Native Infantry, Nowshera	...	February 1874, from Barrackpore	...	686	583	1440.8	17	14	10	10	29.41	29.15
23	8th Bengal Cavalry, Peshāwar	...	March 1874, from Meerut	...	450	393	1341.0	7	38	3	2	84.44	11.11
24	12th Bengal Cavalry, Peshāwar	...	December 1872, from Umballa	...	456	390	1561.5	29	28	3	3	61.40	13.16
25	12th Native Infantry, Peshāwar	...	February 1873, from Sialkot	...	697	610	1919.7	15	15	9	7	21.52	22.95
26	26th Native Infantry, Peshāwar	...	November 1871, from Umballa	...	704	631	2123.6	23	42	12	1	59.06	18.47
27	29th Native Infantry, Peshāwar	...	February 1873, from Jhelum	...	696	631	2370.8	21	48	5	2	68.97	10.06
28	30th Native Infantry, Peshāwar	...	March 1874, from Nowshera	...	696	638	2460.9	10	33	5	2	47.41	10.06
REGIMENTS OF THE PUNJAB		...		...	17,332	15,154	1370.0	307	635	151	61	36.64	12.23
REGULAR NATIVE ARMY OF THE PRESIDENCY		...		...	44,433	38,723	1278.6	778	1,738	425	175	30.12	13.50

		6.—REGIMENTS of											
REGIMENT AND STATION OF 1874.	Date of Arrival from Station previously occupied.	REGIMENTAL STRENGTH.			INVALIDED.		DIED.		LOSS PER 1,000.				
		Number borne on the Rolls.	Average Strength present during 1874.	Admission-rate of 1874 per 1,000 of the Average Strength.	To their homes for change of air.	For Discharge.	With the Regiment.	Absent from the Regiment.	By Invaliding for Discharge.	By Deaths.			
1	Guide Corps, Murdan	...	Stationary	...	1,098	790	1367.1	6	81	5	3	73.77	7.29
2	Hazara Mountain Battery, Abbottabad	...	February 1873, from Kohat	...	160	140	1782.7	...	1	...	...	6.02	...
3	4th Punjab Infantry, Abbottabad	...	December 1871, from Kohat	...	741	678	1316.9	4	16	8	2	21.59	13.49
4	5th Goorkhas, Abbottabad	...	Stationary	...	745	615	1094.3	4	39	8	2	52.35	13.42
5	Peshāwar Mountain Battery, Kohat	...	February 1873, from Abbottabad	...	166	138	2391.3	1	3	1	...	18.07	6.02
6	4th Garrison Company, Kohat	...	Stationary	...	65	63	1270.0	1	9	1	...	138.46	15.39
7	1st Punjab Cavalry, Kohat	...	{ November 1871, from Edwardes- abad	...	479	360	1227.6	6	17	1	2	35.49	6.70
8	2nd Sikhs, Kohat	...	{ December 1871, from Edwardes- abad	...	730	611	1878.9	22	23	8	4	31.51	16.44
9	4th Sikhs, Kohat	...	{ February 1872, from Edwardes- abad	...	740	624	1734.0	19	24	8	4	32.43	16.22
10	3rd Punjab Infantry, Kohat	...	December 1871, from Abbottabad	...	734	611	1469.7	6	22	6	2	29.97	10.90
11	3 Field Battery, Edwardesabad	...	{ January 1872, from Dera Is- mail Khan	...	100	86	3011.6	...	2	3	...	18.87	28.30
12	2nd Punjab Cavalry, Edwardesabad	...	{ January 1872, from Dera Is- mail Khan	...	486	362	1820.0	5	12	7	2	24.09	18.52
13	1st Sikhs, Edwardesabad	...	{ February 1872, from Dera Is- mail Khan	...	729	580	1810.3	29	32	11	...	43.90	15.09
14	1st Punjab Infantry, Edwardesabad	...	December 1871, from Kohat	...	724	588	1676.9	11	15	7	2	20.72	12.43
15	3rd Punjab Cavalry, Dera Ghazi Khan	...	January 1872, from Rajanpore	...	492	369	2500.5	13	17	2	2	24.39	8.13
16	2nd Punjab Infantry, Dera Ghazi Khan	...	January 1872, from Kohat	...	727	600	1990.0	5	26	4	5	35.76	12.58
17	5th Punjab Infantry, Dera Ghazi Khan	...	{ March 1872, from Dera Ismail Khan	...	734	626	2225.2	6	18	17	1	24.32	21.52
18	2 Field Battery, Dera Ismail Khan	...	{ January 1872, from Edwardes- abad	...	107	90	2288.9	2	1	...	...	9.35	...
19	5th Punjab Cavalry, Dera Ismail Khan	...	{ February 1872, from Dera Gha- zi Khan	...	499	386	2007.8	7	21	3	2	42.94	19.22
20	3rd Sikhs, Dera Ismail Khan	...	{ February 1872, from Dera Gha- zi Khan	...	724	611	1945.3	4	56	10	5	69.06	20.72

the PUNJAB—(continued).

		CAUSES OF ADMISSIONS INTO HOSPITAL, AND OF DEATHS IN HOSPITAL DURING THE YEAR.																										
Total Admissions into Hospital, and Deaths in Hospital during the Year.		Cholera.	Fever.	Veneral Affections.	Rheumatism.	Scary.	Anæmia and Debility.	Dropsy.	Phthisis Pulmonalis.	Apoplexy and stroke.	Neuralgic Affections.	Eye Diseases.	Heart Disease.	Bronchitis and Asthma.	Pneumonia and Pleurisy.	Dysentery and Diarrhoea.	Syden Disease.	Hepatitis.	Diseases of the Digestive System.	Diseases of the Urinary System.	Diseases of the Genitive System.	Scabies and Skin Diseases.	Guinea-worms.	Abscess and Ulcer.	Injuries.	Foot-sore.	All other Causes.	
17	{ Admitted ... 451 Died ... 4	...	129	21	15	1	3	...	1	...	6	8	...	27	2	40	8	1	11	...	2	13	5	38	67	1	...	22
18	{ Admitted ... 451 Died ... 13	...	143	6	11	5	12	1	1	...	2	12	...	43	17	44	5	1	14	...	1	4	...	56	24	33	15	1
19	{ Admitted ... 438 Died ... 6	...	135	11	15	...	8	1	...	...	...	8	...	19	11	40	1	...	10	1	1	16	2	94	11	42	12	...
20	{ Admitted ... 619 Died ... 3	...	298	8	13	1	13	2	1	...	1	14	...	19	5	13	4	...	32	...	1	24	...	57	47	43	23	...
21	{ Admitted ... 686 Died ... 6	...	322	4	14	...	10	...	1	...	1	12	1	20	12	29	2	4	23	...	...	8	...	87	111	1	14	...
22	{ Admitted ... 840 Died ... 10	...	526	11	34	3	15	1	1	...	3	11	1	36	7	46	14	2	17	...	6	6	...	43	31	17	9	1
23	{ Admitted ... 527 Died ... 3	...	290	9	22	1	...	...	...	...	3	13	1	12	2	63	...	...	13	...	1	1	...	46	42	...	8	...
24	{ Admitted ... 609 Died ... 3	...	414	5	26	...	...	...	...	...	1	14	...	20	6	30	...	...	5	1	1	3	...	30	40	9	4	...
25	{ Admitted ... 1,171 Died ... 9	...	890	24	9	1	20	...	...	...	2	5	...	21	2	56	4	1	23	...	1	9	...	47	23	15	9	2
26	{ Admitted ... 1,349 Died ... 12	...	762	31	23	2	20	...	4	...	10	14	5	104	29	93	30	...	30	...	2	17	...	61	25	61	17	...
27	{ Admitted ... 1,496 Died ... 5	...	1,069	22	38	...	9	...	...	...	1	6	7	...	16	16	83	10	4	33	4	...	14	1	65	27	58	13
28	{ Admitted ... 1,593 Died ... 5	...	1,262	17	10	...	7	...	...	...	5	14	...	18	8	103	4	...	16	1	...	13	...	57	23	24	11	...
	{ Admitted ... 20,719 Died ... 151	1	11,685	438	794	30	247	8	20	2	117	448	10	731	237	1,147	161	33	440	21	51	247	16	1,482	1,294	632	427	14
	{ Admitted ... 49,512 Died ... 425	58	25,158	1746	1909	77	821	16	73	6	295	993	23	1576	424	3,779	470	82	1,040	40	173	780	53	3,657	3,212	1815	1,222	42

the PUNJAB FRONTIER FORCE.

1	{ Admitted ... 1,001 Died ... 5	382	27	57	1	7	...	5	...	19	54	1	53	1	39	18	6	35	...	1	16	4	81	107	60	27	...	
2	{ Admitted ... 250 Died ...	64	3	11	...	...	...	...	...	3	3	...	22	2	11	...	...	24	...	...	...	12	1	18	61	9	6	...
3	{ Admitted ... 827 Died ... 8	353	20	35	3	30	...	2	...	18	18	1	74	27	46	4	2	50	...	1	14	1	49	39	26	14	...	
4	{ Admitted ... 673 Died ... 8	332	13	44	4	...	...	5	...	8	50	...	37	8	36	7	8	15	...	1	2	...	29	40	43	15	2	
5	{ Admitted ... 330 Died ... 1	173	1	8	...	2	...	...	...	4	...	...	7	2	22	1	...	12	...	1	3	...	41	40	9	4	...	
6	{ Admitted ... 80 Died ... 1	41	1	2	...	...	...	1	...	2	...	...	6	...	4	...	1	6	...	...	2	...	4	4	1	5	...	
7	{ Admitted ... 453 Died ... 1	245	9	9	1	3	...	...	...	1	5	1	7	5	53	3	1	8	1	...	6	8	43	36	...	8	1	
8	{ Admitted ... 1,348 Died ... 8	653	14	63	2	6	...	2	...	6	11	...	76	10	64	15	...	32	...	...	7	4	100	42	27	19	...	
9	{ Admitted ... 1,082 Died ... 8	726	17	19	2	9	...	...	...	9	7	...	24	8	85	14	...	27	...	1	6	2	54	33	31	8	...	
10	{ Admitted ... 898 Died ... 6	552	9	26	8	...	...	...	...	4	6	...	22	14	69	14	4	18	1	2	15	...	59	47	18	10	...	
11	{ Admitted ... 259 Died ... 3	174	...	4	...	...	...	...	...	4	...	...	5	2	6	2	...	7	...	...	3	17	29	1	5	...	...	
12	{ Admitted ... 601 Died ... 7	392	...	17	...	3	...	...	...	2	13	1	15	5	37	2	...	8	...	...	5	2	63	88	1	7	...	
13	{ Admitted ... 1,050 Died ... 11	676	12	32	3	3	...	...	...	4	9	...	33	21	72	11	1	13	1	4	11	13	59	42	10	20	3	
14	{ Admitted ... 986 Died ... 7	641	7	15	...	2	2	2	...	6	9	...	34	15	62	3	4	26	1	1	7	7	76	24	23	19	1	
15	{ Admitted ... 926 Died ... 2	619	3	10	1	9	...	...	...	4	2	...	16	3	23	1	...	22	...	...	11	4	68	70	3	17	1	
16	{ Admitted ... 1,164 Died ... 4	812	14	24	2	20	...	...	1	5	13	...	22	7	46	17	...	23	1	...	12	1	64	22	34	24	1	
17	{ Admitted ... 1,393 Died ... 17	877	12	21	4	2	...	4	...	5	19	1	35	53	49	5	...	30	1	1	13	2	74	50	11	24	...	
18	{ Admitted ... 206 Died ...	112	1	3	...	...	...	1	...	2	2	...	15	2	14	...	...	8	...	...	1	16	25	2	2	...	...	
19	{ Admitted ... 775 Died ... 3	381	6	15	5	34	...	2	...	16	4	...	...	5	27	8	...	7	...	3	8	2	122	101	20	9	...	
20	{ Admitted ... 1,213 Died ... 10	759	9	23	4	6	...	...	...	2	9	...	27	27	80	9	...	34	...	1	8	5	120	17	55	18	1	



TABLE

		6.—REGIMENTS of the									
REGIMENT AND STATION OF 1874.	Date of Arrival from Station previously occupied.	REGIMENTAL STRENGTH.			INVALIDED		DIED		LOSS PER 1,000		
		Number borne on the rolls.	Average Strength present during 1874.	Admission-rate of 1874 per 1,000 of the Average Strength.	To their homes for change of air.	For discharge.	With the Regiment.	Absent from the Regiment.	By Invaliding for Discharge.	By Deaths.	
21 6th Punjab Infantry, Dera Ismail Khan ...	February 1872, from Dera Ghazi Khan.	740	611	1309.0	7	34	5	7	45.95	16.22	
22 4th Punjab Cavalry, Rajanpur ...	December 1871, from Kohat ...	566	380	1741.0	8	12	6	1	23.71	13.83	
REGIMENTS OF THE PUNJAB FRONTIER FORCE ...		12,223	9,888	1722.4	166	470	121	46	38.44	13.66	

		7.—REGIMENTS of the CENTRAL									
1 1st Central India Horse, Goonah, with Detachments ...		492	251	589.6	4	24	2	...	48.78	4.07	
2 2nd Central India Horse, Augur ...		490	390	266.7	2	36	...	2	73.47	4.08	
3 Malwa Bheel Corps, Sirdarpore ...		593	386	911.9	7	16	3	1	26.98	6.75	
4 Meywar Bheel Corps, Kherwarrah ...		797	474	921.9	...	...	8	3	...	15.56	
5 Mairwarra Battalion, Ajmere ...		701	599	1305.7	27	16	6	...	22.92	8.56	
6 Bhopal Battalion, Sehore ...		929	789	600.8	3	10	3	1	10.70	4.31	
7 Erinpoorah Force, Erinpoorah ...		875	765	808.0	1	5	9	1	5.71	11.43	
8 Deolee Force, Deolee ...		876	647	1125.2	4	...	10	3	...	14.84	
REGIMENTS OF THE CENTRAL INDIA IRREGULAR FORCE ...		5,663	4,211	888.6	48	107	41	11	18.80	9.18	

## STATEMENT SHOWING THE GAIN AND LOSS IN STRENGTH

Present with the Regiments on 1st January 1874 ...	...	...	...	...	43,822
At their homes on Furlough ...	...	...	...	...	310
At their homes on Sick Leave ...	...	...	...	...	414
Remaining sick in the Hospitals of other Regiments ...	...	...	...	...	23

Total Strength on 1st January 1874 ... 44,568

## ADDITIONS OF THE YEAR.

Transfers received from other Regiments ...	...	...	...	...	54
Recruits received during the year ...	...	...	...	...	4,661
Deserters rejoined ...	...	...	...	...	11

Total Gain ... 4,726

## ANNUAL RELIEF OF THE

## INFANTRY

17th Native Infantry, From Meean Meer	To Morar ...	...	...	Arrived	January 1875.
26th Native Infantry, " Delhi	" Peshawar ...	...	...	Arrived	March 1875.
26th Native Infantry, " Peshawar	" Meean Meer ...	...	...	Arrived	November 1874.

Total Admissions into Hospital, and Deaths in Hospital during the Year.		CAUSES OF ADMISSIONS INTO HOSPITAL AND OF DEATHS IN HOSPITAL DURING THE YEAR.																									
		Cholera.	Fevers.	Veneral Affections.	Rheumatism.	Scurvy.	Anæmia and Debility.	Droopy.	Pthiasis Pulmonalis.	Apoplexy and Stroke.	Neuralgic Affections.	Eye Diseases.	Heart Disease.	Bronchitis and Asthma.	Pneumonia and Pleurisy.	Dysentery and Diarrhoea.	Spleen Disease.	Hepatitis.	Diseases of the Digestive System.	Diseases of the Urinary System.	Diseases of the Generative System.	Scabies and Skin Diseases.	Gullean-worm.	Abscess and Ulcer.	Injuries.	Footsore.	All other Causes.
21	{ Admitted ... 977 { Died ... 5	...	598	18	23	6	26	2	...	7	12	2	17	15	49	18	...	10	2	2	2	2	2	88	98	22	27
22	{ Admitted ... 679 { Died ... 6	...	427	...	19	2	4	...	3	1	8	...	9	15	14	5	1	...	15	1	2	8	...	55	77	1	11
	{ Admitted ... 17,031 { Died ... 121	...	10,129	196	480	48	166	4	27	1	126	236	7	556	247	968	157	28	430	9	21	168	63	1,301	1,022	402	299
		...	17	...	2	1	1	1	7	...	...	2	7	56	7	2	2	...	22	2	...	...	...	5	5	...	11

INDIA IRREGULAR FORCE.

1	{ Admitted ... 148 { Died ... 2	...	65	8	3	...	4	1	...	7	17	...	3	1	11	4	...	1	...	...	...	3	3	13	...	4	
2	{ Admitted ... 80 { Died ...	...	40	...	5	...	2	...	...	2	1	...	2	8	1	...	...	...	1	...	3	1	9	...	5		
3	{ Admitted ... 312 { Died ... 3	...	128	9	11	...	11	1	1	...	4	19	...	17	2	19	2	2	1	1	2	13	21	32	29	20	7
4	{ Admitted ... 437 { Died ... 8	...	155	7	3	...	4	...	...	...	25	...	18	12	2	1	1	3	...	...	8	63	78	38	8	11	
5	{ Admitted ... 836 { Died ... 6	...	275	9	86	...	6	...	1	...	12	68	...	3	27	38	7	1	53	...	5	2	17	66	76	64	20
6	{ Admitted ... 474 { Died ... 3	...	279	17	20	1	...	...	...	7	27	...	3	7	59	...	...	5	1	1	8	4	20	11	3	1	
7	{ Admitted ... 687 { Died ... 9	...	301	14	13	...	2	...	3	1	8	77	...	6	28	39	5	3	13	...	3	10	8	54	51	28	20
8	{ Admitted ... 728 { Died ... 10	...	241	41	38	1	8	2	1	1	1	66	...	27	10	17	4	1	21	1	3	16	12	96	55	50	15
	{ Admitted ... 3,742 { Died ... 41	...	1,884	105	179	2	37	4	6	2	41	300	...	77	89	193	24	8	97	3	15	57	131	356	282	173	83
		...	9	...	...	...	1	1	2	1	...	...	1	1	10	2	3	...	1	...	...	...	...	5	...	...	6

OF THE REGULAR NATIVE ARMY OF BENGAL DURING 1874.

PERMANENT LOSS OF THE YEAR.

Deaths at Head-Quarters, at Outposts, and in Detachments	...	...	...	429
Deaths while on Furlough, &c.	...	...	...	66
Deaths while at home on Sick Leave	...	...	...	105

Total Deaths ... 600

Invalided for Discharge	...	...	...	1,788
Transfers given to other Regiments	...	...	...	47
Discharged otherwise	...	...	...	1,809
Desertions, struck off for bad conduct, &c.	...	...	...	484

Total Loss ... 4,469

Remaining on the Regimental Rolls on 31st December 1874 ... 44,825

NATIVE ARMY, 1874-75.

REGIMENTS.

33rd Native Infantry	From Allahabad	To Delhi	... Arrived	December 1874.
34th Native Infantry	" Morar	" Allahabad	... Arrived	November 1874.



TABLE NO. 3. JAIL POPULATION, 1874.

Month	Male	Female	Total
Jan	10	5	15
Feb	12	6	18
Mar	15	8	23
Apr	18	10	28
May	20	12	32
Jun	22	14	36
Jul	25	16	41
Aug	28	18	46
Sep	30	20	50
Oct	32	22	54
Nov	35	24	59
Dec	38	26	64
Total	265	145	410

# JAILS OF THE BENGAL PRESIDENCY, 1874.

## I.

*TABLE showing the SICKNESS and MORTALITY among the JAIL POPULATION of the BENGAL PRESIDENCY during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.*

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS.																	
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent and Continued.	Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Diseases.	Phthisis Pulmonalis.	Dropsy.	Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.
						January	69,722	2,067	29.6	308	4.42	2	1	1	6	20	77	36	1	2	3	81	3
February	70,592	1,938	27.4	194	2.75	4	5	1	5	24	1	38	13	1	2	42	2	6	6	10	4	30	
March	70,939	1,985	28.0	169	2.38	9	1	1	5	16	2	30	14	1	1	45	1	11	8	8	4	14	
April	71,147	2,077	29.2	164	2.31	16	1	1	8	13	1	42	20	1	3	25	1	9	4	5	2	16	
May	71,069	2,037	28.7	166	2.32	3	1	2	4	19	4	36	13	1	1	20	1	18	1	1	2	15	
June	72,123	2,086	28.9	177	2.45	14	1	1	9	11	1	26	12	1	2	33	3	22	1	6	10	21	
July	73,021	2,338	32.0	189	2.59	22	2	2	6	4	3	66	19	1	3	33	3	12	3	1	4	12	
August	73,548	2,951	40.1	232	3.16	7	1	1	11	7	4	93	28	1	4	18	3	17	5	5	19	15	
September	74,246	3,132	42.2	370	4.98	7	1	1	12	4	4	138	43	1	4	29	2	12	5	5	18	21	
October	73,635	3,399	45.6	325	4.41	9	1	1	29	16	3	123	30	1	1	39	1	19	7	7	27	24	
November	72,839	2,989	40.9	329	4.48	16	1	1	12	15	1	132	34	1	1	34	2	17	6	1	24	27	
December	71,891	2,429	33.8	255	3.53	5	1	1	9	5	1	87	27	1	4	45	1	21	5	1	20	22	
						179	14	7	10	154	22	891	289	8	26	434	18	181	61	5	171	50	258
						Died per 1,000 of the Average Strength.																	
For the year	72,060	2,448	34.0	2,875	39.90	2.48	.19	3.72	.31	16.38	.11	.37	6.02	.25	2.51	.55	.07	2.37	.69	3.28			

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.	
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				
	Cholera	4	12	33	43	16	37	72	38	167	21	29				8
Smallpox	15	28	38	45	29	16	6	2	1	...	4	1	185	2.5	7.57	
Enteric Fever	1	...	...	1	4	...	...	1	2	1	...	...	10	.1	70.00	
Fever, Intermittent	1,597	1,119	1,522	1,638	1,737	1,756	3,029	4,147	4,058	4,926	3,963	2,053	30,576	424.3	35	
Fever, Remittent and Continued	135	161	202	158	146	87	96	89	117	114	93	73	1,536	20.9	16.22	
Apoplexy	...	2	2	2	10	9	7	3	5	4	3	1	48	.7	45.83	
Dysentery	487	343	451	526	594	477	763	1,054	881	717	555	535	7,293	101.2	8.28	
Diarrhoea	440	400	638	732	599	569	708	799	634	511	459	429	6,929	96.1	10.81	
Hepatitis	5	4	4	5	6	9	7	6	12	9	3	4	74	1.0	4.59	
Spleen Disease	59	39	25	34	45	46	52	59	59	66	57	46	598	8.2	13.36	
Respiratory Diseases	365	274	371	229	232	241	228	189	219	211	325	457	3,241	45.0	61.90	
Phthisis Pulmonalis	26	21	24	26	32	33	15	29	24	26	28	27	292	4.1	21.11	
Dropsy	37	25	33	20	22	21	28	23	26	24	19	20	280	4.0	16.15	
Atrophy and Anæmia	93	70	71	65	55	70	87	112	101	128	162	105	1,059	14.7	3.00	
Scurvy	12	4	9	12	14	12	16	17	29	21	14	7	167	2.3	19.0	
Rheumatism	110	90	124	112	116	105	124	146	94	115	111	123	1,370	18.9	1.143	
General Diseases	75	79	94	104	94	115	80	115	88	97	105	97	1,143	15.9	808	
Eye Diseases	30	38	65	102	100	86	122	89	88	70	71	36	808	12.5	106.7	
Abscess and Ulcer	610	666	658	669	719	859	761	714	699	524	454	467	7,691	106.7	44.2	
Wounds and Accidents	149	232	295	290	329	278	360	365	280	231	218	226	3,184	44.2	97.8	
All other Causes	698	619	611	641	657	615	596	615	593	548	463	414	7,059	97.8		
	4,828	4,237	5,181	5,454	5,437	5,432	7,142	8,543	8,338	8,394	6,158	5,129	74,073			
	Admitted per 1,000 of the Average Strength in each Month.															
	69.2	60.0	75.0	76.7	76.5	75.3	97.8	116.2	109.6	114.0	84.6	71.3	102.9			

# JAILS OF THE BENGAL PRESIDENCY, 1874.

## II.

TABLE showing the SICKNESS and MORTALITY among the JAIL POPULATION in LOWER BENGAL and in ASSAM during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS.																		
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent and Continued.	Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Diseases.	Phthisis Pulmonalis.	Dropsy.	Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.	
						January	16,299	626	38.4	76	...	12	...	...	1	...	25	7	...	1	...	8	1	12
February	16,394	662	39.1	51	...	4	...	...	...	16	1	...	...	...	...	...	...	...	...	...	...	...	...	...
March	16,336	609	37.3	59	...	...	...	...	...	13	4	...	...	...	...	...	...	...	...	...	...	...	...	...
April	16,612	641	38.6	77	...	16	...	...	...	21	4	...	...	...	...	...	...	...	...	...	...	...	...	...
May	16,864	651	38.6	61	...	3	...	...	...	18	3	...	...	...	...	...	...	...	...	...	...	...	...	...
June	17,335	658	37.9	81	...	12	...	...	...	20	3	...	...	...	...	...	...	...	...	...	...	...	...	...
July	17,390	697	40.1	82	...	18	1	...	...	24	6	...	...	...	...	...	...	...	...	...	...	...	...	...
August	17,420	758	43.5	67	...	...	...	...	...	31	7	...	...	...	...	...	...	...	...	...	...	...	...	...
September	17,543	751	42.8	109	...	49	...	...	...	25	3	1	1	1	9	1	...	...	...	...	...	...	...	...
October	17,093	715	41.9	72	...	5	...	1	...	3	25	4	...	1	10	...	...	...	...	...	...	...	...	...
November	16,902	696	41.0	70	...	4	...	...	...	27	10	...	...	...	3	...	...	...	...	...	...	...	...	...
December	16,813	687	40.9	79	...	4	1	...	...	34	9	...	...	...	6	...	...	...	...	...	...	...	...	...
						127	2	4	37	35	10	279	69	1	12	85	5	96	32	1	35	14	40	
						Died per 1,000 of the Average Strength.																		
For the year	16,922	673	39.8	884	52.24	7.50	.12	.24	4.26	.59	29.57	.06	.71	5.02	.30	5.67	1.80	.06	2.06	.83	2.36			

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.			
	Cholera	4	11	30	41	13	33	66	29	126	15	10			
Smallpox	...	...	2	3	2	...	1	...	1	...	1	...	11	7	18.18
Enteric Fever	...	...	...	1	3	...	...	...	...	...	...	...	7	4	57.14
Fever, Intermittent	397	434	632	600	592	658	830	974	832	841	912	744	8,645	519.9	43
Fever, Remittent and Continued	14	13	7	13	20	16	11	22	36	35	26	14	227	13.4	15.42
Apoplexy	...	1	...	...	3	...	...	...	2	3	...	...	10	6	100.00
Dysentery	202	185	226	285	302	299	356	357	261	246	200	240	3,150	189.1	6.13
Diarrhoea	253	237	396	446	341	328	354	335	279	238	225	203	3,635	214.8	79.34
Hepatitis	1	1	1	...	1	3	2	3	8	3	1	...	24	1.4	4.17
Spleen Disease	28	20	15	14	17	29	35	30	25	27	19	22	272	16.1	4.78
Respiratory Diseases	55	59	60	61	68	44	41	49	65	41	39	59	626	37.0	13.43
Phthisis Pulmonalis	14	8	17	13	6	29	6	5	5	5	13	9	121	7.2	79.34
Dropsy	27	17	22	15	15	19	19	16	18	17	8	11	204	12.1	15.69
Atrophy and Anæmia	30	30	37	21	23	26	46	43	40	43	39	38	416	24.6	8.41
Scurvy	11	2	7	5	3	1	3	3	8	3	1	2	49	3.0	2.04
Rheumatism	38	31	62	44	50	47	48	70	25	47	49	36	528	31.2	...
Venereal Diseases	26	27	32	29	23	39	26	39	25	26	38	30	351	20.7	...
Eye Diseases	4	4	14	9	17	27	32	21	28	23	29	14	213	12.6	...
Abscess and Ulcer	112	134	116	166	167	139	148	145	132	123	89	89	1,559	91.6	...
Wounds and Accidents	49	45	74	55	66	65	82	66	77	69	54	58	745	44.0	...
All other Causes	329	271	257	228	224	201	213	200	239	216	188	179	2,727	161.1	...
	1,776	1,520	1,997	2,041	1,856	1,971	2,319	2,409	2,224	2,013	1,923	1,746	23,895		
	Admitted per 1,000 of the Average Strength in each Month.														
	109.0	92.7	122.2	122.9	115.9	113.7	133.4	138.3	126.8	117.8	113.4	103.8	1412.1		

# JAILS OF THE BENGAL PRESIDENCY, 1874.

## III.

*TABLE showing the SICKNESS and MORTALITY among the JAIL POPULATION in CHOTA NAGPORE and in the DINAPORE, BENARES, OUDE and CAWNPORE DISTRICTS, during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.*

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS.																			
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent and Continued.	Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Diseases.	Phthisis Pulmonalis.	Dropsy.	Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.		
						...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
January	24,253	609	25.1	72	...	...	1	1	...	3	...	29	6	...	...	15	...	...	3	...	...	6	...	...	8
February	24,711	566	22.9	57	...	...	0	...	...	...	...	15	4	...	1	10	...	...	...	...	...	1	...	3	12
March	25,041	607	24.2	41	...	1	...	...	...	...	...	11	...	...	...	...	...	4	...	...	...	1	...	1	4
April	24,793	610	24.6	44	...	1	...	1	...	...	...	19	9	...	1	4	...	1	...	...	...	1	...	1	4
May	24,953	569	22.8	42	...	...	1	...	4	...	...	13	6	...	...	...	...	...	...	1	...	...	...	...	8
June	25,298	576	22.8	43	...	2	1	1	1	...	...	13	3	...	...	...	1	...	...	...	...	...	3	...	8
July	25,905	703	27.1	75	...	4	1	...	3	1	...	12	12	...	...	12	1	...	1	...	1	...	1	...	7
August	26,137	836	32.0	107	...	5	...	4	4	3	...	45	17	...	4	10	...	...	...	...	...	6	...	4	4
September	26,430	811	30.7	159	...	23	...	1	...	...	...	73	26	...	...	6	1	...	...	...	...	...	...	2	10
October	26,426	847	32.0	112	...	4	...	...	4	...	...	32	11	...	...	8	...	...	...	...	...	10	...	2	11
November	26,088	713	27.3	115	...	12	...	...	...	...	...	55	15	...	...	6	...	...	...	...	...	8	...	1	9
December	25,777	627	24.3	77	...	1	...	...	...	...	...	29	6	...	1	8	...	...	...	...	10	...	...	...	8
						52	11	3	19	25	4	380	122	3	12	91	4	35	20	2	56	15	90		
						Died per 1,000 of the Average Strength.																			
For the year	25,682	673	26.4	944	37.05	2.04	.83	1.85	.16	19.70	.12	.47	3.57	.16	1.37	.78	.08	2.20	.59	3.23					

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.		
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.					
	...	...	...	...	...	...	...	...	...	...	...	...					
Cholera	...	1	3	2	3	4	6	9	41	6	19	2	96	3.7	54.17		
Smallpox	15	28	35	41	24	15	5	1	...	...	2	...	166	6.5	6.62		
Enteric Fever	1	...	...	...	1	...	...	...	...	...	...	...	3	.1	...		
Fever, Intermittent and Continued	397	311	408	392	386	462	966	920	936	1,085	584	455	7,302	28.6	...		
Fever, Remittent and Continued	10	7	19	16	17	6	29	19	20	41	34	31	249	9.8	10.04		
Apoplexy	...	...	...	...	5	...	1	...	1	...	1	1	9	.3	44.44		
Dysentery	143	80	170	134	103	109	258	395	282	236	186	146	2,271	89.1	...		
Diarrhoea	100	96	179	193	155	155	222	293	238	156	151	151	2,089	82.0	11.51		
Hepatitis	1	3	1	4	2	...	3	2	...	4	...	2	22	.9	13.64		
Spleen Disease	13	6	8	7	16	12	7	17	10	11	10	10	127	5.0	9.45		
Respiratory Diseases	53	63	43	39	40	41	70	68	67	52	49	154	748	29.3	12.17		
Phthisis Pulmonalis	7	6	3	6	8	8	3	9	5	8	2	10	75	2.9	46.67		
Dropsy	5	5	3	3	4	2	3	3	3	5	...	5	41	1.6	48.78		
Atrophy and Anæmia	26	23	7	22	21	23	21	43	29	47	18	40	320	12.6	17.50		
Scurvy	1	...	...	6	10	9	4	1	2	...	1	...	34	1.3	5.88		
Rheumatism	29	23	36	24	25	23	38	33	34	33	38	47	383	15.0	...		
Veneral Diseases	19	24	24	33	39	36	25	27	30	33	36	29	346	13.6	...		
Eye Diseases	13	14	26	33	35	28	37	32	23	10	19	9	279	11.0	...		
Abscess and Ulcer	199	224	237	190	237	346	263	195	155	159	123	161	2,489	97.7	...		
Wounds and Accidents	58	110	149	124	94	114	157	139	121	91	104	86	1,307	51.3	...		
All other Causes	150	148	126	157	156	156	141	177	172	137	115	102	1,737	68.2	...		
	1,299	1,381	1,437	1,426	1,372	1,549	2,208	2,383	2,170	2,114	1,492	1,441	20,093				
	Admitted per 1,000 of the Average Strength in each Month.																
	51.9	47.8	57.4	57.5	55.0	61.3	87.6	91.2	82.1	89.0	57.2	55.9	788.5				

# JAILS OF THE BENGAL PRESIDENCY, 1874.

## IV.

*TABLE showing the SICKNESS and MORTALITY among the JAIL POPULATION in the CENTRAL PROVINCES, excluding JUBBULPORE and SAUGOR, during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.*

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS.																	
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent and Continued.	Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Diseases.	Phthisis Pulmonalis.	Dropsy.	Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.
January	2,458	70	28.5	6	...	...	...	...	1	...	1	...	...	1	...	...	...	1	...	1			
February	2,455	87	35.4	4	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...			
March	2,455	95	37.9	3	...	...	...	...	...	...	3	...	...	...	...	...	...	1	...	...			
April	2,445	93	38.0	4	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...			
May	2,384	74	31.0	4	...	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...			
June	2,492	90	36.1	4	...	...	...	...	1	...	1	...	...	...	...	...	...	1	...	...			
July	2,474	92	37.2	4	...	...	...	...	...	...	1	...	...	...	1	...	...	...	1	...			
August	2,489	35	14.2	0	...	...	...	...	...	...	4	...	...	...	...	...	...	...	1	...			
September	2,490	144	57.8	9	...	...	...	...	...	...	3	...	...	1	...	...	...	1	...	1			
October	2,438	146	59.9	17	...	...	...	...	1	...	3	...	...	1	1	...	1	1	...	1			
November	2,388	198	83.2	9	...	...	...	...	...	1	3	...	...	1	...	1	1	3	...	1			
December	2,320	101	43.5	8	...	...	...	...	...	3	...	...	...	1	...	...	1	1	...	2			
									1	3	...	17	23	1	...	9	3	1	1	2	11	3	6
Died per 1,000 of the Average Strength.																							
For the year	2,445	103	42.1	81	33.13	...	...	1.63	...	16.36	41	...	3.68	1.23	41	41	82	4.49	1.23	2.46			

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.										
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.													
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever, Intermittent	63	70	69	47	44	60	86	142	152	294	98	65	1,100	449.9	...	...	...	...	...	...	...	...	...	...	
Fever, Remittent and Continued	1	...	2	2	2	...	1	3	...	1	...	1	13	5.3	23.07	...	...	...	...	...	...	...	...	...	
Apoplexy	...	9	1	1	1	...	...	...	...	...	...	...	4	1.6	...	...	...	...	...	...	...	...	...	...	
Dysentery	12	9	7	10	14	13	36	48	17	16	19	11	212	87.7	9.61	...	...	...	...	...	...	...	...	...	
Diarrhoea	6	9	10	9	12	14	28	51	25	15	8	5	292	121.7	...	...	...	...	...	...	...	...	...	...	
Hepatitis	...	...	...	1	1	1	...	1	1	1	1	...	5	2.1	20.00	...	...	...	...	...	...	...	...	...	
Spleen Disease	1	1	...	1	1	1	...	1	...	4	3	3	16	6.5	...	...	...	...	...	...	...	...	...	...	
Respiratory Diseases	5	13	15	12	6	6	9	5	8	6	8	6	99	40.5	9.09	...	...	...	...	...	...	...	...	...	
Phthisis Pulmonalis	...	...	...	...	...	...	...	...	...	1	1	...	2	0.8	50.00	...	...	...	...	...	...	...	...	...	
Dropsy	...	...	...	...	...	...	...	...	1	...	...	...	1	0.4	...	...	...	...	...	...	...	...	...	...	
Atrophy and Anæmia	3	2	1	2	...	...	...	...	8	8	17	8	54	22.1	20.37	...	...	...	...	...	...	...	...	...	
Scurvy	...	...	...	...	...	3	6	9	16	17	10	2	61	25.0	3.28	...	...	...	...	...	...	...	...	...	
Rheumatism	9	3	4	5	1	3	5	3	3	10	6	6	62	25.3	...	...	...	...	...	...	...	...	...	...	
Veneral Diseases	6	2	2	4	5	7	5	3	8	6	2	5	53	21.7	...	...	...	...	...	...	...	...	...	...	
Eye Diseases	2	3	...	9	3	5	6	1	3	10	3	1	46	18.8	...	...	...	...	...	...	...	...	...	...	
Abscess and Ulcer	48	57	53	53	51	66	46	78	54	42	41	34	623	254.8	1.66	...	...	...	...	...	...	...	...	...	
Wounds and Accidents	4	14	10	8	15	20	11	8	9	12	4	9	124	50.7	...	...	...	...	...	...	...	...	...	...	
All other Causes	16	21	29	29	18	19	27	17	17	10	17	15	235	96.1	...	...	...	...	...	...	...	...	...	...	
	176	202	203	193	174	219	296	375	322	373	238	171	2,912	...	...	...	...	...	...	...	...	...	...	...	
Admitted per 1,000 of the Average Strength in each Month.																									
	71.6	82.3	81.0	78.9	73.9	87.9	107.5	150.7	129.3	163.9	99.7	73.7	1191.9												



# JAILS OF THE BENGAL PRESIDENCY, 1874.

## V.

TABLE showing the SICKNESS and MORTALITY among the JAIL POPULATION in the AGRA DISTRICT and in CENTRAL INDIA during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS.																	
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent and Continued.	Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Diseases.	Phthisis Pulmonalis.	Dropsy.	Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.
						January	4,975	116	23.3	8	...	...	...	...	...	3	...	...	...	...	...	1	...
February	5,072	119	23.5	6	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1			
March	5,146	115	22.4	9	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1			
April	5,042	128	25.4	6	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1			
May	5,050	113	22.4	7	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1			
June	5,027	111	22.8	3	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1			
July	5,016	140	27.9	8	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1			
August	5,030	212	42.1	13	...	...	...	...	...	3	...	...	...	...	...	...	...	...	3	3			
September	5,152	252	48.9	16	...	...	...	...	...	12	...	...	...	...	...	...	...	...	1	1			
October	5,019	281	56.0	29	...	...	...	...	...	10	...	...	...	...	...	...	...	...	6	6			
November	4,940	235	47.6	26	...	...	...	...	...	12	...	...	...	...	...	...	...	...	3	3			
December	4,619	177	38.3	14	...	...	...	...	...	6	...	...	...	...	...	...	...	...	2	2			
						4	1	60	4	...	...	27	2	5	...	...	16	1	25				
						Died per 1,000 of the Average Strength.																	
For the year	5,007	167	33.3	145	28.6	...	...	89	29	1278	...	...	539	90	100	...	...	320	29	499			

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.		
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.					
	Cholera	...	...	...	...	...	...	...	...	...	...	...				...	4
Smallpox	...	...	1	...	2	1	...	...	...	...	...	...	...	...	...		
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Fever, Intermittent	69	64	47	75	63	83	125	296	296	294	200	112	1,697	338.9	...		
Fever, Remittent and Continued	...	2	2	1	3	1	2	1	1	5	...	4	22	4.4	18.18		
Apoplexy	...	...	...	...	1	...	1	...	...	...	...	...	2	2	...		
Dysentery	18	9	14	35	9	17	50	91	68	60	35	27	433	86.5	12.52		
Diarrhoea	2	2	4	4	6	8	15	14	4	4	8	7	78	15.6	...		
Hepatitis	1	...	3	...	...	2	...	1	1	1	...	3	11	2.2	...		
Spleen Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Respiratory Diseases	23	22	27	21	17	29	19	18	18	2	45	24	259	51.7	9.03		
Phthisis Pulmonalis	2	1	1	...	2	...	2	2	2	1	...	...	13	2.6	38.46		
Dropsy	1	...	...	...	...	...	...	...	...	...	...	...	1	2	4		
Atrophy and Anæmia	5	3	2	1	...	3	2	5	4	7	5	7	41	8.2	36.36		
Scurvy	...	...	...	...	1	1	...	2	1	1	...	3	9	1.8	...		
Rheumatism	5	3	4	7	5	4	4	8	8	4	4	10	66	13.2	...		
Veneral Diseases	19	6	4	4	7	5	2	13	3	6	5	9	74	14.8	...		
Eye Diseases	4	5	7	12	5	3	14	10	11	6	7	1	85	17.0	...		
Abscess and Ulcer	65	65	58	58	43	51	59	70	73	50	63	31	686	137.0	1.78		
Wounds and Accidents	19	9	21	22	24	13	18	14	12	22	13	16	194	38.7	...		
All other Causes	26	19	23	44	40	32	54	70	51	45	50	33	487	97.2	...		
															4,215		
Admitted per 1,000 of the Average Strength in each Month.																	
															84.4		

# JAILS OF THE BENGAL PRESIDENCY, 1874.

## VI.

*TABLE showing the SICKNESS and MORTALITY among the JAIL POPULATION in the ROHILCUND and MEERUT DISTRICTS during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.*

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS.																		
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent and Continued.	Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Disease.	Phthisis Pulmonalis.	Dropsy.	Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.	
January	7,100	160	22.5	47	...	...	...	...	4	...	...	8	13	1	...	13	...	1	1	...	5	...	1	
February	7,295	139	19.1	29	...	...	...	...	1	1	...	1	3	...	6	...	1	...	...	2	...	...	1	
March	7,485	140	18.7	11	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	1	...	...	
April	7,641	170	22.2	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	
May	7,563	190	25.1	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	
June	7,967	215	28.0	11	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4	
July	7,759	325	41.9	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	
August	7,758	553	71.3	22	...	...	...	...	3	...	...	4	...	...	...	...	...	...	4	1	...	5	4	
September	7,778	598	76.9	46	...	...	...	...	1	1	23	4	...	...	...	...	...	...	5	...	...	4	4	
October	7,713	589	76.4	59	...	...	...	...	4	...	...	...	...	...	...	...	...	...	3	...	...	4	3	
November	7,603	483	63.5	69	...	...	...	...	...	...	23	33	...	...	...	...	...	...	...	...	10	...	3	
December	7,666	406	53.0	33	...	...	...	...	...	11	...	...	...	...	...	8	...	...	1	...	7	...	1	
									27	12	3	109	31	1	...	64	1	39	3	...	40	8	23	
									Died per 1,000 of the Average Strength.															
For the year	7,586	331	43.7	352	46.40	...	...	...	5.14	4.0	18.45	1.13	...	8.44	1.13	3.96	4.0	...	5.27	1.05	3.03			

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.		
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.					
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	3	...
Smallpox	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever, Intermittent	120	75	84	100	169	139	564	770	603	623	340	192	3,779	498.2	71	...	
Fever, Remittent and Continued	1	2	1	4	6	3	4	8	10	12	4	1	56	7.4	21.43	...	
Apoplexy	...	1	1	...	...	...	...	...	2	...	...	...	4	5	75.0	...	
Dysentery	14	11	5	8	16	9	34	109	191	76	51	47	673	89.6	14.75	...	
Diarrhoea	41	23	13	27	22	24	38	63	47	49	18	20	376	49.6	33.33	...	
Hepatitis	...	...	1	1	...	...	...	1	1	...	...	...	3	4	33.33	...	
Spleen Disease	1	...	2	...	...	3	1	1	1	5	3	1	18	2.4	...	...	
Respiratory Diseases	33	29	27	52	26	27	29	8	11	25	36	38	332	43.7	19.28	...	
Phthisis Pulmonalis	1	3	...	1	3	3	2	1	3	9	11	7	44	5.8	68.18	...	
Dropsy	...	...	...	1	...	...	...	1	...	...	...	...	3	4	100.00	...	
Atrophy and Anæmia	21	8	19	11	3	5	9	8	11	15	17	6	133	17.5	39.07	...	
Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Rheumatism	6	6	6	7	10	6	8	11	3	10	10	7	90	11.9	...	...	
Veneral Diseases	4	8	9	13	11	12	8	8	6	9	3	9	100	13.2	...	...	
Eye Diseases	3	4	6	11	16	8	13	7	5	9	4	3	90	11.9	...	...	
Abscess and Ulcer	49	69	79	65	87	93	66	49	40	50	57	45	749	98.7	1.99	...	
Wounds and Accidents	14	17	35	28	44	23	23	26	13	14	10	17	258	34.9	...	...	
All other Causes	25	28	27	34	27	39	37	32	29	15	22	12	318	41.9	...	...	
	333	277	314	358	441	394	857	1,101	967	912	588	466	6,928				
	Admitted per 1,000 of the Average Strength in each Month.																
	47.0	37.9	41.9	46.9	58.3	51.4	108.0	141.9	124.3	118.2	77.3	53.0	91.3				

# JAILS OF THE BENGAL PRESIDENCY, 1874.

## VII.

*TABLE showing the SICKNESS and MORTALITY among the JAIL POPULATION in the PUNJAB during the Year 1874, and the prevalence of the principal Diseases in each Month of the Year.*

MONTHS.	Average Strength.	Average Number Daily Sick.	Number Daily Sick per 1,000 of Strength.	Number of Deaths.	Died per 1,000 of Strength.	CAUSES OF DEATHS.																	
						Cholera.	Smallpox.	Enteric Fever.	Fever, Intermittent.	Fever, Remittent and Continued.	Apoplexy.	Dysentery.	Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Diseases.	Phthisis Pulmonalis.	Dropsy.	Scurvy.	Atrophy and Anæmia.	Wounds and Accidents.	All other Causes.
						January	14,637	486	33.2	99	...	...	...	1	12	...	11	9	1	1	42	1	1
February	14,665	435	29.7	56	...	...	...	...	17	...	3	4	...	...	17	...	1	1	...	...	11		
March	14,407	419	29.1	42	...	...	...	...	...	...	1	1	...	...	18	...	...	...	...	...	6		
April	14,614	435	29.8	23	...	...	...	...	...	...	1	1	...	...	3	1	...	...	...	...	5		
May	14,246	440	30.9	37	...	...	...	...	...	...	1	3	1	1	8	...	...	...	...	...	10		
June	14,334	436	30.4	35	...	...	...	...	...	...	3	1	...	...	10	...	...	...	...	...	9		
July	14,486	381	26.3	15	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1		
August	14,714	457	31.1	14	...	...	1	2	1	1	1	...	...	...	1	1	...	...	...	...	...		
September	14,852	476	32.1	31	...	...	...	...	...	...	5	4	...	...	7	...	1	...	...	...	3		
October	14,946	782	52.3	36	...	...	...	...	...	...	6	4	...	...	10	...	1	...	...	...	3		
November	14,828	745	50.2	37	...	...	...	...	...	...	4	5	...	...	16	1	1	...	...	...	3		
December	14,686	428	29.1	44	...	...	...	...	...	...	7	6	...	...	20	...	1	...	...	...	5		
						...	1	...	23	75	4	46	40	2	2	158	3	14	5	...	13	9	74
Died per 1,000 of the Average Strength.																							
For the year	14,619	502	34.3	409	32.08	...	07	...	6.70	27	5.88	14	14	10.81	21	96	34	...	89	61	5.06		

CAUSES OF ADMISSIONS.	NUMBER OF ADMISSIONS INTO HOSPITAL IN EACH MONTH.												Total Admitted during the Year.	Admitted per 1,000 of Strength.	Died out of each hundred cases treated.	
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				
	Cholera	...	...	...	...	...	...	...	...	...	...	...				...
Smallpox	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever, Intermittent and Continued	281	175	282	415	483	354	446	1,075	1,239	1,009	929	485	8,053	550.9	28	
Fever, Remittent and Continued	109	138	171	122	98	61	43	36	90	20	29	22	939	642	8.00	
Apoplexy	...	...	...	...	...	9	5	2	...	1	2	...	19	13	21.05	
Dysentery	78	38	29	54	60	39	29	54	62	83	64	64	654	44.8	7.15	
Diarrhoea	38	33	39	53	63	40	51	43	61	48	49	43	549	37.6	...	
Hepatitis	2	...	2	...	1	3	2	...	1	...	1	1	13	9	15.38	
Spleen Disease	16	11	7	12	10	10	8	10	14	17	19	10	144	9.8	1.40	
Respiratory Diseases	196	97	99	54	75	90	51	41	50	51	148	185	1,137	77.8	13.90	
Phthisis Pulmonalis	2	3	3	6	3	2	2	3	9	2	1	1	37	2.5	37.84	
Dropsy	4	3	8	1	3	...	5	4	4	2	2	2	38	2.6	13.16	
Atrophy and Anæmia	8	4	5	8	8	10	9	11	9	8	6	6	92	6.2	14.13	
Scurvy	...	2	2	1	...	...	3	2	...	2	2	...	14	1.0	...	
Rheumatism	23	24	22	25	25	22	21	17	21	11	13	17	241	16.5	...	
General Diseases	10	14	23	21	18	25	14	25	16	17	21	15	219	15.0	...	
Eye Diseases	4	8	13	28	24	15	20	18	18	12	17	8	185	12.7	...	
Abscess and Ulcer	137	117	115	147	124	155	179	177	155	160	81	107	1,394	100.0	1.98	
Wounds and Accidents	23	37	46	56	77	43	69	52	48	32	33	40	556	38.0	...	
All other Causes	131	142	149	149	192	168	124	119	163	125	71	73	1,546	103.8	...	
Admitted per 1,000 of the Average Strength in each Month.																
71.2    67.6    70.2    78.8    88.8    72.9    74.6    114.8    128.1    163.1    99.8    73.4    109.7																

# JAILS OF THE BENGAL PRESIDENCY, 1874.

## VIII.

COMPARATIVE STATEMENT of the RATIOS of SICKNESS and MORTALITY among the JAIL POPULATION of the various PROVINCES of the BENGAL PRESIDENCY.

	RATIO PER 1,000 OF THE AVERAGE STRENGTH.						
	Bengal Proper and Assam.	Gangetic Provinces and Oude.	Central Provinces (excluding Saugor and Jubbulpore).	Agra and Central India.	Rohilcond and Meerut.	Punjab.	BENGAL PRESIDENCY.
<b>I.—AVERAGE DAILY SICK-RATE OF EACH MONTH.</b>							
January	38.4	25.1	28.5	23.3	22.5	33.2	29.6
February	36.1	22.9	35.4	23.5	19.1	29.7	27.4
March	37.3	24.2	37.9	22.4	18.7	29.1	28.0
April	38.6	24.6	38.0	25.4	22.2	29.8	28.2
May	38.6	22.8	31.0	22.1	25.1	30.9	28.7
June	37.9	22.8	36.1	22.8	25.0	30.4	28.9
July	40.1	27.1	37.2	27.9	41.9	26.3	32.0
August	43.5	32.0	54.2	42.1	71.3	31.1	40.1
September	42.8	30.7	57.8	48.9	76.9	37.8	42.2
October	41.9	32.0	50.9	56.0	76.4	52.3	45.6
November	41.0	27.3	45.2	47.6	65.5	50.2	40.9
December	40.9	24.3	43.5	38.3	65.0	29.1	33.8
<b>AVERAGE OF THE YEAR</b>	<b>39.8</b>	<b>26.4</b>	<b>42.1</b>	<b>33.3</b>	<b>43.7</b>	<b>34.3</b>	<b>34.0</b>
<b>II.—COMPOSITION OF THE ADMISSION-RATE OF THE YEAR.</b>							
Cholera	22.6	3.7	...	...	...	...	6.7
Smallpox	7	6.5	...	8	3	1	2.5
Fevers	524.7	296.5	455.2	343.3	505.6	615.1	445.3
Apoplexy	6	3	1.6	4	5	1.3	7
Dysentery and Diarrhoea	400.9	171.1	169.4	102.1	125.1	82.4	107.3
Hepatitis	1.4	9	2.1	1.4	4	9	1.0
Spleen Diseases	16.1	5.0	6.5	2.2	2.4	9.8	8.2
Respiratory Diseases	37.0	29.3	40.5	50.7	43.7	77.8	45.0
Phthisis Pulmonalis	7.2	2.9	8	2.6	5.8	2.5	4.1
Dropsy	12.1	1.6	4	4	4	2.6	4.0
Atrophy and Anæmia	24.6	12.6	22.1	8.8	17.5	6.2	14.7
Scurvy	3.0	1.3	25.0	1.8	...	1.0	2.3
Rheumatism	31.2	15.9	23.3	13.2	11.9	16.5	19.0
Veneral Diseases	29.7	13.6	21.7	14.8	13.2	15.0	15.9
Eye Diseases	12.6	11.0	18.8	17.0	11.9	12.7	12.5
Abscess and Ulcer	91.6	97.7	251.8	137.0	38.7	109.0	106.7
Injuries	44.0	51.3	60.7	38.7	34.0	38.0	41.2
All other Causes	161.1	68.2	96.1	97.2	41.9	105.8	97.8
<b>ADMISSION-RATE OF THE YEAR</b>	<b>1412.1</b>	<b>788.5</b>	<b>1191.0</b>	<b>841.4</b>	<b>913.3</b>	<b>1096.7</b>	<b>1077.9</b>
<b>III.—COMPOSITION OF THE DEATH-RATE OF THE YEAR.</b>							
Cholera	7.59	2.04	...	...	...	...	2.48
Smallpox	12	4.3	...	...	...	...	1.9
Fevers	4.59	1.85	1.63	80	5.14	6.79	3.72
Apoplexy	5.9	1.6	...	20	40	27	3.1
Dysentery and Diarrhoea	29.57	19.70	16.36	12.78	18.45	5.88	16.28
Hepatitis	9.6	12	4.1	...	13	14	1.1
Spleen Disease	7.1	4.7	...	...	...	14	3.7
Respiratory Diseases	5.02	3.57	3.68	5.39	8.44	10.21	6.02
Heart Diseases	30	1.6	1.23	40	13	21	2.5
Phthisis Pulmonalis	5.67	1.37	4.1	1.00	3.96	9.6	2.51
Dropsy	1.89	7.8	4.1	...	40	34	8.5
Atrophy and Anæmia	2.06	2.20	4.49	3.20	5.27	8.9	2.37
All other Causes	3.25	4.20	4.51	5.19	4.08	5.67	4.34
<b>DEATH-RATE OF THE YEAR</b>	<b>52.4</b>	<b>37.65</b>	<b>33.13</b>	<b>28.96</b>	<b>46.40</b>	<b>32.08</b>	<b>39.90</b>
<b>IV.—MORTALITY RELATIVE TO THE NUMBER TREATED.</b>							
Cholera	33.97	54.17	...	...	...	...	32.29
Smallpox	18.18	6.62	...	...	...	50.00	7.57
Intermittent Fever	4.3	26	...	...	71	28	3.5
Remittent and Continued Fevers	15.42	10.94	23.07	18.18	21.43	8.00	10.22
Apoplexy	100.00	44.14	...	50.00	75.00	21.05	45.83
Dysentery and Diarrhoea	5.13	11.51	9.61	12.62	14.75	7.15	8.28
Hepatitis	4.17	13.94	20.09	...	33.33	15.38	10.81
Spleen Disease	4.78	9.45	...	...	...	1.40	4.09
Respiratory Diseases	13.43	12.17	9.09	9.03	19.28	13.90	13.36
Phthisis Pulmonalis	79.34	46.67	50.00	38.46	68.18	37.84	61.99
Dropsy	15.69	48.78	...	...	100.00	13.16	21.11
Atrophy and Anæmia	8.41	17.50	20.37	36.36	30.07	14.13	16.15

# JAILS OF THE BENGAL PRESIDENCY, 1874.

## IX.

TABLE showing the GENERAL STATISTICS of SICKNESS and MORTALITY in the JAILS of the BENGAL PRESIDENCY and the AVERAGE NUMBER DAILY SICK in each MONTH.

STATIONS.	Average Strength for the Year.	DAILY SICK PER 1,000 OF AVERAGE STRENGTH IN EACH MONTH.												Daily Sick per 1,000 of Average Strength for the Year.	Admitted into these Jails per 1,000 of Average Strength.	DIED PER 1,000 OF AVERAGE STRENGTH.		
																A. Cholera.	B. All other Causes.	C. All Causes.
		Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.					
Presidency (Natives) ...	1,049	547	482	589	532	521	423	509	554	608	612	418	438	515	30820	95	2574	2609
Alipore ...	2,551	425	395	461	499	439	429	541	583	548	560	530	560	498	18542	235	3411	3646
Banshet ...	157	838	945	990	1061	1244	1162	1015	1171	1066	1020	693	979	1015	12182	...	8122	8122
Jessore ...	463	739	694	599	428	465	439	464	410	378	458	341	334	475	19892	...	3024	3924
Kishinagar ...	332	321	252	357	383	297	300	297	249	237	385	346	187	6897	672	3012	3614	
Moorshedabad ...	476	105	177	120	289	329	313	209	207	434	196	257	216	252	6011	1681	2621	4202
Hooahly ...	480	811	656	552	604	674	602	659	617	907	651	568	523	667	26140	6942	5900	11042
Bardwan ...	325	284	300	364	290	168	291	231	346	256	300	292	393	282	12112	...	5070	5070
Dumraon ...	234	207	243	318	222	251	226	156	170	312	198	234	127	214	5893	855	3419	4274
Parulla ...	238	93	79	151	221	252	316	290	303	281	295	291	204	210	9790	...	4202	4202
Sooree ...	304	479	429	448	423	462	422	755	838	523	421	476	356	526	19145	2961	2901	5922
Rajmahal ...	46	556	462	495	361	455	588	556	606	556	417	833	1200	435	13178	...	4348	4348
Deoghur and Sub-divns. ...	112	94	...	127	204	91	144	312	129	227	78	159	160	179	6339	...	1786	1786
Malda ...	70	556	323	337	295	488	297	735	317	260	196	400	556	429	12000	...	1429	1429
Dinajepore ...	596	307	289	319	236	312	354	300	234	168	257	301	314	285	7802	...	5369	5369
Rajshahye ...	847	245	242	236	245	167	200	209	270	294	186	130	128	201	5301	472	2362	2834
Rangpore ...	496	1018	823	688	561	845	955	626	628	711	713	761	575	746	14254	403	15726	16129
Bogra ...	132	493	222	216	355	359	306	273	312	417	140	139	268	263	9277	...	6579	6579
Mymensingh ...	410	310	249	239	359	336	328	234	267	392	615	593	344	333	12252	667	12252	12849
Fulna ...	172	307	375	543	564	493	437	452	689	426	544	494	573	405	23779	...	3488	3488
Furrudpore ...	371	220	260	267	213	196	117	164	205	206	338	328	293	270	12588	...	2426	2426
Iskerpunge ...	481	343	309	412	458	512	504	434	411	552	580	610	560	457	11663	1040	7068	8108
Nocally ...	186	412	350	260	314	163	193	377	464	383	270	417	292	306	14898	...	3061	3061
Chittagong ...	221	278	324	376	282	369	405	388	310	307	349	308	144	317	10695	...	4525	4525
Tipperah ...	279	148	112	107	165	136	213	176	179	181	228	263	224	179	8316	...	3584	3584
Dacca ...	595	388	594	494	418	379	421	238	320	293	368	338	239	353	7479	336	2917	2733
Sylhet ...	342	418	340	559	514	542	347	499	674	397	264	336	265	439	16930	...	2632	2632
Shillong ...	46	509	976	930	1000	952	976	638	1132	1176	800	385	182	870	10000	...	8696	8696
Cachar ...	160	100	741	532	592	593	268	426	583	783	688	702	804	642	2302	917	3670	4587
Gowalpara ...	115	642	396	476	348	430	619	465	569	630	678	608	508	522	23478	1739	7826	9565
Gowhaty ...	122	376	355	147	296	379	476	578	280	273	385	561	278	328	13935	...	4918	4918
Seebangor ...	99	938	690	526	312	430	490	490	543	220	381	275	364	605	23333	...	...	...
Nowong ...	71	122	244	244	250	366	360	147	323	397	169	179	213	282	11127	1408	1408	2810
Tezpur ...	187	793	729	609	745	952	957	914	1094	1123	960	632	756	856	37914	2674	3208	5892
Delooophur ...	73	556	694	794	921	1358	1200	1200	1449	1111	676	746	769	959	26438	2740	15065	17085
Midnapore ...	1,280	178	186	187	248	268	332	354	285	238	259	276	324	266	11102	1016	5156	6172
Balassar ...	175	118	168	118	217	216	289	345	543	368	468	427	373	286	10857	...	3429	3429
Cuttaek ...	297	397	405	341	333	179	205	327	336	251	217	230	167	262	8339	...	1873	1873
Pooree ...	107	128	299	247	298	169	192	265	388	221	148	76	163	157	9346	...	...	...
Monghyr ...	375	61	32	65	92	82	103	130	244	201	123	122	170	133	4480	...	2933	2933
Bhangulpore, Central District ...	827	103	127	120	165	155	179	251	204	376	432	560	705	290	7509	3223	2418	5441
Patna ...	394	318	332	393	377	324	316	386	535	249	247	486	406	374	12959	1701	3401	5102
Purneah ...	378	243	236	216	358	312	310	286	359	221	194	220	314	265	6031	...	6349	6349
Julporee ...	137	476	509	933	732	633	398	324	459	421	615	1302	1184	657	12628	...	27737	27737
Darjeeling ...	61	256	556	571	590	902	806	1065	1045	1071	678	755	833	784	10608	...	5882	5882
<b>Total Presidency</b> ...	<b>16,922</b>	<b>384</b>	<b>361</b>	<b>373</b>	<b>386</b>	<b>386</b>	<b>379</b>	<b>491</b>	<b>433</b>	<b>428</b>	<b>419</b>	<b>410</b>	<b>409</b>	<b>308</b>	<b>14121</b>	<b>750</b>	<b>4474</b>	<b>5224</b>
Chyebassa ...	79	702	968	667	693	375	440	1020	1505	1429	1000	741	779	886	17342	...	3797	3797
Ranchhee ...	247	313	313	292	243	190	253	136	311	241	213	215	222	243	7369	405	3239	3644
Bhadrabangh ...	1,161	163	163	254	300	322	412	480	495	565	400	184	164	301	8777	86	2412	2498
Gyaz ...	564	419	368	424	570	437	449	438	881	794	569	668	559	567	21152	1241	10335	17376
Patna ...	438	216	186	205	242	385	360	319	311	365	480	280	146	297	8151	229	4794	5023
Dehree Ghât working gang ...	756	230	145	166	183	146	122	144	193	285	476	359	253	225	11838	132	8439	8571
Arrah ...	391	223	164	275	231	258	150	389	437	474	267	239	216	281	8312	...	3325	3325
Chumpann ...	216	345	320	268	419	814	604	343	229	243	381	383	364	370	12500	4167	11111	15278
Muzafferpore ...	593	397	412	487	416	394	145	145	242	346	286	266	241	303	8191	108	10984	10752
Chuprah ...	397	235	243	267	262	230	274	373	690	390	329	272	248	327	7884	252	4534	4786
Ghazepore ...	598	53	67	88	121	81	32	70	72	50	64	30	47	67	2425	...	3910	3910
Ghazepore, temporary (7 months) ...	391	...	...	...	...	...	...	135	115	96	77	126	41	83	3573	...	3601	3601
Betwara, Central District ...	1,757	494	345	336	322	296	423	492	457	443	358	248	221	353	9904	...	2561	2561
...	531	394	312	324	364	315	365	344	370	372	373	369	257	345	10635	...	1603	1603
Mirzapore ...	229	78	227	309	282	258	353	412	550	149	425	279	294	273	9747	...	3182	3182
Azimghur ...	518	170	246	226	289	158	146	169	170	152	199	91	174	6443	...	1544	1544	
Jounpore ...	402	319	223	209	208	188	255	514	899	938	597	846	722	498	10846	...	6716	6716
Goruckpore ...	827	299	291	290	379	443	362	422	528	632	477	390	413	419	14755	3307	15051	18358
Buxtee ...	528	511	629	493	317	195	187	163	432	571	790	565	543	436	12973	...	9659	9659
Gendah ...	633	279	91	254	264													

STATIONS.	Average Strength for the Year.	DAILY SICK PER 1,000 OF AVERAGE STRENGTH IN EACH MONTH.												Daily Sick per 1,000 of Average Strength for the Year.	Admitted into Hospital per 1,000 of Average Strength.	DIED PER 1,000 OF AVERAGE STRENGTH.		
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.			A. Cholera.	B. All other Causes.	C. All Causes.
Banda	371	41.2	41.5	29.9	27.7	28.5	34.7	38.0	29.1	32.2	64.2	53.5	25.0	37.7	1752.0	...	53.91	53.91
Allahabad, Central	2,148	40.1	38.1	33.7	34.1	27.3	24.1	31.1	28.7	17.9	19.2	18.8	13.5	20.5	349.2	...	23.74	23.74
.. District	800	11.3	14.7	11.2	10.1	12.6	12.3	13.7	19.5	13.5	12.1	9.6	16.5	12.5	273.7	1.25	27.50	28.75
	25,482	25.1	22.9	24.2	24.6	22.8	22.8	27.1	32.0	30.7	32.0	27.3	24.3	26.4	788.5	2.01	35.01	37.05
Sumbalpor	73	10.9	23.5	27.4	15.4	13.9	13.2	29.0	26.0	13.3	18.2	...	16.4	13.7	671.3	...	27.40	27.40
Raepore	445	49.8	55.3	69.7	68.4	46.2	37.2	46.7	111.1	123.9	106.8	98.7	106.6	70.4	1379.8	...	67.42	67.42
Belaspore	64	11.9	15.9	...	43.5	26.3	41.7	29.4	...	35.5	16.1	...	29.4	15.6	437.5	...	46.88	46.88
Munda	43	...	27.0	...	...	29.4	81.1	27.8	...	51.7	70.2	40.0	24.4	46.5	1348.8	...	...	...
Sonee	122	24.0	33.9	28.8	34.1	23.3	18.9	19.6	16.5	28.5	25.5	13.2	25.0	24.6	778.7	...	32.79	32.79
Chhindwarra	95	15.4	15.9	44.1	30.9	53.6	28.0	38.5	35.7	34.5	76.9	24.6	23.1	31.6	978.9	...	10.53	10.53
Baitool	109	...	18.3	28.3	12.8	...	20.2	37.0	54.1	16.3	22.9	24.6	23.1	18.3	859.9	...	...	...
Narsingpore	120	18.5	18.8	13.6	15.9	9.3	17.5	20.6	28.8	18.5	29.8	19.8	41.0	16.7	783.4	...	33.33	33.33
Hoshungabad	172	20.5	27.0	39.5	33.0	23.5	18.0	22.7	28.2	29.6	38.2	39.5	36.0	29.1	825.6	...	34.88	34.88
Nimar	80	60.2	84.3	47.6	65.2	75.0	65.2	54.9	121.6	94.6	112.9	87.0	75.9	75.0	2637.3	...	25.90	25.90
Sohore	58	38.5	55.6	78.1	66.7	34.5	66.7	106.1	106.1	83.3	133.3	111.1	133.3	86.2	2030.7	...	34.48	34.48
Nagpore	850	28.0	35.4	39.7	31.1	26.3	38.7	39.9	38.0	55.5	56.5	35.1	23.6	36.5	1171.8	...	23.53	23.53
Bandhara	87	44.1	36.3	32.3	41.7	50.0	66.7	60.8	22.7	45.5	49.0	39.2	37.7	35.1	872.2	...	52.43	52.43
Wurdah	66	...	14.3	...	13.9	15.6	13.5	58.8	36.3	17.5	18.5	34.5	16.7	15.6	1503.7	...	...	...
Chanda	75	35.7	19.6	17.9	28.6	32.8	54.1	45.5	63.8	40.4	45.5	32.6	41.7	40.0	1433.4	...	40.00	40.00
	2,445	28.5	35.4	37.9	38.0	31.0	36.1	37.2	54.2	57.8	59.9	45.2	43.5	42.1	1191.0	...	33.13	33.13
Jubbulpore	905	9.3	2.3	4.6	11.0	4.2	4.3	19.3	33.0	41.8	69.9	65.0	59.4	25.4	612.1	...	44.20	44.20
Dumoh	65	18.3	36.8	47.2	59.7	31.7	62.5	25.6	57.1	...	135.1	122.0	61.2	46.2	1292.3	...	46.15	46.15
Sangor	245	69.8	59.9	45.2	37.5	58.8	49.3	53.0	92.7	160.0	145.1	67.3	59.1	69.4	2106.1	...	32.65	32.65
Lalitpore	145	31.8	19.4	20.3	34.5	7.9	14.5	14.2	42.9	73.3	56.3	66.7	55.2	34.5	1062.1	...	...	...
Jhansi	293	13.3	23.5	13.6	25.9	28.7	21.3	22.9	14.7	14.8	21.5	19.9	13.9	21.5	361.8	...	38.63	38.63
Ajmere	363	37.8	39.4	42.6	49.3	56.0	55.7	59.5	64.0	51.5	51.2	51.4	32.4	49.6	1462.8	...	16.53	16.53
Muttra	218	31.2	14.2	7.5	8.9	4.5	11.5	24.2	27.0	25.2	34.8	27.0	31.7	18.3	788.9	...	18.35	18.35
Agra, Central	2,292	29.5	23.4	22.5	31.1	22.2	21.3	23.7	49.7	35.9	56.0	45.2	38.8	33.2	699.8	...	26.61	26.61
.. District	542	31.8	28.2	28.5	36.9	24.3	23.5	26.9	43.9	29.0	35.1	27.0	18.7	29.5	946.4	...	25.83	25.83
	5,097	23.3	23.5	24.4	25.4	24.4	22.8	27.9	42.1	48.9	56.0	47.6	38.3	33.3	841.4	...	28.96	28.96
Etawah	275	10.4	21.7	12.9	20.2	3.9	3.6	14.5	11.8	13.8	7.9	...	3.3	10.9	469.1	...	21.82	21.82
Mynpoorie	438	12.4	12.0	9.4	9.5	11.6	14.3	14.5	17.0	20.5	30.2	29.6	16.4	10.0	593.6	...	20.55	20.55
Etah	279	27.8	51.3	35.2	18.3	14.9	14.1	12.5	24.3	37.0	101.3	72.5	15.1	35.8	1258.0	...	7.17	7.17
Allyghur	532	20.7	21.7	18.5	19.9	23.6	19.8	20.0	39.0	62.4	98.7	39.3	20.3	32.0	1086.4	...	16.92	16.92
Bolnshubhar	193	10.6	10.4	4.3	4.4	11.3	16.3	39.0	66.7	111.8	192.5	217.2	120.3	66.7	1733.3	...	82.05	82.05
Shahjehanpore	285	69.3	49.5	33.3	31.8	35.8	36.3	33.6	37.5	45.1	37.5	32.4	34.6	38.6	807.9	...	45.61	45.61
Budaon	335	14.6	5.9	18.8	31.3	29.2	23.6	18.8	20.9	26.8	22.2	9.8	9.0	19.7	447.9	...	2.82	2.82
Bareilly, Central	1,692	13.1	11.8	11.1	12.8	12.1	12.0	16.3	20.7	24.5	23.7	21.0	23.9	17.5	523.7	...	49.31	49.31
.. District	640	19.0	11.1	10.1	11.7	12.2	11.4	11.3	14.5	15.4	14.0	18.6	19.0	13.9	461.3	...	29.12	29.12
Moradabad	397	8.0	10.9	10.6	9.5	10.3	14.4	5.1	9.4	12.2	9.9	4.8	8.2	16.1	327.4	...	10.08	10.08
Almorah	140	40.7	27.3	32.8	24.4	37.9	21.4	34.2	26.5	29.3	26.8	18.2	18.1	28.6	821.4	...	42.86	42.86
Bijnore	204	11.9	17.3	16.6	20.6	21.4	17.3	9.3	18.5	17.5	20.6	10.1	9.9	14.7	813.7	...	4.90	4.90
Deyrah	76	...	13.5	12.8	12.3	12.3	...	...	...	...	...	...	...	...	144.7	...	...	...
Sahasarpore	304	32.7	23.3	28.0	27.1	43.3	46.8	51.9	58.8	49.0	38.0	45.0	27.9	39.5	592.8	...	17.16	17.16
Muzafferpuggur	143	14.3	13.0	15.5	7.6	6.9	29.2	25.2	13.6	12.7	43.5	28.6	29.4	21.0	601.4	...	34.96	34.96
Meerut, Central	1,223	28.2	19.5	27.2	44.5	57.6	75.0	138.3	233.3	279.4	237.9	216.4	189.3	125.9	1699.1	...	128.37	128.37
.. District	494	54.3	41.5	32.2	32.1	33.8	38.9	84.2	191.8	188.9	159.4	135.7	106.9	95.1	1860.3	...	54.96	54.96
	7,586	27.5	19.1	18.7	22.2	25.1	28.0	41.9	71.3	76.9	70.4	63.5	53.0	43.7	913.3	...	46.40	46.40
Delhi	338	28.4	29.8	28.4	22.9	23.5	26.7	28.6	36.9	38.3	42.2	28.0	25.8	29.6	713.0	...	85.80	85.80
Goorgoon	129	33.9	23.4	36.5	29.5	30.3	29.6	42.9	64.7	66.9	77.6	46.3	42.7	38.8	1720.9	...	23.26	23.26
Rohituck	177	11.4	6.1	10.3	29.7	24.0	20.9	24.2	35.9	35.9	26.0	19.2	33.1	22.6	1401.1	...	5.65	5.65
Hissar	240	8.7	9.4	4.4	8.4	16.9	16.3	19.6	31.4	33.1	36.9	16.5	8.0	16.7	954.1	...	8.33	8.33
Sirsa	253	19.0	14.0	19.1	15.7	28.0	35.4	33.0	22.7	40.1	50.4	29.4	32.7	27.7	964.4	...	19.76	19.76
Karnaul	202	10.4	5.2	4.4	8.8	16.3	10.9	14.9	25.3	28.7	25.5	20.4	14.9	14.9	618.8	...	9.90	9.90
Umballa	697	11.1	10.7	7.1	4.5	11.5	12.2	9.0	22.2	23.7	8.4	2.9	3.0	10.0	479.2	...	20.09	20.09
.. Gangat Roopar	1,875	59.6	45.5	26.4	30.3	37.1	39.5	36.5	48.8	44.2	95.8	131.9	39.8	51.7	1882.7	...	30.93	30.93
Loodianah	282	29.7	17.6	19.4	21.9	26.8	19.4	18.9	29.0	25.1	32.6	23.9	36.9	24.8	687.9	...	10.63	10.63
Jullundar	397	10.4	11.5	12.2	15.0	13.4	12.9	13.9	12.1	9.5	11.9	15.6	16.9	12.6	399.4	...	5.04	5.04
Ferozepore	374	5.4	5.8	2.9	8.5	10.1	19.0	5.6	7.9	7.8	7.2	6.4	4.5	8.0	336.9	...	8.02	8.02
Umritsar	682	24.9	23.4	26.9	38.1	49.8	28.8	19.8	33.4	43.1	32.5	17.7	7.8	28.7	1329.3	...	31.72	31.72
Lahore, Central	2,383	46.3	44.8	45.1	35.4	45.6	53.5	48.5	43.7	69.9	96.3	102.2	62.2	67.7	1438.4	...	53.97	53.97
.. Female Jail	182	45.1	42.6	37.2	43.2	33.1	49.2	27.0	60.8	89.9	89.5	58.1	38.5	49.5	1620.9	...	27.47	27.47
Sealkote	455	58.4	56.3	65.9	92.7	84.1	67.8	34.3	41.4	70.5	63.2	60.1	59.5					

# JAILS OF THE BENGAL PRESIDENCY, 1874.

## X.

*TABLE showing the RATIO in which the PRINCIPAL DISEASES have contributed to make up the ADMISSION-RATE of the YEAR in the JAIL HOSPITALS of the BENGAL PRESIDENCY.*

STATIONS.	Average Strength for the Year.	ADMITTED INTO HOSPITAL PER 1,000 OF AVERAGE STRENGTH.											Admitted per 1,000 of the Average Strength from all Causes.			
		Cholera.	Fever, Intermittent.	Fever, Remittent and Continued.	Dysentery & Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Phthisis Pulmonalis.	Droopy.	Atrophy and Anæmia.	Scurvy.		All other Causes.		
Presidency (Natives) ...	1,040	29	1038.1	...	11070	10	105	438	29	10	190	...	8678	30820		
Alipore ...	2,551	67	528.0	...	179	7268	...	94	22.7	7.8	24	698	20	4657	18442	
Baraset ...	197	...	3198	...	35.5	380.7	...	5.1	15.2	69.0	81.2	102	55.8	152	2335	
Jessore ...	461	...	680.0	...	15.1	267.8	...	...	28.1	34.6	...	19.4	6.5	928.7	1999.2	
Kishinagur ...	332	15.1	2199	...	6.0	189.8	...	3.0	6.0	27.1	...	6.0	3.0	201.8	660.7	
Moorsheadabad ...	476	71.4	317.2	...	8.4	609	...	4.2	25.2	25.2	6.3	...	4.2	188.1	691.1	
Hooghly ...	480	170.2	591.7	...	8.3	841.7	...	...	22.9	16.7	29.8	35.4	14.6	883.3	2614.6	
Burdwan ...	335	...	726.8	...	...	...	...	...	19.7	8.4	2.8	8.4	...	208.5	1211.2	
Bancoorah ...	234	8.5	329.1	...	8.5	21.4	...	...	23.6	4.3	...	...	34.2	4.3	162.4	
Purulia ...	238	29.4	542.0	...	21.0	168.1	...	...	48.2	4.2	...	...	4.2	163.9	679.0	
Nooree ...	304	59.2	822.4	...	...	2928	...	...	19.7	32.6	...	...	6.6	657.9	1914.5	
Rajmehal ...	46	...	804.3	...	...	152.2	...	...	63.2	43.5	...	...	...	282.6	1847.8	
Deoghar and Sub-divisions ...	112	8.9	294.7	...	...	169.6	...	...	...	8.9	...	...	...	142.9	633.9	
Malda ...	70	...	342.9	...	...	271.4	...	...	...	...	...	...	...	428.6	1200.0	
Dinajepore ...	598	...	369.3	...	109.1	...	1.7	3.3	55.4	3.3	10.1	3.3	1.7	183.0	780.2	
Rajshahye ...	847	11.8	193.6	...	4.7	141.7	...	...	10.6	8.3	...	7.1	31.9	3.5	1169	3391
Rungpore ...	496	10.1	314.5	...	133.1	403.2	...	...	10.1	24.2	30.2	258.1	28.2	213.7	1423.4	
Bogra ...	152	...	368.4	...	13.2	282.9	...	...	13.2	13.2	...	...	...	184.2	927.7	
Mymensingh ...	459	13.3	368.9	...	4.5	671.1	...	...	11.1	80.0	22.2	4.5	20.0	22.9	1326.7	
Pabna ...	172	...	1151.1	...	5.8	201.6	...	5.8	75.6	49.5	5.8	5.8	...	819.9	2377.9	
Farrakpore ...	371	...	779.0	...	13.5	88.9	...	...	...	27.0	10.8	...	2.7	336.9	1258.8	
Rackerjunge ...	481	27.0	532.2	...	6.2	497.5	...	2.1	24.9	18.7	2.1	...	2.1	143.5	1160.3	
Naacolly ...	196	5.1	882.7	...	...	275.5	...	...	35.7	29.4	5.1	...	20.4	...	1489.8	
Chittagong ...	221	...	451.6	...	4.5	...	...	...	54.3	9.1	27.1	...	4.5	21.2	1099.5	
Tipperrah ...	279	...	451.6	...	...	81.4	...	...	...	68.1	7.2	...	...	175.6	831.6	
Dacca ...	585	...	300.0	...	33.6	117.6	...	1.7	10.1	55.5	13.4	1.7	...	317.6	747.9	
Srihet ...	342	8.8	403.5	...	26.3	298.2	...	2.9	8.8	67.3	5.8	2.9	8.8	468	812.9	
Shillong ...	46	...	193.7	...	...	193.7	...	...	...	43.5	...	...	173.9	21.7	369.5	
Cachar ...	109	18.3	1128.4	...	18.3	412.8	...	...	9.2	43.9	...	...	9.2	688.1	2330.2	
Gowalpara ...	115	17.4	878.3	...	60.8	617.4	...	...	...	52.2	...	8.7	60.8	8.7	643.5	
Gowhaty ...	122	32.8	537.4	...	...	500.0	...	...	...	8.2	65.6	...	24.6	49.2	164	
Seebaungor ...	99	...	1191.9	...	40.4	787.9	...	...	...	10.1	...	...	10.1	20.2	27.2	
Nowrang ...	71	14.1	422.5	...	14.1	287.4	...	...	70.4	28.2	...	14.1	56.3	...	267.6	
Tezpur ...	187	32.1	951.9	...	107	1283.4	...	42.8	233.3	417.1	...	10.7	21.4	5.3	780.7	
Debrooghur ...	73	27.4	1137.0	...	...	739.7	...	...	82.2	164.4	...	...	13.7	...	479.4	
Midnapore ...	1,280	31.3	668.0	...	8.6	372.7	...	...	2.3	14.1	5.5	2.3	14.8	8	89.8	
Balasore ...	175	...	594.3	...	...	182.9	17.1	...	28.6	...	...	11.4	...	23.1	1085.7	
Cuttack ...	267	...	352.1	...	7.5	29.7	...	...	3.7	41.2	...	3.7	...	230.0	853.9	
Pooree ...	107	...	299.1	...	...	149.5	...	...	18.7	...	...	...	9.3	...	453.0	
Monghyr ...	375	5.3	128.0	...	37.4	169.3	...	...	5.3	26.7	...	...	21.3	...	114.7	
Bhaugulpore, Central District ...	827	100.4	134.2	...	1.2	193.5	...	...	6.1	23.9	4.8	4.8	18.7	3.6	263.6	
Purneah ...	294	95.3	517.0	...	...	282.3	...	...	3.4	37.4	...	...	30.6	17.0	312.9	
Juldigoree ...	378	...	124.3	...	...	179.9	7.9	...	29.1	37.0	10.6	2.7	13.2	...	194.4	
Darjeeling ...	137	...	204.4	...	21.9	642.3	...	...	7.3	29.2	7.3	21.9	21.9	...	309.6	
...	51	...	451.0	...	...	882.4	...	...	30.2	98.0	...	30.2	78.4	...	372.6	
<b>Total</b>	<b>16,922</b>	<b>22.6</b>	<b>510.9</b>	<b>13.4</b>	<b>400.9</b>	<b>1.4</b>	<b>16.1</b>	<b>37.0</b>	<b>7.2</b>	<b>12.1</b>	<b>24.6</b>	<b>3.0</b>	<b>362.9</b>	<b>1412.1</b>		
Chyebassa ...	79	...	746.8	...	38.0	481.0	...	...	...	...	...	...	...	468.4	1734.2	
Ranchee ...	247	4.1	299.6	...	...	180.3	...	4.1	4.1	20.2	...	...	12.1	...	786.9	
Hazareebaugh ...	1,161	2.6	440.2	...	16.4	115.4	...	...	3.4	25.0	...	3.4	5.2	24.1	877.7	
Gyah ...	564	24.8	718.1	...	3.5	806.7	...	1.8	1.8	31.9	10.6	5.3	53.2	1.8	457.7	
Patna ...	498	4.6	810.3	...	2.3	251.1	...	...	2.3	4.6	2.3	2.3	27.8	...	2115.2	
Dehree Ghat (Working Gang) ...	756	2.6	578.1	...	2.6	271.2	...	2.6	30.4	7.9	10.6	10.6	...	26.2	815.1	
Arrah ...	391	...	107.4	...	2.6	349.1	...	...	2.6	161.1	15.3	2.6	15.3	2.6	181.6	
Chumparan ...	216	59.9	171.3	...	152.8	54.6	...	...	50.9	...	27.8	46.3	...	145.4	1250.0	
Mozafferpore ...	595	1.7	223.5	...	8.4	267.2	...	...	5.0	25.2	...	3.4	20.2	...	355.5	
Chuprah ...	397	17.6	191.4	...	7.6	389.3	...	...	10.1	12.6	2.5	...	7.6	...	158.7	
Ghazepore ...	598	...	26.8	...	3.3	6.6	...	...	6.7	23.4	...	...	3.3	...	110.4	
Benares, Central District ...	361	...	102.5	...	...	124.6	2.8	...	5.5	16.6	2.8	...	...	...	102.5	
Mirzapore ...	551	...	813.6	...	...	157.9	...	...	8.0	17.6	2.3	...	...	...	378.5	
Azimghur ...	229	...	359.1	...	4.5	181.8	...	...	14.5	16.3	1.8	...	...	...	969.4	
Jounpore ...	518	...	241.3	...	...	81.1	...	...	...	3.9	3.9	...	1.9	17.4	1063.5	
Garsakpore ...	402	...	288.6	...	...	393.0	...	...	7.5	29.9	...	...	...	...	604.5	
Bustee ...	877	55.9	302.2	...	11.4	507.4	...	2.3	20.5	44.0	4.5	2.3	29.6	...	319.9	
Gondah ...	653	1.5	347.7	...	4.6	127.1	...	...	10.7	24.5	...	4.6	1.5	...	1084.6	
Barach ...	314	...	54.1	...	12.7	23.5	12.7	...	...	...	...	...	...	...	141.9	
Fyzabad ...	848	...	168.6	...	...	169.8	...	...	3.5	38.9	...	...	8.3	...	1109	
Sultanpore ...	446	...	143.5	...	9.0	47.1	...	...	...	11.2	2.2	...	...	...	1009	
Eae Bareilly ...	961	...	213.3	...	11.5	107.2	...	...	...	31	40.6	8.3	1.0	30.2	1665	
Pertabghur, Old ...	233	...	957.1	...	32.2	214.6	...	...	...	103.0	12.9	...	...	...	1244.6	
Pertabghur, New ...	459	...	871.3	...	78.4	335.5	...	...	...	108.9	...	...	15.3	2.2	782.1	
Hurdal ...	286	...	178.3	...	7.0	42.0	7.0	...	...	38.5	3.5	...	...	...	1468	
Khersee ...	261	...	107.3	...	...	39.3	...	...	...	30.7	3.8	...	1.9	...	168.6	
Lacknow, Central District ...	1,566	1.1	126.3	...	6	5.4	1.1	...	4.0	12.5	4.0	1.1	14.7	...	380.1	
Seetapore ...	779	...	112.5	...	...	170.3	...	...	...	13.9	7.9	1.9	29.8	...	312.6	
Nawalungga ...	516	...	151.2	...	...	74.5	...	3.8	...	18.0	...	...	1.3	2.6	9.8	
Oonao ...	277	3.6	310.5	...	25.3	65.0	...	...	...	11.6	1.9	...	...	...	228.5	
Humeerpore ...	280	...	228.6	...	3.6	82.1	...	17.9	16.7	...	...	50.0	...	228.5	721.4	
Orate ...	206	...	330.0	...	4.9	53.4	...	...	4.9	...	...	...	4.9	...	150.4	
Futehghur, Central District ...	1,163	...	282.9	...	1.7	41.3	...	...	...	81.7	2.6	...	1.7	...	609.0	
...	419	...	188.3	...	2.4	28.6	...	...	...	7.2	...	...	...	...	176.6	

STATIONS.	Average Strength for the Year.	ADMITTED INTO HOSPITAL PER 1,000 OF AVERAGE STRENGTH.											Admitted per 1,000 of the Average Strength from all Causes.	
		Cholera.	Fever, Intermittent.	Fever, Remittent and Continued.	Dysentery & Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Phthisis Pulmonalis.	Dropsy.	Atrophy and Anaemia.	Scurvy.		All other Causes.
Cawnpore	382	...	301.0	...	102.1	...	2.6	18.3	2.6	...	2.6	...	185.9	615.1
Futtehpore	392	2.5	403.1	15.3	99.5	...	5.1	17.9	...	...	5.1	...	288.3	839.3
Banda	371	...	835.6	...	225.7	...	55.0	72.8	...	...	2.7	...	579.5	1752.0
Allahabad, Central	2,148	...	135.9	...	42.4	...	9	10.3	...	...	9	...	156.9	349.2
" District	800	1.2	47.5	1.2	53.8	1.2	2.5	22.5	7.5	...	10.0	1.3	125.0	274.7
	25,482	3.7	286.6	9.8	171.1	9	5.0	29.3	2.9	1.6	12.6	1.3	263.7	788.5
Sambalpur	73	...	342.5	...	95.9	...	...	13.7	...	...	...	...	219.2	671.3
Ranipore	445	...	442.7	13.5	258.4	2.3	6.7	11.2	...	...	71.9	22.5	560.6	1379.8
Belaspore	64	...	31.3	...	171.9	...	15.6	...	...	...	15.6	...	303.1	437.5
Munda	43	...	967.0	...	69.8	...	...	...	...	...	...	...	372.0	1348.8
Sonee	122	...	377.0	24.0	98.4	...	8.2	123.0	...	...	8.2	...	139.3	778.7
Chindwarra	95	...	273.7	...	178.9	...	10.5	63.2	10.5	...	10.5	...	481.6	978.9
Baitool	169	...	221.1	...	302.8	...	...	82.6	...	...	26.7	...	247.7	860.9
Nursingpore	120	...	400.0	16.7	68.7	...	...	41.7	...	...	16.7	...	241.6	783.4
Hoshangabad	172	...	267.4	...	157.0	...	...	29.1	5.8	...	...	...	366.3	825.6
Nimar	80	...	1107.0	...	202.5	37.5	12.5	25.0	...	...	...	25.0	1175.0	2637.5
Sehore	58	...	1224.1	...	50.0	...	17.3	120.7	...	...	...	...	758.6	2620.7
Nagpore	850	...	482.4	...	84.1	1.2	7.1	49.0	...	1.2	8.2	87.6	480.0	1171.8
Bandhara	57	...	122.8	35.1	79.2	...	...	52.6	...	...	...	...	595.3	877.2
Wardah	64	...	375.0	...	375.0	...	...	15.6	...	...	46.9	...	781.2	150.7
Chaoda	75	...	527.0	...	280.0	...	26.7	49.0	...	...	26.7	...	507.0	1437.4
	2,445	...	469.9	5.3	169.4	2.1	6.5	49.5	8	4	23.1	25.0	659.0	1191.0
Jubbulpore	905	...	251.9	...	164.6	...	...	40.9	...	...	16.6	...	138.1	612.1
Dumoh	65	...	569.2	...	157.9	...	...	...	...	...	...	...	569.2	1292.3
Saugor	245	...	1004.1	44.9	183.7	...	4.1	28.5	...	...	8.2	...	831.6	2106.1
Lullaijore	145	...	510.3	6.9	69.0	6.9	13.8	55.2	...	6.9	27.6	...	365.5	1062.1
Jhansi	234	...	107.3	4.3	34.3	...	8.6	8.6	...	...	17.2	...	184.5	364.8
Ajmer	293	...	573.0	13.8	93.7	...	5.6	88.2	2.7	2.7	5.5	5.5	672.2	1467.8
Muttra	218	...	500.0	...	41.3	...	...	18.3	...	...	22.9	...	206.4	788.9
Agra, Central	2,292	...	271.0	1.7	79.0	2.6	1.7	67.2	4.4	...	4.8	2.6	264.8	699.8
" District	542	...	274.9	...	119.9	...	...	101.5	3.7	...	1.8	1.8	442.8	946.4
	5,007	...	338.9	4.4	102.1	1.4	2.2	59.7	2.6	4	8.8	1.8	319.1	841.4
Etawah	275	...	203.7	10.9	54.6	...	3.6	32.7	...	...	3.6	...	160.0	469.1
Mynpoorie	438	...	351.6	2.3	42.7	...	6.8	34.2	2.3	...	2.3	...	149.4	593.6
Etah	279	...	727.6	14.3	17.9	...	3.6	25.1	...	...	14.3	...	455.2	1258.0
Allyghur	532	...	684.2	33.8	124.1	...	5.8	24.4	...	...	7.5	...	306.8	1066.4
Bofandshur	195	...	1476.9	15.4	123.1	...	5.1	15.4	...	...	...	...	9.4	1733.3
Shahjehanpore	285	...	210.3	3.5	188.5	...	...	10.5	3.5	...	7.0	...	382.5	895.0
Budaon	355	...	185.2	16.9	31.0	...	...	31.0	...	...	5.6	...	228.2	447.9
Bareilly, Central	1,692	...	206.6	...	121.1	6	...	42.5	13.7	...	1.6	...	133.1	461.3
" District	646	...	203.9	...	71.2	...	...	23.2	7.7	1.6	18.6	...	183.9	327.4
Moradabad	397	...	98.2	...	15.1	...	2.5	10.1	12.6	...	...	...	365.8	821.4
Almorah	140	...	250.0	7.1	114.3	7.1	7.1	50.0	...	...	...	...	416.7	813.7
Bijnore	294	...	289.2	9.8	43.9	...	...	38.2	...	...	...	...	65.8	144.7
Deyrah	76	...	148.0	...	26.3	...	13.1	38.2	...	...	...	...	562.5	792.8
Saharanpore	143	...	209.8	21.0	90.9	...	34.9	21.9	...	...	...	...	233.8	691.4
Mozuffernagar	364	...	1047.4	8.2	304.3	...	...	97.3	7.3	...	8	36.0	193.8	1689.1
Meerut, Central	1,223	...	1315.8	8.1	151.8	...	...	78.9	...	...	48.6	...	257.1	1860.3
" District	494	...	498.2	7.4	125.1	4	2.4	43.7	5.8	4	17.5	...	212.4	913.3
	7,566	...	426.0	11.8	115.4	...	...	23.7	3.0	5.9	...	...	127.2	713.0
Delhi	338	...	869.5	7.7	139.5	...	...	77.5	...	...	...	...	635.7	1720.9
Georgzon	129	...	751.4	...	141.2	5.7	11.3	16.9	...	...	...	...	474.6	1401.1
Rohtuck	177	...	750.0	16.7	37.5	12.5	20.8	29.1	4.2	...	...	...	83.3	954.1
Hissar	240	...	407.1	...	87.0	...	7.9	79.0	...	...	...	...	383.4	964.4
Sirsa	233	...	282.2	...	19.8	...	...	59.4	...	...	...	...	1.3	618.8
Karnal	202	...	374.5	...	41.6	1.4	1.4	18.7	1.4	7.2	7.2	...	25.8	479.2
Umballa	697	...	1049.1	102.9	99.7	1.1	6.9	34.7	5	12.3	4.3	5	570.7	1582.7
" Gang at Roopar	1,875	...	280.1	...	136.6	...	10.6	10.6	...	...	14.2	...	251.8	687.9
Loodianah	282	...	146.1	...	30.2	...	2.5	12.0	2.5	2.5	...	...	194.0	390.4
Jullundur	397	...	128.3	19.7	21.4	...	...	2.7	...	...	5.4	...	160.4	339.9
Ferozapore	374	...	818.7	3.0	83.1	...	...	52.9	4.5	...	7.6	...	356.4	1329.3
Unritsur	692	...	732.5	37.6	97.4	...	20.1	144.6	5.8	1.3	5.0	1.3	392.0	1488.4
Lahore, Central	2,393	...	1,031.0	63.9	137.4	...	44.0	...	...	...	...	11.0	313.2	1620.9
" Female Jail	182	...	284.5	2.1	65.0	...	8.2	80.4	4.1	...	30.9	2.1	694.9	1175.2
Sealkote	147	...	741.5	...	224.5	...	6.3	34.0	...	...	6.8	...	306.1	1319.7
Dharmasalla	297	...	213.5	...	3.4	...	3.4	30.3	...	...	33.7	...	53.8	349.1
Gooldapore	530	...	210	26.0	144.0	...	2.0	64.0	6.0	...	...	...	80.0	340.0
Gooldanwalla	261	...	61.3	...	19.2	...	...	7.7	...	...	...	...	43.6	141.8
Gooldrat	277	...	704.0	...	39.7	...	...	39.7	...	3.6	7.2	...	122.8	917.0
Shahpore	787	...	467.9	...	163.8	...	7.0	34.8	...	...	13.9	7.0	156.8	931.2
Jhelum	400	...	302.0	...	59.2	...	4.1	200.0	...	...	...	...	218.4	783.7
Montgomery	755	...	251.7	2.6	39.7	...	4.0	42.4	1.3	...	1.3	...	69.2	409.2
Mooltan	318	...	207.6	...	81.8	...	...	103.8	3.1	...	3.1	...	135.2	534.6
Dera Ghazee Khan	386	...	823.8	...	106.2	...	18.1	23.3	2.6	2.6	13.0	...	453.4	1433.0
Dera Ismael Khan	595	...	6.67	48.7	63.5	1.7	3.4	215.1	6.7	1.7	11.8	3.4	82.7	1287.4
Kohat	139	...	338.1	...	93.5	...	14.4	57.6	21.6	...	...	...	365.7	920.9
Bunoo	106	...	811.3	792.5	283.0	...	9.4	198.1	...	...	18.9	...	481.1	1594.3
Rawalpindoe	835	...	112.6	525.7	51.5	3.6	10.9	149.7	...	1.2	8.4	1.2	104.2	968.9
Peshawur	542	...	778.6	107.0	86.7	...	5.5	86.7	...	...	1.9	3.7	345.0	1415.1
	14,619	...	559.9	64.2	82.4	9	9.8	77.8	2.5	2.6	6.2	1.0	298.4	1066.7
BENGAL PRESIDENCY	72,000	6.7	474.3	20.9	197.3	1.0	8.2	45.0	4.1	4.0	14.7	2.3	299.4	1027.9







# JAILS OF THE BENGAL PRESIDENCY, 1874.

## XII.

TABLE showing the MORTALITY in each JAIL, the CAUSES of DEATHS, and the RATIO of DEATHS to STRENGTH.

JAILS.	Average Strength for the Year.	CAUSES OF DEATHS.													Total Deaths of the Year.	DIED FOR 1,000 OF THE AVERAGE STRENGTH.				
		Cholera.	Smallpox.	Fevers.	Apoplexy.	Dysentery and Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Diseases.	Plethitis Pulmonalis.	Dropsy.	Scurvy.	Atrophy and Anæmia.		Wounds and Accidents.	All other Causes.	A. Cholera.	B. All other Causes.	C. All Causes.
Presidency	1,040	1	...	1	1	6	...	...	8	1	8	...	1	...	1	28	95	2574	2669	
Alipore	2,551	6	...	8	...	49	...	...	9	...	13	...	...	1	4	83	235	3411	3646	
Baraset	197	...	1	...	6	...	...	1	...	7	...	...	1	...	16	...	8122	8122		
Jessore	461	...	3	...	5	...	...	1	...	...	...	...	2	1	14	...	3024	3024		
Kishnaghur	332	...	1	...	4	...	...	...	...	...	...	...	1	...	12	603	3017	3614		
Moorshedabad	476	8	...	...	4	...	...	...	...	...	...	...	1	3	20	1681	2521	4202		
Howrah	39	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2564	2564		
Serampore	49	...	...	...	1	...	...	...	...	...	...	...	...	1	1	...	2500	2500		
Hooghly	480	29	...	2	...	14	...	...	...	6	1	...	...	1	83	6942	5000	11042		
Burdwan	355	...	...	...	11	...	1	...	1	...	1	...	2	...	18	...	5070	5070		
Bancoorah	234	2	...	1	1	...	...	...	...	1	1	...	1	1	10	855	8419	4274		
Paralia	238	...	...	2	...	5	...	...	2	...	1	...	...	...	10	...	4202	4202		
Raneegunge	19	...	...	...	...	...	...	...	...	...	...	...	...	...	10	...	...	...		
Sooree	304	9	...	...	4	...	...	2	...	...	...	1	...	2	18	2961	2961	5922		
Rajmehal	46	...	1	...	...	...	...	...	...	...	...	...	1	...	2	...	4348	4348		
Deoghur and Sub-Divisions	112	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...	1786	1786		
Malda	79	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1429	1429		
Dinagpore	596	...	10	...	11	...	1	8	...	...	1	...	...	1	32	...	5369	5369		
Rajshahiye	847	4	...	2	5	...	1	1	...	1	...	1	1	1	24	472	2362	2834		
Rangpore	496	2	...	4	24	...	3	3	1	21	20	...	1	4	80	403	16726	16129		
Bogra	152	...	2	...	3	...	1	1	...	1	...	2	...	...	10	...	6579	6579		
Mymensingh	460	3	...	1	27	...	13	6	2	...	2	...	2	2	68	667	12222	12889		
Pubna	172	...	2	...	...	1	...	1	1	...	1	...	...	...	6	...	3488	3488		
Farredpore	371	1	4	...	1	...	1	1	...	1	...	...	1	...	9	...	2426	2426		
Backergunge	481	5	7	...	29	...	3	1	...	1	1	...	1	...	39	1040	7068	8108		
Noacoley	196	...	...	...	3	...	...	...	...	...	...	2	...	1	6	...	3061	3061		
Chittagong	221	...	...	...	1	...	...	4	...	3	1	...	1	...	10	...	4525	4525		
Tipperah	279	...	1	...	1	...	3	3	...	2	1	...	2	...	10	...	3584	3584		
Dacca	595	2	...	...	3	...	...	...	...	4	1	...	...	2	14	336	2917	2933		
Sylhet	342	...	1	1	4	...	...	1	...	...	1	...	...	1	9	...	2632	2632		
Shillong	46	...	...	...	1	...	...	...	...	...	...	2	...	...	4	...	8696	8696		
Cachar	109	1	1	...	1	...	...	...	...	...	...	...	...	...	5	917	3670	4587		
Gowalpara	115	2	...	2	4	...	...	...	...	...	...	...	1	2	11	1739	7826	9565		
Gowhatty	122	...	...	...	2	...	...	...	...	...	...	...	1	1	6	...	4918	4918		
Seebaugor	99	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Nowgong	71	1	...	...	...	...	...	1	...	...	...	...	...	...	...	2	1408	1408	2816	
Tezore	187	5	...	...	6	...	...	...	...	...	...	...	...	...	11	2674	3204	5882		
Debrooghur	73	2	...	...	8	...	1	2	...	...	...	...	...	...	13	2749	10068	17808		
Midnapore	1,280	13	...	7	37	1	...	4	...	8	...	7	...	2	79	1016	5136	6172		
Balasure	175	...	...	...	5	...	...	...	...	...	...	...	1	...	6	...	3429	3429		
Cuttack	267	...	...	...	2	...	...	1	...	1	...	...	...	1	5	...	1873	1873		
Pooree	107	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Monghyr	375	...	1	1	4	...	1	...	1	...	...	2	...	1	11	...	2933	2933		
Bhagalpore, Central District	294	5	...	1	12	...	2	...	3	1	...	...	...	1	45	3923	2418	5441		
Purneah	378	...	1	...	15	...	2	2	...	1	...	3	...	1	15	1701	3401	5102		
Jalpigoree	157	...	4	...	28	...	2	1	2	...	...	...	1	...	38	...	6549	6549		
Darjeeling	51	...	...	...	2	...	...	...	...	...	...	...	...	1	3	...	2737	2737		
<b>Total</b>	<b>16,922</b>	<b>127</b>	<b>2</b>	<b>76</b>	<b>10</b>	<b>348</b>	<b>1</b>	<b>12</b>	<b>85</b>	<b>5</b>	<b>96</b>	<b>32</b>	<b>1</b>	<b>35</b>	<b>14</b>	<b>40</b>	<b>884</b>	<b>730</b>	<b>4474</b>	<b>5224</b>
Chyebassa	79	...	...	...	2	...	...	...	...	...	...	...	...	1	3	...	3797	3797		
Ranchee	247	1	...	...	3	...	...	1	...	...	...	...	2	1	9	405	3239	3644		
Hazareebaugh	1,161	1	1	5	15	...	3	...	...	1	1	1	1	1	29	86	2412	2493		
Gyah	264	7	...	1	84	...	2	...	3	1	...	...	...	...	98	1241	16135	17376		
Patna	438	1	...	2	13	...	1	...	2	1	1	...	1	...	22	239	4794	5023		
Debreo Ghat working gang	756	1	1	1	17	...	1	...	3	...	...	...	...	3	27	132	3439	3571		
Arrah	391	...	...	...	6	...	1	...	3	1	...	...	1	1	13	...	3325	3325		
Chumparon	216	9	...	...	19	...	2	...	3	...	...	...	...	...	33	4167	11111	15278		
Moxufferpore	585	1	...	2	35	...	1	3	...	2	...	5	...	9	61	103	10084	10332		
Chuprah	397	1	...	1	14	...	1	...	...	...	...	1	...	1	19	252	4534	4786		
Ghazepore	598	...	...	...	7	...	...	1	...	2	...	2	2	4	18	...	3019	3019		
Ghazepore, temporary (7 months)	361	...	1	...	8	...	...	3	...	1	...	...	...	...	13	...	3601	3601		
Benares, Central District	1,757	...	3	...	27	...	6	5	...	...	...	2	...	2	45	...	2561	2561		
Mirzapore	220	...	...	...	6	...	2	1	...	...	...	...	...	...	9	...	1633	1633		
Azimgur	518	3	...	...	1	...	1	...	...	...	...	1	...	2	7	...	3182	3182		
Joynpore	402	...	2	...	15	...	...	...	...	...	...	8	...	2	27	...	1544	1544		
Goruckpore	877	29	...	3	90	2	8	11	1	3	2	4	...	8	161	3307	6716	6716		
Bustee	528	...	1	...	33	...	1	5	...	...	1	...	5	...	51	...	15031	18358		
Gondah	653	1	4	...	2	...	4	...	...	...	...	2	...	...	13	...	1991	1991		
Barnich	314	...	1	...	...	1	...	...	...	1	...	...	...	...	5	...	1592	1592		
Fyzabad	848	...	2	...	...	...	1	...	1	...	...	...	...	...	11	...	1297	1297		
Sultampore	446	...	...	...	2	...	...	1	...	...	...	...	...	...	5	...	1121	1121		
Rae Bareilly	861	...	...	...	2	...	...	9	...	2	1	...	2	...	19	...	1977	1977		
Pertabghar, Old	233	...	1	...	3	...	...	2	...	3	1	...	1	1	10	...	4292	4292		
Pertabghar, New	459	...	2	...	...	1	...	...	...	...	1	...	1	...	4	...	871	871		
Hurdai	246	...	...	...	1	...	...	1	...	...	...	1	...	1	4	...	1748	1748		
Kherse	261	...	...	...	...	...	1	...	...	...	...	2	1	1	4	...	1532	1532		
Lucknow, Central District	1,786	...	1	1	11	...	...	...	3	1	...	4	6	6	27	...	1529	1529		
Seetapore	779	...	...	...	4	...	...	2	...	...	...	1	...	1	8	...	1683	1683		
Nawabgunge	516	...	...	...	4	...	...	...	...	1	...	...	4	3	12	...	1027	1027		
Ocnao	27	...	...	...	4	...	...	...	...	1	...	...	...	...	1	...	2325	2325		

JAILS.	Average Strength for the Year.	CAUSES OF DEATHS.														Total Deaths of the Year.	DEED PER 1,000 OF THE AVERAGE STRENGTH.			
		Cholera.	Smallpox.	Fever.	Apoplexy.	Dysentery and Diarrhoea.	Hepatitis.	Spleen Disease.	Respiratory Diseases.	Heart Disease.	Phthisis Pulmonalis.	Droopy.	Scary.	Atrophy and Anæmia.	Wounds and Accidents.		All other Causes.	A. Cholera.	B. All other Causes.	C. All Causes.
Humeerpore ...	280				6												12		42.86	42.86
Oran ...	280			1													3		14.56	14.56
Futtehghur, Central ...	1,763			3	1	5			1								18		11.18	11.18
" District ...	410			5													8		14.32	14.32
Cawnpore ...	382					6											8		20.94	20.94
Futtehpore ...	392			2		8			1								14		35.71	35.71
Bada ...	371					12											20		53.91	53.91
Allahabad, Central ...	2,148		3	1		20			10		1	1					51		23.74	23.74
" District ...	800	1		2	1	10			4						3		23	1.25	27.50	28.75
	25,482	52	11	47	4	502	3	12	91	4	35	20	2	56	15	90	944	2.04	35.01	37.05
Sambulpore ...	73					2											2		27.40	27.40
Raepore ...	445					20							2	6			30		67.42	67.42
Belaspore ...	64					2											3		46.88	46.88
Mundla ...	43																None			
Seonee ...	122			1		2			1								4		32.79	32.79
Chindwarra ...	95					1											1		10.53	10.53
Baitool ...	109																None			
Nursingpore ...	129					1								2			4		33.33	33.33
Hoshungabad ...	172					2			1		1						6		34.88	34.88
Nimar ...	80					1	1										2		25.00	25.00
Shore ...	58																2		34.48	34.48
Nagpore ...	850			1		4											20		23.53	23.53
Bandhara ...	57			2					1		3			3	2	1	3		52.63	52.63
Wardah ...	64								1								None			
Chanda ...	75					3											3		40.00	40.00
Sironcha ...	19								1								1		52.63	52.63
	2,445			4		40	1		9	3	1	1	2	11	3	6	81		33.13	33.13
Jubbulpore ...	905			1		17				1				10		11	40		44.20	44.20
Dumoh ...	65					3											3		46.15	46.15
Saugor ...	245			1		3											8		32.65	32.65
Lulbulpore ...	145																None			
Jhansi ...	233					3								2			9		38.63	38.63
Ajmira ...	363					1			2								6		16.53	16.53
Muttra ...	218								1					3			4		18.35	18.35
Agra, Central ...	2,292			2	1	29			18	1	5			1			61		26.61	26.61
" District ...	542					8			6								14		25.83	25.83
	5,007			4	1	64			27	2	5			16	1	25	145		28.96	28.96
Etawah ...	275					2	1		2								1		21.82	21.82
Mynpoorie ...	438			1		1					2						9		20.55	20.55
Etah ...	279					1					2						3		7.17	7.17
Allyghur ...	532			2	1	2											1		16.92	16.92
Bolundshuhur ...	185			10		6			3								1		82.05	82.05
Shahjehanpore ...	285			1		4											13		45.61	45.61
Rudra ...	355					1			3								1		2.82	2.82
Bareilly, Central ...	1,602			3	1	27			15	1	11	1		19			79		49.31	49.31
" District ...	646					2			4		1	1		4			13		20.12	20.12
Moradabad ...	397										4						4		10.08	10.08
Almorah ...	149			3		1			1					1			6		42.86	42.86
Bijnore ...	204																1		4.90	4.90
Deyrah ...	76																None			
Saharanpore ...	504										1			1	1	1	4		13.16	13.16
Moradnagar ...	143								2								5		34.96	34.96
Meerut, Central ...	1,233			17		85			23		10			10			157		128.37	128.37
" District ...	494			2		10			11		1			2			27		54.66	54.66
	7,686			39	3	190	1		64	1	30	3		40	8	23	352		46.40	46.40
Delhi ...	338			3		16			2		1	1		2			29		85.80	85.80
Goorgaon ...	129			1		1											3		23.26	23.26
Ehotack ...	177					1											1		5.65	5.65
Hissar ...	240			1													2		8.33	8.33
Nirsa ...	253					3			1								5		19.76	19.76
Kurnaul ...	202								1								2		9.90	9.90
Umballa ...	697					7			2					1	1	1	14		20.09	20.09
" Gang at Roopar ...	1,875			16		8			17		2	1					58		30.93	30.93
Loodianah ...	282								1	1							3		10.63	10.63
Jullundur ...	397										1						2		5.04	5.04
Ferozepore ...	374			1	1				1								3		8.02	8.02
Umritsur ...	662					3			12					1			21		31.72	31.72
Lahore, Central ...	2,393			13	1	20			58		4						127		53.07	53.07
" Female Jail ...	182			2		3											5		27.47	27.47
Senkote ...	485					1											1		2.06	2.06
Dhormsalla ...	147			1							2						5		16.83	16.83
Goordaspore ...	297										2						9		18.00	18.00
Gooranwalla ...	600			1	1	3			1	1	1						1		3.83	3.83
Goorjat ...	261																4		14.44	14.44
Shahpur ...	277			2		1											3		3.69	3.69
Jhettum ...	287																1		10.20	10.20
Montgomery ...	499			1					4								5		22.52	22.52
Mooltan ...	755			3	1	2			8								17		22.01	22.01
Jhong ...	318			1		1			4		1						7		15.54	15.54
Dera Ghazee Khan ...	398			1					3			1					6		42.02	42.02
Dera Ismael Khan ...	595			4		2		1	11	1							25		50.36	50.36
Kohat ...	139								1			4					7		141.51	141.51
Bunoo ...	108			8					2								15		85.03	85.03
Rawalpindoe ...	835			33		7	2	1	19								71		31.37	31.37
Peshawur ...	542			6		3			2								17			
	14,619	1		98	4	86	2	2	158	3	14	5		13	9	74	469		32.08	32.08
BENGAL PRESIDENCY	72,060	179	14	298	22	1,180	8	26	434	18	181	61	5	171	50	258	2,875	2.48	37.42	39.90

# JAILS OF THE BENGAL PRESIDENCY, 1874.

## XIII.

*DETAIL of the ADMISSIONS and DEATHS of the JAIL POPULATION of each PROVINCE.  
(A Summary of the Annual Returns of the Jails of the Presidency.)*

CAUSES OF ADMISSIONS AND DEATHS.	BENGAL PROPER AND ASSAM.		CHOTA NAGPORE, BENGAL PROVINCES, BENGAL, OUDH, AND CANNORE.		CENTRAL PROVINCES (EXCLUDING JUBHULPORE AND SAUGOR).		AGRA AND CENTRAL INDIA.		MERUT AND ROHILCUND.		PUNJAB.		
	Strength ...	Admissions ...	Strength ...	Admissions ...	Strength ...	Admissions ...	Strength ...	Admissions ...	Strength ...	Admissions ...	Strength ...	Admissions ...	
	Deaths ...	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Cholera ...	378	127	97	52	...	...	...	...	...	...	...	...	...
Smallpox ...	10	2	175	11	...	...	...	...	...	...	...	...	...
Chickenpox ...	423	...	98	...	14	...	3	...	...	...	...	...	...
Measles ...	2	...	16	...	...	...	...	...	1	...	...	...	...
Mumps ...	7	...	178	1	1	...	185	...	25	...	12	...	...
Influenza ...	...	...	2	...	...	...	...	...	...	...	1	...	...
Diphtheria ...	...	...	1	...	...	...	...	...	...	...	122	...	16
Pyæmia ...	...	...	1	...	...	...	...	...	...	...	...	...	...
Hydrophobia ...	1	1	...	...	...	...	...	...	...	...	...	...	...
Erysipelas ...	9	...	55	7	1	...	15	...	7	...	191	...	24
Enteric Fever ...	8	...	10	3	...	...	...	...	...	...	...	...	...
Intermittent Fever ...	8,620	37	7,345	19	1,090	1	1,090	...	27	...	8,120	...	23
Remittent and Continued Fevers ...	235	35	201	25	14	3	22	4	55	12	870	...	75
Rheumatism, Acute ...	106	...	122	1	32	...	20	...	11	...	28	...	1
"    Chronic ...	87	...	57	...	14	...	16	...	13	...	63	...	...
"    Muscular ...	247	...	133	...	10	...	13	...	6	...	2	...	...
Leprosy ...	31	5	20	4	2	...	6	...	...	...	...	...	...
Elephantiasis ...	6	...	...	...	...	...	...	...	...	...	...	...	...
Scurvy ...	49	1	34	2	60	2	9	...	1	...	16	...	...
Anæmia ...	126	...	90	...	4	...	11	...	1	...	25	...	...
Cancerum Oris ...	5	4	1	1	...	...	3	3	...	...	...	...	...
General Dropsy ...	191	30	23	15	...	...	1	...	...	...	36	...	5
Cancer ...	4	3	5	2	...	...	...	...	...	...	...	...	...
Primary Syphilis ...	143	...	160	...	30	...	46	...	41	...	54	...	...
Secondary Syphilis ...	117	1	101	...	11	...	26	...	33	2	121	...	1
Phthisis Pulmonalis ...	118	96	75	35	2	1	12	5	44	30	39	...	14
Hæmoptysis ...	61	...	5	...	1	...	2	...	2	...	11	...	...
Scrofula ...	11	...	12	...	...	...	7	...	3	...	2	...	...
Tuberculosis Mesenterica ...	...	...	...	...	1	1	...	...	...	...	...	...	...
Myelitis ...	...	...	1	...	...	...	...	...	...	...	...	...	...
Encephalitis ...	...	...	3	4	...	...	...	...	...	...	5	...	4
Meningitis ...	1	1	1	1	...	...	...	...	...	...	6	...	1
Apoplexy ...	3	3	4	4	...	...	...	...	...	...	2	...	4
Sunstroke ...	9	10	4	...	3	...	1	1	4	3	14	...	...
Paralysis ...	2	...	5	...	1	...	...	...	...	...	8	...	2
Tetanus ...	6	1	29	6	1	...	6	1	2	...	2	...	1
Tetanus ...	2	3	4	2	...	...	...	...	...	...	18	...	1
Epilepsy ...	23	1	37	2	4	1	3	1	4	...	1	...	...
Hysteria ...	1	...	...	...	1	...	...	...	...	...	...	...	...
Anæsthesia ...	...	...	2	...	...	...	...	...	...	...	...	...	...
Neuralgia ...	63	...	66	...	4	...	12	...	5	...	59	...	...
Chorea ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mania ...	69	...	23	...	1	...	2	...	4	...	25	...	...
Dementia ...	10	...	1	...	3	...	1	...	...	...	2	...	...
Melancholia ...	...	...	3	...	1	...	...	...	...	...	...	...	...
Ophthalmia ...	...	...	...	...	...	...	...	...	94	...	184	...	...
Impaired Vision ...	208	...	292	...	44	...	85	...	...	...	...	...	...
Nyctalopia ...	2	...	5	...	2	...	...	...	...	...	...	...	...
Otitis ...	4	...	...	...	10	...	12	...	10	...	28	...	...
Deafness ...	62	...	37	...	...	...	...	...	...	...	1	...	...
Epistaxis ...	1	...	2	...	1	...	2	1	3	...	5	...	1
Ozæna ...	14	...	1	...	1	...	1	...	2	...	2	...	...
Polypus nasi ...	1	...	...	...	1	...	1	...	...	...	...	...	...
Pericarditis ...	2	1	4	3	...	...	1	1	...	1	3	...	3
Valve Disease of Heart ...	6	2	...	...	2	2	...	...	1	1	4	...	2
Hypertrophy of Heart ...	...	...	4	3	...	...	...	...	...	...	...	...	...
Fatty Degeneration of Heart ...	2	...	2	1	...	...	...	...	1	...	...	...	1
Aortic Aneurism ...	1	1	...	...	1	1	...	...	...	...	...	...	...
Palpitation ...	...	...	...	...	...	...	...	...	1	...	1	...	...
Syncope ...	...	...	...	...	...	...	...	...	...	...	1	...	...
Varix ...	...	...	...	...	...	...	...	...	...	...	1	...	...
Phlebitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Inflammation of Glands ...	5	...	1	...	...	...	...	...	...	...	...	...	...
Goitre ...	22	...	8	...	2	...	2	...	4	...	11	...	...
Laryngitis ...	1	...	7	1	...	...	...	...	...	...	...	...	...
Bronchitis ...	4	1	2	1	...	...	1	1	...	...	18	...	3
Asthma ...	399	7	407	17	37	1	111	3	144	13	420	...	15
Pneumonia ...	54	3	128	19	10	...	17	...	29	1	31	...	4
Pleurisy ...	127	66	130	56	34	6	147	25	116	48	372	...	129
Gangrene of Lungs ...	46	5	41	5	12	1	16	...	12	2	163	...	7
Odonalgia ...	1	3	...	2	...	...	...	...	2	...	6	...	...
Stomatitis ...	1	...	12	...	1	...	3	...	...	...	11	...	1
Tonsillitis ...	115	...	4	...	...	...	...	...	1	...	123	...	...
Gastritis ...	14	...	32	...	4	...	...	...	30	...	6	...	1
Enteritis ...	...	1	1	...	...	...	...	...	4	...	6	...	1
Peritonitis ...	2	2	9	8	...	...	2	2	...	4	1	...	5
Hernia ...	7	5	9	3	...	...	...	...	1	...	6	...	1
Ileus ...	6	...	5	...	...	...	3	...	...	...	1	...	2
Stricture of Colon ...	...	...	1	...	...	...	...	...	...	...	...	...	...
Hæmatemesis ...	...	...	2	...	1	...	...	...	...	...	1	...	...
Melæna ...	4	2	...	...	...	...	...	...	...	...	...	...	...
Dyspepsia ...	258	...	162	...	40	...	42	...	68	...	95	...	...
Colic ...	297	...	365	...	67	...	67	...	62	...	252	...	...
Constipation ...	122	...	102	...	2	...	6	...	12	...	173	...	...
Dysentery ...	3,144	270	2,283	380	212	17	433	60	567	109	643	...	46

CAUSES OF ADMISSIONS AND DEATHS.	BENGAL PROPER AND ASSAM.		CHOTA NAGPORE, BHOAR PROVINCES, BENARES, OUDH, AND CANNPORE.		CENTRAL PROVINCES (EXCLUDING JUBHULPORE AND SAUGOR).		AGRA AND CENTRAL INDIA.		MEERUT AND ROHILKUND.		PUNJAB.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Diarrhoea	3,616	69	2,076	122	196	23	78	4	378	31	545	40
Hæmorrhoids	122	...	68	...	4	...	9	...	5	...	57	...
Fistula in Ano	7	...	4	...	1	...	1	...	1	...	5	...
Typhilitis	...	...	...	...	...	...	3	1	...	...	...	...
Ascariæ	3	...	1	...	...	...	...	...	...	...	7	...
Tapeworm	8	...	...	...	...	...	...	...	...	...	5	...
Spleen enlargement	276	11	110	12	16	...	11	...	19	...	149	2
Rupture of Spleen	1	1	...	...	...	...	...	...	...	...	...	...
Hepatitis	22	1	23	3	5	1	7	...	4	1	11	2
Lardaceous Liver	...	...	...	1	...	...	...	...	...	...	...	...
Cirrhosis	4	2	6	2	...	...	1	...	...	1	1	1
Hydatid of Liver	...	...	...	...	...	...	...	...	...	...	1	...
Jaundice	32	...	101	...	8	...	16	...	17	...	41	4
Ascites	15	2	17	5	1	1	1	...	3	3	2	...
Nephritis	2	2	6	5	...	...	1	...	3	3	9	...
Cystitis	4	...	1	1	...	...	...	...	3	...	2	...
Hæmaturia	5	...	5	...	...	...	...	...	1	...	...	...
Calculus	1	1	2	...	...	...	1	...	2	...	1	...
Diabetes	...	...	2	...	1	...	1	...	...	...	2	...
Enuresis	...	...	...	...	...	...	...	...	1	...	3	...
Stricture of Urethra	32	...	9	1	3	1	...	...	4	1	5	...
Sloughing of Scrotum	...	...	2	1	...	...	...	...	...	...	...	...
Fungus Testis	1	...	...	...	...	...	...	...	...	...	...	...
Urinary Fistula	3	...	...	...	...	...	1	...	...	...	...	...
Gonorrhœa	52	...	37	...	7	...	5	...	11	...	32	...
Phimosis	14	...	33	...	5	...	3	...	13	...	4	...
Warts	1	...	1	...	1	...	...	...	...	...	...	...
Bubo	80	...	28	...	12	...	12	...	19	...	16	...
Orchitis	41	...	25	...	7	...	18	...	16	...	33	...
Hydrocele	51	...	14	...	2	...	4	...	...	...	3	...
Hæmatocele	...	...	1	...	1	...	...	...	...	...	...	...
Periostitis	6	...	6	...	4	...	1	...	...	...	2	...
Caries	2	...	5	...	...	...	...	...	...	...	2	...
Necrosis	3	...	8	...	...	...	...	...	...	...	7	...
Synovitis	23	1	20	...	...	...	2	...	1	...	11	1
Bursal Inflammation	3	...	...	...	...	...	5	...	4	...	...	...
Cramp	...	...	...	...	...	...	...	...	...	...	1	...
Atrophy of Muscle	...	...	1	...	1	...	...	...	...	...	1	...
Spinal Deformity	...	...	...	...	...	...	...	...	1	...	...	...
Contraction	...	...	...	...	...	...	...	...	...	...	1	...
Harelip	1	...	...	...	...	...	...	...	...	...	2	...
Abscess	573	...	1,180	6	206	...	233	2	410	...	820	1
Ulcer	577	...	960	20	332	2	341	13	257	8	537	1
Whitlow	32	...	63	...	10	...	18	...	20	...	68	...
Boils	265	...	216	...	57	...	73	...	39	...	132	...
Carbuncle	43	...	25	...	...	...	3	...	6	...	9	...
Itch	190	...	107	...	42	...	45	...	12	...	124	...
Urticaria	...	...	5	...	...	...	5	...	6	...	16	...
Eczema	20	...	25	...	1	...	10	...	5	...	17	...
Herpes	26	...	37	...	2	...	14	...	13	...	42	...
Psoriasis	10	...	2	...	...	...	1	...	1	...	6	...
Prurigo	1	...	...	...	...	...	...	...	...	...	...	...
Other Skin Diseases	8	...	11	...	2	...	1	...	7	...	13	...
Guinea-worm	...	...	2	...	8	...	22	...	5	...	103	...
Tumour	7	...	4	...	1	...	...	...	1	...	5	...
Childbirth	9	...	27	...	3	...	2	...	2	...	13	...
Abortion	4	...	1	...	...	...	...	...	...	...	...	...
Phlegmasia Dolens	1	...	2	...	...	...	...	...	...	...	...	...
Metritis	1	...	1	...	...	...	...	...	...	...	...	...
Puerperal Convulsions	1	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	1	...	...	...	...	...	...	...	...	...	...	...
Menorrhagia	3	...	5	...	...	...	6	...	...	...	...	...
Leucorrhœa	...	...	...	...	...	...	...	...	...	...	...	...
General Debility	279	35	296	50	50	11	33	16	128	40	64	13
Poisoning by Opium	...	...	...	...	...	...	...	...	...	...	...	...
" by Vegetable Poisons	...	...	...	...	...	...	...	...	...	...	...	...
" by Arsenic	...	...	...	...	...	...	...	...	1	...	...	...
Snake-bite	1	1	1	...	...	...	...	...	...	...	5	...
Burning	30	...	33	...	3	...	12	...	8	...	14	...
Wounds and Contusions	593	8	982	11	104	...	188	1	176	6	434	6
Fracture	58	...	185	...	3	...	28	...	39	...	63	...
Dislocation	3	...	12	...	1	...	1	...	2	...	4	...
Sprain	25	...	22	...	8	...	11	...	9	...	25	...
Suicide and Suicidal Wounds	15	5	6	4	1	3	...	...	...	2	1	3
Drowning	...	...	...	...	...	...	...	...	...	1	...	...
Punished	8	...	50	...	4	...	4	...	4	...	7	...
Cause not defined	585	...	...	1	...	...	...	...	...	...	...	...

# GENERAL SUMMARY FOR 1874.

*DETAIL of the CAUSES of the ADMISSIONS and DEATHS of the EUROPEAN ARMY of INDIA, and of the NATIVE ARMY and JAIL POPULATION of the BENGAL PRESIDENCY.*

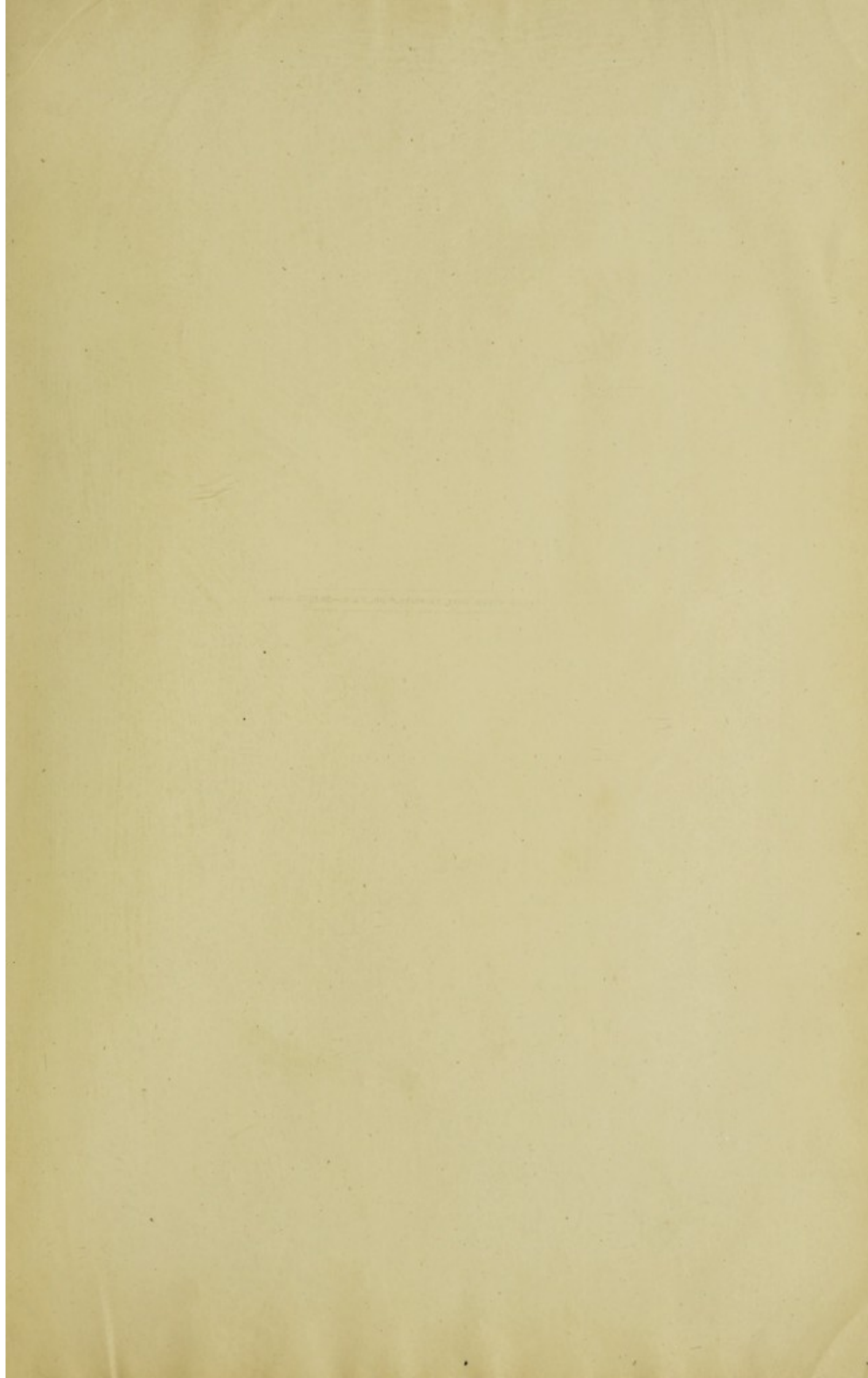
CAUSES OF ADMISSIONS AND DEATHS.	ADMITTED INTO HOSPITAL AND DIED IN AND OUT OF HOSPITAL.											
	ARMY OF BENGAL.		ARMY OF MADRAS.		ARMY OF BOMBAY.		ARMY OF INDIA.		NATIVE ARMY OF BENGAL.		JAIL POPULATION OF BENGAL.	
	Strength	Admitted	Strength	Admitted	Strength	Admitted	Strength	Admitted	Strength	Admitted	Strength	Admitted
	Died	Died	Died	Died	Died	Died	Died	Died	Died	Died	Died	Died
Cholera	9	8	1	1	3	2	13	11	58	43	475	179
Smallpox	37	7	5	1	4	...	46	8	55	14	193	14
Chickenpox	7	...	5	...	...	...	12	...	35	...	538	...
Measles	10	...	...	...	...	...	10	...	27	1	19	...
Mumps	11	...	...	...	3	...	14	...	155	...	358	1
Influenza	30	...	4	...	3	...	37	...	41	...	3	...
Diphtheria	...	...	...	...	...	...	...	...	2	...	123	16
Scarlet Fever (?)	47	...	...	...	...	...	47	...	...	...	...	...
Dengue	45	...	6	...	...	...	51	...	3	...	...	...
Hydrophobia	2	2	...	...	...	...	2	2	1	1	1	1
Erysipelas	134	4	30	1	37	...	201	5	43	1	278	31
Gangrene and Phagedæna	...	...	3	...	...	...	3	...	3	...	...	...
Pyæmia	3	2	...	...	...	...	3	2	1	1	1	...
Typhus Fever	...	...	...	...	...	...	...	...	13	1	...	7
Enteric Fever	172	75	34	12	33	14	239	101	11	6	20	7
Intermittent Fever	13,200	5	710	...	3,396	1	17,396	6	36,042	53	30,656	197
Remittent and Continued Fevers	7,214	36	1,365	2	1,111	7	9,690	45	717	51	1,397	154
Rheumatism, Acute	413	1	55	...	119	1	547	2	411	2	424	2
"    Chronic	889	...	210	...	157	...	1,256	...	1,296	...	213	...
"    Muscular	685	...	212	...	170	...	1,67	...	951	...	469	...
Gout	5	...	...	...	2	...	7	...	1	...	...	...
Leprosy	...	...	...	...	...	...	...	...	20	...	67	11
Elephantiasis	...	...	...	...	...	...	...	...	1	...	6	...
Scurvy	13	1	2	...	3	1	18	2	127	1	169	5
Anæmia	148	...	40	...	30	...	218	...	137	5	267	...
Canceræ œris	...	...	1	...	...	...	1	...	4	...	9	8
General Dropsy	3	1	1	...	...	...	4	1	11	1	251	59
Obesity	...	...	...	...	1	...	1	...	...	...	...	...
Cancer	4	3	5	4	1	1	10	8	6	3	10	6
Primary Syphilis	2,440	...	900	...	662	...	4,092	...	927	...	474	...
Secondary Syphilis	869	3	348	2	285	...	1,493	5	365	1	409	4
Phthisis Pulmonalis	274	44	117	13	71	4	462	61	106	35	290	181
Scrofula and Tuberculosis	21	1	2	...	...	1	25	2	12	1	36	1
Hæmoptysis	44	...	8	...	7	...	59	...	21	1	82	...
Hip-joint Disease	...	...	...	...	1	1	1	1	...	...	...	...
Myelitis	3	2	...	...	...	...	3	2	3	...	8	1
Encephalitis	15	7	6	1	2	2	23	10	1	1	9	9
Meningitis	6	2	2	...	1	...	9	2	2	1	10	5
Apoplexy	8	5	...	...	5	...	15	8	7	5	23	22
Stroking	67	32	15	6	39	11	122	49	7	7	43	10
Paralysis	49	...	14	...	...	...	72	...	42	7	43	6
Tetanus	...	...	...	...	1	...	1	...	2	1	9	6
Epilepsy	94	1	30	1	25	...	140	2	27	...	89	6
Hysteria	1	...	1	...	...	...	2	...	...	...	3	...
Anæsthesia	1	...	...	...	...	...	1	...	...	...	2	...
Hyperæsthesia	...	...	...	...	...	...	...	...	1	...	...	...
Chorea	...	...	...	...	4	...	...	...	...	...	2	...
Paralysis Agitans	3	...	3	...	...	...	6	...	4	...	...	...
Neuralgia	319	...	104	...	79	...	592	...	462	...	299	...
Mania	27	...	8	...	5	...	40	...	26	...	124	...
Dementia	29	...	9	...	17	...	55	...	7	...	17	...
Melancholia	22	...	13	...	2	...	37	...	5	...	4	...
Hypochondriasis	...	...	...	...	...	...	...	...	...	...	...	...
Impaired Vision	29	...	5	...	...	...	5	...	...	...	17	...
Nyctalopia	3	...	...	...	20	...	54	...	32	...	4	...
Ophthalmia	835	...	156	...	226	...	1,217	...	1,529	...	897	...
Otitis	299	...	114	...	67	...	490	...	329	...	189	...
Deafness	38	...	15	...	11	...	64	...	41	...	5	...
Epistaxis	26	...	1	...	3	...	21	...	7	...	26	2
Polypus nasi	1	...	2	...	2	...	5	...	1	...	1	...
Ozena	5	...	...	...	3	...	8	...	4	...	11	...
Tumour of Pericardium	...	1	...	...	...	...	...	1	...	...	...	...
Pericarditis	16	...	4	1	7	...	27	1	13	5	10	9
Valve Disease of Heart	158	13	34	6	29	3	221	22	17	6	13	7
Hypertrophy of Heart	41	4	19	1	5	...	65	5	3	1	4	3
Fatty Degeneration of Heart	8	7	1	...	...	...	9	8	1	...	4	5
Rupture of Heart and Aorta	1	1	...	...	...	...	1	...	...	...	...	...
Aneurism, Aortic	36	...	19	4	11	8	66	38	8	...	2	3
"    Popliteal	...	...	1	...	...	...	2	...	...	...	...	...
"    Subclavian	...	...	2	...	...	...	1	...	...	...	...	...
"    Iliac	1	...	...	...	...	...	1	...	1	...	...	...
"    Traumatic	...	...	...	...	...	...	...	...	...	...	...	...
Palpitation	627	...	190	...	91	...	908	...	12	...	2	...
Embolism	2	...	1	1	...	...	3	1	1	...	...	...
Syncope	2	...	1	...	...	...	3	...	...	...	1	...
Angina Pectoris	9	1	3	...	3	...	15	1	2	...	...	...
Phlebitis	2	...	1	...	...	...	3	...	4	...	6	...
Varix	37	...	16	...	8	...	61	...	10	...	1	...
Inflammation of Inguinal Glands	453	...	339	...	271	...	1,054	...	102	...	49	...
Inflammation of other Glands	51	...	18	...	22	...	91	...	...	...	8	...
Gonorrhœa	3	...	...	...	...	...	3	...	165	...	25	7
Laryngitis	12	...	...	...	3	...	15	...	18	...	1,428	56
Bronchitis	1,968	1	498	...	317	...	2,79	1	1,874	26	259	18
Asthma	28	...	16	...	11	...	65	...	72	1	926	328
Pneumonia	152	17	19	4	18	5	189	26	533	125	1	5
Gangrene of Lungs	...	...	...	...	1	1	1	1	...	...	200	20
Pleurisy	108	2	29	1	22	...	159	3	211	10	25	1
Odontalgia	2	...	2	...	1	...	5	...	67	...	135	1
Stomatitis	59	...	15	...	9	...	74	...	76	1	208	7
Tonsillitis	1,120	...	121	...	391	...	1,542	...	203	1	7	2
Gastritis	9	...	2	...	6	...	17	...	7	1	23	17
Enteritis	4	...	1	...	...	...	5	1	13	4	19	13
Peritonitis	9	7	1	1	4	4	14	12	4	2	...	...
Iliac and Pericæcal Abscess	1	...	...	1	...	...	1	1	...	...	...	...
Typhilitis	5	...	...	...	...	...	5	...	1	...	3	1

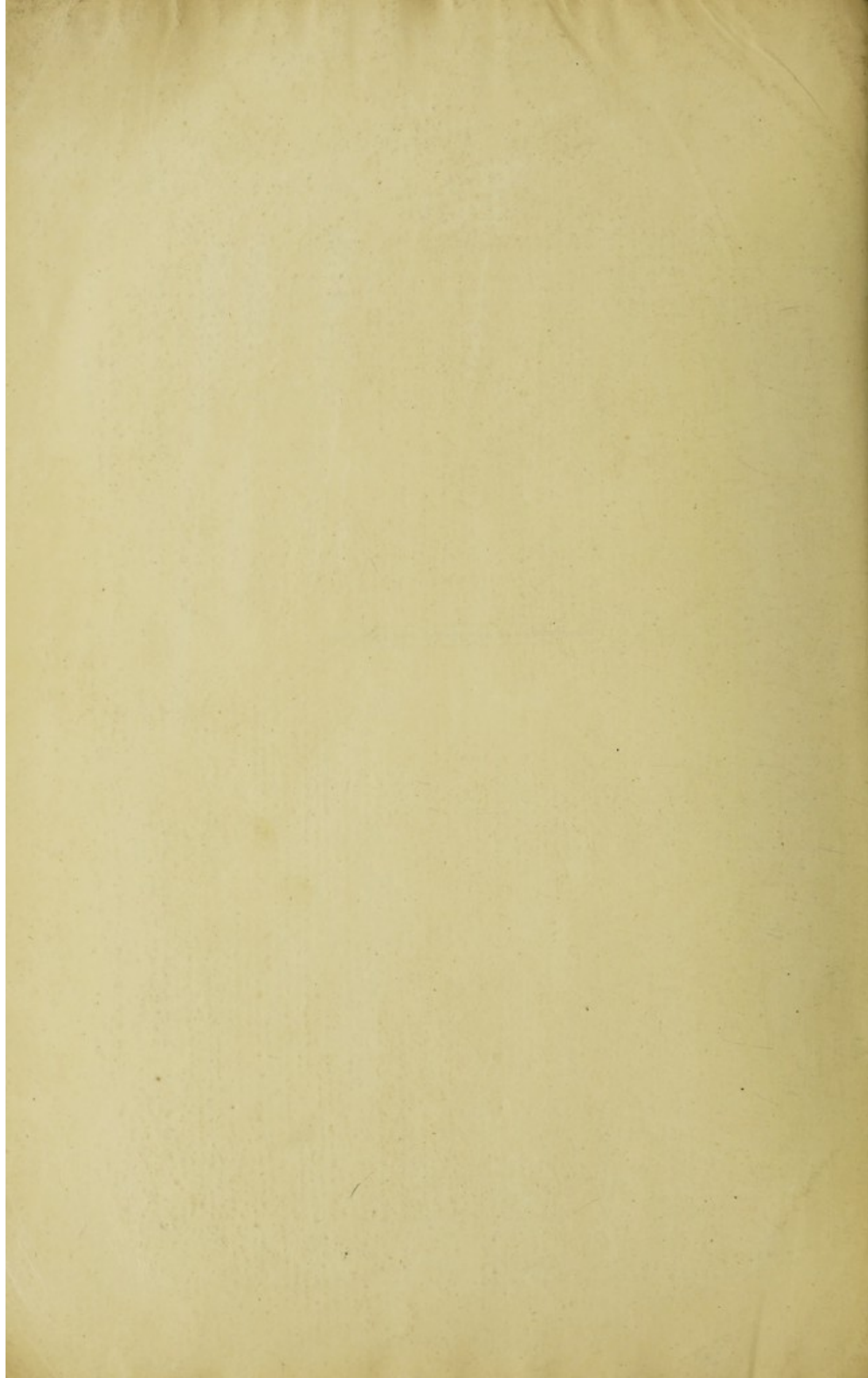
ADMITTED INTO HOSPITAL AND DIED IN AND OUT OF HOSPITAL.

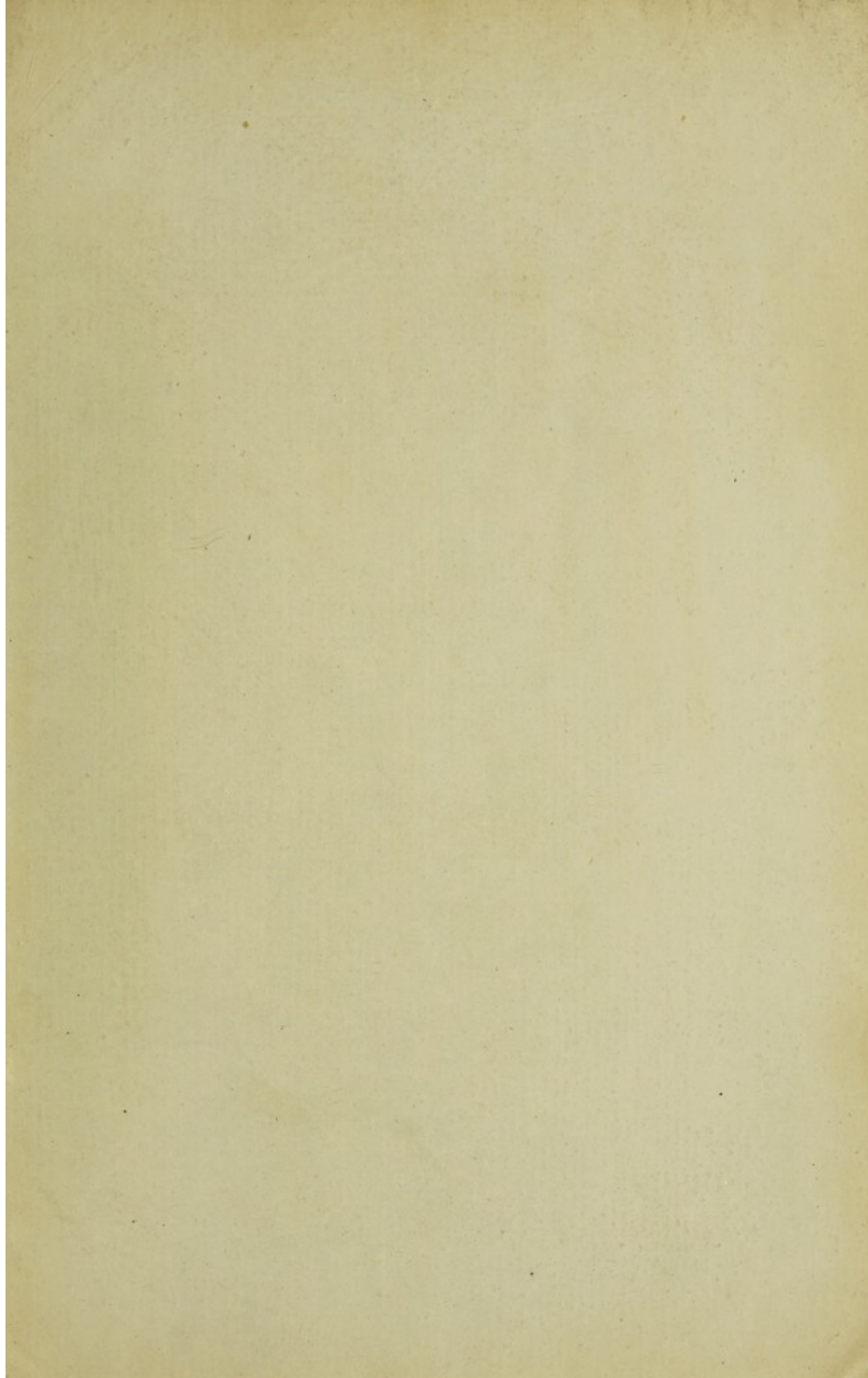
CAUSES OF ADMISSIONS AND DEATHS.	ARMY OF BENGAL.		ARMY OF MADRAS.		ARMY OF BOMBAY.		ARMY OF INDIA.		NATIVE ARMY OF BENGAL.		JAIL POPULATION OF BENGAL.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Hernia	34	1	16		7		57	1	17	1	21	1
Ileus	1						1	1	1	1	2	4
Hæmatemesis	6				4	1	10		2	1	4	1
Melæna											4	2
Dyspepsia	1,437		709		585		2,731		563		665	
Colic	192		17		52		301		697		1,100	
Constipation	30		12		16		58		170		417	
Dysentery	953	45	955	22	241	6	2,149	73	3,061	39	7,392	891
Diarrhœa	1,892	2	531		473		2,896	2	1,819	27	6,889	289
Hæmorrhoids	331		100		88		519		137		265	
Fistula in ano	37		3		4		44		31		19	
Ascariæ	2						4		17		11	
Tapeworm	120		69		45		234		14		13	
Spleen Enlargement	233	1	29		89		351	1	651	3	582	25
Rupture of Spleen										2		1
Hepatitis	1,061	72	964	38	502	18	3,157	128	118	9	72	8
Cirrhosis	10	11	2		1	1	13	12	2	1	12	6
Hydatid of Liver											1	
Amyloid Disease of Liver	3	2					3	2				
Gall Stones									1			1
Jaundice	203		31		29		263		81	2	265	4
Ascites		1	1		7		16	1	13	4	39	11
Nephritis	39	8	9	1	28		76	9	18	3	21	10
Cystitis	39		5		5		49		15	1	10	1
Hæmaturia	6				1		7		3		11	
Calculus	3				1		4		14	1	7	1
Diabetes	6	3	1				7	3	5	2	6	
Enuresis	30				1		32		1		4	
Stricture of Urethra	158	3	50		45		253	3	28	1	53	3
Urinary Fistula									1		4	
Sloughing of Scrotum									2		2	1
Gonorrhœa	3,683		787		740		5,190		494	1	114	
Phimosis	21		10		10		41		20		72	
Warts	104		23		13		140		6		3	
Bubo									153		158	
Epididymitis	81		30		14		125		54			
Atrophy of Testis	1						1					
Orchitis	481		134		85		700		196		140	
Neuralgia Testis					1		1					
Fungus Testis									1		1	
Hydrocele	23		17		2		42		17		74	
Hæmatocele	2		1				3		1		2	
Varicocele	37		8		1		46		4			
Periorchitis	54		6		15		75		51		19	
Caries	7						7		3		10	
Necrosis	1		8	1	4		13	1	7	1	21	1
Synovitis	92		33	1	16		141		60	1	63	2
Bursal Inflammation	13		6		2		21	1	18		3	
Contraction	4		1				5		7		1	
Cramp	1		1				2		2		1	
Atrophy of Muscle			1				3		1		3	
Deformity of Spine	2				2		2		1		1	
Abscess	632		238		212		1,082		1,309	1	3,422	
Ulcer	1,088		311		340		1,739		1,780	1	2,994	44
Whitlow	93		34		31		158		135		241	
Boll	792		256		267		1,285		1,831		722	
Carbuncle	6		1		3		10		15	1	86	
Itch	42		19		14		75		424		420	
Skin Diseases	562		150		91		743		592		307	
Guinea-worm	9		1		9		19		247		140	
Hælip											3	
Tumour	34		8		9		81		22		18	
Childbirth											56	
Abortion											8	1
Metritis											2	
Phlegmasia Dolens											1	
Puerperal Convulsions											1	
Puerperal Fever											2	
Leucorrhœa											1	
Menorrhagia											2	
General Debility	697		327		288	1	1,312	1	887	23	730	171
Delirium Tremens	89	7	36	1	50		175		1			
Poisoning by Alcohol	17		7		18		42	8	6			
" by Cantharides	1						1					
" by Arsenic									4		1	
" by Corrosive Sublimite									3	2		
" by Carbolic Acid									1	1		
" by Vegetable Poisons	2				1		3		13	1	7	1
Snake-bite									12	3		
Fly-bite									71			
Burning	31		9		9		49		157		106	
Wound and Contusion	2,021	23	694	2	674	4	3,389	29	3,093	11	2,427	32
Concussion of Brain	19		2		6		18		95		296	
Fracture	161		76		45		282		28		23	
Dislocation	28		15		15		58		24		100	
Sprain	987		259		274		1,520		459			
Murder and Homicide	1	1	1	1	1	2	3	4		3		
Suicide and Suicidal Wounds	3	18		3	2	2	3	24		7	23	17
Drowning		12						24		8		1
Struck by Lightning										1		
Asphyxia	1						1					
Died while drunk		6				2		8				
Suffocated while drunk		3			1	1		5				
Executed		1			1	2		4		1		
Foot-sore	114		20		33		167	4	2,380			
Punished	3						3		2		77	
Surgical operations	6		3				9		1			
Cause not ascertained	71	2	7	1	20		98	3	15		885	1
Absent Deaths of the Native Army										173		



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WITH

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