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

#### **Contributors**

India. Sanitary Commissioner.

#### **Publication/Creation**

Calcutta: Superintendent of Government Printing, [1906]

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### ANNUAL REPORT

OF THE

# SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA,

1906,

WITH

APPENDICES AND RETURNS OF SICKNESS AND MORTALITY AMONG EUROPEAN TROOPS, NATIVE TROOPS, AND PRISONERS, IN INDIA, FOR THE YEAR.







CALCUTTA
SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA
1908.











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FOR

1906.



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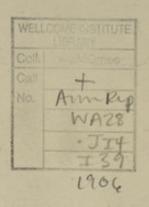
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CALCUTTA
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ANNUAL SANITARY REPORT FOR 1906.

#### METEOROLOGY OF THE YEAR.

1. The following summary has been abstracted from the Monthly Weather

Summary of the meteorological Reviews for the year 1906, published by the Meteorological Department of the Government of India.

Chief features.—The cold weather season lasted longer than usual, and February and March were very wet months in northern India, where the seasonal rainfall was in very large excess.

There was a delay in the setting in of both monsoon currents over by far the greater part of the country, and the rainfall from June to September was in slight defect in the field of the Bay current, but was practically normal in the region usually served by the Arabian Sea current. The provincial departures from the normal were not large except in the case of Mysore (24 per cent. in excess) and Sind (31 per cent. in defect), and the rainfall of the whole country was in defect by 1 per cent.

Weather was drier than usual in October and November, but in December the Punjab and the Peninsula received rainfall in excess of the average, the excess being most marked in the Peninsula.

Fanuary.—Weather in Persia and northern India was on the whole slightly more disturbed than is usual in January, but with one exception the depressions travelling from the west, to which such disturbances in the winter months are chiefly due, were weak or met with conditions unsuitable for rainfall. An eastward travelling depression, however, which arose in Central India gave rain in the north-east; and a storm from the Bay, of a character very unusual in January, was the cause of the only wet weather which occurred in the south of the Peninsula. The following statement presents the average conditions that existed during the month:—

- (i) The geographical distribution of pressure deviated only slightly from the normal, with tendencies to low pressure over the Peninsula, and thence northward across the Central Provinces, Chota Nagpur and Bihar up to the Himalayas, and to high pressure in northwest and north-east India. The mean geographical departure from normal for the whole area was + 002°.
- (ii) Maximum temperature was low in the areas of high pressure in north-west and north-east India, and high in the areas of low pressure; but the places were few in which the deviations exceeded 3°.
- (iii) Minimum temperature showed the same distribution as maximum temperature, except in the north-east, where, in Bengal, it was practically normal, and in the east of the United Provinces, where it was distinctly in defect.

(iv) Rainfall occurred chiefly in the Peninsula, Bengal, the east of the Central Provinces and in the north-west submontane districts: humidity, both absolute and relative, and cloud presented similar features of distribution.

February.—The weather in northern India was abnormally cold, wet and cloudy, and a series of depressions of the winter type passed eastward from Baluchistan or the Arabian Sea across Gujarat, Sind or the North-West Frontier Province, accompanied by waves of hot and cold weather. There was also evidence of two other such depressions, with centres passing to the north of Kashmir. Rain or snowfall occurred with each of these, notably with the two last to which was due the larger part of the total rainfall of the month which, as has already been indicated, was very greatly in excess of the normal. Mean temperature was from 2° to 4° low over the whole of northern India, the maximum or day temperatures especially contributing to this result, and conditions of high humidity and excess cloud amount were nearly general.

March.—Weather in northern India presented the same cold, cloudy and damp features which had been prominent in February, and in all parts of the Peninsula also, except the extreme south, mean temperatures well below normal were recorded. Above latitude 22° N. the defects of temperature lay between 2° and 5°, and large tracts in the north-west and from Bengal westwards to the Central Provinces and the east of the United Provinces were uniformly 4° low in mean temperature. The greater part of this result was due to deficiencies of maximum day temperature, which in consequence of cloudy weather ranged up to 8°. Rain continued, as in February, to fall in excess in the north, but in a less marked manner than during that month. In Burma, Assam, and on the west coast only were any deficiencies shewn. In the south rain fell on the Coromandel coast and in south Madras on the 1st, and scattered thunder-showers on the 18th and 19th. Humidity was high generally in the areas of rainfall, and cloud was in excess over the whole Indian area, except in parts of Bombay and Burma.

April.—Weather conditions presented a strong contrast to those of the previous month—the departure of mean pressure from the normal fell from +'048' in March to -'007' in April; rainfall was practically absent except in Kashmir, Assam and south India; and cloud was in conspicuous defect. Maximum day temperature rose above the normal over the whole of the Peninsula and Bengal, and minimum night temperature showed closely corresponding changes. Two depressions of the cold weather type crossed northern India in the first half of the month and strong evidences appeared of the passage of two others to the north of Kashmir. The rainfall due to them was confined to the extreme north-west corner of India, and to Bengal, Assam and northern Burma, the principal falls in the north-west occurring between the 4th and 9th and the 15th and 17th, and in Assam from the 2nd to the 3rd and from the 5th to the 7th.

A wave of very cold weather was affecting the west at the opening of the month and was felt in a modified degree in the United Provinces and Bengal, but it had given place to a warm wave by the end of the first week. This latter wave of high temperature was due to and preceded the third travelling depression of the month, and was followed by a marked low temperature wave giving total

changes of 16° and 18° in the west between the 7th and 11th and of 6° and 8° between the 12th and 14th in Bengal. During the latter half of the month weather in the north-east was influenced by a trough of low pressure lying near the hills, which by directing the winds from Orissa along a more eastward course than usual raised the temperature in Bengal and maintained it at values from 4° to 10° above normal. Rain fell almost daily in Assam during the second and third weeks, heavy falls occurring on the 18th and 19th during a strong development of the low pressure area at the foot of the hills. In the Peninsula dry weather prevailed except in south India, where thunderstorms gave light scattered showers on many days and more general rain on the 27th, 28th and 30th. Temperature was a few degrees above normal over most of Bombay and Madras.

May .- The weather was warmer than is usual even in May, the warmest month of the year, the averages of both day and night temperatures having been almost generally above normal over India and Burma. In maximum temperature the greater part of the country showed an excess of about 2°, but in Burma, south India and the Central and United Provinces the excess reached 4°. Minimum temperature was above normal almost equally generally, the area of its greatest departure, which reached 6° covering parts of Rajputana and Central India. Cloud was conspicuously less than usual, and its distribution was similar to that of absolute and relative humidity, as measured at the ground level. Rainfall was nearly everywhere below the average, by amounts varying from 10 per cent. in Bengal and Orissa to 89 per cent. in the area comprising east Rajputana, Central India and Gujarat. In distribution it was concentrated, as is usual in May, over the north-eastern parts of India, the Malabar coast, and Burma, and the heavy falls which regularly occur in the extreme south of the Peninsula and on the Tenasserim coast graded off rapidly in a northward direction, in the Peninsula towards the area of dry weather, in north Bombay and in the south of Burma towards the interior.

June.—The chief feature of the weather of the wonth, the breaking of the monsoon, occurred later than the normal date over the greater part of India, most notably in Malabar, the Central Provinces and the east of the United Provinces. In these areas the delays amounted to 10, 10 and 12 days, respectively. The month's rainfall, due to unsettled conditions prior to the monsoon, and later, to the monsoon current itself, was deficient in Lower Burma, Bengal, Assam, a large part of the Punjab plains, in Rajputana, Central India and on the west coast, and was above normal elsewhere.

Three depressions developed during the month; the only one of importance crossed India, between the 17th and the 23rd, from the east coast to Sind, causing light, moderate and heavy rain along its course. Mean pressure was '018" in excess over India and Burma, and departures from this average condition were nowhere large. The monthly average of mean temperature was nearly normal, with a slight excess in part of Bengal and a slight defect in Upper Burma. The actual departures from normal, however, which occurred from time to time during the month, were considerable in several parts of India. Humidity conditions were, on the monthly average, approximately normal; they showed, however, an excess in Sind, Cutch and Rajputana, and a defect in the United Provinces and east Punjab.

July.—Weather was on the whole less cloudy than usual, rainfall was below the average, except in the Peninsula, and temperatures were normal over the greater part of the country. In the north-west, however, Sind and the Punjab had clearer skies, higher temperature and very considerably less rain than is usually the case in July. During the month three depressions affected the weather in the periods from the 1st to the 4th, from the 17th to the 24th, and from the 25th to the 29th. The first caused general and heavy rain in north-east India, the United Provinces, Central India and parts of the Central Provinces and Rajputana. The second depression gave an increase of rainfall over the whole of the Peninsula and caused rain over the greater part of northern India between Bihar and Rajputana. The third gave heavy rain from Bengal westwards to the central parts of the country.

August .- Weather was less cloudy than usual over the greater part of India and Burma, although at the ground level humidity was approximately normal. Mean temperature was slightly low along the base of the Himalayas and in the south-east of the Peninsula, owing chiefly to a defect of day temperature, and high in parts of Rajputana and the Punjab, but elsewhere mean monthly conditions were practically normal. Pressure was on the average high by '031" and its departures from normal varied from a small defect in the south to an excess of '080" at the head of the Bay of Bengal. Winds were weak in the Peninsula, but strong in Rajputana, the upper Sub-Himalayas and at the head of the Bay of Bengal. Rainfall was in excess along the base of the Himalayas, at Himalayan hill stations, and in the Peninsula, especially in the south. In the belt of the country between the Sub-Himalayas and the Peninsula rainfall was on the whole deficient. Two depressions occurred during the month, one in Gujarat between the 24th and 29th and the other, almost simultaneously, travelled from the Bay of Bengal across Orissa to Rajputana. In each case some heavy rainfall in the neighbourhood of the depressions was induced by the conditions prevalent at the time.

September.—Weather in the north-west and west-central parts of India was on the average of the month slightly cooler by day and the air damper than is usual in September; cloud was in excess in Rajputana and over a belt of country from Gujarat across the Central Provinces to Burma, and in defect in Bengal. In other parts of India conditions were approximately normal. Mean monthly pressure was low, especially in Bengal. Rainfall was light in Bengal, the Peninsula and Gujarat, but heavy in Burma and the area comprising the Punjab, Sind, Rajputana and Central India.

Five depressions occurred, the first of which was already filling up at the end of August. The second and third appeared between the 4th and the 15th and gave wide-spread rain over nearly the whole of India; the remaining two depressions together caused heavy rainfall between the 25th and the 3oth in central and north-east India and in Burma,

October.—Skies were even more free from cloud than usual over a large part of the country, although humidity was above the normal in most places. Rainfall was somewhat irregulary distributed: it was above normal in the interior of Burma, the Assam Hills, the Brahmaputra Valley, Bengal, Chota Nagpur, Mysore and south Madras, and was deficient in the remainder of the country. The defect was greatest in the United Provinces, Berar and the central and western districts of the Central Provinces which received hardly one-tenth of their normal quantity. Nights were warmer than usual in most districts,

particularly in upper India where minimum temperature was from 2° to 6° above the normal; while days were, if anything, slightly cooler than is normally the case. In the mountain zone, bordering upper India, temperature was high, both by day and night. One storm, of moderate intensity, occurred in the month, developing near the Andaman Islands between the 21st and the 27th. It travelled to the Madras coast at Cocanada, and thence moved slowly along the coast till its disappearance on the 31st and caused rainfall on the Circars coast, in Orissa and north-east India.

November .- On the average of the whole of India weather was drier and warmer and skies were clearer than is usually the case in November, and barometric pressure was in mean geographical excess by '027". Humidity was high in the north-west, north-east and south India, and low over the central parts of the country. Cloud amount was below normal everywhere except in the south and west of the Peninsula, central Burma and upper Assam. Temperature, both by day and night, was in excess over the greater part of the country, most markedly in north-west India where it ranged up to 6° above normal. The excess of pressure was higher in the hills of northern India than on the plains, so that the vertical pressure gradients were slighter than usual. Winds had a more westerly tendency than usual in northern India, and in the Peninsula shewed a strong north component. Rainfall was below normal except in Burma, Eastern Bengal and Assam and the south of Madras. The largest defect occurred in Mysore where only 25 per cent. of the normal quantity was received. No rain fell over the tract of country which includes the United Provinces, the Punjab, Rajputana, Central India, Sind and Gujarat.

December.—In northern India, with the exception of the Punjab, weather was drier than is usual in this month, but in the Peninsula conditions were disturbed, and the rainfall was in many parts in excess of the normal by between 200 and 900 per cent. Temperature, and especially minimum temperature, was high over the greater part of the country, and humidity was in most places above normal. Skies were much clouded in the area of rainfall in the Peninsula and also in the North-West Frontier Province, parts of north-east India and Burma, but elsewhere cloud proportion was lower than usual. Pressure was low on the average by '017", the defect being chiefly noticeable in the Peninsula, and vertical gradients of barometric pressure in the northern parts of the country were less marked than usual. There were four periods of disturbed weather in the Peninsula, during which the greater part of the rainfall of the month within that area occurred; and in the north of India the conditions accompanying the winter type of depression appeared on four occasions, although on only one of these was the resulting precipitation at all abundant.

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#### SECTION II.

### EUROPEAN ARMY OF INDIA.

2. The average strength of the European army of India during 1906,

India Appendices A and B to Section II. Tables I, III and LIII.

51 per cent. were men under 25 years of age and

21 per cent. were men with less than one year's service in India. The year was an unhealthy one for all classes of people in India and from the statement in the margin it will be seen that the rates of admission to hospital, of

India,		All causes, Ratios per 1,000			
		GRIVE D	1900-1904.	1905.	1906.
Admissions		-	1046'5	834'3	870 8
Constantly sick			64.6	52'3	51'4
Deaths			13'03	10.02	10'43
Invalids			34'76	21'24	28:36

mortality, and of invaliding, among European troops were all somewhat higher than those of the previous year though they were considerably lower than those of the antecedent quinquennium. Despite an increase in the number of cases of sickness the constantly sick rate fell from 52.3 to 51.4 per 1,000; and, in view of the fact that the rates of admission to hospital

and of death during 1905 were the lowest on record, it must be concluded that the health of the British troops in 1906 was very good. The recorded increase in sickness was due chiefly to a rise in the number of admissions on account of ague; this disease, venereal diseases and simple continued fever were the chief causes of sickness during the year. As compared with 1905 there was a rise in the admission rates from ague, remittent fever and simple continued fever, and a fall in those from venereal disease, influenza and enteric fever.

The chief causes of death were, as usual, enteric fever and abscess of the liver, the former accounting for 30.6 per cent., and the latter for 14.6 per cent. of the total number of deaths. The mortality from each of the chief diseases, with the exception of heat-stroke, pneumonia and tubercle of the lungs, was higher than in the previous year.

The chief causes of invaliding were, in order, debility, ague, syphilis, valvular disease of the heart, enteric fever, and disordered action of the heart, these causes together accounting for 847 invalidings (nearly one-half of the total number) as compared with only 574 in 1905. The number of men sent home on account of syphilis rose from 75 in 1905 to 120 in 1906 and on account of enteric fever from 52 to 115, but there was a fall in the number invalided for tubercle of the lungs (from 116 to 92) and only 10 men were invalided for Bilharsia hæmatobia as compared with 23 in 1905, 71 in 1904 and 158 in 1903.

If the marginal statements in the first paragraphs of this and the following section be compared it will be seen that the admission rate among European troops during 1906 was nearly one and a quarter times as high as that among Native troops, that the constantly sick rate was more than twice as high and that the invaliding rate was four times as high. The death rates among European and Native troops were, respectively, 10.43 and 6.57 per mille.

The average annual strength of the European troops composing the garrison in the Aden Hinterland during the first three months of 1906 works out to 79, and altogether 57 admissions into hospital and one death were reported. Ague, as usual, was the chief cause of sickness; the death was due to syphilis.

3. Employing the statistical method usually adopted in this report for ascertaining which areas are most and which least Commands. Divisions. Stations. Appendix A. Tables I, III, IV and favourable to the health of the troops we find that of the three Commands the Western was the most unhealthy during 1906 both for European and for Native troops, and that for European troops the Eastern was more unhealthy than the Northern. The Western Command was the most unhealthy chiefly owing to the death rates on account of enteric fever, abscess of the liver and dysentery being higher than in the other Commands. Enteric fever was least prevalent and caused least mortality in the Northern Command and venereal diseases were also least prevalent in this Command. Tubercle of the lungs was most prevalent in the Western Command, and pneumonia and influenza in the Northern. As regards the Divisions the statistics of the 5th (Mhow) Division were the least favourable during 1906, the rates of admission to hospital, of constantly sick, and of mortality being respectively 1,060, 55 and 16 per mille. The 1st (Peshawar) Division stands next in the list with an admission rate of 1,290, a constantly sick rate of 55 and a death rate of 8 per mille and the 9th (Secunderabad) Division next with rates of 927, 62 and 10 per mille, respectively. As in 1905, the health of the European troops in the 2nd (Rawalpindi) and the 3rd (Lahore) Divisions was better than in the other Divisions during 1906.

Among the larger stations the highest constantly sick rates were recorded at Fort William (88.2), Meerut (71.3), Wellington (69.4) and Rawalpindi (64), and the lowest at Sialkot (36). The incidence of enteric fever was greatest at Mhow, Jhansi and Lucknow, and of hepatic abscess at Sialkot, Mhow and Secunderabad. Fort William (34.45), Colaba (20.60) and Rangoon (18.09) furnished the highest constantly sick rates for venereal diseases and Quetta (4.61) the lowest.

4. The geographical groups which, as judged by the statistics of sickness Geographical groups. Appendix B. and mortality in combination, may be regarded as having been most unhealthy for European troops during 1906 were Bengal-Orissa (IV), Central India (VIII), Burma Inland (II), Indus Valley (VII), and Deccan (IX), while at the other end of the scale were the hill stations (XII-a), the Burma Coast (I) and the Western Coast (X). Bengal-Orissa and Central India invariably appear in the list of unhealthy groups, and the hill stations in the list of healthy ones, but the position of the remaining groups as regards their healthiness differs from year to year and is dependent upon other factors than climate; one is the figure representing the average strength, which in some groups is low [e.g., Burma Coast (1), where it was only 1,375 in 1906] and a few deaths yield a high death rate, and in others high [e.g., Upper Sub-Himalaya (VI), where it was 13,989]. The admission and constantly sick rates were lower than in 1905 in all the geographical groups except five, the three groups where the rates recorded during 1906 compare most unfavourably with those of 1905 being Burma Inland II), Central India (VIII) and Southern India (XI). Ague was most prevalent

among the troops located in the Indus Valley, the Central India and the Bengal-Orissa groups, simple continued fever among those in the Burma Coast group, influenza among those in the Indus Valley group, and enteric fever among those in the Central India group.

- 5. Influenza caused an admission rate of 11'4 per mille among the European troops during 1906 as compared with 14'2 per Influenza. Appendix B. Table VI. mille in 1905 and 4'9 per mille in 1904. The disease was prevalent in all the geographical groups, the incidence being greatest in groups VII (Indus Valley) and VIII (Central India). In the first of these the troops were affected to the extent of 65 per thousand of their strength and in the second to the extent of 23 per thousand. There were altogether 804 admissions to hospital, with no fatality, reported from 41 stations, of which Peshawar (313), Agra (119) and Cawnpore (86) contributed 64 per cent. of the total number of admissions. At Peshawar the epidemic lasted from May until October. The usual symptoms of the disease were present and in all cases the blood was examined microscopically in order to exclude malaria, From the sputum of one patient, in whom the disease was complicated with pneumonia, the influenza bacillus was isolated. At Agra the epidemic occurred during September and October; the medical officer considered that the disease was probably imported from stations in the hills, where it had been prevalent during the summer. At Cawnpore influenza was prevalent during October and November.
- 6. There was a considerable increase in the prevalence of cholera among Cholera. Appendices A and B. European troops during 1906, the number of cases recorded being 72 and the number of deaths 46 as compared with 10 cases and 9 deaths in 1905 and 16 cases and 11 deaths in 1904. Of the 72 cases during the year 21 (including 6 cases of "choleraic diarrhœa") with 9 deaths occurred at Meiktila, 11 with 10 deaths at Secunderabad, 9 with 7 deaths at Benares, 4 with 3 deaths at Dinapore and 11 with 8 deaths among troops on the line of march. The first patients in the outbreak at Meiktila were soldiers who had probably drunk milk or aerated waters in a billiard saloon in a bazaar where cases of cholera had occurred. It was found that the milk supplied to this saloon came from a district where cholera was severely prevalent among the cow-keeping community. The outbreak, which began on the 1st of August, was quickly checked by moving the affected regiment into camp and by the thorough measures of isolation and disinfection immediately undertaken. The outbreak at Secunderabad was confined to patients under treatment in the upper storey of the station hospital and all the cases occurred between the 4th and 16th of August. Eight of the patients were suffering from enteric fever, two from simple continued fever and one from rheumatism. Only three of the patients attacked with cholera lived more than a day after the onset of symptoms. The source of infection in the first case could not be traced with certainty, but it was possible that it was a case of infection by milk, which, it appears, was obtained from native contractors and apparently was not boiled before issue to the patients. The wards of the upper storey were evacuated on the 12th or 13th of August and the last case occurred on the 16th. The outbreak at Benares lasted five days, from the 30th of May until the 4th of June. All the men attacked belonged to the same company

and used the same latrine. It was found that one of the patients had visited a house in the bazaar where there were two cases of cholera and it was probable that he had taken food there. All the cases at Dinapore were among members of the Sergeants' mess and it was thought that infection had been conveyed in uncooked vegetables and fruit brought from a locality where cholera existed.

- 7. There were in all 87 cases of small-pox with 4 deaths among European Small-pox. Appendices A and B. troops in 1906 as compared with 99 cases with Tables III and IV. one death in 1905, and 49 cases with 4 deaths in 1904. An examination of the records for the past ten years shows that there has been a considerable increase in the prevalence of this disease among European troops in India during recent years, for it appears that during the five-year period from 1897 to 1901 only 96 cases of small-pox with 11 deaths occurred among these troops while during the five-year period from 1902 to 1906 no fewer than 326 cases with 21 deaths were recorded. This is the more unfortunate since among the much larger body of Native troops the prevalence of small-pox has not increased. The lack of success in the prevention of this disease among European troops during recent years is further illustrated by the fact that while in each year from 1897 to 1902 small-pox was more prevalent among Native troops than among European troops, in each year from 1903 to 1906 it was more prevalent among European than among Native troops. An interesting table obtained from the office of the Principal Medical Officer in India gives the number of European soldiers who at the yearly examinations are found to have no satisfactory marks or record showing that they have been vaccinated, from which it appears that in 1906 the number was no less than 20,649 as compared with 14,923 in 1905, 6,529 in 1904, 5,987 in 1903 and only 2,463 in 1902. It can scarcely be necessary to search further for an explanation of the cause of the increase of small-pox among European troops in India. During 1006 one or more cases were recorded in 32 stations, the largest numbers occurring in Cawnpore (15), Ihansi (12) and Karachi (8). There was no death among the 15 patients who suffered from the disease in Cawnpore. All the men except one had been re-vaccinated at periods varying from two to eight years before the attack, but in nine only two marks had been made and in the remainder only three. In seven re-vaccination had "failed" and in three the result was recorded as "modified". There was one death among the patients at Jhansi; the man had been successfully re-vaccinated in 1902, three marks having been made. At Karachi also one case was fatal; the patient had been re-vaccinated in 1901 there being one satisfactory mark. Measures have recently been taken to ensure that failures in re-vaccination are not due to loss of potency of the vaccine.
- 8. Malarial fevers were very prevalent among all classes of people in India Intermittent and remittent malarial during the latter part of 1906 and the number of admissions to hospital on account of intermittent fever among European troops rose from 7,945 (111 per mille) to 12,380 (176 per mille). The number of deaths ascribed to this disease was 16, which is equivalent to a death rate of '23 per mille as compared with '11 per mille in 1905. Native troops and prisoners also suffered more severely than in the previous year. As regards the prevalence of the disease among the European troops of the three Commands it may be noted that in the

Northern Command the admission rate rose from 70 per mille in 1905 to 226 per mille, in the Western from 163 to 250 and in the Eastern from 113 to 132. As regards the ten Divisions the admission rates from malarial fevers (intermittent and remittent) were highest among the troops of the 1st (Peshawar) Division (686 per mille of strength), the 5th (Mhow) Division (349.7 per mille), and the 4th (Quetta) Division (2071). The rates in these three Divisions during the previous year were 178.9, 184.3 and 123.8 per mille respectively, which shows the great increase in prevalence during the year under review.

As regards the relative prevalence of malarial fevers in the different geographical groups the admission rates among both European and Native troops were highest in the Indus Valley group (VII), the rates in the Central India group (VIII) coming next and those in the Bengal-Orissa group (IV) next. Finally as regards the relative prevalence of these fevers in the different stations it may be noted that excluding the Hill stations (in which, of course, the admissions are almost entirely on account of relapses of infections contracted in the plains) an increased prevalence among European troops as compared with 1905 was recorded in 42 stations and a diminished prevalence in 25; and that, omitting stations with an average strength below 200, the highest rates were recorded among European troops in 1906 at Delbi, Jhansi, Peshawar, Nowshera, Hyderabad (Sind), Nasirabad and Neemuch, the rates in all these stations being above 500 per mille of strength and being considerably higher than those of the previous year.

The number of admissions recorded under the heading remittent fever during 1906 was 240 (3'4 per mille) and the number of deaths five as compared with 161 admissions (2'3 per mille) and one death in 1905. No fewer than 178 of the admissions during 1906 were recorded in Maymyo; the next highest numbers in any station were nine at Neemuch, eight at Port Blair, six at Mhow and four each at Ambala and Saugor. In eight stations only one case occurred, in four two cases and in four three cases. This list includes all the stations in which a case was recorded. All the cases at Maymyo were considered by the medical officer to be malarial fever; they were returned under the heading remittent fever in accordance with the character of the temperature chart. A similar remark applies to the cases at Neemuch, Port Blair, Mhow and Ambala. Except Mhow none of the stations at which cases of remittent fever were recorded come in the list of stations where malarial fever was most prevalent during the year and the inconsistency in the statistics of this disease from year to year shows that the return of cases under this heading depends more upon the idiosyncracy of the medical officer than upon any other factor. For this reason it is fortunate that the term has been omitted from the new edition of the Nomenclature of Diseases and after 1907 it will not be used in statistical returns.

The table in the margin shows the extent to which the admissions recorded

	100	Number	Admission
Years.		of admissions.	ratio per
1903		846	14'0
1903	***	1,300	18'5
1904	***	1,684	23'7
1005	-	3,415	479
1906	***	3,017	557

as due to simple continued fever have increased during recent years, an increase which is coincident with a decrease in the number of admissions recorded as due to intermittent and remittent fevers. There is no doubt that the increase is the result of a change in diagnostic procedure and that in former years a great number of the cases now shown under the heading simple continued fever would have been

returned under the heading ague. The truth of this will be apparent from a con-

TOTAL ADM	ISSIONS.	EUROPEA	N TROOP	S.	
espiral (more)	1901 A3	ID 1902.	1905 AND 1906.		
Station.	Malarial fevers,	Simple continued fever.	Malarial fevers,	Simple continued fever.	
Rangoon Lahore Cantonment Stalkot Jubbulpore Secunderabad Bangalore Quetta	357 1,291 419 392 453 298 647	23 35 1 28 95 21	72 210 176 110 202 323 470	398 432 222 279 363 163 777	
TOTAL	3,857	316	1,569	2,624	
Proportion	100	: 8°2	100	: 167'2	

sideration of the second marginal table which gives the number of admissions recorded as due to malarial fevers and to simple continued fever in some stations during the years 1901-02 and 1905-06. The years 1903-04 were apparently a "transition period" during which the opinion was gradually gaining ground that a number of cases of "fever" among European troops are not malarial

in origin, and for this reason the statistics of those years are omitted. It will be seen that in these stations the number of admissions recorded as due to malarial fevers during 1905-06 was less by 2,288 than during 1901-02, but that the number recorded as due to simple continued fever was greater by 2,308, so that the total number recorded under both the headings was about the same in the two periods (that is it was 4,173 in 1901-02 and 4,193 in 1905-06). The more frequent use of the microscope in the diagnosis of malarial fevers, and, in places where anti-malarial operations are being carried out, the desire to make the results appear as favourable as possible have led to similar changes in diagnosis in other countries besides India, and such changes have to be taken into account in estimating the significance of a reported reduction in the prevalence of malarial fevers in any place. The great attention now being paid to the correct diagnosis of cases of "fever" is one of the most satisfactory results of the anti-malarial campaigns in force in most tropical countries and is to be encouraged in every way, but it has to be borne in mind that the statistics of the prevalence of malarial fevers in any place in which the newer methods of diagnosis have been instituted are not comparable with those recorded before microscopes were generally used in diagnosis. In favour of the view that the majority of the cases returned as simple continued fever in India are not malaria the statistics of 1006 are so far satisfactory in that the seasonal incidence of simple continued fever does not correspond with that of malarial fever. For India as a whole the months of greatest prevalence of simple continued fever were from May to September with July as the month in which the largest number of admissions were recorded. The stations in which most cases occurred during the year were Quetta (398) in which the month of maximum prevalence was September, that for ague being November, Secunderabad (257), the month being August as compared with December, Rangoon (222), the month being May as compared with July and September, Rawalpindi (220), the month being May as compared with November. Ferozepore (182), the months being July and October respectively, and Lahore Cantonment (179), the months being April and October respectively.

The much more frequent use of the microscope in diagnosis and the changes

Reports by medical officers on which are apparent in the statistics of malarial fevers and of simple continued fever indicate that success is attending the attempt to ascertain the true place which malaria should take as a cause of sickness among European troops. It is realized that a considerable proportion of the sickness formerly ascribed to "ague" is

due to a variety of causes none of which, however, have any connection with malaria. The heading under which these non-malarial cases of sickness are returned most frequently is simple continued fever. For the most part they are cases in which there is fever for two or three days without any other prominent symptom and they are classified by most medical officers according to their cause. Thus the medical officer at Rangoon recognises the four following varieties: (1) cases due to constipation and indigestion; (2) cases occurring in men who are taking a great deal of exercise and living upon a too highly nitrogenous diet; (3) cases due to exposure to the sun but which are not sufficiently severe to be returned under the heading heat-stroke; (4) cases of the bilious type, due to congestion of the liver. In general these are the varieties recognised by most medical officers of experience although some lay most stress upon exposure to the sun as a factor in causation, others upon congestion of the liver and indigestion as a result of errors in food and drink. In some stations, as in Lahore Cantonment, the headings simple continued fever and congestion of the liver are used alternatively for these cases. Most of the admissions occur not during the malarious season but during the hot dry months of the year and doubtless exposure to great heat and errors in diet are both important factors in causation. Soldiers newly arrived in the country and those who are more than usually careless as regards the sun are especially liable to be attacked. The factor of errors in diet is referred to by many medical officers, but the opinions of only a few can be mentioned here. The medical officer at Rawalpindi (where there were 220 cases) says that moderate eaters do not suffer, but only those who have no control over their appetites; he considers that the large amount of nitrogenous food which soldiers consume, often in an unsuitable form, is an important factor in causation. The medical officer at Fort Lahore considers that the prevalence was aggravated to a great extent by over-eating and in some instances by over-drinking, and says that most of the cases occurred among men who frequented the canteen daily. A similar opinion is expressed by the medical officer at Lahore Cantonment (Mian Mir) where 170 cases were recorded. At Secunderabad the great majority of the cases (of which there were 257) were associated with congestion of the liver and were considered to be dependent upon this condition. So far as true malaria is concerned it may be noted that in 3,611 cases during 1906 as compared with 2,797 during the previous year and only 705 during 1904 malarial parasites were found, and the species of parasite determined, by microscopical examination of the blood. The results show that nearly 80 per cent. of the cases during 1006 were infections with the benign tertian parasite as compared with 85 per cent. in 1905 and 83 per cent. in 1904, and that about 20 per cent. were infections with the malignant tertian parasite as compared with 11 per cent. in 1905, and 16 per cent. in 1904. Quartan parasites were found in only about 13 cases during 1906. The practice of returning as malarial fever only those cases in which malaria parasites are found in the blood is now adopted in many stations and doubtless accounts in part for the recorded reduction in malaria. Another factor which has affected the statistics is the system of "treatment in barracks" which was introduced at the end of 1903. During 1906 there were 4,317 cases of ague so treated, and these are not recorded as admissions to hospital; if they were, the admission rate from ague among

European troops in 1906 would have been 237'6 per 1,000 instead of 176 and from simple continued fever it would have been 68.8 instead of 55.8. In these circumstances it must always be difficult to estimate by statistics the effect of the anti-malarial operations which are being carried out. A measure which has doubtless effected a real reduction in the number of admissions to hospital for malaria is the "after-treatment" now given in nearly all stations to patients who have been admitted for this disease. A nominal roll of these patients is kept at the station hospital and they are required to attend twice weekly for from six weeks to two months to receive a dose of quinine. The dose given during 1906 in the great majority of stations was 10 grains, but at Sialkot, Mhow, Kamptee and a few other stations it was 15 grains and at Nowgong 20, and these larger doses are doubtless more effective. Medical officers at stations where this "after-treatment" has been thoroughly carried out invariably report that it has caused a marked decrease in the number of re-admissions for relapses, which, as is well known, are the main cause of the high malaria ratios in certain stations. As regards the prevention of primary attacks there can be no doubt that the efforts put forth during the past year have been more general and more complete than formerly. "Mosquito brigades" were organized in nearly all stations in the plains and carried on a systematic campaign throughout the year. In the larger stations such as Peshawar, Rawalpindi, Lahore Cantonment (Mian Mir), Meerut, Mhow, etc., the cantonment was mapped out into separate areas each under the charge of a medical officer with one or more hospital assistants or trained soldiers and a gang of coolies working under his direction. In this way the whole cantonment could be gone over at least once a week, and all collections of water dealt with. At Mandalay a crude petroleum known as "earth oil" was used as a larvicide instead of kerosine oil; it is cheaper and was found to be quite as effective. At Deolali and Kamptee the petroleum known as "pesterine," which could be obtained at 6 annas a gallon was found to be a very effective larvicide. Anopheles mosquitoes were found in 38 stations in the plains, but the species were identified in only 19. A. rossi and A. culicifacies were the two species most frequently found. In a few stations the campaign against mosquitoes was reported to have been fairly successful, but in the great majority little or no effect was produced. The rainfall of the year was abnormally heavy and added great difficulties to the work in most stations. The medical officer at Rawalpindi reported that owing to the heavy rainfall the cantonment was covered with long rank vegetation which concealed numerous pools and other breeding places which the four mosquito brigades could not deal with effectually. Anopheles mosquitoes were present in enormous numbers at Peshawar, and although a mosquito brigade was organized in connection with each regiment and the cantonment sub-divided into small areas for the more effective control of all breeding places it was found that, owing to the difficulty of dealing with the numerous canals and ditches, little or no effect on the number of mosquitoes was produced. At Ferozepore the effect of the operations carried on by the mosquito brigades, as judged by the prevalence of malaria in 1906 and 1905. respectively, was recorded as a "total failure". At Roorkee anopheles mosquitoes were very prevalent and rain-formed pools were so numerous that it was impossible to keep them oiled constantly. The Ganges canal was not running for some weeks and mosquitoes bred " in millions" in the pools left in the canal bed. At Barrackpore the campaign had to be stopped during the rains as the numerous

pools could not be dealt with at a reasonable cost. At Mhow and some other stations the proximity of native bazaars rendered the efforts to reduce the number of mosquitoes ineffective. The medical officer at this station and many others considered that quinine prophylaxis is the best system for reducing the amount of malaria among the troops. This measure alone, or with others, was carried out in 42 stations. The dose, the frequency of administration, and the method adopted for ensuring that the men take the prophylactic dose varied considerably in different stations. In about 20 stations 10 grains of quinine were administered on two successive days each week; in Sialkot, Amritsar, Mhow and Belgaum 15 grains were given twice a week, in Kamptee 15 grains once a week and in Meerut (to one regiment) 15 grains three times a week. In Ahmedabad and Rangoon 10 grains were given three times a week, and in Saugor the same dose once a week. In Muttra, Allahabad, Quetta and Jubbulpore the dose was 5 grains given twice a week and in Shahjahanpur the same dose once a week. In Hyderabad the dose was 8 grains once a week, and in Karachi 6 grains. Mention is made that the doses were administered under the supervision of a medical officer or of an assistant surgeon in only about 15 stations and it appears that the measure is still carried out under regimental arrangements in a number of stations. A method of prevention which was adopted in several stations with excellent results and certainly merits further trial in future years was that of removing regiments severely attacked by malaria into camps situated at some distance from their barracks. The measure is practically the same as that known under the term "Segregation of Europeans". It was tried at Rawalpindi, Ihansi, Maymyo and Delhi, in every case with good results. It is well worthy of trial as regards the European troops in Lahore Cantonment (Mian Mir), where malaria is prevalent during only a short period of the year. In this cantonment extensive anti-mosquito operations (which included the stoppage of all irrigation since August 1905 and great improvements in surface drainage) have been carried on for several years. It is too early yet to judge of the effect of these measures.

9. Seven admissions to hospital during 1906 were due to Malta fever as comMalta Fever. Table LIII. pared with four in 1905, six in 1904 and nine in
1906 were Wellington, Ambala, Sialkot, Lebong, Lucknow, and Shahjahanpur.
The patient at Wellington had been transferred from Bellary. He had not been at
Malta or a Mediterranean station for nine years. The clinical symptoms were said
to be typical and the blood agglutinated the Micrococcus melitensis in a dilution of
1 in 80. The patient at Sialkot apparently contracted the infection in the station.
In this case and in the case at Lucknow the diagnosis was confirmed by the isolation of the micrococcus. The patient at Shahjahanpur had arrived from Malta
eight months previous to his attack. The diagnosis was doubtful in the case at
Lebong, and of the case at Ambala no particulars are given by the medical officer.

10. For many years it has been the custom to give in this place a summary

in which is set\* forth the more recent work upon enteric fever, and those who make a practice of reading this portion of the report will have observed that during the last few years notable advances in our knowledge of important problems connected with the disease have been recorded. These advances resulted in great part from the new impulse which was given to research concerning enteric fever by the work of Koch and his followers and are such as to

justify the conjecture that before very long most of the vexed problems will be satisfactorily solved. To this end the work carried out under the authority of the German Government has largely contributed and by pointing the way in which inquiry is most likely to be attended with profitable results has enabled great advances to be made in the investigation of the problems of enteric fever in other countries. In India, especially, the lead given by the Germans has been enthusiastically followed and the results obtained by the committee of investigation at the Central Research Institute, Kasauli, are of great interest and far-reaching importance. The investigations are still proceeding but an interim report of the work accomplished up to the present time has been written by Captain Greig, I.M.S., who is temporarily in charge of the bacteriological inquiry, and the main results attained may well be included in this summary of the year's work. The complete report will, of course, be published in a separate volume.

Among the problems of the subject none is of more importance than whether enteric fever is a single pathologi-Paratyphoid Fever. cal condition or a group of closely allied diseases and as much light has been thrown upon this problem by the discovery of "paratyphoid fever" it will not be out of place to begin with a brief account of this disease. Valuable articles upon the subject have recently been published by Kutscher, Sacquépée and Chevrel, Lentz, and Lorrain Smith and to these, as well as to the original papers of the authors quoted below, the reader is referred for complete details. The term paratyphoid fever is now generally used to designate an acute infectious disease the clinical course of which is in some cases like that of typhoid fever and in others like that of cholera nostras; and before dealing with the bacteriology of the disease it will be well to enumerate the chief clinical characters of these two types and to state briefly the morbid changes found in fatal cases. It may be said at once that in many instances it is not possible by clinical methods to differentiate cases of paratyphoid fever of the first type from typhoid fever, but in other cases the clinical differences between the two diseases are well marked. The following are some signs of this type of case of paratyphoid fever as given by Kutscher, Lentz and others, which may be of service in diagnosis: the disease often begins with a definite rigor and high rise of temperature; diarrhoea is a frequent symptom at the onset of the disease; in about half the cases herpes labialis appears during the early stage of the disease; the stage of continued fever usually present in cases of typhoid is replaced by a stage, the length of which varies with the severity of the case, characterised by the presence of irregular fever of a remittent or intermittent type; enlargement of the spleen is much less frequent than in typhoid fever; if the spleen is enlarged the increase in size is less than in typhoid fever and the organ feels harder than in that disease. The cases which come in the second class bear no resemblance clinically to typhoid fever and it is because the affections caused by the paratyphoid bacillas may have nothing in common with typhoid fever that the clinical term paratyphoid fever is an unfortunate one (Jürgens'). These cases begin with severe gastro-intestinal symptoms, vomiting, diarrhœa, rapid collapse and cramps, and when cholera is prevalent they may be mistaken for that disease. It is possible that some of the cases recorded in India as "diarrhoea" or "ptomaine poisoning" may in reality be cases of this type of paratyphoid fever. As regards the morbid changes produced in the intestine by an infection with paratyphoid

bacilli it may be said that they differ considerably from those found in typhoid infections. Usually, there is a general swelling of the mucous membrane and some inflamed patches with a few hæmorrhages in the neighbourhood of the lymph follicles. Ulceration of Peyer's patches is very rarely if ever found. This is what would be expected from the knowledge that the disease usually runs a much milder course than typhoid fever. In the epidemic of 38 cases at Saarbrücken there was no death. Lentz' from observations on 120 cases found the case mortality to be 3'3 per cent., the case mortality from true typhoid fever during the same period of observation being 9 per cent. Lorrain Smith's says that of 162 cases described six have terminated fatally.

Although the mode of infection and the conditions in which paratyphoid fever occurs are often similar to those met with in typhoid fever, etiologically the diseases are sharply separated and for this reason are to be regarded as quite distinct. The history of the researches which culminated in the differentiation of the paratyphoid bacillus has been summarized in previous issues of this report and here it is necessary to mention only that the bacilli isolated from patients suffering from paratyphoid fever are of two kinds to which the names paratyphoid bacillus type A (Brion and Kayser) and paratyphoid bacillus type B (Schottmüller) have been given?. The first of these is the bacillus which was described by Gwynto in 1898, and according to the more recent researches of the German observers it plays only a very subordinate role as a cause of disease Lentz" says that he has never encountered it and all observers agree that at any rate in Europe it is very rarely met with From the researches of the committee of investigation in India it would appear that in this country its role is a more important one, for of six cases of paratyphoid fever detailed in Captain Greig's report four were due to this bacillus and only two to the bacillus of type B. In its cultural characters it is more akin to the typhoid bacillus than is the paratyphoid bacillus type B. In Germany the paratyphoid bacillus type B is regarded as of far greater importance and has been found to be the cause of the great majority of cases of disease classified under the heading paratyphoid fever in that country. It differs from the bacilli of type A in its cultural characters upon various media and especially in its biological characters.

A large and increasing number of paratyphoid epidemics have been reported especially in Germany during recent years. Many are analogous to epidemics of typhoid fever and caused in the same way either as the result of contact infection or by the infection of a water or milk supply; others are the result of eating contaminated food and from the epidemiological standpoint the connection between the paratyphoid bacillus and the gastro-intestinal form of meat poisoning is of great interest. The bacteria which have been isolated in different epidemics of meat poisoning agree so closely with one another, culturally and biologically, that for a long time attempts to separate them were not successful and generally all went by the name of Bacillus enteritidis. Durham" was the first to note that a bacillus isolated by him from a patient suffering from meat poisoning could be differentiated from Gaertner's bacillus by the agglutination test. As a result of similar investigations de Nobele's was able to divide the bacilli of meat poisoning into two groups, the type of one being Gaertner's bacillus and of the other the bacillus discovered by de Nobele at Aertryck. These researches have been confirmed in many investigations of which the more recent are those carried out by Kutacher and Meinicke," Trommsdorf," Bock," and Kutscher". The

Aertryck bacillus belongs to the so-called paratyphoid group of meat poisoning bacilli and the view that the members of the paratyphoid group of meat poisoning bacilli are identical with the bacillus which causes paratyphoid fever is now generally accepted. Some of the recent epidemics of food poisoning in which the paratyphoid bacillus type B. was proved to be the causal agent are those reported by B. Fischer," Uhlenhuth," Kutscher," Jacobson", Fromme", Netter and Ribadeau-Dumas," and Vagedes". It is said that according to one estimate fully four-fifths of all meat-poisoning epidemics have been proved to be due to the ingestion of the flesh of animals suffering from bacterial infection's and there is no doubt that occasionally the paratyphoid bacillus can infect animals. B. Fischer isolated this bacillus from the milk and afterwards from the organs of two cows in an epidemic at Futtercamp, and Kutscher isolated it from two samples of meat which had caused an epidemic in Berlin. This is a matter of great importance not only from the standpoint of epidemiology but especially from that of prophylaxis, pointing as it does to the necessity for adequate examination of animals the milk or flesh of which is to beused for human consumption.

The connection between paratyphoid fever and typhoid fever is important, and upon this subject papers have recently been published by Levy and Gaehtgens, 15 Fornet," Gaehtgens," and others. The two cases reported by Levy and Gaehtgens show clearly that an infection (which may prove fatal) with typhoid bacilli can occur while a patient is going through an attack of paratyphoid fever and that very probably such an infection is favoured by the lowered vitality of the paratyphoid patient. In these instances typhoid bacilli were found in the blood and dejecta of patients who were convalescent after infections with paratyphoid bacilli. In the paper by Gaehtgens on the other hand eight cases are recorded in which paratyphoid bacilli were found in the stools of patients convalescent after typhoid fever. Some of these were shown to be the result of a concurrent mixed infection, but in others it was probable that the infection with paratyphoid bacilli had occurred during the course of the typhoid fever or after its termination. The question whether it is possible for typhoid bacill to become converted into paratyphoid bacilli also arose, but in an examination of 650 strains of typhoid bacilli and two strains of paratyphoid bacilli Gaehtgens could find no reason in favour of this view. In his report of the investigations in India Captain Greig relates the case of a patient whose blood was first examined on the 20th of July 1907, after he had been in hospital for five days. On this date the blood serum agglutinated the Bacillus typhosus in a dilution of 1 in 320, but the Bacillus paratyphosus, type A, was isolated from the blood. On the 24th of July the latter bacillus was isolated from the fæces and at intervals this bacillus was found in the fæces until the 20th of August. Further examinations were negative until the 16th of September when not the paratyphoid but the typhoid bacillus was found in the fæces, and a similar result was obtained on the 18th. The whole problem of the connection between paratyphoid and typhoid bacilli and between the diseases caused by them requires further research, but the practical point brought out by the work already done is that since an attack of paratyphoid fever confers no immunity against typhoid fever, patients suffering from these diseases should be treated in different wards and should use nothing in common lest by contact or other means a severe typhoid infection may supervene upon a comparatively mild paratyphoid one.

The discovery of paratyphoid fever as a disease distinct from typhoid fever

Bacteriological methods for the diagnosis was due to the use of bacteriological methods in diagnosis and it is by the appli-

cation of such methods that the solution of the problem regarding the unity of enteric fever will be arrived at. For this reason as well as on account of the intrinsic importance of the subject and of the great advances lately made in it we may deal next with the more recent work upon bacteriological methods for the diagnosis of typhoid and paratyphoid fever, namely, the Widal test, the search for the bacillus in the blood and the search for it in the fæces and urine.

In the early days of the use of the Grüber-Widal reaction as a means of diagnosis the test was regarded as being strictly The Widal test. specific and as a sure method of arriving at a correct diagnosis of enteric fever, but later some mistrust of its value arose. This was due firstly to the discovery that the reaction could be obtained in other diseases than enteric fever, especially in diseases of the biliary tract, and secondly to the discovery that sera from some patients suffering from enteric fever agglutinate not only the Eberth-Gaffky bacillus but also a number of other bacilli allied to, but not identical with it, and that conversely sera from some patients infected with these allied bacilli agglutinate not only the infecting bacillus but also the Eberth-Gaffky bacillus. The first problem is dealt with in a recent paper by Gaehtgens'. Of 842 cases in which an unequivocally positive result for the typhoid bacillus was obtained 829 were afterwards shown to be cases of true typhoid fever, 3 were tuberculosis, 3 jaundice, 2 cholecystitis, 1 disease of the liver, I sepsis due to infection with B. coli and 3 were ill-defined fever. Thus six of the ten cases in which a definite diagnosis of a disease distinct from typhoid fever was made were cases of disease in connection with the biliary passages and in view of the fact, now well recognised, that after an attack of typhoid fever the bacilli can persist for years in the biliary tract and set up morbid lesions there, it was very probable that these patients had suffered previously from attacks of typhoid fever. Christian' reports a case of the same nature. A patient aged 42 was admitted into hospital with deep jaundice and marked tenderness in the region of the gall-bladder. His blood serum agglutinated the typhoid bacillus in a dilution of 1 in 50 in 20 minutes and it was ascertained that he had suffered from typhoid fever 7 years previously. The patient died and from the fluid in the gall-bladder and from a gallstone the typhoid bacillus was cultivated, but no typhoid lesions were found in the intestine. The positive reactions in the three cases diagnosed as tuberculosis were also considered by Gaehtgens to be due to the patients having previously suffered from typhoid fever, and in this connection it has to be remembered that the Widal reaction has been observed to persist for many years, and that even in the absence of a history of typhoid fever a patient may harbour the bacillus. French and Louisson's report several cases in which the reaction persisted for eight years, and Gaehtgens observed cases in which it could be obtained ten, thirty, and even 35 years after an attack of typhoid fever. The positive result in the case of infection by the coli bacillus is to be explained on the hypothesis that it was a group reaction and it is in the interpretation of such reactions that most difficulty arises in connection with the test. The phenomenon of co-agglutination or group-agglutination, which is defined as the agglutinating action of a serum specific for one bacillus upon a bacillus of another species, became known in the first place chiefly through the work of Grüber and Durham, Gilbert and Fournier and Achard and Bensaude. In clinical work it is important chiefly on account of the confusion which it causes in the diagnosis between typhoid and paratyphoid fever. Widal and Sicards added to our knowledge considerably when they showed that the serum of a

patient suffering from typhoid fever agglutinated the paratyphoid bacillus only in dilutions much lower than those in which the typhoid bacillus is agglutinated, for it became apparent that it is not so much the actual reaction which is specific as the degree of dilution in which the reaction occurs. Later researches by Sacquépées, Drigalskis, Conradi and Jürgens, Schottmüllers and others showed that even this restriction is not in all cases sufficient, for it was proved firstly that in some paratyphoid infections the blood serum agglutinates the typhoid bacillus in dilutions from 1 in 100 to 1 in 500 and even to a degree equal to that in which the infecting bacillus is agglutinated, and secondly that in some typhoid infections the serum agglutinates paratyphoid bacilli in dilutions higher than those in which the typhoid bacillus is agglutinated. The conclusion to which these observations led was that the agglutination test, while it sufficed to separate infections due to the typhoid bacillus from those caused by organisms such as the pneumococcus and the staphylococci, was of value only as a test of infection by one or more bacilli of a group belonging to the same family. Fortunately this inference is not altogether true. Complete discussions on the problem will be found in recent papers by Abramio and by Sacquépée and Chevrelio whose chief conclusions may be briefly summarized here. Abrami found that when the phenomenon of co-agglutination is studied in detail it is apparent that the frequency of its occurrence is very variable and that there are great differences in the degrees of dilution in which the chief and the secondary agglutinations occur as well as in the time of their appearance and above all in their duration of persistence. In his opinion sera with which the phenomenon of co-agglutination can be obtained contain several agglutinins of which one exercises a constant and specific action on the infecting bacillus while the action of the others is irregular, does not follow the same curve as does the specific agglutinin, and is not lasting. Thus, when the test is carried out with proper precautions at frequent intervals and especially if in a doubtful case the curves of the chief and of the secondary agglutination are mapped out for some days, it is always possible to ascertain which bacillus is the infecting one. Sacquépée and Chevrel sum up their conclusions as follows: "When a human serum agglutinates the bacillus of Eberth more markedly than the paratyphoid bacilli the case is not one of paratyphoid fever; and if the diagnosis rests between this disease and typhoid fever the conclusion is in favour of the latter disease." They consider, however, that the converse of this statement does not hold good and state that when a human serum agglutinates a paratyphoid bacillus more markedly than the typhoid bacillus, one cannot conclude that the case is one of paratyphoid infection; the disease may be typhoid fever, paratyphoid fever or meat poisoning.

On the whole we may conclude that, at any rate as regards typhoid fever, a positive result with the Widal test when proper precautions have been taken is of great value. This is apparent also from the frequent and successful use of the test which is made in laboratories. Klinger's report" of the researches made in the Strasburg bacteriological institute shows that of 605 cases of typhoid fever a positive result by the Widal test was obtained in 494 or 817 per cent. The percentage of cases in which the isolation of the bacilli from the blood was successful was 48, from the stools 38 and from the urine 99. Plass" reports that in the clinical laboratory at Göttingen a positive result at the first examinations of 92 cases was obtained in 67 or 72'8 per cent. Neumann's reports that in the bacteriological institute of the University of Heidelberg, 226 blood specimens for Widal's

reaction were examined during 1906, the percentage of positive results being 34'5 as compared with a percentage of 5'5 of successful results in the search for the typhoid bacillus in the urine and fæces and of 7.8 in the search for this bacillus in the blood. According to Brion and Kayser's the test fails during the third week of typhoid fever in only 5 per cent. of cases. A list of articles dealing with the methods of carrying out the test employed by different workers will be found at the end of this section's, but beyond saying that all who have worked at the subject insist upon the necessity of precautions being taken to avoid errors due to spontaneous agglutination, to agglutination by normal sera, to agglutination by non-specific sera, and to agglutination by sera the agglutinating power of which is very strong, it does not seem necessary to summarize these articles here. The experiments of the committee of investigation in India are of importance in regard to the errors due to agglutination by normal sera. In order to ascertain the limit of dilution above which agglutination of typhoid bacilli is of significance in India they carried out the Widal test with the blood of a large number of healthy European and Native soldiers and with that of a number of healthy native children. The results showed that as regards both Europeans and Natives, a positive reaction in a dilution of 1 in 40 cannot alone be regarded as evidence of an infection with the typhoid bacillus, and that agglutination in a low dilution is of less significance in Natives than in Europeans so that in performing the test with the blood of people of the former class high dilutions must be used.

In view of the difficulties which sometimes arise from the presence of co-agglutinins it might be hoped that the procedure of Castellani (saturation of the agglutinins) would be valuable. Jürgens and Rieux and Sacquépée have shown that in experimental typhoid or paratyphoid sera saturation with the specific bacillus absorbs all the agglutinins, while saturation with the secondary bacillus prevents the phenomenon of co-agglutination while the specific agglutinin remains unchanged. Unfortunately the results are much less certain when human sera are used and the value of the method in clinical work is doubtful (Rieux and Sacquépée)16.

Among bacteriological methods of diagnosis the one which, on account of its rapidity, its ease of execution and its accuracy The search for the bacillus in the at present takes the first place is the search for the bacillus in the blood. For a long time, despite the good results obtained by Castellani, Schottmüller and many others, the difficulty of overcoming the bactericidal action of the blood serum prevented the method being largely used as a diagnostic measure, and it was not until Conradi discovered that bile arrests the bactericidal action and is a good medium for the cultivation of the typhoid and paratyphoid bacilli, that the research became sufficiently simple for general use. Conradi's medium ' consists of 90 c.c. of ox-bile. 10 grammes of peptone and 10 c. c. of glycerine. This mixture is sterilized and poured into tubes holding from 2 to 3 c.c. The blood is taken from a vein or from the lobe of the ear and immediately transferred to tubes containing the liquid medium, the proportion of blood to liquid being as 1: 3. After the blood and the medium have been mixed together the tubes are kept in an incubator at 37°C for 16 to 32 hours and the culture is then plated on the Drigalski-Conradi medium. The bacilli are afterwards identified by the usual tests. Since this method has been used the percentage of positive results in the search for the bacillus in the blood has been much larger than before. Coleman' reports that of 224 examinations made in the first week of the disease 200 or 89 per cent. were

positive, of 484 examinations in the second week 353 or 73 per cent. were positive, of 268 examinations in the third week 178 or 60 per cent. were positive and of 103 in the fourth week 15 or 26 per cent. were positive. Kayser3, using a modified Conradi method was able to isolate typhoid bacilli from the blood during the first week of the disease in 100 per cent. of cases and during the second week in 58 per cent. In 18:5 per cent. of the cases the bacilli were isolated before a positive result with Widal's test could be obtained. Using a similar method Gildemeister isolated the bacilli from the blood during the first six days of the disease in 11 out of 16 cases. In 7 of the 11 cases Widal's test gave a negative result. Tzeidler5 obtained a positive result in 100 per cent. of his cases during the first week, in 80 per cent. during the second week and in none during later stages. Schtülern using the Conradi-Kayser method obtained a positive result during the first week of the disease in 95 per cent. of cases, the bacilli being isolated from the blood in 25 per cent. of the cases while the result of the Widal test was still negative. He notes that the frequency of the discovery of the bacillæmia is independent of the severity of the attack. During the second week the bacilli were isolated in 60 per cent. of the cases and he found that after this period the bacilli generally disappeared from the blood except in very grave attacks. Brion and Kayser in 200 cases isolated the bacilli during the first week in 188 or 94 per cent. The method is being used extensively in the researches of the committee of investigation in India and of 31 cases detailed in Captain Greig's report the typhoid bacillus was isolated from the blood in 28. Twelve cases were examined on the day of admission to hospital or on the following day and in eleven a positive result was obtained. Tubes or bottles containing the proper quantity of sterile Conradi medium can now be obtained from most laboratories; the clinician has only to withdraw about 2 c.c. of blood under aseptic precautions from the patient and transfer it to the tube or bottle which is then returned to the laboratory, a procedure not more difficult than that which is necessary in connection with the Widal test.\*

An important discovery relating to the search for the bacillus in the blood was made by Müller and Gräf<sup>5</sup> who found that when blood taken from a patient is allowed to coagulate the bacilli become entangled in the clot and are not acted upon by the serum. In their first paper, published in 1906, these observers reported that they had been able to cultivate typhoid bacilli from the clots of eight out of 11 specimens of blood sent for the Widal test, and in a more recent paper<sup>9</sup> giving the results obtained between December 1905 and February 1907, they report the isolation of the bacilli from the clots of 110 specimens out of a total of 360, many of which were from patients in the convalescent stage of the disease and some from healthy bacillus carriers. Kurpjuweit<sup>10</sup> tried this method of diagnosis with 294 specimens of blood sent to the bacteriological laboratory in Saarbrücken and succeeded in isolating typhoid or paratyphoid bacilli from the clots of 12 specimens. Of the remaining 282 specimens 194 were afterwards found to be from patients who were not

The following are the directions furnished with the bottles of medium sent out from the Central Research Laboratory in India: (1) The front of the bend of the elbow is sterilized with 1 in 20 carbolic lotion which is removed with alcohol and other; (2) a vein is made prominent by pressure at the bend of the elbow; (3) a syringe is sterilized by boiling and the needle introduced into the vein and about 5 c.c. of blood withdrawn; (4) one-half of the blood is immediately injected into one bottle of the bile medium by passing the needle through the rubber cap, and the remainder is injected into the second bottle of medium. The small hole made by the needle in the rubber cap is sealed by melting the paraffin with a match. The bottle is then shaken; (5) the bottles are labelled and sent to the laboratory.

suffering from typhoid or paratyphoid fever. Fornet" using a somewhat different technique succeeded in isolating the bacilli from the clots of 14 out of 19 Widal reaction specimens. Conradi" has also employed this method and says that a diagnosis can be made when the amount of blood available is as small as \frac{1}{3} c.c. He extracts the thread of coagulum from the capillary tube or capsule with forceps and transfers it to a test-tube containing his ox-bile medium. The tube is then kept at 37° C. for from 12 to 16 hours. It is then well shaken and o'l and I c.c. of the contents are spread with a glass spatula on dried plates of litmus-milk-sugar-agar. He obtained a positive result with 50 per cent. of the blood specimens which had been taken during the first week of the disease.

As the ox-bile method is the one now used in routine work in nearly all laboratories it is unnecessary to enter into detail regarding other methods with which more or less successful results in the search for the bacillus in the blood have been obtained by different workers. It will suffice to mention that Epstein's using a glucose gelatine medium to 15 c.c. of which from 5 to 2 c.c. of the blood of the patient is added, succeeded in isolating the bacillus in 80 per cent. of his cases.

It will be apparent from the results recorded above that the great advantage of the search for the bacillus in the blood lies in its success during the very early stages of the disease, and it is plain that when this method and the Widal test (which as is well known is chiefly successful during the later stages) are carried out simultaneously, there must remain very few cases in which a definite diagnosis cannot be made. It is of great advantage also that when it is not possible to work with fresh blood both these methods of diagnosis can be carried out with specimens of blood such as are usually sent for examination by the Widal test.

It is well known that despite many recent improvements in methods of research, typhoid and paratyphoid bacilli cannot The research in the faces and urine. be isolated from the fæces and urine in a large proportion of cases before the third week of the disease or even later, and for this reason as well as on account of the difficulties attending the research its value as a purely diagnostic measure is not great. The medium of Drigalski and Conradi, that of Lentz and Tietz (malachite-green), and that of Endo (fuchsin), the compositions of which have been given in previous issues of this report, are those which at present are most generally used in laboratories. In the Strasburg bacteriological institute between August 1903 and September 1905, comparative investigations were made with the Drigalski-Conradi and the Endo media and it was found in the examination of 3,214 specimens of fæces plated simultaneously on these two media that typhoid bacilli could be isolated 267 times from the Drigalski-Conradi plates and 341 times from the Endo plates, the proportion of positive results being as 100: 128. As Endo's medium is easier to make and cheaper, the use of the Drigalski-Conradi medium was discontinued at the termination of these experiments and Endo's medium combined with the malachite-green "enrichment" method of Lentz and Tietz alone used. In all 768 tests of fæces and 392 tests of urine from patients suffering from typhoid or paratyphoid fever were made by these methods, a positive result being obtained in the examination of the fæces in 32'8 per cent, of the cases, and in the examination of the urine in 9'9 per cent1. In the bacteriological institute of Heidelberg during 1906, the three media were usually employed simultaneously; a positive result was obtained in 5'5 per cent. of the cases.3

Ditthorn' in his account of the work done at the bacteriological institute of Posen for the year ending March 1906, states that in the examination of fæces and urine the Drigalski medium was employed almost exclusively, as the results obtained in the institute with the media of Endo and of Lentz and Tietz had not been so favourable. On the other hand Klinger, Neumann, Gaehtgens, Levy, and others whose experience of the malachite-green medium has been very extensive speak very highly of its value. Klinger succeeded in isolating typhoid bacilli from the fæces in about 70 per cent. of cases by its use. Neumanns found that with this medium typhoid bacilli could be isolated from a bacterial mixture when the proportion of typhoid bacilli to other bacteria was as 1: 75,000, a result which could not be attained by any other method which he tried. Gaehtgens' says that he is in agreement with Forster and Levy in considering that when used in conjunction with Endo's medium according to the procedure recommended by Klinger it is the best medium at present employed in the search for the bacillus in the fæces. He and Levy' have attempted to overcome some of its disadvantages by substituting bouillon for agar as the basis of the medium, but apparently with little success. It is possible that success or failure with the medium is determined, in part at any rate, by the degree of purity of the malachite green employed. In the Indian researches the Drigalski-Conradi medium has been used throughout. The sample of fæces to be examined is mixed with about 20 times its volume of sterile normal salt solution and put to stand for two or three hours in a conical glass. One or two c. c. of the supernatant fluid is then taken and plated on three large Drigalski-Conradi plates.

It will be seen that the relative value in diagnosis of the bacteriological methods dealt with above cannot be judged from a comparison of the results obtained in a number of cases of typhoid fever taken at random, for each method is of special value during a particular stage of the disease. There can be no doubt that in the important matter of the diagnosis of the disease in its earliest stage no method can compare in value with that of blood culture, but we have seen that as a rule the bacilli disappear from the blood stream about the end of the second week, and it is therefore fortunate that from this time onwards we have valuable methods of diagnosis in the Widal test and in the search for the bacillus in the fæces and urine. It will be apparent also that the bacteriological examination of the fæces and urine is of prime importance as a means of discovering "bacillus carriers" either during convalescence after an attack of typhoid fever or when they are apparently quite healthy.

Turning now to the epidemiology of typhoid fever the important problem of the role of convalescents and so-called "bacillus-Epidemiology. Convalescents and carriers" (Bazillenträger) as sources of infection first claims attention. The problem has to be considered with reference to three classes of persons, namely, (1) patients convalescent after typhoid fever who may excrete the bacilli in their fæces and urine for several weeks after the cessation of the fever; (2) persons who have quite recovered from an attack of typhoid fever, but who continue to excrete the bacilli 10 weeks or more after the beginning of the attack (the so-called "chronic bacillus-carriers"); and (3) persons in whom the bacillus enters and leaves the intestine without causing any symptoms of illness (hereafter called "temporary bacillus carriers").\* It is well known that the excretion of typhoid bacilli

These bacillus carriers are often called "acute bacillus carriers" but the term seems inappropriate and is misleading. After all it is quite possible that they are in reality chronic carriers without a history of typhoid fever who are excreting the bacilli intermittently.

in the fæces and urine does not in the majority of cases cease with the cessation of the fever but continues (according to Simon and Dennemark1 in about two-thirds of the cases) during convalescence. Lentz' considers that the duration of this excretion in a normal attack of the disease is about eight weeks after the first day of the illness. Brion and Kayser' in an examination of 209 cases found that in 93 per cent., of the cases the excretion ceased within two weeks of the beginning of convalescence and Simon and Dennemark report that it ceases as a rule within three weeks. In not a few cases, however, the excretion continues much longer than this. Drigalskit isolated the bacilli from the fæces between the beginning of the fifth week and the tenth week (reckoned from the date on which the first symptoms appeared) in 11 per cent. of his cases and in 4.7 per cent. from the third month and onwards; and Klingers who reports that in the examination of 604 patients during convalescence, the bacilli were isolated from the fæces in 70 or 11'6 per cent. and from the urine in 11 or 1'7 per cent., found that while it was possible to cure all the cases of bacilluria by the administration of urotropine" the attempt to stop the excretion of the bacilli in the fæces failed. When the excretion continues for more than ten weeks after the beginning of the attack the patients are called chronic bacillus-carriers. An account of this condition and of its danger was given in the last issue of this report so that it is necessary here to mention only the more recent work upon the subject. A great difficulty in connection with the problem arises from the fact that in patients convalescent after typhoid or paratyphoid fever the excretion of the bacilli in the fæces and urine ceases at intervals and recurs again so that one or even two negative examinations of the dejecta do not suffice to decide whether a patient is free from bacilli or not. In the Strasburg institute a patient is declared to be "basillenfrei" when the examinations have been negative on three different occasions but Kayser says that even this number of examinations has not always proved sufficient and he gives a number of examples which show that about 3 per cent. of patients who had been pronounced "bacteriologically recovered " were afterwards found to be bacillus-carriers. cent researches have shown that, contrary to the opinion which is generally held, this intermittency in the excretion of bacilli in the stools and urine occurs in the case of chronic bacillus carriers as well as in convalescents, and for this reason it is not likely that the control of bacillus carriers can ever be complete. This, however, does not alter the necessity which exists of searching out these carriers and controlling them as far as possible, and Kayser gives the following rules to this end. The stools and urine of patients convalescent after typhoid and paratyphoid fever should be examined a fortnight and again three weeks after the cessation of fever. If a negative result is obtained in both these examinations a third should be made after some months. When a positive result in one of the three researches is obtained, examinations should be made every week until the absence of bacilli has been proved on at least three successive occasions and subsequently two examinations should be made at intervals of two or three months for a year. Finally those who are known to be bacillus carriers should be kept under "bacteriological control" even when for many months no bacilli have been found, since it is known that at any time the bacilli may suddenly appear anew. All the observations mentioned have been found to hold good as regards convalescents and chronic bacillus-carriers in India. Captain Greig reports that of 87 patients examined during convalescence ten

<sup>\*</sup> The results obtained by the committee of investigation in India show that unotropine cannot be depended upon for the persuanent cure of bacilluria.

were found to be excreting the bacilli in the urine or fæces longer than six weeks after the cessation of fever and he gives the results of the daily examinations made on 16 patients, from which it appears that some were still at intervals excreting the bacilli in their urine or fæces more than three months after convalescence had begun. The intermittency in the excretion of the bacilli is explained by the fact now well recognised that the resting place of the bacilli is not the intestine but the liver and biliary passages. Recent cases bearing upon this subject have been reported by Etienne and Thiry,7 Nieter and Liepmann,8 Dehler9 and others as well as by the committee of investigation in India. An interesting case related by Levy and Kayser10 may be mentioned. It was the case of a woman who after suffering from typhoid fever had been a bacillus-carrier for three years. At the end of this period she suddenly became ill with severe symptoms of typhoid fever and died. Typhoid bacilli were cultivated from the blood, the liver, the spleen and the bile, but the most interesting point was that they were cultivated also from the centre of a gallstone found in the gall-bladder. In the opinion of Levy and Kayser the patient died from a severe typhoid fever contracted by autoinfection with bacilli from the gall-bladder. Another case in which typhoid bacilli were cultivated from the centre of a gallstone is reported by Christian." The patient had suffered from typhoid fever 7 years previously. The committee of investigation in India obtained samples of bile from 11 fatal cases of enteric fever and found the bacillus in large numbers in the samples from seven. The frequency with which patients suffering from typhoid fever become chronic bacillus-carriers and the length of time the condition lasts are important. Lentz12 found that about 4 per cent. of patients become carriers and upon the limited number of patients examined by the committee of investigation in India it would appear that in this country about 11 per cent. become carriers; the figure given by Klinger's is lower than this. He reports that during the researches at the Strasburg bacteriological institute from 1903 to 1905, there were examined during convalescence 604 patients, of whom only 6 or 1 per cent. became chronic bacilluscarriers. The examinations in India were made daily so it is probable that the Indian figure is the more nearly correct. In the researches at the Strasburg institute eighteen months was found to be the longest period within which bacilli were still being excreted by a patient. The cases mentioned above show that patients may be bacillus-carriers for much longer periods than this. Fornet's indeed relates the case of a woman who had been a bacillus-carrier for 20 years and Lentz says that authentic cases where the duration has been 30 years or more have been recorded.

With reference to the search for carriers among people who apparently have always been in good bodily health (temporary carriers) Klinger's reports that among 1,800 such people whose stools and urine were examined at the Strasburg institute 27 or 1'5 per cent. were found to be bacillus-carriers.

It is the opinion of many observers that the bacilli excreted by temporary bacillus carriers in good health are not very virulent and that such bacilli can cause an attack of the disease only when the vitality of the person whom they infect is lowered as a result of an illness or injury or some other cause. A case bearing upon this subject reported by Levy and Wieber<sup>16</sup> was that of a woman who during the time when she was in a weak state of health as a result of a recent confinement was infected with typhoid bacilli (and suffered from a severe attack of typhoid fever) by her mother who had attended her during the confinement and who although in excellent health was found to be

a bacillus-carrier. The mother had come from a village where there had been several cases of typhoid fever; typhoid bacilli were found in her stools and her blood agglutinated a strain of the bacillus in a dilution of 1 in 50.

The part played by convalescents and bacillus-carriers in the spread of typhoid and paratyphoid fevers depends in great Infection by contact. measure upon infection by contact, which, since Koch made plain the view that man is the important source of infection in typhoid fever, has come to be regarded as the chief way in which the disease is conveyed. As is well known so-called contact infection may be direct-from the patient to those who come in contact with him, or indirectfrom the patient to articles which he touches and thence to persons who come in contact with them. In both these ways the infection is transferred from the patient in his dejecta and it may be said that as a general rule a patient is not so dangerous during the actual attack of typhoid fever as during the convalescent stage and the stage in which he may be termed a bacillus-carrier because during the attack measures to guard against the spread of infection are usually taken. Most dangerous of all are mild ambulatory cases and cases in which for various reasons the disease has remained unrecognised, and in view of the many and varied forms of disease in which typhoid or paratyphoid bacilli have been found it behoves everyone to be on the watch for such cases. For obvious reasons people who are excreting the bacilli in the urine are particularly dangerous. The work of Koch, Baginsky, Velich and others upon forms of disease which were in reality typhoid fever but had not been recognised as such, has been referred to in previous issues of this report and the work of other observers will be found in a recent article by Kutscher'. A few additional examples recorded in the present year may be briefly mentioned. Neumann' gives an account of the illness of an Italian labourer who resided with ten comrades in a common lodging house. Two of these people had been sent to hospital with severe attacks of typhoid fever and a few days after their departure the labourer complained of slight headache and weakness which for three days had made it difficult for him to do his work. His temperature was normal, but as it was thought possible that despite the absence of symptoms of typhoid fever he might have contracted this disease from one of the two previous cases, he was taken into hospital. During his stay there the temperature remained normal or below normal except on two occasions when it rose to 99°F, and 100°F., respectively, but on the eighth day his blood gave a positive reaction with the Widal test and on the eleventh day typhoid bacilli were isolated from his fæces. On the 21st day the urine was found to be turbid and to contain albumen and typhoid bacilli were isolated from it. The bacilli could not be demonstrated in the fæces after the eleventh day but they continued to be present in the urine up to the 48th day. There was no symptom worthy of note throughout this period. The case indicated the great importance of a bacteriological examination in the detection of the cause of apparently trivial illnesses, and the great importance of such an examination in the case of persons who have come into contact with typhoid patients. An epidemic of typhoid fever in which nearly 90 por cent. of the cases were of the ambulatory and abortive types is reported to have occurred early in 1907 in South Wales. The symptoms usually present were a rise of temperature lasting from 12 to 72 hours, headache, backache, abdominal pain, diarrhœa lasting two or three days. and sometimes vomiting. As a rule the patients were convalescent after two or three days. In a large proportion of cases the temperature was normal or sub-normal throughout the period of treatment. It is especially in connection

with symptoms of abdominal trouble that a suspicion of typhoid fever may arise; the gastro-intestinal form of paratyphoid fever has already been referred to in the paragraph relating to that disease, and in any doubtful case of so-called "gastric fever" the possibility of paratyphoid fever should be considered. Catarrhal jaundice, gallstones, and acute cholecystitis are all diseases which may be due to the typhoid bacillus, and in some cases without other signs of typhoid fever having occurred. Etienne and Thiry' report a case in which two attacks of catarrhal jaundice due to the typhoid bacillus occurred in a patient under treatment in a surgical ward. He had never suffered from typhoid fever, but during the attacks of jaundice his blood agglutinated the typhoid bacillus in a dilution of 1 in 300, and later the typhoid bacillus was isolated from his fæces. The role played by chronic bacillus carriers in causing typhoid fever by direct and indirect contact is a very important one. Lentz6 records the following case of infection by direct contact with such a carrier. A woman who had suffered from typhoid fever in September 1905 and had become a chronic bacillus carrier was taken ill in January 1906 with symptoms of cholecystitis. During the first two days of her illness no precautions against the spread of infection were taken and the nurse in charge of the case became infected and afterwards suffered from a severe attack of typhoid fever. Numerous cases of infection by indirect contact from bacillus-carriers are recorded, of which a few of the more recent may be mentioned. Friedel' reports the case of a cook who had suffered from typhoid fever in 1889 but was not discovered to be a bacilluscarrier until 1906. In the meantime he had caused in all at least 24 cases of typhoid fever in the houses where he had been employed. Another case to which reference may be made is recorded by Soper?. It relates to a household epidemic of typhoid fever in a town in America. Of eleven persons in the household six developed typhoid fever between August 27th and September 3rd. Careful investigation excluded water, milk, vegetables, fruit and shellfish as possible sources of infection. There was no case in the town immediately preceding or following those studied and none of the patients had been away for several weeks before they fell sick. The house was in a thoroughly sanitary condition. On August 4th a new cook had been engaged and she remained with the family three weeks before and three weeks after the outbreak. An investigation of her past history was made and it was found that although no information could be obtained relating to two of the last five years, 26 cases of typhoid fever with one death had occurred in seven families with whom she had worked during this time. Indirect information indicated that she herself had had a mild attack of typhoid fever. A representation made to the Health Department of New York led to the woman being placed in hospital where her fæces and urine were examined. Although she was in robust health typhoid bacilli were isolated in abundance from her fæces nearly every day for several weeks. They were not found in the urine. Some very interesting examples of a similar nature are detailed by Captain Greig in his report of the work in India. The account of these is too lengthy for adequate summary in this place and it must suffice to mention that in two epidemics (one in the Bedfordshire Regiment at Kasauli, the other in a convent school at Poona) the chronic bacillus-carrier who was directly responsible for the epidemic was a cook who had unknowingly infected the food supply. The details of the way in which infection by direct and indirect contact is brought about were given in this report for 1904 and need not be repeated here. In circumstances

where few or no precautions to guard against this mode of infection are taken the number of cases may become sufficiently large as to constitute an epidemic which, according to Lentz<sup>9</sup>, may exhibit a typical curve.

The great importance attributed during recent years to contact infection in the spread of typhoid fever has led to more Infection by water and by milk. thorough research into the cause of epidemics, with the result that the number attributed to contaminated water-supplies has decreased considerably. The role of drinking water, however, must still be regarded as highly important and the literature of the year contains as usual a number of instances of epidemics which were traced more or less certainly to contamination of a water-supply. The more important are those recorded in Germany by Seige and Gundlach, Matthes and Gundlach, and Matthes and Neumann,3 and in America by Bowman, Edwards and Wainwright.4 A few epidemics presumably due to a contaminated water-supply are also recorded as having occurred in the British Isles, notably in South Wales.5 At least in some of these epidemics the evidence which incriminated the watersupply is sufficiently convincing and as it is similar to that which has frequently been detailed in previous issues of this report it need not be repeated here. Owing to the well known difficulty of finding the typhoid bacillus in water the evidence that an epidemic is water-borne is seldom conclusive; it rests in many instances upon epidemiological observations such as, among others, the sudden appearance of a number of cases simultaneously and the observation that all the people attacked have obtained their supply Lentz instances a case in which an inof water from the same source. adequate research on these lines might have wrongly incriminated a watersupply.6 He was called upon to investigate the source of origin of two cases of typhoid fever reported in a village and during the investigation found eleven other cases in five houses situated near the village well. It seemed probable that all the cases had arisen from contamination of the well-water and at first this was the view held. It was found, however, that the remaining inhabitants of the village, none of whom had suffered from typhoid fever, obtained their water from the suspected well and that the people who were ill were all related to one another. Further investigation proved that the epidemic was due entirely to contact infection. A water-borne epidemic of paratyphoid fever has been recorded by Kellermann'.

Little or no work which advances our knowledge of methods for isolating the typhoid bacillus from water, falls to be recorded this year and in most laboratories the results of this research have been, as usual, invariably negative. A list of papers dealing with various methods employed during the year will be found at the end of this section of the report.

As regards the problem of the longevity of the typhoid bacillus in water, there is no new fact to record. Fraenkel<sup>9</sup> has criticised the work done by Russell and Fuller, which was summarized in last year's report, on the grounds that the methods of experiment were not such as would give a true notion of the length of life of the bacillus when it enters the water in fæces—in which, of course, it is more or less protected from harmful influences. He considers that in natural circumstances the length of life of the bacillus in water is much longer than the experiments of Russell and Fuller suggest. According to Kutscher it is probable that the paratyphoid bacillus type B, on account of its hardiness, can remain alive in water longer than the typhoid bacillus.

Problems connected with the isolation of B. coli from water and the value of its presence as a criterion of specific contamination have been dealt with by Longley, Sawin, Gage, Jackson, Weston and Tarbett, and Sellards. The papers by these observers are easily accessible and need not be summarized here.

An interesting milk-borne epidemic of 120 cases in which Conradi was able to isolate the typhoid bacillus from a sample of the milk was referred to in last report, and during the current year an epidemic in which the proof was equally complete has been recorded by Shoemaker". In this epidemic, which occurred in Philadelphia, more than 20 persons living in a large tenement house became ill with typhoid fever within two weeks. It was found that the sanitary condition of the house was excellent and that all drinking water for the use of the occupants A sample of the milk supplied to the house was proved to contain typhoid bacilli and on a visit being made to the dairy it was found that the proprietor and one of his servants were suffering from typhoid fever. The son of the proprietor was convalescent after the same disease and was discovered filling the milk bottles from a tank by siphonage, in the act of starting the flow by sucking with his mouth at one end of the tube. A culture made from this end of the tube revealed the presence of typhoid bacilli in abundance. Another milk-borne epidemic of 59 cases with 10 deaths which occurred in a village in Germany is recorded by Brummund". In this instance pasteurisation of the milk was supposed to have been carried out at the dairy, but it was found that in order to economize coal this was not being done regularly. The necessity for some form of sterilization, at any rate in English towns, is shown by the results of Hewlett and Barton13 who found in a quantity of milk not exceeding one c.c. the B. coli in 46 per cent, of samples of milk supplied to London. Interesting discussions upon the significance of streptococci and of leucocytes in milk will be found in recent papers by Harris and by Russell and Hoffmann".

It will be seen from a later paragraph containing a summary of the opinions of medical and sanitary officers in India that the Infection by dust, flies, clothing, etc. view that enteric fever is frequently spread by dust and by flies is still held by many medical men in this country. It is, of course, possible that the opinion may be correct, but it is important to keep clearly in mind the fact and the obvious conclusions which arise from it that the life of the typhoid bacillus outside the human host is very short and that for this reason the persistence of the disease in any locality cannot be explained by an hypothesis which postulates a long viability of the bacillus in the external world. The experiments carried out at the Central Research Institute, Kasauli, in connection with this subject are still in progress but the following are a few of those already made: (1) urine containing about 60 million typhoid bacilli per c.c. was allowed to stand at room temperature (80° F.) and protected from the sun; at the end of 72 hours it was found to be sterile. (2) Five grammes of human fæces were emulsified in normal saline solution with one loopful of an emulsion of the typhoid bacillus and the mixture kept at room temperature and protected from the sun; after five days the typhoid bacillus could be isolated from it but not after ten days or more. (3) A full test tube of the effluent from a septic tank was mixed with one loopful of an emulsion of the typhoid bacillus and kept at room temperature and protected from light; after five days the typhoid bacillus could be isolated from the effluent but not after 17 or more days. (4) A piece of dirty cotton sheeting and a piece of dirty blanket were soaked in the fresh urine of a patient whose urine contained 60 million typhoid bacilli per c. c. The pieces were dried in the

air and each divided into two portions. One portion of each was exposed to the sun, the other was kept in a dark cupboard. The results showed that all the typhoid bacilli in the cotton sheeting were killed by exposure in the sun for two hours and that in the blanket they were all killed by exposure in the sun for six hours; and as regards the bacilli in the pieces of sheeting and blanket kept in the dark cupboard it was found that they could be isolated after six days but that in 17 days all had died.

The measures of prevention indicated by the foregoing considerations are sufficiently obvious, but are difficult to carry out. Preventive measures. They depend upon a realization of the facts that infection takes place through the mouth, that every case of typhoid fever arises from a previous one, that the typhoid bacillus escapes from human beings in all the excreta but especially in the urine and fæces, and that the saprophytic life of the bacillus outside the human host is very short. Man is the only known host of the bacillus and the point of greatest importance in prophylaxis is the prevention of the spread of the living bacillus by him. If this can be completely effected the further spread of the disease is impossible for any bacilli which have previously escaped will die out within a short period of time. Thus the two conditions to be fulfilled in a successful campaign against typhoid fever are, firstly, to be in a position to discover all cases of the disease easily and at as early a stage as possible and, secondly, to be in a position to destroy the bacillus in these cases. It is in the carrying out of the measures necessary for the fulfilment of these two conditions that the difficulties arise, but that they are less great as regards a body of men, such as the European army in India, under complete military and medical control than as regards the ordinary civil population of any country there can be no doubt, and the success which has attended the measures on these lines for the suppression of typhoid fever in many civil districts in Germany, raises the hope that when they are effectually put into force in the European army in India the prevalence of typhoid fever among this body of men will decrease very considerably. The expense of establishing a large hospital in the hills where convalescents could be kept until they had ceased to excrete the bacilli in their urine and faces and the expense of the staff of bacteriologists who would have to be constantly employed would necessarily be great, but it would be more than compensated for if the prevalence of a disease which causes so much sickness, mortality, and loss of service, could be materially diminished.

Of the 102 stations occupied by European troops during 1906 there were only 15 in which more than 20 cases of enteric fever occurred and there were 8 in which only 2 cases occurred, 16 in which only one case occurred and 17 in which no case occurred. It is plain, therefore, that in the majority of stations enteric fever does not occur in the form of well marked epidemics and in view of the difficulties which attend the investigation of the origin of sporadic cases occurring at considerable intervals it is not surprising that the medical officers in at least 22 stations during 1906 stated that they had failed to trace the source of origin of attacks, and that a guarded opinion was given by the medical officers in a number of other stations. But although it is not often possible to come to a definite decision as to the origin and mode of spread of enteric fever in Indian cantonments the careful enquiries and investigations which are made in every case reveal many sanitary defects and lead to a clearer view of the relative importance of the different

conditions which influence the prevalence of the disease. One of the most important conclusions to which these enquiries and investigations have led is that water plays only a very minor role in the dissemination of enteric fever among European troops in India. As regards the year 1906 if we except an instance at Saugor where it was thought the patient may have contracted the infection by drinking water from a well in a native city, one at Calcutta where the attack commenced some days after the patient had drunk water in a native house, and a very few isolated cases attributed to drinking water from nullahs or village wells while on manœuvres or on the line of march, in none of which is there any good reason for connecting the attack of enteric fever with the water drunk, we are left with only one outbreak in which there was a suspicion that the disease was water-borne. This outbreak (of 25 cases) occurred in Peshawar between the 23rd of May and the 30th of June, and all the regiments in the garrison were affected. It was found that the filter-bed was not working satisfactorily and that the contractor had obtained sand from a dhobie's ghat which was grossly dirty. The epidemic ceased within three weeks of the filter being put out of use. As regards conveyance by milk it may be noted that an outbreak of 14 cases which occurred at Ferozepore between the 21st of April and the 19th of May was considered to have been milk-borne and that a few cases at Rawalpindi, Secunderabad, Sitapur, Agra and Lucknow were also attributed to infected milk, but in all these cases as well as in the outbreak at Peshawar which has just been referred to, the evidence is much wanting in conclusiveness. As has been the case during the last few years the reports of 1906 show that medical officers consider contact infection, direct and indirect, to be the most important mode by which enteric fever is spread in Indian cantonments and although vigorous measures to guard against it are taken it was a potent factor in many stations during the year. A few examples taken from the reports may be mentioned. At Lahore Cantonment, Cherat, Nowgong and several other stations, hospital orderlies who were nursing enteric fever patients were attacked with the disease, the total number of cases among these orderlies amounting to 13. The Sanitary Officer of the Northern Command, Major Scott, R.A.M.C., investigated an outbreak which occurred in Lahore Cantonment during December 1905 and January 1906 and came to the conclusion that excluding the first patients, who, in all probability, had become infected from some source outside the cantonment, water, milk and flies could be excluded as factors in the spread of the disease and that personal contact was the most important means. Two of the patients were on duty as nurses in the enteric fever ward. Major Scott also investigated an outbreak at Dera Ismail Khan, where it seemed probable that infection had been conveyed indirectly by a sweeper who worked in the regimental hospital and in the bungalows occupied by the persons who were attacked. The danger that convalescents may spread the disease by direct and indirect contact is well recognised, and measures to guard against it are taken in all stations. At Rawalpindi such patients were not allowed to enter the barracks at all after their illness but were sent straight from the hospital to a convalescent depot in the hills and the medical officer considered that the absence of the usual autumnal rise in the prevalence of enteric fever was due to this measure. A similar plan was adopted at Belgaum. Patients in an early stage of the disease are more difficult to deal with and there are many instances in the reports which show the difficulty of discovering cases at a sufficiently early stage to prevent them from spreading infection. In Lahore Cantonment the usual daily medical inspection of "contacts" revealed the presence of enteric fever in three men who declared that they were quite well. At Mhow 6 cases were definitely traced to infection from a patient

who began to feel ill on the 9th of February but did not report sick until the 16th; another patient at this station began to feel ill on the 14th January but did not report sick until the 22nd. The reports from Neemuch, Rawalpindi and other stations also contain evidence that men abstain from reporting themselves to be ill as long as possible. Some of the cases at Peshawar were so mild that they would not have been diagnosed as enteric fever if a positive result had not been obtained with the agglutination test. An interesting instance of infection by direct contact with a bacillus carrier is reported from Kasauli where enquiries as to the mode of origin of cases of enteric fever in a child and in a woman led to the examination of the child's mother when it was found that although she felt quite well she was excreting typhoid bacilli in great abundance in her fæces. It appeared that she had come into contact with patients suffering from enteric fever at Agra, but that her infection with typhoid bacilli had caused no symptoms except slight looseness of the bowels which she noticed on arrival at Kasauli. The woman who had been admitted into hospital for enteric fever at Kasauli was a friend of hers and both she and the child had doubtless been infected by direct or indirect contact with her. Other examples of cases contracted by contact are to be found as usual in a number of instances in which infection was thought to have been contracted in latrines and by contaminated cooking utensils and food. The danger of "latrine infection" is said to have been greatly lessened in many stations by the use in the latrine pans of a solution of carbolic acid or perchloride of mercury instead of dry earth, and to this measure also is attributed a great diminution in the number of flies present in the latrines. Flies were regarded as the chief agents by which enteric fever was spread in Barrackpore. Indore, Kamptee, Nasirabad, Jhansi, Poona and a few other stations. Lieutenant-Colonel Meek, R.A.M.C., the Sanitary Officer of the Western Command, investigated the outbreak of enteric fever at Jhansi and found no reason to attribute its origin to infected water or milk, and the outbreak had not the characters of a waterborne epidemic. It cannot be said that his report contains any evidence which can be regarded as conclusive but it seemed to him most probable that flies, which were exceedingly prevalent during July and August, were chiefly responsible for spreading the disease. Both flies and dust were considered to be important factors in the spread of enteric fever at Delhi, Mhow and Jubbulpore; and at Quetta, Muttra and Lucknow infected dust alone was held responsible. Major Morgan, R.A.M.C., the Sanitary Officer of the Eastern Command, investigated the mode of spread of enteric fever at Lucknow. He considered that water, aerated waters, milk, food, personal contact and infected clothing could be excluded, and that infected dust had been the main factor in the spread of the disease. He reported that the soil was dry and sandy, that the floors of many of the latrines and urinals were not paved and were much polluted, and that dust-storms were frequent. At Chaubuttia and Ihansi one or two cases were attributed to eating salad bought from natives and at Khandalla one case was thought to have been contracted in Bombay by eating oysters. Finally there is, as usual, a list of stations in which it was thought that some of the patients had become infected in native bazaars and a longer list of stations where all or nearly all the cases had been contracted on the line of march, or in camp, or on a railway journey, or in a station other than that in which the patients became ill. The fact that 20 of the 28 patients who suffered from enteric fever in stations in the Murree hills were admitted into hospital within 26 days of their arrival illustrates the danger of infection during the annual move by route march from the plains to the hills.

11. The statement in the margin shows at a glance the number of admissions

Enteric fever in 1906. Appendices A need B to Section III and D to Section III. Table IV.

admission and death rates per 1,000 of average strength recorded from enteric fever among European troops in India during each of the last five years. On the whole the record, especially if it be compared with that of the preceding five years (from 1897 to 1901), is distinctly encouraging and there is reason to believe that the prophylactic measures now in force are meeting with a measure of success. The average duration of a case in 1906 was about 75 days, in 1905 about 70 days, in 1904 about 68 days and in 1903 about 54 days, and this progressive increase in the duration of stay of patients in hospital is doubtless due to a more thorough

Years.	Admissions.	Deaths,		
1902	16.7	260		
1903	1,384	4,10 302		
1904	1,395	376		
1905	1,146	213		
1906	1,095	3'19		

appreciation of the necessity of keeping convalescents segregated from their comrades in barracks as long as possible. This practice causes, of course, an increase
in the constantly sick rate and in the figure showing the total loss of service due to
enteric fever [the average number of men constantly sick on account of enteric
fever in 1906 was 224'11 and the total loss of service due to the disease was 81,800
days as compared respectively with the figures 220'50 and 80,482 in 1905] but in
the end it cannot fail to reduce materially the number of new infections. The
case-mortality was slightly higher than in the previous year, namely, 16'7, as compared with 15'5. It is evident from the reports of medical officers that the
fatality of the disease would be much lessened if men could be induced to report
sick at an earlier stage of the attack, and in this matter as well as in the discovery of mild ambulant cases and of convalescents who are still excreting the
bacilli a great deal still remains to be done.

Enteric fever in Commands, Divi.

Sions and Geographical groups.
Appendices A and B. Table VIII.

Divisions its incidence was greatest among troops in the 5th (Mhow), the 9th (Secunderabad), the 7th (Meerut) and the 8th (Lucknow) Divisions and least among troops in the 10th (Burma) Division. As regards geographical groups the admission rates in the Central India (VIII), Gangetic Plain (V) and Deccan (IX) groups were highest during 1906, the prevalence in the first two of these groups being considerably greater than in the previous year. In the group of Hill Stations (XII-a) the admission rate fell to 7.3 per 1,000 as compared with 10.9 per 1,000 in 1905 and 14.7 in 1904. No case occurred in the Burma Coast group (I) during 1906.

Enteric fever in stations. Appendices
C and D to Section II. Tables III,
following is a list of stations at which the highest
rates were recorded:—

In group VI.	In group V.		In group VIII.		In group IX.		
Amritsar 59'7 Fort Lahoro 56'1 Ferozepore 29'5 Lahore Cantonment 28'0 Meerut 24'5	Sitapur Lucknow Fatchgarh	51'7 36'0 26'0	Deesa Mhow Nowgong Jhansi Agra Neemuch Muttra	62'5 42'5 41'4 41'2 34'8 29'4 27'8	Jubbulpore Poona Secunderabad	31'9	

The stations where the largest number of cases occurred were Secunderabad (92), Lucknow (90), Mhow (77), Poona (54), Meerut (50), Bangalore (47), Jhansi (44), Rawalpindi (41), Agra (38) and Peshawar (34). The points of interest in connection with the prevalence of the disease at these and other stations have been dealt with in a previous paragraph, and some details about the more unhealthy stations will be found in Table V. In Appendix D the dates of admission to hospital of patients residing in different barracks and tents at some stations are given.

14. In 1906 the greatest liability to suffer and die from enteric fever fell upon Relation of enteric fever to age and the age period 20-25 and upon the first two years length of residence in India. Tables of Indian service. This is indicated in the XV and XVI.

Statistics by the fact that nearly 69 per cent. of the total admissions at all ages were among men up to 25 years of age and that nearly 57 per cent. of the total admissions were among men during their first two years of Indian service. The admission rate among men over 35 years of age was 4.7 per mille as compared with 4.2 in 1905 and 4.0 in 1904; and among men with five years' service and upwards it was 7.0 per mille as compared with 6.9 per mille in 1905.

15. Among European troops in India there were recorded in 1906, 17 Plague and some other general dis- cases of plague and two deaths; in 1905, 13 cases. Table LIII. cases and four deaths; and in 1904, two cases and no death. Of the 17 cases seven occurred at Fort William, four at Cawnpore, three at Poona, two at Mhow and one at Bombay. Six of, the patients at Fort William had come from Mauritius and had inguinal buboes before their arrival in Calcutta-there was some doubt about the diagnosis and the bacteriological examination and the results of inoculation experiments were negative. At Cawnpore plague was prevalent in the city and cantonment, but the exact source from which the patients became infected was not discovered. The type of the disease was bubonic and the plague bacillus was found in each case. All the patients recovered. The three patients at Poona contracted the disease in the native bazaar, where plague was very prevalent. The bacillus was isolated in each case. In one of the cases at Mhow the type was pneumonic and this patient died. The bacillus was isolated in all cases. The source of infection was not discovered in the case at Bombay and there was some doubt about the diagnosis as the bacillus could not be isolated from the blood stream or from the glands. There were altogether 60 admissions on account of measles, the majority occurring in the Eastern and Western Commands. Erysipelas accounted for 15 cases with no fatality. Of the 50 admissions (with three deaths) on account of beri-beri no fewer than 32 (with two deaths) were recorded at Aden; there were four admissions at Chakrata and three (with one death) at Rangoon, Twenty-six of the cases at Aden occurred in one regiment which had arrived from Burma in December 1905. The patients at Chakrata came from Cawnpore, where a small epidemic had occurred in the previous year. There were 282 cases of dengue with no fatality as compared with 415 cases with one death in 1905 and 439 with one death in 1904. The disease was practically confined to Fort St. George (Madras), where there were 182 cases, Rangoon where there were 63 and Karachi where there were 33. Bilharzia hæmatobia accounted for only nine admissions to hospital as compared with 22 in 1905, 63 in 1904 and 318 in 1903; and the number of men invalided for this cause fell from 23 in 1905 to 10 in 1906.

Tubercle of the lungs. Appendices A to Section II and E to Section III and IV.

Tables III and IV.

The admission rate in 1906 and the death rate from '28 to '17.

The admission rate in the Western Command (1'9) per mille) fell to about half that of the previous year; the rate in the Northern Command fell from 1'7 to 1'5, and the rate in the Eastern Command remained unchanged. The total number of cases treated for this disease during the year was 138 and the total number of deaths 12, the stations from which the largest number of admissions were reported being Rawalpindi (8), Poona (5) and Lucknow (5). The number of men invalided fell from 116 in 1905 to 92. The death rates from tubercle of the lungs among European troops, Native troops, and native prisoners during the year were in the proportions of 1, 3, and 21 as com-

17. In 1906 the admission and death rates from pneumonia were 3'4 and '28

Pneumonia and other respiratory diseases. Appendices A and B to Section II and H to Section III. Tables XII; III and IV.

pared with 1, 2, and 13 in 1905.

per mille, respectively, as compared with 4'1, and '63 in 1905, the total numbers of admissions and deaths in each year being respectively 241 and 20 in 1906, and 296 and 45 in 1905. The disease was most

prevalent during the year among troops in the Northern Command and least so among those in the Western Command and as regards geographical groups it was most prevalent among troops in groups IV (Bengal-Orissa), XII b (Hill Depots), VIII (Central India) and VI (Upper Sub-Himalaya). Compared with the previous year there was an increase in prevalence in five of the geographical groups and a decrease in seven. Excluding stations where the strength was low the highest admission rates for the year were recorded at Campbellpore (27.8 per mille), Agra (10.1), Multan (9.5), Nowshera (7.8), Darjeeling (7.8) and Rawalpindi (7.8). For India as a whole the months of greatest prevalence are, as a general rule, December, January and February, and those of least prevalence June, July, August and September; during the year under report most cases occurred in January and fewest in August.

There was a decrease in the admission rate on account of "other respiratory diseases," the rate being 20'3 per mille as compared with 23'0, but the death rate was '09 per mille as compared with '06. The admission rate was lower than in 1905 in all three Commands, the greatest decrease being in the Western Command, where the rate fell from 26'4 to 20'6. The highest rate (21'8) was in the Eastern Command. The geographical group in which these diseases were most frequent during the year was XII b (Hill Depots), group VI (Upper Sub-Himalaya) coming next; and the stations (excluding those with an average strength below 150) where admission rates above 40 per mille were recorded were Dum Dum, Wellington, Chakrata, Nowgong and Meerut. Of the six deaths from diseases under this heading one was due to broncho-pneumonia, one to gangrene of lung, and two each to pleurisy and empyema.

Dysentery and diarrhoea. Appendices A and B to Section II and E to Section IV. Tables XIII, III and IV.

Dysentery and diarrhoea. Appendices A and B to Section II and E to Section IV. Tables XIII, III and IV.

Tables XIII, III and IV.

Toops rose from 13'4 per mille in 1905 to 15'2 per mille in 1906 and the death rate from '46 to '53. As in 1905 the disease was most prevalent and fatal during 1906 among troops in the Western Command, and as regards Divisions it was most prevalent among troops in the 9th (Secun-

derabad), the 5th (Mhow) and the 6th (Poona) Divisions. The death rates were highest among troops in the Mhow and Burma Divisions. As regards geographical groups the disease was most prevalent in the Deccan group (IX) and most fatal in the Burma Coast group (I). Excluding stations with a strength below 150 the highest admission rates were recorded at Aden (56'4 per mille), Barrackpore (53'5), Jubbulpore (48'5), Secunderabad (44'2) and Jhansi (42'1). For the European army as a whole the months of greatest prevalence were July, August and September, and those of least prevalence January and February.

Among the whole European army of India there were 960 admissions on account of diarrhæa, with no fatality, as compared with 1,070 admissions and 37 deaths on account of dysentery. The disease, like dysentery, was most prevalent among troops in the Western Command. As regards geographical groups the highest admission rates were recorded in groups XII a (Hill Stations) and VIII (Central India). In the first of these are included the two stations with the highest ratios, namely, Ranikhet (58 I per mille) and Jutogh (39 o).

- 19. In all 183 admissions to hospital on account of abscess of the liver Hepatic abscess. Appendix A to and 107 deaths were recorded during 1906 as Section II. Tables III and IV. during the previous year, the admission and death rates per mille being in 1006, 2'6 and 1'52, and in 1005, 2'1 and 1'18. The admission and death rates were highest among troops in the Western Command and as regards Divisions the admission rate was highest among troops in the 5th (Mhow) Division and the death rate among troops in the 6th (Poona) Division. One or more cases occurred in 60 stations and, excluding Calicut where the average strength was low, the highest admission rate was recorded as usual at Barrackpore, where there were five cases with three deaths. At Secunderabad, however, there were 17 cases and eight deaths, at Mhow 10 cases and four deaths, at Poona eight cases and nine deaths and at Sialkot eight cases and four deaths. The majority of the cases at Secunderabad were associated with dysentery, but in one case the disease followed an attack of enteric fever. In one of the fatal cases the abscess had opened into the lung, and in another into the stomach. There was a history of dysentery in four of the cases at Mhow, in eight at Poona and in one at Sialkot, but in the majority of the fatal cases even when no history of dysentery had been obtained chronic ulceration of the large intestine was found after death. Multiple abscesses were found post-mortem in nearly all the fatal cases.
- Alcoholism. Tables XVI and LIII. during 1906 as compared with 197 admissions and 11 deaths during the previous year, the corresponding average numbers recorded annually during the decennium ending 1905 being 242 and 8, respectively.
- Venereal diseases. Tables III and IV.

  These figures are represented in actual numbers by 8,242 the total admissions, 11 the total deaths, and 864'79 the total number constantly sick throughout the year. The corresponding figures in 1905 were, as regards rates 153'7 per mille, '18 per mille and 15'3 per mille and as regards

actual numbers 10,966 the admissions, 13 the deaths, and 1089'27 the number constantly sick. That the noteworthy reduction in the rates during recent years is due to a real reduction in the amount of venereal disease among European troops there can be little doubt, for in 1906 the procedure with regard to the statistical record of the diseases under this heading was the same as in 1905, and the reduction is evident in the statistics of invaliding and death which are not affected by changes in the method of record. The decrease is doubtless due to a number of causes among which the strenuous efforts put forth of late years by all classes of military and medical officers as well as by cantonment magistrates and by the authorities of the Royal Army Temperance Association to lessen the great annual wastage from this cause are not the least important. Some indication of the good results of these efforts may be obtained from the figures of the "syphilis register" upon which is entered the name of each man who comes under treatment for this disease for the first time. This register was started in 1904 and in that year the names of 2,947 men were entered upon it. In 1905 the names of only 1,470 men had to be entered on it and in 1906 the names of only 936, so that we may assume that the number of men who contract syphilis each year is steadily decreasing. Another potent factor in bringing about a reduction in the amount of venereal disease is the great improvement which has taken place in the methods and duration of treatment. It is well known that the high admission rates from venereal disease in former years were due largely to the great number of readmissions to hospital which occurred on account of relapses. At present every man whose name is on the syphilis register has to attend hospital once a week for observation and treatment during a period of about two years; and this measure must lessen not only the number of relapses but also the chance that a serious complication will ensue, and for this reason must tend to reduce the number of invalidings and deaths. During 1906 only 583 men had to be readmitted to hospital while undergoing observation and treatment as compared with 902 in 1905. There has been a great improvement also in the method of carrying out the treatment of gonorrhoea and to this is probably due in great part the reduction in the admission and invaliding rates from this disease.

The average period of detention in hospital of a patient suffering from any form of venereal disease during 1906 was 38.30 days and the total loss of service involved amounted to 315,648 days, the non-efficiency thus reckoned being about four times as much as that incurred on account of enteric fever.

There were 11 deaths ('16 per mille of strength) attributed to venereal diseases during 1906 as compared with 13 ('18 per mille) in 1905 and 15 ('21 per mille) in 1904; and the number of men invalided for this cause was 131 (1'86 per mille) as compared with 83 (1'16 per mille) in 1905 and 199 (2'80 per mille) in 1904.

There was a decrease in the admission rates from venereal diseases in all three Commands, but in 1906 as in the previous year the rate in the Eastern Command was highest (126'9 per mille) and that in the Western next (120'6), the admission rate in the Northern Command being only 75'7 per mille as compared with a rate of 132'4 per mille among troops outside this Command. Among Native troops also venereal diseases are less prevalent in the Northern Command than elsewhere. As regards Divisions venereal diseases were most prevalent in the 10th (Burma) Division with a rate of 191'1 per mille and the 9th (Secunderabad) with a rate of 153'9 per mille, and least prevalent in the Peshawar Division (64'5 per mille) and the Quetta Division

(75'9). Excluding stations at which the average strength was less than 100 the highest admission rates on account of venereal diseases among European troops in the Northern Command were recorded at Kasauli (148'6 per mille), Attock (146.6) and Lahore Cantonment (137.2); in the Western Command at Deolali (252'7); Saugor (252'5) and Bombay (217'5); in the Eastern Command at Fort William (324'8), Fort Allahabad (228'9), and Barrackpore (214'0); in the Secunderabad Division at Mallapuram (284.6), Madras (235.6) and Bellary (205'9); and in the Burma Division at Rangoon (228'2), Shwebo (222'7) and Maymyo (204'6).

The admission rate on account of gonorrhoea was 61'o per mille of strength in 1906 and that on account of soft chancre 28.5 per mille as compared with rates of 74'8 and 43'3 per mille respectively in 1905. Eleven men as compared with eight in the previous year were invalided for gonorrhea during 1906.

- 22. The total number of deaths recorded as a result of heat-stroke during Heat-stroke. Appendix A. Tables 1906 was 39 as compared with 55 in 1905 and XVI and LIII. 35 in 1904. The stations at which the largest numbers of deaths from this cause occurred during 1906 were Nowshera (8), Aden (4), Lahore Cantonment (3) and Multan (3).
- 23. The average annual number of suicides reported in the decade 1891-1900 was 19 and in 1906 the number was 21, of Suicide. Tables XVI and LIII. which six were by gunshot, eight by cut-throat, two by drowning, two by hanging, one by oxalic acid poisoning, one by strychnine poisoning and one by multiple injuries.
- 24. From the whole European army of India 1,993 men were invalided in Invaliding. Appendix A. Tables 1906 (28.36 per mille of strength) as compared XVII and LIII. with 1,508 (21'24 per mille) in the previous year. The rates per mille of strength ranged from 41'99 in the Western Command to 19'47 in the Burma Division. The chief causes of loss by invaliding have been mentioned in paragraph 2 above, and a striking feature of the statistics is the large increase in the number of men invalided for enteric fever and for debility. Of the 115 men (against 52 in 1905) invalided for enteric fever 110 were under 30 years of age and 90 had been less than four years in India, and of the 255 (against 152 in 1905) invalided for debility 178 were under 30 years of age and 116 had been less than four years in India. Of the total number of men invalided from all causes 48 per cent. were under 25 years of age and 83 per cent. under 30 years of age; and as regards length of residence in India 27 per cent. of all invalids had less than two years' service in this country and 66 per cent. less than five years.
- 25. The average strength of commissioned officers with European troops in Officers. Appendix E to Section India during 1906 was 2,225 and among these II. Table XVIII. there were 1,620 cases of sickness, 138 were invalided and 39 died during the year. The admission rate, the constantly sick rate, the invaliding rate and the death rate were each considerably higher than in the previous year, the death rate rising from 9'04 to 17'53 per mille. The admission rates on account of influenza, ague, cholera, small-pox, enteric fever, simple continued fever, and hepatic affections were all higher than in 1905, but those of pneumonia, dysentery, diarrhœa and venereal diseases were lower. There were 14 deaths from enteric fever, the chief cause of mortality, giving a ratio of 6'29 per mille against 2'58 per mille in 1905. There were 39 cases of

dysentery with one death, six cases (all fatal) of cholera, and two cases (both fatal) of hepatic abscess. Two officers suffered from plague but both recovered. As compared with the incidence on troops the following diseases were more prevalent in proportion to strength: influenza, cholera, small-pox, enteric fever, simple continued fever, other respiratory diseases, dysentery, diarrhœa, congestion of the liver, while the officers suffered less than the men from malarial fevers, tubercle of the lungs, pneumonia, hepatic abscess, venereal diseases. Enteric fever, ague, debility, and dysentery were the chief causes of invaliding.

26. The health of the women was not so good during 1906 as during the preWomen. Appendix F to Section vious year. The average strength was 3,431, which
II. Tables XIX and XXI.

is an increase of 56 on that of 1905, and there were
in all 2,600 admissions to hospital and 42 deaths giving admission and death rates
of 757'8 and 12'24 per mille respectively as compared with rates of 646'8 and
10'96 in 1905. The constantly sick rate was 32'9 per mille as compared
with 27'9. The chief causes of admission to hospital were, as usual, debility,
diseases peculiar to women, and ague, which together accounted for 65'00 per
cent. of the total number of admissions from all causes. Of the 42 deaths five
were due to enteric fever, five to child-birth and abortion, four to hepatic abscess
and three each to small-pox and pneumonia. The highest admission rate was
recorded in the Secunderabad Division and the highest death rate in the Eastern
Command.

27. There was a higher rate of sickness and a higher mortality among the Children. Appendix G to Section children during 1906 than in either of the two previous years. The average strength was 5,322, the admission rate 469'o per mille, the constantly sick rate 18'o and the death rate 44'72. The chief causes of sickness were ague, diarrhœa, respiratory diseases, measles, and eye diseases which together accounted for 42 per cent. of the total number of admissions from all causes. There was an increase in the prevalence of measles, ague, dysentery, diarrhœa and diseases of the eye as compared with 1905. Out of the total of 238 deaths 42 were attributed to diarrhœa, 34 to debility and immaturity at birth, 20 to convulsions, 17 to teething, 16 to respiratory diseases, and 11 to dysentery. There were 30 admissions to hospital with three deaths from enteric fever and 240 admissions with 42 deaths from diarrhoea. Among the exanthemata to which children are liable there came under treatment during the year 144 cases of measles, 49 cases of chicken-pox, 10 of rubella, 7 of scarlet fever and 5 of small-pox; there were also 22 cases of whooping cough, 19 of mumps, 5 of diphtheria and 4 of dengue. Sickness was greatest among children in the Secunderabad Division and mortality among those in the Western Command.

The strength at different age periods, the death rates per mille and the relative liability to death at each of these periods are shown in Table XXV. Immaturity at birth was the cause of death in 29 per cent. of the total number of deaths among children under six months of age.

Papers and Books referred to in Section II.

Abbreviations used below.

A.H.=Archiv für Hygiene.

A.K.G.A.=Arbeiten aus dem kaiserlichen Gesundheitsamte.

A.P.=Annales de l'Institut Pasteur.

B.I.P.=Bulletin de l'Institut Pasteur.

B.J.H.H.=Bulletin of the Johns Hopkins Hospital.

B.K.W. = Berliner klinische Wochenschrift.

B.M.J. = British Medical Journal.

C.B .= Centralblatt für Bakteriologie.

D.M.W .= Deutsche medizinische Wochenschrift.

H.R.=Hygienische Rundschau.

H.Z.=Hygienisches Zentralblatt.

I.M.G.=Indian Medical Gazette.

J.A.M.A .= Journal of the American Medical Association.

J.H .= Journal of Hygiene.

J.I.D .= Journal of Infectious Diseases.

J.H.H.R .= Johns Hopkins Hospital Reports.

J.P.B .= Journal of Pathology and Bacteriology.

J.P.P.G.=Journal de Physiologie et de Pathologie Générale.

J.R.A.M.C .= Journal of the Royal Army Medical Corps.

J.T.M .= Journal of Tropical Medicine.

K.W.=Kolle and Wassermann's Handbuch der pathogenen Mikroorganism en-L.=Lancet.

L.G.B. = Report of Medical Officer, Local Government Board,

M.M.W .= Münchener medizinische Wochenschrift.

N. = Nature.

P.J.S .= Philippine Journal of Science.

S.C.I.=Annual Report of the Sanitary Commissioner with the Government of India.

Z.H.=Zeitschrift für Hygiene.

Enteric fever.

Paratyphoid fever .- 1 Kutscher in K.W. Supplementary Volume, part 2, page 655; Sacquépée and Chevrel in B.I.P., 1907, Vol. V, No. 2, page 49, and No. 3, page 97; 3 Lentz in H.R., 1907, Vol. XVII, No. 6, page 377; 4 Lorrain Smith in Allbutt and Rolleston's System of Medicine, 2nd Edition, 1905, Vol. 1, page 1157; 6 Jürgens reported in J.A.M.A., Vol. XLVIII, 23rd February 1907, page 741; 6 and 7 reported by Kutscher as above, page 675; 8 Lorrain Smith as above, page 1158; 9 see Kayser in M.M.W., 1902, Nos. 40 and 41; 10 Gwyn in B.J.H.H., 1898; 11 Lentz in H. R., XVII, No. 6, page 377; 12 Durham in the Journal of Experimental Medicine, 1900, Vol. 5, quoted by Kutscher as above, page 683; 13 de Nobele quoted by Van Ermengem in K.W., Vol. 2; 14 Kustcher and Meinicke in Z.H., 1906, Vol. 52; 15 Trommsdorf in A. H., 1906, Vol. 55; 16 Bock in A.K.G.A., 1906, Vol. 24, heft 2; 17 Kutscher in Z.H., 1906, Vol. 55, page 331; 18 Fischer in Z.H., Vol. XXXIX; 19 Uhlenhuth in Von Leuthold's Gedenkschrift, reported in B.I.P., Vol. 5, 1907, page 526; 20 Kutscher as above; 21 Jacobson in B. K. W., 25th March 1907, reported in B. I. P., 1907, page 526; 22 Fromme in C. B. Originale, XLIII, 25th April 1907, page 775; 23 Netter, and Ribadeau-Dumas in C. R. Soc. Biologie, LXII, 13th April 1907; 24 Vagedes reported in B. I. P. V., 1907, page 528; 25 Battey Shaw in Allbutt and Rolleston's System of Medicine, 2nd Edition, Vol. II, part I, 1906, page 855; 26 Levy and Gaehtgens in A. K. G. A., XXV, 1907, page 250; 27 Fornet in A. K. G. A., XXV, 1907, page 247; 28 Gaehtgens in A. K. G. A., XXV, 1907, page 203.

The Widal Test.—¹Gaehtgens in A.K.G.A., XXVI, heft 2, page 226; ²Christian reported in L. of June 8th, 1907, page 1586; ⁵ French and Louisson reported in L. of May 18th, 1907, page 1363; ⁴Widal and Sicard quoted by Abrami in J. P. P. G., 15th March 1907, page 290; ⁵Sacquépée in Thése de Chevrel., Paris, 1905; ˚Drigalski in Z. H., Vol. XLII; ²see Jürgens in Z. H., XLIII, page 372; ⁵Schottmüller in Z. H.; ⁵ Abrami in J. P. P. G., Vol. 19, 1907, No. 2, page 290; ¹¹Sacquépée and Chevrel in B. I. P., V, 1907, No. 2, page 49, and No. 3, page 97; ¹¹Klinger in A. K. G. A., XXV, 1907, page 214; ¹²Plass in H. R., XVII, 1907, No. 5, page 283; ¹³Neumann in H. R., XVII, No. 7, page 391; ¹⁴ Brion and Kayser reported in H. R., XVII, No. 6, page 347; ¹⁵Bruns and Kayser in Z. H., XLIII, page 401, Abrami in J. P. P. G., Vol. 19, 1907, No. 2,

page 290; Gaehtgens in A. K. G. A., XXV, heft 1, page 218; Klinger in A. K. G. A., XXV, 1907, page 214; Kafka reported in H. R., XVII, No. 2, page 133; 18 See Sacquépée and Chevrel as above, page 102.

The search for the bacillus in the blood .- 1 Contadi in D. M. W. of January 11th, 1906; see also J. A. M. A., Vol. XLVIII, 1907, No. 24, page 2041, and H. R., XVII, 1907, No. 7, page 399; 2 Coleman at a meeting of the New York Academy of Medicine held on March 7th, 1907, reported in J. A. M. A., Vol. XLVIII, 1907, No. 14, page 1207; 3Kayser in M. M. W., 1906, Nos. 17 and 40, reported by Gildemeister in H. R., Vol. XVII, No. 7. page 399; 4Gildemeister in H. R., Vol. XVII, 1907, No. 7, page 397; 5Tzeidler reported in B. I. P., Vol. V, 1907, No. 10, page 432; Schtülern reported in B. I. P., Vol. V, 1907, page 433, and in D. M. W., Vol. 33, 1907, No. 19, page 771; 7 Brion and Kayser reported in H. R., Vol. XVII, 1907, No. 6, page 347; "Müller and Gräf in M. M. W., 1906, No. 2, reported in L. of May 4th, 1907, page 1241; Müller and Gräf in C. B. Originale, Vol. XLIII, 1907, heft 8, page 856; 10 Kurpjuweit in A. K. G. A., Vol. XXV, 1907, heft 1. page 229; 11 Fornet in M. M. W., of 29th May 1906, quoted by Kurpjuweit as above, page 239; 12 Conradi in M. M. W., Vol. LIII, No. 49, reported in J. A. M. A., Vol. XLVIII, 1907, No. 4, page 375, and by Kurpjuweit as above, page 239; 13 Epstein in the Proceedings of the New York Path. Soc., reported in B. I. P., Vol. V, 1907, No. 7, page 295.

The research in the faces and urine .- 1 Klinger in A. K. G. A., XXV, 1907, page 214; 2 Neumann in H. R., XVII, 1907, No. 7, page 391; 3 Ditthorn in H. R., XVII, 1907, No. 6, page 327; \*Klinger referred to by Gaehtgens in A. K. G. A., XXV, page 208, and by Levy and Gaehtgens in the same volume, page 240; 5 Neumann in A. H., Vol. LX, 1907, page 1, reported in B. I. P. Vol. V, 1907, page 211; Gaehtgens in A. K. G. A., XXV, 1907, page 208; Levy and Gaehtgens in A. K. G. A., XXV, 1907, page 240.

Convalescents and Bacillus carriers .- 1 Simon and Dennemark in Dtsch. militärärstl. Zeitschr., 1907, heft 3, reported in H. Z., Vol. II, 1907, page 579; \*Lentz in H. R., XVII, 1907, page 380; Brion and Kayser reported in H. R. XVII, 1907, page 348; Drigalski, reported by Kutscher in K. W. Supplementary volume, helt 2, page 189; 6Klinger in A. K. G. A., XXV, 1907, page 214; 6 Kayser in A. K. G. A., XXV, 1907, heft 1, page 223; Etienne and Thiry in Archives Générales de Médecine, January 1907, reported in L. of 23rd February 1907, page 526; 8 Nieter and Liepmann reported in H. Z., II, No. 19/20, page 582; Dehler in M. M. W., April 16th, 1907, reported in J. A. M. A., 1907, No. 19, page 1603; 10 Levy and Kayser in A. K. G. A., XXV, 1907, page 254; 11 Christian reported in L. of June 8th, 1907, page 1586; 12 Lentz in H. R., XVII, 1907, No. 6, page 377; 13Klinger in A. K. G. A., XXV, 1907, page 214; 14Fornet in A. K. G. A., XXV, 1907, page 247; 16Klinger as above; 16Levy and Wieber in C. B., Originale, XLIII, 1907, page 419.

Infection by contact .- 1 Kutscher in K. W. Supplementary volume, 1906, heft 1, page 192; 2Neumann in A. K. G. A., XXV, 1907, heft 1, page 200; 3B. M. J., February 9th, 1907, page 342; 'Etienne and Thiry reported in L. of February 23rd, 1907, page 326; Lentz in H. R., XVII, 1907, No. 6, page 383; Friedel reported in H. Z., Vol. II, No. 18, page 580; Soper in J. A. M. A. of June 15th, 1907, page 2019; Lentz as above, page 383.

Infection by water and by milk .- 1 Seige and Gundlach reported in H. R., XVII, No. 2, page 105; 2 Matthes and Gundlach reported in H. R., XVII, page 105; 3 Matthes and Neumann reported in H. R., XVII, No. 2, page 106; \*Bowman, Edwards and Wainwright reported in J. A. M. A., April 6th, 1907, page 1206; See B. M. J. of March 30th, 1907, page 774; \*Lentz in H. R., XVII, 1907, page 383; \*Kellermann reported in D. M. W., 1907, No. 17, page 693; \*see Venema reported in H. R., XVII, No. 2, page 96, Terburgh reported in H. R., XVII, page 108, Hilgermann reported in D. M. W., 1907, No. 7, page 282, Ditthorn and Gildemeister reported in D. M. W., 1907, No. 11, page 440, Wilson in B. M. J. of May 18th, 1907, page 1176, and articles summarized in B. I. P. 1907, pages 42, 59, 60 and 61; <sup>9</sup>Fraenkel in H. R., XVII, No. 8, page 470; <sup>10</sup>Longley in J. I. D., Vol. 4, 1907, No. 3, page 397; Sawin in Supplement No. 3 to J. I. D., May 1907, page 33; Gage in J. I. D. Supplement No. 3, May 1907, page 20; Jackson, Weston and Tarbett, Sellards in J. I. D. Supplement No. 3, May 1907, pages 30, 39 and 41; <sup>11</sup>Shoemaker in J. A. M. A., May 25th, 1907, page 1748; <sup>12</sup>Brummund in Z. H., 1907, page 425; <sup>13</sup>Hewlett and Barton in J. H., 1907, No. 1, page 22; <sup>14</sup>Harris in J. I. D. Supplement No. 3, May 1907, page 50; Russell and Hoffmann in the same, page 63.

Preventive Measures.—1See S. C. I. for 1903, 1904 and 1905 and Lentz in H. R., XVII, 1907, page 383.

The state of the s

## SECTION III.

## NATIVE ARMY OF INDIA.

India. Apardices A and B to Section III Tables XXVI and LIII. China, was 127,853 as compared with 123,434 in 1905, and their health, as judged by the statistics of sickness and mortality, was good, the constantly sick rate and the death rate being the lowest on record. The statement in the margin enables a comparison to be made at a glance between the rates of sickness, mortality,

	All causes, Ratios per mille,				
Native troops.	1900-04.	1905.	1906.		
Admissions	719'0	6071	683.2		
Constantly sick	27"2	93"2	23'0		
Deaths	10'87	8'09	6'57		
Invalids	11'92	9'02	7'05		

and invaliding for the year under review, for the previous year and for the quinquennial period from 1900-1904, and it will be seen that a striking feature of the statistics is the reduction in the rates of mortality and invaliding. As compared with 1905 the reduction in mortality and in invaliding is represented in actual numbers by the fact that there were 158 fewer deaths and 211 fewer invalidings during 1906 than during 1905. The increase in the rate of

admission to hospital was due almost entirely to the greater prevalence of ague, the admission rate from which was 261.8 per mille as compared with 171.2 per mille in 1905; simple continued fever, dysentery, cholera and scurvy were the only other diseases the admission rates from which were higher than in the previous year. There was a considerable reduction in the mortality from pneumonia and other respiratory diseases and from "remittent fever", but a considerable increase in the mortality from cholera.

The chief causes of sickness during 1906 were intermittent fever, dysentery, simple continued fever, "other respiratory diseases," venereal diseases and anæmia and debility, in order of their relative prevalence, intermittent fever accounting for 38 per cent. and dysentery for nearly five and a half per cent. of the total number of admissions from all causes. In connection with the remarks upon simple continued fever which were made in Section II it is important to note that among Native troops the admission rate from this cause was nearly double that of the previous year and nearly four times as high as in 1904, and this disease now occupies the third place among the chief causes of sickness. The principal causes of death were pneumonia, tubercle of the lungs and cholera, these diseases accounting respectively for 23.7 per cent., 80 per cent., and 74 per cent., of the total number of deaths from all causes. The number of men invalided for discharge from the service during 1906 was 902 as compared with 1,113 in 1905, the chief causes of this source of loss being tubercle of the lungs, debility, rheumatism, venereal diseases, and intermittent fever.

If Table XXVI be compared with Table I it will be seen that the Native troops suffered less than the European troops from influenza, cholera, small-pox, enteric fever, intermittent fever, simple continued fever, diarrhoa, hepatic affections and venereal diseases, but that they suffered more from each of the other chief causes of sickness and also from scurvy.

- 29. As regards the relative healthiness of Native troops in the three Commands

  Commands and Divisions. Appendix A to Section III. Table XXVI.

  Command were the most healthy during 1906.

  The rate of admission to hospital and the constantly sick rate were highest in the Northern Command, due chiefly to the greater prevalence of malarial fevers; but the death rate was highest in the Western Command, where cholera was prevalent. As regards the ten Divisions the 2nd (Rawal Pindi) Division ranked as the least healthy during the year, the 5th (Mhow) Division coming next in the list and the 6th (Poona) Division third.
- Geographical groups. Appendices B and C to Section III. Table XXVII. (North-West Frontier) must be considered to have been most unhealthy for Native troops, and as regards groups IV and VII this is in accordance with general experience. Intermittent fever and influenza were most prevalent in group VII (North-West Frontier), enteric fever in group IX (Deccan), pneumonia in group XII (Hill Stations), dysentery and tubercle of the lungs in group X (Western Coast). The highest death rates were recorded during 1906 in groups X (Western Coast), where the mortality was due chiefly to pneumonia, circulatory diseases and dysentery and IV (Bengal-Orissa), where it was due chiefly to cholera and pneumonia,

In Appendix C to this section will be found the statistics for each of the years from 1902 to 1906 of some of the chief diseases among Native troops located (1) in the plains, (2) in hill stations which are between 3,000 and 5,000 feet in height, and (3) in hill stations which are between 5,000 and 8,000 feet in height. The statement shows that in 1906, as in previous years, the hill stations below 5,000 feet in height were least favourable to the health of the troops. The great majority of these stations are situated on the north-western and western frontiers of the Empire.

- 31. In 1906 there were 40 stations in which the average strength of Native troops was over 1,000, but in only three of Stations. Tables XXVIII to XXX. Regiments. these, namely, Dera Ismail Khan, Abbottabad, and Mhow were the admission and death rates In Dera Ismail Khan the admission rate was 1795'4 per mille, and the death rate 5.80 per mille, the chief causes of the large amount of sickness being malaria, dysentery and "other respiratory diseases". In Abbottabad the admission rate was 1,2187 and the death rate 7.67 per mille, respectively; of the 4,291 admissions to hospital recorded at this station 2,519 were due to intermittent and simple continued fevers and of the 27 deaths 12 were due to tubercle of the lungs and 7 to pneumonia. The admission and death rates at Mhow were 810'2 and 16.67 per mille, respectively, the high death rate being due chiefly to the mortality from plague. Among the regiments with a record of much sickness and mortality during the year were the 6th Jat Light Infantry at Jhansi, the 69th Punjabis at Dera Ismail Khan, the 125th Rifles at Bangalore and the 2-5th Gurkha Rifles at Abbottabad. In all these regiments ague, simple continued fever, and dysentery were the chief causes of sickness.
- 32. Influenza was less prevalent during 1906 among Native troops than among Influenza. Appendices B and G to Section III. Tables XXVI to XXIX admission to hospital rose from 1.5 per mille in 1905 to 5.2 per mille in 1906. The largest numbers of cases recorded among Native troops in the different stations were 134 at Peshawar, 103 at Karachi, 60 at

Cawnpore and 49 at Dehra Dun. The disease was most prevalent at Peshawar during June, July and August, at Karachi during November and December, at Cawnpore during August and September, and at Dehra Dun during January, February and March.

- 33. There was a considerable increase in the prevalence of cholera among Native Cholera Appendices A and B. Tables troops, 94 cases and 62 deaths being reported during 1906 as compared with 11 cases and 7 deaths in 1905 and 27 cases and 22 deaths in 1904. The disease was widely prevalent among the general population of the country and the success which attended the measures to prevent the disease from spreading among the troops is indicated by the fact that although a case or cases occurred in 32 regiments, only one case occurred in 13 regiments, only 2 in six regiments, only 3 in three regiments, and only 4 in five regiments, so that there are left only five regiments in which 5 or more cases occurred. These were the 61st Pioneers at Secunderabad (15 cases), the 122nd Rajputs at Indore (8 cases), the 96th Berar Infantry at Secunderabad (7 cases), the 26th Light Cavalry at Poona (5 cases), and the 78th Rifles at Ahmednagar (5 cases). The outbreak in the 61st Pioneers lasted from the 16th to the 27th of July. The majority of the cases occurred among the married sepoys and 15 women and 14 children were also attacked. It was thought that the outbreak was due to the contamination of one of the wells and it ceased after the closure of this well. The outbreak in the 122nd Infantry at Indore was attributed to the patients having drunk contaminated water on the march from Mhow at a village where several cases of cholera had occurred. The cases in the 78th Moplah Rifles at Ahmednagar were attributed to contaminated milk obtained from a native dairy adjacent to the lines. All the cases in the 26th Cavalry at Poona were imported.
- 34. There were 79 admissions to hospital and 4 deaths from small-pox

  Small-pox Appendices A and B. during the year as compared with 77 admissions
  Tables XXVI to XXIX. and I death in 1905. The rates per mille of
  strength in 1906 were '6 and '03, respectively, the former being higher, but
  the latter equal to the corresponding rates for the decennial period 1891-1900.
  The troops in the Western Command were chiefly affected, 48 of the cases being
  recorded in this Command. A case or cases occurred in no fewer than 45 regiments, but there was only I case in 27 and there were only 2 in nine and only
  3 in six, the highest numbers which occurred in any regiment being 7 (in the
  87th Punjabis), the next 5 (in the 12th Pioneers), and the next 4 (in the 94th
  Infantry). Some remarks upon the relative prevalence of the disease among
  European and Native troops have already been made in Section II.
- 35. Intermittent fever accounted for over 38 per cent. of the total number of Agne, remittent fever simple continued fever. Appendices A. B and C. Tables XXVI to XXIX and XXXIV sion rate which had been steadily falling since 1902 to XXXVI. rose from 171 per mille in 1905 to 262 per mille. The admission rates recorded in all but two of the twelve geographical groups were

The admission rates recorded in all but two of the twelve geographical groups were higher than in 1905, the two exceptions being Burma Coast (I) and Bengal-Orissa (IV); and as regards the Commands the admission rates in all were considerably higher than in the previous year, the increase being greatest in the rate recorded in the Northern Command. The months of greatest prevalence of the disease were, as usual, October and November and fewest admissions were recorded during February and March. Among the stations at which the average strength was over 150 those from which the highest admission rates were returned were Dera Ismail Khan (1,196 per mille), Deesa (918 per

mille), Delhi (830 per mille), Dthala (796 per mille), Jacobabad (753 per mille), Jhansi (711 per mille) and Baroda (638 per mille). In eight other stations the admission rate was over 500 per mille of strength. The admission rate recorded among the Native troops in Mauritius was 715 per mille and among those in Port Blair (Andaman Islands) it was 544 per mille. Dera Ismail Khan was garrisoned during the year by the 29th Mountain Battery, the 16th Cavalry, the 20th Infantry and the 26th and 69th Punjabis, the average annual strength of the Native troops being 2,415. The admission rate among the men of the 29th Mountain Battery was 2,048 per mille, among those of the 16th Cavalry it was 1,606 per mille, among those of the 69th Punjabis it was 1,001 per mille and among those of the 26th Punjabis it was 915 per mille. These very high rates were due in part to the fact that many patients had to be re-admitted to hospital four or five times on account of relapses and from the reports of the medical officers it would seem that the treatment of patients with quinine was not in all cases sufficiently thorough or sufficiently prolonged. Mosquito brigades were organized for each regiment and during the malarial season (which lasted from October to December) the houses occupied by the troops were twice fumigated with sulphur with the object of destroying mosquitoes. Quinine was issued as a prophylactic in all regiments, but the means taken to ensure that the measure was efficiently carried out are not stated in the reports. The 108th Pioneers and a detachment of the 119th Infantry were at Deesa throughout the year, the admission rate from ague in the former regiment being 923 per mille and in the latter 1,020 per mille. The disease was most prevalent during October, November and December. The medical officer of the 108th Pioneers attributed the epidemic to the steady and heavy rainfall of the year and to the fact that the lines are built on the banks of a broad river which overflows leaving many stagnant pools in which mosquitoes breed. Quinine was administered as a prophylactic twice a week during September and three times a week from the beginning of October to the end of the year, but the dose was only 5 grains. The 35th Sikhs and the 18th Lancers were at Delhi during the greater part of the year, the admission rate from ague in the former regiment being 1,174 per mille and in the latter 300 per mille. Quinine was used as a prophylactic (a dose of 10 grains being given twice a week) during August, September and October, and anti-mosquito operations were carried out, but the medical officer of the 35th Sikhs reports that on account of the proximity of the river and the numerous "tanks" and other breeding places in and around the lines such operations would have to be on an immense scale to produce an appreciable effect. Dthala is in the Aden Hinterland and the 81st Pioneers were stationed there throughout the year. The admission rate from ague in this regiment was 1,089 per mille. August, September and October were the malarious months, but there were also a large number of admissions (due to relapses) in November. Anopheles mosquitoes were found in great numbers. The two regiments stationed in Mauritius suffered less from malaria than in 1905 the admission rate from this cause in the 11th Rajputs falling from 2,205 per mille to 742 per mille and in the 75th Carnatic Infantry from 1,113 to 636. All the men were provided with mosquito nets and quinine was issued prophylactically. One sepoy in the 11th Rajputs suffered from blackwater fever. Quartan parasites were found in his blood at the beginning of the attack. At first he was treated with quinine, but as it appeared to be doing harm it was discontinued on the 12th day of the disease. The patient ultimately recovered. For further remarks on malaria in various stations the reader is referred to paragraph 8 of Section II and to the details regarding unhealthy stations given in tables V and XXX.

The number of admissions to hospital recorded as due to remittent fever in 1906 was 633 and the number of deaths was 43, the rates per mille of strength being 5 and '34, respectively, as compared with 8'4 and '56 in 1905. This recorded decrease during a year when malarial fevers were much more prevalent and severe than usual is in accordance with the inconsistency which always characterizes the statistics of remittent fever; it may be due to the fact that many medical officers now return under this heading only those cases in which there is some doubt as to the correct diagnosis. The disease from which one or more patients were suffering was returned as remittent fever in 86 stations during the year, but in 29 of these only t case was recorded and in 70 the total number did not exceed 10. The stations at which most cases were recorded were Nowshera (77), Maymyo (45), Kirkee (28) and Jhelum (25), and as in these stations the seasonal incidence agreed with that of intermittent fever it is probable that the medical officers returned as remittent fever all cases of malarial fever in which the temperature chart did not show regular intermissions. This is the reason given by the medical officer of the 45th Sikhs for the large number of cases at Nowshera and the practice is in accordance with the system adopted in the 3rd edition (1896) of the Nomenclature of Diseases. Further remarks upon remittent fever will be found in Sections II and IV.

The statement in the margin shows that among Native as well as among

Years,		Total admissions.	Admission rate per 1,000.		
1902		631	5'1		
1903		441	3'5		
1904		829	6.7		
1905		1,768	14'3		
1905		3,783	29'6		

European troops (see Section II) the number of cases recorded as due to simple continued fever has increased greatly during recent years and it may be assumed that the cause of the increase is similar as regards both classes of soldiers. The matter has been discussed in some detail in Section II and further remarks are unnecessary here, save to say that as the practice of returning as malarial fever only those cases

in which malaria parasites are found by microscopic examination of the blood is not so generally adopted by medical officers of Native as of European troops, the increase in the recorded prevalence of simple continued fever is not so great among the former as among the latter. In 1906 most cases were recorded among Native troops in the month of September and fewest in January and February, and the regiments from which the largest numbers of cases were returned were the 2-6th Gurkha Rifles (400 cases), the 1-6th Gurkha Rifles (261 cases), the 2-5th Gurkha Rifles (274 cases), all at Abbottabad and the 36th Sikhs (214 cases) at Rawalpindi. Thus 1,149 out of the total number of 3,783 admissions were recorded in two stations only and this fact may afford some reason for the conjecture that when more accurate methods for the diagnosis of malarial fevers among natives of India become generally applied it will be found that the number of cases of disease classified as "pyrexia of uncertain origin" will be greatly increased while the number of cases recorded as true malarial fever will diminish proportionately.

36. There were 10 cases diagnosed as kala azar during the year. They occurred in the following regiments and stations: 1 in the 1-5th Gurkha Rifles at Abbottabad, 3 in the 1-2nd Gurkha Rifles, 3 in the 2-2nd Gurkha Rifles, 2 in the 1-9th Gurkha Rifles, and 1 in the 2-9th Gurkha Rifles, all at Dehra Dun. Six of the patients died.

An examination of the medical case sheets shows that the signs and symptoms were in all instances typical of the disease and in the majority the diagnosis was further confirmed by the discovery of the Leishman-Donovan parasites in the splenic blood. It is remarkable that cases should have been recorded only in these two stations and only in Gurkha sepoys, but it is probable that when medical officers become more familiar with the signs and symptoms of the disease the number of cases recorded among Native troops will increase considerably.

37. Among the whole Native army of India 127 cases of enteric fever with 34

Enteric fever. Appendices A. B
and D to Section III Tables
XXVI to XXIX and XXXIII.

deaths were recorded during 1906 as compared with
130 cases with 35 deaths during 1905, 70 cases with
16 deaths during 1904 and 80 cases with 27 deaths

during 1903. The admission rate was 1'0 per mille in 1906 and the death rate '27 per mille as compared with rates of 1'1 per mille and '28 per mille in 1905. Thus the record shows, as usual, how slight is the prevalence of the disease among Native troops and this is apparent also from the facts that cases occurred in no fewer than 69 regiments and 40 stations and that in 41 regiments only 1 case occurred and in 12 only 2. The regiments in which most cases occurred were the 76th Punjabis at Secunderabad (9 cases), the 96th Berar Infantry at Secunderabad (8), the 87th Punjabis at Jhansi (7), and the 2-6th Gurkha Rifles at Abbottabad (7). Of the total number of cases 25 occurred among Gurkhas which gives a ratio of 1'8 per mille as compared with a ratio of '9 per mille for the incidence among sepoys of other classes.

In a number of instances the clinical signs and symptoms were typical of the disease and intestinal hæmorrhage and perforation occurred in several, but in many cases the type was mild and the diagnosis was arrived at only on the results of the agglutination test. This test was performed with the blood of 109 cases, a positive result in a dilution of 1 in 40 or 1 in 80 being obtained in 80 cases, or 73 per cent. The blood of one patient gave a positive re-action with the paratyphoid bacillus, but a negative with the typhoid bacillus; and in one case the typhoid bacillus was isolated from the peripheral blood. A post-mortem examination was carried out in one case only, and in this case although the clinical symptoms and signs were typical the agglutination re-action both with the typhoid bacillus and with the strain of the paratyphoid bacillus at the Pasteur Institute. Kasauli, was persistently negative. The lower part of the ileum was found to be intensely congested, but no ulcers corresponding to Peyers' patches were present. The reports of medical officers as well as the statistics bring out the fact that nothing in the nature of an epidemic occurred among Native troops during the year and even in the regiments in which from 6 to 9 cases were recorded the admissions to hospital occurred at wide intervals, as for example, in the 87th Punjabis in which the admissions were recorded in June, July, November and December, the 2-6th Gurkha Rifles (January, June, July, November, December), the 96th Berar Infantry (August to November), and the 15th Sikhs (April, May, September and October). As in the majority of instances only 1 case occurred in a regiment during the year it is not surprising that the source of infection was not definitely traced in any case. The drinking of unboiled milk obtained in bazaars was mentioned as the most probable cause of infection by the medical officers of several regiments and contaminated canal or well water was suspected in other instances, but beyond these remarks little or no information with regard to etiology is to be obtained from the reports.

38. A considerable number of admissions to hospital on account of Malta fever were again recorded during 1906, namely, 38 with Malta fever Table LIII. t death. In 1905 the number was 43, in 1904 five, in 1903 eight and in 1902 four. The disease shows no special seasonal incidence and in 1906, February was the only month in which no admission occurred. At Ferozepore there were 22 admissions to hospital, 14 from the 14th Sikhs and 8 from the 15th Sikhs; at Jhansi 4 admissions, all from the 12th Pioneers; at Lahore Cantonment (Mian Mir) 4 admissions, 3 from the 34th Sikhs and 1 from the 38th Dogras; at Jullundur 3 from the 29th Punjabis; at Ambala 1 from the 32nd Sikhs; at Delhi I from the 35th Sikhs; at Edwardesabad I from the 31st Punjabis; at Meerut I from the 31st Lancers; and at Agra I from the 17th Infantry. Thus five of the nine stations from which cases were reported are in the Punjab, two are in the United Provinces, one is in Central India and one is on the North-West Frontier, and it is noteworthy also that at least 32 of the patients were Sikhs. A full account of the disease among the men of the 15th Sikhs has been published by Major Wimberley, I.M.S.1, and the clinical signs and symptoms in a number of the cases in this regiment as well as in the 14th Sikhs were typical; 100 days or more was a common duration of the fever, relapses were frequent, pain and effusion in the joints was present in most cases and the blood agglutinated the Micrococcus melitensis in dilutions as high as 1 in 1,280 and in one case as high as 1 in 5,120. No case occurred in the 15th Sikhs after August 1906, and Major Wimberley reports that this may have been due to the fact that all the goats from which milk was obtained were inspected and those which appeared in poor condition got rid of. He was formerly of opinion that the disease is widely prevalent throughout northern India, but he now considers that in any given locality only a few of the goats are infected and if this should prove to be the case it should not be difficult to stamp out the disease. In a number of cases in other regiments the clinical signs of the disease were by no means typical and the diagnosis was arrived at by excluding malarial fever, enteric fever, rheumatic fever and other diseases and especially by the results of the agglutination test. Common diagnoses on first admission to hospital were "ague," "simple continued fever," "remittent fever," "enteric fever" and "rheumatism," and it was only by a process of exclusion and by the results of the agglutination test that a correct diagnosis was at length made. Sciatica and neuralgic pains in the muscles and joints appear to be the symptoms most frequently complained of and in any case of this nature associated with fever the serum test should be carried out. In the great majority of cases of Malta fever the agglutination phenomenon occurs in high dilutions of the serum, so that the diagnosis is not in doubt, but in a few the test may fail. Major Wimberley reports such a case in the 15th Sikhs. The patient was admitted to hospital on the 18th December 1905 and on the 1st of January 1906 his blood serum gave a complete re-action with the Micrococcus melitensis in a dilution of 1 in 640. The attack lasted seven weeks and the test was carried out repeatedly until the 2nd of March, but after the 21st of January no re-action even in a dilution of 1 in 10 could be obtained. Bassett-Smith<sup>2</sup> also reports that in prolonged cases the agglutination re-action may be obtained only in very low dilutions and a fatal case is recorded in which for some months before death 1 in 10 was the highest dilution in which a complete re-action was obtained, although on the day before the patient died the Micrococcus melitensis was isolated from the blood3.

39. Despite the continued prevalence of plague among the civil population of Plague. Cerebro-spinal fever. Table India the disease has hitherto been prevented from appearing in epidemic form among the Native troops.

In 1906 there were 147 admissions to hospital and 83 deaths from this cause as compared with 79 admissions and 46 deaths in 1905, 187 admissions and 1111 deaths in 1904 and 184 admissions and 115 deaths in 1903. Out of the total of 160 stations occupied by Native troops during 1906, about 104 were situated in districts where plague was prevalent among the general population yet in only 27 of these did cases occur among the troops. The largest number of admissions at any station was 30 at Poona, 10 of the cases occurring in the 33rd Light Cavalry, 7 in the 121st Pioneers, 5 in the 94th Infantry, 4 in the 78th Moplah Rifles and 2 each in His Excellency the Governor's Body Guard and the 114th Mahrattas. Other stations where the disease was prevalent among Native troops were Neemuch in which 22 cases occurred in the 3rd Skinner's Horse; Mhow in which 13 cases were distributed among men in the 102nd Grenadiers, 122nd Infantry and 101st Grenadiers; Kirkee in which 13 cases were distributed among men in the 107th Pioneers, the 3rd Sappers and Miners and the t10th Mahratta Light Infantry; and Kamptee where 11 cases occurred in the 8oth Carnatic Infantry. In no other stations were more than 7 cases reported and in 10 stations and 14 regiments only 1 case occurred. The measures generally adopted during the year were similar to those described in this report for 1904. During 1906 only 3 cases of cerebro-spinal fever with two deaths were recorded among the Native army of India. All occurred in the 21st Punjabis at Jhelum. The disease was apparently contracted by the three patients at the same time, but the source of infection was not traced.

40. The total number of admissions to hospital on account of scurvy during 1906 was 307, which gives a ratio of 2'4 per Scurvy. Tables XXVI to XXIX. mille as compared with a ratio of 1.7 per mille in 1905. About 50 per cent. of the admissions in 1905 were recorded among troops in the Western Command and about 18 per cent. among troops in the Eastern; and as regards geographical groups over 29 per cent. of the admissions occurred among troops in group XII (Hill Stations), over 12 per cent. among troops in group IX (Deccan) and over 10 per cent. among troops in group VIII (Central India). The largest numbers of cases occurred in the 128th Pioneers (42 admissions to hospital and 1 death), the 106th Pioneers (37 admissions), the 2-10th Gurkha Rifles (13 admissions), the 116th Mahrattas (11 admissions and 1 death) and the 120th Infantry (10 admissions). As regards the disease in the 128th Pioneers most of the cases occurred in the detachment at Robat, where great difficulty is experienced in obtaining fresh vegetables. The 106th Pioneers were at Sibi for the first three months of the year and for the remainder at Quetta. The medical officer states that arrangements have been made for the provision of vegetables in the dietary. Stomatitis was prevalent in the regiment, due partly, in the medical officer's opinion, to the fact that the men were careless about the cleanliness of their teeth. In the 2-10th Gurkha Rifles many men besides those admitted to hospital were found to be suffering from soft ulcerated gums and measures were taken to improve the meat and vegetable dietary with good results. The 116th Mahrattas were stationed in Aden, where scurvy is usually prevalent.

Tubercle of the lungs. Appendices on account of tubercle of the lungs among Native troops and in 1906 this rate was 2'5 per mille (which is the lowest since 1896) as compared with 3'1 per mille in 1905. Among Gurkhas the admission rate fell from 6'1 per mille in 1905 to 5'2 per

mille in 1906. There was, however, a slight rise in the death rate, from '50 to '52 per mille, and among Gurkhas a considerable rise, from 1'58 to 2'41. The highest admission rate for the year (9'o per mille) was recorded in the Western Coast group (X), but the average strength in this geographical group is low; the next highest (3.6 per mille) was in the hill stations, group (XII) and the third (3'2) in the Upper Sub-Himalaya group (VI). The position of the second and third of these groups is due to the number of Gurkhas located in them for among regiments of this class the disease was, as usual, much more prevalent than among those of other classes, the admission and death rates for the Native army excluding Gurkhas being 2'3 per mille and '33 per mille, respectively, and for Gurkhas 5'2 per mille and 2'41 per mille. The average strength of Native troops of other classes than Gurkhas located during 1906 in the Gurkha stations was 2,203 and the admission and death rates from tubercle of the lungs among these men were respectively 3.6 and '25 per mille. Although the reason may be hard to find there can be no doubt that some classes of natives in India suffer more from tubercle of the lungs than others and the following table which gives the statistics of admissions to hospital from this disease among different races in the Native army located in India during the quinquennial period 1902 to 1906 is of interest in this connection. It is to be noted, of course, that in such a table it is not possible to take into account the important fact that the troops of the different classes shown in the table are located in different parts of India.

1902-1906.	Gurkhas.	Dogras.	Jats.	Mohamedans (Punjabi, Hin- dustani and Pathan).	Garhwalis.	Sikhs.	Rajputs.	Brahmans,	Madrasis.
Aggregate strength.	63,680	10,301	9,666	20,510	7,544	29,917	25,982	7.524	37,893
Total number of admissions.	818	60	45	79	29	99	62	16	65
Admission rates per 1,000.	12.8	5'8	4.7	3-9	3.8	3.3	2'4	3.1	1'7

The largest number of admissions (18) in any regiment during 1906 occurred in the 41st Dogras who were stationed at Shan Hai Kwan and Tongshan in north China, the prevalence of the disease being attributed by the medical officer to the severity of the winter and to the unsatisfactory housing arrangements for the troops. It appears that the barracks are old Chinese houses or temples, some at least of which are in a bad state of repair, that the lighting and ventilation are not satisfactory and that over-crowding exists to some extent among the sepoys and to a large extent among the followers. The 47th Sikhs were also in north China (at Tientsin), but the barracks there are apparently satisfactory and only seven cases of tubercle occurred during the year. Among regiments located in India the largest numbers of admissions were recorded in the 30th Punjabis at Ihelum (13), and in the 2-5th, 7th and 2-10th Gurkha Rifles at Abbottabad and Lansdowne (8 each). As regards the prevalence of the disease in the 30th Punjabis it is said that nearly all the cases originated in north China, where the regiment was stationed during 1904 and the early part of 1905 and the medical officer considers that the barracks which the men occupied during this tour of duty were previously infected. No remarks worthy of note are made by the medical officers of the different Gurkha regiments in which the disease was prevalent.

There were 2 cases returned as non-tuberculous phthisis during the year as compared with 6 in 1905, 3 in 1904, 6 in 1903, and 23 in 1902.

Pneamonia and other respiratory diseases. Appendices A. B. C and H to Section III. Tables XXVI to XXIX and XXXVII.

42. The admission rate on account of pneumonia was 9'o per mille and the death rate 1'56 per mille as compared with rates of 12'5 and 1'90 per mille, respectively, in 1905. The disease was considerably less prevalent than in the previous year in six of the geographical groups, the decrease being greatest in the North-West

Frontier group (VII), where the admission rate fell from 20'5 in 1905 to 10'0 in 1906, in the Western Coast group (X) where it fell from 13'7 to 5'6, in the Bengal-Orissa group (IV) where it fell from 10'9 to 5'5, and in the Upper Sub-Himalaya group (VI), where it fell from 15'4 to 10'3. The months of greatest prevalence were as usual January, February, March, November and December. From Appendix C it will be seen that while pneumonia is always more prevalent and causes more mortality among troops located in the hill stations considered as a whole than among those located in the plains, this is due in chief measure to its prevalence and fatality in the hill stations which are less than 5,000 feet above sea-level. Among stations where the average strength was over 100 the highest admission rates were recorded at Sibi (53.6 per mille) and at Kherwara (40.2 per mille), and as regards regiments the highest rates were recorded in the 106th Pioneers at Quetta, the 1-6th Gurkha Rifles at Abbottabad, the 7th Rajputs at Malakand, the 2-5th Gurkha Rifles at Abbottabad and the 2nd Queen's Own Sappers and Miners at Bangalore.

Other respiratory diseases were most prevalent during the year in the Northern Command and in groups IV (Bengal-Orissa), XII (Hill Stations) and I (Burma Coast). For the whole Native army of India the admission and death rates on account of other respiratory diseases were 22'9 and '13 per mille, respectively, as compared with 28.5 and '23 per mille in 1905.' Omitting stations. where the average strength was less than 100 the highest admission rates were recorded at Ahmedabad (145'1 per mille), Aden (113'6), Abbottabad (85'5), Kohima (82'4), Sibi (76'6) and Thal (72'7). Among regiments the highest numbers of admissions during the year occurred in the 1-6th Gurkhas at Abbottabad, the 100th Infantry at Santa Cruz, the 116th Mahrattas at Aden, the 53rd Sikhs at Peshawar and the 55th Rifles at Nowshera. There were in all 16 deaths ascribed to these diseases, of which 8 were due to bronchitis, 3 to pleurisy, and 1 each to laryngitis, asthma, haemoptysis, broncho-pneumonia and empyema.

43. Dysentery was rather more prevalent and fatal among Native troops

Dysentery and Diarrhosa. Appendices A, B and C, Tables XXVI to XXIX and XXXVIII.

during 1906 than during 1905, the rate of admissions to hospital rising from 32'5 per mille to 37'1 per mille and the death rate from '18 to '20 per mille. The increase in the admission rate was due

to a greater prevalence of the disease in eight of the geographical groups, but especially on account of its prevalence in the Western Coast group (X), where the admission rate was 101'o per mille as compared with 20'7 per mille in 1905. The stations at which the disease caused the highest admission rates during the year were Bombay, Fort Jamrud and Sibi, and the highest death rates were recorded in Madras, Sibi and Bombay. Among regiments dysentery was most prevalent in the 6th Jat Light Infantry at Jhansi, the 128th Pioneers at Quetta, the 125th Rifles at Bangalore and the 113th Infantry at Bombay. The medical officer of the 6th Jat Infantry considered that the difficulty of obtaining good milk at a reasonable price was an important factor in bringing about the increased prevalence of the disease. The great majority of the cases in the 128th Pioneers

occurred among men of the detachment at Robat where, it was said, the water is brackish.

There were in all 926 admissions to hospital and 10 deaths from diarrhea during 1906 as compared with 929 admissions and 7 deaths during 1905. The case-mortality was, as usual, considerably higher than that of dysentery, and it is probable that in some cases the diagnosis is at fault. The regiments in which the largest numbers of cases occurred were the 2nd Rajputs in which there were 80 admissions to hospital recorded under this heading, the 113th Infantry in which there were 56, the 3rd Brahmans in which there were 31 and the 9th Bhopal Infantry in which there were 30. The 2nd Rajputs were stationed at Secunderabad during the year, and diarrhoa was most prevalent during July and August. The medical officer attributes the disease to the bad quality of the milk; he states that the milkmen are extremely dirty and that their cows grazed more often than not over the filth trenches, where the grass grows rankest. As regards the 113th Infantry the majority of cases of dysentery and diarrhoea occurred in the detachments at Santa Cruz, where it was probable the atta was not of good quality. Errors in diet and faulty cooking of food are referred to by the medical officers of other regiments as the probable cause of the prevalence of diarrhoea.

44. As judged by the statistics of the year, venereal diseases were over seven Venereal diseases. Appendices times more prevalent among the European troops than among the troops of the Native army the admission rate per mille of strength being only 16.2 among the latter, as compared with an admission rate of 117'3 among the former. When the total figures are referred to (Tables IV and XXIX), it is seen that while among European troops an annual average strength of 70,272 gave 8,242 admissions from venereal diseases, in the case of Native troops an annual average strength of 127,853 gave only 2,067 admissions. The rates of admission to hospital and of invaliding from these diseases among the Native troops of the whole Indian Command have decreased steadily during recent years though not nearly to the same extent as in the case of the rates among European troops. The number of deaths from this cause among Native troops varies little from year to year; in 1906 there were 8 deaths and 55 invalidings as compared with 7 deaths and 79 invalidings in 1905, 6 deaths and 107 invalidings in 1904 and 9 deaths and 107 invalidings in 1903. The diseases are always less prevalent among both European and Native troops located in the Northern than among those in other Commands, but in 1906 the admission rate among the Native troops in the Northern Command was 7 per mille less than in 1905 and among those in the Western Command it was I per mille less while among those in the Eastern Command it was 3 per mille greater than in that year. Gurkhas invariably suffer more than other classes of native troops and during 1906 this liability was evidenced by the fact that the admission rate among Gurkhas was 30.6 per mille while among the remainder of the troops it was 14.5 per mille. Excluding stations at which the average strength was less than 100 the highest admission rates on account of venereal diseases among Native troops in the Northern Command were recorded at Bakloh, Rawalpindi, and Ambala; the highest among troops in the Western Command at Satara, Bhuj, and Ahmednagar; the highest among troops in the Eastern Command at Almora, Kohima, and Shillong; the

highest in the Secunderabad Division at Bellary and Madras; and the highest in the Burma Division at Maymyo and Fort Dufferin. Seven of these stations appeared in the corresponding list for 1905. Among all the Native troops in India the admission rate for syphilis was 5'3 per mille, for soft chancre it was 4'6 per mille, and for gonorrhæa it was 6'2 per mille as compared, respectively, with the figures 7'7 per mille, 4'6 per mille and 7'4 per mille in 1905.

- 45. There were in all 41 admissions to hospital and three deaths from beri-beri during 1906, but 38 of the cases occurred in one regiment (the 81st Pioneers) stationed in the Aden Hinterland. Two of the remaining cases occurred in the 99th Deccan Infantry at Bolarum and one in the 63rd Palam cottah Light Infantry at Fort William. The cases which occurred in the Aden Hinterland were said to be of the dry variety, but the report of the medical officer does not contain anything which throws light on the etiology of the disease. The patients were isolated, the site of the camp was changed, and a diet containing a larger amount of proteid was issued to the troops.
- Gninea worm. Tables XXIX and to hospital for guinea worm, the total being 500 against 609 in 1905 and 730 in 1904. As usual the largest number of cases occurred in group VIII (Central India), groups IX (Deccan) and VII (Indus Valley) coming next in order of prevalence of the disease. As regards stations the largest number of cases were recorded as usual at Kherwara where the Mewar Bhil Corps is stationed, the number of cases in this regiment during the year amounting to 52 or a ratio of 84 per mille of strength. The average length of stay in hospital of patients was 32 days. The medical officer of the regiment states that 43 per cent. of the sepoys recruited in the Kherwara district suffer from guinea worm.
- 47. During the ten years 1896—1905 there were altogether 146 cases of suicide, an average of nearly 15 per annum. There were only 7 in 1906, of which three were by drowning, one by gunshot, one by hanging, one by opium poisoning and one by decapitation by a train.

PAPERS AND BOOKS REFERRED TO IN SECTION III.

For explanation of abbreviations see end of Section II.

Malta fever. 'Wimberley in I. M. G., April 1907, page 123; 'Bassett-Smith in J. H., Vol. VII, 1907, No. 1, page 115; 'Malta fever Commission's reports to the Royal Society, part IV, page 104.

#### SECTION IV.

# JAILS OF INDIA.

48. The health of prisoners depends upon the hygienic state of the prisons, i.e., the sites, buildings, water-supplies, etc., the efficiency of the management, and

the quality of the health of newly admitted prisoners. Efficient management can make up for many deficiencies—skill and experience can turn imperfect buildings to the best account, remedy defects in water-supplies, and the like; and attention to suitable precautions will lessen the danger of the introduction of disease from without. The quality of the health of newly admitted prisoners depends ultimately on climatic conditions which must always influence the prison statistics, but the better the hygienic state of the prisons and the more efficient the management the smaller the effect of this influence will be.

The statistics of the years 1904, 1905 and 1906 show how small was the influence of climatic conditions on the health of the prisoners in these years, and furnish materials by which the growing efficiency of jail management in India may be judged. The year 1904 was, excepting for the prevalence of plague which does not affect the prison statistics, generally healthy, and the proportion of prisoners requiring treatment in hospital, the proportion constantly in hospital and the death rate (17'61 per 1,000) were lower than they had ever been. The following year, although marked by a great decline in the prevalence of plague, was not, except in Bombay and the Punjab, a healthy one, but the proportion of prisoners treated in hospital was even lower than in 1904, the proportion constantly sick was the same and the death rate rose by only 1'62 per 1,000. The year 1906 was very unhealthy; in every province except Bengal and Eastern Bengal and Assam the general health was bad, and the death rates, leaving plague out of account, were considerably higher than in 1905. Cholera was severe throughout southern India, and all over northern India the autumn was exceptionally malarious. In spite of these adverse conditions, the health of the prisoners was good, and although there was a considerable increase of sickness the duration of illness was generally short, and the death rate was only 19'27 per 1,000, or 1 66 higher than the lowest rate ever recorded.

The mean daily prison population in 1906 in India, including the Andamans was 110,082, or 3,817 more than in the previous year, every administration except the Central Provinces and the North-West Frontier Province contributing to the increase.

In the Andamans the number of convicts was increased by 340 to 14,688. The statistics relating to these convicts will be considered separately, because the conditions in which they live have little in common with prison life in India; but it is satisfactory to note that, although the rate of admission to hospital and the proportion constantly sick have risen, the death rate has fallen from 38.96 per thousand in 1905, and a mean of 37.38 in the five years ending with 1905, to 27.30, the lowest death rate since 1898.

The average daily number of prisoners of all classes in the jails of India and Burma during the year was 95,394, an increase of 3,477 on the average of 1905, but 85 less than the five years' mean. The rate of admission to hospital was 658 per thousand, compared with 647 in the previous year; in Eastern Bengal and Assam, the Central Provinces, Madras and Burma the admission rates were lower than in 1905, but throughout northern India and in Bombay they rose considerably. The mean constantly sick rate was 27 per thousand compared with 28 in 1905; in the United Provinces and in the Punjab the constantly sick rates were the same in 1906 as in the previous year, and only in Bombay and the North-West Frontier Province were these rates higher in 1906 than in 1905.

The death rates were lower than in 1905 in all provinces except Madras, Bombay and the North-West Frontier Province; unfortunately the rise in these provinces—5'90 per thousand in the case of Madras, 3'24 in Bombay, and 5'59 in the North-West Frontier Province, more than counterbalances the fall in the others, and the mean death rate of 1906 was very slightly higher than the mean of the previous year—19'27 per thousand against 19'23.

The average daily number of convicted prisoners in confinement was 89,521, among whom the mean death rate was 18'95 per thousand against 19'23 in 1905, the rates ranging in the several administrations from 28'37 in Eastern Bengal and Assam to 13'06 in the Central Provinces. In five administrations the rates were under 20 per thousand, and in only one was the rate over 25.

The following statement shows the admission and death rates of convicts in central and district jails in the different provinces in each of the last five years.

A PROPERTY.		1902.		61111	1903.			1904.			1905.		100	1906.	
Administration.	rength.	1,0	O PER SOO ENGTH.	strength,	1,0	RATIO PER 1,000 OF STRENGTH-		RATIO PER 1,000 OF STRENGTH.		strength.	RATIO PER 1,000 OF STRENGTH.		ength.	RATIO P 1,000 O STRENGT	
	Average strength.	Ad.	D.	Average st	Ad.	D.	Average strength	Ad.	D.	Averages	Ad.	D.	Average strength.	Ad.	
	GOING!	18719	Bengal a	s a whole		N AND	8 60								
Bengal excluding Central	10,368	1,054'1	22'57	9,316	1,015*8	17'50	9,519	803'7	18'91	7,631	1,041'0	25'55	7,658	1152'4	23
transferred to Eastern Bengal District	9,268	1,0846	29'56	8,160	1,162'7	50'76	8,483	1,154'1	21'81	5,885	931'5	23'96	6,305	943'5	23
Assam including Central			Ass	am		-				1,886	608'2	24'92	1,901	630°2	23
of the new Prov- ince of E. B. & Assam. District	1,352	890'5	30,10	1,295	809'3	29,32	1,430	650'6	23'68	4,392	1,248'4	35'05	4,832	997'1	30
United Provin-{ Central	11,475	653°5	23'4	9,387	642'8	12'9	9,313	502'7	12'78	9,389	489'8 620'0	15*76	9,934	482"4	14
( Central	14,5 <sup>0</sup> 3	124'5	26'44	4,858	85.0	18'94	4,822	915'2	25'09	4,570	714'9	17'94	4,751	625'8	15
Penjab District	6,179	1,100'3	25'25	6,341	1,056'3	19'71	5,930	961,5	15'85	5,961	740'3	16.10		868'2	17
North-West Frontier Pro- Central District	893	110'3	28'00	971	121,3	15'48	1,055	118.3	16'11	1,077	1,053'9	21'36	1,091	1631'5	24
Central Provin- Central	3,465	957'3	23'09	2,676	772'1	16'82	2,468	4899	10,13	2,418	574'0	14'05	2,272	520.5	12
ces. (District	1,418	9260	25'39	1,113	1,002'3	18'35	6,120	439'9	18'43	6,695	506'6	16'20	784	866-1	13
Madras { Central District	3,660	499'1	18'32	3,124	578.7	20'49	3,143	591'8	18'45	3,435	534'1	15.03	2,940	462.8	19
Bombay { Central District	3,846	707'0	33'80	3,026	347'3 654'8	19'17	3,039 4,868	556'8	17'11	3,092	654°6 583'3	12'94	3,146	894°2 564°0	12
( Central	6,823	5:0'6	13'34	6,691	460'3	14'05	6,962	381.1	21'69	7,491	278'9	17'62	7,797	346.0	13
Burma District	4,953	573'0	18'58	3,981	501'6	22'61	4,151	300.2	14'21	4,460	367.7	17.04	4,809	308*2	14
Total of the Central above Provin- District	4%,768 47,803	791'9	22,52	41,729	680°S 848°1	16'30	42,252 42,922	591'5	17'51	43,172	598'8 723'2	18,18	44,923	604'6	17

As usual the numbers of convicts in central and district jails throughout India were nearly equal; but the central jail populations were larger than the district jail populations in Bengal, the Central Provinces, Madras and Burma; and as usual there were more prisoners in the district than in the central jails in Eastern Bengal and Assam, the United Provinces and the Punjab. As is generally the case the mean rate of admission to hospital was lower in central than in district jails, 604.6 against 736.3, but this relation of the death rates is fairly constant only in the United Provinces and Burma. As is always the case the mean death rate in central jails, 17.59, was lower than the mean in district jails, 20.16; but here again the provincial figures show that, although this relation is the common one in the different provinces, it is not invariable.

In 1906 the death rate of convicts in central jails was lower than in any year except in 1903 and 1904, and the death rate among convicts in district jails was lower than in any year except 1904.

49. The following table shows the death rate among convicts in central and district jails according to duration of confinement.

			. c	ontineme	nt.			
The state of	Years.	Not exceeding six months.	Above six months and not exceeding one year.	Above one year and not exceeding two years.	Above two years and not exceeding three years.	Above three years and not exceed- ing seven years.	Above seven years.	Total,
- 2	Strength Deaths Ratio per 1,000 of strength.	12,789 280 21°9	8,961 188 21'0	8,941 206 23'0	6,941 122 17.6	7,332 220 30'0	3,5 <sup>6</sup> 5 69 19'4	48,529 1,085 22'4
1503	Strength  Compared to the strength of strength.  Strength  Compared to the strength of strength.	25,610 588 23°0	10,697 278 26°0	6,623 148 22.3	2,5 <sup>9</sup> 4 49 19 o	1,883 38 20°2	361 8 22'2	47,758 1,109 23'2
1903.	Strength Deaths Ratio per 1,000 of strength.	11,122 181 16'3	7,463 112 15°0	7,970 137 17'2	5,715 91 15'9	6,862 122 17 8	2,486 37 149	41,618 680 16'3
19	Strength Deaths Ratio per 1,000	23,242 587 25'3	9,612 205 , 21-3	5,314 108 20'3	2,279 28 12'3	1,650 37 22'4	209 7 33'5	42,306 972 22°9
-ta61	Strength Deaths Ratio per 1,000 of strength.	11,446 196 17·1	7,605 132 17'4	8,328 151 181	5,642 70 12'4	6,749 140 20:7	2,475 51 20'6	42,245 740 17:5
19	Strength Deaths Ratio per 1,000 of strength.	23,849 464 19'5	9.567 157 10:4	5,348 90 16'8	2,192 35 10°0	1,872 24 12'8	213 2 9'4	43,041 772 17'9
1905.	Strength Deaths Ratio per 1,000 of strength.	12,322 203 16'47	7,963 143 17'96	8,606 141 16:38	5:733 76 13'26	5,936 174 29'31	2,925 48 16:41	43,483 785 18°05
10	Strength Deaths Ratio per 1,000 of strength.	23,285 477 20'49	9,771 195 19°96	5,741 125 21:77	2,315 29 12'53	2,063 42 20°36	236 8 33'90	43,413 876 20:18
1906.	Strength Deaths Ratio per 1,000 of strength.	13,611 207 15'21	8,288 146 17.62	8,297 141 16:99	5,820 107 18:38	5,898 146 24.75	3,107 43 13.84	45,021 799 17:55
19	of strength.  Strength Deaths Ratio per 1,000 of strength.	23,121 535 23'14	10,459 195 1864	5.963 97 16.27	2,491 33 13'25	2,012 35 17'40	319 4 12'54	44,365 89 <b>9</b> 20'26
-							Control of the last of the las	

As in past years the highest mortality in central jails occurred among convicts who have been from 3 to 7 years in confinement, tubercle of the lungs

being especially frequent among them. The highest mortality in district jails generally occurs among the newly admitted prisoners, and in an unhealthy year, such as 1906 was, the death rate among these prisoners is relatively higher than usual.

50. The diseases which caused the highest admission rates were intermittent fever (admission rate 207.2 per thousand), dysentery (78.9), abscesses, ulcers and boils (68.9), diarrhæa (39.1), respiratory diseases other than pneumonia (25.2); and the most common causes of death were dysentery (death rate 3.25 per thousand), tubercle of the lungs (3.21), pneumonia (2.55) and cholera (1.10).

51. In 1906 the death rates attributed to fever among the general population
were higher than in the previous year in every province except Madras, Bengal and Eastern Bengal and Assam, and throughout northern India the autumn months were exceptionally malarious. These circumstances enable us to judge of the value of the anti-malarial measures in force in the jails. The results obtained are at once encouraging and disappointing; encouraging because they show what can be done, disappointing because they show that some jail medical officers either do not believe in the possibility of preventing malarial fever among prisoners or are half-hearted in carrying out the necessary measures.

The number of prisoners admitted to hospital on account of intermittent fever was 19,765, or 3,061 more than in 1905, and the admission rate was 207'2 per thousand, compared with 181'7 in that year. It is important to note that although the admission rate was higher than in the previous year, it was lower than it had ever been previously, and the deaths in 1906 numbered only 72 against 84 in 1905, and the death rate '75 per thousand was, with the exception of the rate of '66 in 1904, the lowest on record. Until June intermittent fever was much less prevalent than usual, but the numbers of cases rose rapidly in the third quarter of the year, reached the maximum in October and continued high until the end of the year. By far the highest admission rate was 809'2 per thousand in the North-West Frontier Province, where the prisoners suffered nearly three times as much from this disease as in the Punjab (2018); in Madras and Burma the admission rates were only 60'2 and 49'7, respectively; elsewhere the rates ranged from 330'7 in Bengal to 139'3 in Bombay. In Eastern Bengal and Assam (death rate 2'77 per thousand), the North-West Frontier Province (1:54), the United Provinces ('88) and Bengal ('81) the death rates are higher than the mean, elsewhere they varied between '50 in Bombay and '19 in Madras. In parts of India in which kala azar is prevalent, cases of that disease are not infrequently diagnosed as intermittent fever; and the post-mortem records suggest that this mistake was made in 6 of the 25 fatal cases ascribed to intermittent fever during 1906. The necessity for care in diagnosis is obvious, and although the difficulty is often very great, the fact that fatal cases shown by the appearances after death to have been due to tuberculosis, pneumonia, pleurisy, pericarditis, meningitis, dysentery, chronic Bright's disease, cirrhosis of the liver and kala azar, were diagnosed as ague, shows that due care is not always observed.

52. There was a considerable increase in the number of cases of remittent fever admitted into hospital, the total rising from 109 in 1905 to 140, and the admission rate from 1'2 per thousand to 1'5. The monthly incidence of remittent fever varies from

year to year and bears little relation to that of intermittent fever. In 1906 the highest admission rates were 2.9 in Bombay, 2.7 in Bengal and in the Central Provinces, 2.5 in Eastern Bengal and Assam, and 2.1 in Madras. In two of these provinces, Madras and Bombay, there is comparatively little intermittent fever, and in the North-West Frontier Province, where intermittent fever was most prevalent there was not a single case of remittent fever. The post-mortem records show that besides cases of malarial poisoning, and cases of kala azar, tuberculosis, pneumonia, etc., in which the diagnosis is evidently at fault, there is a residuum of cases which appear to be due to a fever that has not yet been differentiated in India.

Quinine prophylaxis and anti-mosquito measures are in force in every administration, but it is evident that the thoroughness of their application and, consequently, the degree of success attained, varies greatly, not only in the several provinces, but in the different jails in each province.

Inspectors-General give very little information concerning the arrangements in force in their administrations, indeed in only one report is it stated what dose of quinine is given. In the Punjab 15 grains of quinine are given to each prisoner every six days, but the dates between which the issue of quinine is made are not stated; Lt.-Colonel Braide, whose experience has made him an enthusiastic advocate of quinine prophylaxis, ascribes all failure to faulty arrangements.

If the importance of reducing the number of cases of malarial fever in jails and the possibility of effecting this by anti-malarial measures are admitted, it follows that these measures should be adopted in all malarious localities, and it should be recognized that the prophylaxis of malaria is as much a part of efficient jail management as the suitable dieting of the prisoners. It has been shown over and over again that the success of anti-malarial measures, and particularly of prophylaxis by the regular administration of quinine, depends entirely upon attention to detail and the personal supervision by the medical officers under whose immediate orders the measures are carried out, and it seems therefore that it should no longer be left to the discretion of medical officers to determine whether measures are or are not to be adopted in particular jails, but that the Inspector-General should lay down for each jail in his administration exactly what measures are to be carried out, the dates between which these measures are to remain in force and the precautions to be observed to guard against failure. Effective procedures to destroy mosquitoes must vary with the surroundings of the jail; and, as all localities are not equally malarious, the dose of quinine and the intervals of time between doses should be regulated to meet the requirements of each case, the rule being to give the smallest dose of quinine that will be effective, while the importance of reducing the unpleasant effects of quinine by the selection of the most suitable salt and by skilful compounding should not be overlooked. Above all things the procedure of dosing the prisoners should be so carefully detailed and supervised that no prisoner whom it is intended to subject to prophylactic treatment should by any possibility escape taking his dose.

53. There were 7,525 admissions to hospital and 310 deaths ascribed to dysentery during 1906, compared with 7,496 admissions and 277 deaths in the previous year. The jail population of 1906 was, as we have seen, considerably larger than in 1905, and the admission rate fell from 816 per thousand to 789. There was a notable increase in the frequency of dysentery cases in Madras, Bombay, the Punjab and the North-West Frontier Province, but this was more than balanced by the decline in the numbers of cases in Eastern Bengal and Assam and Burma. The death rate was 3'25, or '24 per thousand higher than in 1905; the rise was common to

all provinces except Burma, where the rate fell from 2.60 to 1.50 per thousand, and Bengal where it fell from 6.56 to 5.72, the most important rise being from the singularly low rate of .52 recorded in the Punjab in 1905 to an average provincial rate of 2.64 per thousand.

In India generally, as in previous years, the disease was most prevalent in August and least prevalent in February: this is the distribution of the incidence of dysentery in most provinces year after year with the following exceptions, in Bombay the lightest incidence is generally in March; in Madras in April; and in the Central Provinces in May; the heaviest incidence occurs in Burma in July, in Eastern Bengal and Assam in August; in Bombay in July or August; in the United Provinces in August or September; in the Punjab and Madras irregularly, in the former generally, and in the latter always, dysentery cases are most frequent in one of the last four months of the year.

- 54. The number of cases of diarrhoea admitted to hospital was 3,734, of which

  70 terminated fatally, the admission and death rates
  being, respectively, 39°1 and '73 per thousand,
  compared with 39°2 and '74 in 1905. The highest admission rates were 84'9 in
  Bengal and 73°5 in Eastern Bengal and Assam, and the lowest 3°3 in Madras;
  while the highest death rate was 1°36 per thousand in the Punjab, and the lowest
  10 in Madras. The mean case-mortality in all the jails was 1°9 per cent., but in
  the different administrations this percentage varied greatly, from 4°5 in Burma
  and 3°5 in the United Provinces, to '88 in the Central Provinces and '79 in
  Eastern Bengal and Assam.
- 55. The number of admissions to hospital on account of these diseases fell from 2,428 in 1905 to 2,400, and the number of deaths from 85 to 68. The admission and death rates fell from 26.4 and 92 per thousand to 25.2 and 71, the reduction in the former being mainly due to the great decrease in the frequency of these diseases in the Punjab, and in the latter to the lessened death rate in Bengal, the Punjab and the Central Provinces. In the North-West Frontier Province the admission rate rose from 12.2 per thousand in 1905 to 35.4, and the death rate from 76 to 1.54. Of the 68 deaths, 25 were due to bronchitis, 11 to gangrene of the lungs, 10 to broncho-pneumonia, 7 to pleurisy, 5 to spasmodic asthma and 3 to empyema.
- 56. There was a considerable increase in the number of cases of pneumonia, the total rising to 963, as compared with 896 in 1905, and 963 in 1904. The admission rate in 1906 was 10°1 per thousand compared with 9°7 in the previous year and the death rate 2°55 compared with 2°28. The frequency and fatality of the disease in the different provinces as usual varied greatly, the highest admission rates being 23°8 per thousand in the North-West Frontier Province and 15°4 per thousand in Bombay, where the Sind jails were responsible for the high rate, and the lowest 7°4 per thousand in Madras and 4°2 in Burma; while the death rates ranged from 3°85 per thousand in the North-West Frontier Province and 3°66 in Bombay, to 1°63 in Madras and 1°20 in Burma and the Central Provinces. The mean case-mortality was 25°23 per cent., the percentages ranging in the several provinces from 35°48 in Eastern Bengal and Assam to 16°13 in the North-West Frontier Province.
- 57. There were 844 admissions to hospital and 306 deaths from tubercle of the lungs, compared with 803 admissions and 293 deaths in 1905. The admission rate, which in 1904 had been 84 and in 1905, 87, per thousand rose to 88, and the death rate,

3.21, was fractionally higher than in any of these years. As compared with 1905, the disease was less frequent in the jails of Eastern Bengal and Assam, the Punjab, the Central Provinces, Bombay and Madras, but it was more fatal in Burma, Bengal, the United Provinces and Madras. The highest admission rate was as usual recorded in Bengal, 15'1 per thousand; the next highest being 9'7 in Madras and 95 in Eastern Bengal and Assam, and the lowest 3'9 in the Central Provinces. The highest death rates were 4'31 in Bengal and 4'19 in Burma, and the lowest 1'80 in the Central Provinces and '77 in the North-West Frontier Province.

An examination of the statistics of the last ten years, due allowance being made for changes in nomenclature and modification in practice, shows that while the limits of the fluctuations in the admission and death rates are fairly characteristic in each province, these fluctuations are considerable from year to year, and the rates show no constant tendency to decline. This is disappointing because it might have been expected that the removal of predisposing causes by improved sanitation-free ventilation, better food, more suitable clothing and the reduction in the numbers of malarial attacks-and the preventive measures which have been generally adopted, would have reduced the numbers of cases and the fatality of the disease. On the other hand, there is no sign that tubercle of the lungs is becoming more frequent, and, indeed, there is reason to think that a real reduction in the frequency of the disease is disguised by the results of earlier and more accurate diagnosis. The mean case-mortality has steadily fallen from 43 per cent. in 1900 to 36 per cent. in 1905 and in 1906, and the stay in hospital of fatal cases is becoming longer-although in the different provinces the length of time between the diagnosis of the disease and death varies greatly. It is mainly to the result of early diagnosis that we must look for improvement in the future. It is obvious that the earlier a case is recognized the more hopeful is treatment and the less the danger of infection from it; but the number of instances in which the post-mortem records show that the presence of tubercle was not detected until after the death of the sufferer shows that even more care than is at present taken is necessary.

58. The number of cases of anæmia and debility admitted into hospital in 1906 was 1,193 and there were 52 deaths, compared with 1,014 cases and 50 deaths in the previous year. The mean admission rate Anzemia and Debility. which in 1905 was 11'0 per thousand, rose in 1906 to 12'5; but in the different provinces the rates varied enormously from 39'3 in Eastern Bengal and Assam and 25'4 in the North-West Frontier Province, to 5'0 in Madras and 2.5 in Burma. The mean death rate rose from '54 per thousand in 1905 to '55, the highest and lowest rates being 1'54 and '07 in the North-West Frontier Province and Burma, respectively; elsewhere they ranged from '88 in Bombay to '24 in the United Provinces. Anæmia and debility is, it must be admitted, a convenient heading for medical subordinates, and in provinces where a large proportion of the prisoners are confined in small district jails it is difficult to avoid its use, but resort to it should be discouraged as much as possible, not only because it leads to slovenly practice and ineffectual treatment, but because the use as a definition of a term which describes symptoms common to many diseases must lead to difficulty in the future in ascertaining the effects of hygienic improvement in reducing the prevalence of these diseases. We know, for instance, that the increase in the frequency of tubercle of the lungs in the jail statistics in the years immediately preceding 1900 was largely due to cases of anæmia and debility being correctly diagnosed as tubercle, but owing to the loose way in which the term "anæmia and debility" had been used to describe other diseases, it was not possible to be sure that there had not been a real increase in the number of cases of tubercle in the prisons. Of the 52 deaths ascribed in 1906 to anæmia and debility, 21 were considered by the medical officers to be due to old age. In 36 cases post-mortem examinations were made which show that in 6 instances death was probably due to dysentery, in 3 to tubercle of the lungs, in 2 to disease of the kidneys; in the remaining 25 cases such details of the examination as are given throw little light on the cause of death.

- 59. There were 82 admissions and 9 deaths from small-pox, against 31 admissions and 4 deaths in 1905. Twenty-six of the cases occurred in the United Provinces, 15 in Bengal, 13 in Madras and 11 in Burma. The mean death rate from small-pox was '09 per thousand.
- 60. The number of plague cases fell from 66 in 1905 to 19, and the deaths from 46 to 8. Seven cases occurred in three jails in Bengal, 6 cases in three jails in the Punjab, 3 cases in two jails in Bombay, 2 cases in one jail in Burma and 1 case in the United Provinces.
- of 2 on the total of 1905, but the facts ascertained at the careful post-mortem examinations, which were performed in every instance, did not always support the diagnosis, and it is possible that the cause of death in two cases was a tumour pressing on the brain, in two others pyæmia and in one other pneumonia. In two cases the diagnosis was confirmed by bacteriological examination.
- 62. The number of cases diagnosed as enteric fever is increasing every year. In

  1904 there were 55 cases and 14 deaths, in the
  following year 64 cases and 15 deaths, and in
  1906 the number of cases rose to 102 and the number of deaths to 18. In
  Madras 61 cases and 7 deaths occurred, and in Eastern Bengal and Assam 20
  cases and 5 deaths. No information is available regarding the signs and symptoms presented by the cases that recovered, but in the fatal cases these were
  typical, in 7 of them perforation occurred, and in all of them extensive ulceration of Peyer's patches was found.
- 63. There were 186 admissions and 105 deaths from cholera, compared with

  Cholera.

  73 admissions and 40 deaths in 1905. The mean
  death rate was 1'10 per thousand, and rates in
  excess of the mean were recorded in Madras (4'32), Bombay (2'27), and Eastern
  Bengal and Assam (1'89). The only administrations entirely free from
  cholera were the Punjab and the North-West Frontier Province. The
  more important outbreaks occurred in the Common Prison, Bombay (36
  cases and 15 deaths), in the central jail at Coimbatore (25 cases and 12
  deaths). In the district jail at Gauhati there were 7 cases and 6 deaths and in
  district jails at Azamgarh and Bankura, respectively, 5 cases and 2 deaths.

The following paragraphs contain brief notes of more important matters discussed in the provincial reports by the Inspectors-General and in the sanitary sheets of the various jails.

64. Lack of sufficient accommodation is a serious defect in the majority of jails in this administration, and there was over-crowding during a part or the whole of 1906 in 28 of the 35 jails. Many of the jails are badly situated in the centre of a town or bazaar and "site over-crowding" is a defect commonly reported. There are still some sleeping barracks in which there are four rows of beds and more than one in which there are six rows. The medical officer of the Purneah jail reports that in the wards of this jail nine prisoners sleep between two ventilating openings. Many improvements, however, were effected during the year under review, and many others are in progress. A new Presidency jail for Europeans and Natives is being built at Calcutta; the ventilation of the wards in the Midnapore central jail is being improved at a cost of more than a lakh of rupees; the areas of the jails at Balasore, Bankipore and Arrah have been, or are being, extended; new segregation wards have been added to the jails at Puri and Darjeeling, a new hospital to the Monghyr jail and new wards to the hospital of the Jessore jail; improvements to wards and worksheds are in progress in the Krishnagar jail; and schemes are in hand for more buildings to relieve over-crowding or for additional hospital and other accommodation or for improving the ventilation of barracks in the jails at Alipore, Purneah, Cuttack, Purulia and Ranchi.

The mean daily population of the jails in 1906 was considerably higher than in 1905, but while the rate of admission into hospital rose from 953'5 per 1,000 in 1905 to 1008'8 per 1,000 in 1906, the death rate fell from 24'91 to 23'36 per 1,000. The principal causes of admission into hospital were intermittent fever (3e'78 per cent, of all admissions), dysentery (18:59) and diarrhœa (8:41); and the principal causes of death, dysentery (24'5 per cent. of all deaths), tubercle of the lungs (18'4) and pneumonia (12'7). Intermittent fever was responsible for an admission rate of 330'7 per 1,000 as compared with a rate of 290'7 in 1905, but there were only 12 deaths among 4,913 cases ('24 per cent.) as compared with 30 deaths among 4,120 cases ('95 per cent.) in 1905. This reduction in casemortality may have been due in part, as the Inspector-General thinks, to the use of quinine as a prophylactic, or it may have been due to more careful diagnosis; the latter explanation seems the more probable for there is no indication that the prophylactic administration of quinine was carried out more stringently in 1906 than in the previous year; and an examination of the postmortem records shows that even in the year under review malarial fever was not the cause of death of all patients whose diseases had been returned under this heading; in at least one instance the cause of death was very probably kala azar and in another it was possibly tuberculosis. Quinine was issued as a prophylactic in all jails and the Inspector-General remarks that " a majority of medical officers report favourably on it ". Dysentery was responsible for an admission rate of 1876 per 1,000 and a death rate of 5.72 per 1,000 as compared with rates of 196.4 and 6.56 per 1,000, respectively, in 1905. There was considerable over-crowding during the greater part of the year in some or all of the barracks of the five jails in which the highest admission rates on account of this disease were recorded, and all are more or less defective structurally. Tubercle of the lungs caused 275 admissions into hospital and 64 deaths as compared with 192 admissions and 59 deaths in 1905. The rate of admission into hospital has increased considerably during recent years, and although the death rate remains about the same there has been a steady reduction from year to year in the case-mortality. In all probability this does not mean that the prevalence

of the disease is on the increase among prisoners in the Bengal jails, but that patients suffering from tubercle are discovered and admitted into hospital at an earlier stage than formerly was the case. The Inspector-General hopes to be able to utilize the jail at Berhampore as a special jail for prisoners suffering from this disease.

The death rate in four jails was over 40 per 1,000. The high death rates in the Naya Dumka and Purulia jails were attributed by the medical officers chiefly to over-crowding, and in the Chaibassa jail it was attributed by the Inspector-General to bad management, in that sufficient use was not made of the hospital.

65. The average strength of the prisoners in the jails of Eastern Bengal and Assam rose from 6,401 in 1905 to 6,871 in 1906, and Eastern Bengal and Assam. with the exception of the jails at Tezpur and Sylhet, all were more or less over-crowded during a part or the whole of the year. admission rate, the constantly sick rate and the death rate, however, were lower than in the previous year, being 912, 43, and 29.69 per 1,000, respectively, as compared with 1,081, 46 and 32'96. The chief causes of admission into hospital were dysentery (26'56 per cent. of all admissions) and intermittent fever (25'75) and the chief causes of death, dysentery, pneumonia and tubercle of the lungs. There were 19 deaths among 1,613 patients admitted for intermittent fewer, the casemortality (1'18 per cent.) being considerably higher than in any other province. The post-mortem records suggest that at least five of the deaths due not to malarial fever but to kala azar, and it is unfortunate despite the attention which lately has been directed to this disease, especially in Assam, medical subordinates still appear to be ignorant of its symptoms. A patient whose temperature keeps at or above 104° F. for 20 days in spite of his having received 30-40 grains of quinine daily, as happened in one case diagnosed as "ague" at Mangaldai, cannot possibly be suffering from malarial fever. Twenty cases of enteric fever with 5 deaths were recorded during the year and 14 cases of cholera with 13 deaths. Fourteen of the cases of enteric fever occurred at Mymensingh, where a small epidemic had begun in December 1905. The cases of cholera occurred at Gauhati (7), Dacca central jail (5), Tippera (1) and Dinajpur (1). The principal improvements effected in the jails of this administration during the year were the construction of new hospitals at Mymensingh and Malda, new segregration and under-trial wards at Chittagong, and a new civil jail and a new ward for females at Barisal.

Good during the early part of 1906, but during the autumn and winter months malaria was more prevalent than usual. In a few districts famine conditions were present until the onset of the rains. The average strength of the jail population was 24,872 as compared with 23,680 in 1905, and about 20 jails were somewhat over-crowded during part of the year. The sanitary condition of all the jails was reported by the Inspector-General to be good and the medical officers of only a very few jails reported any defects in accommodation, ventilation, or drainage. Only about 16 of the 57 jails in this administration are, however, situated a quarter of a mile or more from inhabited areas, and "site over-crowding" is a defect of some jails. In 1906 the admission rate, constantly sick rate and death rate were 603, 27 and 16.56 per mille, respectively, as compared with 569, 27 and 17.31 per mille in 1905. Intermittent fever, dysentery, and tubercle of the lungs were more prevalent

than in the previous year, but the fatality of dysentery, as judged by the death rate per thousand and by the case-mortality, was less than in any previous year. The rates of sickness and death from tubercle of the lungs in this administration have been remarkably similar for many years, but the Inspector-General is of opinion that the disease is less prevalent in the jails than formerly. Every effort is made to segregate tuberculous patients and there are special wards where the open air treatment can be efficiently carried out in all central jails. Death rates over 30 per 1,000 were recorded in five jails where the average annual strength was over 100, the highest rates among the prisoners in these five jails being 46'24 per mille recorded in the Ghazipur district jail, 36'59 in the Orai district jail, and 35'97 in the Hamirpur district jail. The Inspector-General remarks that there was a large proportion of old men in the Ghazipur jail, and that on account of the high price of grain in the district a large number of weak and aged people sought refuge in the jail to save themselves from starvation. In the Orai district also famine conditions prevailed. The death rate in the Meerut district jail was 33'39 per 1,000, the 'deaths including five among eight prisoners admitted into hospital for tubercle of the lungs and six among eight admitted for pneumonia. Cholera was epidemic among the general population during the greater part of the year and was introduced into nine jails, but the measures taken effectually prevented an epidemic among the prisoners and only 17 cases with 11 deaths were recorded in all the jails.

67. It appears from the reports of medical officers that there are no serious defects in accommodation or in the ventilation of barracks in the great majority of the jails in the Punjab, and only in the jails at Montgomery, Lahore, Mooltan and Hoshiarpur was there any serious over-crowding during 1906. The average strength of the jail population was 11,744 in 1906 as compared with 11,512 in 1905, and although there was a slight increase in the rate of admission into hospital the death rate fell from 16:33 to 15:75 per thousand, which is the lowest rate recorded since 1896. Intermittent fever was the principal cause of admission into hospital, but there were only 4 deaths among the 3,427 cases classed under this heading, the case-mortality (\*12 per cent.) being considerably lower than that in any other administration. Tubercle of the lungs, pneumonia, and dysentery were the principal causes of death, being responsible for 24'3, 16'8 and 16.8 per cent., respectively, of the total number of deaths recorded. Despite the absence of over-crowding and the good arrangements which exist in most of the jails, tubercle of the lungs was as usual considerably more fatal than in the jails of any other administration. In the Lahore central jail, where special arrangements for the treatment of patients suffering from tubercle exist, the case-mortality was as high as 66 per cent. Whether the recorded high proportion of deaths to cases means that tubercle of the lungs is a more fatal disease in the Punjab than in other parts of India, or whether it is due to the non-discovery of cases in an early stage cannot be definitely decided; the latter is a possible explanation which perhaps gains some support from the fact that "anæmia and debility" is not infrequently recorded as the cause of death in the Punjab jails. Dysentery was considerably more prevalent and more fatal than in 1905. The Inspector-General draws attention to the connection between this disease and scurvy and points out that in some jails where dysentery was prevalent a "scorbutic taint" certainly existed. Pneumonia caused 130 admissions into hospital and 31 deaths as compared with 164 admissions and 29 deaths in 1905. No case of

cholera occurred during the year and only six cases of plague (two of which were fatal) and seven of small-pox.

68. In the jails of this administration there is accommodation for 1,515 prisoners of all classes, but although the average strength North-West Frontier Province. of the jail population during 1906 was only 1,300 (as compared with 1,314 during 1905) there was over-crowding in the Peshawar jail for 201 days, in the Bannu jail for 191 days, in the Kohat jail for 100 days and in the Abbottabad jail for 94 days. The year was an unhealthy one and the rates of sickness and mortality among the prisoners were considerably higher than they have been for many years. Intermittent fever caused 55'25 per cent. of the total admissions into hospital, the admission rate being higher than in any year since 1897. Quinine was issued as a prophylactic and the fact that it did not appear to have much effect in warding off attacks may have been due, in the Inspector-General's opinion, to its administration not having been begun sufficiently early in the malarial season. Dysentery caused 102 admissions into hospital as compared with 60 in 1905, tubercle of the lungs 10 as compared with five, and pneumonia 31 as compared with 18. Influenza was prevalent in the Peshawar jail and accounted for 38 admissions into hospital and seven deaths.

69. The average strength of the jail population fell from 3,547 in 1905 to 3,329 in 1906, but there was occasional over-crowding Central Provinces and Berar. mostly in the under-trial wards, in eight jails. The admission, constantly sick, and death rates all fell, the death rate, which was 13.82 per thousand, being lower than that recorded in any other administration during 1906. Intermittent fever, abscesses, dysentery, and diarrhæa were the principal causes of admission into hospital, and dysentery, tubercle of the lungs and pneumonia the principal causes of death. Intermittent, fever caused 32'90 per cent. of the total admissions from all causes. The Inspector-General reports that quinine is used as a prophylactic in some jails, but not in others. Dysentery caused 7 deaths, tubercle of the lungs 6 and pneumonia 4. In the Central jail at Jubbulpore there was no admission into hospital for dysentery or for diarrhœa during the year. In all the jails diarrhœa caused 113 admissions into hospital and one death, compared with 128 admissions and one death in 1905.

70. The daily average strength, which was 9,320 in 1904 and 10,147 in 1905. increased in 1906 to 10,428. The admission rate fell from 469 to 417 per mille, and the constantly sick rate from 19 to 18 per mille, but the death rate rose from 15 87 per mille in 1905 to the comparatively high figure of 21'77 per mille in 1906. This was due mainly to the occurrence of cholera, the death rate from which was higher than in any year since 1897. This disease attacked the prisoners in eight jails and caused in all 82 admissions into hospital and 45 deaths. There were 25 cases with 12 deaths at the Coimbatore central jail, 20 cases with 6 deaths at the Madura jail, 13 cases with 11 deaths at the Russelkonda jail and 12 cases with 6 deaths at the Rajahmundry central jail. In at least one instance the disease was introduced into a jail, not by newly admitted prisoners, but by warders or other jail officials who had visited infected areas, and the Inspector-General draws attention to the advisability of limiting the movements of warders during times of epidemic. The water-supply of the Rajahmundry central jail is apparently faulty and the Inspector-General reports that it becomes polluted periodically. Dysentery which caused 18.72 per cent. of the total admissions into hospital, and intermittent fever which caused 14:46 per cent. were the principal causes of sickness, and cholera (19:8 per cent. of all deaths), dysentery (19:8 per cent.), tubercle of the lungs (11:5) and pneumonia (7:5) the principal causes of death. The death rate from dysentery was higher than in any year since 1898. The Inspector-General remarks that there is reason to believe that in many jails the grain is not always thoroughly freed from gravel before being ground and that the use of soft mill stones must add largely to the amount of grit present in the flour. There was only a very slight increase in the death rate from tubercle of the lungs as compared with the previous year, and as usual the comparatively low fatality of this disease in the Madras jails is a satisfactory feature of the statistics. At Trichinopoly, where there is a special ward for open air treatment, 23 patients suffering from tubercle were admitted, and of these only 4 died during the year; at Bellary also only 4 of the 20 tuberculous patients admitted into hospital died. In this jail a special ward for the treatment of patients in the open air is being constructed.

71. The daily average population of the jails in Bombay increased from 7,851 in 1905 to 7,925 in 1906, and the admission constantly sick and death rates rose from 603 to 689, from 27 to 31 and from 17:45 to 20:69 per thousand, respectively. The principal cause of sickness was ague which accounted for 20'21 per cent. of the total admissions into hospital and the principal causes of death were pneumonia and cholera, the former accounting for 17'7 per cent. of all deaths and the latter for 11'0 per cent. There were in all 45 cases of cholera with 18 deaths, the chief outbreaks occurring in the Bombay Common Prison (36 cases and 15 deaths) and in the Yerrowda central prison (8 cases and 3 deaths). under-trial prisoner was the first person attacked in the Common Prison and the outbreak was confined to persons living in the barrack of the quarters for under-trial prisoners. There was an interval of five days between the occurrence of the first and second cases and the same interval between the second and third. This case occurred on the 13th of November and between this date and the 18th, 28 prisoners were attacked. The evidence appeared to indicate that the germs of the disease had been introduced in the food of under-trial prisoners. Food brought into the jail from an infected area was also suspected to be the cause of the outbreak in the Yerrowda prison. The diagnosis in three of the cases which occurred in this prison was confirmed by a bacteriological examination made at the Parel laboratory. Pneumonia caused 122 admissions into hospital and 29 deaths and dysentery 434 admissions and 16 deaths, both diseases having considerably higher death rates than in 1905. Pneumonia was, as usual, chiefly prevalent among the convicts of the Sind Gang, who are employed on railway work and are exposed to all weathers. Their barrack accommodation has been increased and more efficient means of ventilation provided; they are not sent out to work until a late hour of the morning and not until they have received some hot food; all their clothing and bedding is numbered; those patients suffering from pneumonia are promptly isolated, and their bedding and clothing burned.

The Shikarpore jail was closed at the end of November 1906, all the prisoners being moved to Sukkur.

72. No defect in accommodation or ventilation was reported during 1906 by the medical officers of 28 of the 32 jails in Burma, Burma. but there was more or less over-crowding in 17 jails, and in 20 jails there is no separate hospital accommodation for the isolation of cases of infectious disease. The average strength of the jail population which was 12,639 in 1905 rose to 13,369 in 1906, but the admission, constantly sick and death rates fell from 320, 17 and 17'01 per thousand, respectively, in 1905 to 280, 16 and 14'81 per thousand. The three rates were the lowest on record for Burma. Intermittent fever and abscesses were the chief causes of sickness, and tubercle of the lungs, dysentery and pneumonia the chief causes of death. The admission rate on account of intermittent fever was only 49'7 per mille, which is far lower than that recorded in any other administration. Apparently quinine was used prophylactically in most jails, but the doses given and the plans adopted to secure proper administration are not stated. "Mosquito brigades" were organized in some jails. It is mentioned by the Inspector-General that at Rangoon only those cases are returned as intermittent fever in which malaria parasites are found by microscopic examination of the blood, and this probably accounts for only 18 cases being recorded as having occurred during the year in this jail as compared with 124 cases of simple continued fever. At Insein, which is near Rangoon, this practice is not adopted and here 101 cases of intermittent fever were recorded, and not a single case of simple continued fever. There were 114 cases of tubercle with 56 deaths, the case-mortality for the year being higher than in any other administration except the Punjab. The Inspector-General states that arrangements are made for the segregation of all patients suffering from this disease and that the open air system of treatment is carried out as far as local conditions permit. Apparently all the patients during 1905 were treated in jails where there is ample accommodation for carrying out these measures, but the results were disappointing, and in the Rangoon central jail, where there is a special ward capable of accommodating 34 tuberculous patients, 18 of the 22 patients admitted during the year died. There was a satisfactory decrease in the sickness and mortality from dysentery. The great majority of cases of this disease occurred in the central jails at Thayetmyo and Myingyan and the Inspector-General is of opinion that in the former jail the cause was the impurity of the water-supply, which at present is obtained from the Irrawaddy river. A scheme for the improvement of the present supply and another for providing a supply from a new source are under consideration. Seven cases of cholera (with 3 deaths) and 2 of plague (one fatal) occurred during the year. Only one prisoner suffered from beri-beri which he had contracted before his admission to jail.

The diets issued to prisoners were the same as in the previous year, and the Inspector-General attributes a considerable share in the marked improvement shown in the health of the prisoners during recent years to the great attention which has been paid to the food supply.

73. In the jail at Ajmer there was over-crowding for eleven months of the year.

Atmer, Mercara, Quetta and The water-supply from the jail wells was insufficient and had to be supplemented by purchasing water from the municipality. The average annual strength of the jail population was 465, and 192 admissions into hospital and 10 deaths occurred during the

year, giving ratios of 412'9 and 21'51 per thousand, respectively, as compared with 390'8 and 16'99 in 1905. There were 10 cases of guinea worm. In the Mercara jail, where the average annual strength was 95, there were 10 deaths during the year, three being due to pneumonia, three to diarrhœa, and one each to hepatitis, hydatid of the liver, heart disease and old age. At Quetta, where the average annual strength was 58, there was no death, and at Secunderabad (the average annual strength being 81) there were two, of which one was due to acute mania and the other to epilepsy.

74. In 1906 the rainfall recorded at the observing station in the Andaman Islands was 99'23 inches, nearly 2 inches less than in the previous year and 22 inches less than the mean of the previous five years. There was a further increase of the convict population, the average strength being 14,688 or 340 more than in 1905. Accommodation was increased by the erection of 15 temporary barracks, and each convict has now 50 square feet surface area in a large well-ventilated barrack. There was no over-crowding except occasionally in the hospital. The improvement in the food supply to which reference was made in last year's report was maintained; the supply of wheat has been improved, the issue of urad dhall has been discontinued, and mung dhall is given three times and urhur dhall four times a week to all labouring convicts. Water is obtained from tanks, wells and springs and is boiled at all the large stations; condensed water is supplied for drinking purposes to the inmates of the 'female' and cellular jails. The Senior Medical Officer recommends the introduction of filter beds at Hope Town and the fitting of a covering of galvanised iron to all the wells in the Settlement.

The admission rate rose from 1,898 to 2,041 per thousand and the constantly sick rate from 68 to 70, but there was a remarkable fall in the death rate from 38.96 per thousand in 1905 and a quinquennial mean of 37.38, to 27.30, the fall being due almost entirely to the reduction in the number of deaths from dysentery.

The number of admissions to hospital on account of dysentery fell from 2,359 in 1905 to 1,381, and the number of deaths from 187 to 72, the admission and death rates falling, respectively, from 164'4 and 13'03 to 94'0 and 4'90, rates which are comparable with those recorded in Indian prisons. The improvement is ascribed by Major Fearnside to precautions taken to prevent infectious matter getting into water-supplies and to improvement in the quality of the food. The admission rate for tubercle of the lungs fell from 11'4 to 6'9 per thousand, and the death rate from 6'48 to 5'58. The admission rate on account of pneumonia, however, rose from 11'0 to 15'8 per thousand, and the death rate from 4'81 to 5'38; the greater prevalence of this disease being due to an epidemic of influenza. There were 385 cases of influenza admitted to hospital during the year, and fatal pneumonia followed the attack in 47 instances.

Intermittent and remittent fevers were the cause of 21,362 admissions and 51 deaths, the admission rate, 1454'4 per 1,000, and the death rate, 3'47, being both lower than in 1905. Anti-mosquito measures are stated to have freed the Island of Ross from malaria, and are being undertaken elsewhere. The temporary barracks are infested by anopheles mosquitoes, and the Senior Medical Officer would replace these thatched structures by permanent barracks whenever funds permit. Major Fearnside notes the frequent occurrence of a fever, lasting from three to ten weeks; no malaria parasites are present in the blood, and the disease which is clinically distinct from enteric fever, resembles Malta fever.

75. The maintenance of favourable statistics of the health of the prisoners in spite of the unhealthy character of the year is most satisfactory; it shows that the high standard of care and skill reached by the Inspectors-General and the staff of the prisons is not only being maintained but is being raised; and it justifies the hope that in the near future there will be a still further reduction in prison mortality.

## SECTION V.

# VITAL STATISTICS OF THE GENERAL POPULATION.

76. The populations of the areas in which births were registered in the Indian

Births in India.

Empire in 1906 aggregated 223,511,195

according to the census of 1901, and the number of births registered during the year was 8,448,478.

As the date of the census recedes it is evident that the birth and death rates calculated upon the census populations become less accurate; where there has been an increase in the population the calculated rates are too high, but in Indian statistics corrections for this error are difficult to make, because owing to the large fluctuations in the numbers of births and deaths which occur from year to year the changes in the numbers of the different populations are irregular, and because the addition of the increase or subtraction of the decrease deduced from the registration figures would mislead in proportion to the defects in registration. There are defects in the registration nearly everywhere, and in some places the defects are very serious. Improvement in registration is, however, being steadily effected, and in some of the provinces the errors in the numbers of births and deaths registered are comparatively small, although the causes of death are everywhere, except in a few of the greater cities, incorrectly reported.

The calculated birth rate in 1906 was 37'80 per thousand compared with 39'13 in 1905 and 38'41 the average of the five years ending with 1905. The provincial rates ranged from 51'72 per thousand in the Central Provinces and Berar, to 30'9 in Madras and 28'91 and 26'10 in the small provinces of Ajmer-Merwara and Coorg, respectively. In all provinces except Bombay, the North-West Frontier Province and Coorg the birth rates of 1906 were lower than those of the preceding year, but the only variations over 2 per mille were an increase of 3'2 per mille in the North-West Frontier Province, and decreases of 8'41 in Ajmer-Merwara, of 2'30 in the Central Provinces and Berar, of 2'23 in Bengal and of 2'01 in Lower Burma. In all provinces, except three, the birth rates were higher than the death rates, the most considerable excesses being 8.25 per thousand in the Central Provinces and Berar, 6.8 in the Punjab, 5.71 in Eastern Bengal and Assam and 5.18 in Lower Burma. The three provinces in which the birth rates were exceeded by the death rates, were Bombay, Ajmer-Merwara and Coorg. In Bombay the birth rate of 1906, although low, was higher than the mean of recent years, the death rate was high owing to the persistence of plague and the unusual prevalence of cholera, fevers and bowel complaints. In Upper Burma birth registration is confined to a few towns and is exceedingly defective, death registration is general and is less defective. In Ajmer-Merwara, the birth rate was unusually low in 1906, and in Coorg, owing to the deficiency of females in the population, the birth rate is always low. The mean percentage of male to female births was 106.88, the percentages ranging from 118.8 in the North-West Frontier Province to 104'4 in Madras and 97'28 in Coorg.

77. The populations among whom deaths are registered aggregate 226,125,682 according to the census of 1901; the excess over the number among whom births

are registered being due to the inclusion of 2,614,487 persons in Upper Burma among whom births are not at present registered. The number of deaths registered during 1906 was 7,852,330 compared with 8,117,771 in 1905, and the death rate fell from 35'96 per thousand in that year to 34'73, the decrease being due to the great decline in the mortality from plague, while the mean for the quinquennium ending 1905, was 32'91. The fall in the general death rate was, however, due to lessened mortality in the more populous provinces of Northern India; in Madras, Bombay, Burma, the Central Provinces and Berar, the North-West Frontier Province and Coorg the death rates of 1906 were higher than those of 1905. The highest death rates were 43'47 per thousand in the Central Provinces and Berar and 39'07 in the United Provinces, and the lowest 27'15 in Lower Burma, 27'4 in Madras, and 26'22 in Upper Burma. In every province except Bengal and Eastern Bengal and Assam, the urban mortality was higher than the rural.

The greatest mortality occurred in October, November and December and the least in February and March. In most provinces the male death rates were higher than the female death rates, but the United Provinces, the Punjab, the North-West Frontier Province, Ajmer-Merwara and Coorg were exceptions to the general rule.

Male infants died at the rate of 228'30 per thousand born and female infants at the rate of 217'52, compared with rates of 231'11 and 217'72 in 1905. In the provinces the highest male infantile mortatily was 317'5, per thousand born, in Ajmer-Merwara and 292'16 in the Central Provinces and Berar, and the lowest 205'9 in Eastern Bengal and Assam and 200'0 in Madras. The same positions are taken by these provinces in respect of female infantile mortality, the highest rates were 317'9 and 266'35 per thousand born in Ajmer-Merwara and the Central Provinces and Berar, and the lowest 187'7 in Eastern Bengal and Assam and 182'1 in Madras. In all provinces except Coorg, as we have seen, the birth rates of males were higher than the birth rates of females, but in the United Provinces, the Punjab, the North-West Frontier Province and Ajmer-Merwara, the death rates of female infants were higher than the death rates of male infants.

Cholera was present in every province except the North-West Frontier Province, and was severe in Madras (death rate 3'9), Bengal (3'81), Eastern Bengal and Assam (3.63), the Central Provinces and Berar (3.26), the United Provinces (3'14) and Bombay (2'50). Small-pox was more widespread than in 1905 and the death rates were upwards of '5 per thousand in seven provinces, the highest being 1'42 in Lower Burma, 1'30 in Coorg, '83 in the Central Provinces and Berar and '8 in Madras. Plague was much less prevalent than in 1905, and although no province except Coorg, escaped altogether, the death rates in Eastern Bengal and Assam ('002), Madras ('02), and the North-West Frontier Province ('02) were low, and the rates in the Punjab (4.56), Bombay (2.79), the United Provinces (1.46) and Ajmer-Merwara (14) were much lower than in 1905. In Upper Burma, however, the plague death rate rose from '22 to 1'17. The fever death rates were considerably higher than in the previous year in all provinces except Bengal and Eastern Bengal and Assam, and the death rates from dysentery and diarrhoea were nearly everywhere greater. Respiratory diseases continue to be very badly registered and the only rates over 1 per 1,000 were 3'28 in Bombay, 2'48 in the Punjab and 1'40 in the Central Provinces and Berar, in all of which plague was severe.

78. The first three months of the year were unusually wet and cold, the rainfall in February being extraordinarily heavy and continuous. In April and May the rainfall was less than usual. The south-west monsoon was established about the middle of June, but the rainfall was irregularly distributed and except in Bihar was in defect. In consequence of this irregularity, agricultural produce was below normal in most of the districts, and even in districts such as Gaya and Bhagulpur where the harvests were fairly good, the supply of food grains was depleted on account of the demand in Eastern Bengal where there was great scarcity. These conditions following the bad harvests of recent years raised the prices of food, and during the last six months of the year in many places prices were nearly twice as high as usual.

There was a considerable decrease in the number of births recorded as compared with 1905, the total falling from 1,973,301 in that year to 1,885,725, and the birth rate fell from 39'59 per thousand, the mean of the previous five years and 39'55 in 1905 to 37'32 in 1906. The birth rate was over 45 per thousand in five districts, namely, Palamau 55'06, Hazaribagh 48'95, Gaya 47'15, Ranchi 46'27, and Sambalpur 45'05; and it was under 30 per thousand in three, namely, Burdwan 29'61, Hooghly 28'93 and Calcutta 17'79. In four towns, Sahibganj (61'92), Katihar (60'37), Jamalpur (59'34) and Kurseong the birth rates were over 50 per thousand; at the other end of the scale was South Barrackpore with a rate of 4'50. In many of the towns exceptionally low birth rates are due to the small numbers of females among the populations. The mean percentage of male to female births was 105, the percentages in the districts ranging from 111 in Howrah to 100 in Manbhum.

The number of deaths recorded during the year was 1,823,243, or 99,126 fewer than in 1905, and the death rate was 36'08 per thousand compared with 38'53 in 1905 and a mean of 34'15 in the previous five years, the fall in the death rate of 1906 being due to a decline in the mortality from plague and the diseases grouped under the heading "fevers." In the districts, the highest death rates were 47'51 in Patna, where plague (9'15) was severe; 47'48 in Purnea, where the death rates from fever (35'97) and cholera (9'37) were very high, and 43'04 in Bhagalpur where also the mortality from cholera (8'23) and fever (28'92) was excessive. In rural areas the mean death rate was 36'15 compared with 35'03 in the towns in which the rates ranged from 74'13 in Monghyr to 7'97 in Ulubaria.

Among Hindus and Muhammadans the death rates were, respectively, 36.63 and 36.13 per thousand, among Buddhists and "other classes" 32.56 and 30.92, and among Christians 23.38.

Male and female infants died at the rates of 214'1 and 198'1 per thousand born, respectively; and boys and girls over one year and under five years of age died at the rates of 58'12 and 51'25 per thousand of the census population. Although the male and female death rates approached each other closely in the age periods 15-20 and 20-30, the male-rates were the higher in every age period, the general male death rate being 37'91 and the female 34 28.

79. The experiment of employing a professional agency in a selected area to ascertain the actual causes of the deaths registered, referred to on page 97 of this report for 1905, was begun in the Galsi thana of the Burdwan District in Bengal

The enquiry is being conducted by an Assistant Surgeon assisted by two Hospital Assistants and will be continued for two years. The population of the area according to the results of a census taken at the commencement of the enquiry is 52,948. The enquiry began on the 1st of August 1906 and during the year ending on the 31st of July 1907, the causes of 2,311 deaths were investigated. The following statement shows the results obtained:—

name and any books by a ducing two or of most rects to have a usery area	Cholera.	Small- pox.	Plague.	Fever.	Dysen- tery and Diar- rhœa.	Respira- tory Dis- eases.	Injuries.	All other causes.	Total.
Number of deaths recorded in the thana register.	128	20		1,726	88	35		313	2,311
Number of deaths according to the results of the investi- gation.	135	26	<b></b>	975	446	488	3	238	2,311
Ratio per thousand according to the returns in the thana register.	2.42	-38		32.60	1.66	-66	02	2.01	43 65
Ratio per thousand according to the results of the investi- gation.	2*55	'49		18-41	8:42	9'22	*06	4'49	43.65

80. The rainfall of 1906 was approximately normal in amount and was fairly

evenly distributed; but the great rivers of
the delta which drain the Himalayas in the
north rose to unusual heights and many districts suffered from floods. The high
prices of grain ruling in the end of 1905 in certain districts spread throughout the

prices of grain ruling in the end of 1905 in certain districts spread throughout the province; these high prices are ascribed rather to the effect of floods injuring the growing rice crop or delaying the importation of grain and to excessive exports, than to unfavourable meteorological conditions. Relief works were opened and assistance was freely given, while arrangements were made for the speedy reporting of mortuary statistics from the districts most affected so that the occurrence of unusual mortality could be ascertained without delay. It seems that the classes unconnected with agriculture, small traders and people living in towns on small fixed incomes suffered most, and that the effects of scarcity are hardly discernible in the vital statistics of the year except possibly in the lowered birth rates of some districts.

The number of births recorded was 1,114,526, and the birth rate 37'38 per thousand, compared with 39'37 in 1905 and a quinquennial mean of 39'63. The highest district rates were 45'94 in Goalpara, 44'51 in Noakhali and 44'34 in Malda; the lowest 33'52 in Sibsagar, 33'14 in Lakhimpur and 32'55 in Sylhet. In rural areas the mean birth rate was 37.74 per thousand compared with 20'73 in the towns among which rates varied from 48'90 in Barpeta to '95 in Jhalakati. These two towns, the provincial Sanitary Commissioner remarks may be taken as types of opposite social conditions. Barpeta is a residential town where the female population at child-bearing ages is in slight excess of the male population at corresponding ages; there is little immigration or emigration and the number of foreigners is small. The birth rate per thousand of married women at child-bearing ages is 307 per thousand. Jhalakati, like most of the riverine towns in Eastern Bengal, is a centre of trade and few of the traders have their wives with them. The proportion of males to females is as ten to one, the birth rate among the married women is 46'11 per thousand, and the birth rate per thousand women at the child-bearing age is only 5'78 per thousand.

The mean percentage of male to female births throughout the province was 107, the extremes in the districts being 120 in Bogra and 102 in Lakhimpur.

The number of deaths registered was 944,335 equal to a death rate of 31.67 per thousand which is 3'39 less than the rate of 1905 and almost exactly the same as the quinquennial mean. The highest district death rates were 48.88 in Goalpara, where 35.80 per thousand deaths were ascribed to fever and 6.45 to cholera, 47.84 in Darrang, where the cholera death rate was 16.76 per thousand, and 44.84 in Dinajpur, where all but 3.62 per thousand of the deaths were recorded under the heading 'fever'. The lowest rates were 25'60, 25'53 and 23'22 registered respectively, in Mymensingh, Pabna and Sylhet. In rural areas the mean death rate was 31.83 compared with 24.15 in the towns, among which the highest rates were 85.79, registered in Mangaldai, a village in which more than half the deaths were due to cholera; 56'21 in Barpeta, where a death rate of 33'09 was due to the occurrence of small-pox among a community that have religious objections to vaccination; and 47'94 in the small town of Jorhat, where besides an exceptionally high death rate under the heading 'all other causes,' cholera and bowel complaints gave rise to death-rates of 5'51 and 5'86 per mille, respectively. The lowest rates were 10'90 in Pabna, 7'39 in Sirajganj and 5'73 in Jhalakati.

The highest death rate was 49.69 among 'other classes.' Hindus came next with 32.36, then Muhammadans 30.65, then Christians 23.91 and lastly Buddhists, 23.12; the vast majority of the Buddhists in the province live in the Chittagong district where the recorded death rate among them was only 1.6.

Male infants died at the rate of 205'9 and female infants at the rate of 187'7 per thousand born, respectively; and boys and girls over one year and under five years of age at the rates of 45'68 and 38'76. At all age periods, except the three between 15 and 40, the male death rates were the higher, the general rates being 32'59 and 30'71 among males and females, respectively.

Assam during the twelve months ending the 30th June 1907 was 680,772, showing an increase in the 12 months of 9,809. Of the total labour force 38.75 per cent. was employed in the Surma Valley and 61.25 per cent. in the Assam Valley, the distribution approximating closely to that of the preceding year. The birth rate showed a decrease being 28.3 per thousand of the total population and 91.8 per thousand of the adult female population against 29.2 and 94.7 per thousand, respectively, in 1905-06. These rates compare unfavourably with the corresponding provincial ratios of 37.38 and 122.7.

The registered death-rate was 22'0 per mille compared with 24'0 in the preceding year, the total number of deaths being 15,007. The principal causes of deaths were dysentery (2,769), malarial fever (2,204), diseases of the respiratory organs (1,805), anchylastomiasis (1,668) diarrhœa (1,628), and cholera (1,164).

The death rate among coolies from all recruiting areas except Madras showed a slight decrease. The mortality among coolies from that province increased from 26.64 to 30.88.

The number of unhealthy gardens, i.e., those with a death rate of over 70 per mille, was 8 out of a total of 748, against 10 out of a total of 757 in the previous year.

There were 98 deaths among coolies travelling to the Assam Valley, against 58 in the previous year; 73 of these deaths were due to cholera. No deaths were reported among coolies in transit to the Surma Valley or at the Sylhet depots.

82. The number of births registered was 1,918,425, or 48,584 fewer than in 1905, unlted Provinces.

and the birth rate, which averaged 44.25 per thousand in the previous five years and was 41.24 in 1905, fell to 40.22. Among the district birth rates the highest were 54.42 in Bijnor, 53.62 in Pilibhit and 53.33 in Shahjahanpur; in other five districts, comprising the remaining districts of the Rohilkhand division and Hardoi and Kheri, the rates were over 50 per mille, and in other six they were over 45, while in only two districts, Dehra Dun, 28.13, and Ballia 27.74, were they below 30. In the 89 municipal towns the mean birth rate was 39.30, and in only 31 of them were the birth rates higher than the death rates.

The mean percentage of male to female births was 108'72; in three districts Dehra Dun 124'29, Banda 115'31 and Ballia 113'03, the percentages were exceptionally high, elsewhere they ranged from 112'46 in Muttra to 103'06 in Amora.

The number of deaths recorded fell from 2,098,300 in 1905 to 1,863,336 in 1906, and the death rate from 44'00 per mille to 39'07, compared with the quinquennial mean of 36'36. The decline of 4'93 per thousand in the death rate as compared with 1905 was almost entirely due to the lessened prevalence of plague from which the death rate fell from 8'05 to 1'46; cholera and fevers were much more prevalent than usual.

Among the districts the highest death rates were 80.75 in Jalaun, 73.34 in Jhansi, and 65.21 in Hamirpur, adjoining districts in the south of the province in which cholera and fevers were exceptionally severe. In three districts Partabgarh 29.98, Almora 28.40, and Dehra Dun 26.63, the death rates were under 30 per mille.

In rural areas the mean death rate was 38'31 compared with 49'15 in the towns, in which the rates ranged from 111'95 in Nagina and 88'20 in Najibabad to 24'78 in Sardhana.

Hindus and Muhammadans died at the rates of 39'33 and 38'52 per thousand, respectively, and 'other classes' and Christians at the rates of 13'77 and 11'41.

Male infants died at the rate of 249.7, and female infants at the rate of 252.2 per thousand born, respectively; and boys and girls between one year and five years of age died at the rates of 78.16 and 78.40 per thousand of the census populations at those ages. In the four age periods between 10 and 40 years the female death rates were the higher, in all other age periods the male death rates were the higher, the general rates being 38.72 per thousand among males and 39.44 among females.

83. During the first quarter of the year the temperature was lower than usual, and in February and March the rainfall was exceptionally heavy. April and May were hotter and drier than usual, and in June, although the rainfall in the hills was very abundant,

precipitation on the plains was below normal. The monsoon rains on the plains were scanty in July, which was abnormally hot, but were copious thereafter. The weather of the last three months of the year was dry and warm. The prices of food grains which, on account of the demand from other provinces, were high in the beginning of the year, fell when the prospects of the spring harvest were assured, and reached normal rates towards the end of the year.

The number of births registered in 1906 was 878,006, compared with 893,360 in the previous year, and the birth rate fell from 44'4 per thousand to 43'7 which is, however, 2'1 per thousand higher than the quinquennial mean. The highest district birth rates were 53'7 per mille in Lyallpur—Chenab Colony, 49'8 in Multan and 48'2 in Sialkot, and the lowest 34'7 in Rohtak, where there was scarcity in the end of 1905 and beginning of 1906, 33'9 in Dera Ghazi Khan and 20'0 in Simla. In rural areas the mean birth rate was 43'9 against 40'0 in the towns. The mean percentage of male to female births was 109'7, the percentages, omitting the exceptional percentage of 121'9 in Dera Ghazi Khan, ranging in the districts from 115'7 in Mianwali to 104'3 in Simla.

The recorded deaths numbered 742,906, no less than 213,202 fewer than in the previous year, the reduction in the number being due to the diminished prevalence of plague from which the recorded number of deaths fell from 390,233 in 1905 to 104,863 in 1906. The death rate from all causes was 36'9 per mille, compared with 47'6 in the previous year and 45'2, the mean of the previous five years. Among the districts the death rate varied between 49'7 per thousand in Sialkot and 24'2 in Simla. The mean rural death rate was 36'08, compared with 44'73 in the towns among which rates ranged from 89'23 in Zira, a small plague-stricken town in the Ferozepore district, 81'91 in Bhiwani where the death rate from plague was 36'42, and 79'43 in Sangla, a small town in Gujranwala where plague was present and the death rates recorded under the heading fevers and all other causes were exceptionally high, to 9'6 in Khangah Dogran in Gujranwala.

Hindus and Muhammadans died at the rates of 37.51 and 36.42 per thousand, respectively, and other classes and Christians at the rates of 77.19 and 30.57.

Calculated upon the births registered during the year the death rates of infants were 230'2 and 240'1 per thousand among males and females, respectively. Boys and girls between the ages of one year and five years died at the rates of 70'23 and 76'94, respectively; and at all other age periods the female death rates were the higher—the general death rate among males being 34'7 and among females 39'5.

84. The number of births registered rose from 70,369 in 1905 to 76,834 and the birth rate from a mean of 33'2 per thousand in the five years ending 1905, and 35'4 in that year, to 38'6 which is the highest rate hitherto recorded. Allowance being made for the increase in the population since the date of the census, it appears that the rise in the birth rate is largely due to improved registration. The special measures for the check of registration carried out during the last three years were continued and show that although the proportion of male to female births is very high, it is possibly exaggerated by defective registration. In the districts the birth rates ranged from 46'1 in Kohat to 36'2 in Dera Ismail Khan, and the percentages of male to female births from 129'7 in Peshawar to 108'8 in Hazara, the provincial mean being 118'8.

The deaths registered numbered 67,149 or 13,822 more than in 1905, and the death rate was 33'7 per thousand compared with 26'8 in 1905 and a quinquennial mean of 25'6. The autumn was very unhealthy, the monthly death rates reaching 5'16 and 5'80 per mille in November and December, respectively. In the districts the death rates ranged from 44'2 in Dera Ismail Khan to 31'9 in Peshawar and in Hazara. In rural areas the mean death rate was 33'50, compared with 36'28 in the towns, among which exceptionally high rates were recorded in Buffa, 52'21, of which 36'14 were attributed to fevers, in Haripur, 50'91, of which 9'14 were registered as due to respiratory diseases, and in Lakki, 47'14.

The Muhammadan death rate was 34'35 compared with a rate of 27'84 among the Hindus who number about one-fifteenth of the population.

Male infants died at the rate of 224.5 per thousand born during the year and female infants at the rate of 224.7; and boys and girls between the ages of one year and five years died at the rates of 67.02 and 72.82 per thousand of the census populations at those ages. At all age periods the female death rates were higher than the male death rates, the general rates of the sexes being 31.7 among males and 36.0 among females.

85. The drought in the last quarter of 1905 followed by heavy showers and hail in February caused some damage to the rabicops; but the monsoon broke early in June and the abundant well distributed rainfall ensured a good supply of food grains. The heavy rainfall, however, was followed by an unhealthy autumn, and mortality was high in August, September and October.

The number of births registered was 614,616, and the birth rate was 51'72 per thousand, compared with 54'02 in 1905 and a five years average of 45'83. In three districts the rates were 60 per cent. or over, namely, Betul 62'78, Nimar 60'46 and Chhindwara 60'0, and in only one district, Jubbulpore, 44'91, was the rate below 45. In rural areas the mean birth rate was 52'94 compared with 41'13 in the towns, the rural rate being the higher in every district except Amraoti. The provincial percentage of male to female births was 104'52, the extremes being 109'58 in the Burhanpur and 102'66 in the newly formed district of Drug.

The registered deaths totalled 516,613, and the death rate was 43'47 per thousand compared with 37'21 in the previous year and 31'33 the quinquennial mean. In the districts the death rates ranged from 64'38 in Yeotmal to 30'0 in Raipur, the mean death rate in rural areas being 42'71 compared with 50'01 in the towns. Among the latter the enormous death-rate of 220'59 per thousand was registered in a small town in the Nagpur district called Kalmeshwar, where more than 12 per cent. of the inhabitants died of plague and more than one per cent. from cholera. The two next highest urban death rates were registered in the same district, in Saoner 133'13 and Kamptee 95'55, in both of which plague was very severe.

The death rate of male infants was 292'16 and of female infants 266'35 per thousand born, respectively. The general death-rate among males was 55'58 per thousand compared with 41'41 per thousand among females.

86. The number of births registered was 1,125,978 or 50,278 fewer than in 1905, and the birth rate of 1906 was 30'9 per thousand compared with 32'0 in 1905 and 29'4, the quinquennial mean. Among the districts the rates ranged from 37'6 in South Canara

to 20.4 in Nellore; the rates in 16 of the districts being lower than in the previous year, a result which is ascribed to the continued high price of food grains. In rural areas the mean birth rate was 30.7 or 1.7 per thousand less than the mean of the populations of the towns among which by far the highest birth rate was 61.7 in Vaniyambadi, the rates elsewhere varying between 50.5 in Dindigul and 4.1 in Rajempet.

The percentage of male to female births was 104'4, the percentages in the different districts varying between 106'5 in Ganjam and 101'3 in Kurnool.

The registered deaths numbered 998,391 or 212,268 more than in 1905, and the death rate which averaged 21 5 per mille in the previous five years and was 21 4 in 1905, rose to 27 4. Cholera, small-pox, fevers, dysentery and diarrhœa and respiratory diseases were all more prevalent than usual. Among the district death rates, the highest was 46 9 recorded in Madras, where dysentery and diarrhœa were specially rife and the death rate under the heading all other causes was nearly double the presidential mean; elsewhere the rates ranged from 34 3 in the Nilgiris to 22 0 in Nellore. The mean rural death rate was 26 6 per thousand compared with 33 4 in the towns, among which the highest death rate was 77 5 recorded in Suluru, a town in Vizagapatam in which the death rate from cholera was 50 2 per thousand. The death rates in the other towns ranged from 56 9 in Narasannapeta to 6 1 in Gobichettipalayam.

Among Muhammadans and Hindus the death rates were, respectively, 28.1 and 27.5 per thousand, and among Christians and 'other classes,' 23.6 and 16.2.

Male and female infants died at the rates of 200°0 and 182°1 per thousand born, respectively, and boys and girls between one year of age and five at the rates of 38 8 and 36°7 calculated on the census population. At all age periods except 15-20 and 20-30 the male death rates were the higher, the rates for the sexes being 28°2 among males and 26°5 among females.

Coorg. per thousand compared with 25.31 in 1905 and 23.31, the quinquennial mean. The rates ranged from 39.97 in Padinalknad to 20.37 in Mercara, the percentage of male to female births being 107.47 in Mercara and varying elsewhere between 98.27 in Kiggatnad and 94.24 in Padinalknad.

The registered deaths numbered 5,285 and the death rate which had fallen, from a quinquennial mean of 29.57 per thousand to 26.24 in 1905 rose to 29.26, the district rates ranging from 33.36 in Nanjarajpatna to 23.69 in the Kiggatnad, the mean in rural areas being 28.59 against 36.59 in the towns.

Male and female infants died at the rates of 247'0 and 232'7 per thousand born, respectively. The male were higher than the female death rates in all age periods except 5-10, 15-20, 20-30 and 30-40, the rates of the sexes being 28'68 and 29'99 per thousand among males and females, respectively.

88. The scanty rainfall and the consequent failure of crops resulted in high prices of food grains amounting to scarcity in certain of the Deccan districts, but fortunately the rains of 1906 were abundant and well distributed, so that prices fell although they continued at a higher level than normal until the end of the year.

The number of births registered was 625,486, and the birth rate was 33'84 per thousand, compared with 33'07 in 1905 and a quinquennial mean of 31'75. By far the highest district birth rate was 52'47 per thousand recorded in Khandesh; in the other districts of Bombay proper the rates ranged from 46'72 in Nasik to 30'0 in Ratnagiri. In the urban district of Bombay the birth rate was 26'96, and in the districts of Sind the rates ranged from 24'67 in Sukkur to 16'63 in Hyderabad. The mean percentage of male to female births throughout the presidency was 107'60; but while in the Bombay districts the highest percentage was 112'0 in Kaira and the lowest 101'79 in Kanara, in the Sind districts the lowest percentage was 114'71 in Karachi and the highest 137'45 in Hyderabad.

The recorded deaths numbered 648,019 compared with 588,394, and the death rate was 35'06 per thousand as compared with 31'84 in 1905 and a mean of 38.66 in the five years ending with 1905. There was a further decline of 1.07 per mille in the plague death rate, but cholera, fevers and bowel complaints were more prevalent than usual. Among the districts the highest death rate was 68'98 in Bombay City where plague was again epidemic and caused a death rate of 14'20 per thousand. In the Poona district the death rate was 50'84, including high rates, from plague, cholera and bowel complaints; the next highest rates were 43'04 in Ahmedabad and 40'71 in Nasik, in the former the fever death rate was very high and in the latter the death rates from cholera and from 'all other causes' were exceptionally high. The lowest district death rates were 23'67 in Thar and Parkar, 21'56 in Hyderabad and 21'39 in Ratnagiri. In rural areas the mean mortality was 32'25 compared with a mean of 53'76 in the towns, in which, excluding the exceptional death rate of 103'56 in Poona, where plague caused 7,319 deaths equal to a rate of 60'72 per thousand, the rates ranged from 75'77 in Viramgam to 12'29 in Ahmednagar Cantonment and 8'75 in Ahmedabad Cantonment.

Among the sects Christians had the lowest death rate, 24'96 per thousand, and 'other classes' the highest, 78'51; the other rates being Hindus, 36'64, Muhammadans, 29'26, Parsis, 27'29 and Jains, 26'15.

Male infants died at the rate of 226.0 and female infants at the rate of 214.17 per thousand born, respectively; and boys and girls between the ages of one and five years died at the rates of 63.53 and 62.10, respectively. The male death rates were the higher in all age periods except 5-10, 10-15, 15-20, and 20-30, the general rates being 35.26 among males and 34.85 among females.

89. The prices of food grains were higher than usual, partly on account of damage by rain to the crops after reaping, but mainly on account of large exports to India; there is, however, no evidence that the high prices exercised any influence on the vital statistics.

The number of births registered was 180,025 and the birth rate was 32'33 per thousand, considerably lower than the rate registered in the previous year, 34'34, and slightly lower than the quinquennial mean. In only three districts, Mergui, 43'45, Sandoway, 42'67, and Tavoy, 41'91 were the birth rates over 40 per thousand, and in five, Kyaukpyu 29'88, Maubin 28'35, Amherst 28'17,

Akyab 26.46, and Rangoon 17.16 they were below 30. The mean birth rate in rural areas was 33.28, compared with 25.80 in the towns, but the mean urban birth rate is reduced by the very low rates prevailing in Rangoon, Moulmein and Akyab, where there are large floating coolie populations; excluding those towns, the urban birth-rate was 33.52. The percentage of male to female births was 107, the percentage varying greatly in the different districts—in Myaungmya where 8,523 births were registered, it was 120, and in the neighbouring district of Henzada where the births recorded aggregated 16,520, it was 99; in the Arakan districts the percentages were 113 in Sandoway and 111 in Akyab and in Kyaukpyu.

The number of deaths recorded was 151,193 and the death rate was 27'15 compared with 24'93 in 1905 and a quinquennial mean of 22'83, the increase in mortality being shared by all the registered causes of death. The highest death rate was 47'57 in the Rangoon town district, in the other districts the rate ranged from 40'35 in Thayetmyo to 17'43 in Tavoy. In rural areas the mean death rate was 24'89 compared with 42'59 in the towns in which the rates varied between 65'34 in Myanaung which suffered severely from plague and cholera, and 17'22 in Sandoway. The death rate among Hindus was 35'37 per thousand, their high rate being due to exceptional mortality among them in Myaungmya, Rangoon and Prome; among the Burmese the death rate was 26'88, among Muhammadans 25'59, among Christians 19'14 and among 'other classes' 32'64.

Male infants died at the rate of 236.5 and female infants at the rate of 188.7 per thousand born, respectively; and boys and girls between one year and five years of age died at the rates of 34.25 and 30.62 per thousand of the census populations at those ages. In all age periods the recorded male death rates were higher than the female death rates—owing probably to the large number of male coolie immigrants in the population. The mean male death rate was 28.63, the female rate 25.45.

90. The registration of births is still limited to certain towns—thirteen in 1906, in which the birth rates ranged from 39'22 in Taungdwingyi to 28'58 in Meiktila, and the percentages of male to female births from 128 in Salin and Yamethin to 88 in Monywa.

Death registration is general, and the number of deaths recorded in 1906 was 76,493, equal to a death rate of 26'22 per thousand compared with 22'46 in 1905, and 19'84 the five years' mean. In the districts the rates varied between 43'59 in Mandalay and 18'35 in Sagaing, the mean in rural areas being 23'41 and in towns 50'42. At all age periods except 20-30 and 30-40, the male death rates were the higher, the mean death rates being 27'68 among males and among females 24'91 per thousand.

91. The registered births numbered 13,789 against 17,802 in 1905, and the mean birth rate which was 30.51 per thousand in the five years ending 1905 and was 37.32 in that year, fell to 28.91 in 1906, the rates having been 33.65 in Merwara and 27.50 in Ajmer.

The deaths recorded aggregated 15,367 and the death rate was 32.22 or 2.03 per thousand less than in 1905 and 91 more than the quinquennial mean. The registered death rate in Ajmer was 33.74 and in Merwara 27.11. In rural areas the mean was 27.75 compared with 44.21 in the towns among which the rates ranged from 70.94 per thousand in Ajmer suburb to 31.65 in Nasirabad.

The death-rates among infants were 317'5 and 317'9 per thousand born among males and females, respectively. Boys and girls over one year of age and under five died at the rates of 135'82 and 145'70 per thousand of the census populations at those ages. In the age period 5-10 the male death rate was slightly higher than the female, and in the age periods over 40 the male rates were considerably greater, but at all other age periods females died at a greater rate than males, the general rates among the sexes being 31'38 and 33'16 among males and females, respectively.

### SECTION VI.

# GENERAL POPULATION.

HISTORY OF THE CHIEF DISEASES.

92. The accompanying table shows at a glance the number of deaths, and the

Yei	ire.	Cholera.	Small- pex.	Fevers,	Dysentery and Diarrhees.	Plague.	All causes.
1901	{	274,126	115,443	4,979,751 18'95	235.750 1'04	455,075 2°02	7,117,136
1903	{	312,854	, 93,693	4,450,237	273,459	686,485 3 93	7,831,125
1904	{	192,535	55,932	4,093,981	240,655	940,609	7,435,472
1905	{	441,086 1'95	70,952	4,417,655	254,124	940,821	8,117,771
1905	{	690,510 3'05	109,581	4-452,842	298,117	300,355	7,852,330

death rates per 1,000 of population recorded in British territory in India during each of the five years from 1902 to 1906. On comparing the figures for the year under review with those for the previous year it will be seen that in 1906 there was a considerable increase in the number of deaths attributed to cholera, small-

pox, fevers, and dysentery and diarrhoea, but that the number of deaths recorded as due to plague was only about one-third of the number recorded in 1905, and that from all causes taken together there were recorded in British territory 265,441 fewer deaths than in 1905.

93. The number of deaths from cholera recorded in British territory during 1906 was 690,519, equal to a death rate of 3'05 per Cholera in India im 1906. Appendix A to Section VI. 1,000 of the total population under registration. If the deaths recorded in the Native States from which returns were received are added (Statement 1), the total amounts to 713,664. In the previous year 441,786 deaths from cholera were recorded in British territory, giving a ratio of 1'96 per 1,000 of population, so that during the year under review cholera was more than one and a half times as prevalent as in the previous year. This increase in mortality during 1906 was shared by all the British provinces except Eastern Bengal and Assam and the North-West Frontier Province. The greatest numbers of deaths from the disease during the year were recorded in Bengal, the United Provinces, the Madras Presidency, and Eastern Bengal and Assam. In Eastern Bengal and Assam 34,034 fewer deaths from this disease were recorded than in 1905, but in the Central Provinces 38,768 deaths were reported as compared with 1,217 in 1905, in Madras 142,811 as compared with 16,888, and in Bombay 46,119 as compared with 5,396. The highest death rates were recorded in Madras, Bengal, Eastern Bengal and Assam, the Central Provinces and Berar and the United Provinces, and in all provinces except the Punjab and Bombay, cholera was prevalent throughout the year. As usual the seasonal prevalence of the disease did not correspond in the different provinces: in Bengal and Bombay the greatest number of deaths occurred in April, in Eastern Bengal and Assam in January, in the United Provinces in May, and in the Punjab, the Central Provinces, Madras and Upper Burma in August : and fewest deaths occurred in February in Bengal, in September in Eastern Bengal and Assam, in January in the United Provinces and the Central Provinces, and in March in Madras.

94. In the issues of this report for 1904 and 1905 brief summaries were given of the important researches carried out in Recent investigations. Egypt and elsewhere with reference to certain vibrios isolated from the intestinal contents of pilgrims to Mecca who had died from diseases other than cholera. Investigation and discussion have been concerned chiefly with the problem whether these vibrios-now generally known as the "Tor vibrios"-are or are not true cholera vibrios. Bacteriologists are not in agreement as to the correct answer to this question. It will be remembered that Gotschlich, who was the first to work systematically at the subject came to the conclusion, from a consideration of their morphological, cultural, and biological characters, as well as for epidemiological reasons, that the Tor vibrios are true cholera vibrios; and Kolle and Meinicke as well as Mühlens and von Raven arrived at the same view'. On the other hand Kraus and his coworkers' reported that the Tor vibrios possess certain hæmolytic and toxin-forming properties which, it was said, are not possessed by the true cholera vibrios, and they concluded for this reason that the Tor vibrios must be regarded as distinct from the true cholera vibrio and must be placed in a special group. Gaffky, Pfeiffer, Gotschlich and others did not agree with the view of Kraus'. Subsequently Dr. M. A. Ruffer in a review of the researches into the bacteriological diagnosis of cholera carried out by medical officers of the sanitary, maritime and quarantine council of Egypt, advocated the correctness of Kraus's conclusions and stated definitely his opinion that the Tor vibrios are not true cholera vibrios. More recently Neufeld and Haendels have investigated the hæmolytic and toxin-forming properties of the Tor vibrios and of true cholera vibrios and have come to a conclusion entirely different from that of Ruffer; they consider that the Tor vibrios are true cholera vibrios. It is unfortunate that the different workers are not of one opinion about this matter because on the one hand, if the Tor vibrios are not true cholera vibrios it must be concluded that the bacteriological methods hitherto employed for the diagnosis of the cholera vibrio are not adequate for the purpose, and on the other hand, if the Tor vibrios are true cholera vibrios it must be concluded not only that under certain conditions the cause of cholera, like that of typhoid fever, can remain in apparently healthy human beings much longer than has been thought possible hitherto, but that "cholera bacilli carriers" are not necessarily dangerous to the community.

cs. In Bengal in 1906 the total number of deaths recorded as due to cholera was 192,596 or 3.81 per mille of the popu-Cholera in Bengal. lation, as compared with 146,339 or 2'93 per mille in 1905 and 116,490 or 2'33 per mille, the average figures for the five years 1901-05. Excepting the year 1900, the mortality from cholera during 1906 was the highest ever recorded, and no district entirely escaped. The disease assumed an epidemic form in 123 registering circles against 104 in 1905 and caused a death or deaths in 21,365 villages (excluding those in Sambalpur) as compared with 18,652 in that year. The highest mortality was recorded in the district of Purnea where 17,579 of the inhabitants (equal to a ratio of 9'37 per mille of the population) died from this cause; next in order came Bhagalpur with 17,190 deaths (8:23 per mille), Champarun with 12,328 (6:88 per mille), Khulna with 7,867 (6.27 per mille), Balasore with 5,627 (5.25 per mille), Cuttack with 10,789 (5.22 per mille), Gya with 10,069 (4.88 per mille), Midnapore with 13,406 (4.80 per mille), Birbhum with 4,207 (4.66 per mille) and Howrah with 3,959 (4.65 per mille). Ranchi continued to be almost free from the disease and its

comparative immunity is attributed to the population being scattered over a large area and to the good natural drainage existing in most parts of the district; also in the districts of Singhbhum, Palamau, and Darjeeling the mortality from cholera was low.

Disinfection of wells with permanganate of potash was carried out in about 16 districts where cholera prevailed, but in some districts the inhabitants were opposed to the measure and it was carried out with difficulty. It is said also that in Purnea the people refused to drink the water of wells which had been treated, so that in this place disinfection had to be stopped. It appears that some villages where the measure was thoroughly carried out were completely free from cholera, although the disease was prevalent in neighbouring districts.

The highest death rates from cholera recorded in towns were 14:39 per mille in Meherpur in the Nadia district, 14:02 in Sitamarhi in the Muzaffarpur district, 12:65 in Hazaribagh, 12:46 in Baduria, in the 24-Parganas, and 12:40 in Nadia. In rural areas the highest death rate, 37:46 per mille, was recorded in Raniganj.

Among the European seamen of the port of Calcutta there were three deaths from cholera; and there were 48 among the native floating population.

of. The number of deaths attributed to cholera in Eastern Bengal and Assam during 1906 was 108,278, equal to a ratio of Cholera in Eastern Bengal and Assam. 9.63 per thousand of the census population, as compared with 142,312 deaths or a ratio of 4.77 per mille in 1905. January was the month of greatest prevalence, as a result of the continuance of the epidemic of the previous year, and in most districts the prevalence, diminished considerably as soon as the rainy season began. The highest death rates were recorded in the Kamrup and Darrang districts, namely, 21'15 and 16'76 per mille of population, respectively. The provincial Sanitary Commissioner reports that there is a great scarcity of drinking water in some parts of the Kamrup district and that in more than 50 villages which the Civil Surgeon visited the immediate cause of the outbreak was found to be the drinking of contaminated water. The Civil Surgeon of this district reports that the people are beginning to realise the necessity of having good water for drinking purposes and that applications for grants-in-aid to improve existing water-supplies and to sink new wells are numerous.

In towns the highest death rates were recorded in Mangaldai (43:60 per mille), Dhubri (19:79 per mille), and Pirojpur (9:91 per mille). A sum of Rs. 300 was allotted by the Sanitary Board to aid in improving the water-supply of Mangaldai and a new well is being constructed there by the Public Works Department. The epidemic in Dhubri was said to be due to the fact that the people who live on the banks of the Brahmaputra river obtain their drinking water from a part of the river where, as it is shut off from the main stream by a sand bank, there is no current; this part of the river is used as a harbour for trading boats and is much contaminated with fæces. The provincial Sanitary Commissioner does not think it desirable to sink wells in this place as the town is threatened with destruction by the river, but recommends that a temporary bridge should be erected across the area of slack water so that water for drinking purposes may be obtained from the main stream.

Permanganate of potash was largely used for the disinfection of water-supplies where cholera prevailed and almost all Civil Surgeons considered the measure to be of great value.

The death rate from cholera among the tea-garden population in the Assam and Surma Valleys was 2'35 per mille as compared with 2'14 per mille in 1905.

97. The total number of deaths from cholera recorded in the United Provinces during 1906 was 149,549, equal to a ratio of 3'14 per 1,000 of population, as compared with a total of 121,790 and a ratio of 2'55 in 1905. The average death rate of the preceding quinquennium was 1'07 per mille. The greatest number of deaths occurred in May and the smallest number in January. All districts suffered more or less, those with the highest death rates being Jhansi (13'70 per mille), Jalaun (11'50), Gonda (10'58), Kheri (10'24) and Hamirpur (10'02).

The highest death rates for this disease recorded in towns were 19'16 per mille at Mahoba (Hamirpur), 17'69 at Mubarakpur (Azamgarh), 17'16 at Rath (Hamirpur), 13'72 at Konch (Jalaun), 13'47 at Sherkote (Bijnor), and 13'23 at Lalitpur (Jhansi). Of the 106 towns with populations of 10,000 or more, no death from cholera was reported in 26, while in 25 of the remainder the number reported did not exceed ten.

The Kumbh Magh mela, which takes place once in 12 years, was held at Allahabad in January and February 1906. Cholera broke out on the 6th January and continued until nearly the end of the mela, causing altogether 333 cases with 267 deaths. At the Dikhauti fair at Hurdwar which took place on the 13th of April, seven cases of cholera and four of small-pox, all except one being imported, were reported during the week preceding the principal bathing day; but no secondary cases occurred and there was no epidemic of disease. No case of cholera was reported to have occurred at the Dadri fair at Ballia, or at the Garhmuktesar fair which was held in the Meerut district during November.

98. In the Punjab the total number of deaths recorded as due to cholera was 4,232 (0'21 per 1,000 of the population) against Cholera in the Punjab. 2,197 (0'11 per 1,000) in the previous year. More than one-third of the total number of deaths reported occurred in the Lahore district and about one-seventh in the Sialkot district. There are altogether 32,834 towns and villages in the province but a death or deaths from cholera were reported to have occurred in only 610, of which 319 are in the districts just mentioned. Rewari (113 deaths) was the only town out of those with a population of 10,000 and upwards in which the disease prevailed in a severe form, and among smaller towns the highest death rates registered were 7.89 and 5.16 per mille in Khem Karan (Lahore district) and Pasrur (Sialkot district), respectively. As usual the province remained practically free from the disease during the first four months of the year, but a rapid increase took place in July and the largest numbers of deaths, 1,537 and 1,225 respectively, were registered in August and September when cholera is generally at its maximum prevalence in the province.

99. In 1906 no case of cholera was reported to have occurred in this province. In the previous year 415 cases and 303 deaths were registered.

100. In the Central Provinces and Berar the total number of deaths recorded Cholera in the Central Provinces and as due to cholera in 1006 was 38,768, or 3.26 per mille of the population, as compared with a total of 1,217 and a ratio of 10 per mille in 1905. Of the total number in the year under review, 17,247 (equal to a ratio of 1.89 per mille of the population) were recorded in the Central Provinces and 21,521 (7.81 per mille of the population) in Berar. The probability that an epidemic of cholera would occur was anticipated in view of the occurrence in January of the Kumbh mela at Allahabad, and, as far as possible, precautions to guard against it were taken.

The districts in the Central Provinces where the inhabitants suffered most from cholera were Jubbulpore (3,374 deaths), Nagpur (2,964 deaths), Wardha (2,638 deaths), Bhandara (1,277 deaths), Narsinghpur (1,129 deaths), Saugor (1,119 deaths) and Drug (1,051 deaths).

In Berar the death rate from cholera (7.81 per 1,000 of the population) has only three times been exceeded during the last 35 years. There were recorded as due to this disease 7,791 deaths in the Yeotmal district, 5,277 in the Buldana district, 4,974 in the Akola district and 3,479 in the Amraoti district.

In general the origin of outbreaks in the province was attributed to importation of the disease from Allahabad, Puri, Ujjain, Nasik, and Pandarpur, but it is said that in many instances large tracts of country became simultaneously affected without it being possible to trace infection from outside. Among causes which influenced the unusual prevalence are mentioned the drying up of wells and tanks during the second quarter of the year and the consequent necessity of drawing water from polluted streams, the gathering together of large numbers of people in connection with the harvest, and, later in the year, excessive heat during a break in the rains, followed by unusually heavy rainfall. The vaccination staff as well as Assistant Surgeons and Hospital Assistants specially deputed distributed medicine in affected areas and disinfected the sources of water-supply with permanganate of potash.

as due to cholera, giving a ratio of 3'9 per mille of population, as compared with a total of 16,888 and a ratio of '5 per mille in 1905. Deaths from cholera were reported in all the districts of the Presidency but the disease was chiefly prevalent in the Kistna, Godavari, Kurnool, Ganjam and Tinnevelly districts, the death rates in them being 8'9, 8'3, 7'6, 6'4, and 6'2 respectively, per mille of population. In the Nilgiri district only 15 deaths were recorded, equal to a death rate of 0'1 per mille. The months of greatest prevalence were August and July, in which no less than 36,496 and 29,968 deaths, respectively, occurred, and the lowest numbers of deaths, 836 and 1,015, were recorded in March and April.

The highest death rates from cholera recorded in towns were 17.5 in Periyakulam, 15.5 in Palni and Nandyal, 12.1 in Ellore, 10.3 in Tinnevelly and 10.1 in Palamcottah; while Kodaikanal, Cannanore and Mangalore were free from the disease.

Permanganate of potash was, as usual, largely employed for the purification of polluted sources of water-supply.

cholers in the Bombay Presidency.

deaths, equal to a ratio of 2'50 per mille of population, as compared with 5,396 deaths or a ratio of '29 per mille in 1905. The mortality in 1906 has been exceeded twice only during the last twenty years, namely, in 1897 and 1900, both of which were years of famine. Of the 25 districts, all except Kaira were more or less affected, the highest death rates from this disease being recorded in Colaba (7'61 per mille of population), Poona (6'54), Nasik (5'34), and Thana (5'25). No death was reported to have occurred during January, and the highest mortality occurred during April and May when there were recorded 11,047 and 10,862 deaths, respectively.

Deaths from cholera were recorded in 42 of the 56 town circles in the Presidency, as compared with 11 in 1905; the highest rates per mille being 16'93 in Nasik, 12'79 in Wai (Satara), 9'45 in Athni (Belgaum), 8'41 in Ahmednagar, 8'37 in Junnar (Poona) and 8'30 in Pandharpur (Sholapur). In the City of Bombay 1,223 deaths were recorded as compared with 25 in the previous year.

The provincial Sanitary Commissioner reports that the outbreak in the western registration district was traced to the use of water from a pool which is the chief source of water-supply for a large number of the high caste inhabitants of Nasik. The water of this pool is also largely used by pilgrims and the place is regarded as sacred. Arrangements were made to have the infected pool emptied and cleaned out, but it is reported that as soon as the work was begun numbers of priests and Brahmins "drove the workmen away and refused to allow any interference with the sacred spot."

103. In Lower Burma during 1906 there were recorded as due to cholera 5,529

Cholera in Burma.

deaths, equal to a ratio of '99 per mille of population, as compared with 3,511 deaths or 63 per mille from the same cause in 1905. Deaths from cholera were recorded during each month of the year, but the highest number occurred in July and the lowest number in November. The highest death rates per mille of population recorded in districts were 5'91 (1,417 deaths) in Thayetmyo, 2'36 (668 deaths) in Maubin and 2'27 (1,100 deaths) in Henzada; in towns the highest death rates were 20'48 in Zalun, 8 84 in Yandoon, 8'33 in Toungoo, 7'74 in Lamyethna and 7'17 in Danubyu.

In Upper Burma the total number of deaths recorded as due to cholera during 1906 was 2,343, equal to a ratio of '80 per mille of population, as compared with 1,836 or '63 per mille from the same cause in 1905. The disease prevailed in every district. The highest number of deaths occurred in August and the lowest in February. In districts the highest death rates per mille of population recorded were 1'96 (686 deaths) in Mandalay, 1'45 (363 deaths) in Meiktila, and 1'43 (4,040 deaths) in Sagaing; in towns the highest death rates were 10'17 in Monywa, 6'80 in Meiktila and 6'22 in Sagaing.

104. In Ajmer-Merwara 284 deaths from cholera were recorded during 1906, giving a ratio of 60 per mille of population.

During the three preceding years no death from this disease had been recorded.

105. In Coorg ten deaths from cholera—one in October and nine in December—were reported during the year. This small province had been free from the disease during the four preceding years.

Small-pox. Table I of Appendix be seen that in British territory in India the death to Section VI.

Table I of Appendix be seen that in British territory in India the death ratio per 1,000 of population from small-pox rose from '31 in 1905 to '48 in 1906. The mean ratio for the quinquennial period from 1901-05 was '38 per mille. The total number of deaths recorded from this disease during 1906 was 109,583 against 70,962 in 1905 and 55,232 in 1904. The death rates during 1906 were higher than in 1905 in all provinces except the Bombay Presidency and Ajmer-Merwara, the increase being greatest in Bengal, the United Provinces, the Punjab, the North-West Frontier Province, Lower Burma and Coorg. The small-pox mortality recorded in towns was twice as high as that in rural areas; and the deaths of children under ten years of age amounted to 68'39 per cent. of the total number of deaths from this cause.

In Bengal the number of deaths from small-pox rose from 7,213 ('14 per mille) in 1905 to 22,206 ('43 per mille) in 1906; the mean death ratio during the quinquennial period ending 1905 was '49 per mille. With the exception of Champarun, Darbhanga, Muzaffarpur and Singhbhum there was a marked rise during 1906 in the mortality from this cause in every district. Among the districts with the highest mortality, Puri stood first with a death rate of 4'85 per mille of population, followed by Calcutta with 3'42 and Howrah with 1'63 per mille, respectively. A scheme for increasing the number of vaccinators in Puri has received the sanction of the local Government. In towns 4,438 deaths and in rural areas 17,768 deaths from small-pox were registered as compared with only 709 and 6,504, respectively, during the previous year. The Civil Surgeon of Burdwan states that in the rural areas of this district the Muhammadans suffered most, and he attributes this to their religious principles which enjoin them to visit patients of their own class suffering from small-pox and prevent the evacuation of infected houses.

In Eastern Bengal and Assam during 1906, small-pox was responsible for 6,972 deaths, equal to a death rate per mille of '23 against 4,723 deaths and a ratio of '15 per mille in 1905. The highest rates per mille of population in districts were reported from Kamrup (3'08), Darrang (1'30), and Goalpara (1'24). In towns the highest death rate (33'09) was recorded in Barpeta, the head-quarters of the Mahaparushiyas, among whom, it is said, small-pox is always prevalent because, on religious grounds, they object to vaccination.

In the United Provinces 13,202 deaths were attributed to small-pox in 1906 as compared with 3,273 in 1905 and 6,998 in 1904, the corresponding rates being '28, '07 and '15 per mille of population. The average rate for the quinquennial period was '16. Garhwal was the only district which was practically free from this disease during the year, the number of deaths recorded being four. The highest death rate in districts (2.66 per mille) was again recorded in Jhansi, and the next highest in Rai Bareli (2.02) and Jalaun (1.85). No death from small-pox was recorded in 35 of the 106 towns with a population of 10,000 and upwards, while in 50 the number did not exceed ten.

In the Punjab, 13,239 deaths from small-pox, equal to a ratio of 0.66 per mille of population, were registered during the year, as compared with 4,723 deaths and a ratio of 0.23 in 1905, and 0.48 the mean ratio during the preceding quinquennium. A death or deaths were recorded during 1906 in 4,252 of the 32,834 towns and villages in the province. Vaccination is compulsory in 26 towns and the death rate from small-pox in these was 1.25 per mille; in the towns where vaccination is not compulsory it was 1.58 per mille.

In the North-West Frontier Province the number of deaths recorded as due to small-pox rose from 571 ('29 per mille) in 1905 to 1,127 ('57 per mille) in 1906. Of the deaths recorded in 1906 no fewer than 1,071 were of children under ten years of age. The greatest number of deaths were recorded in December and the fewest in October. In the Peshawar district 969 deaths were recorded, in the Hazara district 71 and in the Kohat and Dera Ismail Khan districts 43 each, while in the Bannu district only one death was recorded. It is noteworthy that in the city of Peshawar—now the only town of any importance in the Province where vaccination is not compulsory—the death rate was 4.06 per mille of population, as compared with 0.07, 0.10, and 1.17, in the towns of Dera Ismail Khan, Bannu and Kohat, respectively.

In the Central Provinces and Berar there were 9,889 deaths from small-pox recorded during the year and of these 7,580 were of children under ten years of age. In the previous year 8,364 deaths from small-pox were recorded. In the year under review the disease was, as usual, chiefly prevalent during the hot season. Measles and chicken-pox were also prevalent during the same months and the provincial Sanitary Commissioner states that the reporting agents are apt to confuse the three diseases. The existence of plague is said to have interfered with the work of vaccination during recent years.

In Burma there was an increase in the prevalence of small-pox during the year, the total number of deaths recorded being 8,540 against 6,161 in 1905. Lower Burma was chiefly affected, 7,903 deaths, equal to a death rate of 1.42 per mille of the population, being recorded against 5,623 deaths and a rate of 1.01 in 1905. In Upper Burma the increase was very slight, there having been 637 deaths recorded, equal to a death rate of .22 per mille of the population, against 538 and a rate of .18 in 1905. The highest death rates were recorded in the Rangoon, Bassein and Hanthawaddy districts, all in Lower Burma.

In the Madras Presidency the number of deaths recorded as due to smallpox in 1906 was 29,840 (8 per mille of population) against 18,540 (5 per mille) in 1905. A death or deaths from the disease were registered in every district and in all except ten of the 61 municipal towns. The death rate in towns was somewhat higher than that in rural areas.

In the Bombay Presidency the number of deaths from small-pox recorded during 1906 was only 4,063 ('22 per mille of population) as compared with 16,985 ('92 per mille) in the previous year. Deaths were reported from 225 of the 287 registration circles in the Presidency, but the disease was especially prevalent only in the southern registration and Karachi districts where 1,395 and 308 deaths respectively were recorded. The months of greatest prevalence were March and April. Of the total number of deaths recorded about 64 per cent. occurred among children under ten years of age.

In Ajmer-Merwara 271 deaths ('57 per mille) from small-pox were recorded during 1906 as compared with 277 ('58 per mille) in 1905. In Coorg the number of deaths reported as due to this disease was 234 against 132 in the previous year.

107. The year 1906 was distinguished by a remarkable decline in the mortality from plague, the number of deaths recorded throughout the country falling from 1,143,933 in 1904 and 1,069,140 in 1905 to 356,721, the smallest total since 1901.

In the British provinces in 1904 the number of plague deaths registered was 938,010, and in the following year the number increased slightly to 940,821; in 1906 the total was 300,355, nearly the same as the number of deaths registered under the heading of dysentery and diarrhæa, and much less than half the number of deaths ascribed to cholera in the same areas in the same time. In 1905 the course of the epidemic was peculiar; the mortality during each of the first five months of the year was much greater and the mortality in the last seven months much less than the mortality in the corresponding months of the preceding year. In 1906 these relations were reversed; in the first eight months of the year the numbers of deaths were much lower and in the last four they were much higher than in the corresponding months of 1905. In the Native States the numbers of deaths aggregated 56,365 less than half the mortality recorded in 1905, the monthly totals in 1906 up to May being much lower and from June onwards considerably higher than in the preceding year.

The mean death rate from plague in the British provinces was 1'33 per thousand, compared with 4'17 in 1905; males suffered less than females, the death rates of the sexes being 1'25 and 1'40 per thousand, respectively. The decrease in plague mortality was common to all the greater provinces, but in the United Provinces, the Punjab and Bengal it was specially large. In Burma and the Central Provinces and Berar the mortality increased, and although the figures in Eastern Bengal and Assam and in the North-West Frontier Province remained low, the increase in the latter province from 3 deaths to 41, including 39 indigenous cases, was ominous. The small province of Coorg alone was entirely free from plague. In all the British provinces, except Eastern Bengal and Assam, the North-West Frontier Province, Ajmer-Merwara and Coorg, and in all the larger Native States plague deaths were reported in every month of the year. In Calcutta plague mortality fell from 7,372 deaths in 1905 to 2,606 in 1906, and in Bombay from 14,171 to 10,802, deaths occurring in both cities in every month of the year. In Madras the number of deaths rose from 22 to 56, deaths occurring in January, February, March and September.

108. In these Reports for 1904 and 1905 an account was given of the appointment in London of an Advisory Committee for the The Plague Commission. investigation of plague, of the appointment of a Commission to work under their direction in India, and of the earlier investigation carried out by the Commission. After continuous work for two years, when most of the problems set before them had been solved, the Commission was temporarily dissolved in May 1907. Reports of the investigations carried out by the Commission are being published by the Advisory Committee in special numbers of the Yournal of Hygiene. This method of publication, although offering many advantages, presents certain defects. The reports are not published continuously. and they are necessarily couched in technical language, so that however widely they may be distributed it is doubtful if they would be read or understood by a public that it is desirable to reach. In order to redress these defects Major Lamb. the senior member of the Commission, was authorized to prepare a summary of the work done by the Commission in the form of a continuous narrative. This summary has been published and widely circulated; but it is not out of place here to describe briefly the work done and the conclusions which appear to be permissible, referring readers for details to the original reports in the Journal of Hygiene and to Major Lamb's summary—The Etiology and Epidemiology of Plague.

109. A reference to the Reports for 1904 and 1905 will give some idea of what was known of the etiology of plague before the The state of knowledge when the Commission began their labours. Commission began their labours. It was generally recognized that the rat was a most important factor in the spread of bubonic plague, and attention had been attracted by the work done at the Plague Research Laboratory by Colonel Bannerman and Captain Liston. Captain Liston made the discovery that guinea-pigs could be used to trap fleas in plague-infected houses, and that many of the guinea-pigs used for this purpose died of plague; and he found the bacilli of plague apparently multiplying in the stomachs of some of the fleas caught on the guinea-pigs. It had been shown that healthy animals could live along with plague-stricken animals and not contract the disease, and that the life of the bacillus in earth taken from the floors of Bombay houses was comparatively short. Attempts had been made to convey plague from one animal to another by means of fleas, but these attempts failed.

110. The work of the Commission was carried on in Bombay City, in a few villages in its neighbourhood and in two villages in The work of the Commission. the Punjab, in all of which plague has been either continuously or intermittently prevalent since the beginning of the epidemic. In Bombay most of the houses, although large and high, are lightly built, masonry plinths are rare and most of the roofs are of country tiles. Between the houses are parrow passages in which there is communication with the sewers and stormwater channels. The huts in the villages near Bombay are of flimsy construction with earthen floors and tiled roofs. The houses in the Punjab villages are built of mud or sun-dried bricks, floored with earth and roofed with country tiles or earth. The houses in Bombay and the villages have this in common, they offer every facility for infestation by rats; in Bombay and in Parel village the sewers and storm-water drains afford additional asylums for them. Bombay City, stables, grain godowns and the like abound, and in the villages the people store their supplies of grain in their houses. In Bombay and the Punjab alike the people are tolerant of rats; and the rats fear man so little that they run about the houses freely even in the day time.

The Commission made arrangements to obtain as many rats as possible alive or dead. Living rats were examined to ascertain the number and kind of flea infesting them, and all rats were examined to ascertain the proportion attacked by plague. A record of particulars regarding all rats obtained was kept. The localities where plague-infected rats were found were noted for the purpose of determining the relationship between the disease in rats and in man.

The rats that carry plague. rat, and M. rattus, the black rat. The former is the more numerous in stables, godowns, storm-water drains and sewers, and in the ground floors of houses; the latter is essentially a house rat; both species meet on the ground floors of houses, but ascending the house black rats become more common and gray rats more rare. No gray rat was found higher than the third storey of a house. In the villages only the black rat is of impor-

tance so far as plague is concerned. It was found that both gray and black rats are infected and that the gray rat, probably on account of its larger size and consequent greater infestation by fleas, is attacked more frequently than the black rat.

112. In Bombay the year may be divided into an epizootic season, from December to May, and a non-epizootic season, The epizootic. from June to November inclusive; but throughout the non-epizootic season there was never a week when less than 20 plague-infected rats were examined at the laboratory. The Commission found that an epizootic among gray rats preceded the epizootic among black rats by about 10 days, and that it was the gray rat that spread the disease throughout the city while the black rat was mainly responsible for its distribution in the houses. In the villages plague among rats did not persist throughout the year and new outbreaks of the disease could be traced to fresh infections. In the two Punjab villages acute infection among rats apparently disappeared, and, although chronic plague was found in a few rats, it seems exceedingly unlikely that this can give rise to acute infection. It does not follow, however, because acute infection disappeared from the villages under the observation of the Commission that it disappears similarly from all villages : deaths from bubonic plague are recorded in nearly every province during the non-epidemic season and, as will be seen, the occurrence of bubonic plague in man is evidence of the presence of acute plague among rats.

The relation of the epizootic to the epidemic.

The relation of the epizootic to the epidemic period of about 10 days, so the epizootic among black rats preceded the epidemic by another interval of from 10 to 14 days. The relation of the epizootic to the epidemic in particular places was difficult to establish in Bombay City, but this was established in the Punjab villages; and it was found in Bombay City and in the villages that there was correspondence between the numbers of rats and human beings infected.

It was found that it was rare for more than one person in a house to be attacked, and that when more than one person was attacked, the attacks were as a rule nearly simultaneous.

The infection of plague. Fleas and do not infect healthy animals except when fleas are present; that plague can be carried from the sick to the healthy animal by means of fleas; and that the plague bacilli in grossly contaminated floors do not remain infective for more than 24 hours.\*

Infection by feeding.

nated material or by causing them to eat the carcasses of rats that had died of plague. When, however, infection was induced in this manner the site of the primary bubo in 72 per cent. of the cases was one of the mesenteric glands, and the neck glands were involved in only 29 per cent. of the cases, while the inguinal and axillary glands were practically never involved. When rats are naturally infected the distribution of bubos is quite different. The primary bubo in natural infection is generally in the neck (74 per cent. of cases), the axillary and inguinal glands are often affected (25 per cent.), and in no single instance among 6,000 naturally

infected rats examined after death, was the primary bubo found in the mesenteric glands.

- The multiplication of bacilli in the flea; but the proportion of infected fleas varies in different seasons of the year, being six times greater in the epidemic season than in the non-epidemic season. In the epidemic season the proportion of infected fleas was greatest (43 per cent.) during the first four days after removal from the infected rat. After four days the percentage of infected fleas rapidly fell, although 9 per cent. were found to retain bacilli in their stomachs up to the twelfth day.
- Mode of Infection by the flea.

  Mode of Infection by the flea.

  In the blood of an animal was not an easy one to solve. It was found that in the flea the presence of bacilli was limited to the digestive tract. The rectal contents and fæces of infected fleas are loaded with bacilli, and it was possible to infect an animal by means of the fæces through the wound inflicted by the pricker. Although infection by a single flea was possible, it seems that the chance of an animal contracting plague after being bitten by a single flea is remote. Both male and female fleas (P. cheopis) convey infection; and infection can be carried by P. irritans and Ceratophyllus fasciatus, but not apparently by P. felis.
- Rat-Beas and man when starved from 72 to 96 hours, but unless they were very numerous they would not bite man in the presence of their natural host the rat. It was found that rat-fleas might be attracted by man, jump on to his clothes, but not feed on him at once. The importance of this observation from an etiological point of view is obvious; an infected rat-flea may be carried on a man's clothing from one place to another and, without biting him, leave the man's clothing for a rat when an opportunity offers.

It was ascertained that rat-fleas could be kept alive for from three to four weeks when fed on human blood alone, and that rat-fleas deprived of all food never survive longer than seven days.

110. The most striking fact in the epidemiology of plague is its apparent dependence upon climatic variations; its disappear-The seasonal prevalence and persisance when the temperature becomes very high and its re-appearance when the temperature falls. How does the bacillus maintain an existence during the non-epidemic season, and what are the factors which influence the seasonal prevalence of the epidemic? We have seen that the life of the bacillus in the soil is comparatively short, and that plague in man is dependent upon plague in the rat. There is no reason to suppose that man harbours the bacillus after recovery from an attack of plague, and, although chronic plague does occur among rats, the development of acute plague from a chronically infected rat appears to be hardly possible. The only obvious way, then, in which the disease could be maintained during the non-epidemic season is by the occurrence of a chain of cases of acute plague among rats. In the cities of Calcutta and Bombay plague occurs among human beings throughout the year. and from different areas in all the widely-infected provinces deaths from plague are reported in every month of the year. If human cases derive their infection

from rats it follows that acute plague in rats must occur throughout the non-epidemic season, although the cases may not be numerous.

- India are not yet available, but it was ascertained by the Commission that in Bombay and the Punjab, although rats breed throughout the year, they breed most freely in the seasons between epizootics.
- Seasonal prevalence of fleas.

  Seasonal prevalence of fleas.

  Seasonal prevalence of fleas.

  Seasonal prevalence of fleas.

  Season of their greatest prevalence coincides in point of time with the epidemic of plague. The facts on which the prevalence of fleas depend have not been fully ascertained, but it has been found that a high temperature restricts their breeding, restraining the adult from laying eggs and delaying or preventing the development of eggs into larvæ.
- The effect of a high temperature plague in the stomach of the flea. It is cleared out of the bacillus in the flea. It is cleared out of the stomach more rapidly than when the temperature is lower, say, 70° F. At the high temperature fewer transmission experiments by means of fleas succeed, and the flea retains the power to infect for a shorter time than at the low temperature.
- The effect of a low temperature on when the temperature is low infected rats generally die of plague before the bacilli reach the blood, and thus fleas have few opportunities of ingesting bacilli.
- from rat to rat by means of the rat-flea; but it is contended that the evidence that plague is carried from rat to man by means of the flea is inconclusive. The direct proof is certainly wanting; but all susceptible animals on which experiments have been tried can be infected through the rat-flea, and apparently this is the means by which the disease is spread among animals in nature. The rat-flea will bite man under certain conditions, the very limitations of which seem to furnish additional evidence of the correctness of the flea theory in respect of man, because they explain satisfactorily facts of the epidemiology which are otherwise mysterious.

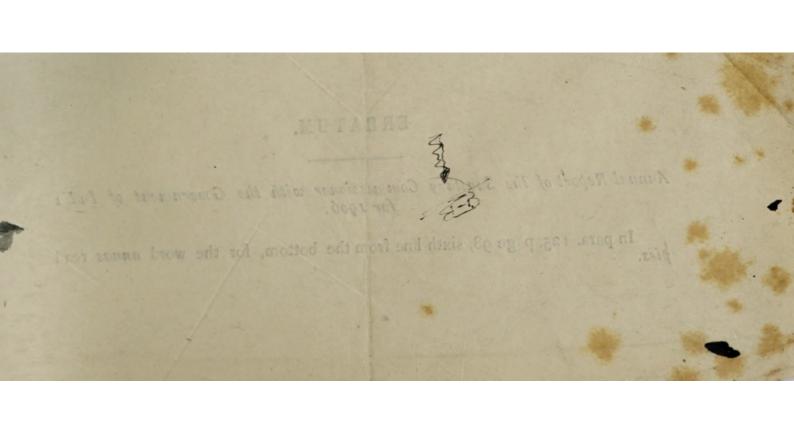
In the present condition of knowledge it must, I think, be accepted that bubonic plague is spread by infected rats, the vehicle of contagion between rat and rat and rat and man being the rat-flea; and that the life of the bacillus outside the bodies of animals and certain insects is of comparatively short duration.

Pneumonic plague is directly infectious from man to man by inhalation, but this form of the disease is rare and plays but a small part in the general spread of the epidemic.

125. The Director of the Bombay Bacteriological Laboratory reports that since January 1897 when the first doses of prophylactic vaccine were issued,
6,321,578 doses have been despatched from the laboratory and that of these doses

5,754,044 have been issued to medical men in India. The number of doses issued in 1906 was, however, only 176,651 as compared with 315,905 in the previous year. In all probability this decline was due to the greatly diminished prevalence of plague during 1906, for it is well known that the majority of natives are willing to resort to inoculation only when the disease is very severely epidemic among them. The decline has also been attributed to people having temporarily avoided inoculation in the hope that a less disagreeable method of protection from plague might be discovered by the Plague Research Commission, and it is said that now the results of the investigations of the Commission are known there are signs that inoculation will be resorted to more frequently. Further experience of the use of the vaccine by a large number of medical men has served to confirm the opinion as to the great value of the method in reducing the case-incidence and the case-mortality from plague, and during the year under review no untoward result from inoculation was reported.

125. The destruction of rats was carried out during 1906 to a greater or less extent in nearly all provinces where plague The destruction of rats. prevailed and there is considerable evidence that the measure can be undertaken without exciting the prejudices of any but a small minority of the people. Chiefly on account of the results reported in a campaign against rats carried out at Tokio in Japan attempts have been made to minimize the value of rat destruction as a means of preventing plague, but it is obvious that since bubonic plague is transmitted not from man to man but from rat to man every infected rat destroyed means the removal of a source of infection. There are probably few places where the extirpation of rats can be accomplished solely by official agency, but the efforts now being made are of educative value, and in the present state of our knowledge wherever the measure of rat destruction can be thoroughly carried out it should be adopted. In Bengal rat killing was vigorously carried out during 1906 in the districts of Monghyr and Saran, in the towns of Modhubani and Bhagalpur and in the circles of Monghyr and Jagadispur, 356,662 rats being destroyed in these localities. In five other towns less vigorous measures resulted in the destruction of 26,684 rats during the year. In Calcutta, where a reward of two annas was paid for each live rat obtained, more than 145,000 live and dead rats were collected during the year. A systematic and very energetic campaign extending from April 1905 until March 1907 has been conducted in the Jagadispur municipality and surrounding villages. As far as possible the operations were confined to an area of about 20 square miles, which included the municipality and nine villages, the population in the area being 20,501. The total number of rats killed during the period of the experiment is stated in the report of the officiating magistrate of Jagadispur to have been 1,409.351, of which 459,878 were killed in the municipality of Jagadispur which has a population of 11,451 people. The total cost of the operations (including the rewards paid for rats) is said to have been Rs. 25, 154-1-0 or nearly three and a half annas per rat killed. The operations appear to have banished plague from the municipality-there were 60 cases in 1902, 324 cases in 1903, 151 cases in 1904, and 99 cases before the operations commenced in 1905; from June 1905 until April 1907 there was no case. It is not stated in the report whether any approach to extermination of the rats was effected, but from the fact that during March 1907 nearly 50,000 rats were killed in the municipality



#### ERRATUM.

Annual Report of the Sanitary Commissioner with the Government of India for 1906.

In para. 125, page 98, sixth line from the bottom, for the word annas read pies.

and over 97,000 in the other parts of the area it does not appear that such was the case. In the Punjab, systematic operations for the destruction of rats were carried out during the plague season of 1906-07 in 8,650 villages and 70 municipal towns. In villages the use of poisoned baits was the method chiefly relied upon; in towns this method and trapping were employed. No figures showing the number of rats killed are given in the special report on the operations. but in the annual report of the provincial Sanitary Commissioner it is stated that during the operations carried out in the latter half of the season 1905-06 over one and a half million dead rats were found, and that for various reasons this number was considered to be only a small proportion of the actual number killed. It is said that in some places the results were unsuccessful because the inhabitants collected and threw away or buried the baits after they had been laid, but that these difficulties disappear as the staff and the people gain experience and that a second trial of the measure is usually accepted readily. The Inspector-General of Civil Hospitals remarks that "all reports agree that the mass of the people accept rat destruction and in many places even ask for it; in some the people do it themselves." In the Bombay municipality the campaign against rats, which had been begun in July 1905, was vigorously continued, 231,392 rats being collected during 1906 and sent to the Bombay Bacteriological Laboratory for examination. Of the 131,322 rats examined 18,572 or 14'14 per cent. were found to be infected with plague. The first of a series of specially organised campaigns was conducted in Fort North section of "A" ward early in 1907. The area of this section is '21 of a square mile and it was mapped out into divisions, circles, and blocks, each under the charge of one or more supervisors and inspectors. The residents were previously informed of the campaign by the distribution of handbills printed in English. Marathi and Gujrathi. The important feature of the campaign was that a very large number of baits (100,000 or more) were prepared beforehand so that on the evening when the operations were begun baits could be deposited in a very short time in all the gullies, culverts, drains and on the floors of houses throughout the area. On the next and following mornings search for poisoned rats was made. The cost of the experiment (excluding the cost of the poison) was Rs. 375, and 1,362 dead and living rats were collected. Similar campaigns are being carried out in other parts of the city. In Burma 4,366,869 rats were killed during 1906 at a cost of Rs. 253,260 or 11'1 pies per rat. An energetic campaign was conducted in the town and district of Sagaing, the population of the town being 9,643 and of the district 273,015. The provincial Sanitary Commissioner reports that up to the 31st of March 1907, 35,679 rats had been killed in the town and 2,047,612 in the district. In the Central Provinces and in Madras the destruction of rats by poisoning and trapping was largely practised.

127. The number of deaths registered as due to plague in Bengal fell from

126,084 in 1905 to 59,619 in 1906 and the death
rate fell from 2.52 per thousand to 1.51. Of
the 33 districts only 9 were entirely free from the disease, but in many
others the numbers of deaths were comparatively small. Mortality was, as
usual, highest in the districts of the Patna division, especially Patna (death rate
9.15 per mille) and Saran (6.44), in the urban district of Calcutta (3.07) and
Shahabad (3.01). Except in Calcutta, where the male death rate was considerably
the higher, and in districts in which very few deaths were recorded, females suffered

more severely than males, the death rates being 1'03 per mille among males and 1'31 among females. Nearly three-fourths of the municipal towns escaped, but many of those attacked suffered severely, notably Monghyr (death rate 48'94 per mille), Tikari (35'10) and Revelganj (29'49) so that the mean urban mortality from plague (4'94) was more than five times as much as the mean rural mortality ('92). The epidemic followed the usual seasonal distribution in Bengal—the numbers of deaths increasing steadily from January until March, a slight fall in April, followed by great falls in May and June; after the minimum in July a gradual rise until November followed by a considerable rise in December.

128. The immunity from plague enjoyed by this province was maintained, but during the year there were three outbreaks of Plague in Eastern Bengal and Assam. pneumonic plague resulting in 74 deaths. The details of the occurrence of plague in a region which has enjoyed immunity from the general epidemic are evidently of special interest. In March 1906, a man, said to have been employed in a jute mill near Calcutta, was travelling with two companions to his home in the Pabna district. On the steamer he died of pneumonic plague. His companions took his corpse on shore and carried it a distance of 5 or 6 miles to his village, where it was buried. Both men were attacked by pneumonic plague and conveyed infection to 27 other persons Of the 27 cases 24 died. In June there were two outbreaks in the Bajitpur thana of the Mymensingh district, both of which were due to importation from Calcutta. In the earlier outbreak there were 5 attacks and 5 deaths. in the later 50 attacks and 45 deaths. All were cases of pneumonic plague.

Since 1898 there have been eight outbreaks of plague in Eastern Bengal and Assam, including the three described and the outbreak in Dibrugarh in 1903. The provincial Sanitary Commissioner notes regarding them that "with the exception of the outbreak in Dibrugarh town, the epidemics all seem to have been of the same nature. They all occurred in typical Bengal villages, in which each homestead consists of a group of three or four huts built round an open square courtyard, surrounded by an ample compound and shut off from the neighbouring baris on all sides by a thick jungle of bamboos and palms." In every instance except the Dibrugarh outbreak, the first case came from Calcutta, the epidemics were "almost entirely of a pneumonic character," there was nearly always a history of direct infection from case to case, and whole families living in the same homestead died. At Dibrugarh, where the epidemic resembled those common in Northern India, the disease first appeared among rats, the cases were bubonic, and the number of persons attacked in any household was small. Enquiries regarding the distribution of rats in the Province are being carried out. Lieutenant-Colonel Hare, I.M.S., states that "rats are by no means common in the rural areas of the lower districts. The country is hardly above the flood-level of the tidal rivers and it is difficult for them to find food or migrate from one village to another."

129. The number of plague deaths registered fell from 383,802 in 1905 to
69,660, and the death rate from 8.05 to 1.46. Only
three districts—Almora, Jhansi and Hamirpur,
escaped altogether, but in seven other districts the number of deaths recorded was

less than one hundred. Among these were Agra and Muttra. In Agra only three deaths were recorded and in Muttra, where the deaths in 1905 numbered 47,974, there were only 21. The highest district death rates occurred in Ballia, 7.82 per thousand, Bijnor, 5.47, and Muzaffarnagar, 4.17. In rural areas the mean death rate was 1.25, compared with 4.29 in the towns. Of the 106 towns with a population of over 10,000, only 30 escaped, and in five—Chandausi (46.01), Mehndawal (23.76), Mau (23.00), Khairabad (22.80) and Gangoh (21.97) the rates were over 20 per thousand. The mortality rose rapidly from the beginning of the year until March, fell very slightly in April and rapidly in May and June, to a minimum in July, after which it rose gradually until November and very rapidly in December. Females suffered more than males, the death rate among the former being 1.68 per mille compared with 1.25 among the latter.

year since 1901, the number of deaths recorded being 104,863 compared with 390,233 in 1905 and 402,950 in 1904. Of the total, 92,115 occurred in the British districts and 12,748 in Native States. In the British districts the mean death rate was 4.56 compared with 16.65 in 1905 and a mean of 11.17 in the previous five years. The districts of Simla, Jhang, Multan and Dera Ghazi Khan were free from the disease, and the mortality in Mianwali (7 deaths), Muzaffargarh (34), Attock (59) and Kangra (84) was slight. In rural areas the mean death rate was 4.45 per thousand compared with 5.53 in the towns. Except in Delhi and Gurgaon very few of the towns in infected districts escaped, and in many the mortality was exceedingly high, notably in Dharmkot, (death rate 46.80), Garhdiwala (37.24), Bhiwani (36.42) and Zira (35.49).

Mortality increased rapidly until April, remained stationary at a high figure in May, fell rapidly in June and again in July, reached the minimum in August, after which the numbers of deaths rose rapidly until the end of the year. Females died at the rate of 5'14 per thousand and males at the rate of 4'06.

Regarding the attitude of the people the Inspector-General of Civil Hospitals writes:—"Although generally apathetic, the people are gradually becoming less suspicious of proffered assistance."

Plague in the North-West Frontier but in March 1906 there was an outbreak of pneuProvince. but in March 1906 there was an outbreak of pneumonic plague in the Hazara district. The disease
was imported from Rawalpindi whence a man suffering from plague went to the
village of Ghazi, where he died. His relatives, who lived in the same house,
contracted the disease which spread to three other villages. The villagers refused
to allow preventive measures to be taken, but fled from the village. The
inhabitants of the neighbouring villages, however, refused to take them in and they
had to live in the open air. The disease soon disappeared, but not before 44 cases
had occurred, of which 40 proved fatal. There were other 3 cases in the
province—2 in Peshawar city and 1 in Dera Ismail Khan.

132. In 1904 there were 32,820 deaths from plague in these provinces; in the Flague in the Central Provinces following year the total fell to 5,345, and in 1906 the number again rose to 18,121. Only two districts—

Narsinghpur and Betul, were entirely free from the disease, but its occurrence in the districts of the Vindhyan and Mahanadi divisions was limited to a few cases.

The districts of Nagpur (death rate 15'39 per mille), Buldana (3'53), Akola (3'19) and Nimar (2'45) suffered most severely. The mean mortality in rural areas was '59 per thousand, but in the towns it was 9'55. In a few of the towns the death rates were enormous; in Kalmeshwar it was 129'78, in Saoner 84'18 and in Kamptee 65'52. In Nagpur the number of deaths recorded was 5,432, equal to a death rate of 42'52 per thousand.

In January the number of recorded deaths was 1,264, in February 3,022 and in March 3,690; in April the number fell to 1,700 and in May to 53. In June only 4 deaths were registered and in July 15; after which the monthly totals rose to 2,620 in October, falling to 1,656 in November and again rising to 1,938 in December. The general death rate was 1.53; males suffered more than females, the death rate of the former being 1.62 per mille and of the latter 1.43.

The attitude of the people has improved greatly; they understand the necessity of excluding from their villages arrivals from infected areas; they are ready to evacuate their villages, and suspicions regarding official action are passing away.

133. The number of deaths fell from 20,125 in 1904 and 5,788 in the following year to 898 in 1906. The district most severely affected was Bellary, where 325 deaths occurred. The general death rate was '02. As in the Central Provinces and Berar males suffered more than females, the deaths of 464 of the former being reported against 434 of the latter.

134. The number of deaths from plague which had fallen from 223,957 in 1904

Plague in Bombay.

to 71,363 in 1905, fell further in 1906 to 51,525, the
smallest total since 1900. Only the districts of
Thar and Parkar, Larkhana, Sukkur and Upper Sind Frontier escaped entirely, but
the mortality in Hyderabad, Bijapur and Kanara was inconsiderable. The urban
district of Bombay suffered most severely, but the death rate of 14'20 per
mille was much lower than in the previous year, 18'63, and the quinquennial mean, 21'28. In the district of Poona mortality was exceedingly heavy—
12'75 per thousand, and the death rates in Kaira, 7'87, Karachi, 5'24, Panch
Mahals, 4'80, Satara, 4'75 and Ahmedabad, 3'76, were high. Few of the towns
escaped, and the mean death rate among the urban population was 10'88 per
thousand compared with 1'57 among the population of rural areas. In Poona
city the number of deaths registered was 7,319, equal to the enormous death rate
of 60'72 per thousand.

The numbers of deaths rose slowly to 6,108 in April and then fell slowly to a minimum of 612 in July; a sudden rise in August, owing to the outbreak in Poona, was followed by the highest monthly figures in September, 8,435 and October 8,619, after which the totals fell to 5,381 and 4,801 in November and December, respectively. Males suffered more than females, the death rates being 2.93 and 2.63, respectively, but in many districts, notably Sholapur,

Satara, Ratnagiri and most of the districts in Gujarat and in the south of the Presidency, the female death rates were the higher.

135. The total number of recorded plague deaths rose from 3,692 in 1905 to 8,637. Of the total, 5,223 occurred in Lower Burma. Burma, where the plague death rate was '94 compared with 1'17 in Upper Burma. The districts of Akyab, Kyaukpyu, Sandoway, Tavoy, Mergui and Magwe escaped altogether, and in Pegu, Maubin, Pyapon, Thaton, Thayetmyo, Shwebo, Pakôkku and Kyaukse the occurrence of the disease was limited to a few cases. The highest death rates were 11'79 in Rangoon and 6'87 in Mandalay, the only other rates over 1 per mille being 2'40 in Amherst, 2'09 in Meiktila and 1'28 in Prome. In Lower Burma the number of deaths that occurred in rural areas was very small, only six districts being affected and in two of these only single deaths were reported, and the rural death rate was '05 compared with 6'98 in the towns. In Upper Burma the rural death rate was '27 compared with 8 98 in the towns.

In both provinces deaths were recorded in every month in the year; in Lower Burma the heaviest mortality occurred during the rains; in Upper Burma the maximum occurred in March. In both provinces males suffered more than females.

- 136. The number of deaths from plague in Ajmer-Merwara fell from 2,480 in 1905 to 68, the death rates among males and females, respectively, being '16 and '12 per thousand.
- 137. For the second year in succession the small province of Coorg was reported to be free from plague.
- 138. The total number of deaths recorded in British territory in India during 1906, under the heading "fevers" was 4,452,842 Fevers. Table II of Appendix B to Section VI. as compared with 4,417,655 during 1905, the ratios per thousand of the census population being 19'69 in 1906 and 19'57 in 1905. As a rule the number of deaths recorded as due to fever does not vary greatly from year to year, but during the ten years ending with 1906 there were registered in all 43,641,844 deaths under this heading as compared with 40,221,452 during the ten years ending with 1896. In the year under review 56 per cent. of the deaths from all causes were registered under this heading and, as usual, there were many towns and villages especially in Bengal, Eastern Bengal and Assam, and the Punjab, in which over 80 per cent. of all the deaths that occurred were so recorded. The death rate recorded from all other causes than fever was only 150 per thousand of the population. When reference is made to fever in India malarial fever is generally understood, but it is obvious from the figures just given that many causes of death and many diseases much more fatal than malarial fever are included under the beading. At present it is not possible to ascertain with any degree of accuracy what proportion of the deaths recorded under "fevers" in India is due to malaria, but from various considerations and from the results of enquiries that have been made it may be said that for India as a whole the proportion is almost certainly not higher than between 20 and 30 per cent.; in all probability it is much lower.

The following are some of the considerations and enquiries upon which this estimate is based. In 1905, excluding Burma and the small provinces of Ajmer-Merwara and Coorg for which no returns are available, the diseases of 141 patients out of every 1,000 who attended for treatment at the dispensaries in India were diagnosed as malarial fever. A considerable number of the patients who attend at dispensaries are suffering from surgical diseases, which causes the figure to be smaller than it would be if all were medical cases, but, on the other hand, it has to be remembered that the diagnosis of malarial fever is made in almost all cases without the help of the microscope and that for this reason a number of diseases other than malaria are doubtless included under the heading. For the purposes of the argument we may also eliminate the possibility that the ratio 141 per 1,000 is too low, by assuming that it represents not the proportion of the total sickness in India which is due to malaria but the proportion of the total mortality which is due to this cause. On this assumption the number of deaths from malarial fever in 1905 would have been about 1,144,605 which is 25'9 per cent. of the mortality recorded under the heading fever during that year. In 1906, excluding two or three provinces for which no returns are available, the dispensary figures show that the diseases of about 148 out of every 1,000 patients were diagnosed as malarial fever, and applying this figure in the same manner as has been done above, the number of deaths from malarial fever in 1506 would have been 1,162,144 which is 26'o per cent. of the mortality recorded as due to fever during that year. It is, of course, very far from the truth to say that all who suffered from malarial fever during these years died, but for the purposes of the argument it serves to show that the estimate of between 20 and 30 per cent, mentioned above is certainly not too high. An enquiry made by private practitioners in 1894 into the causes of 14,660 deaths in the United Provinces showed that 44 per cent. of the mortality which had been recorded under the heading fever was due to this cause, but in this investigation no attempt was made to define the nature of the fever, so it is fair to assume that a much lower percentage was due to malarial fever. In the Dinajpur district in Bengal in 1904 Captain Rogers, I. M. S., sought out the relatives of 1,000 people whose deaths had been recorded under the heading fever and enquired from them the symptoms, course and duration of the illness in each case. He concluded that only 31'8 per cent. of these deaths were in reality due to malarial fever. A similar enquiry carried out more recently by Captain Stewart, I. M. S., and Lieutenant Proctor, I.M.S., in three other districts in Bengal resulted in the observation that 36'1 per cent. of the deaths which had been recorded under the heading fever were due to malarial fever. An Assistant Surgeon and two Hospital Assistants are at present employed in carrying out a similar enquiry in the Galsi thana of the Burdwan District in Bengal. The enquiry began on the 1st of August 1006 and up to December the 31st the causes of 919 deaths, 752 of which had been recorded in the thana register under the heading fever, had been investigated. The results showed that of the 752 deaths returned as due to fever only 303 or 40'2 per cent. were in reality due to this cause. The proportion of this percentage which was due to malarial fever was not ascertained.

If we assume that the true mortality from malarial fever in India is 25 per cent. of the mortality recorded under the heading fever the number of deaths due to malarial fever among the civil population during 1906 would have been 1,113,210 and the death rate 4'9 per mille of population. Malarial fevers were considerably more prevalent in nearly all the provinces of India during 1906 than during 1905, but the extent of the increased prevalence is not indicated by the

comparatively small rise (namely, 35,187) in the total number of deaths recorded under the heading fever. This is due chiefly to the fact that in Bengal 81,908 fewer deaths were recorded under the heading and in Eastern Bengal and Assam 60,527 fewer deaths; in all other provinces there was a considerable rise in the number of deaths attributed to this cause. The largest number of deaths and the highest death rate from fevers during the year were recorded in the United Provinces, but there is no doubt that this is not the province in India where malarial fevers are most prevalent and severe. For India as a whole November was the month in which most deaths from fever were recorded and February the month in which fewest were recorded.

In Bengal the recorded death rate from fevers during 1906 was 22:41 per mille of population as compared with 24:34 per mille in 1905, the total numbers, in the two years being, respectively, 1,132,579 and 1,214,487. The mortality shown under this heading was greatest in October and November and least in June and February. Anti-malarial operations, which consisted chiefly in filling up hollows and depressions, clearing jungle, and spreading kerosine oil on "tanks" and cesspools, were carried out in four towns at a total cost of Rs. 8,920. During the year a committee was appointed with a view to ascertain how far the prevalence of malarial fever in the province is due to defective drainage and whether a drainage scheme to remedy the evil is practicable.

In Eastern Bengal and Assam 645,733 deaths from fever were recorded (21.65 per mille of population) as compared with 706,260 deaths (23.68 per mille) in 1905. Over 68 per cent. of the total mortality was recorded under this heading. Dinajpur was the district in which the highest death rate from fevers was recorded (namely, 41'18 per mille of population), but in this district over 91 per cent. of all the deaths were recorded as being due to this cause, and the number of deaths registered as due to respiratory diseases was only 21 or 1 per 100,000 of the population. The total number of deaths recorded as due to kala azar in the province was 2,407 as compared with 3,030 in the previous year and 3,748 in 1904. Deaths from kala azar were reported in all districts except Cachar, but there is reason to believe that the disease is gradually disappearing from all parts of the province. During the year a memorial was presented to the local Government by the Duars Planters' Association asking that a special enquiry regarding blackwater and other fevers in the Duars should be made. The Government of India decided that an investigation was necessary and this is now being conducted under the direction of an Advisory Committee consisting of the Sanitary Commissioner with the Government of India, the Director of the Central Research Institute, the Professor of Pathology at the Medical College, Calcutta, Captain S. P. James, I.M.S., and Captain S. R. Christophers, I.M.S.

In the United Provinces 1,317,491 deaths (27.62 per mille of population) were ascribed to fevers during 1906, the number being higher by 33,327 than in the previous year. Malarial fevers were considerably more prevalent than in 1905, the proportion of cases diagnosed under this heading among patients treated at dispensaries rising from 155 per 1,000 of all cases treated in 1905 to 172 per 1,000 in 1906. The recorded mortality from fevers in towns was higher than in rural areas; in one town (Nagina) the death rate recorded under

this heading was 81'31 per 1,000 of the population and in another (Deoband) it was 70'61 per 1,000. In the first of these towns, however, more than 72 per cent. of the total mortality was recorded as due to fever and in the second more than 97 per cent.

In the Punjab during 1906 the total number of deaths recorded as due to fever was 407,878, giving a ratio of 20'28 per mille of population as compared with a total of 370,047 and a ratio of 18'40 per mille in 1905. The mortality recorded under this heading during the first eight months of the year was less by 36,638 than during the same period in 1905, but the mortality recorded during the last four months was greater by 74,529. The proportion of cases diagnosed as malaria in dispensaries rose in 1906 to 170 per 1,000 of the total number of patients treated as compared with 112 per 1,000 in 1905 and there is little doubt that the increased prevalence of malaria-which was due, it is said, to the monsoon rainfall being heavier than usual-was an important factor in causing the increase in the mortality recorded under the heading fever. The districts of Mianwali, Karnal, Dera Ghazi Khan and Muzzaffargarh were among those in which the death rates from fever were very high. The provincial Sanitary Commissioner reports that the country was flooded in the Mianwali district by the river Indus and in the Muzzaffargarh district by the river Chenab. It is said that in the Karnal district large areas of land were under water for a long period, and that in the Dera Ghazi Khan district the mortality was especially heavy in the Tounsa tahsil which lies near the foot of the hills and is liable to inundation.

In the North-West Frontier Province the recorded number of deaths from fever was 52,039 in 1906 as compared with 41,190 in 1905, the ratios per mille of population being 26.14 and 20.69, respectively. Malarial fevers prevailed with unusual severity during the last four months of the year and more than half the total number of deaths recorded under the heading fever occurred during this period. The diseases of about 266 patients out of every 1,000 who attended for treatment at the different dispensaries in the province during the year were diagnosed as malarial fever, and judging from this as well as from the report of the provincial Sanitary Commissioner it is probable that during 1906 the prevalence and severity of malarial fever was greater in this than in any other province.

In the Central Provinces and Berar 225,141 deaths (18'95 per mille of population) were ascribed to fever during 1906 as compared with 207,195 (17'43 per mille) in 1905. The death rates from fevers recorded in all except six of the 24 districts were higher than in the previous year. The provincial Sanitary Commissioner says there is reason to suspect that many deaths from dysentery, diarrhœa, influenza and measles are included in the mortality attributed to fever and the Civil Surgeon of Nimar reports that in some large villages every death is ascribed to this cause. In dispensaries the proportion of cases diagnosed as malarial fever to the total number of patients treated fell slightly as compared with the previous year. Anti-mosquito operations were carried out on a small scale in a few towns, notably in Badnur, Jubbulpore, and Khandwa.

In Lower Burma the recorded death rate from fevers was 9'77 per mille as compared with 8'97 per mille in 1905; and in Upper Burma it was 7'34 as compared with 6'76.

In the Madras Presidency the death rate recorded from fevers in 1906 was, as usual, much lower than in any of the other large provinces. The total number of deaths recorded under this heading was 304,926 (8.4 per mille of population) as compared with 265,044 (7.2 per mille) in 1905. The proportion of deaths recorded under this heading to the total mortality from all causes fell from 33.7 per cent. in 1905 to 30.5 per cent. The highest rates recorded in districts were 21.2 per mille in Vizagapatam, 17.2 per mille in Ganjam and 14.2 per mille in Guntur, and the highest in towns 30.7 per mille, 28.8 per mille and 21.5 per mille. Out of the total of 232 towns in the Presidency, these were the only ones where the death rate recorded from fevers was over 20 per mille. The proportion of cases diagnosed as malarial fever in the dispensaries during 1906 was 71 per 1,000 of the total number treated as compared with 65 per 1,000 in 1905.

In the Bombay Presidency the number of deaths recorded as due to fever was 274,653 (14.86 per mille of population) as compared with 245,373 (13.28 per mille) in 1905. Malarial fevers were much more prevalent than in the previous year, especially in the Sind registration district, in which death rates from fevers of 35.90 per mille, 29.08 per mille and 24.14 per mille were recorded in the Sukkur, Larkhana and Upper Sind Frontier collectorates, respectively.

In Ajmer-Merwara 12,292 deaths were ascribed to fevers in 1906 as compared with 10,336 in 1905; and in Coorg 4,266 as compared with 3,876.

139. In Bengal there was again a reduction in the amount of quinine sold,

32,189 parcels (each containing 102 seven-grain
packets) having been disposed of as compared with

35,472 in 1905. The decrease is attributed to the lesser prevalence of malarial fevers. More than half the total number of parcels were sold during the period from August to November. Increased facilities are being afforded for the purchase of the drug at dispensaries and post-offices and from village schoolmasters.

The system of distributing pice packets of quinine from central stations was abolished in the Assam and Surma valley districts of Eastern Bengal and Assam in 1905. Depots under the direction of the Civil Surgeon were opened at each head-quarter station, the price of the drug was reduced, and the number of recognised agents for its sale was increased. The number of packages, each containing 102 seven-grain powders, sold in these districts of the province increased from 1,021 in 1905 to 2,094 in 1906 and in November of the latter year a similar system was brought into force in the Eastern Bengal districts.

In the United Provinces 1,205,181 powders, each costing one pice, were sold during 1906 as compared with 643,668 during 1905. Quinine is sold at post-offices and by vaccinators and schoolmasters; and in certain districts in the Rohilkhand, Allahabad, Lucknow and Fyzabad divisions it is sold by landlords

and their agents. Large quantities of quinine were distributed gratuitously, especially in districts affected by famine.

In the Punjab quinine was, as usual, distributed gratuitously in a number of districts through the agency of vaccinators, tahsildars and headmen of villages, but no details regarding the amount sold at post-offices, are contained in the provincial Sanitary Commissioner's report.

In the Central Provinces and Berar 4,362 parcels of quinine, of which 500 contained 102 five-grain powders, and 3,862 contained 102 seven-grain powders, were sold during 1906 as compared with 4,887 parcels in 1905. The drug is sold at post-offices and by stamp vendors, schoolmasters and patwaris. The decrease in the amount sold is attributed to villages being vacated on account of plague.

In Burma 9,173 parcels and 63 powders of quinine (that is 733,903 sevengrain packets) were sold at post-offices and by vaccinators and district officials during 1906 as compared with 6,996 parcels and 39 powders in 1905. It is said that the Burmese prefer to take the drug made up in the form of compressed tablets rather than in powder and it has been decided to issue a certain amount of the drug in this form.

Details are wanting regarding the sale of quinine in the North-West Frontier Province, Madras, and Bombay.

Dysentery and diarrhea. Table heading dysentery and diarrhea rose from 264,124 in 1905 to 298,117 in 1906, and the death rate per mille of population from 1'17 to 1'32 which is the highest rate recorded since 1900. It is almost unnecessary ta say that the number of deaths and the death rate recorded do not represent, even approximately, the true mortality from these causes. In the Galsi thana in Bengal during the year ending July 1907 it was found that 231 deaths which had been recorded under the heading "fever" and 128 deaths which had been recorded under the heading "other causes" were due to dysentery or diarrhea. A higher mortality than in 1905 was recorded in all provinces except the United Provinces in which, however, the decrease in the number of deaths recorded amounted to only 184. In India as a whole the greatest number of deaths were, as usual, recorded under this heading during August and September and the smallest number during February and March.

In Bengal 48,920 deaths were registered under the heading dysentery and diarrhoea during 1906 as compared with 45,260 during 1905. The highest death rates were recorded in the districts of Howrah (4.09 per mille of population), Cuttack (3.67), Puri (3.61), Darjeeling (3.45), Calcutta (3.22) and Patna (3.14). Death rates over 2 per mille were recorded in only two other districts. There were three towns in which no death from these causes was reported and six towns in which only one was reported. The death rate recorded in towns was more than three times as high as in rural areas. In Eastern Bengal and Assam 26,912 deaths were attributed to dysentery and diarrhoea in 1906, the death rate per mille of population being 90 as compared with 85 in the previous year. The death rates recorded in districts varied between 5.58 per mille in Lakhimpur and .05 per mille in Dinajpur. December was the month in which most deaths

were recorded under this heading and August the month in which fewest were recorded. In the United Provinces the recorded mortality from dysentery and diarrhœa was almost the same as in the previous year; the death rate ('55 per mille) was lower than in any other province except the North-West Frontier Province. The greatest number of deaths were recorded under this heading in May and the smallest number in February. The highest death rates recorded in districts were 9'17 per mille in Garhwal and 4'02 in Almora; and the highest in towns 7'72 per mille in Ballia and 7'05 in Benares. The death rate recorded in towns was five times as high as in rural areas. In the Punjab 17,505 deaths (.87 per mille of population) from dysentery and diarrhoea were recorded during 1906 as compared with 13,762 deaths ('68 per mille) in 1905. Ihelum, Rawalpindi, Ambala and Simla were the districts in which the highest death rates were recorded, the rates in these varying between 2'07 and 1'69 per mille of population. The death rate recorded in towns was 2'28 per mille and in rural areas '72 per mille. In the North-West Frontier Province 571 deaths were attributed to dysentery and diarrhoea as compared with 562 in 1905. In the Central Provinces and Berar the recorded death rate from dysentery and diarrhœa rose from 3'02 per mille in 1905 to 3'58 in 1906. The rate is the highest recorded in any province during the year. The mortality recorded under this heading was higher than in 1905 in all except five of the districts and in all except 39 of the towns. The death rate recorded in Berar was 8'91 per mille and in the Central Provinces it was only 1'98; there are four districts in Berar and the rates recorded in them were 12'45 per mille in Akola, 9'06 per mille in Buldana, 7'12 per mille in Amraoti and 6'31 per mille in Yeotmal. The Civil Surgeon of the Yeotmal district reported that the high death rate was due to a number of deaths from cholera having been returned under the heading dysentery and diarrhoea. In Lower Burma in 1906 the recorded death rate from dysentery and diarrhoa was 1.65 per mille of population as compared with 1.43 in 1905 and in Upper Burma it was '68 as compared with '44. The provincial Sanitary Commissioner considered it possible that the increase may have been due partly to the registration of deaths from cholera under the heading dysentery and diarrhœa. In the Madras Presidency 61,588 deaths from dysentery and diarrhœa were recorded as compared with 51,298 in 1905, the death rate being 1'7 per mille as compared with 1'4. In the opinion of the provincial Sanitary Commissioner many cases of cholera may have been returned under this heading The death rate recorded in town circles was nearly three times as high as in rural districts and it was higher by '1 than in the previous year. In the Bombay Presidency 61,736 deaths were recorded under the heading dysentery and diarrhœa during 1906, the death rate (3:34 per mille) being higher by '34 than in 1905. The number of deaths was larger than that recorded in any other province during the year and the death rate was higher than in any other province except the Central Provinces and Berar. It is said that the increased prevalence of these diseases as compared with 1905 was largely due to conditions of scarcity and famine. In Ajmer-Merwara 564 deaths were attributed to dysentery and diarrhoea; and in Coorg 141 deaths were recorded under this heading.

BOOKS AND PAPERS REFERRED TO IN SECTION VI.

For explanation of abbreviations see end of Section II.

Cholera. ¹Gotschlich in Z. H. 1906, Vol. 53, page 281; Kolle and Meinicke in Klin. Jahrbuch 1905, Vol. 15; Mühlens and v. Raven in Z. H., 1906, Vol. 55; ¹Kraus in Wien Klin. Wochenschr, 1903. No. 50 and 1906, No. 22; Kraus and Pribram in the same journal, 1905, No. 39, and in C. B. Originale, Vol. 41, 1906, pages 15 and 155; Kraus and Prantschoff in Wien. Klin. Wochenschr., 1906, No. 11 and in C. B. Originale, Vol. 41, 1906, pages 377 and 480; ³Gaffky, Pfeiffer, Gotschlich, reported in C. B. Referate, 1906, Vol. 38; ⁴Ruffer. Researches on the bacteriological diagnosis of cholera. Alexandria. Société de publications Egyptiennes, 1907; ⁵Neufeld and Haendel in A.K.G.A., Vol. 26, heft 3, 1907, page 536.

### SECTION VII.

## GENERAL HISTORY OF VACCINATION.

141. The total number of operations performed by the Vaccination Department in 1906-07 was 9,080,303. This figure, although Vaccination in India-197,593 less than the total of 1905-06, is considerably higher than the total of any of the preceding three years. The falling off in the number of operations in 1906-07 as compared with 1905-06 was shared by every province, except Madras, where there was an increase of 86,610 operations, and was greatest in Eastern Bengal and Assam, 110,994, and Burma, 59,275. The number of primary operations performed was 8,341,794, or 244,976 fewer than in 1905.06. In Madras alone was the number of these operations higher than in the previous year, and the increase of 80,179 in that province has to be set off against a decrease of 123,509 in Eastern Bengal and Assam, of 56,536 in Burma, of 30,401 in the Punjab, of 29,649 in Bengal, of 28,419 in the United Provinces and smaller numbers elsewhere. The total number of revaccinations was 738,509, or 47,383 more than in the previous year, all provinces except four sharing in the improvement, which was greatest in Bengal, 25,692, the Central Provinces and Berar, 16,406, and Eastern Bengal and Assam, 12,515. The four provinces in which the numbers of revaccinations were fewer than in 1905-06 were the Punjab, 13,119, Bombay, 7,843, Burma, 2,739, and Ajmer-Merwara, 298. The mean percentage of success in primary operations throughout India was 97'21 compared with 97'20 in the previous year, and the variation in the percentages of success in the provinces between 99'34 in the Punjab and 90'64 in Burma was nearly the same as in the previous year. Revaccinations succeeded at the rate of 72.85 per cent. compared with 74'20 in 1905-06, the percentages in the different provinces ranging from 84'43 in the United Provinces to 53'43 in Burma. The mean number of operations performed by each vaccinator was 1.432, or 48 less than in the previous year; and, as usual, there were great differences in the mean outturn per vaccinator in the different provinces, the extremes being 2,923 operations per vaccinator in the North-West Frontier Province and 807 in Ajmer-Merwara.

There was a further increase in the total number of persons vaccinated at dispensaries, the total in 1906-07 being 218,717 against 207,421 in the previous year; but the increase was confined to Bengal, 23,844, and Burma, 1,014; everywhere else there was a falling off. The ratio of successful vaccination per thousand of the census population, which had risen from 34'79 in 1904-05 to 36'39 in 1905-06, fell to 35'41, the ratios ranging from 54'58 in Coorg to 25'36 in Bombay and 24'79 in Ajmer-Merwara.

The proportion of children vaccinated was, of course, also lower than in 1905-06. Taking the census population of 1901, and estimating the number of births during the year at 40 per thousand of that population, the percentage successfully vaccinated was 42.62 of the total against 43.83 in the previous year, and 42.46 in 1904-05. The percentage rate of protection according to this very artificial calculation varied from 73.61 in the Central Provinces and Berar and 60.05 in the Punjab, to 18.58 in Burma and 12.72 in Coorg.

The total cost of the department was Rs. 13,45,072, compared with

Rs. 12,82,636 in 1905-06, and the mean cost of each successful case rose from two annas and five pies in that year to two annas and seven pies. The highest rate was nine annas and six pies in Bombay, and the lowest rates were one anna and six pies in the United Provinces, one anna and five pies in Bengal and one anna and two pies in Eastern Bengal and Assam.

Province, Ajmer-Merwara and Coorg, there is a Central Vaccine Depots.

Central Vaccine Depot, more or less complete, for the manufacture of vaccine, and each of the presidency towns, except Madras, maintains a separate depot for its own requirements.

At Shillong the depot has been improved by extending the site and building a new operating room with marble flooring and walls. It is hoped that in the ensuing season it will be possible to supply the whole province with glycerinated lymph and discontinue arm-to-arm and calf-to-arm vaccination. At Patwa Dangar, in the United Provinces, owing to the increase of work in 1905-06 a considerable augmentation of establishment was sanctioned. A scheme for expanding the vaccine institute at Lahore has been sanctioned and will be carried out as soon as funds can be made available. The chloroformed glycerine lymph manufactured in the Punjab was used with the most satisfactory results in a large number of cases. In 152,080 primary operations the case success was 99.88 per cent. and the insertion success 98.72, and in 24,603 revaccinations the case success was 81'o per cent. and the insertion success 80'16, The people of the Punjab greatly prefer the use of tubed vaccine to the calfto-arm process, because the results of the operation are less severe and the sores heal more quickly, and because their calves are no longer required as vaccinifers. The Institute continued to supply the North-West Frontier Province with vaccine. At Amraoti, in Berar, great difficulty was experienced in obtaining a sufficient number of calves, and it is being considered whether it would not be well to close the depot and manufacture lymph at the head-quarters of each district as is done in the Central Provinces. In Bombay good progress was made in the substitution of glycerinated vaccine for calf and human lymph. A laboratory was added to the depot at Belgaum where the purity of each supply of lymph is tested before issue. In Burma on account of the high temperature on the plains, it is proposed to move the depot from Meiktila to Maymyo.

143. Of the total of 2,037,273 vaccination operations performed during the year, 1,874,976 were primary cases and 162,297 Bengal. revaccinations. The former show a fall of 29,649 and the latter a rise of 25,692 compared with the figures of the preceding year; the net decrease being 3,957 cases. The reason for the smaller number of primary cases is said to be inability of the poorer classes to pay the prescribed fees owing to high prices of food grains. Of the 34 districts in the province there was an increase in the number of vaccinations in 13 and a decrease in 21. The larger increases occurred in the Tributary States (52,798), Darjeeling (22,846), and Murshidabad (22,716), and the larger decreases in Cuttack (15,451), and Jessore (10,581), while in Nadia, Howrah and Darbhanga the fall in each exceeded seven thousand cases. The reasons for the decreases are peculiar to each district; and in some places a decrease was due to an unhealthy season. No adequate reason is assigned for the remarkable increase in the Tributary States, but a part is due to the inclusion of figures of the Sonpur State which were not included last year. In Darjeeling an outbreak of small-pox, and in Murshidabad the employment of a larger number of vaccinators and better supervision account for the results. The system of rewards to vaccinators has created a healthy stimulus and competition among the better class of men and is to be continued. The quality of work shows an improvement; in primary cases 99'24 per cent. were successful compared with 99'13 per cent, in 1905-06, and in revaccinations 70'40 per cent. compared with 66'29 per cent. Of the several classes of operators, the licensed men obtained the higher rate of success in primary cases, and paid vaccinators in revaccinations. The work 'done by vaccinators attached to municipalities, dispensaries, etc., increased from 122,105 to 145,949 cases; the primary cases which numbered 90,873 increased by 253 only but the revaccinations increased by 23,591 to 55,076. The ratio of success was, however, lower, 97'85 against 98'38 per cent. in primary cases, and 56'66 against 65'17 per cent. in revaccinations.

The kinds of lymph used and the extent to which employed with the ratio of success in primary cases were as follows—the figures in brackets are the percentages of success during the preceding year:—Calf lymph 87,803 cases with 99'08 (98'92) per cent. successful, lanoline lymph 696,415 cases with 98'25 (96'57) per cent. successful, and human lymph by the arm-to-arm process 1,090,758 cases with 99'13 (99'21) per cent. successful. In revaccinations the ratio of success by each of the above methods was 66'73, 50'29 and 77'75 per cent., respectively, the corresponding rates in the previous year being 58'81, 53'98 and 78'02 per cent.

On an estimated birth-rate of 40 per thousand of population, 39'46 per cent. of the infants were protected compared with 39'18 per cent. in 1905-06. It is said that although the statistics furnished by illiterate vaccinators are not always reliable it may fairly be assumed that infant vaccination is making progress from year to year. In towns 87'29 per cent. of the number of available infants were successfully vaccinated, against 85'82 per cent. in the previous year.

No account has been given of the working of lymph depots. The depot at Darjeeling supplied the Nepal Darbar and the Sikkim and Bhutan States with 350, 1,381 and 335 grains of lymph, respectively, but the results obtained are not stated.

The cost of the department amounted to Rs. 1,73,229, excluding the figures of the Calcutta municipality and three Feudatory States in the Sambalpur district, the returns for which had not been furnished, or Rs. 15,426 more than in the preceding year: no explanation of the increased expenditure has been furnished. Each successful case cost one anna and five pies against one anna and three pies in 1905-06.

144. The total number of operations which numbered 1,429,026 in 1905-06,

fell to 1,318,032 in 1906-07. The net decrease of 110,994 is represented by a decrease of 123,509 primary cases and an increase of 12,515 revaccinations. The smaller outturn of work in 1906-07 is attributed to unusual activity in the department during the preceding year, but the amount of successful work done during 1906-07 shows 3,181 operations less than during the preceding quinquennium. Of the 28 districts 17 show a decrease compared with the work done during 1905-06, of which the largest occurred in Faridpur (30,753 cases) and in Chittagong (25,303),

in both these districts, however, the work exceeded the average of the preceding five years. The decrease of 9,435 cases in the Dacca district marks the continuance of the progressive fall since 1904-05 and an enquiry is to be made into the cause. In the Rajshahi, Tipperah and Kamrup districts the work increased to the extent of 3,225, 7,739 and 5,080 operations, respectively. The quality of the work as a whole shows an improvement, the percentage of success in primary cases being 98:55 and in revaccinations 72:11 against rates of 98:28 and 71.71, respectively, in 1905-06. On tea-gardens 15,871 operations were performed, of which all, except 71, were primary cases with 98.28 per cent. successful, compared with 15,143 operations, of which 94 per cent. were successful the year before. Dispensary vaccination fell from a total of 27,735 cases in 1905-06 to 25,602 in 1906-07: the primary cases were fewer and the revaccinations more numerous than in the previous year, while the percentage of success in the former was almost the same, 97.89 and 97.84, in the two years and in the latter 86.08 against 74.64 in the preceding year. The provincial Sanitary Commissioner points out the undesirability of allowing the population of an area round a dispensary to be vaccinated by the Hospital Assistant and his Compounder and proposes placing such areas under the Vaccination Department.

The inspecting agency in Eastern Bengal was combined with that in Assam on the 1st April 1907 and the cadre is to be increased by 10 officers; steps have also been taken to improve the class of men appointed as inspecting officers. Inoculators are still to be found in parts of the province, but the conversion of some of them in the Cachar district into licensed vaccinators, and the extension to all districts of Act IV (B. C.) of 1865, prohibiting inoculation, ought soon to result in the disappearance of this operation.

On an estimated birth-rate of 40 per thousand of the population, 29'30 per cent. of the infant population were protected; and of the number of available children in the towns of the province 68'7 per cent. were successfully vaccinated, the corresponding percentages the previous year were 33'62 and 70'9, respectively.

The expensive and cumbersome vaccination from the calf has been discontinued except in the Dinajpur, Rajshahi and Bogra districts, and the use of humanized lymph, which has already been discontinued in areas where vaccination is compulsory (and is also if possible to be discontinued elsewhere) has been replaced by the introduction of glycerinated lymph from the Shillong depot. This description of lymph is much appreciated and the demand of the year exceeded the estimated consumption. A larger quantity will be prepared to meet all requirements. Lanoline paste was issued to some districts with unsatisfactory results and is not to be used in future. Certain improvements are being carried out at the Shillong depot which is to supply the whole province with vaccine; the quality of the vaccine issued during 1906-07 was uniformly reported to be excellent.

The cost of the department rose to Rs. 90,635 from Rs. 80,103 in 1905-06, and each successful case cost one anna and two pies against eleven pies in each of the two preceding years.

off in 1906-07 compared with the preceding year. The Vaccination Department in the United Provinces, except in the number of revaccinations, exhibits a falling

numbered 1,675,060 or 20,356 less than in 1905.06. Primary cases were fewer by 28,419 and revaccinations more numerous by 8,063 than in the preceding year. The percentage of success in primary work was 97'72 and in revaccinations 84.43, against 97.93 and 84.78, respectively, in 1905-06. The falling off occurred in the 1st Circle, there having been an increase in the 2nd Circle as a whole. The decline in the 1st Circle is partly attributed to local causes, but the provincial Sanitary Commissioner considers more supervision necessary which cannot be afforded while the Deputy Sanitary Commissioner of the Circle is also Chief Plague Officer. Arrangements have now been made to relieve the Deputy Sanitary Commissioner of such additional duties in future. There are 49 districts in the province of which 22 show an increase in the number of successful primary operations against 34 in the previous year. The largest increase was of 3,804 operations in Garhwal, and the largest decrease occurred in Jalaun (7,922), followed by Etawah (6,251), Hamirpur (5,997) and Agra (5,643). The causes of the decreases were good work in previous years which reduced the susceptible population, sickness among the people, etc.

On a hypothetical birth-rate of 40 per thousand, 48.49 per cent., against 49.57 per cent. the year before, of the infants available were successfully vaccinated. In municipal towns 93.4 per cent. of the number available were protected.

Lymph depots were maintained at Lucknow and Patwa Dangar (Naini Tal). Pure calf lymph and lanoline lymph were both used, but the vast majority of operations were performed with glycerinated lymph. The working of the Patwa Dangar depot was satisfactory and the amount of work had so increased during the year 1905-06 as to necessitate a considerable increase to the subordinate staff which was sanctioned in October 1906. The cost of the depot was Rs. 5,741, including Rs. 1,160 for stores received from England, and as lymph of the value of about Rs. 3,500 was sold to Native States, municipalities and private individuals, the depot is largely self-supporting. All the material required to start the season's vaccination in every district, except Lucknow, was supplied from the depot. The credit of the successful working of the year is said to be due to the Deputy Sanitary Commissioner of the 2nd Circle.

The cost of the department in the province amounted to Rs. 1,50,971, against Rs. 1,53,241 in the year 1905-06, the decrease being due to the smaller expenditure at the Patwa Dangar depot for which fewer costly articles were imported. The cost of each successful case was one anna and six pies in both years.

or 43,520 less than the number in the preceding year, when there had been an increase of 28,968 compared with the total of 1904-05. In 20 of the 29 districts there was a decrease in the amount of work done, and but for the notable increase of 22,514 cases in the Kangra district and considerable increases in the Lahore and Amritsar districts, the results would have been far more unsatisfactory. The districts of Multan (15,325), Ferozepur (14,575) and Dera Ghazi Khan (11,271) between them represent a fall of over 41,000 cases. The provincial Sanitary Commissioner attributes the smaller outturn of work to the fact that in the first half of the vaccinating season, October to December, malarial fevers

were very prevalent in many districts, and in the second half, January to March, plague increased to such an extent as to interfere seriously with vaccination work. The Sanitary Commissioner adds that in very few instances were the deficiencies due to neglect on the part of the operating staff. The number of primary operations was 607,909 or 30,401 less than during 1905-06 with a percentage of success of 99'34 against 99'19, and there were 97,310 revaccinations or 13,119 less than during the preceding year, with a percentage of success of 78'12 against 83'38.

On an estimated hirth-rate of 40 per thousand, 60.05 per cent. of the infants were protected, compared with rates of 62.54 and 56.25 per cent. in 1905-06 and 1904-05. Of the available children under one year of age, 71.44 per cent. were successfully vaccinated in towns where the Vaccination Act is in force and 68.04 per cent. in towns where it is not in operation. The corresponding rates in 1905-06 were 85 and 66 per cent., respectively.

The results of the use of chloroformed glycerine vaccine continued to be most satisfactory. In 152,080 primary operations the average case success was 99'88 and insertion success 98'72 per cent., while in 24,603 revaccinations the case success was 81'0 and insertion success, 80'16 per cent. The scheme for the expansion of the work of the central vaccine institute, with a view to supply vaccine in tubes to every district, has been sanctioned and is to be carried through as soon as funds can be made available.

The cost of the department was Rs. 99,605 or Rs. 1,903 more than during 1905-06, and each successful case cost two annas and five pies or two pies more than in the preceding year.

Vaccination work in the large Native States, except those of Nabha and Jhind, showed a falling off compared with 1905-06. The following are the results—the figures in brackets are those for the preceding year, Patiala—primary cases 45,174 (54,086), revaccinations 24,832 (31,034): Bahawalpur—15,277 (18,804) and 46: Kapurthala—4,303 (5,578) and 97: Nabha—1,968 (1,074) and 11: Jhind—7,116 (6,978), (no revaccination) and Faridkote—3,119 (5,185) and 40. The quality of the work in primary cases ranged from a percentage of success of 8759 in Nabha to 98'99 in Patiala, compared with the range of 89'77 in Nabha and 98'09 in Faridkote in the preceding year. In Patiala revaccinations succeeded at the rate of 77'75 per cent. and in the other States the numbers of revaccinations were insignificant.

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was 91,893, or 8,973 less than in the preceding year, when there had been an increase of over 23,000 cases. The number of successful primary cases was 10,234 less and the successful revaccinations 1,424 more than in 1905-06, but the quality of work in the former was better—98'95 per cent. successful against 98'56 per cent., and the quality in the latter not quite so good, 83'67 against 84'45 per cent. In primary work all the districts except Peshawar which shows an increase of 1,084 cases, exhibit a smaller outturn of work, the chief cause being the severe prevalence of fever during the greater part of the vaccinating season, while other causes, differing in character in the several districts, also affected vaccination. The local Administration suggest that a subsidiary cause may have been the absence of small-pox, and it may be noted that in the Peshawar district

where the vaccination work was better than in the previous year, there was a rise in the ratio of deaths due to that disease. The work in the Political Agencies increased by 2,538 cases in all. In the Kurram Valley there was an increase in primary cases, but a fall in revaccinations: in the Tochi Valley there was a slight decline in primary work and in the Shirani country both classes of work showed a decrease, while in the Chitral sub-agency and the Swat Valley no work was done, the reason for which has not been stated. The vaccinations at dispensaries amounted to 1,281 cases or less than half the number of 1905-06, and the quality of the work was poorer:

On an estimated birth-rate of 40 per thousand, 56'13 per cent. of the infants were successfully vaccinated, compared with 58'92 per cent. in 1905-06. In towns 85'9 per cent. of the available children under one year of age were protected against 72'3 per cent. in the preceding year.

Animal lymph was largely used in the settled districts of the province where there are facilities for obtaining buffalo calves. Vaseline lymph was used in less than a fifth of the total cases and human lymph chiefly in the Shirani country, and to a small extent in the Hazara and Bannu districts and the Kurram Valley. The percentage of success with animal lymph was 93.76 in primary cases and 80.99 in revaccinations; with vaseline lymph 92.61 and 65.85 and with human lymph 98.28 and 95.32, respectively.

A notable occurrence was the successful persuasion of three mullahs of Hangu to learn vaccination and it is hoped that in time they will give up inoculation.

The cost of the department amounted to Rs. 11,217 compared with Rs. 11,643 in 1905-06, but the cost of each successful case was two annas and two pies, or two pies more than in 1905-06.

148. In consequence of the prevalence of plague the total number of vaccination operations in the province, including Central Provinces and Berar. dispensary vaccination and the operations in Feudatory States, fell to 617,381, or 8,757 less than in the year 1905-06. The primary operations numbered 525,977, a decrease of 25,163, and revaccinations 91,404, an increase of 16,406. The mean number of operations per vaccinator was 2,058, or 31 less than during the preceding year. The percentage of success was 98.56 in primary cases and 75.38 in revaccinations, compared with 98'59 and 72'30, respectively, in 1905-06. Excluding dispensaries and Feudatory States, there was a decrease of 28,492 primary operations in the districts, the most marked being in Jubbulpore (5,651), Wardha (4,984), Yeotmal (4.101) and six other districts with decreases ranging between 3,000 and 1,000 cases. The great falling off is attributed to, not only plague, but to cholera epidemics and to the withdrawal of vaccinators for duty in connection with these diseases, together with sickness among these men in common with the rest of the population. Still, it is satisfactory to note that six districts showed small increases, the highest being Buldana (1,013 cases). Revaccinations increased by 17,747, the largest rise occurring in Jubbulpore (4,392), while the largest decreases occurred in Saugor (2,865) and Amraoti (2,068). The increased number of revaccinations on the whole is due to special efforts made to revaccinate as many persons as possible owing to the severe outbreak of small-pox during the year. Dispensary work shows 19,162 primary cases against 24,064 in 1905-06 and 4,870 revaccinations against 4,726, but the quality of the work was better

96'96 and 67'19 per cent. successful in primary cases and revaccinations, respectively, compared with 88'55 and 65'95 per cent. in 1905-06. In the Feudatory States primary cases numbered 64,334 against 56,103 in 1905-06, and revaccinations 5,483 against 6,968, with percentages of success of 97'71 and 84'29, respectively, in 1906-07, compared with percentages of 96'84 and 84'26 in 1905-06.

Estimating the birth-rate at 40 per thousand, 73.61 per cent. of the infant population, compared with 76.75 per cent. in the preceding year, were successfully vaccinated, and in municipalities 81.93 per cent. of the available number were protected against 96.93 per cent. in 1905-06.

The vast majority of the vaccination operations were performed with glycerinated lymph, fresh calf lymph being used in 10,246 cases and human lymph in 6,103 cases; with lanolinated lymph only 383 operations were performed. The percentage of success with the different descriptions of lymph have not been stated. The Amraoti depot not being able to meet the full demand for the Berar districts, the Central Provinces system of preparing lymph in each district is likely to be introduced.

The cost of the provincial department was Rs. 59,987 or Rs. 1,631 less than during the preceding year, and the cost of each successful case two annas in both years. In the Feudatory States the cost was Rs. 5,275 or Rs. 525 more than in 1905-06, and the cost of each successful case also the same in both years, vis., one anna and three pies.

149. The decrease of 18,279 vaccination operations which occurred during the year 1905-06 was more than made up during 1906-07, when, with an increase of 86,610 cases, the net total for the Presidency amounted to 1,551,600 cases. Primary cases and revaccinations numbered 1,437,924 and 113,676, against 1,357,745 and 107,245, respectively, during the preceding year, and of these the number successful were 1,296,673 primary cases against 1,222,602 in 1905-06 and 72,825 revaccinations against 73,710. The percentage of success in the former rose to 93'4 from 92'9 and in the latter it fell to 74'2 from 76'o. The increased amount of work is attributed to the impetus given by the prevalence of small-pox throughout the Presidency. The largest increases occurred in the North Arcot (20,415 cases) and Godavari (14,198) districts and in nine other districts the increases ranged between five and ten thousand cases. In two districts only, vis., Tanjore and Chingleput, were decreases recorded and these are attributed in the former to the absence of vaccinators without substitutes, and in the latter to the smaller number of unprotected persons. and in both to the short supply of paste. The shortage of the paste supply was due to the failure of the contractor to supply a sufficient number of calves to the King Institute and to an outbreak of disease among those actually supplied, but measures have been taken to guard against a similar misfortune in future. The absence of vaccinators without substitutes will also be avoided by the maintenance of a reserve of operators by district boards. In municipalities 153,269 operations, or 14,312 less than in the preceding year, were performed. In Madras alone there was a fall of 15,744 operations, and in Negapatam and Trichinopoly decreases of over 1,000 cases each occurred, which are said in Madras and Negapatam to have been due to epidemics of small-pox in the preceding year when many people then sought protection in vaccination, and in Trichinopoly to the failure of the lymph supply and the carelessness of an operator. The total number of operations at dispensaries fell from 2,100 in 1905-06 to 248, and is accounted for by the orders issued in April 1905 by the local Government removing the responsibility of vaccination from medical officers.

On an estimated birth-rate of 40 per thousand, 31'92 per cent. of the infants were successfully vaccinated compared with 30'09 per cent. in 1905-06, and in municipalities 65'7 per cent. compared with 67'9 per cent. in the preceding year.

Lanoline lymyh supplied by the King Institute was used in the vast majority of cases with a percentage success of 94°0 in local fund areas and of 95°9 in municipalities, and in the 193 cases performed with the same description of lymph supplied by the Bangalore Institute the percentage of success was 96°9. The glycerine lymph supplied by the King Institute was used in 11,708 cases and was practically a failure, as only 6°3 per cent. proved successful. The Corporation of Madras, with the sanction of the local Government, now uses animal lymph and no longer obtains vaccine paste from the King Institute.

The cost of the department showed a small increase, from Rs. 2,94,419 in 1905-06 to Rs. 2,94,881 in 1906-07, but the cost of each successful case fell to three annas and six pies, or two pies less than last year.

ations numbered 9,013 and revaccinations 1,871, the corresponding figures for the previous year being 9,047 and 1,831. The percentage of success in primary cases was 93'22, slightly lower than the year before when the rate was 93'30, and in revaccinations 75'54 compared with 76'11. Dispensary vaccinations fell from 413 to 348, the percentage of success in primary cases falling from 89'71 to 87'85, and in revaccinations from 78'26 to 72'22 in the two years 1905-06 and 1906-07, respectively.

The cost of the department was Rs. 2,752, or Rs. 12 more only than in the preceding year, and each successful case cost four annas and seven pies which is one pie more than in the year before.

in the preceding year, and in 1906-07, the total of 629,184 operations exhibits a further decline of persons primarily vaccinated which is attributed to the interruption of work by the deputation of vaccinators to classes of instruction in the use of preserved lymph; in the presidency circle there was a decrease in both primary cases and revaccinations, said to be due to the supply of lymph being interfered with owing to rinderpest among the calves and also to vaccination being interrupted by the extra work thrown on the staff in the preparation of glycerinated vaccine; in the Gujarat registration district there was a fall in both classes of work, the decrease in primary cases occurring in the Native States only, the reason assigned being the absence of the supervision that exists in British territory. The largest decrease in both primary cases and revaccinations occurred in the Sind registration district, the chief cause being the great prevalence

of malarial fever among all classes. There was also a decrease in the Aden Settlement, the reason for which has not been stated. The total primary operations numbered 593,351 against 610,985, and revaccinations 37,510 against 45,353 during the previous year: the ratio of success was 95'93 per cent. in the former and 71'75 in the latter, compared with 97'56 and 76'13 per cent., respectively, in 1905-06. These figures include dispensary vaccination which numbered 325 primary cases and 1,180 revaccinations against 1,764 and 2,104, the corresponding figures for the preceding year, while the ratios of success were 84'16 and 54'22 per cent. for primary cases and revaccinations, respectively, compared with rates of 97'47 and 60'98 per cent., respectively, in 1905-06.

Estimating the birth-rate at 40 per thousand, 49'71 per cent. of the infant population were successfully vaccinated against 52'32 per cent. in the preceding year. The number of children actually vaccinated in towns exceeded the number calculated to be available which is said to be due to children born outside the towns being vaccinated in them.

Good progress was made in the substitution of glycerinated vaccine for calf and human lymph and by the end of the year the use of preserved lymph had been introduced in all British districts excluding Sind. The depot at Belgaum supplies lymph to most of the vaccinators and that at Bombay to the local municipal establishment. A bacteriological laboratory has been added to the Belgaum depot, and the purity of every supply of vaccine is now tested before issue. In Sind calf lymph is used in Karachi town, and human lymph in all the districts. In the Presidency as a whole, human lymph, calf lymph, glycerinated lymph and lanoline lymph were used. The results with glycerine lymph are not yet as good as those with human and animal lymph, but the provincial Sanitary Commissioner notes that new methods, new material and new instruments require time before the best results can be obtained.

The cost of the department increased from Rs. 3,01,303 in 1905-06 to Rs. 3,26,124 in 1906-07, and in consequence of the larger expenditure and the smaller number of operations the cost of each successful case rose from eight annas and three pies to nine annas and six pies. The large increase under provincial funds is stated to be due to the increased pay of Deputy Sanitary Commissioners.

Burma.

60,289 fewer than in the preceding year. Primary cases decreased by 57,414 to 359,709, and revaccinations by 2,875 to 51,422. In primary work the ratios of success were practically the same in both years, vis., 90.80 per cent. in 1905-06 and 90.65 in 1906-07, but in revaccinations the ratio fell from 53.25 per cent. to 52.39. The decline in the work of the department is said to be due not to apathy on the part of the officers concerned, but largely to the presence of plague, as there was proof that the people were confusing vaccination with inoculation against plague. In localities not affected by the plague scare there was evidence of increased work. At dispensaries 18,521 operations in all were performed or 1,014 more than in 1905-06. The percentage of success in primary cases fell to 90.12 from 90.44, but in revaccinations it rose to 59.34 from 53.78 in the preceding year.

Estimating the birth-rate at 40 per thousand, 18:58 per cent. of the children were successfully vaccinated compared with 21:27 per cent. the year before. The statistics of the children available in towns and the number vaccinated show that the latter exceeds the former, owing to children being brought into the towns for vaccination.

Vaccine lymph continued to be manufactured at the Meiktila depot for the whole province except Rangoon. In addition to recognized difficulties due to high temperature in certain months, the lanoline supplied to the depot was unsatisfactory and in consequence a large proportion of the issues were of glycerinated lymph. Lanoline is, however, held locally to be the best medium to preserve the vitality of the lymph in tropical conditions, and arrangements have been made to obtain a better quality. Proposals have been made to open a vaccine institute at Maymyo where the disadvantage of a high temperature at certain seasons of the year will be avoided. After a series of experiments at the Meiktila depot Major Entrican decided to discard the use of chloroform in purifying lymph for ordinary purposes. The vaccine depot at Rangoon is reported to be so ill-fitted as to render the successful manufacture of vaccine difficult, but the local municipal authorities are expected soon to realize the necessity for constructing and equipping a suitable depot for the lymph supply of the town.

The cost of the department rose from Rs. 1,14,464 in 1905-06 to Rs. 1,27,528 in 1906-07, and of each successful case from four annas and nine pies to six annas and one pie. The increased expenditure is attributed to the cost of educating native superintendents of vaccination and improving the equipment of the Meiktila vaccine depot, and this with the smaller number of vaccination operations, resulted in the higher cost of each successful case.

153. The total number of operations which had been 14,935 in 1905-06 fell to 12,100 in 1906-07. Of the total the primary cases numbered 11,973 and revaccinations 127, against 14,510 and 425, respectively, in the preceding year. The percentage of success however showed an improvement compared with the preceding year: in primary cases 97'87 per cent. proved successful against 95'50 per cent., and in revaccinations 82'68 per cent. against 81'65 per cent. There was no dispensary vaccination in the province.

The cost of the department was Rs. 2,867 as compared with Rs. 2,849, and the cost of each successful case three annas and ten pies against three annas and one pie in the preceding year.

- 154. The usual statistics of vaccination operations in the Army will be found in Statement No. III of the appendices to this section.
- The conditions of service of vaccinators.

  The conditions of service of vaccined by municipalities, local bodies and cantonments,

were entitled to pensions or gratuities from the general revenues. They decided that vaccinators should be placed on the same footing as other local fund employés, and accordingly directed, in Home Department Resolution No. 190-202 (Municipalities), dated 27th November 1906, that—

- (1) for the future vaccinators shall not be enrolled as servants of Government or employed as a provincial establishment;
- (2) vaccinators employed hereafter by local bodies shall be wholly under their administrative control, and shall be on the same footing as other local employés; and that
- (3) existing incumbents shall retain existing rights to pension from Government.

The effect of these orders cannot of course be gauged at present, but with the beginning of an altered system of recruitment a record of the present position in respect of the recruitment, employment, etc., of vaccinators is of interest. The statement on the following pages shows conveniently the number of vaccinators working in the several provinces, by whom they are employed, how they are supervised, their rates of pay, the area in which they are required to work, and how they are employed in the non-vaccinating season.

Vaccinators

Statement showing the conditions of employment of vaccinators in the different provinces of India.

	Supervision exercited.	Supervised by Inspectors of Vaccia- ation, Deputy Sanitary Commis- sioner and the Civil Surgeon,	Each Sub-Inspector is responsible to the Civil Surgeon for the work of the vaccinators within his circle, he has to inspect about 60 to 70 per cent, of the operations per formed and submits a monthly surgeon.  The District Inspector help the Civil Surgeon in compliant in the Civil Civil Surgeon in compiling month-	ty returns and inspects about 40 per cent, of cases, The Civil Surgeon and Deputy Sanitary Commissioner also inspect the work when on tour.  The Province is divided into two superintendence of a Deputy Sanitary Commissioner and each district itary Commissioner and each district its under the direct supervision of the Civil Surgeon assisted by an Assistant Superintendent of Vaccil nativity, except in the Care of a few	districts where the supervision is cu- ercited by a Senior Assistant Superintendent of Vaccination.  The work of vaccinators is inspected by Superintendents of Vaccin- ation, Divisional Inspectors, Givil Surgeous, and the Deputy Sanitary Commissioner, and the Sanitary Commissioner in the course of his tours also inspects the work.	Supple or character.
	How employed during the non- vaccination season.	Vaccinators in reunicipalities are generally entertained for periods ranging from 3 to 6 mooths.  When entertained during the nonvaccination season her see employed in connection with the stamsing out of outbreaks of small-poyare given an allowance of four	annes a day.  No regular employment. The proposal to employ Municipal vaccinators in collecting vital statistics in compulsory areas is under consideration.	On sanitary and registration work, for the distribution of medicines in times of epidemics or of relief in times of scarcity, for checking vital statistics, or sanisting is carrying out minor sanitary incrovements in villages. When so employed they are given	in addition to pay an allowance of Rs. 5 per mensen.  Vaccinators during the non-vaccination season are employed in checking birth and death registers and preparing lists of children for revaccination in the following winter. A certain number are sent to Sadr dispensaries to be buight the compounding to be buight the compounding the compounding season of simple draws and also	to dress simple wounds and to perform such miner operations as the opening of abscesses. They also distribute quinine in distributists where maheral forers are prevalent. On cholora epitemists they are employed for distributing medicines, etc.
1	Area within which a vaccinator is required to work,	Square miles.	158 25	9 1	% 1 1	
NUMBER. PAR.	Pensionable or Non-pensionable.	Non-pecsionable†	Pensionable Non-pensionable	Pensionable Non-pensionable	Pensionable	
	Total.	Rs. 12—30 8—15 Paid at the rate of two annas for each successful case.	8-75 & 10-12 Paid Ly fees at two annus for each successful case,	-	1111	1
PAT.	3rd class,	d: ::	11 1 1	\$	2 2	
	and class.	2111	1, 1 1	\$	21 11	13,00
	class.	2:11	111	9	2 2	
	Total.	°200 1,421	230	4	401 44 17 60	
GR.	grd class.	111	1 1 1	1	2 ∞	
NUMBER.	and class.	111	111	1	8 6	1
	rst class,	1 1 1	. 1 1 1	1	2 "	
	Employed by	State Local bodies Licensed	and Local bodies Licensed	State { Local bodies }	District Staff Special Staff Cantonments	
	Province.	Bengal	Assam, Bengal and	United Provinces {	Punjab	

Staff District The Excluding Calcutta Municipality.
 Factor of the control of the combents will be treated as Local Fund employée and will not be entitled to pension.
 Except those in Darjecting and Sambalpur; feture incumbents will be treated as Local Fund employee and surface and sambalpur is granted by the Local Bodies concerned a small extra local allowance.
 Including 12S of the ath grade at Ra, to each. The men of the provincial waterinston and are paid from the provincial funds; the control of the provincial funds is the controlled as servants of the State and admitted to the bensities of pension, etc.

Statement showing the conditions of employment of vaccinators in the different provinces of India-contd.

WITH THE GOVERNMENT OF INDIA FOR 1906.										
	Supervision exercised,		when on tour.  The work of the vaccination staff is supervised by native Superintenders of Vaccination and by the Civil Surgeon of the district under the supreme control of the Sanitary Commissioner.	The work is supervised by Deputy Inspectors of Vaccination who are Government servants appointed and controlled by the Sanita, y Com-	missioner, and are required to verify not less than 50 per cent. of the operations performed. The Civil Surgeon is the Superintendent of Varcenation and verifies cases when on tour. During the teuring casen the Inspector verifies vaccination work and submits footnightly returns.	The supervising staff comprises 5 Deputy Saniary Commissioners, 31 Impectors who are also advisory Saniary Inspectors. There is at least one Inspector to each Collectorate and two or more for the larger Collectorates, Each Inspector	is able to see some if not all his vacinators twice a year.  Civil Surgeons are ex-officio Super-intendents of Vacination and are responsible for the management of the staff and cutture of work in their respective districts. Native Superintendents (23) of Vaccination have been appointed for inspection work.			
	How employed during the goo-raccination season.	In inspecting birth and death registers and in receiving instruction at the Sade station in the use of a few simple drugs.	On duties connected with out- breaks of epidemic disease. When not so employed their services are available for medical or sanitary work as the Civil Surgeon may think fit.	No recess period	Vaccinators remain at head-quarters and perform what operations they can.	There is no non-vaccinating season, but the work is less during the monsoon months.	No period for testation of vaccina- tion work; arrangements are being made to cease it for ene month during the year, when vaccinators will be depated to sall quinne, will be depated to sall quinne, perform mosquito brigade work, or other daty according to local re- quirements.			
	Area within which a vaccinator is required to work.	Square miles,	(25 for municipal or cantonment vaccinator.)	3	91 to 421 }	i i	Not fired; usually corresponds in size with the township con-			
	Pensionable or Non-pensionable.	Pensionable	Pensionable	Non-pensionable	Pentionable§ Non-pensionable	Pensionable	Pensionable Non-pensi-nable			
	Total,	R II	1 1	1	23	1	30 30 1			
PAY.	3rd class.	. E	2	Ĩ,	11	3	11			
	and class.	15.	2	<u> </u>	11	5	11			
	1st class,	. S.	5 5	15-20	11	•	11			
	Total.	**	2477	\$50	10 H	38	Not fixed			
NUMBER.	3rd class,	6	8	1	11	1	11			
	and class,		1 2	1	11	11	11			
	rst class.	~~	\$ 1		11		-11			
	Employed by	State Local bodies	State Local bodies	State Local bodies	State Local bodies	State Local bodies	State Local bodies			
	Province,	North-West Frontier	Central Provinces and State Berar.	Madras {	Coorg	Bombay	Burns			

Including 25 apprentice vaccinators at Rs. 10 each.
 Including 25 apprentice vaccinators at Rs. 5 each per mensem.
 In addition, 4 vaccinators are employed in Zamindaries, 6 in Castonments and 18 in Agency Tracts: the services of men in Agency Tracts and Cantonments are pensionable.
 As vacancies occur, they will be filled by men employed by the Local Fend Board.
 Higher rates are given in a few specially unhealthy localities.

## SECTION VIII.

# SANITARY WORKS.

156. The number of municipalities in Bengal, excluding Calcutta, in 1905-06

Bengal.

was 128, and their income during the year, excluding the opening balance of Rs. 7,58,552, was Rs.

49,67,128, or Rs. 1,39,178 more than in 1904-05. The total sum available was Rs. 57,25,680, and of this 38.63 per cent. was spent on sanitary works, of which 7.42 per cent. was spent on the treatment of the sick, 8.76 per cent. on roads, 5.19 per cent. on public safety and 30.96 per cent. on other requirements. The actual sums spent on sanitary works were as follow—on water supply Rs. 2,48,049, or Rs. 15,200 less than in the previous year; on drainage Rs. 1,60,065, or Rs. 14,066 less than in the previous year, the decrease in both cases being due to smaller capital expenditure; on conservancy Rs. 11,78,994 or Rs. 70,470 more than in 1904-05; while smaller sums were spent on markets and slaughter-houses, vaccination, the disposal of the dead, etc.

The improvement of the conservancy in the towns of Bengal continues to make progress and expenditure under this head rose nearly everywhere. Almost every town has now a properly laid out trenching ground and most of these are regularly cultivated. Rules for the management of the septic tank installations at factories have been published and instructions were issued from the office of the Sanitary Commissioner to all inspecting officers specifying the details of inspection to be made by them of these installations. Several of the District Boards undertook the sanitary improvement of villages, notably in the Patna district, where 181 villages were cleansed on the lines laid down by the Board at a cost of Rs. 2,500.

- 157. There were four meetings of the Sanitary Board during the year, at which the following were the principal subjects of discussion—
  - (1) rules for the preparation of water-supply and drainage projects;
  - (2) the employment of a permanent staff of surveyors for the preparation of sanitary schemes;
  - (3) the preparation of a drainage scheme for the Berhampore municipality; and
  - (4) a proposal to treat the Darjeeling water-supply with ozone.

Preliminary estimates were prepared for the following schemes-

Gaya water-works.—It is proposed to sink wells on the bank of the river Phalgu. The estimate, which amounts to Rs. 6,30,000, is being considered by the local authorities.

Patna drain-flushing scheme.—It is proposed to have a central pumping station at Babuaganj ghat; the cost of the scheme is Rs. 1,10,000.

Jessore water-works.—Borings are being made to ascertain whether a sufficient supply of water can be obtained from the bed of the Bhairab.

Detailed estimates were prepared for the following-

The Khulna water-works.—The cost of the scheme was reduced to Rs. 17,841. It provides for a supply of 15,000 gallons of filtered water a day delivered into five existing reservoirs. The water is raised from a reserved tank by means of a pulsometer pump with two sand filters, whence it flows in pipes to the reservoirs from which the people draw off the water. The works were opened in October 1906.

Bhagalpore water-works, remodelling.—The scheme, which will cost about Rs. 1,21,000, comprises a remodelled intake from the Ganges, and an installation of Diesel oil-engines for pumping.

The Darjeeling water-works.—The Pasteur-Chamberland system having proved a failure, it has been resolved to convert the existing settling tanks into sand filters.

Monghyr water-works.—A scheme to obtain water direct from the Ganges at a cost of Rs. 4,69,000 was sanctioned and the work was nearly finished at the end of the year.

The municipalities of Arrah, Bankura, Berhampur, Bettiah, Bhagalpur, Garden Reach, Jessore, Murshidabad, Midnapore, Baruipur and North Barrackpur, each appointed a surveying staff for the preparation of surface drainage schemes. Drainage schemes for Suri, Serampur and part of Hooghly-Chinsura were drawn up, and good progress was made in the towns of Burdwan, Monghyr, Kalna and Katwa. The Hazaribagh municipality entrusted the execution of their drainage scheme to a contractor.

The following schemes among others were considered during the year— The Cossipur-Chitpur unfiltered water-supply; the Serampur filtered water-supply; the extension of filtered water-supply to Tollygunge; the Kurseong water-supply improvement; the Manicktollah water-supply; the Bagjollah drainage scheme; and drainage schemes for Baranagore, Cuttack, Baraset, Uttarpara, Titaghar and Howrah (Block IV).

Opening balances, was Rs. 15,99,511, of which 42'12 per cent. was spent on sanitary works and sanitation, including treatment of the sick and the construction of roads, the actual sums spent under the principal headings being, Rs. 77,151 on water-supply; Rs. 45,613 on drainage; Rs. 3,63,172 on conservancy; Rs. 23,423 on markets and slaughter-houses; Rs. 1,45,556 on the treatment of the sick; and Rs. 2,14,407 on the construction of roads, the amount under each heading in all cases, except treatment of the sick, being considerably larger than in 1904-05.

The towns of Gauhati, Silchar, Dibrugarh, Faridpur, Mymensingh and Pabna spent the largest proportion of their respective incomes on sanitation, in each case over 50 per cent.; the towns of Sylhet, Noakhali, Comilla, Rangpur and Dacca spent between 40 and 50 per cent., and Chittagong spent 28'13 per cent.

Many of the District and Local Boards are beginning to spend a larger percentage of their income on sanitation, and there is reported to be a growing feeling among them that Sanitary Inspectors should be appointed to bring them more in touch with the requirements of the districts and to aid in dealing with outbreaks of epidemic disease.

In many of the larger towns of the province schemes for water-supplies and drainage are under consideration, and the improvement of conservancy and the construction or improvement of market buildings are receiving attention.

At Dacca a scheme for improving and extending the existing water-supply is under consideration, and plans and levels have been prepared in connection with a drainage project. A new slaughter-house is in course of construction and proposals have been brought forward for the construction of a municipal market.

At Chittagong two alternative schemes for a water-supply have been brought forward: one scheme provides for the construction of a reservoir by damming a stream among the hills near the town; the other provides for obtaining water from springs near the railway station.

At Narayanganj a project to supply the inhabitants on the western bank of the river Lakhia with water from that river at a cost of Rs. 1,67,000 is being carried out, and a surface drainage scheme to cost Rs. 14,000 is being prepared.

At Barisal a water-supply project to supply water from the river at a cost of Rs. 2,07,000 has been temporarily shelved for want of funds, but it is hoped that it will soon be taken up.

At Dinajpur a drainage scheme has been completed as far as possible at present, and a further scheme to canalise the Ghagra and Kachai rivers where they pass through the town is being considered by the Municipality and District Board.

At Gauhati a new pump has been installed at the water-works; and the building of the new municipal market is well advanced.

Projects for improving the water-supply of Chandpur, Rampur-Boalia, Sibsagar, Silchar and Jorhat are under consideration, and surface drainage schemes for English Bazar, Mymensingh, Comilla, Gauhati and Silchar are in various stages of preparation.

- 159. Five meetings of the Board were held during the year, at which the following were the principal subjects of discussion—
  - (i) The drainage of unhealthy areas.—Steps were taken to obtain information concerning unhealthy tracts in the Faridpur, Dinajpur, Rangpur and Rajshahi districts with a view to taking special measures for their improvement. A scheme for the improvement of the Nator sub-division of the Rajshahi district is being drawn up by the District Engineer.
  - (ii) Improvement of water-supplies in rural areas.—A sum of Rs. 22,000 was placed at the disposal of the Board by the local Government to be distributed as grants-in-aid to the various District and Local Boards on the conditions that the Local Board and the people of the locality would each contribute a sum equivalent to the grant, and that legal guarantees should be given that the water in the

wells or tanks constructed with the money should be reserved for drinking purposes. In some districts the invitation of the Sanitary Board for applications was eagerly accepted, notably in Kamrup and Dinajpur; from the former district alone applications for more than half the total allotment were made.

- (iii) An enquiry into the condition of the country near Bogra which was said to have become unhealthy through the silting up of the river Karatoya. The re-excavation of the river was found to be impossible; but it seems there is no evidence that the area in question is particularly malarious.
- (iv) The appointment of a Sanitary Engineer for the province. An application for a whole-time Sanitary Engineer was made to the local Government. The creation of the appointment has been approved by the Government of India.

160. The municipal towns in these provinces spent in 1905-06 about 44 per cent. of their total income on conservancy, plague-United Provinces. prevention, water-supply and drainage; the actual expenditure was, on water-supply works Rs. 6,52,270, and on drainage and sewerage Rs. 10,97,209. The rapid progress made in the development of municipal sanitation may be gauged from the fact that the cost of the projects of improvement considered by the Sanitary Board was about 38 per cent. more than in the previous year. The water-supply works at Agra, Allahabad, Benares, Cawnpore, Lucknow and Meerut worked well throughout the year; there was in each instance a considerable increase in the quantity of water supplied, many pipe extensions were made, and the numbers of house connections continue to rise. At Naini Tal the water-works gave satisfaction throughout the year; and at Mussoorie the large hydro-electric scheme for extending the water-works and providing electric light in Mussoorie and Landour made good progress and is expected to be completed by March 1908.

At Agra 15 more lanes were paved and drained and the length of drains flushed has risen to 42½ miles. At Allahabad a large drainage scheme is in preparation, in connection with which an engine and disintegrator were purchased during the year. Many stone-flag drains were laid and 46,000 square feet of city lanes paved. At Benares the sewerage scheme has been completed at a cost of Rs. 13,32,033, and a further scheme estimated to cost Rs. 20,72,953 for the sewerage and surface drainage of the rest of the city has been sanctioned and will be carried out as funds become available. At Cawnpore the sewerage scheme worked satisfactorily, and estimates and plans for the surface drainage and paving of the city were prepared. At Lucknow progress was made with the surface drainage and paving and after some discouraging results, satisfactory results are being obtained with the plant for the biological treatment of sullage which on account of its extreme concentration (446°0 parts of suspended solids per 100,000) presents unusual difficulties.

Drainage works were completed in Dehra Dun, Chandausi, Fategarh and Mirzapur; and were nearing completion in Deoband and Nagina. Projects for the drainage of Hathras, Budaun, Moradabad, Hapur, Saharanpur, Bahraich, Jaunpur, Fyzabad, Ujhaini and Muttra-Brindaban were either completed or nearly completed; and surveys were in progress in Amroha, Etawah, Gorakhpur, Mainpuri and Sambhal.

The appointment of an Assistant Engineer was sanctioned, and Mr. Parker, who was selected, joined his appointment in January 1907.

161. There were four meetings of the Board during the year, at which the

Sanitary Board.

members considered, criticized and approved
projects estimated to cost Rs. 25,90,925 to most
of which reference has already been made. The reports on the working of the
Village Sanitation Act in 1904-05 were read, and it was noted with satisfaction
that the expenditure on village sanitation which amounted to Rs. 1,03,220 was
greater than in any former year.

162. No details regarding municipal funds or of the proportion of income devoted to sanitary works are contained in the Punjab. provincial report. At Lahore estimates have been made and financial arrangements are being considered for improving the watersupply by the addition of a third engine and another series of wells. The construction of the conservancy tramway line was nearing completion. At Delhi the urgent necessity for an extra engine, pumps, filter beds, and sedimentation tank at a cost of about Rs. 1,93,000 has been brought to the notice of the Municipal Committee. The intramural drainage construction made good progress. At Amritsar estimates for remodelling the street drains in several more of the city wards were prepared; and it was decided to raise the sullage by means of centrifugal pumps from two collecting tanks at the surface on to land. At Ambala grants-in-aid aggregating Rs. 15,000 were sanctioned for the extension of intramural drains. At Rawalpindi the construction of the main intercepting drain and disposal works estimated to cost Rs. 1,38,967 was nearly completed, and the preparation of a project of intramural drainage was taken in hand. At Multan the construction of the main drain and disposal works, to cost Rs. 73,179, was nearly finished. The drainage works at Jagraon and Gujarat were completed. At Ludhiana a detailed estimate amounting to Rs. 4,30,468 for the water-works scheme was sanctioned and work was begun in September. At Sargodha the water-works, estimated to cost Rs. 1,22,266, and the drainage works of the city and civil station, estimated to cost Rs. 91,000, were completed.

The Sanitary Engineer notes that there still remains much to be desired in the working of the sewage farms, but the Sanitary Commissioner draws attention to the increase in the area of land taken up for sullage irrigation in the vicinity of many of the towns and to the increased price being paid for municipal sullage. The amount realized from the sale of manure by the municipal towns was Rs. 1,59,847, compared with Rs. 1,51,879 in 1905.

A few District Boards offered rewards for the best results shown in the sanitary improvement of villages, but as usual they were not bestowed as the interests of village communities in sanitation is not yet awakened.

The Board disributed grants-in-aid aggregating
Rs. 30,000, to a large number of the smaller towns for sanitary works; and advised regarding most of the projects mentioned above.

The appointment of provincial Sanitary Engineer was made a permanent one.

North West Frontier Province.

Of the towns, and to the cleaning out of wells in the district. There was a trifling increase in the sum derived from the sale of manure by municipalities, the aggregate receipts rising from Rs. 21,779 in 1905 to Rs. 21,853, and it appears that if more attention was paid to this source of income the sum realized would be considerably increased.

165. The income of the district head-quarters municipalities in 1906, excluding opening balances and special grants, was Rs. 12,97,016, or Rs. 26,532 less than in the previous year. Of the total income 39'49 per cent. (against 34'24 in 1905) was spent on water-supply, drainage, conservancy (21'04 per cent. of total income), markets, slaughter-houses and other sanitary requirements; 4'27 per cent. on medical relief; 1'21 per cent. on plague and 0'17 per cent. on vaccination.

No original work of capital importance was undertaken during the year, but in most of the towns considerable activity was displayed in improving watersupplies, extending and renewing drains, etc.

ord were held at all district head-quarters, except Akola, Hoshangabad and Nagpur. The work carried on under their direction consisted as usual in the improvement of existing wells, the construction of new wells, the repair of roads and the clearing of village sites.

A letter was sent by the local administration to the Government of India in which the urgent necessity for the appointment of a provincial Sanitary Engineer to carry out schemes of sanitary improvement in the larger towns was represented.

tion are furnished in the provincial report, from which, however, it appears that the assignment made for sanitation during 1906 was smaller than in the previous year, but a larger proportion was actually spent, although with the single exception of Bimlipatam, where it was exceeded, in no town was the allotment fully utilized, and in eight towns the expenditure was 50 per cent. below the sanctioned amount.

The extension of the Coonoor water-works, and the erection of a pumping installation at the Arisipalyam tank in Salem were completed under the direction of the Sanitary Engineer. The improvement of the head-works of the Guntur water-supply; the drainage works of Ootacamund, and the head-works of the Saidapet water-supply scheme, which was held in abeyance pending the settlement of a claim made by the authorities of the cantonment of St. Thomas Mount to certain land, were under construction. The Vellore, Gudiyattam and Nellore water-works were being constructed by the Public Works Department. A comprehensive scheme for the drainage of Madura, and plans and estimates for the water-supply of Berhampur, Periyakulam, Tuticorin (filter-beds and pumping plant), and Tanjore extension were prepared by the Sanitary Engineer. A report containing proposals for the improvement of the drainage of the City of Madras was forwarded to Government, the proposals were sanctioned, and the President of the Corporation was requested to have plans and estimates prepared.

cost of which was Rs. 60,39,399; of the schemes, 39 costing Rs. 59,64,673 were for Municipalities and 27 costing Rs. 74,726 were for local Fund Boards. The most important of the schemes were, Madras water-supply (improvements), Rs. 22,50,000; Ootacamund drainage, Rs. 3,83,020; Coimbatore water-supply, Rs. 4,50,000; Madras hospitals for infectious diseases, Rs. 1,14,657; Tuticorin water-supply, Rs. 2,89,190; Madras drainage (improvements), Rs. 5,79,380; and Madura drainage, Rs. 13,63,930. Final approval was accorded to the plans and estimates of 31 works costing Rs. 89,631.

The income of the 162 municipalities in the districts of Bombay in the year 1905-06 was Rs. 69,98,933, of which Rs. 22,35,473 or 31'94 per cent. was spent upon water-supplies, drainage and conservancy. There were 24 District Local Boards with 210 Taluka Local Boards, of which the aggregate income was Rs-56,85,096, and a sum of Rs. 3,94,875 or 6'95 per cent. of income was expended by them on water-supply and drainage.

Progress in municipal sanitation in the Bombay Presidency has been hampered by the ravages of plague which have embarrassed the financial position of most municipalities to such an extent that many urgent schemes for water-supply and drainage have had to be deferred.

- 170. The Board met twice during the year, when the following among other
  Sanitary Board. matters were considered—
  - (1) Surveys for the improvement of the water-supply and drainage of the towns in the neighbourhood of Bombay City.
  - (2) The collection of information regarding municipal water-supply and drainage works with a view to obtain a record of such works in the Presidency. The information collected by means of a circular addressed to all municipalities was abstracted by the Sanitary Engineer and forms an admirably concise account of the progress made in municipal sanitation in the Bombay Presidency. It is published in the provincial Sanitary Report for 1906.

Three important works were in progress during the year-

The Ahmedabad drainage and sewerage scheme.—The extension of the scheme undertaken by the municipality in 1903 was completed at a cost of Rs. 14,03,018, for which they have sewered 500 acres of the city populated by about 90,000 persons. The municipality are arranging to extend operations on their sewage farm, and to develop their resources before beginning a further extension of the scheme.

Karachi drainage.—Extensions of the Shone system were in progress and the original scheme cost Rs. 6,00,000 for a population of 30,000. Another Rs. 5,50,000 have been sanctioned to extend the system to a total population of 44,564.

The Jalgaon water-supply.—The water-supply is derived from two tanks situated about 3 miles to the south of the town. The lower tank serves as a pure water reservoir; the upper tank, which was built in 1878 to supplement the supply of the lower, is leaky and frequently runs dry. The improvements include a feeder channel to augment the supply in the upper tank, a balancing tank, a new

13-inch service main to replace the existing 5½-inch main, and improvements in the distribution system; the cost is estimated at Rs. 1,70,897.

The following projects were sanctioned-

Improvements to the Dhulia water-works.—The expenditure of Rs. 38,175 was sanctioned to provide new filter-beds.

Pandharpur drainage.—The project for a complete drainage system, which includes a main collecting sewer to intercept the sewage which has hitherto found its way into the river, in which thousands of pilgrims wash and bathe and from which many of them obtain their drinking water, is estimated to cost Rs. 2,00,659.

Projects were prepared during the year for the Poona and Kirkee water-supply (Rs. 15,84,218) and the drainage of Poona (Rs. 22,35,368). A considerable number of new works and improvements to existing works were considered, including extension and improvement of the Ahmedabad water-supply; improvement of the Surat water-supply; a drainage scheme for Surat; Kurla water-supply; improvement of the Pandharpur water-supply; improvement of the Hyderabad water-supply; improvement of the Sukkur water-supply; improvement of the Ahmednagar water-supply; and the provision of new water-supplies for Nasik, Kapadvanj and Dakor.

of which Rs. 41,16,789 were spent on sanitary works as follows—on water-supply Rs. 12,55,082; on drainage Rs. 8,58,668; on conservancy Rs. 10,46,894; and on other sanitary works Rs. 9,56,145.

At Rangoon the Hlawga water-supply scheme, estimated to cost Rs. 46,33,102, was completed and handed over to the municipality on the 1st July. A supplementary estimate of Rs. 1,42,662 was sanctioned for special repairs to the dams and part of this work was finished.

The cantonment water-supply scheme was completed. The reclamation of land continues, but the improved building bye-laws were still under consideration by the Municipal Committee.

At Akyab the water-supply project was in progress and the estimates were slightly amended to admit of certain improvements.

At Insein plans and surveys for a drainage scheme were prepared by the Sanitary Engineer and handed over to the Executive Engineer of the district so that detailed estimates and plans might be prepared for sanction. At Pegu plans and estimates (Rs. 51,308) for a drainage scheme were prepared. At Mandalay water-supply schemes continue to be discussed. In several other towns plans and estimates for water-supply and drainage schemes were prepared.

The income of the District Municipalities in 1906 was Rs. 44,63,775, of which Rs. 3,20,602 were devoted to sanitary works, distributed as follows—on water-supply Rs. 70,042; on drainage Rs. 37,572; on conservancy Rs. 72,097; and on other sanitary works Rs. 1,40,891.

172. The Board met four times during the year—three times in Rangoon and once in Mandalay. At the second meeting the Board approved of the amended rules for the

guidance of the Sanitary Engineer in respect of sanitary works and recommended their adoption. At the third meeting the water-supply of Mandalay was discussed as the accepted scheme for tube wells was not considered in all respects satisfactory. It was resolved that the municipality should be asked to decide what is the largest sum which they can afford to pay for a water-supply, and that for comparison with the present scheme the following sources of supply should be considered and rough estimates framed for the different projects—a reservoir in the hills with a supply by gravitation; deep wells in the north of the town; the river.

173. During the year 1906-07 the expenditure on ordinary military works

was Rs. 80,30,768, as compared with Rs.

1,15,78,465 in the previous year. In addition,
Rs. 38,35,443 was spent on military works connected with the military reorganization scheme and Rs. 19,38,572 under the head "special demands." Details regarding new works and improvements in some of the more unhealthy cantonments will be found in the statements appended to Tables V and XXX at the end of this volume.

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### SECTION IX.

#### GENERAL REMARKS.

174. The pilgrim season of 1905-06 was the last for which the segregation of pilgrims for five days at Bombay, prior to embarkation, was enforced. The conditions on which pilgrimage from India to the Hejaz is now permitted were detailed in paragraph 175 of this report for 1905.

According to the report by the Superintendent of the Preventive Service, Bombay, the segregation Camp at Pir Pao was opened on the 7th October 1905, and the first batch of pilgrims sailed from Bombay on the 14th of that month. In all 18,390 pilgrims left Bombay in 23 ships, the last sailing on the 9th of January 1906. The report of the British Vice-Consul at Kamaran records the arrival of 24 ships from Bombay with a total of 18,745 pilgrims of whom 15,203 are described as Indians. The Vice-Consul has included in his return the S. S. "Clan Sinclair" which arrived at Kamaran on the 15th of October 1905 with 257 pilgrims; this ship is not included in the return of the Bombay authorities, presumably because it sailed before the recognised pilgrimage season. According to the Indian reports there was an increase of 6,097 pilgrims during the season 1905-06 as compared with the previous one, but the Kamaran report records an increase of 3,801 only; this difference may be due to the fact that the Kamaran report, and also the Haj report, distinguish between Indians and Afghans, while the Indian report makes no distinction as to nationality.

The sanitary condition and arrangements of the ships are described in the Kamaran report as good, and the health of the pilgrims as satisfactory. On the voyage 30 deaths occurred, and from one ship five persons suffering from small-pox were landed at Aden.

During the period of quarantine at Kamaran 122 pilgrims were admitted to hospital and there were 35 deaths, due chiefly to acute and chronic bronchial and pulmonary affections, gastric and intestinal diseases, and old age and debility. The disinfection at Kamaran was carried out satisfactorily and there was no second disinfection as in previous years. The Haj report states that "the health during the pilgrimage was very satisfactory:" a few cases of small-pox occurred but the disease did not spread in epidemic form. The sanitary condition of Jeddah and Mecca was satisfactory.

The pilgrims, 18,072 in number, returned in 25 vessels between the 2nd of March and the 3rd of July 1906. During the homeward voyage 240 deaths occurred, the chief causes being old age, general debility, dysentery and diarrhoa. On ten ships during the voyage there were 34 cases of small-pox, one of measles and three of chicken-pox. Some of the patients were landed and taken into hospital at Aden and the remainder at Bombay. Of all the pilgrims on ships infected with small-pox, only 103 were vaccinated, the rest refusing to avail themselves of the offer of vaccination free of charge. The personal effects of 6,551 pilgrims among whom small-pox appeared were disinfected, after which the pilgrims were made over to the Protector of Pilgrims for despatch to their homes.

Laboratories.

Labora

The Bombay Bacteriological Laboratory at Parel has two sections, the anti-plague vaccine section and the bacteriological section. The work of the first section has already been referred to in Section VI. The room in the bacteriological section fitted up for the accommodation of outside workers, and other rooms in the laboratory, were occupied throughout the year by the Plague Research Commission, so that although several applications from outside workers were received none could be admitted. During the nine months from the 1st of April to the 31st of December 1906 the routine work undertaken in diagnosis and research for medical men in the Bombay Presidency included the examination of 358 samples of blood by the serum test for typhoid fever, paratyphoid fever and Malta fever, 131 films of blood for malaria parasites, spirilla of relapsing fever, plague bacilli, etc., and 32 specimens of sputum for tubercle bacilli, pneumococci, etc. In all 183 animals were received for examination of which 84 were rats sent by private persons to be examined for the diagnosis of plague and 33 were dogs to be examined for the diagnosis of rabies. The research work done by the staff of the laboratory during the year included an investigation by the Director (Lieutenant-Colonel Bannerman, I.M.S.) to ascertain the relative value of the constituents of the antiplague vaccine; an investigation of the value of Dr. Brazil's curative plague serum; investigations into an outbreak of cholera in the Umarkhadi jail; into an epidemic of infantile diarrhoea in the Cama hospital; into the life history and mode of transmission of the spirillum of relapsing fever, etc. The collection of snake venom was continued, 371 snakes being received during the year. The venom, after desiccation, was sent to the Central Research Institute for the preparation of antivenene.

The King Institute of Preventive Medicine at Guindy, Madras, also has two sections, the small-pox vaccine section and the bacteriological section. The work of the vaccine section has been mentioned in Section VII. The routine work of the bacteriological section during the year included the examination of 1,083 specimens sent by medical and sanitary authorities. Of these specimens 396 were sent for diagnosis of plague, 217 for malaria, 134 for typhoid and similar fevers, 57 for a tuberculosis, 12 for kala azar and 10 for hydrophobia; and 123 were tumours and 95 were samples of water. The research work carried out by the staff dealt with the bacteriological examination of Indian waters, the efficiency of cyllin as a disinfectant, the extraneous organisms of vaccine, the development of Piroplasma canis in the tick, kala azar, mammalian hæmo-

gregarines, and other subjects. A summary of the results obtained in a few of these investigations is given in the next paragraph. The educational work done at the Institute included a course of lectures in minor sanitary engineering, a course of instruction for plague inspectors, and lectures and practical instruction in human and animal vaccination.

At the Pasteur Institute, Kasauli, during 1906 the number of persons who presented themselves for anti-rabic treatment was 1,147, of whom 350 were Europeans and 797 were natives. Among the Europeans 181 were soldiers and 169 were civilians, the corresponding numbers among the natives being 52 and 745. Patients came from every province, from the Native States of Rajputana and Kashmir and from Ceylon; ten of the eleven patients from Ceylon were European civilians. During the year the treatment was unsuccessful in only nine cases out of the total number treated. In addition to the anti-rabic inoculations, 282 experiments were conducted with brains sent for the diagnosis of rabies, and 969 specimens sent for diagnostic purposes were examined and reported upon.

The Pasteur Institute, Coonoor, was opened for the treatment of patients on the 1st of April 1907 so there is no information concerning its work to be recorded in this issue of the report.

have been or are being carried out with reference to enteric fever, kala azar, and other subjects.

In addition to routine work at the bacteriological laboratories, enquiries have been or are being carried out with reference to enteric fever, dysentery, malaria, blackwater

Enteric fever.—The results obtained up to the present time in this investigation, which was commenced at the Central Research Institute in March 1906, have already been summarized in Section II of this report (pages 16 to 32). The investigation was conducted by the Director of the Central Research Institute [Lieutenant-Colonel Semple, R.A.M.C. (retired)] and Captain E. D. W. Greig, I.M.S.; other officers who assisted in the work were Lieutenant-Colonel Wyville Thomson, I.M.S., Captain D. Harvey, R.A.M.C., Captain F. N. White, I.M.S., Captain E. C. Hodgson, I.M.S., and Assistant Surgeon Paras Ram.

Dysentery .- In July 1906 Captain W. C. H. Forster, I. M. S., was placed on special duty under the Sanitary Commissioner with the Government of India to investigate the causation, prevention, and treatment of dysentery in the prisons and lunatic asylums of India. Until the end of the year Captain Forster worked in the jails of the United Provinces and the Punjab and in the laboratories of the Central Research Institute. In the beginning of 1907 he represented that the problems connected with the subject would be more likely to be solved by continuous work at a jail where dysentery is prevalent than by the work which could be done during short visits to many jails, and the Midnapur jail in Bengal was selected as being suitable. The services of two Assistant Surgeons were placed at his disposal, one to assist in the work at the Midnapur jail, the other in the work at the institute. The investigation in the Midnapur jail was commenced on the 1st of February 1907 and, excepting a short period spent on a visit to the Barisal jail in Eastern Bengal and Assam, where a severe epidemic of dysentery was reported, has been carried on there since that time. In July 1907 the direction and control of the investigation was placed in the hands of the Director of the Central Research Institute.

Captain Forster has furnished three reports of the progress made in the investigation and a brief summary of the results recorded in the most recent of these may be given here with the saving clause that as the problems of the subject are not easy to solve the conclusions arrived at are liable to correction in the light of future work. Under the heading of the causes of acute dysentery Captain Forster states that from the stools of different cases he has been able to isolate the bacillus of Shiga, the bacillus of Flexner, the Y bacillus of Hiss and other varieties of the group, but that from the great majority of cases of bacillary dysentery, the bacilli of Shiga or of Flexner have been isolated. In some cases both these bacilli were present. In the cases of dysentery from which the bacilli can be isolated the stools are characteristic and the bacilli give rise to a definite train of symptoms. The vast majority of cases of acute dysentery are bacillary in origin, and, in first attacks of the disease, bacilli of the dysentery group are nearly always present. Captain Forster reports the finding of two types of amœbae in the stools of patients suffering from dysentery; one has characters similar to those of the A. histolytica, the other to those of the A. coli. The first type is the one nearly always found, Amæbae are often present in cases of chronic dysentery, but seldom in cases of acute dysentery (13 times in 88 cases); flagellates and ciliates are usually, and Shiga's bacillus is sometimes, present when amœbae can be found. Amœbae do not appear to be capable of causing a definite group of symptoms and they are not associated with a definite type of stool. Captain Forster considers that in a proportion of cases the presence of amœbae in the stools is secondary to an infection with Shiga's bacillus and that usually cases of chronic as well as cases of acute dysentery are bacillary in origin. Under the heading of the mode of spread of the disease he states that in the Midnapur jail dysentery is not due to infection of the general food or water-supply or to infection of the soil, but that there is much evidence in favour of the view that the spread of the disease is due to the presence of "bacilli carriers." He has made experiments to ascertain the length of life of the bacilli of Shiga and Flexner outside the human body; in clothing and sheets the bacilli were killed by exposure in the sun for one hour, in blankets by exposure for two hours; and the bacilli could not be recovered from a specimen of mucus which had been placed in a glass tube and kept in a dark cupboard for 24 hours. These observations are in favour of the view that the bacilli cannot live in nature as saprophytes. The problem of the spread of dysentery by "bacilli carriers" is now being investigated bacteriologically on the same lines as has already been done in the case of enteric fever.

Malaria.—The Drainage Committee which, as was stated in this section of the last report, was appointed under the orders of the Government of Bengal to enquire into the conditions of drainage in the Presidency Division of Bengal and their connection with the prevalence of malaria, assembled in November 1906 and continued its enquiries until the 15th of March 1907. To assist the committee with expert knowledge the services of Captain Stewart, I.M.S., and Lieutenant Proctor, I.M.S., were lent temporarily to the local Government. The report of the committee has been considered by the local Government and it is understood that steps to give effect to the various recommendations made are being taken.

Blackwater fever.—In April 1907, as a result of a representation from the Duars Planters' Association, the Government of India in consultation with the

Government of Eastern Bengal and Assam, arranged that an enquiry regarding blackwater and other fevers prevailing in the Duars should be conducted. It was decided that the enquiry should be undertaken by the Central Research Institute assisted by an Advisory Committee consisting of (1) the Sanitary Commissioner with the Government of India, (2) the Director of the Central Research Institute, (3) the Professor of Pathology at the Medical College, Calcutta, (4) Captain S. P. James, I.M S., (5) Captain S. R. Christophers, I.M S. The Sanitary Commissioner was given power to add to the number of this Committee and in June Lieutenant-Colonel Hare, Sanitary Commissioner, Eastern Bengal and Assam, was added. It was considered that the first stage of the investigation should be a careful survey of existing conditions in the tea-gardens of the Duars especially with the object of obtaining information with regard to (1) the chief diseases which cause sickness and death among Europeans and Natives in the planting communities, (2) the conditions under which the European and Native members of the planting communities live, and the extent to which these conditions may conduce to the sickness and mortality, (3) the steps which are being taken to prevent disease, (4) the prevalence of blackwater fever among Europeans and Natives and its distribution in the Duars. The services of Dr. C. A Bentley, medical officer of the Empire of India and Ceylon Tea Company, were engaged for the conduct of this preliminary investigation. Dr. Bentley entered upon his duties early in July 1907 and after short visits to Simla and Kasauli to receive instructions from the Advisory Committee and to obtain the apparatus required, proceeded to Sam Sing in the Duars where he interviewed the Chairman of the Duars Planters' Association and some members of a special Malaria Committee which had been convened there. On the advice of these gentlemen Dr. Bentley. decided to commence work in the Dam Dim district. Up to the 3rd of October 1907, in addition to obtaining valuable information regarding the special subjects with which his enquiry was chiefly concerned, Dr. Bentley had been able to make a number of important observations on malaria in different parts of the Duars and he had seen or had received reports of twelve cases of blackwater fever, the majority of which were among natives. In view of these observations it was decided in November that the material available for the study of the etiology of blackwater fever in the Duars was sufficient to render a successful investigation possible, and one of the members of the Advisory Committee, Captain Christophers, I.M.S., whose previous work in connection with the subject is well known, was deputed for this investigation. Captain Christophers handed over his duties as Superintendent of the King Institute at the end of November and proceeded to join Dr. Bentley in the Duars. The results of his work will, it is hoped, add to the existing knowledge of this fatal disease.

Kala asar.—Captain Patton, I.M.S., who was attached to the King Institute at Guindy for the purpose of investigating the extra-corporeal life of the parasite of kala azar has continued his researches with the result that he has found that the parasite may, under certain conditions, undergo development in the body of a species of bed-bug. With the exception of this observation there has been no important contribution to our knowledge of the subject of kala azar during the year, and the correct zoological position of the Leishman-Donovan parasite still remains undecided. Apparently Laveran and some other protozoologists of authority are still of opinion that the parasite is a species of piroplasma and it

will not be out of place to enumerate the chief results of work which has been done (mostly by medical officers in India) towards a settlement of the question. (1) It is now known that the Leishman-Donovan parasite does not invade the red blood corpuscles, as some at first supposed, but the endothelial cells and leucocytes; and although the invasion of a different kind of host cell is not in itself sufficient evidence of absence of relationship between organisms, the fact that the Leishman-Donovan parasite is not parasitic in the red blood cells is at least some evidence that it is not one of the piroplasmata, all known species of which are parasitic in those cells. (2) The results of recent work upon the morphology of piroplasma show that there is little if any affinity between the chromatin masses in this parasite and in the Leishman-Donovan parasite; the minute punctiform mass of chromatin in piropiasma, called by Schaudinn and Luhë the blepharoplast, is by no means always present and very probably is not a true blepharoplast. (3) It is known from the work of Rogers and others that the Leishman-Donovan parasite as seen in the human body is a stage in the development of a flagellate organism, but the researches in connection with the development of piroplasma in the tick carried out by Koch, Kleine, and especially by Christophers, show that piroplasma has no flagellate stage in its life cycle. (4) Considerable doubt has been thrown upon the value of the experiments upon which Schaudinn based his view that a flagellate stage is common to many parasitic protozoa by the discovery that a large percentage of mosquitoes are normally infected with flagellates derived through the larva, as well as by the discovery that in birds latent infection with trypanosomes is very frequent.

So far as the work done up to the present time justifies a conclusion, it may be said that the Leishman-Donovan parasite is most closely related to certain flagellates which are commonly found in the alimentary canal of somearthropods. Several species of these flagellates have been studied by Captain Patton, with a view to throw light upon the life history of the Leishman-Donovan parasite, and he has shown that in many of them there is a stage in which they resemble very closely the Leishman-Donovan parasite as it is seen in the human tissues. The earliest stage of a flagellate parasitic in C. pipiens in Madras is described by Captain Patton as being found in the larva, in which it resembles almost exactly the parasite of kala azar; in the nymph many of these forms have developed flagella, whilst in the adult mosquito the characteristic herpetomonas forms, described by other observers, are seen. In the alimentary canal of a small homopterous insect (Peritoppus) he found in the young nymphs similar round and oval parasites with the arrangement of the chromatin masses characteristic of the Leishman-Donovan parasite, and he has since found other flagellates in which there is a small, round non-flagellate stage.

As regards the discovery that the Leishman-Donovan parasite may undergo development in the body of a species of bed-bug, it was mentioned in the issue of this report for 1905 that Captain Patton had been able to find the parasite in the alimentary canal of bugs fed on patients suffering from kala azar and that in some of the parasites signs of commencing development had been observed. More recently Captain Patton has been able to obtain in a series of bugs fed on a patient in whom there were numerous parasites in the leucocytes of the peripheral blood, specimens showing all the stages of development of the parasite up to fully developed elongated flagellates. The forms found in the alimentary

canal of the bug are in many respects similar to those which can be obtained in vitro, but there is a greater tendency to the formation of rosettes. It has been found by several observers that the bed-bug is free from parasitic flagellates and the feeding experiments carried out by Captain Patton point with some degree of certainty to its being the agent which transmits kala azar.

The bug in which development of the parasite has been observed is Cimex macrocephalus (Fieb.) a species which until recently was reported to be present in Burma only. It is now known, however, that its distribution in the East is wide, specimens having been sent to Captain Patton from India, Burma, Assam, the Malay States, Aden, Mauritius and Réunion. The bed-bug from Réunion was described by Signoret in 1852 under the name C. rotundatus, but the two species Corotundatus and C. macrocephalus are indistinguishable, and Captain Patton proposes to revert to the name C. rotundatus which has the merit not only of priority but of being more appropriate. C. lectularius, which is the ordinary bed-bug of Europe and America, also occurs in the East, but in India it does not appear to be so common as C. rotundatus.

The life history of Piroplasma .- Among the special enquiries which have been carried out since the last issue of this report none is of greater interest than that undertaken by Captain S. R. Christophers, I.M.S., with the object of adding to our knowledge of the life history of parasites of the genus Piroplasma. Even before Major Ross had demonstrated the part played by mosquitoes in the transmission of malaria, Smith and Kilborne had shown that Texas fever in cattle, a disease due to Piroplasma higeminum, is conveyed by the bites of ticks, and it was known also that the transmission is effected not by the bites of ticks which have fed on an infected animal, but by the bites of the progeny of such ticks. Many able observers, however, had failed to discover the processes involved in this complicated method of transmission, and until quite recently, when Koch succeeded in finding in ticks fed on suitable animals what may be regarded as the first stage in the developmental changes undergone by the parasite after ingestion by the tick, nothing beyond what had been discovered by Smith and Kilborne in 1893 was known of the life history of the parasite outside the bodies of infected animals. The difficulties met with in attempting to trace a parasitic protozoon through its intermediary host are very great and those in connection with piroplasma are especially so on account of the small size of the parasite and the complex structure of the tick, but Captain Christophers had prepared himself for the task by a prolonged study of the parasite in its animal host and by a thorough investigation of the normal anatomy and histology of ticks. The results of his work on the latter subject were published as No. 23 of the new series of the Scientific Memoirs. For reasons into which it is not necessary to enter here, Captain Christophers chose the species of piroplasma met with in the dog (Piroplasma canis) as the one the life history of which he would endeavour to work out, and at the outset there arose the difficulty that the only species of tick (H. leachi) which up to that time was known to transmit the parasite, does not occur in India. It was necessary therefore to ascertain which of the Indian ticks transmits the disease and this was accomplished by an investigation lasting several months. It was found that in India Piroplasma canis is conveyed by the species of tick called R. sanguineus and the investigation of the life history of the parasite was therefore commenced by a minute examination of ticks of this

species which had been fed upon infected dogs. After many fruitless examinations had been made, forms of the parasite showing definite signs of development were at length found, and continued effort resulted in the discovery of all the important developmental changes which the parasites undergo during their life in the tick. The following is a very brief summary of these changes. Some of the forms of the parasite in the peripheral blood of the infected animal, after having reached the alimentary canal of the tick, enlarge and become round or oval bodies about four times the size of the original parasite. Each of these bodies then becomes divided into two nearly equal portions, one of which contains the mass of chromatin of the original parasite. The two portions separate except at one point and the portion not containing the chromatin swings round to become the tail end of a club-shaped body, the portion which contains the chromatin becoming the head end. These club-shaped bodies are composed of delicate transparent protoplasm free from granulations and the chromatin mass which they contain resembles that in the form of the parasite seen in the animal host. When fully developed they carry at the thicker extremity a curious disc-like structure bearing short blunt cusps. They are the developmental stage of the parasite which was also discovered by Koch. They are motile, showing in some instances leach-like movements, in others a side to side movement of the thinner end, and when mature they leave the gut of the tick and become lodged near the ovaries and oviducts, finally entering the substance of the ova in which they proceed to develop into what Captain Christophers terms the "zygote." The change from club-shaped body to "zygote" consists mainly in swelling of the middle portion of the parasite, disappearance of the tail end and of the disc and great increase in size; the parasite also has a greater affinity for basic stains. All stages in the further development of the "zygote" have not been completely worked out in the egg and larva, but they have been followed in the tissues of nymphs fed on infected animals. When a nymph is fed on an infected animal the club shaped bodies develop in its alimentary canal in the same way as in the alimentary canal of an adult tick, but when the club-shaped bodies are mature they become lodged not in the ovary, which is as yet undeveloped, but in certain undifferentiated tissue which at the period of metamorphosis is remodelling the adult tick within the skin of the nymph. In the embryonic cells of this tissue the club-shaped bodies develop into "zygotes" which grow rapidly and become very large bodies with a characteristic appearance. Ultimately the contents of the "zygote" become differentiated into many hundreds of small pear-shaped bodies resembling the forms of the parasite seen in the blood of the animal host. By a process which Captain Christophers has followed out with some exactness, these pear-shaped forms, which, provisionally, he has termed "sporozoits," become lodged in enormous numbers in the salivary glands of the adult tick. The life history of Piroplasma canis as described by Captain Christophers is therefore as follows. The parasites in the blood of the animal host are sucked into the alimentary canal of an adult tick (R. sanguineus) or of a nymph. In both cases the parasites develop into club-shaped bodies. When the parasites have been ingested by an adult tick the club-shaped bodies penetrate the ova where they develop into "zygotes" which increase in size and undergo developmental changes so that by the time the ovum has become a larva they are in the stage termed "sporoblasts." By the time the larva has become a nymph the "sporoblasts " have become differentiated into immature " sporozoits, " and in the adult tick these " sporozoits, " now fully mature, are found in enormous numbers in the salivary glands. When the parasites of the animal host have been ingested

by a nymph, similar changes occur. The club-shaped bodies leave the gut and become lodged in the cells of the embryonic tissue where they develop into "zygotes" which break up into "sporoblasts." Owing to the growth of the embryonic tissue the "sporoblasts" become disseminated throughout the cell tissue of the nymph. Many of the cells of this tissue are those which form the salivary glands of the adult tick so that by the time the "sporoblasts" have become differentiated into "sporozoits," the latter are already in the cells of the salivary glands of the adult tick; the "sporozoits" which have become developed in cells of other tissue possibly reach the salivary glands by their own movements.

The developmental changes described by Captain Christophers suggest that the life history of *Piroplasma canis* has many points in common with that of the malaria parasite, and although many details still require to be worked out, there can be no doubt that the problem of discovering the chief events in the life history of parasites of the genus *Piroplasma* has been satisfactorily solved.

The rats of India .- With a view to obtain precise information regarding the distribution, life history, habits, and identification of the rats of India, the collection of material for a comprehensive study of the subject has been begun. It was arranged by the Government of India that the first steps in the matter should be taken by the Natural History Section of the Indian Museum and accordingly Dr. Annandale, the Officiating Superintendent of the museum, caused a pamphlet to be prepared by Dr. W. C. Hossack of the Plague Department, Calcutta, giving details of the methods of identification of the common species, with instructions as to the measurements to be taken, the preparation of skins and skulls, the preservation and labelling of specimens, and the mode of despatch of specimens to the museum. This pamphlet has been widely circulated among officers employed on plague duty and sanitary work in all provinces and instructions have been issued to these officers to aid the Natural History Section of the museum in their enquiry by collecting information and sending specimens. Dr. Hossack, the author of the pamphlet mentioned above, has made a special study of the rats of Calcutta and the results of his work have been published as No. 1 of the first volume of the memoirs of the Indian Museum.

The biting flies of India .- An enquiry into this important subject is being conducted by Mr. Maxwell Lefroy and Mr. Howlett, the Imperial Entomologists in India, and with the object of enlisting the help of medical officers and others in the enquiry a pamphlet on the subject of biting flies has been prepared and will be distributed as widely as possible. In view of the possibility that cases of sleeping sickness may be imported into India from East Africa, it was necessary to ascertain whether the tsetse-fly which carries the disease occurs in India. A search has been made in various parts of the country and especially in Assam by medical officers and by the Imperial Entomologist, but up to the present no evidence of the presence of this fly in India has been obtained. In September 1906, on the recommendation of Lieutenant-Colonel Bannerman, I.M.S., Director of the Bombay Bacteriological Laboratory, the Government of Bombay issued a circular to officers of the Forest and Salt Departments and to all Political Agents in the presidency, asking for the names of those who would be willing to collect biting flies in order that they might be supplied with nets and other necessaries for this purpose. Lieutenant-Colonel Bannerman reports that more than a hundred officers have expressed their willingness to assist,

177. Since the issue of the last report the following memoirs have been published:—No. 27, Preliminary report on the development of the Leishman-Donovan body in the bed-bug, by Captain W. S. Patton, I.M.S.; No. 28, The Sexual cycle of Leucocytosoon canis in the tick, by Captain S. R. Christophers, I.M.S.; No. 29, Piroplasma canis and its life cycle in the tick, by Captain S. R. Christophers, I.M.S.; No. 30, The theory and practice of anti-rabic immunisation, by Captains W. F. Harvey and A. McKendrick, I.M.S.

JOHN T. W. LESLIE, Lieut.-Col., I.M.S., Sanitary Commissioner with the Govt. of India.

# APPENDICES

TO THE

Annual Report of the Sanitary Commissioner with the Government of India

FOR

1906.

TABLE I .- Highest, lowest and mean temperature in shade and its departure from the

			JANI	VART.			Faber	ART.			85.	NOH.			Ar	all.			35	AY.			Je	SI.	
Stations		Highest,	Lowest,	Mean,	Departure.	Highest,	Lowest.	Mean,	Departuro.	Highest.	Lowest,	Mean,	Departure.	Highest.	Lowest.	Mean, .	Departure,	Highest,	Lowest.	Mean,	Departure.	Highest	Lowest.	Mean,	Departure,
Calcutta (All	poze)	81.0	45.4	65"7	-015	87.4	23.0	70'8	-0.4	63,0	51.0	75-5	-3.0	1051	714	87'3	+17	105"6	70'4	881	+3.1	103'0	74'9	85'3	+13
Narayanganj	***	88'1	50.3	65.0	-0.7	87'1	54'3	70'5	+0,1	94'6	51*8	75'5	-3.0	98.1	69"3	85'8	+2*0	95"1	69"3	8376	0	95'6	70"8	84'2	+0"5
Chittagong	100	83'6	49'1	65'6	-1'3	857	50'1	70'6	-0.I	91"3	52"1	75.0	-8.3	897	65.1	S1-8	+0'5	91'7	65%	Sri	40'1	31.3	72'6	81.0	0
Sibeagar	***	75'8	43'9	59'8	0	76-3	48'9	63'7	-0'6	83.3	49'9	67'3	-3.3	20,3	59'9	72'3	-2'3	95.3	66'9	787	-0.4	95'3	7379	Sard	-0'3
Slichar		8279	45'5	64'4	-0'7	83'4	48'5	67:3	-0'4	90'5	49'5	72'3	-3.3	92'5	63°p	78'3	-0.2	94'5	68.3	80'7	+0.1	97'6	71'3	Sarg	+0'1
Cuttack	***	80*4	51'1	72"4	+0.3	944	60°E	7616	-1.3	103'4	58'1	82'2	-3'5	111,0	74'3	91'9	+1.0	113,0	73'3	9279	+20	113.0	73'2	88.4	+079
Hasaribagh		79'7	43"3	60%	-1'3	83'7	45'3	63/8	2'5	90'7	45"2	73'0	-4'2	104'5	63.3	85.8	+0'5	105'5	69'3	30,0	+375	106'6	71'3	87'1	+179
Patea		78'0	43'8	61,3	-0.4	82'5	43.0	6415	-1'4	95.0	45'9	71'9	-4'5	107'5	66.8	87*3	+0.3	111.1	707	8973	+0.3	105'5	7477	89'4	+1'2
Darjeeling		51'3	28'0	39,8	-1,0	53'7	31'5	41'4	-0.4	63*3	3370	4579	-215	20.3	44'1	57'1	+1'6	747	48%	59'3	+1'2	71'3	51'6	60'9	+0"2
Allababad		8375	35'5	60'3	-1.0	8316	44.2	64'5	-1.0	95'1	44'5	74'9	-37	110,1	64'5	578	-0,3	115'3	73'5	95'5	422	111'6	71'5	93"5	+1"4
Lucknow		79'7	35"1	57'8	-2167	837	45'2	650	-19	97*8	44'7	71%	-3,1	1078	63.8	86'8	+0'1	113.8	70'3	53.1	+1.4	110'3	73'8	917	+0'8
Meerut		79"5	34"1	55.3	-1'4	780	41'7	59*3	-3.3	880	45'7	67*9	-4'1	105'7	59'3	81'4	-20	113,3	67.8	93'3	+3.0	110.8	73'3	90'1	-0.4
Delhi		75"9	35.0	57'2	-2.3	757	45":	58%	-41	87"7	44"5	69.2	-53	104'3	5975	847	-2'0	114'3	75":	95'4	+379	111.3	71'6	91'5	-17
Agra		81'5	3919	59'5	-1.6	810	45"4	63.0	-2.2	93'0	47'9	22,0	-4.0	104'5	65'4	85'3	-3.0	114'0	75'9	9870	+3%	111'0	7379	33.3	-1,3
Jhansi		85.3	44'3	63'4	-0.4	91'3	51'2	65-8	-1.2	96'7	51'7	77*1	-3.7	108.3	70"1	9116	+1*2	115'9	89"2	101'8	+5'9	111,8	77"1	94"4	+10
Ajmer		81'4	3879	58'3	-1.25	81'4	43'8	61,3	-3'4	61.10	45'8	73'2	-1.3	103'4	64'2	8573	-0.3	111'9	75'5	95'3	+4'8	10979	73'1	91'3	+0'7
Sauger		87'4	410	63.1	-1.3	89*4	46-1	65'3	-3"3	94'9	49'6	75'9	-3.2	104,4	66.1	87'5	+0.3	112'5	35.1	9576	+3.8	108.2	71'6	87"9	+0.3
Jabbalpore		89'4	34'8	6015	-2.3	89'9	43'8	65.6	-0.0	95"5	42'3	74"1	-3'7	105'5	58-8	84'5	-1.0	113,0	71'3	95%	+2'8	109'0	72'3	8819	+1"2
Multan		76'3	34'5	55'5	-1.3	75'3	400	23.1	-976	83-8	43,0	67'9	-4.6	104'4	55.4	\$1.3	-27	117'5	74'0	95.4	+4'3	113,0	750	96.0	+1"1
Lahore		74'3	33.1	53'1	-1*8?	74"3	40.1	55'8	-1.0	84"4	40"1	64.0	-4'8	99"4	55'1	78'5	-3.8	115.0	68.3	53.0	+3.8	112'9	697	93.6	+0.3
Peshawar		71'3	30,0	500	-1.2	74"2	3379	52'0	-3.4	Sa*e	37'9	61.4	-2'7	89'6	54'0	20.0	-3.0	108,2	6000	85'6	+1.3	1150	68-4	91'6	-0.1
Ranikhet		637	25'0	44'4	-3.0	04.0	30,0	43'3	-4,0	71'0	34'1	53'4	-2.0	84'0	43.0	06.90	+1.0	90'1	53'0	73"2	+3.8				-
Chakrata		63'5	150	41'9	-1.0	64.3	29'0	38'9	-4-8	65.3	27"0		-4.9		41'0		+0'3	83.3	51'0	68'4	+279	8113	54'0	67'3	+0"2
Indore		83.1	28.1	200	-r8	85-6	40'1	65.3	-3'5	164	47'1		-1-2		59'1		-0'1		73'6		+13	108.1	68.1	84"3	-0.0
Deera		8913	40*4	63.2	-3.8	83'8	44"4	66'1	-47	1018	45'9		-3.0		61.0		-1.0			100	+1'5	100	74'9	9977	-00
Karachi		8119	45'3	64,5	-0.0	18.0	49*2	65.5	-5'4	93'4	51.3	000	The same		65.7		-0.3		76'9		+1'0		79'3		+0.3
Bombay		890	60.0	1000	-1'1	85'0	61,0	33,0		91'0	67-5				73'5		-1.4		77'0	,	+0.2	03.0	75'0	1300	+0"
Belgaum	-	88.3	50'9		+0%	90"8	49'0		-3.5	99"3	5379		-1.3		63.4		+1.2	1000	65.8		+0.8	91.8	64.8		+0'9
Nagpar		89'6	43'1		-0'3	94,1	53'3		-0,3	200	54'3	80'4		200	69,1		+1.0		20.0		100	108'7	70'6		-0'5
Bellary	-	94'0	23.1	78'3		10000	63'3		+1,5	20	63.3				75'3	7000	+3.4		66-8		+2'5		69'7	84-8	
Bangalore		88.8	55'0	72'2	+3'7	8,20	57'4	757	+3.0	95"3	57'4	77'3	-0.4	9973	67'3	200	+3.0			1000	+3"1	94'3	64'3	7515	+0'8
Madras		870	65.0		+0'7	94'5	64'5	80'4			67'5		-0.6		72.0	+	+0.0		70'0			107'0	75'0	80.3	-0.4
Rangoon	-	94'5	62'8	1	+5'9	8970	64.8	23.3	+1'4	100	20.1	100	-2.1	94'9	71'2		+0.0	970	79'3		+3'0	60.1	76'4		+0'4
Akyab	-	81'9	54"1	69.3	-1,3	879	55'1	13.3	+0.1	93-9	301	110		24.9	"	-	-	""	"	-39	" )	02.0	74"3	81.8	-0.3

TION I.-METEOROLOGY.

average of each month at thirty-four stations of India during 1906.

	Je	т.	3	87	Avo	UST.	A TO		Sarra	MDER,	N O	-1	Осто	oxs.	1 1		Nove	MILE.		1	Dad	- WHI		
	10000	100	16.	1000					200	7	1				10.				2				1	STATIONS.
Highest,	Lowest.	Mean,	Departm	Highest	Lowest.	Mean,	Departm	Highest.	Lowest.	Mean.	Departure	Highest.	Lowest.	Mean,	Departu	Highest.	Lowest.	Mean.	Departure	Highest	Lowest,	Mean,	Departure,	100
62,0	74'4	84.6	+1'4	90*9	75'9	83'5	+0'8	93'4	75'4	8373	+0'5	91'9	67'4	80'8	40'3	85'4	5974	74"1	+1"1	51'4	51'9	68"1	0	Calcutta (Alipore).
32.0	71'3	850	+1'2	90"0	75"3	82'5	-0'8	92'5	74'8	84'1		90'5	70'8	81.4	+0"1	85'5	60'8		+0'8	83'5	53-8	Total .	- 33	Narayanganj.
89'1	74"4	81*6	+0'4	89'1	73'9	80-5	-0.4	90'1	75'4	82'0	+0'4	89'1	69'4	80'3	+0.3	87'1	59'4	73'7	-07	85'1	54'9	69'8	+17	Chittagong,
95'6	75'9	85.1	+1.1	91'1	74'3	817	-1.3	99*5	74"3	83'7	+0'5	87'1	63.3	75'9	-0,9	89-6	23,3	68'9	0	766	43'2	60-3	-0.3	Sibsagar.
95'6	76'2	84'5	+0'8	98'5	67'3	81.0	-1.0	99'1	74'3	84%	000	91'5	65'3	· Jacob	-0"2	87'5	55'9	74"3	-01	85'4	50.4	65'0	+0'6	Slichar,
95'4	757	85'2	+1.0	94'4	76-3	84.0	+1.3	94'4	77"2	850	+0,0	94'9	687	81'8	+0'7	90'4	50°1	63"3	+0'3	83.3	55.5	71'4		Cuttack.
91'7	77'3	85-5	+17	91'5	75'3	28.0	+0'4	94'5	30.3	20.3	+0,1	92'0	67'2	75'3	+1'4	83'5	53'2	73'1	+0.7	77'7	44'2		+2"4	Patra.
97'5	55'6	63'5	+1'6	69'2	55'6	61'7	+0'3	73'2	54"1	63"1	+2'3	65.3	45"1	55'0	+0'8	64.7	40.0	50'7	+3'4	63.3	34'5		+3.3	Darjeeling.
98,1	75.0	85.8	+0'3	95'1	75'0	84'1	-0*3	94%	71'5	84'1	-0'1	94"1	55*5	80'1	+10	91'1	50'5	20.8	+1'7	81'2	39'5	63.3	+1'6	Allahabad,
95-8	75'3	85'3	-0.2	95%	75'6	84.0	-0.2	950	71"1	84'3	-0.3	94'9	55'1	79'1	+0.4	890	43:1	-6913	+1.2	\$110	40'1	60'5	+1'6	Lucknow.
100*1	75'3	870	+0'9	95'1	74'8	84'0	-0.0	96'6	67-3	83.0	-1'9	99.6	54'3	75-9	+0'5	85"1	45'8	67.6	+1'7	Sit	38.8	59'9	417	Moerat.
104'7	23.1	85'4	+1'0	¢87	75-1	85-1	+016	987	72'1	83.2	-1.0	94'7	60'6	Sorg	+0.0	90'7	51'7	51,3	+1'7	81.7	40'7	6916	+1,3	Delhi,
101'5	74'0	23.3	+1'4	98'0	77*4	85.0	+0.0	95'5	71'9	83.0	-1.1	97'0	61.4	81.0	+1'4	91'0	54'9	72.7	+2'5	83,0	43'4	1000	+1.3	Agra,
101,3	751	25'9	+019	95.9	75'5	85'3	+3'5	93.3	72'6	81.2	-11	95'3	23.1		+0'7	93'4	53'8	75.5	+3'3	84'4	45'7	64,3	+37	Jhanei, Ajmer,
97'9	75'5	79'6	+0.1	91,1	60.2	79'4	+rs	80.1	63'5	77'0	-3,1	89'6	50'5	100	-0'2	88'1	55'5	200	+35	81.6	47'0		+2'0	7 12 -
93'0	73'3	80'5	+0.3	63,0	71'8	81'5	+3.3	8914	ctra	78'6	-1*5	890	53"3	75'6	-0,3	8319	45'3	68'4	+0'9	84'4	3973	63.6	+3,3	Jobbulpare.
114'5	Sto	32.1	+64	108'4	75'0	93.9	+1'5	105,0	72'0	8917	+0'8	102'9	58'9	81.0	45.0	94'3	51*4	72.7	+4'3	87.8	43'9	61'5	+3'4	Multan,
111'4	73"2	9373	+3"2	100.0	75'7	90.0	+2'0	97"9	677	837	-2"1	97'9	54"1	79'0	+1'9	53'4	45'1	68'5	+5'3	84'4	35'6	50'9	+3'1	Lahore,
1097	71'9	99'5	+1'4	10913	70"4	88-8	+0'3	100'2	65'4	837	+07	97"7	53"9	752	+3'4	84.3	42.0	64.1	+3.0	7773	35 9	55"2	+1,0	Peshawar,
-						***	-	-			1		ta met		1			-						Ranikhet.
22.3	55'0	65.0	-0,1	71'3	57'0	1800	-0'5	73'3	550	6374	+0%	90'5	44"0		+1,3	69°3	49'6		+2'4	83,1	43'1	65'3	+079	Chakrata,
103'3	74'4	73'3	+0,3	99'3	75'4	77"4 Sarp	+0.4	95.8	60.0		-1'4		38.0	1 - 3 ]	+0'3	09'8	53'4		+1'8	91'3	45'4		+0'5	
94'9	81.3	10.00	+2'2	1000	75'2	140	+3'0	92'4	77'2	303	+13	98'4	66.3	Bred !		95'4	59'2		+3'4		50.7	71'1		
87'5	75'0	81'1	+0.3	880	75'5	81.3	+0.8	875	75'5	81'2	+0'7	940	720	827	+0"7	920	72'0	\$1.0	+ 2'5	91'0	69'5	18-8	+17	Bombay.
80'3	65'8	71'8	+0'5	84'3	64.8	73'3	+1.0	89.3	61.0	71'5	-07	85.3	54'4	74"	+0"1	85"3	54'9	33.1	+0.2	843	51'9	70'9	+1'0	Belgaum.
92-5	72'6	80"7	-0'8	63,1	68.0	80.7	7	03.1	71'6	8010	-1'5	99.1	91,1	78'4	-0.0	90%	517	73'0	+0'3	866	50"1	69"1	+173	Nagpur.
990	717		+0'8					95'0	67.7	80'9		95'5	65'3		+0'5	940			+3'1		57'1	75'0	200	The state of the s
87'8	64.3		+0.4	133		73"5	18	24'8	72'0	35'3	100	94'5	53'4	73'5	+0.2	93'0	58.4	79'3	+1'5		53'9	75'5	+1'0	Bangaiore.
103"5		1		95'0	The same	81'9	+1.2	99°5	73'9	81.0			23.5		+0'1	91%	618	1277	+07		643	20.3		Rangoon.
8879			+0'5	100			+0.4	1				Gires.	74"2	200	+0.3	200		1000	-1.1	200		7 3'5		Akyab.
-	1		1017	1	_	1																100		

Appendix to Section I .- Meteorology.

+36.92+ -13,10 14.00 -2'43 99.0-+13,12 61.1-69.41-12,35 +18-74 -2,25 +3,41 -2775 +1,37 +13,24 +3,19 -11,75 +10,44 +8.77 13,72 +36.04 -0.03 -13,07 +9.63 Departure. TOTAL. 49.40 20.04 24,18 40.33 19,34 31,40 41.36 Actual. DECEMBER, Departure. 11.—Monthly and Annual RAINFALL and its departure from the average at thirty-four stations in India during 1906. NEZ. NES. NE. Actual. -0.33 90.0 -0.07 -0,30 95,0-NOVEMBER. Departure. Actual. -0.33 10.43 +0,31 OCTOBER. Departure. Actual -3.00 +0.05 SEPTEMBER. Departure. Actual. Departure. August. Actual. Departme. not available JULY. 31.00 61,61 16'67 20.02 7.18 Actual. +3.03 +3,31 +1,37 + 2,22 050-Data +0,04 Departure. JUNE. Actual. Departure. 4.08 9.87 NEL. 13.45 50 21 4 -0,13 -0.33 98.0-50,0--033 19.1-Departure. APRIL. Nul. Nil. NIL. NEZ. Nil. Actual. Departure. MARCH. Actual. +0,33 +0.73 +0,13 11,0+ FEBRUARY. Departure. 2,00 3,03 1.15 1.07 2.81 2.80 3.74 90,1 0.53 1.13 55,1 5,00 1,34 15,0 1.05 Actual. 09.0-+1.24 83.0-26.0--1,03 -0.23 9,0--0.31 19.0-+0,20 -0.39 -0.86 -1.24 85.0--0.32 +2,33 -0.37 +0.36 -0,13 -0'53 +0.02 JANUARY. Debarente. 1,03 3,30 NEL. 1.31 Nu. Nil. Nul. 0,31 Nat. Nil. 50.5 Actual. Calcutta (Alipore) STATIONS Narayanganj Chittagong Hazaribagh ubbulpore Allahabad Peshawar Cattack Multan

The same						379		RAT	O PER	MILLE	OF STR	ENGTH		-		_
S courses	AND DU	Herove	100	Average								DEATES	FROM			-
ACOMMANDS	ANDDI	visions.	Years.	strength.	Admissions into hospital.	Constantly sick.	Deaths,	Invalid-	Cholera.	Srall-pox.	Eateric feret,	Heat-stroke,	Toberele of the lungs.	Poeumonia,	Dysentery.	Abscens of the
Northern Command			1905	15,274	801	49	9'05	20			2,13	1.12	'27	-83	*05	*44
		(	1906	18,600	848	48	8 45	10	***	*11	2.63	'96	*21	*32	*43	191
Western	-	{	1905	19,537	895	\$5	11'62	29	*10	*05	3.60	'51	'41	167	*72	1'64
		(	1905	18,885	935	51	13'93	42	*37	- '11	4'08	*74	*11	*16	195	3.38
Eastern	***	{	1905	18,983	820	54	10'90	10	*11	***	3,11	1'00	*37	'47	*42	1'43
100			1906	18,850	814	54	10.55	25	154		3 71	*27	*21	'48	*27	1143
tet (Peshawar) Die	islon		1905	2,757	1,031	54	13'37	23	***		5'06	2 89	135	'72		*36
1		(	1905	2,811	1,200	55	8 15	17	***	*35	2'48	283		***	*35	*25
sed (Rawalpindi)		- 5	1poS	6,881	745	47	872	15		***	3'63	'58	*15	'53	***	*44
		4	1905	6,858	758	48	7773	15			2'04	*29	*44	*58	'73	1:31
and (Labore)		{	1905	8,627	773	50	8'00	24			2'09	1'04	'35	1'04	.112	*45
		(	1905	9,019	778	45	9 00	18		'11	3,10	-8,	*11	*22	'21	*73
ath (Quetta)		{	1905	4,311	1,014	60	15,02	50	***	*33	4'63	*23		1'59	'93	11.6
The state of the s		4	1905	4,099	951	47	10 25	35	-	*24	1'95	'49	***	'73	'24	2'44
stb (Mbow)		- {	1905	7,310	891	51	11.63	19		***	4'51	141	*27	24	'95	2'05
		4	1905	7,060	1,060	55	16'01	45	*14	*14	7 08	*99	*28		1'84	1'08
6th (Poosa)		{	1905	6,955	816	55	9%3	21	***	***	3'30	. '43	*86	-86	*29	1'29
	9000	4	1906	6,647	731	45	10'68	24	.00	100	2'86	*15			*30	185
7th (Mecrut)			1905	8,590	777	53	10,11	18			4'19	*93	*12	*47	'23	53
		5	1905	8,933	832	53	9'63	23	*22		4'03	*34	*11	*67	'11	*99
8th (Lucknow)		{	1905	10,303	855	55	11145	20	*19	***	2'21	1'06	'53	*48	*53	1'33
	Day!	-4	1905	9,019	8:5	55	11'39	37	1'01	***	3'43	'20	'30	*10	*40	1.91
eth (Seconderabad)		_5	1905	8,389	813	6a	8-46	18	100		2'61	*48		*36	-60	1'72
		.5	1906	8,510	917	63	9:61	33	1'17	***	3'17	*12	113	112	*23	1.83
Barma Division		5	1905	3,513	971	54	971	15	1'31	***	'79	195		1.02	1'31	-25
	10		1906	3,853	898	53	9'85	19	2'34	***	'96	*16	195	195	1.04	.21
Adro Brigade	1000	5	1905	947	948	65	24'19	63	-		3'17	3'17			1'05	317
	-		1905	1,078	1,394	63	15'70	154	100		***	3'71			175	1-85
INDIA	1	5	1905	71.343	834	52	10.02	21	'13	*01	2'99	777	'18	*63	-45	1715
Sandra A.	-		1905	70,272	871	51	10.43	28	105	*05	5'10	*55	117	128	153	1'51

					R	ATIO PE	ER MILI	E OF S	TRENG	TH.				
BGROUPS.								1	townseron	is reem				-
	Years,	Average* strength.	Admissions	Constantly sick.	Inflaenza.	Cholera.	Small-per.	Enteric fesor	Ictermittent feser,	Remittent lever.	Simple con- tinged feyry	Preumonia.	Dysestery.	Veneral decases.
Group LBurma Coast and Bay {	1894-1903 1905 1906	1,143 1,259 1,375	1,750 1,221 865	90 51 45	45'3 '8 3'2		12 274 175	8:2	181'9 27'0 41'2	6 o 21 2 8 o	46'0 135'8 105'1	115 314 77	45°2 35°7 22°5	\$07'0 215 7 2025
" II.—Burma Island {	1894-1901 1905 1906	2,391 2,063 1,609	1,411 823 943	98 51 35	3'4 1 0 8'1	13'1		4°3 2°9 3°7	323 9 155 0 97 0	21°3 3°4 1°2	48°7 63 0 90°1	3 3 3 4 1 2	25°5 5'8 9'9	447°3 157 5 107 8
. IV.—Bengal and Orissa {	1894-1003 1905 1906	3,163 1,690 1,775	1,356 2,160 1,120	8 <sub>3</sub> 27 77	7'8 60'4 6 8	1.0		10 6 7 7 8 5	353°6 353°6 323°9	31.5 4'7 1'1	90'7 91'3 87.3	2'6 47 5'1	10.8 31.3 68.1	41 21 1 744 4 902'5
" VGancetic Plain and Chatia Nagpor.	1894-1903 1905 1906	6,603 7,315 6,871	1,951 801 788	89 81 53	9'5	4'9 '3 1'9	1"3 "1 2'5	28 6 17 4 23 0	216 9 95'4 107'1	7'6 3'5	47'3 104'4 59 7	2.3	29'4 12'9 14'0	446'7 152'3 107'1
" VIUpper Sub-Himataya {	1894-1993 1995 1996	13,880 13,724 13,989	1,755 315 885	8 <sub>4</sub> 53 53	3'7 15 5 5'5		'5 '3 '6	24'6 23'3 15 4	305'3 74'0 300'9	9.6 3.2 '5	19'7 53 6 64'3	6'3 5'4 4'5	31'3 9 0 7'9	355°5 130°0 101°7
" VII.—North-Western Frontier, Indus Vatley, and North Western Kajputana.	1804-1003 1005 1906	4,701 5,063 4,975	1,400 1,003 1,353	79 57 56	970 937. 64.7	="	1'0 2'4	1972 1870 974	573'8 190 8 513'0	41°1 72 74	26.7 64.5 74.0	6 8 7 1 4 4	18°0 2°7 5°0	130 a 130 a
WIII.—South-Eastern Rajputana, Central Iodia, and Gujarat.	1894-1903 1905 1906	5,893 6,552 6,249	1,555 220 1,017	93 51 55	2 7 5'0 22'6		18 38 43	34 6 16/8 34'9	430°1 161°5 309°5	10°8 6°4 2°6	30°4 8°7 25 3	578 474 4.5	13.2 13.3 32.3	470 <b>5</b> 173 7 118 7
. IXDecean	1894-1903 1905 1906	9.371 10.434 10,188	1,255 807 750	84 52 49	30'3 6 1	*S	36	20 8 24°5 21 5	58.3 103.0 521.2	71	24"7 41"9 53"8	3'4 3'5 3'7	25'7 19'5 30 8	459-8 105'3 185 0
. XWestern Coant{	1894-1903- 1915 1906	1,572 1,591 3,444	088 855 817	69 58 37	73	=	57	6'4 1'3 2'8	131°1 151°1 185°5	73 38	34.7 1.9 7.0	377 371 7	13.0	351'0 243'2 217 5
" XISauthern India	1894-1903 1905 1905	3,270 3,718 3,802	2,191 775 1,016	75 55 59	9'5	73 73	77 274 171	14"4 13"1 15 8	91'0 91'0 91'2	8 2	44'0 15'2 59'5	9'8 '5	99.4 10.0 30.5	411'8 109 \$ 170'0
XIIaHill Stations	1804-1903 1905 1905	8,778 10,508 11,235	1,025 755 075	70 45 41	5°5 4°0	3	77	29°4 10°9 7°3	165 7 60 0 63 2	8'1 '3 15'9	14'7 53'6 60'5	5'9 5'8 3'9	17°0 10°5 6 6	391°8 110°5 77°9
w XIIb.—Hill Convalencent Depôts, {	1894-1991 1995 1906	3,075 3,513 3,593	1,725 819 807	P4 60 58	6'4 3'1 3'1		3	15'3 97 12'0	52.3 131.0 581.5	3.1 .0 8.3	9°4 13'1 24'2	4°3 1°1 47	31°1 713°7 15%	140.1
INDIA{	1894-1993 1995 1996	66,88; 71,343 70,273	1,793 834 871	80 52 54	6'3 14'3	1.0	'5 1'4 1'9	15'6	311°2 111°4 170°3	13'5 2'3 3'4	27°2 47'9 55 7	4'3 4'1 3'4	27°5 13'4 15'2	385'S 153.7 117'3

<sup>\*</sup> The decennial ratios are, of course, worked on the total strength of the ten years p riod,

# Appendix to Section 11 .- European Troops-contd.

C .- Admission and death rates from Enteric fever in stations of over 1,000 strength.

	19	ds.	DECENNIUM	, 1894-1903.		190	6.	DECENNIUS	v, 1894-1903.
Stations.	Admission- rate per 1,000.	Death- rate per 1,000,	Admission- rate per 1,000.	Death- rate per 1,000.	Stations.	Admission- rate per 1,000,	Death- rate per 1,000.	Admission- rate per 1,000.	Death- rate per 1,000.
Mhow	42'5 41'2'3 36'0 34'8 26'2'2 28'4 24'5 20'0 20'2 17'9 11'7 15'3	9'39 14'98 6'01 9'15 5'05 4'04 4'91 4'90 2'97 5'38 5'18	3877 3173 3779 4471 1877 2271 3573 2175 3370 573 1976 2470	8'40 9'27 9'88 11'70 5'38 5'15 10'87 4'38 14'10 1'76 1'76 3'42 5'80	Ranikhet Bareilly Qortta Chakrata Ambala Ahmadnagar Wellington Karachi Fort William Colaba Sialkot	14'3 7'2 67 57 51 4'8 47 3'4 3'4 27	2'68	31'2 92'8 33'8 31'3 37'3 36'4 11'5 5'3 4'6 3'8 15'2	4'88 4'17 8'08 4'37 9'50 7'97 2'21 1'44 1'19 1'33 5'06

#### D - Enteric fewer. Dates of admission into hospital of patients from certain Barracks and Camps.

SE	CUNDERABAD.		LUCKNOW.		MHOW.		POONA.	1313	MERRUT.		BANGALORE.
Serial number of the case	Date of admission into hospital.	Serial number of the case	Date of admission into hospital.	Secial number of the cave	Date of admission into hospital.	Serial number of the case.	Date of admission into hospital.	Serial number of the case.	Date of admission into hospital.	Serial number of the case.	Date of admission into hospital.
	From Barrack No. 1.		From Barrack No. 1.		From Barrack No. 1.		From Barrack No. 1 Wanowrie.		From Barrack No. 1.		From Barrack No. 2.
16 17 47 52 63 75 77	13th May 1906. 31st "2nd Sep. 1906. 8th "20th "20th "3th Oct. 1906. 8th "4th Oct. 1906.	4 8 35 37 59 71 74 75 78	15th Jan. 1906. 2nd Feb. 1006. 8th April 1906. 11th 16th May 1906. 25th Aug. 1906. 26th 1nd Sep. 1906.	17 18 27 26 29 45 43 48	19th March 1906. 17th " 17th " 17th " 28th " 7th April 1906. 6th May 1906. 9th " 20th June 1906.	10 27 45 53	14th Aug. 1506. 27th 5, 1906. 17th Sep. 1906. 5th Oct. 1905. From Barrack No. 3 Wanowrie. 2cth July 1906.	6 15 17 19	1st April 1906. 9th May 1906. 13th ,,	10 11 28 32 36	15th ,, 17th June 1906, 16th July 1906, 31st ,,
77 87	From Barrack	78 70 82	8th ,, 8th ,,	62 64 66 71	4th Aug. 1900, 7th ", 8th ", 18th Sep. 1906.	7	1st Aug. 1906. 21st ,,		From Barrack No. 3.	37	6th Aug. 1906.
26 27 34	No 2 1st Aug. 1906, 1st ,, 6th ,,	10	From Barrack No. 2.	74	4th Oct. 1906, From Barrack No. II.	16 28	From Barrack No. 4 Wanowrie. 20th Aug. 1906, 27th	9 16 21	22nd April 1906. 11th May 1906.	40	From Barrack No. 3.
34 69 73	ond Oct. 1906. 6th ., From Barrack No. 3.	20 20 44 52 58	13th March 1906, 5th April 1906, 19th ,, 27th ,, 11th May 1906,	8 9 15 20	10th Feb. 1906. 10th 12th March 190k, 19th	32	3rd Sep. 1906.  From Barrack No. 4 Ghorpuri.	44 45	27th Oct. 1906. 3rd Nov. 1906.	12	6th May 1906.
23 23 35	24th July 1906. 1st Aug. 1906. 6th	61 65 69 70	7th June 1906, 17th July 1906, 19th July 1906,	41 45 61 67	3rd May 1966. 19th " 27th July 1966. 11th Aug. 1966.	31 33	2nd Sep. 1906, 4th 19		From Barrack No. 8.	13	13th ,
28 40 51 78	4th ", 16th ", 6th Sep. 1905. 16th Oct. 1906.	71 81 83 85	3rd Aug. 1905. 13th Sep. 1906. 13th Oct. 1906. 27th	- 11	From Barrack No. 1-L. 28th Feb. 1906	38	From Barrack No. 6 Wanowrie. 7th Sep. 1906, 8th	22 26	24th May 1906. 2nd June 1906.	30 33	22nd ,, 4th July 1906, 23rd ,,
80	From Barrack No. 4.		From Barrack No. 3.	22 31 37	20th March 1906, 13th April 1906, 18th ,,		From Barrack No. 10 Wanowrie.	38	6th Aug 1906. 16th Sep. 1906.		From Barrack No. 4.
20	3rd Aug. 1906. 3rd 21st	11	19th Jan. 1906. 22nd Feb. 1906.		From Barrack No. 2-L.	24 50	25th Aug. 1906, 22nd Sep. 1906.		From Barrack No. 9.	6	2nd Feb. 1906.
43 54 61 62	12th Sep. 1906. 17th 18th	15	6th March 1906.	13	6th Feb. 1906. 10th March 1906.	8	From Barrack No. 13 Wanowrie 5th Aug. 1906.	13	7th May 1906. 9th **	15	18th May 1906.
-	From Barrack No. 5	23	18th ,,	32	14th April 1906,	15	From Barrack No. 15 Wanowrie.		From Barrack No. 10.	18	noth ,, 12th June 1905.
33	6th Asg. 1906.	30	6th April 1906.	23	From Barrack No. 3-L. 20th March 1900.	. 9	10th Aug. 1905. 23rd ,,	12	6th May 1906. 2nd June 1906.	-	From Barrack No. 5.
45	23rd ,, 3rd Sep. 1906,	48	24th	25	ernd ,		From attached section, Ghorpuri.		From Barrack No. 16.	34	26th July 1906, 30th "
53	9th ,, 3rd Oct. 1906,	1	27th " From Barrack	30	15th ,,	11 14 18 21	16th Aug. 1906. 18th " 21st " 23rd "	33	30th Aug. 1907		From Barrack No. 11.
70 20 80	22nd ,,	13	No. 4. 5th March 1900.	54	7th May 1906.	40 51	10th Sep. 1906. 28th 29	40	21st Sep. 1906.  From Tent.	44 45	6th Nov. 1906. 6th ,,
-	From Barrack	19	agrd	59	24th ** 27th **	_	From the Camp.	47	25th Nov. 1906.		From the Cam
19	No. 6.	39 54	15th April 1906. 30th #	68 72	11th Aug. 1906. 24th Sep. 1906.	12	18th Aug. 1905.	50	25th ,,	3 4 17 24	6th Jan. 1906. 20th ,, 19th May 1906. 20th ,,
55	2nd Aug. 1906. 12th Sep. 1906.	72 76	25th Aug. 1906. 2nd Sep. 1906.	76	17th Oct. 1906.	20	agrd "			25	1st June 1906. 1oth "

## Appendix to Section II .- European Troops-concld.

D .- Enteric fever. Dates of admission into hospital of patients from certain Barracks and Camps-concld.

_								,		1	
Sr	CUNDERABAD.		LUCKNOW.		Множ,		POONA.		MEERUT.	-	BANGALORE.
Serial number of the case,	Date of admission into hospital.	Serial number of the case.	Date of admission into hospital.	Serial number of the case.	Date of admission into hospital.	Serial number of the care,	Date of admission into hospital.	Serial number of the case,	Date of admission into hospital.	Serial number of the case.	Date of admission into hospital,
	From Barrack No. 6-concld.		From Barrack No. 5.		From Barrack No. 1-U.		From the Camp —concld.				
81	28th Oct. 1905.	28	2nd April 1906.	16	14th March 1906,	22	24th Aug. 1906.				
82	ard Nov. 1906.	34	8th ,,	19	17th . 39	23	24th p				
86	12th »	42	16th ,,	24	16th April 1906.	26	26th 33				San Carrier
- 88	From Barrack	49	5th May 1906.	33	i@h ,	29	28th 29			1	The same of the sa
	No. 7-	80	10th Sep. 1905.	42	4th May 1906.	35	4th Sep. 1906.			1 .	The state of
39	14th Aug. 1905.	84	24th Oct. 1906.	21	16th July 1906.	37	7th ss			1	I I I I I I I
53	20th sep. 1900.			56	20th July 1906.	47	tSth so			1	(depter
-	From Barrack		From Barrack No. 6	70	19th Aug. 1906.					1 .	I Berry
-	No. 9.	16	10th March 1906.		From Barrack No. 3-U.					1	(400)
10	20th "	17	rith ,	3	18th Jan. 1906.	-	13			1	Department.
21	22nd July 1906.	18	ard May 1906.	4	19th ,,						Chapter Dan
32	6th Aug. 1906.	55	22nd 20	10	19th Feb. 1905.					-	
67	73rd Sep. 1906.	63	23rd 1,		From Barrack			1			THE STATE OF
83	5th Nov. 1906. 18th Dec. 1906.	66	19th June 1906.	12	No. 4-U.	-					
92		-	From Barrack	14	11th ",						
	From Barrack No. 10.	-	No. 8.	- 21	20th 20						
37	11th Aug. 1906.	22	14th March 1906	52	10th July 1905.	1					
41	16th 19	32	7th April 1906.	58	23rd »						
	From Barrack No. 13.	64	16th ,, 23rd May 1906,	63	24th ,, 5th Aug. 1906,						
44	22nd Aug. 1906. 1st Sep. 1906.		From Barrack No. 9.	64	5th »,				1 1991		
_	From Barrack	38	15th April 1906.								-
-	No. 16.	45	21st ,					1		1	
59 72	15th Sep. 1905. 5th Oct. 1905.		From Barrack No. 10.								ger on
7	From the Camp.	43	Sth April 1906.								
2	1st Feb. 1906.	36	10th #9		12 14	1	Re line	1		1	
3		50	26th n					1		1	
8		60	16th May 1906.			3				1 4	1
40	100		From Barrack No. 14.	1		1.	E YES	1		1	1 11 11 11
84		14	6th March 1906.			1		-		-	
83	10th 30	25	22nd 25							1	1
		27	28th p			1		1		1	The same of the sa
-			E,-OFFIC	PPC.			FWomen,	-	1 0	-Сип	Derv
		-					11 11011111		-		area.
	Period	†Avera annu streng		nstantly ck-rate r 1,000.	Death- rate per 1,000. †Avers annu streng	al	nission- Constantly rate sick-rate 1,000. per 1,000.	Death- rate per 1,000	annual r	ite :	Constantly sick-rate per 1,000.
1894	1903	2,00	6 846'3	•300	15'26 3,01	0	873'4 36'5	15'68	5,384 5	870	27'0 42'82
1905		2,3	1	18.3	9'04 3,37		646'8 27'9	10'96	5,154 4	05'9	29"3 38"80
1906		2,2	5 725'1	30.0	17'53 3,43	•	757'8 32'9	12'24	5,322 4	690	150 4472

<sup>\*</sup> For five years only.
† The decennial ratios are, of course, worked on the total strength of the ten years period.

							RA	TIO P	ER M	ILLE (	OF ST	RENG	TH.			
		10000	15		- pos-	.;		Mar all		DE	THS F	ROM				guip.
A.—COMMANDS	AND D	VISIONS.	Years.	Average strength.	es into	ly sick.		ж.	fever.		of the			of the	1	deaths.
		2000			Admissions pital.	Constantly	Cholera,	Small pox.	Enteric f	Remittent faver.	Tubercle lungs.	Pacumonia	Dysentery.	Abscess of	All causes	Mortality
Northern Comman	d	{	1905	36,696	652	26 25	103		·27	-76 -37	'76 '07	3'32	.10	105	12'92	14'00
Western Command		{	1905 1906	33,932 34,972	602 743	23	63		·21	'32 '26	'47 '23	1'74	18	.03	6.60	8.81
Eastern Command	***	{	1905	21,918	572 647	23 25	18		18	*64 *50	55	1.33	*18	'05	6 42	8-30
zet (Peshawar) Div	ision	}	1905 19:6	9,065 9,859 8,647	526 782	20			10	66	'44 '30	2.43	33		717	10.03
		}	1905 1906 1905	10 800	785 790 518	32 28 27		-	·8:	.10	1'39	312	35	.09	8-10	1284
grd (Lahore) 4th (Quetta)	11	{	1906	11,336	466	18	-26		25	62	53	1.32		'05	27.85 5.38	33:53
rth (Mham)		}	1905 1905	7,513	791 585	25 22	.13	73	13	27	13	1'46	·87	13	5.73 4.92 6.74	8·39 9·79
6th (Posse)			1905	9,068	778 500	24	'43		'50 '21	"37 "21	'25 '31	1'99	'12		8.38	11·17 0·52
eth (Manuel)	,	5	1905 1905	9,538 10,212 11,474	575 501 C43	20 24 27	1'47	.10	1.18	'10	-69	1.47	'21 '20	.21	9.65 7.25	9-20
8th (Lucknow) ,	,	{	1905	11,611	633	22	'35 '34 '57		'09 '20	'44 '34 '57	1.22 .43 .57	1'22	'17 '48		5'68	9.73
9th (Secunderabad),		{	1905	11,794	466 524	19	2.16	.08	'34 '66		'08	1.27	17	7.	7.56 5.77 7.73	10·72 6·29 7·29
Burma		{	1905	4,793 5,310	614 644	26 25				·53	83	63		"19	6.47	9.81
Kohat, Derajat and	Bannu	Brigades	1905	8,693 8,540 8,8	797	30 35			'47		35	4.83			9.20	3.80
Aden Brigade		}	1965	1 806	1,096	65 37 21	105			1.18	1.00	2'36	118		9'41	18.87
India		{	1936	127,8 3	684	23	.48	.03	28	34	.20	1.79	18	.01	6.57	9'50

							R	OITA	PER M	HLLE	OF S	TREN	GTH.			
				Average		32				A	DM1881	NS FR	ом			
	B.—Groups,		Years.	strength.	Admis- sions.	Constantly sick.	Inflaenza.	Cholera.	Small-pox.	Enteric fever.	Intermittent fever.	Remittent fever.	Simple conti- nued fever.	Paeumonia.	Dysentery.	Venereal dis-
Group	L - Burma Coast and I	Bay {	1891-1900 1905 1906	1,891 1,195 1,349	794 625 485	37 24 18	\$'7 4'2		2		105°2 168°2 108°3	6·6 5°0 '7	4'3 52'7 71'9	5.0 5.0	66.4 52.7 5.2	55:5 10:5 8:5
	II.—Burma Inland	{	1891-1903 1905 1906	6,083 2,916 2,835	1,165 539 674	50 22 26	2.0	1.7		'1 	576·5 159·5 222·5	8.6	7'2 4'5 40'2	4'7 1'7 2'1	71°5 23°7 15°5	12:5
	III.—Assam	{	1891-1900 1005, 1905 1891-1900	2,003 919 954 2,035	751 775 1,120	51 25 25 44	9'2	3.0		3.8	\$12.1 213.9 302.9	2°1 2°1	8:4	9·4 5·3 7·3	40°0 45°1	71-2 26-3 32-5
	IV Bengal and Orissa	{	1905 1906 1801-1909	2,558 1,816 6,463	877 876 668	27 33 28	2.2 7.8	··· ··6	·3 ··6 ·3	1.7	511-2 353-8 303-4 215-4	15°0 24°6 6°1	20'4	5·9 10·9 5·5	95'4 43'5	35.0
	V.—Gangetic Plain a Chutia Nagpur.	had	1905 1907 1891-1900	7,046 6,209 15,166	506 564 732	18 18	1'1 10'0 2'0	·6	2	.3 52 52	1198 1409 2808	9°2 3°4 17°9	13.1	5°3 6°9	35°1 33°3	13.9
19	VIUpper Sub-Himalay	ya }	1905	16,649 20,842	512	23	2.6		·4	2.9	111.4	88	3.1 2.3	15'4	29'8	33'7
**	VIINorth-Western Fo- tier, Indos Valley, a North-Western Raj tana.	and }	1891-1900 1505 1906	15 459 17,946 19,224	1,102 654 938	36 25 27	8°9 4°0 16°2	2.3	-6 -7 -5	·2 ·7 1·2	5°7'5 170'8 468'3	9°9 7°3	10.3	20'5	56·5 39·5 49·2	15.8 22.5 14.7 8.5
39	VIII.—South-Eastern Raj tana, Central India a Gujarat.	and }	1891-1900 1905 1906	12.679 13.651 13.243	814 588 767	27 21 23	6°0 1°0 3°2	1.5	'7 1'4 1'8	·1 7 9	337'5 211'8 355 3	3'4 3'9	12'3 6'8 13'4	13'I 14'7 10 I	2979 181 407	41°5
"	IX Deccap	{	1891-1900 1905 1906 1891-1900	19.504 15.977 16,391 3.055	736 445 579 714	27 18 21 20	7°0 *2 3°7 2°2	3.8	1.3	11 20 '4	73°2 110°0 150°0	2'4 3'3	11'6 20'7 43'6	9:3	31·3 25°0 39°2	43 0 24'3 20'3
"	XWestern Coast	}	1905	1,978	600 804	29			4.0	.5	1926	14'9	20·8 10·6 4·5	137	20.7	53°3 38°4
	XISouthern India	{	1891-1900 1905 1900	8,244 5,967 4,282	565 552 605	29 21 20	3.5 2.8	2'5 '5 '7	·6 ·2 1·6	'I '2 I'4	132'0 122'2 166'0	3.6 8 1.6	21.7 57.3 27.8	7'9 5'0 6'1	20°1 19°9 42°7	43°2 30°5 23°8
	XIIHill Stations	{	1905	17,027 20,224 22,403	1,075 729 735	40 31 28	3.8	'o	'3 '0	1.6	470°0 170°3 250°0	24·6 11·5 6 5	8 4 23.4 66.2	20°5 13°7 12'8	51°3 32°3 33°6	49°6 24°3 20°2
	INDIA	{	1905 1905	127,006 123,434 127,853	852 607 684	23 23	8·1 1·5 5·2	1.8	5 6	1.1	348/8 171'2 261'8	15°2 8 4 5°0	9'1 14 3 29'0	14'4	48·8 32·5 37·1	37°2

## 1.—ACTUALS 2.—RATIOS.

c.	Plains and Hills.	Average annual strength.	Inter- tent F		Remit Fev		Tubero the lu		Pneu nia.		Oth resp to disea	ira-	Dyse an Diarr			rvy.	31	emia id ility.	Cau	ill ses.	Average number con- stantly sick.
		- Car	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	Averag
	Plains}	99,841	} 26,587 266'3	1.30	1,091	1,10	3.3	53	1,456	3.23	-	30	5,150	57	220	2 '02	1,272	14	69,816 699-3	1,079	2,523 25'3
ei	Hills {	20,950	3287	-86	388	1.10	9'4	46 2:20		511	275	57	70'9	57	3.0		22'0	7	821.9	1370	32.5
1902	Hills above 5,000 feet sea-level.	8,553	165.4	82	197	1-64	5.8	16	14.6	2.10	22-3	4	20.3	82	3.3		12-9	.33	5,183	10.64	28'1
	Hills below 5,000 feet sea-level.	12,397	} 5:472 441:4	-89	17.8	9 '73	146	30	304	7:18	31.1	8 65	1,055	5	55 4'4		351 28°3	5	12,035	196	35 6
	Plains {	100,859	} 24,204 240'0	60	854 85	94	369	46	1,340	277	2,122	22	4,225	38	179	800	1,424	8 '08	64,660	944	2,349
3.	Hills {	21,676	} 5,898 272'1	16	10.1	16	350	35	448	202	611	4 -18	1,156	11	120	11	328	5	16,466 759·6	238	733
1903	Hills above { 5.000 feet } sea-level.	9,900	} 1,455 147'0	4	105	3	50	18	137	16	21.2	.10	357 36·1	4	20		10.0	.10	5,673 573'0	8 <sub>2</sub> 8-28	255
1	Hills below {     5,000 feet {     sea-level. }	11,776	} 4.443 377'3	12	9'7	1.10	300	17	311 26:4	7:30	398	3	799 67·8	7	8'5	.93	19'4	34	916.5	201	478
	Plains {	98,289	} 17,183 1748	.33	605	53	340	25	1,048	1.03		23	3,476	20	3'3	101	1,283	12	56,276 5726	7'04	2,151
.506	Hills {	20,365	3 4,590	10	11'1	.08	6.1	30	100	3°45	20'9	20	702 34'5 269	.39	83	.02	252 12'4 81		656.8	8.84	28:3
19	5,000 feet sea-level.	8,576	1,438	82	9.9	-82	5.7	1'40	103	1.22		-35	31'4	12	35 4'1	.13	9'4		5,055	8:40	26.2
	Hills below { 5,000 feet sea-level.	11,790	} 3,152 267-3	3	97	13	76°	1.83		37	251	.08	433	7	48 4'1		14'5		705'9	9:16	349
	Plains {	99,771	} 14,461 144'9	28	669	41	287	33	12.7	185	2,528	23	3,771	18	1'2 84	3	1,080	9 09	55,250 553-8	603	2009
905.	Hills {	20,224	3,444	9 '45 4	11.2	17 -84 7	93 4.6 46	1.30	277 13'7 95	2.37	920 45'5 333	35	850 42'0 341	45	4'2	.02	253 12'5 100		729'3 5,698	365 1805 260	30.9
10	5,000 feet sea-level. Hills below (	9.583	1353	42	6.3	73	4.8	1'36	9'9	2'00	34'7	.21	35.6	63	5'2	.10	10'4		594.6	27.13	27.1
-	5,000 feet }	10,641	3 201.8	.47	16:3	94	4'4	1.55	171	2.63	55'2	'47	47.8	-28	3-2		14'4		850-6	9:87	342
	Plains {	101,783	26,348 2589	31	485 48 146	33	221 212 79	32	856 84 285	1.26	2,108	14	4,650 45'7 926	27	214	.10	1,349	.03	68,275 670'8 17,057	665	2,201
900.	Hills }	22,469	271.7	27	6.5	44 6	3'5	1.29	12.7	1 74	33-6	09	41'2	·36	4.1		15:4	109	7591	7'03	28.8
	5,000 feet { sea-level. { Hills below(	11,510	3,630	17	6.3	52	3.0	·78	10'3	1'48		.17	38·o 489	·6t	6.1		14'2	.17	601°5	6.78	25°5
	5,000 feet {	10,959	331.5	.36	6-8	*36		182	15.2	2'01	42'4		44.6	'09	2'0		16.8		924'7	7'30	32.2

				1800		1891-	1900.	29	06.
	1	OENTERIO	Paven.			Admission-rate per 1,000.	Death-rate per	Admission-rate per r,eco.	Death-rate per
European troops			***			24'2	646	15.6	3.19
Native troops						-3	09	1,0	-27
Gurkhas only						1'4	.38	1.8	'35
Prisoners			***		***	-3	12	9	16

+ Including Gurkhas also.

			ETenapter e		FVenterat,
elanger very grant grant		12 19	Admisson rate per 1,000.	Death-rate per 1,000.	Admission-rate per 1,000.
Northern and Eastern Commands excluding Gurkhas			 2-4	-27	11'4
Gurkha Regiments in the Northern and Eastern Commands	***		 5'4	2'53	29'3

			G1×	FLUTNIA.			нРх	EUMONIA.	
	-	1891-1900.		1905.		1801-1	900.	190	6.
121 (4)		Admission-rate per 1,000.	Death-rate per 1,000.						
European troops		 6.8	.03	11'4	***	3.8	-60	3'4	*28
Native troops		 81	.15	5'2		14'4	3'24	90	1.20
Prisoners		 23.8	-38	8-6	*11	16-2	4'27	10.0	2'93

						R	ATIO P	ER MIL	LE OF S	TRENG	*HT.				
									1977	DEATHS	FROM			7	
A.—Administrations.		Years,	Average strength.	Admissions,	Constantly sick.	Cholers.	Small-por.	Remittent fever.	Tubercle of the lungs.	Perumosia.	Other res- piratery diseases,	Dysentery.	Diarrhora,	Anemia and debility.	All cames.
Borma	{	1901-1905 1905 1906	11,779 12,639 13,309	452 320 380	32 2 15	*68 **22	*03 *08 *15	*34 *08 *07	3'63 3'80 4'19	1,30 1,03 1,33	*51 *63 *52	1,20 3,21 1,20	*8a *95 *45	*32 *24 *07	16'78 17'01 14'81
Eastern Bengal and Assam	{	1901-1905 1905 1906	6,285 0,401 0,871	1,099 1,081 912	45 45 43	1.87 1.82	.10	"64 "47 "15	3'34 3'44 3'05	3'47 3'50 3'30	-75 -94 1-15	7.67 7.50 7.71	**05 *78 *58	1°46 3'66 '87	39'6g 38'96
Bengal	{	1901-1905 1905 1906	14,573 14,179 14,857	909 954 1,009	37 39 38	'77 '35 1'01	.04	"30 "31 "47	3'86 4'02 4'31	3,48 3,13 3,48	*54 1*05 *74	5 83 6 56 5 72	1,20	*55 *49 *67	23'95 24'91 23'35
United Provinces of Agra and	Oudh {	1901-1905 1905 1905	25,557 23,640 24,571	619 619 603	34 37 37	*45 *17 *44	*04 *04 *12	*09 '31 '04	3'97 2 05 2'85	3°54 3°00 3°77	*94 1*10 *84	373 1'94 1'89	1°05 '84 '75	*93 *21 *24	18'77 17'31 16'56
Panjab	{	1901-1905 1905 1906	13,333 11,512 11,744	999 708 737	32 26 36	.32	.10 .09	'34 '09	3'68 4'43 3'83	4°74 2°52 2 64	*66 *69 *17	3,04 .23	"75 "17 1"35	-63 -69 -85	16°53 16°53
North-West Frontier Province	-{	1901-1905 1905 1905	1,287 1,314 1,340	1,016 950 1,405	34 36	==	*78	*16 *76	1'51 1'51 '77	4'35 1'51 3'85	*47 *76 1*54	3'73 4'57 4 69	*47 *76 *77	1'54	20°35 19°70 25°38
Bombay	-{	1901-1905 1905 1906	8,725 7,851 7,915	689 603 689	39 37 31	*05 2'27	*16	*80 *51 *83	1.99 3.18 3,31	3.05 3.05	1°50 1°53 1°14	1°74 1.15 3°03	1°53 1°15 *76	*83 *75 *83	26°36 17°45 20°69
Central Provinces	-{	1901+1905 1905 1905	4,429 3,547 3,329	772 630 398	95 21 19	*09 *28 	=	'05 '60	3°53 1'97 1'80	9'48 1'41 1'30	1'31 1'13	3'51 1'41 3'10	1.82 .38	1'17 '35 '60	12,93 12,53 30,10
Madras	{	1901-1905 1905 1906	9,831 10,147 10,438	4 <sup>S2</sup> 4 <sup>6</sup> 9 4 <sup>1</sup> 7	91 19 18	1°36 1°38 4'33	.03	"14 "20 "10	3°50 2°37 3°49	1.48 1.48	.23 .23 .23	3°35 3'05 4'32	*14 *30 *10	"37 "30 "58	18'74 15'87 21'77
INDIA†	-{	1901+1905 1905 1906	95,479 91,917 93,394	759 647 658	31 35 37	'54 '44 1'10	*06 *04 *09	-32 -32	3,18 3,18 3,33	3'07 3'35 3'55	779 193 171	3'75 3'01 3'15	1'04 '74 '73	'55 '54 '55	19'27 19'23 19'13
ANDAMANS	-{	1901-1905 1905 1905	13,250 14,348 14,688	1,838 1,898 3,041	98 98 91	=	=	3.23 3.23 3.20	7'65 0'48 5'58	4'25 4'81 5'38	1,33	13 03 4'90	1°57 '49 '34	*02 ***	35.30 38.00 33.30
INDIAT"	-{	1901-1905 1905 1906	1,08,769 1,06,165 1,10,082	\$91 816 843	35 33 35	*47 *58 *95	*06 *04 *08	*55 *57 *53	3.23	3,23 3,23	-85 '91 '78	4°58 4°37 3°47	1'11 '71 '68	'49 '47 '47	33'11 31'90 20'34

<sup>\*</sup> Excluding Subsidiary Jails.

the same of the last of the last		MALY	10000	1115-L 94	RAT	10 PER	MILLE	OF ST	RENGT	H.*			
		Average						Армі	ssions r	ROM			
BGroups.	Years.	strength.	Admissions.	Constantly sick.	Influenza,	Cholera,	Small-pex.	Enteric fever,	Intermittent fever.	Remittent fever,	Simple con-	Pneumonia.	Dysentery.
Group I.—Burma Coast and Bay Islands {	1901-1905 1905 1906	7,967 8,868 9,576	442 352 348	31 14 15	7	1.3	.3	*6 *6 *4	97'4 32'1 42'0	a'3 ·8 ·6	19'2 24'6 18'2	3'8 3'3 3'7	37°0 16°3 10°7
., IIBurma Icland	1901-1905 1905 1905	3,812 3,831 3,793	471 455 350	23 22 19	4°2 3'7	1,8		.8 .8	107.7 94.3 69.1	.8	9.0	3'4 5'5	55'9 55'9
" III.– Assam	1901-1905 1905 1906	1,239 1,291 1,430	810 868 757	43 53 59	3 6 7	1'5 1'4 4'9		.,	355°-3 338 6 350°1	5'5 4'3 7'0	4'4 5'8	4'8 1'4 77	334°3 359°5 150°1
IV.—Bengal and Orisea {	1901-1905 1905 1906	12,182 11,901 12,457	1,014 1,036 987	40 43 44	0.8 10.0 31.3	1'5	74 77 70	1,3	248°0 273°5	3.0 1.3 3.1	10.8	8.0 8.0	333.8 326.0 328.0
,, V.—Gangetic Piain and Chutia Nagpur {	1901+1905 1905 1906	23,686 21,083 23,376	769 685 680	33 30 27	16'0 13'7 3'0	'9 '4 1'1	·4 ·2 ·7	74 73	331,1 330.0 392,3	173 171 74	4.5 8.0 11.3	8,0 8,1 10,0	85°0 87°2 85°5
"VIUpper Sub-Himalaya	1901-1905 1905 1906	13,091 11,930 12,351	045 619 818	32 25 39	17'8 18'7 13'5	3	1,0 .3	-8 -5	409°3 353°9	1°3 1°4 '7	3'9 4'8 7'3	17'5	35.8 30.4
, VII. North-West Frontier, Indus Valley and North-Western Rajput-	1951-1905 1905 1906	8,142 5,407 8,447	785 651 690	20 20 25	20.0 30.0	77.4	1.4	-1,	313.0	1.1	4'0	97'4 17'4 18'1	48'5 38'4 37'5
,, VIIISouth-Western Rajputana, Central {	1901-1905 1905 1906	4,773 4,346 4,595	754 524 614	30 30 32	13.2	-3	.8		378'4 160'4 194'6	-6 -9		18.8 33.3 30.2	35°5 15°1 23°7
,, IX.—Deccan{	1901-1905 1905 1906	8,373 7,017 6,840	813 672 350	31 38 29	14'0 4'5 7'3	1.2	.3		189'3 158'0 189'3	1'0	4'5 3'4 1'8	9.0 9.1 2.3	50°3 47°3 59°9
" X.—Western Coass {	1901-1905 1905 1906	2,7:8 2,3:8 2,452	517 532 500	23 20 21	174	147	1'3	3°7 3°0 15'9	155°3 141°1 109°3	4°7 1°3 77	8°3 11'6 11'4	9.2 9.5	40°3 41°3 88°9
" XISouthern ledia	1901-1905 1905 1905	8,845 9,340 9,409	497 456 419	31 20 18	1.0	3'5 4'0 7'3	7.4.5	3'3 3'3	87°7 57°6	1.0	3618 3414 3915	9°0 8'4 7'4	55°1 65°2 76°0
_xii,-Hills{	1901-1905 1905 1905	594 ° 575 573	843 878 893	38 94 31	2.1	1.3	1.0	3'4 3'7	337.8 323.3 323.3	3'7 3'5 17'5	19'9 17'4 13'3	10.1	85°5 80°0 80°4
INDIA+{	1901-1905 1905 1905	95,479 91,917 95,394	759 647 635	31 18 27	11'5 5'9	3.0 48	.2 .3	·6	351°9 351°7 207°2	1'5	8°1 9°7 9°7	9:7 10'1	23°5 81°6 78°9
ANDAMANS{	1901-1905 1905 1905	13,389 14,318 14,688	1,838 1,898 2,041	20 98	30.3 13.0 1.0	=	=	=	1111'3 1345'8 1450'0	5°1 4°4	574	11'6	155'0 154'4 94'0
INDÍA1{	1901-1905 1905 1905	1,08,760 1,06,105 1,10,082	S91 816 843	35 35 33	11'7	*9 *7	·4 ·3 ·7	.6	355-9 325-8 373-0	5'I 1'9	7'1 8'4 9'3	10 0 0,0 13,2	80.0 81.2 80.4

<sup>•</sup> Szrinding Subsidiary Jaffe. † Incinding Aden and excluding Andamans. 2 The eninquennial ratios are, of course, worked on the total strength of the five years.

§ Including Andamans.

<sup>†</sup> Including Ajmer, Quetta, Mercara and Secunderabad and excluding Andamans,

						-										
CCauses of admissi	oc	*Ye	ears.	January.	February.	March.	April.	May.	Jane.	July.	August.	September.	October,	November.	December,	Total,
ladocesa		5	1901 1903 1904 1905 1906	58 70 14 77 29	62 45 9 114 36	129 30 5 90 25	113 261 32 323 51	188 109 51 52 64	115 42 41 30 96	30 15 35 48 50	90 94 33 130 23	39 6: 38 193 50	28 55 47 59 10.4	10 32 40 21 30	24 20 33 21 10	\$36 \$34 370 1,057 595
	Total	19	02-1905	248	265	379	680	454	314	181	368	370	391	193	10\$	2,713
Cho'era	_	-{	1902 1903 1904 1905 1905	1 1 2 4 3		3 5 1	2 14 3 2 9	10 7 2 3	3 13 20 5	2 7 1 2 42	3 25 12 37	14 16 1 39 5	3 3 5 30	6 3  47	2 4 3 3 3	35 97 47 73 137
	Total	190	02-1905	10	6	13	30	23	49	54	77	75	40	58	15	440
Bateric Forer	_	-{	1902 1903 1904 1905 1906	3 4 13 	1 1 3 1	783444	5 2 8 4 3	4 3 3 6 5	7 5 2 6 7	11 7 3 14 14	10 4 5 11 13	11 4 6 3 14	8 1 3 6 4	::: 2 5 3 2	3 7 4	69 45 55 64 103
	Total	19	903-1906	31	6	25	23	21	25	49	63	58	23	13	17	335
Intermittent Forer		-{	2902 2903 2904 2905 2905	1,818 1,220 1,253 1,483 1,483 855	1,515 1,085 1,089 974 673	1,595 1,554 1,154 1,123 900	1,794 2,124 1,329 1 292 1,163	1,751 1,757 1,303 1,355 1,177	1,631 1,439 1,203 1,254 1,237	2,194 1,599 1,411 1,319 1,686	3,009 1,759 1,099 1,531 1,596	3,437 2,231 2,533 1,543 3,502	3,793 3,412 2,565 1,877 2,893	3,415 2,578 2,035 1,725 2,845	2,355 1,830 1,451 1,297 1,297	23,477 21,615 19,515 16,704 19,765
	Total	19	02-1905	6,239	5,355	6,457	7,703	7,475	5,854	8,176	10,224	13,566	14,540	13,587	8,970	107,085
Remittent Fever		-{	1902 1903 1904 1905 1906	15 15 4 4 9	31 2 10 3 3	15 14 6 5 9	16 12 13 10 6	23 91 10 13 10	25 34 8 15 15	#5 15 14 8 10	80 11 13 4 9	66 4 5 15	23 13 10 10 22	31 7 6 10 26	14 5 3 11 11	345 143 109 109 149
	Total	15	902-1905	47	39	50	57	77	50	73	117	59	78	70	"	840
Simple Continued Pever	-	-{	1901 1903 1904 1905 1905	28 16 51 47 31	44 17 45 50 96	30 31 33 55 71	41 23 36 78 51	\$5 53 57 100 85	34 39 66 69 99	31 76 58 94 94	19 63 50 81 417	31 72 99 94 123	44 63 87 104 130	37 63 63 63 64 62	24 41 83 57 40	440 540 735 892 930
	Total	190	02-1905	183	185	319	230	352	397	353	335	419	437	292	245	2,537
Poramonia	-		1908 1903 1904 1905 1905	305 16: 147 86 95	163 118 131 131 131 88	171 170 89 94 71	87 100 60 89 70	101 S1 65 65	95 74 69 43 83	67 72 38 53 53	68 56 61 55 48	57 60 46 54 67	74 71 73 64 68	135 117 83 72 101	133 166 97 100 133	1,339 1,306 055 896 963
	Total	19	003-1906	695	613	555	405	308	363	254	289	284	350	504	619	5,369
Dyscotery	-		1902 1903 1904 1905 1306	607 353 508 410 432	4 <sup>5</sup> 3 361 251 310 336	618 489 830 837 446	616 508 501 592 534	557 493 515 607 571	60g 5%7 675 501 558	849 740 868 751 855	1,058 943 952 978 8,079	1,005 870 748 991 794	887 749 765 763 756	904 709 069 635 615	682 630 583 561 538	8,051 7,393 7,747 7,495 7,515
	Total	10	02-1906	2,510	1,793	1,480	s,809	2,744	3,014	4,056	5,020	4.278	3,861	<b>\$</b> ,531	5,004	39,011
100 F 101 F 100 F 100 F	1334 19				Excludi	lng Ands	mans.									

- 1				100					Se			1
	RATIOS.	Death-tates.	5	433	2,5	4.16	3.22	3,38	3,41	17.79	2.28	27.55
PNEUMON1A.	RAT	Admission-raics,	8.98	17.9	15.4	150	14.3	13.3	13.0	10.1	1.6	101
PNEU	148.	Deaths.	481	415	308	450	373	330	303	152	910	243
	ACTUALS,	-coolreimbA	1,805	1,719	1,518	1,634	1,501	1,133	1,306	265	895	595
9	36.	Death-tatte.	3.80	65.2	3.00	3.38	3.24	3.67	3.17	3,65	\$119	25
is.	RATIOS.	Admission-rates.	7.1	2	2	90	9 9	-6	27	***	1.00	92.60
TUBERCLE OF LUNGS.		Deaths.	301	300	300	415	303	362	107	370	293	300
TOBI	ACTUALS.	,ènoleelmbA	161	731	270	606	898	916	og.	20	\$03	245
9	4	Death-rates,	10.	.03	ş	10.	50	70	10.	1	10.	I
SIMPLE CONTINUED FRVER.	RATIOS.	A dmission-rates.	24.3	0.50	6.22	98.0	13.3	5.4			2.6	6.4
FEV	14.	Dearpa.	•	•	+	-	1	•	-	1	-	1
SIMIC	ACTEALS.	Admissions.	2,675	2002	3,257	3,085	1,379	410	. 540	735	892	630
. E	*	Death-rates,	8.	178	.55	.83	66.	8	E.	41.	7	F
REMITTENT FRVER.	RATIOS.	Admission intes.	8.8	8.4	\$.0	4.9	3.2	25	2	=	2	1.3
TTEN	.610	Deaths.	60	2	2	ā	+	9	5	1,5	2	90
REMI	Acreats.	Admissions.	600	545	497	535	202	346	143	101	604	140
/ER.	*	Death-cates.	21.15	1.03	-36	1,01	16.	1.13	2	99.	6.	*75
ERMITTENT FEVER.	RATIOS.	Admission-rates.	317.6	305.8	9.5%	371.8	313.6	\$.080	9550	316.1	181.7	2000
TIM	-	Deuthe.	114	105	79	i	26	114	38	99	2	73
INTER	ACTUALS.	"enoleelmb.A	34,794	30,091	14,143	30,075	32,036	25,477	\$19,615	19,525	10,304	19,765
R.	.000	Death-rates.	#	60.	:	51.	61.	.15	.188	31.	92.	61.
FEVE	RATIOS.	"eades-noleelmbA					*		**	p		E
ENTERIC FEVER.	A18.	Descha-	13	0.	=	11	10	15	25	2	15	18
EN	ACTEALS.	AnolesimaA	25	9	=	7	+	63	45	55	70	103
	RATIOS.	Death-rates.	E.	60.	So.	er.	01.	9	40.	*o.	10.	60.
SMALL-POX.	RAT	"ester-noissimb.A	0	,		=	9	*			r	9
SMAL	ACTEALS.	Desibs.	2	-	103	1	01	0	0	*	*	0.
	Act	Adminstods.	114	3	=	911	69	47	69	35	10	8
	RATIOS.	Death-raites.	100	7	59.	1.51	2		9	5	7	1.10
CHOLERA.	RA	Admiss'on-raice.	8		1.0	9,4	0,4		5	.50	70	200
HO	ACTUALS.	Deaths.	465	-	6	273	306	7	57	ñ	9	105
9	5		656	2	101	500	=	R	6	=	2	187

2 2 2 2 2 2 2 2 2 2 2 2

1,623

1,343

2 4 2 2 2 2 2 2

101,437

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90,353

Death-rates.

Deaths.

Admissions.

1.digeonie facena sgarovA

Admission-cates.

RATIOS.

Acreats,

D.-Sicking AND MORTALITY PROMERTY PRINCEPAL PRINCEPAL

INFLUENZA,

-	-Pris	one	er	s-concld.									x	iii	
1	PARCENTAGES IN PEATER FROM ALL CAGAIN.			Prisoners.‡	5.3	3	20.7	1.0	160	167	22.00	1		0,001	108.
I	RCENTAGES IN DEA			Wather treops,	1.4	1473	-	20	14	2	39.6	1		0.001	Andam
I	PARCES			European troops.	62	3376	2	27	3.2	9.1	477	1		0,001	r Excluding Andamans,
ı	NI ALL			Prisoners	0	2	2	68	19	2	7	Ī		2	3.8
	RELATIVE CLABILITY IN PRECENTACES.			Nether troops.	2	17	0		2		2	İ	,	2	1
	RELATE		-	European troops.	90	60	=	**	-	*	200	İ	-	2	aed fever
	oor vorm.			T.ansaosi19	1.10	1.15	3,08	55.	3.30	3,31	6,02	1	-	Linda	le contin
	DIED PER 1,000 OF AVERAGE STRENGTH.			Native troops.	7	93.	81.	7	1,60	.53	3.60	İ	1	Di o	duis ba
I	Dige			European troops.	ż	3.30	13,	103	.33	.11.	5.15	Ì		10.43	nittent a
			ai ai	Cames of deaths,	Cholera	Feverst	Bowel-complaints	Anamia and debility	Respiratory diseases	Tobercle of the longs	All other causes			wit canno	· Enteric, Intermittent, remittent and simple continued fevers,
I	rv.	108.		Death-rates.	27.62	3:14	7	1,33	1,8	.39	.7	7	.54	.55	
I	ANÆMIA AND DEBILITY.	RATIOS.		Admission-rates.	20.00	2079	14.0	10.4	15.8	13.7	0.11	17.4	11.0	11.5	
I	MIA ANT	19	-	Deaths.	356	315	12	151	82	3	8	37	2	2,	
ı	ANA	ACTUALS.		Admissions,	4,744	3,307	1,440	2,137	1,657	1,389	1,058	1,116	1,014	1 193	
ı		*	1	Death-cates.	3.33	1.47	17.14	3.36	1,16	1.39	4.	.65	*24	ţ.	
	ICEA.	RATIOS,		Admission-tabta.	\$.00	53.1	\$1.5	0.55	40'8	47.9	41.0	41.0	20,5	237.1	
I	DIARRHURA,	-		Deaths.	ñ	148	113	249	100	7	89	88	23	30	
		ACTUALS.		Admissions.	7,153	5,135	3,094	6,393	5,916	4,852	3,714	3,374	3,603	3,734	
		34.		Dearh-rates.	11734	\$ 35	4.75	6.40	\$1.5	4,01	3,10	16.2	3.01	3.15	
	ERY.	RATIOS.		Admission-rates.	1.911	6,116	5.05	1170	9,101	87.3	89.3	25.2	9	200	
	DYSENTERY.	118	-	Deaths.	1,308	537	410	715	Sto	407	283	263	27.6	310	damans.
I		ACTUALS.		Admissione.	12,518	9,239	8,035	13,000	10,666	8,051	1,393	7,747	7,496	7,515	# Excluding Andamans
I	ях	.80		Death-cates.	1,00	\$6.	66.	7	16.	F	7.	59.	60.	F	# Ex
	OTHER RESPIRATORY DISEASES.	RATICS.		Admission-rates,	0.98	33.8	0.00	28.9	31,0	27.3	27.3	1.51	7.00	15.1	
	R RES	110.	1	Deaths,	101	55	ē	93	25	7.	63	20	8,5	60	
	отне	Acreats.		Admissions.	3,793	3,304	3,060	3,188	3,155	2,773	2,113	3,254	3,418	3,490	
				Years.	1	i		i	1	1	i	ı	£	i	
					1892	1898	1833	1900	1001	1903	1001	1904	1905	3000	

# Appendix to Section V.—Vital Statistics. STATEMENT NO. I.—Birth and Death Statistics.

Page   Province   Page   Province   Page   Province   Page   Province   Pro	134		B	ISTUS.		Nom	ER OF SEAT	188.	PER	LATION.	F PEPE	DEATH			VEST	DUS	ING PR	H-RATE EVIDES EARS.	s of
Bangal { 1905 1,973,301 30'55 35'91 128,412 1,792,657 4,823,259 40'01 35'43 35'33 91'36 59'53 7'41 22'07 3 21'59 12'59 3 30'50 11.5,152 1,710,091 1,823,243 35'03 35'13 35'03 74'13 45'41 7'91 22'07 3 21'59 3 30'13 35'03 51'33 35'03 51'33 45'41 7'91 22'07 3 21'59 3 30'13 35'03 51'33 35'03 51'33 45'41 7'91 22'07 3 21'59 3 30'13 35'03 51'33 45'41 7'91 22'07 3 21'59 3 30'13 35'03 51'34 45'41 7'91 22'07 3 21'59 3 30'13 35'03 51'34 45'41 7'91 22'07 3 21'59 3 30'13 35'03 51'34 45'41 7'91 22'07 3 21'59 3 30'13 35'03 51'34 45'41 7'91 22'07 3 21'34 45'41 1006 1,114,526 31'03 3	PROVINCE.			per 1,000	ratio per 1,000 opniation 603- previous five	onicipalities towns.	ricts	10	manicipalities d towns.	1000		monicipalities	stricts exc towns.	rallt.	Ü	In municipalities and towns.	In districts exclud-	T.	Number f deaths of
Bengal		Year	Tota	Rati	Mean of p irg	In m		Tota	I an	in di	Ten	In and			In d	In	lo d	Total	Num
Bengal							3	200	100		1			-		-			1
Eastern Benard and 1905 1,173,879 30'37 30'53 16,798 1,08,507 1,08,507 1,08,505 26'43 35'25 35'05 55'21 46'61 4'77 19'90 2 789 3 10 1,08,482 1,098,982 944,335 24'15 31'83 31'07 85'79 40'19 5'73 27'98 2 94',082 944,335 24'15 31'83 31'07 85'79 40'19 5'73 27'98 2 94',082 944,335 24'15 31'83 31'07 85'79 40'19 5'73 27'98 2 94',082 944,335 24'15 31'83 31'07 85'79 40'19 5'73 27'98 2 94',082 944,335 24'15 31'83 31'07 85'79 40'19 5'73 27'98 2 94',082 944,335 24'15 31'83 31'07 85'79 91'24 23'04 25'98 4 4'07 180,482 1,698,884 1,855,336 49'13 38'31 30'07 111'95 81'01 24'78 24'85 24'25 4 100'0 105'71 91'24 21'04 100'0 105'71 91'24 21'04 100'0 105'71 91'24 21'04 100'0 105'71 91'24 21'04 100'0 105'71 91'24 21'04 100'0 105'71 91'24 21'04 100'0 105'71 91'24 21'04 100'0 105'71 91'24 21'04 100'0 105'71 91'24 21'04 100'0 105'71 91'24 21'05'8 100'0 11'05'71 91'24 21'05'8 100'0 105'71 91'24 21'	Bengal §	1905	1,973,301	30"55	38 91	128,412	1,793,957	1,921,359	40.01	38.45	38.23	91'16	59'63	7'41	22'07	38 62	33 05	53'42	10
Bennat and   Assam   1906   1,114,320 37'38   39'53   15,353   918'981   944,335   24'15   31'83   31'07   85'79   49'19   5'73   27'24   23'04   23'28   44'07   1906   1,018,425   40'29   44'15   165,052   1,695,384   1,853,336   49'13   38'31   39'07   111'95   81'01   24'78   24'25   40'00   105'71   91'24   23'04   23'28   24'25   40'00   105'71   91'24   23'04   23'28   24'25   40'00   105'71   91'24   23'04   23'28   24'25   40'00   105'71   91'24   23'04   23'28   24'25   40'00   105'71   91'24   23'04   23'28   24'25   40'00   105'71   91'24   23'04   23'28   24'25   40'00   105'71   91'24   23'04   23'28   24'25   40'00   40'13   47'37   47'35   306'95   80'10   7'10   21'31   47'10   47'37   47'35   306'95   80'10   7'10   21'31   47'10   47'37   47'35   30'95   80'10   7'10   21'31   47'10   47'37   47'35   30'95   80'10   7'10   21'31   47'10   47'37   47'35   30'95   80'10   7'10   21'31   47'10   47'37   47'35   30'95   80'10   7'10   21'31   47'10   47'37   47'35   30'95   80'10   7'10   21'31   47'37   47'35   30'95   80'10   7'10   21'31   47'37   47'35   30'95   80'10   7'10   21'31   47'37   47'35   30'95   80'10   7'10   21'31   47'37   47'35   30'95   80'10   7'10   21'31   47'37   47'35   30'95   80'10   7'10   21'31   47'37   47'35   30'95   23'73   32'73	,	1905	1,585,715	37'32	39'59	113,152	1,710,031	1,823,243	35'03	35'15	35'08	74'13	48'41	7'97	27.59	38108	31'88	34'15	10
Assam.   1906   1,114,526   37'98   39'93   15,353   928'982   944,235   24'18   31'53   31'67   85'79   49'29   5'73   27'24   2 '74	Sastern Sienasi and	1905	1,173,879	39'37	39'53	16,798	1,028,507	1,045,305	16.41	35"25	35'05	55'21	46-61	4'77	19'90	25'05	31.04	31"50	10
Vacable Agra and Agra		1906	1,114,525	37"39	39'63	15,353	918"981	944,335	24'15	31.83	31'67	85'79	49'19	5'73	23"24	15.33	31'80	31'66	200
Agra and Couch.  Quals.  Punjab  { 1905		1905	1,967,009	41'24	44'07	180,482	1,017,8:8	2,098,300	53'64	45'26	44'00	10571	91"24	23'64	25'38	47'13	32'78	33'80	1007
Pusjab { 1908 893,260 44'4 40'5 99,131 856,057 936,108 40'13 47'37 47'55 306'36 80'10 7'10 21'31 4 106 878,006 43'7 41'6 90,182 652,714 742,006 44'73 25'08 36'94 89'23 49'87 9'15 22'05 4 10'50 8 10'10 10'	Agra and (	1905	1,018,425	40.53	44'15	165,052	1,698,184	1,853,336	49'15	38,31	39'07	111'95	81'01	2478	24'25	49'14	35"37	35'35	1047
Puspab { 1906	(	1905	803,050	44'4	40'5	121,00	855,057	935,108	49'13	47'37	47'55	305'35	80'10	7'10	21'31	47763	44'53	44'88	99
Frontier, Province, 1905 76,834 35'6 33'2 6,118 61,031 67,149 36'28 33'50 33'73 52'21 45'77 16'79 31'41 31'75 19'05 642,199 54'03 41'78 50,637 39'1,756 442,383 41'87 36'49 37'21 127'05 52'17 17'07 28'43 41'87 1906 614,616 51'72 45'83 61,507 435,106 516,613 30 01 42'71 43'47 220'59 65'01 19'04 30'09 41 185,944 660,179 785,123 29'8 20'3 21'4 92'2 30'6 5'6 15'4 3 15'4 1906 1,115,018 30'9 29'4 149,109 836,282 998,391 33'4 26'6 27'4 77'5 33'9 6'1 20'9 2 19'04 19'	Punjab (	1905	878,006	43'7	41'5	90,182	659,714	742,905	44'73	\$15.08	35'94	89'23	49'87	9'15	20'05	46.05	45'01	45'17	101
Frostlice   1906   76,834   35'6   35'3   6,118   61,031   67,149   36'28   33'30   33'73   52'31   45'77   16'79   31'41   21'70   16'79   16		1905	70,363	354	31'3	5,062	48,165	53,317	30-82	10,41	25'79	44"25	38,13	16.41	23'75	18'01	25'22	25'5	110
Varies and learn learners and learners are learners learn		1906	76,834	300	33.3		61,031	67,149	36.38	33.20	33'73	23,31	45'77	16-70	31'41	28-63	25,70		101
Varies and learn learners and learners are learners learn	Central Pro- (	1905	642,100	54'02	41'78	50.631	201,755	442,383	41'87	36'69	37'21	127'05	52'17	17.07	28'43	47"43	35'52	35'73	1091
Fresidency. \{ \begin{align*}{c ccccccccccccccccccccccccccccccccccc	vinces and {	1905				171075			50 01	43-71		210"59	62,01	19'04	30.00	41'71	30'08	31,33	107 8
Freeldency. { 1906 1,125,018 3019 29'4 142,109 856,282 998,391 35'4 26'6 27'4 77'5 33'9 6'1 20'9 2  Coorg { 1908 4,572 25'31 23'28 490 4,249 4,730 32'13 25'70 26'24 45'99 31'52 15'74 21'70 46' 1906 4,713 26'10 23'31 553 4,727 5,185 36'30 18'59 29'26 49'73 34'06 21'20 23'69 41  Bombay Presidency. { 1908 611,173 33'07 30'51 115,007 473,287 588,394 47'59 29'47 31'84 65 24 40'73 8'58 14'28 67  Presidency. { 1908 625,486 33'84 31'75 129,893 518,126 048,019 53'75 31'25 25'06 103'35 42'74 8'75 19'88 36'  Lower Burma { 1908 191,226 34'34 33'46 27,061 111,789 135,850 38'31 23 00 24'93 54'53 27'64 16'52 14'26 30'  Lower Burma { 1908 160,025 31'23 32'60 30,247 120,046 151,103 42'90 24'89 37'15 65'04 40'76 27'22 15'37 32'  Upper Burma { 1905 16,351* 34'91* 37'03* 10,843 54,698 65,541 36'56 20'87 22'46 62'55 30'36 24'08 15'41 33		1905	1,105,255	32'0	20'4	125.041	660,179	285,123	20'6	30,3	2174	03.3	3016	5'6	15'4	20'5	21"1	31.0	104
Coorg { 1905 4,713 26'10 23'31 558 4,727 5,285 36'59 26'59 19'26 49'73 34'06 21'20 23'69 41    Bombay	Fresidency, {	1905		180		100000	10.330	998,391	33'4	25'5	27'4	77'5	33'9	6.1	1	30,3	20'6	21'5	103
Coorg { 1905 4,713 26'10 23'31 558 4,727 5,285 36'59 26'59 19'26 49'73 34'06 21'20 23'69 41    Bombay		1005	4.570	20121	20.00	400	A 240	4.730	32713	25*70	25124	45,00	31"52	15'74	21'20	40'22	20.0	31,30	11979
Bombay Presidency. \$ 1906 625,486 33.84 31.75 129,893 518,126 048,019 53.76 31.25 35.06 103.55 42.74 8.75 19.88 36  Lower Burma \$ 1905 191,216 34.34 33.46 27,061 111,789 135,850 38.21 23.00 24.93 54.53 27.64 16.52 14.26 30  1906 180,025 31.33 32.60 30,247 120,946 151,103 42.59 24.89 27.15 €5.04 40.76 27.22 15.37 32  Upper Burma \$ 1905 10,351* 34.91* 37.03* 10,843 54.69\$ 63,541 36.56 20.87 22.46 62.55 30.36 24.08 15.41 33	oorg {		3 333	7,300		1000	55000						34'05		20133	41'97	25'42	29'57	110,3
Bombay Presidency. \$\begin{array}{c ccccccccccccccccccccccccccccccccccc		1005	611.151	99'00	40044	*** ***	471,157	583.114	17'50	20'47	21-74	61.24	40'73	State	14'99	67*10	43"25	45'31	
Lower Burma { 1906 180,025 31'23 32'60 30,247 120,046 151,193 42'59 24'89 27'15 €5'04 40'76 17'22 15'37 32  Upper Burma { 1905 10,351* 34'91* 37'03* 10,843 54,698 65,541 36'56 20'87 22'46 62'55 30'36 24'05 15'41 33		1920		10000	100000						1000	0.00	1000	10000	0000	55'15	35'03	38'66	103.3
Lower Burma { 1906 180,025 51'23 32'60 30,247 120,946 151,193 42'59 24'89 27'15 €5'04 40'76 17'22 15'37 32  Upper Burma { 1905 10,351* 34'91* 37'03* 10,843 54,698 65,541 36'56 20'87 22'46 62'55 30'36 24'05 15'41 33						****	******	110 000	.See.			****	***						
Upper Burma 1905 10,351* 34'91* 27'03* 10,843 54,698 65,541 36'56 20'87 28'46 63'58 30'36 24'08 18'41 33	ower Burma	333	1000	20.00		1000					222	1000				33.14	31,23	33'17	13
Jpper Burma {				2000			1	1000										1	
-1 14 1 AVIAGO 1 30 17   30 04   13/2/9   -11/2/9   3-11/2   3-12/2   3-1	pper Burma	9.3					3.5	10000			200		1999	200	23.2	33'35	18'20	19'63	30
				44.7						1									
tjmer-	jmer- {				100					*	200		-	9.0				31"31	105"

\* Statistics for 13 towns, † Statistics for 13 towns.

STATEMENT No. II .- Total number of deaths by months.

Province,	ıry.	dary.	14					st	September.	ber.	ovember.	December.	TOTAL.	RATIO 1,000 POPULA	OP
	January.	February.	March.	April.	May.	June.	July.	August.	Septe	October.	Nove	Decen		1906.	1905
Bengal	167.506	127,983	152,429	172,096	151,196	120,160	138,895	137,708	143,037	175.430	166,190	170,613	1,823,243	36.08	38 53
Eastern Bengal and Assam.	115,352	71,073	70,820	81,140	77,778	60,309	65,113	50,560	60.195	84,240	90,035	117,720	944-335	31.67	35'00
U. P. of Agra and Oudh.	131,895	111,559	120,535	148,729	175,852	159,271	115.274	134,525	180,391	207,531	201,365	176,409	1,863,336	39'07	44'00
Panjab	53,767	41,825	47,693	6,262	87,576	51,094	42,415	43,191	51,502	76.548	93,501	84.527	742,906	36-94	47'55
N. W. F. Pro-	4,992	3,908	4,437	3,756	4,357	4.795	3-941	3.784	5,187	6,181	10,264	11,553	67,149	33'73	26.79
C. P. and Bernr	32,895	33-349	33/035	36,533	44,506	43,522	32,569	61,14	65,724	49,170	44,289	39,877	516,613	43'47	37'21
Madras Presi- dency.	68.582	55,762	58,289	6,226	66,261	77,626	107,120	126,348	108,603	95,166	85,169	93,239	998,391	27'4	21'4
Coorg	448	315	425	491	432	509	607	451	429	411	337	430	5,285	29'26	26'24
Bombay Presidency.	46,932	42,597	52,614	64,291	61,213	46,097	54,309	56,388	53,518	54,494	58,109	57.457	648,019	35.00	31.84
E SLower	11,597	10,406	10,888	11,395	10,846	11,747	16,418	16,564	14,078	12,854	11.790	12,610	151,193	27.12	24'93
₩ Upper	6,286	5.328	5,966	5,297	4,360	4,647	7,544	8,338	6,532	6,500	7,004	8,691	76,493	26'22	22'40
Ajmer-Mer- wara.	1,015	939	874	905	1,373	1,053	913	1,605	1,526	1,383	1,827	1,944	15,367	32,55	34"25
Total	641,267	505,044	558,004	650,121	685,750	580,840	585,118	640,606	690,722	769,908	769,880	775,070	7,852,330	34'73	35796

		RATIO OF	BIRTHS PER POPULATION.		Number	Excess of	Excess of
Paovincs.	Population under registration.	Maximum for any one district,	Minimum for any one district,	Mean for the province,	of males born to every 100 females born.	births over deaths per 1000 of population.	deaths over births per 1,000 of population.
Bengal	50,528,044	55'06	17:79	37:32	105*	1'24	
Eastern Bengal and Assam	29,812,735	45'94	32'55	37.38	107	571	***
United Provinces of Agra and Oudh	47,691,782		27'74	40'22	108.72	1'15	***
Punjab	20,108,690	67'3	20'0	43°7 38°6	109.7	6.8	400
North-West Frontier Province	1,990,744	46'I	3612		118.8	4'90	***
Central Provinces and Berar	11,884,340	62.78	44'91	51.72	104'52	8:25	***
Madras Presidency	36,484,486	37.6	20'4	30.0	104'4	3.20	***
Coorg	180,607	39'97	20'37	26.10	97.28	***	3.17
Bombay Presidency	18,481,362	52'47	16.63	33.84	107.00	***	1.53
Lower	5,568,479	43'45	17.10	32'33	107	5.00	***
Burma	The State of	1	-00				.6.
(Uppert	303,014	39.22	28.58	34'17	108	***	16.
Ajmer-Merwara	476,912	33-65	27.50	28'91	113.65	***	3.31

Includes 16,010 persons enumerated at the Ajodhya Fair.
 † Statistics for 13 towns.

#### STATEMENT NO. IV .- Deaths.

		132	Average	RATIO OF	POPULATION,		DEATH BAT	E BY SEX.
Раотиса.	Population under registration.	Area in square miles.	population per square miles,	Maximum for any one district.	Minimum for any one district.	Mean for the year,	Male.	Female,
Bengal	50,528,044	110,442	457	47'51	23'55	36'08	37'91	34'28
Eastern Bengal and Assam	29,812,735	71,555	416	48.88	23'22	31.67	32'59	30.71
United Provinces of Agra	47,691,782*		445	80.75	26 63	39.07	38.72	39'44
Punjab North-West Frontier Pro-	20,108,690	97,209	207	49.7	24'2	36.9	34'7	39'5
vince.	1,000,744	13,688	149	44'2	31.0	33'7	31.7	360
Central Provinces and Berar	11,884,340	97,841	121	64.38	30.00	43'47	55'58	41'41
Madras Presidency	36,484,486	129,241	282	46'9	22'0	27.4	28.3	26.5
Coorg	180,007	1,583	114	33'36	23.69	29'26	28-68	20'00
Bombay Presidency	18,481,362	122,984	150	68-98	21'39	35'06	35'26	34.85
(Lower	5,568,479	76,992	72	47'57	17:43	27'15	28.63	25'45
Burma			1		100000			143
(Upper	2,917,501	29,411	99	43'59	18-35	26.22	27.68	24'91
Aimer-Merwara	476,912	2,711	176	33'74	27'11	32.22	31.38	33.10

<sup>\*</sup> Includes 16,010 persons enumerated at the Ajodhya Fair.

# STATEMENT No. V .- Deaths in Towns and Rural Circles compared.

Bushes		CIRCLES.			Population.			OF POPUL	
Province.	Rural.	Town.	Total.	Rural.	Town.	Total.	R ural.	Town.	Total
Bengal	400	129	529	47,298,478	3,229,566	50,528,044	36'15	35'03	36.08
Eastern Bengal and Assam.	242	54	296	29,177,017	635,718	29,812,735	31.83	24.12	31 67
United Provinces of Agra and Oudh.	857	447	1,304	44,333,434	3,358,348	47,691,782*	38.31	49'15	3907
Punjab	405	144	549	18,092,723	2,015,967	20,108,690	36'08	44'73	36194
North-West Frontier Province.	64	11	75	1,822,091	168,653	1,990,744	33'50	36.58	33.73
Central Provinces and Berar.	245	104	349	10,654,609	1,229,731	11,884,340	42.71	50'01	43'47
Madras Presidency	185	232	417	32,234,437	4,250,049	36,484.486	26.6	33'4	27.4
Coorg	5		10	165,358	15,249	180,607	28.59	36.20	29'26
Bombay Presidency		55	280	16,065,004	2,416,358	18,481,362	32.52	53.76	35'06
Clower	252	39	291	4,858,273	710,206	5,568.479	24.89	42.29	27.12
Burma {Upper	132	13	145	2,614,487	303,014	2,917.501	23'41	50'42	20.23
Ajmer-Merwara	17	6	23	347,280	129,632	476,912	27'75	44'21	32,55

<sup>\*</sup> Includes 16,010 persons enumerated at the Ajodhya Fair.

	100		2010		To the last	The same		RATIO	PER I	,000 02	POPU	LATION						100		
Province,	Under o	ne year.	1-5 y	cars.	5-10 y	ears.	10-15	years,	15-20	years.	10-30	years.	30-40	years.	40-50	years.	50-60	years.	an	years and ards,
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female,	Male.	Female,	Male.	Female.	Male,	Female.	Male,	Female.	Male.	Female.	Male.	Female.
Bengale Eastern Bengal and Assam.	298,30	256°77 206°85		51'25	21.62		15'79	13.86	18'41	17'50	21,22		25'04		30'96	24°88 24°48	46'45 41'03		77'19	74°89 62'19
United Provinces of Agra and Oudh,	333'57	320'45	78'16	78'40	19'51	18'10	12'04	12'47	14'57	18.76	18-13	20'46	20'71	20'91	28.08		45'38	41'47	83'44	70'98
Punjab North-West Fron- tier Province. Central Provinces	310'30 231'21 Not a	318'62 216'20 vailable		76'04 72'82		17'20	11'72 8'81	16'87	738	17'38	14'07	15'32	17,00	19'44	20,51	22,84	31'38	36.08	74'89 69'77	50°45 75°75
and Berar. Madras Presidency Coorg Bombay Presiden-	211°1 207'82 352'91	177'1 197'30 319'39	38°8 46°41 63°53	36.7 40.70 62.10	13'0 9'34 15'44	12'3 10'00 15'54	9'3 8'67 11'95	9°0 7°80 13°26	12'8 11'50 17'73	16'4 12'40 19'97	14'5 17'31 19'72	14'8 22'03 21'37	15'5 24'32 22'54	14°1 27°20 21°51	21'6 39'71 29'16	17'0 35'88 23'14	34'4 51'61 44'63	28'8 43'37 30'14	81'7 86'53 94'50	71'67
cy. Burma { Lower Upper Ajmer-Merwara	342°05 273°36 713°32	192'79	34'25 28'84 135'82	26'57	12'26	15'06 11'48 10'00	11'13 9'19 5'20	10'05 8'30 7'20	15'37 13'18 7'51	12'57	13'44	13'83 13'52 14'73	18'49 16'21 14'57	17'71 16'67 15'39	22'32 19'84 21'20	19'87 16'09 16'6\$	28°93 29°38 28°93	37.88 31.08 33.08	55°49 71°93 86°24	65'9

<sup>•</sup> Excluding Sambalpur district for which the population figures are not available.

#### STATEMENT No. VII.—Deaths according to cause.

				D	BATHS	PER 1000 OF	POPULATIO	N IN 190	6.			5
Province.		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoca.	Respiratory diseases.	Injuries.	All other causes.	All causes.	Ratio of deaths in 1905.	Ratio of deaths in 1904.
Bengal		 381	*43	1.17	22'41	. '96	*25	*52	6.48	36.08	38.23	31-95
Eastern Bengal and Assam		 3 63	*23	'002	21.65	-90	*07	*39	4'77	31.67	35'05	25 85*
United Provinces of Agra as	nd Oudh	 3'14	.23	1.46	27.62	'55	'42	'54	5'05	39'07	44'00	34'70
Punjab		 0.31	0.66	4.26	20-28	0'87	2.84	0.33	718	36'94	47'55	49.00
North-West Frontier Provin	noe	 	0.57	0'02	26-14	0.50	orág	0.37	5-65	33'73	26.79	28-56
Central Provinces and Beran	f	 3.26	*83	1.23	18-95	3.28	1'40	.23	13:39	43'47	37'21	32'06
Madras Presidency		 3.9	0.8	0 0 2	8:4	1.7	0.7	0.3	11.6	27.4	21'4	22'50
Coorg		 .05	1.30		23.62	•78	*24	13	3'14	29.26	26'24	26-62
Bombay Presidency		 2'50	*22	2'79	14.85	3'34	3.58	-37	7:71	35'06	31.84	41'39
Lower		 .09	1'42	*94	9'77	1.62	72	.30	11.36	27'15	24'93	22-36
Burma {Upper		 -80	*22	1'17	7:34	.68	-87	'44	14.69	26:22	22'46	18-69
Ajmer-Merwara		 •60	.57	*14	25.77	1.18	-67	*34	295	33:22	34'25	27:57

<sup>6</sup> Excluding statistics for Eastern Bengal.

#### STATEMENT No. VIII .- Ratio of deaths from all causes according to months.

Province.			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Bengal			3.31	2'53	3.01	3'40	2'99	2.37	2.74	2.72	2.83	3.47	3.58	3 37	36'08
Eastern Bengal and Assam		***	3 86	2-38	2.37	2.72	2.60	2.03	3.18	1.69	2'01	2-82	3'02	3'94	31.67
United Provinces of Agra and O	udh		2.76	2.34	2.23	3.13	3.69	3'34	2'42	282	378	4'35	4'22	3.70	39'07
Penjab			2.67	2003	2.37	3'44	4'36	2.24	2.11	2.12	2.56	3 81	4.65	4*20	36'94
North-West Frontier Province			2.21	1.06	2.23	1.89	2.10	2'41	1.08	1.00	261	3.11	516	5.80	3373
Central Provinces and Berar			2.77	2.81	2.78	3'07	374	3'66	2.74	5'14	5'53	4'14	3'73	3:36	43'47
Madras Presidency			1.0	1.2	1.6	1'5	1.8	2.1	2.9	3'5	30	2.6	2'4	2.6	27'4
Coorg	***		2'48	1.74	2:35	2'72	2.39	2.82	3.36	2.20	238	2.58	1.87	2.38	29:26
Bombay Presidency	•••		2.54	2'30	2.85	3'48	3:31	2'49	2'94	3'05	2.00	2.95	314	3.11	35'06
Burma Lower			2.08	1*87	1.06	2.02	1'95	2.11	2.95	2'97	2.23	2:31	212	2 26	27-15
Surma {Upper	***		2.12	1.83	2.04	1.82	1'49	1.20	2.20	2.86	2'24	2.23	240	2798	26:22
Ajmer-Merwara	***		2.13	1.97	1.83	1'90	2.88	2.53	1.01	3"37	3'20	2190	3'83	4'08	32'22

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18,3044   1,437   2,475   2,415   2,	155,049   11,437   3,459   34     4,645   3,126   4,645	15,049	× ×	VEAR.					Bengal.	Assam.	United Provinces of Agra and Oudh.	Punjab.	NW. Frontier Province,	Central Prov nces	Beinr.	Madras.	Coorg.	Bombay.	Lower Burma,	Upper Burma.†	Ajmer- Merwara.	Rajputane.	Central India.	Hydera- bad (Can- to-ment stations).	Mysore.
4.0.4.0         6.5.19	1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0	1.0   1.0	1.	1	1	1	1	1	155,305	11,377	31,770	39	-	3,418	842	357,430	*	57,238	7,2;6	1	=	3	916	7.414	1,902
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Correction         Correct	115,475	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,				100	-		182,352	\$1,055	89,372	33	1	11,932	3.573	23,604	31	1001	7,177	1	189	1,337	1,562	150	893
1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,	1.1.1.4.11         2.5.1.45         2.5.4.45          1.5.4.45	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,			3				\$69436	14.903	18,160	051	1	16,235	108,72	36,254	:	37,954	3,185	1	87	191	1,740	1,947	124
1.1. 1.1. 1.1. 1.1. 1.1. 1.1. 1.1. 1.1	113,154         75,153         60,457         1,054         1,154	11,15,16   1,1							134,421	22,176	30,143	614	i	140	87	75,476	1	13,504	5,515	:	217	1,297	1,015	2,470	330
1.16,183         70,418         34,65         11         16,79         996         11,411         16,79         11,412         16,79         11,413	118,188         76,41         200,528         113         11,417         976         14,417         116,714         4,628         5,534         11,417         11,417         11,419         11,411	11,000   1				-		1.	173,767	1,753	63,457	1,035	1	21,868	3,683	58,109	1	37,287	7,685	-	100	1,615	4,524	1,187	2,677
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	11.031   9,653   18,744   14,038     19,1   20,653   28,677   2,9550   18,650     19,651   2,9550   19,652   1	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,							118,368	30,158	34.575	11	1	16/19	926	12,417	1	167	4,027		765	173	290	664	10
1. 1.301         96/63         18/14/28 <t< td=""><td>11.1391         96634         18,744         14,938          91,943         7,040         92,547         2,549          91,943         7,040         92,943         15,949         93,948         10,049         7,040         92,943         13,149         93,149         11,149</td><td>  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,</td><td></td><td></td><td></td><td></td><td></td><td></td><td>172,578</td><td>7,041</td><td>200,628</td><td>8,504</td><td>i</td><td>12,576</td><td>14,396</td><td>28,359</td><td></td><td>25,711</td><td>5,649</td><td>:</td><td>\$354</td><td>219'6</td><td>8,568</td><td>2,831</td><td>833</td></t<>	11.1391         96634         18,744         14,938          91,943         7,040         92,547         2,549          91,943         7,040         92,943         15,949         93,948         10,049         7,040         92,943         13,149         93,149         11,149	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,							172,578	7,041	200,628	8,504	i	12,576	14,396	28,359		25,711	5,649	:	\$354	219'6	8,568	2,831	833
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	1.1.1.03         18,288         48,494         28,588         10,935         76,010         9         33,431         33,40         10,903         11,316         89,198         35,400         10,936         10,936         35,400         10,936         10,936         10,900	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,				1003	-		111,391	66916	18,704	14,938	:	110	305	58,677	*	36,50 .	15,582	:	13	33	161	2,057	1,015
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	1.55.85         15,585         15,585         15,585         15,585         35,388         5         3,135         10,107          4,170         847         35,388         5         3,135         10,107          21,131         7,038         45,733         7         18,736         24,400         6,240          51,132         2,033          31,142         7,043         2,033          4,100         6,240          31,143          31,143         2,043          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,143          31,144          31,144          31,144          31,144          31,144          31,144          31,144          31,144	1. 145,885         15,856         80,938         3,401          4179         84,73         8,438         1,479         4,409          1,478         9,473         1,479          1,479<							171,103	18,288	48,404	2,838	1	52,588	10,925	76,020	6	32,431	3,240	1	5.	6,023	3,344	1,115	1,590
		1,000,000   1,000,000   1,000,000   1,000,000   1,00				1000			145,585	15,396	80,195	3,401		4,707	847	35,288	2	3,759	920'1	1	408	2,746	3,132	:	1,326
<td>         195,958         31,533         194,836         75,939          557         1,188         33,439         9         18,833         2,193          31,44          35,97         1,188         33,439         9         18,833         2,193          31,44          35,97         1,188         33,439         9         18,833          31,44          31,43          31,44          31,44        <td>  156,016   21,849   12,154   659     57,019   1,108   21,299   9   15,853     2,130    </td><td></td><td></td><td></td><td>1</td><td></td><td></td><td>229,575</td><td>23,882</td><td>169,013</td><td>10,107</td><td>1</td><td>21,312</td><td>7,058</td><td>98,773</td><td>1</td><td>17,830</td><td>2,400</td><td></td><td>532</td><td>3,946</td><td>13,474</td><td>3,102</td><td>1,304</td></td>	195,958         31,533         194,836         75,939          557         1,188         33,439         9         18,833         2,193          31,44          35,97         1,188         33,439         9         18,833         2,193          31,44          35,97         1,188         33,439         9         18,833          31,44          31,43          31,44          31,44 <td>  156,016   21,849   12,154   659     57,019   1,108   21,299   9   15,853     2,130    </td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td>229,575</td> <td>23,882</td> <td>169,013</td> <td>10,107</td> <td>1</td> <td>21,312</td> <td>7,058</td> <td>98,773</td> <td>1</td> <td>17,830</td> <td>2,400</td> <td></td> <td>532</td> <td>3,946</td> <td>13,474</td> <td>3,102</td> <td>1,304</td>	156,016   21,849   12,154   659     57,019   1,108   21,299   9   15,853     2,130				1			229,575	23,882	169,013	10,107	1	21,312	7,058	98,773	1	17,830	2,400		532	3,946	13,474	3,102	1,304
	1.1.6.4.0.1         11.8.4.9.1         11.8.4.9.1         11.8.4.9.1         11.8.8.1         11.8.8.1         11.8.9.9         11.8.8.1         11.8.9.9         11.8.9.9         11.8.9.9         11.8.9.9         11.8.9.9         11.8.9.9         11.9.9.9 <td></td> <td></td> <td></td> <td></td> <td>1000</td> <td></td> <td></td> <td>250,198</td> <td>21,553</td> <td>104,586</td> <td>75.959</td> <td>1</td> <td>39,972</td> <td>2,030</td> <td>79,033</td> <td>58</td> <td>42,900</td> <td>6,208</td> <td></td> <td>2,152</td> <td>092'96</td> <td>8,384</td> <td>23</td> <td>5,497</td>					1000			250,198	21,553	104,586	75.959	1	39,972	2,030	79,033	58	42,900	6,208		2,152	092'96	8,384	23	5,497
3.5,54         13,673         13,673         113,673         113,673         113,673         113,673         113,673         113,673         113,673         113,673         113,673         113,723         1	17,7687         13,507         113,607         113,607         113,607         113,606         113,607         24,126         11,509         24,126         11,509         24,126         11,509         24,126         11,509         24,126         11,509         24,126         11,509         24,126         11,509         24,126         11,509         24,126         11,509         24,126         11,509         24,126         11,509         24,126         11,509         11,609         1	1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,			1				126,916	21,849	12,154	629	i	557	1,188	33,309	0	18,833	2,593	:	13	314	127	165	089
	15,684         18,634         18,634         51,564         56,944         51,754         40         55,50          40,147         51,466          55,744         40         55,149          40,147         10,123         11,744         40         55,149          10,449          51,131         10,123         14,445         106         57,149          10,444         8         4,166         2,093          10,444         8         4,166         2,093          10,444         8         4,166         2,093          10,444         8         4,166         2,093          10,444         8         4,166         2,093          10,49         11,496          10,133         14,166          10,134         10,134         10,134         10,144         8         4,166         2,093          10,49         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406         11,406	15,087   15,087   18,052   15,042   25,05   1,042   25,05   1,042   25,05   1,042   25,15				1			236,150	13,497	178,079	113	1	7,043	. 3.452	42,:89	00	33,588	7,428		1	**	5,710	1,802	318
34,524         17,042         69,147         5,146          55,441         40         55,444         20,59          19         34,95          15,146         13,144         10,122         14,3445         104         5,144         10         55,144         10         45,146         55,144         10         45,146         15,149         35,144         10         45,146         10         10         10         10         10         10         10		1,000							177,087	18,462	51,362	510	1	15,506	616,11	21,172	:	8,890	5,150	1	269	1,049	6,043	467	9,334
									226,824	17,042	69,147	5,146	1	52.9%	12,364	47,847	40	15,104	2,959	1	13	3,757	15,766	525	2,100
							7.		196,247	33,240	44,208	622	1	57,131	10,122	143,445	100	57,109	8,533	-	19	1,496	13,202	1,039	4,248
***.***         ***.***         ***.***         ***.***         ***.**         ***								9	65,030	11,149	2,508	325	1	7		65.444	80	4,368	2,972	1	-	9		0	1,193
									107,678	8,380	8,143	1,816	1	195	541	29,482	i	8,579	4,042	2,050	-	408	•		122
						1	*		345,878	192,761	84,960	28,160	4	63,114	18,375	60,'62		163,889	3,440	4	4,842	612,82	20,450	3,813	179
						1			110,753	7,468	53,995	180	117	67	17	81,310	825	13,600	3,552	**	20	0	72	-	11,351
									120,021	12,658	15,160	371	ì	60	16	692%2 -		3,230	1,844	57	32	1,519	113		218
					*		*		203,405	8,360	47,159	14,688	1,354	437	1	27,393	-	1,825	5,346	2,887	1	236	1,110	1	86
									137,701	5,5,5	6,617	2:6	-	2,967	1	23,109	,	13,156	2,472	508	i	-	150	:	471
						200			146,339	142,31200		7,197	300	1,217	1	16,888		5,376	3,511	1,836	1	49	27	3	919
	and the same of th	Excluding Calcutta from 1877 to 1892. Statis ics from 1872 to 1888 not available.							965'261	108,278	149/549	4,232	1	38,768	-	142,811	10	611'97	5.529	2,343	284	4,714	10,147	1,001	7,223

#### Appendix A to Section VI .- Chief Diseases-contd.

#### STATEMENT II .- Deaths from Cholera in British Provinces, by months, during the year 1906.

			1	9 3	-						- 19	9			RATIO 1,000 POPUL	OF
Province.		Jacuary.	February.	March.	April.	May.	June.	July.	August,	September,	October.	November.	December,	Total.	1906.	1905
Bengal	***	10,263	9,537	13,795	23,886	23,623	17,108	17,288	15,022	13,505	18,994	14,344	15,231	192,596	3.81	3.03
Eastern Bengal Assam.	and	19,272	9,038	9, 184	14,441	13,489	7,137	4,866	2,528	1,427	2,123	8,047	16,487	108,278	3.63	4.77
United Provinces of and Oudh.	Agra	826	2,769	2,019	18,422	31,364	24,965	7,309	9,073	18,493	20,055	10,657	3,397	149,549	3'14	2'55
Punjab	***	2	***	,	5	35	79	821	1,537	1,225	507	17	3	4,232	0.31	.11
North-West F r o n Province.	tier			-							-	***				*15
Central Provinces Berar.	and	,	325	640	1,876	3,827	4,954	3,982	15,913	7,337	861	49	3	38,768	3'26	.10
Madras Presidency	•••	2,774	1,247	835	1,015	3,133	14.531	29,968	36,496	10,477	12,954	8,690	10,690	142,811	3.0	.2
Coorg	***	***					•••						9	10	.05	
Bombay Presidency		***	131	2,084	11,047	10,862	6,447	8,428	4,393	1,374	596	508	249	45,119	2'50	125
Burma { Loner		220	341	227	508	407	585	1,079	860	465	196	114	527	5,529	.00	165
Upper	***	84		11	11	7	143	574	636	226	246	229	175	2,343	*80	-6:
Ajmer-Merwara					***	93	129	24	38					284	-60	
Total	***	33,442	23,389	29,007	1,211	87,040	76,078	73,279	86,496	64,520	56,532	42,655	46,771	690,519	3.02	1'96

#### STATEMENT III .- Details of the distribution and occurrence of Cholera during the year 1906.

Province.	Mortality in 1906.	Mean mortality of previous 5 years,	Urban mortality.	Raral mortality.	Percentage of will ages attacked.	Maximum mortality in any one district excluding towns,	Maximum mertality in any one town,	Month of maximum mortality
Bengal	3.81	3,33	3,01	3'86	15'69	9'47	14'39	April,
Eastern Bengal and Assam	2.63	3,30	285	3.64	14'72	21,22	45'60	January.
United Provinces of Agra and Oudh,	3'14	1'07	1'59	3,52	13127	14'76	19'16	May.
Punjab	6'21	6'18	6'34	0,30	1.86	1'42	7.89	August.
NW. Frontier Province		0,18						1 1 1 3
Central Provinces and Berar	3'26	0'08	411	2,16	10564	13'64	18'69	August:
Madras Presidency	2.0	1'0	4'3	2,5	25'08	9'0	50'2	August
Coorg	*06	106		*05	0.80	'21		December.
Bombay Presidency	2*50	- '40	2'07	a'56	12'16	776	16'93 .	April.
CLower	'99	-61	1'77	*88	4'49	6.56	20.48	July.
Burma (Upper	.80	36	3,03	-66	3'76	1'82	10'17	August.
Ajmee-Merwara	*60	.04	.76	'54	2'71	6.12	1'95	June.

#### Appendix B to Section VI .- Chief Diseases-contd.

#### TABLE I .- Small-pox mortality.

	-	pue	2		Frontier	nces				ncy.	,		leda.
		Bengal	rince	- 14	it Fro	Provincer rar,	orma.	4	Presidency.	Fresidency	Merwara.		o la
PROTINCES, DISTRICTS, TOWNS.	-	N. H.	04.4	6	Province.	2	20	Burma			e-Me	1000	Iratio
	Bengal	Assam,	Ualted Provinces,	Pusjab	Prost	Central and Be	Lower	Upper	Madras	Bembay	Ajmere-	Coarg	Registration
Mortality by Provinces :-			!	9	1						- 150		
Deaths by months -	1,554	430	724	1,255	100	1,055	581		3,187	583	10	28	9,500
February	2,238	6:5	905	1,134	107	1,314	970	37	3,168	694	19	. 20	11,134
March	3,565	819	1,358	1,139	113	1,477	1,575	27	3,535	811	-41	35	13,946
April	3,572	1,059	1,759	1,180	97	1,574	1,698	120	3,015	700	ds	31	14,910
May	3,185	913	2,554	3,015	03	1,495	1,088	100	3,657	377	53	48	14,550
Jane	2,244	Spr	2,155	1,849	99	1,228	705	80	2,240	971	. 23	23	17,870
July	1,915	500	1,470	1,390	101	745	532	73	2,358	171	- 21	15	9,31 1
August	919	349	708	787	101	206	366	27	3,100	100	- 13	- 9	5,806
September	648	391	188	310	33	102	113	10	1,935	51	. 5	7	3,488
October	818	204	255	624	83	113	105	24	1,711	57 98	3		4, 125
November	1,480	531	705	1,050	140	180	76	36	2,030	144	74	6	6,400
December													
Total	21,205	6,971	13,303	13,139	1,137	9,859	7,003	637	99,840	4,063	971	224	109,583
the same of		1	1								Link I		
-Annual death ratios	'43	'93	*38	0.00	0'57	0.83	141	'21	0.8	*22	*57	1,30	0'48
Fatio per 1,000 of population,						1						1000	
Ratio per 1,000 of population,	*24	.12	*07	0,53	0.30	0.70	. 1,01	*18	0.2	191	*58	.43	.31
A DESCRIPTION NO.	-	-								-			-
Difference	4 129	+ '68	+ '21	+ 0'43	+ 0'28	+ 0.13	+ 0'41	+ .04	+ 0.3	- 70	701	+ '52	+ '17
an ratio per 1,000 during 1901-1905.	*49	,39	116	0'48	0.69	0,39	*44	'24	0.2	.34	'17	'73	6*35
La Carrie Carrier													
Difference	105	- '05	+ '13	+ '18	-'12	+'44	+ '08	- '02	+ '3	'12	+ '40	+ '57	+ '10
Difference	- 0			-							150		THE STATE OF
			1000										
-District mortality excluding						3 - 15		-					
Number of districts affected	31	32	48	13	4	23	17	11	32	24	15	5	15
Highest district ratio	5'03	2'57	3'85	1'44	0.00	379	3,01	*68	37	'73	4"25	288	5'0
ame of that district	Puri	Kamrup	Jhanel		Peshawar	Damoh	Myaung-	Pakokku	Bellary	Kanara	Pleangan	Nanjaraj-	Part.
	1000	1000	0,1	area		0.03	. mya.,	*004	0,1	*03	'09	patna.	*00
west district ratio	'003 Singh-	Sibeagar	Garbwal	Mianwall	Harara Harara	Burhan-	Tavoy		100000	Ahmedoa-	1450	Padicalk-	Singh-
me of that district	bhum.	Silvenga.	1000		110.00	pur.			tam.	gar.	was.	nad.	bhum.
amber of districts without mortality	None	None	None	1	1	2	1	None	None	None	2	None	
strict death-eate per 1,000 of popu-	*37	*23	195	0'57	0'45	0.82	1,53	.33	0.3	*20	-166	1.34	0.4
lation.										100	1 30	1000	-
	-	-	-		7.00	1000000					-		
Town mortality :		142		11 12	1774	11500	13.12	100	1000	1000	10000	and the same of	
Number of towns affected	94	30	71	115	6	63	31	5	138	38	4	5	60
Highest town ratio	3'43	33.00	2"77	13-01	4'05	6.63	18'94	168	13.7	3,00	5'33	2"25	33 0
Name of that town	Howrah	Barpeta	Kench	Pindi Bhattian,	Peshawar	Kalmesh- war.	Wakema	Mylogyan	T. C. Adiram-	Karachi	Pisargan	Kodlipet	Barpeti
				1		1	1		patnam.	300			
west town ratio	*01	.04	.03	6'08	0'07	oot	109	.01	000	.03	.04	115	iero
ame of that town	Darbhan- ga.	gaos.	Badaun	Delhi	Dera Ismail	Juppel-	Allanmyo	Mandalay	M, T. C. Viziana- gram	bad.	Nasirabad	Diercara	Jubbul-
amber of towns without mortality,		35	35	99	Khao,	36	7	8	94	35	,	None	30
own death-rate per 1,000 of popula-	1'37	79	. 24	1'43	1'85	0'70	2'68	*19	10	*34	.33	*85	0.8
fice.	1 21	1		1		1	1000	100			- 10	to the last	
Contacting of the Contacting		-	-	-	1								
Children under a year	3,798	805	4,709	3,241	243	4,110	093	25	11,131	1,041	103	-	1947
Children 1-10 years		1 150	7,135	7,018	1	3,450	1 38	190	9333	1,500	1000	-	45,30
Percentage of children in total small-	1	1/2/200	1000	- 8644	1	1 1000	7 (3.0)	34'85	73'54	64.07	91"51		68'3
pos mortality.		A STATE OF THE PARTY OF THE PAR	The second second	1	1	1		B. C. Contract	100000	1			

## Appendix B to Section VI .- Chief Diseases-contd.

#### TABLE II .- Fever mortality.

	-	-		-					approximately and					Sta was	
FREYINGSS, DIST			Bengal.	Easters Pengal and Assam.	United Provinces,	Punjah,	North-West frontier Province.	Certral Provinces and Berar,	Lower Burma.	Upper Burna,	Macras Presidency.	Bombay Presidency.	Ajmer-Merwara.	Costg.	Registration India.
		-	-	-	-	-							-	-	-
			11						151	1	1 10 11	-	1		100
1Mortality by Provi	nces : -								1				1		15
A Deaths by mooths	-			100		1		1					1	170000	1000
						30,800	3,765	15,006	4,550	1,755	33,131		-	1	
January	-	***	110,693	79,686		10000	I FILE	1 3	10000	1000	1 333	24,118	707	359	383,531
February	-	***	75,935	47,001	80,100	22,317	3,830	14,205	3,687	1,407	18,176	30,418	731	350	257,359
March	***	***	82,550	45,578		32,314	3,147	12,957	3,530	1,311	19.313	31,754	100000	310	204,838
April	***	-	93,703	52,076	89,064	23,859	3,513	15,300	3,549	1,346	10,163	92,388	651	400	324,237
May	***	***	91,381	50,010	109,752	34,935	3,934	30,503	1000000	1,131	33,457	31,975	918	313	359,953
Jone			72,876	41,031	104,684	39,030	3,513	20,233	4,052	1,071	31,850	17,036	710	410	315,556
July	-	-	83,054	47,375	31,387	23,708	3,618	13,317	5,993	1,816	95,047	18,668	693	517	305.105
Avgust .m		***	85,050	35,750	94,089	23,351	3,511	19,674	5,853	3,001	33,953	20,335	2,244	. 375	324,387
September	***	***	91,181	45,725	135,918	30,521	3,872	25,904	4,933	1,860	31,777	19,708	1,358	350	385,307
October		***	115,425	64,100	154,614	50,742	5,055	23,705	4,513	1.919	39,453	23,915	1,170	333	475,134
November			114,957	63,099	158,734	64,315	8,010	23,313	4,502	3,323	38,448	32,227	1,010	384	503,040
December	***	***	113.777	79,240	135,852	52,075	10,041	\$0,054	5,904	3,350	31,063	38,000	1	350	416,139
	-	-		1				1	1	-		1	1	-	410,137
				10000		12								1	- Comment
						2.9									
	Total	***	1,133,579	6,5,733	1,317,491	407,818	\$3,039	225,141	54,422	31,433	304,936	874,653	13,393	4,100	4,452,842
					1000	100		-			100				Service .
			199					1		133				The same	
B Annual death rati	los-		1000	135		1	1377	1	27	193	1	1000	1000	Contract	
Ratio per 1,000	of manual	atlon	22'41	31'65	37'62	sorati	26'14	18 05	977	734	8.4	14'85	35'77	33.0	19769
1906.	or boken				1			1000	-		1 300		-311	.30.	
Ratio per I,000	of popula	ation,	2434	\$3,08	25'92	18:40	30.60	17'43	8'07	675	7'3	15'18	31'67	21'40	19'57
1905.			1 1 3					14	1				1	13	
								1				10000	The same of	1300	
					-	10000			1000			1000			
	Difference	***	-1.03	-0,03	+70	+1.53	+545	+1'51	+-80	+*53	+1'2	+1 58	+4,10	+5.14	+0,13
			-	-	-			-	-	-				-	-
					1				1000			1			
Mean ratio pe	r s,000 d	oring	91'75	23,00	\$5,10	21'17	19"58	15'53	9'30	0.08	7.0	14'18	24"16	24"30	18'98
1901-1905.			1	1	1	1	-	-	-		1	-		15 63	
			1	The same					The same		1	Manual Property of the Parket		lucia lucia	1.33
				-			100000	16.00							
	Difference	***	+0.23	-1.44	+3.23	-1,50	+6.22	+ 3,43	+0.43	+0.32	40'5	+'53	+1.01	-74	+0.41
						-		-							
											1		1	188	
IIDistrict mortal!	ity exclu	ading										1	1 7/ 7	1000	
towns;-			1								1		1 400	No. of Street, or other Persons	Course
Number of distri		d	31	33	43	10	5	24	13	11	33	24	17	5	257
Highest district	ratio	***	35-14	41'33	57'33	30.85	35'14	33.65	18-15	11,00	33.3	35.31	43"49	18.05	57'33
Name of that di	strict	***	Purnea	Dinajous	Jalaun	Mianwali	Dera Ismail	Nimar	Prome	Mandalay	Vitagapa-	Mokkur	Goella	Mercara	Jalaus.
Lowest district r	atlo	1131	7'31	8168	15'45	4'57	Khao. 23'34	831	2.93	3105	PI	5'04	15'73	19'75	171
Name of that di		***	Pari	Sylhet	Garbwal	Simla	Hazara	Buldana	Ma-ubin	Meiktilla	Ananta-	Belgaum	- 2750	Yedenal-	Angeta-
rame of that of		***	20.0								por.			koud.	pur.
Number of districts wi	thout mort	tallty	None	None	None	None	None	None	None	Nene	None	None	None	None	None.
District death-rate per	1,000 of p	popu-	25'13	ar 25	27'51	\$0,20	25'73	19-63	10.41	7'51	8'7	15'53	35:40	24'25	20.13
lation.			-			F-150 9	186	1116		1	1 110 7	1000	2	-	1
						-	-								
			1						200						THE REAL PROPERTY.
IIITown mortality	-		1		13/15	TRANSP.	1200	14 5 1	19 1				1	1000	1
Number of towns	affected.	-	110	54	105	144	21	204	39	13	330	da	6		973
Highest town rat		173	20.83	35'12	81'31	47'23	35'14	43"13	24.04	11'45	2017	4574	40'04	35'58	81'31
		-	1 (00000)		1000	Makha		Kalmesh-		Kyaukse	T.C. Stungar-	Umarkot	127000		
Name of that to	W 17	-	Morshid- abad.	Nawab- ganj.	Naglea.	- ALLEGO	Lucia	Mat.	Pyapon	- Lyaukse	arapur-	O MINISTOR	Beawar	Francipet	Nagina.
			0 3	1	1		153	100	1	430	Kota.	7-3-	1000	-	
Lowest town rati	0 -		1'05	3'24	11'39	1'22	8'41	Pit	1'67	8'65	0"1	1.80	34'37	1 40	0.3
Name of that to			Ulubaria	Halla-	Mirzapur	Dharm-	Took	Deulgaon	100	Vamethin	Madaka-	Athai	Nasirabad		Madaka
		-		kandi.	Biodachal	sala,	(notified area).				sira,			rapet.	sira.
Number of towns with	hout marks	Ille	Nese	None	None	None	None	None	None	None "		1	None	None	1- 36
Town death-rate per 1,		5.5	11.20	12,03		20'11	19'85	13.00	5'44	5'87	5'9		Santa.	3	-
Town death-rate per 1,	or bob	ain.	11 50	12.03	39"18	2011	.5 .2	1300	3 44	207	39	10.21	2578	16'65	14.38
ALM I WALL	279	10		Town of	11000			1					1		1

#### Appendix B to Section VI .- Chief Diseases-contd.

#### TABLE III .- Dysentery and Diarrhwa mortality.

The state of the s	-									*			-
PROTINCES, DISTRICTS AND TOWNS.	Bengal.	Rastern Bengal and Assam,	United Provinces.	Punjab.	North-West Freatler Province,	Central Provinces	Lower Burma,	Upper Burma,	Madras Presidency.	Bembay Presidenty	Ajmer-Merwara.	Coorg.	Registration India,
-Mortality by Previnces ;-								-					
A. Deaths by months—									11		1	1	1
January	4,636	3,854	1,597	1,001	47	3,107	534	214	3,050	3,319	27	13	\$0,209
February	3,830	1,776	1,321	676	31	2,098	481	93	3,385	3,005	20	5	16,710
March	0000	1,716	7,412	781	58	2,120	500	145	3,500	3,859	23	6	18,471
April	0.000	1,873	1,943	1,180	39	3,084	555	140	3,190	3,266	33	5	21,784
May	3,612	2,079	2,758	7,383	78	3,709	798 859	135	4,624	5,007	75	15	24,548
July		1,005	2,465	1,066	28	2,957	1,592	330	6,819	7,657	43	23	28,738
August	4.434	1,557	2,717	1,321	21	6,578	1,400	438	8,271	8,051	100	14	35,913
September	4,108	1,894	2,671	1,559	57	7,513	853	181	7+197	6,475	. 77	14	33/079
October	W 170.200	2,587	2,513	2,258	45	4.777	624	131	5,054	4,011	50	12	27,055
Nevember	4,155	3,195	1,940	1,674	84	3,205	407	75	5,148	3,773	37	13	24,471
December	4440	26.30	1040	1,074	-4	2,504	477	100	34100	3,745	35	17	23,854
Total	48,900	25,913	26,348	17,595	571	42,583	9,180	1,079	61,588	61,735	554	141	298,117
B,-Annual death ratios-		1			No.	1			1				
Ratio per 1,000 of population,	*95	*90	'55	0.87	0,23	3'58	1165	168	1'7	3'34	1'18	.13	1.33
Ratio per 1,000 of population,	.80	-85	*56	0*68	0.38	2.03	1'43	*44	174	3,00	-89	'sɔ	1'17
Difference	+-e6	+ '05	01	+ 0.10	+ 0.01	+ 0'55	+ 0.33	+ *24	+ 103	+ 0°34	+ .39	+ '15	+ '15
Mean ratio per s,000 during	*95	*65	-61	0.21	0.38	a*38	1'41	*33	1'2	3"15	1,00	'72	1,11
Difference	+.01	+ "25	'05	+ -16	+ '01	+ 1,30	+ 0'24	+ '35	+ "05	+ 0.13	+ 0.18	+ '06	+ 0 20
IIDistrict mortality excluding												11 11	
Number of districts affected	33	21	48	20	5	24	18	11	22	24	13	5	253
Highest district ratio	3'95	5'48	9"17	8,10	0.22	14'00	2180	-83	7'3	10.80	1'41	'73	14'00
Name of that district	Howrah	Lakhim-	Garbwal	Simia	Dera Ismail Khan,	Akela	Thayet-	Magwe	Nilgiris	Khan- desh,	Pohkar	Kiggatead	Akela.
Lowest district ratio	*03	*04	101	0'18	0.04	0'14	*43	*07	0.2	0'05	*05	*19	101
Name of that district	Purnea	Rajshahi	Mainpuri	Multan	Peshawar	Bhandara	Saudo- way.	Kyaukse	Nellore	Larkbons	Nasirabad	Nanjaraj- patea,	Mainpuri
Number of districts without mortality.	None	None	None	None	None	None	None	None	None	Nose	4	None	
District death-rate per 1,000 of population.	-84	-87	'43	0*73	0'20	3,28	1'34	*53	1'4	3*16	0.30	*47	1"15
											1	-	
Town mortality-	1												
Number of towns affected	115	51	96	140	11	104	38	13	212	62	5	3	802
Highest town ratio	10'06	11'34	7'72	10'47	4'40	1973	6.21	2'77	11'5	12'55	9"33	8:87	1972
Name of that town	Kurseong	North Lakhim-	Ballia	Kalabagh	Kulachi	Shegaon	Pegu	Mandalay	Palam-	Sholapur	Ajmer	Virajend- rapet.	Shegaon
Lowest town ratio	-11	Pur. "15	*07	*10	0'17	*18	*51	,21	cottah, ora	*24	0.53	*57	*07
Name of that town	Baraset	Sudharam	Sherkot	Sobdara	Kohat	Ratas- pur.	Pyapon	Pakokku	T. C. Parama- gudi,	Ahmed- abad. Cant.	Pisangan	Somwar- pet.	Sherket,
	3	,	10		None	None	1	None	10	1	,	2	44
Number of towns without mortality.	100											10000	1

#### Appendix B to Section VI.-Chief Diseases-contd.

#### TABLE IV .- Plague mortality.

														-
		13							11 8		19		Te	tal.
PROVINCE OR STATE.			To be	63				-			1	-	the said	13.
Patrick Control	ıı.	any.	a	0.3	10.83	10.55		2	September,	15	wamber.	December,	1906.	1905.
	Jaconty	Pebruhry	March.	April.	May.	June,	July.	Asgost.	Septe	October	Now	Dece	133	
	-		1	0 000000				1					1000	
British Provinces :		1	1				10					- 19	-	
Bergal	5,434	10,345	19,855	16,532	1,761	538	103	431	555	518	905	3,833	50,619	130,084
Eastern Bengal and Assam		-		24		10	25	15					74	
United Provinces of Agra	5,631	8,957	15,551	16,309	4,953	105	142	675	863	1,531	3,961	10,505	69,660	383,802
Panjah	2,093	3,779	9,553	28,365	28,559	2,440	167	83	420	1,671	4,915	9,463	91,713	334,897
North-West Frontier Pro-	-		39	,					-			,	41	,
Central Provinces and Berny	1,254	3,025	3,619	1,700	53	4	15	349	1,084	3,520	1,656	1,938	18,122	19,705
(Lower	204	264	589	533	401	603	979	658	317	235	158	163	5,723	3,045
Borma Upper	319	577	1,160	390	30	50	91	50	30	35	98	565	3,414	647
Madras Presidency	307	133	113	93	22	13	21	36	77	64	45	74	898	5,798
Bombay	3,905	2,812	5,400	6,108	3,515	709	612	3,869	8,435	8,619	5,381	4,801	51,525	71,353
Ajmer-Merwara			35	3	1			3	18				68	2,450
Coorg													-	-
the beautiers					-						-	-		
Total }	17,417	29,833	55,033	70,253	38,655	4,371	2,154	5,181	13,613	15,319	17,123	30,448.	300,355	
(1905	119,318	113,115	231,037	241,450	140,146	15,703	3,804	6,318	10,651	10,795	9,383	13,953		940,821
Native States, etc. :-				HA					1			1	1	
Posjab Native States	321	3/5	3,437	3,330	3,295	1,128	231	19	50	435	593	1,511	12,748	54,868
Jammu and Kashmir States	107	183	451	901	733	90	,	17	30	28	71	85	3,735	3,650
Native States in Central Provinces,								***	-				-	-
Madras Natire States					***					-		-		-
Bombay Presidency Native States.	1,005	1,080	1,075	1,973	1,021	214	301	1,551	3,064	4,147	3,298	2,770	23,401	13,010
Baluchistan			-	6				Line of			-	100	7	
United Provinces (Tehri			-	-	-			-						39
Garhwal),		4.	493	335	44	-	-		5	20	9	100	1,132	20.002
Castant taille	112	155	499	393	35	1	19	763	3,001	3,022	2,023	1,047	13,055	30,083
Mysore	243	184	176	35	24	18	99	305	430	518	518	280	2,960	3,959
Bangalore Civil and Mili- tary Station.	186	125	115	48	40	35	49	100	77	110	90	100	1,077	1,854
Hyderahad State	187	377	196	48	7				-	317	07	55	1,250	9,008
to a later of the		100				district in	St. St.	47.49		-		Section 1	- Carrie	107
Total {*po5	2,195	2,535	5,478	7,070	5,215	1,493	701	2,758	6,737	8,552	6,679	6,918	55,365	-
(1005	14,605	14,510	24,437	35,424	21,180	1,095	619	3,384	3,447	3,508	3,350	3,581		138,319
GRAND TOTAL (1905	19,512	31,423	62,411	77,358	43,870	5,869	2,855	7,939	19,350	23,971	33,501	37,352	355,721	-
GRAND TOTAL (1905	144,183	142,745	255,374	275,874	261,435	15,997	4,423	8,702	14,108	14,533	11,731	15,934	1,059,140	-
Calcutta City	118	133	658	971	310	149	41	45	32	41	54	51	2,006	7,371
Bembay City	244	504	3,527	3,952	3,549	344	148	139	143	1.19:	55	45	10,802	14,171
Madras City	16	34	5									***	55	22
				-				0						

# Appendix B to Section VI.—Chief Diseases—concld.

## TABLE V .- Mortality from Respiratory Diseases.

PROVINCES, DISTRICTS	AND TOWES.	Bengal.	Eastern Bengal and Assam.	United Provinces.	Punjab.	North-West Prentler Prevince.	Central Provinces and Berar.	Lower Barma.	Upper Barma.	Madras Presidency.	Bombay Presidency.	Ajmar-Merwara.	Coorg.	Registration India,
-Mortality by province		-	-		4	-	3"		2	2	9	<	0	8
-Deaths by months-					-		E							
			Lane F	1	-							1		
January	-		222	1,895	5,550	135	1,471	357	177	1,735	5,975	41	1	18,18
February March			212	1,543	4,218	123	1,301	359	201	1,480	4.835	35	3	15,30
April			107	1,505	4,073	109	1,313	338	230	1,541	5,013	31	7	15,70
May		. 881	159	1,815	5,093	127	1,370	318	145	1,855	4,955	27	1	15,77
June		772	189	1,594	3,877	107	1,110	291	167	1,7.15	4,201	21	1	14,00
July		The state of the s	169	1,450	3,503	107	1,015	333	255	3,017	4,831	21	3	14,80
August September			168	1,504	3,830	112	1,414	404	230	2,415	5,150	33		15,50
October		1000	230	1,705	5,918	97	1,695	371	935	2,403	4,744	18	3	15,8
November			188	1,688	6,149	101	1,458	359	213	9,053	4.915	35	5	18,4
December		1,373	167	1.752	6,077	135	1,715	#94	220	2,153	5,487	14	4	19,4
	Total	12,525	2,208	30,139	57,127	1,573	15,509	4,024	3,544	23,378	60,615	322	43	301,3
		-	-	-	-	-	-	-				-		-
-Appenal death ratios	-				13				Toronto.	-				
Ratio per 1,000 c	f population	*195	'07	*42	2.84	0.00	1'40	773	*87	0.4	3,18	*67	*24	01
Ratio per 1,000 0	f population	723	*68	'49	3705	0.23	1,30	'73	155	0'5	2.02	1.18	*17	
Di	ference	+ '03	+ '01	- 107	- '11	+ 13	+ 0 10	- "01	+ '31	+ '2	+ 0'53	- '51	+ '07	+ 0"
Mean ratio per s,000	during 1901-	+	+	,	278	0'40	+	+	t	0.4	315	*19	*07	+
Di	fference	1	,	-†	+ 0.06	+ '30	,	+	+	+ '3	+ 0'13	+ 415	+ '17	-
- District mortalit	y excluding									-	5 50000		-	-
Number of districts	affected	. 31	- 33	43	29	5	24	18	11					
Highest district ratio			100	6:31	11347	0'47	407	1.13	*70	30	9'37	*40	*08	105
Name of that distri	t	Puri		Hamirpur		Banno	Betol	Basseln	Lower	Nilgiris	Kalra	Pohtar	Yederaik-	330
Lowest district ratio		1001	pur,	1000	par.	0'05	6'07	*02	Chindwin,	0'1	.0.2	*08	kond.	par.
Name of that distri-			Tippera	Bara Banki,	Multan	Kohat	1000	Sandoway	Kynukse	Ganjam	Upper Slad Frontier.	Kekri	Nanjaraj- patna,	Pun
Number of distri	cts withou	None	None	None	None	None	None	None	None		None .	9	3	
District death-rate population.	per 1,000 o	*15	*07	*23	a*53	0.37	1'28	*35	'18	0.2	3'15	*07	*03	01
									-			-	-	_
-Town mortality :-	Marie Contract	14 .	100	-		8	100000					1	1	
Number of towns at	lected	82	34	97	144	11	89	25	10	175	50		3	7
Highest town ratio			3,40	18-55	13'63	914	9:01	777	17.67	11.8	20'02	473	8:41	201
Name of that town		Calcutta	Dhobei	Rath	Pathankot	Harlpur	Doori	Toungoo	Tanagd wingyl.	M. T. C. Cooser.	City of Bombay.	Ajmer suburb,	Virajen- drapet,	City
Lowest town ratio		*04	105	'05	0'37	0'44	0,13	*e8	*12	0*1	0,41	*23	*15	Demoi
Name of that town		Krishon-	Chitta- gong.	Deoband	Khangah Dogras,	Kehat ;	Raipor	Yandoon	Yamethin	T. C. Bobbili	Larkhana	Piran- gan.	Mercara	Krish
Number of towns v	elthout mor-	100 CO (100 CO)	20	9	None	None	15		3	55		gen.	2	gar.
		Wagner .		235	1000		Const.	1 300					13.00	
Town death-rate population.	per 1,000 of	1.75	*19	3.90	5'60	4'10	3'47	3,32	6.87	14	10.81	2'18	3'49	3.0
Town death-rate	per 1,000 of	1'75	*19	3.30	5'60	4'10	3'47	3,52	6.83	14	10.81	3138	3.49	3.6

#### Appendix to Section VII .- Vaccination.

STATEMENT 1.—Total Primary and Re-vaccinations, successful cases among the children, cost of the Special Vaccination Department, etc., during the official year 1906-07.

PROVINCE,	NUMBER OF PERSONS VACCINATED BY THE SPECIAL AND DISPENSARY STAFFS COMBINED.		SUCCESSFUL CASES* TO TOTAL OPERATIONS.		SUCCE	SSFULLY ATED BY CIAL AND NSARY	ther of operations y each vaccinator al Staff.	the Special De-	Average cost of each successful case vaccinated by the Special Department,
	Primary.	Re-vacci- nations,	Primary.	Re-vacci-	Under one year.	1 to 6 years.	Average number of o performed by each of the Special Staff.	Total cost of partment,	Average cost case vaccing Department
				100				Rs.	Rs. a. p.
Bengal	1,874,976	162,297	99*24	65 90	814,772	943,050	1,012	1,73,229	0 1 5
Eastern Bengal and Assam	1,262,029	56,003	98'55	72*11	360,810	720,542	1,026	90,635	012
United Provinces of Agra and Oudh	1,571,486	103,574	97.72	84'43	930,316	517,672	1,824	1,50,971	0 1 6
Punjab	607,909	97,310	99°34	78'12	487,441	90,739	2,648*	99,605	0 2 5
North-West Frontier Province .	76,604	15,289	98'95	83.67	47,258	17,481	2,923†	11,217	0 2 2
Central Provinces and Berar	575,977	91,404	98'56	75'38	401,063	95,056	1,978	65,263	0 1 11
Madras Presidency	1,437,924	113,676	93'41	74'24	490,417	645/932	1,721‡	2,94,881	0 3 6
Coorg	9,166	2,066	93,13	75'23	919	. 4,841	1,209	2,752	0 4 7
Bombay Presidency	. 593,351	37,510	95'93	71'04	410,300	89,192	1,466	3,25,124	096
Burma	370,399	59,253	90'64	53'43	77,858	175,356	1,685	1,27,528	061
Ajmer-Merwara	11,973	127	97'87	82.68	9,129	2,444	807	2,867	0 3 10
TOTAL	8,341,794	738,509	97'21	72.85	4,050,283	3,302,345	1,432	1,345,072	0 2 7

<sup>Excluding those the results of which were not known,
Including the vaccinations performed in cantonments.
Excludes average of work done by each medical subordinate.</sup> 

STATEMENT II.—Vaccination operations performed by the Special and Dispensary Establishments separately, deaths from small-pox, etc., during the official year 1906-07.

		(PRIMARY A	PERSONS VA AND RE-VACC MBINED).		ccinations ion.	estimated o of popu- occinated.	DEATH SMALL-	
PROVINCE.	Population.	By special department.	By Dispensary staff.	Total.	Ratio of successful vaccination, per 1,000 of population.	Percentage of annual estimated births at 40 per 1,000 of popu- lation successfully vaccinated.	Number.	Ratio per 1,000 of population.
							177	
Bengal	51,625,771	1,891,224	145,949	2,037,273	37'80	39'45	22,206	'43
Eastern Bengal and Assam	30,788,134	1,292,430	25,602	1,318,032	41'33	29,30	6,972	'23
United Provinces of Agra and Oudh .	47,960,6671	1,674,799	2611	1,675,060	33'31	48'49	13,202	*28
Punjab	20,293,834	704,249	970	705,219	32'00	60'05	13,239	166
North-West Frontier Province	2,104,812	90,612	1,2815	91,893	39.67	56-13	1,127	'57
Central Provinces and Berar	13,621,559	593,349	24,032	617,381	42'06	73'61	9,889	.83
Madras Presidency	38,408,531	1,551,352	248	1,551,600	35'66	31'92	29,840	-8
Coorg	180,607	10,884	348	11,232	54'58	12,72	234	1.30
Bombay Presidency	21,640,385	629,356	1,505	630,861	25'36	49'71	4,063	*22
Burma	10,477,508	411,131	18,521	429,652	33 06	18.28	8,540	1,01
Ajmer Merwara	476,912	12,100		12,100	24.79	47*86	271	*57
TOTAL .	237,578,000	8,861,586	218,717	9,080,303	35'41	42'62	109,583	.48

For the Calendar year.
 † Includes 16,010 persons enumerated at the Ajudhya Fair.
 The Special vaccinators are attached to dispensaries. Operations performed by medical subordinates.
 † There were no special vaccinators attached to the dispensaries. Operations were performed by Hospital Assistants.

Appendix to Section VII.-Vaccination-concld.

		-1	Successful.	Spoto	3,774	2,307	***	250	12,315
STATEMENT NO. III.—The number of persons primarily vaccinated and the number of those who were successfully vaccinated in His Majesty's European and Native Army in India during 1906.		Total,	Primary.	5,839	\$,019	3,168	1,204	373	15,603
s Ma		iren,	Successful	2,515	1,607	88	575	178	5,837
Hi		Children.	Primary.	2,693	1,965	1,187	899	197	573 6,707 5,837
ed in		· ugu	Successful.	65 55 60	2	E	**	- 1	573
inat	IT.	Women.	Primary.	255	165	360	9	1	88
שמכנ	NATIVE ARMY.	Com- coned, Com- coned s and	Successful.	2,272	2,034	1,124	362	2	5,864
fully	NATIV	Native Com- missioned, Non-Com- missioned Officers and	Primary.	2,876 2,272	2,878	1,709	529	176	5,168 5,864
cess		pean cers' fren,	Successful,	2	=	2	4	1	30
e suc		European Officers' children,	Primary.	2	4	=	4	1	5
mer.		Sera, sera,	Successful	-	1	1	-	1	04
r good	-	European Officers' Wives.	Primary.	-	:		-	1	. 01
thos		ors,	Successful,	1	1	1.	i	1	1
a du	3	European Officers,	Primary	1	1	-	1	1	-
Indi		Ti Ti	Successful.	2852	207	310	104	3	8
he n y in		Total,	Primary.	311	ii -	403	133	92	1,252
nd t		irep.	Successful,	279	202	303	103	3	156
ted a		Children	Primary.	304	319	300	130	29	1,229
eina d Na		i i	Successful	1	1	1	ı	1	1
א שמני	,	Women.	Primary.	63	1	ı	-	1	*
opea	EUROPEAN ARMY.	Warrant and Non- Commission- ed Officers and men.	Successful.	1	1	-	-	1	n
Eur	ROPEAN	Warr and ced O	Primary.	1	ı	-	-	i	"
sous	Eu		Successful,	*	N)	0	1	1	52
per		Officers' children.	Primary.	4	l/s	-	1	-	7.
62 0)		Officers* wives,	Successful.	i	1	1	1	1	1
tu mb		OBO	Primary.	1	1	1	1	i	1
The ?		2015.	Successful	1	1	ı	1	1	1
Ī		Officers.	Primary.	1	1	1	:	1	!
0.11		yous.							India .
Z L		d Divis	-	pasu	pur	Por	Division		Ipo
EMEN		Commands and Divisions.		Northern Command	Western Command	Eastern Command	Secunderabad Division	Burma Division	
TAT		Commit	E HAR	lorthers	Vesterr	Eastern	Secund	Burma	
02				The state of	1000	A PARTY	100	1000	

G.C. B. P. Simla. - No. 80 S. C. - 15-1-05, - 700 - K.M.

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#### ANNUAL RETURNS

OF THE

# EUROPEAN ARMY OF INDIA

OF THE

# NATIVE ARMY AND OF THE JAIL POPULATION

FOR THE YEAR

1906.

COMPILED AND SYSTEMATICALLY ARRANGED FROM THE ORIGINAL DOCUMENTS

BY

S. P. JAMES, M.D., CAPTAIN, I.M.S.,

Statistical Officer to the Government of India in the Sanitary and Medical Departments.

ANNUAL RETURNS

1

EUROPEAN ARMY OF INDIA

MATTIVE ARMY AND OF THE JAIL

2000

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D. C. C. C. C. C. C. C. C. C. C. C. C. C.	******	86-89
	XXVIII XXXIX*	86-89
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<sup>†</sup> There being no cases of cholera the table is blank.

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#### IV.-TROOPS AND PRISONERS 1906.

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TABLE G.

#### Grouping of Diseases in the Main Tables for 1906.

HEAD OF DISEASE.	Includes or includes also
CHOLERA	Choleraic diarrhœa. Sunstroke and Heat-Apoplexy. Delirium tremens. Alcoholic Poisoning. Tubercular Phthisis, and Hæmoptysis due to tubercle. Includes Hæmoptysis and Cirrhosis of the lung not due to tubercle, and excludes Pneumonia and Tubercular Phthisis. Old age (Tables for men and women). Immaturity at birth (Tables for children). Epidemic Diarrhœa. Congestion of liver, Hepatitis, Perihepatitis; but excludes Cirrhosis of liver.
VENEREAL DISEASES GUINEA-WORM AND OTHER ENTOZOA PHAGEDÆNA, SLOUGH, AND GANGRENE. ABSCESS, ULCER, AND BOIL . AFFECTIONS.  OTHER DISEASES PECULIAR TO WOMEN.	Syphilis, Gonorrhea, and Soft Chancre, which include also their sequelæ.  The entozoa numbered from 1 to 56, 67 to 81: also Nos. 105 and 106.  Nomenclature of 1896, Nos. 25 a and b, 800, and 847.  Nomenclature of 1896, Nos. 799, 843, and support and 845.  Nomenclature of 1896, Nos. 700 and 706 to 718, and any other diseases stated by medical officers to have been puerperal.  Nomenclature of 1896, No. 426, Vomiting of Pregnancy, Nos. 632 to 699, 701 to 705, and 719 to 730.

• For details of individual diseases, see Table LIII.

1.—EUROPEAN TROOPS, 1906. A.—MEN.

#### TABLE D.

#### STATIONS by COMMANDS AND INDEPENDENT DIVISIONS.

STATIONS.	Height above sealevel in feet.	Authority for height. †	STATIONS.	Height above sea level in feet.	Authority for height. +	STATIONS.	Height above sea level in feet.	Authority for height. +
NORTHERN COMMAND:-			WESTERN COMMAND :-contd.			EASTERN COMMAND :-contd.		
Peshawar	1,165	S. G.	‡ Taragarh Sanitarium	2,855	S. G.	Dinapore	171	S. G.
Nowshera	1,100	M. O.	Ahmedabad	170		Allahabad	298	,,
Rawalpindi	1,707	S. G.	Kamptee	930	**	Fort Allahabad	298	,,
Campbellpur	1,200	M. O.	Nasirabad	1,461	,,	Benares	256	,,
Attock	1,192	S. G.	Neemuch	1,613	"	Campore	417	
Sialkot	829		Deesa	470	,,	Fyzabad	336	,,
Lahore Cantonment	706		Jhansi	860	,,	‡ Lebong	6,000	I.B.
Fort Lahore	706	,,	Nowgong	770	1. B.	‡ Ranikhet	5,983	S. G.
Mooltan	402	,,	Jubbulpore	1,306	S. G.	‡ Chaubuttia	6,942	"
Ferozepore	645	,,	Saugor	1,753	,,	1 Chakrata	6,885	,,
Jullander	900	**	Poona	1,909	,,	‡ Landour Convalescent Depôt	7,362	,,
Amritsar	756	,,	Kirkee	1,837	,,	‡ Naini Tal " "	6,400	,,
Ambala	902	,,	Colaba (Bombay)	20	,,	1 Darjeeling " "	7,168	,,
‡ Cherat	4,546		Deolali Depôt	1,829	39			
‡ Khyragully	7,678	,,	1 Mount Abu Sanitarium .	3,960			G VI	
‡ Baragully	7,800	M. O.	1 Pachmarhi	3,481	,,	SECUNDERABAD DIVISION:-	Conne	1000
‡ Kuldunnah	7,049	S. G.	i Purandhur	4,550	,,	Secunderabad	1,732	S. G.
‡ Kalabagh	7,936	I. B.	† Khandalla "	2,000	M. O.	Bellary	1,483	"
‡ Gharial	6,811	S. G.	Ahmednagar	2,125	S. G.	Bangalore	3,021	**
‡ Barian Camp	7, 133	I.B	Belgaum	2,473		Madras	15	
1 Upper Topa	7,000	M. O.	Aden	26		St. Thomas' Mount	250	
‡ Lower Topa	7,320	I. B.	Dthalla	***		Cannanore	47	
: Khan Spur	7,500	M. O.				Calicut	27	M. D.
1 Dagshai	5,982	S. G.			1	Mallapuram	500	M. O.
‡ Solon	5,166		EASTERN COMMAND :-	26.32		‡ Ramandrug	3,150	S. G.
‡ Subathu	4,124	,,	Meerut	739	S. G.	‡ Wellington	6,160	"
‡ Jutogh	6,371	,,	Delhi · · ·	715	"	Poonamallee Depôt	50	M. O.
1 Murree Convalescent Depôt	7,250	,,	Muttra	576	"			
1 Dalhousie ,, ,,	6,732		Agra · · ·	554	>>			-
I Kasauli " " .	6,320	,,,	Bareilly	560	22	BURMA DIVISION:-		Alexand I
			Shahjahanpur	507		Fort Dufferin (Mandalay) .	249	S. G.
			Roorkee	884	"	Shwebo	600	M.O.
WESTERN COMMAND:-	100	1000	Lucknow	400	22	Bhamo	351	S. G.
i Quetta	5,511	S. G.	Sitapur	449	10	Meiktila	860	23
Karachi	28	,,	Fatehgarh	444	I. B.	Thayetmyo	145	
Hyderabad (Sind)	134	I. B.	Fort William (Calcutta) .	17	S. G.	Rangoon	14	**
Mhow	1,903	S. G.	Dum-Dum	***		Port Blair	85	**
Indore	1,806		Barrackpore	24	S. G.	‡Maymyo	3,508	

<sup>\*</sup> These heights are usually those of the survey-marks or of the mercury-surface in barometer-cisterns of meteorological observatories.

† S. G. = Surveyor-General of India; I. B. = Intelligence Branch of the Division of the Chief of the Staff; M. D. = Meteorological Department;

M. O. = Medical Officers in charge of Station Hospitals in their Sanitary Reports.

‡ These are the official "Hill Stations."

## TABLE I.

#### RATIOS OF COMMANDS.

The ratios of admissions and deaths to strength are taken from Table III. The actuals will be found in Table IV.

						1			1 /	HE AVERAGE ST		
.0							Northern Command.	Western Command.	Eastern Command.	Secunderabad Division.	Burma Division,	India.
STRENGTH .						-	18,699	18,885	18,850	8,520	3,853	70,272
+ CONSTANTLY-SIG	K-RATE OF	BACH	MONT	TH-					50°6	-		
January . February .	: :		:	. :		:	51'4 43'9	26.0 20.0	49'0	59°0 58'4	62'4 57'3	53°3 49°3
March .	: :						36°2 37°5	44'9	48'5	60'1 56'5	50.9	44'9
May .						:	41'5	40°2	40.6	54'3	46'3	44"8
June : :							42'4 45'9	40'4	55'3	55'0	49°3 55°0	46°0
August .							41'4	53'3	55'8	67'9	51'1	51'4
September . October .	: :	:		:			53'9	59°2	61'2	70'1	55.0	55'9
November . December .	: :	:	:	:			78'3	56'3	55'7	70'9	23.0	63'4 58'0
			0	THE.	VEAR		48'1	21.0	54'0	61'5	52'9	51'4
-ADMISSION-RATE	OF THE Y	EAR-	0.			1	-	3.0	340		3-9	3. 4
Influenza . Cholera .	: :	:				:	20'3	3'2	17.7	1'9	4'2	11'4
Small-pox .							6	1'9	1.6	9	'5	1.3
Enteric Fever Intermittent Fe	rer:	:		:		:	225.7	17'6	132'0	18'5	1.0	176.3
Remittent Feve					1		.2	1'4	35'6	53:8	49'6	3'4
Simple Continu Tubercle of the	lungs .			. :	19 1	:	73'5	48.7	1.8	'8	121,4	55'7
Pneumonia . Other Respirate	Marie Control					:	4.6	3'2	3.3	25'4	16.0	3'4
Dysentery .					5		6.3	19.8	12'4	29'5	14'0	15'2
Diarrhosa Hepatic Absces	: :			:			12'4	3'4	15.6	7.3	100	13.7
Venereal Disease	stion and Ir	flamm	ation			:	15'6 75'7	11.0	14'9	153'9	14'5 191'o	137
			-	ALL C	ATTERS		847'9	9360	823.7	926-6	898'3	870'8
					nvess	•		9350	- 0257	-	- Cyc o	-
DEATH-RATE OF T	HE YEAR-							'37	***	1'17	2'34	-65
Small-pox .							2'62	'11		3'17	*26	3,18
Enteric Fever Intermittent Fe	ver :	:					'21	4'08	3'71	*12		'23
Remittent Feve Simple Continu	ed Fever					:	-05	.16			'26	'07
Heat-stroke .						-	.06	'74	*27	'12	*26	55
Circulatory Dis	lungs .		:		: :	2	'53 '21	111	'80 '21	12	*52 *25	*17
Paeumonia							'32 ,11	.11	.48	12	.36	128
Other Respirat	ory Disease	•	:	:	: :	:	'43	'95	**27	*23	1'04	'53
Diarrhœa .							10	2.38	1'43	1*83	23	1'52
Hepatic Abscer	•		•	•			-	- 35	- 45	-	-	
				ALL C	AUSES		8'45	12.93	10.26	9*62	9.86	10'43
PERCENTAGE IN I	DO ADMISSI	ONS-					2'39	74	2'14	*20	-46	1'31
Cholera .				:	. :	:		'34 '06 '20	'11	16	100	112
Small-pox . Enteric Fever		:			: :	:	1'54	1.88	2'19	2'00	'17	1'79
Intermittent Fe	ver .						26.62	26.71	16.03	6-41	7°02 5'52	20*23
Remittent Feve Simple Continu	ed Fever		-		. :	:	8.67	5'20	4'32	5-80	13'55	6:40
Tubercle of the	lungs .						*18 *54	'20 '34	*22 *40	20	17	.30
Pneumonia . Other Respirate					. :	:	2'02	2'20	2.02	2'74	1.88	2'33
Dysentery . Diarrhea .	: :	1:	:	:	:	:	- 1'46	1'78	1'50	3'18	1,18	1.75
Hepatic Abscer	s .	· flor	atio-				1'84	1*24	1.81	1'28	1'62	1'57
Venereal Disea	stion and Ir			:			893	12.88	15'41	16.61	21.27	13'47
-PERCENTAGE IN	100 DEATHS	-									-	
Cholera .					: :	:	1'3	2.9	6.0	12,3	23'7	30.0
Small-pox Enteric Fever							31'0	31.6	35'2	32'9	2.6	30.0
Remittent Fev	r	:	:		: :	:	2.2	1,5	'5		2.6	.7
Simple Continu	ed Fever						11'4	57	2.5	1,3	2.6	5'3
Heat-stroke Circulatory Dis	eases .	-			: :	:	6.3	4.9	7'5	6.1	5'3	0.3
Circulatory Dis Tubercle of the	lungs .				5 .		2'5 3'8	1'2	2'0 4'5	1'2	2.0	1'6
				100	*	*	173	*8	100	2'4	***	2.4
Pneumonia . Other Respirab	ory Diseases										TALK.	W
Other Respirab Dysentery Diarrhesa	ory Diseases	:	:	•			5'1	7'4	13.6	19'5	10'5	14.6

<sup>\*</sup> Including troops on the line of march, and the Field Force. For complete detail of diseases see Table LIII.

† Worked on the aggregates.

## TABLE II.

#### RATIOS of GEOGRAPHICAL GROUPS.

The ratios of admissions and deaths to strength are taken from Table III. The actuals will be found in Table IV.

No.	ie ratios c	Lucinos	ous and d		The state of the s	1,000 0	-				DE 100	10 10 11	DIG IV.
	1	11	IV	V	Vi	Vil	VIII	IX	X	XI	Xila	XII6	
	Burma			Gange-	Upper	NW. Frontier, Indus	and bear					Hill Conva-	
	Coast	Burma Inland.	and	tic Plain and	Sub- Hima-	Valley,	Central	Deccan	Western Coast.	ern	Hill Stations.	Depôts#	India.
	Bay Islands.	Interest	Orissa.	Chutia Nagpur.	laya.	NW. Rajpo-	India,		Const.	India.	Stations	Sanita-	12 1
-		-			-	tana.	Gujarat.		-	-	_	ria.	
I.—STRENGTH	1,375	1,609	1,775	6,871	13,989	4,975	6,249	10,188	1,444	3,802	11,235	3,592	70,272
11+CONSTANTLY-SICK-RATE OF EACH											10		-
MONTH- January	71'1	67"1	80:9	43'7	51'8	50'4	56'9	50'7	70'8	57'9	43'8	62.3	53'3
February	75°7	590	75°5 84°3	44'4	45'6	37.6	46.3	43'4 42'5	64.3	62'4	38'3	58.3	49'3
April	35°5 40°0	59°5 47°5	71'3	50.7	53'8	38.0	45'8	41°8 39°7	55'5 46'5	55°4 56°2	31'8	43'8 48'5	44'0
June	45'9	54'9	81.3	49'3 57'5	20.8 20.8	52'8	40.6	43'4	55.0	57'7	40'4	53'0	44'8 46'0 50'0
August	35'0	57.6 57.4	87.8	58°0	49°9 58°0	44'4	23.2 21.0	20.0	53'7 45'2	51'4	42°5 44°2	55°7 57°9	51'4
October	44'I 31'9	51.6	70'3	64'5	66'1	57'8 90'2	82'3 76'2	59'1	63.8	66°8 58°8	45'4	57'9 62'8 93'3	57'0
December	28.4	55'9	65'5	48.8	52'0	89.3	55'3	56'3	49°0 57°3	58.8	53'4	90°0	58'0
OF THE YEAR .		237			3- 9	30 2	33.3	400		200	400	3/0	51.4
III ADMISSION-RATE OF THE YEAR-	-	81	6.8		1	-			7	-	L. Ward		
Influenza	5.5	13,1	111	17.6	5.2	64'7	22'6	1.0		3.3	4.6	3,1	11'4
Small-pox	1'5	3'7	8.2	53.3	15'4	2'4 9'4	4'3 34'9	21.2	2.8	12.8	7'3	12.0	15'6
Intermittent Fever	42°2 8°0	97'0	225'9	107.1	200'9	513'0	369.5	88'2	185-6	64.7	15'9	93.3	176'2
Simple Continued Fever	162.1	90,1	87.3	52'7	64'2	74.6	25'3	23.8	7.6	50.2	60'5	24'2	557
Tubercle of the lungs Pneumonia	1'5	1'9	2,3	3,1	2'1 4'5	-8 4'4	1'4 4'5	2'7	2'8	'5 '5	1.0	2°2 4°7	1'6
Other Respiratory Diseases Dysentery	20'4	14'3	16'9	17'0	24.5	17'1	17.6	19'7	20'1	18.7	19'3	28°7	20'3
Diarrhœa	175	8'7	11.3	10'3	13'4	9'8	18.4	10'2	9'7	13'2	20'2	13'1	13.2
Hepatic   Congestion and	3.6	31'7	28.7	17'2	15.7	6.8	10'6	10,3	12'5	13.1	1.7	17.0	
Venereal Diseases	209'5	167'8	262'5	107'3	101'7	86.6	118.4	125'0	217'5	178'0	77'9	104'1	117'3
ALL CAUSES .	865'5	943'4	1,120'0	788'4	885.2	1,251'5	1,026*7	755'9	816.2	1,016'3	674.7	807.3	870'8
IV DEATH-RATE OF THE YEAR-													1 191
Cholera		5'59		1'46	14	*40	.16	1.24			***		*65 '06
Enteric Fever		*63	.36	4'66	3'67	1'81	7-84	4'22	.69	3.10	1.00	3'06	3,10
Remittent Fever				.15		.40		.10			'09		*07 *01
Heat-stroke	***	1'24	1'13	*15 *73	'50 '86	2'61	'96 '64	·49 ·69	. '69		**18	Fit	'55 '6s
Tubercle of the lungs Pneumonia		*62		'44			*48	'20	**69		'09 '45	1'11	'55 '65 '17 '28
Other Respiratory Diseases Dysentery	1'45	1'24	***		14	*20	1'16	*20 *59			**27	*28 *56	.00
Diarrhœa	111	-62	3'38	1,03	1.14	1'41	1.60	2'94	2.08	***		2.78	
Hepatic Abscess	6.22	14'92	9'58	12'08	0.28	10'25	15'68	13'74	6.93	6.84	6.14	10.28	10'43
	-								-	-		-	-
V.—PERCENTAGE IN 100 ADMISSIONS— Influenza	*25	*86	*60	2'23	*62	5'17	3,50	'39	*08	'31	.69	.38	1'31
Cholera		1,38	*05	'24	107	"19	'03 '42	*25 *08		10	°03	"17	112
Enteric Fever	4'87	10.58	20'17	13'54	1'74	40'99	35'99	2'84	22.73	6:37	1.08	1'48	1'79
Remittent Fever Simple Continued Fever	19'08	9'55	7'80	6.68	7'25	2,00	*28 2*46	7'12		4'97	2'36	3'00	6.40
Rheumatic Fever		'20	*20	*04 *30	104	.00	'03	'03 '22	*o8		115	'03	104
Paeumonia	2'35	1'52	2'01	2'16	2'74	1'35	1'71	261	2'45	105	2'86	3.22	3.33
Dysentery	2,61	1.02	1.21	1'85	1'52	*45 *79	1.73	4'08	1'44	2,03	2'93	1.02	1'75
Hepatic Congestion and	-17	*07	'45	*26	*27	-14	34	'55	*34	'23	'25	.23	.30
Venereal Diseases	'42 24'20	3'36	2'57	3,18	1'77	6.42	11.20	16'54	1.23	1*19	1'95	2'10	1'57
		-17			- 49		-		-	-,	-	-	
VI.—PERCENTAGE IN 100 BEATHS— Cholera		37'5		12'0	1'5		1'0	11'4			1000		6.3
Small-pox		4.5	5.0	38.6	32.1	3'9	50'0	30'7	10.0	46'2	31'0	28'0	30.0
Intermittent Fever	***	***	***	2'4	4'5	2'0	20	-7		***	1'4	26	3,3
Simple Continued Fever			***	***	-7	3.0		3.6			1'4	1	77
Heat-stroke Circulatory Diseases		8.3	11.8	6.0	2.5	5.0 52.2	4.1	5.0	10.0	77	3.0	10'5	5.3
Tubercle of the lungs		4.2		3'6	6.0		3.1		10,0		7'2	10.2	2.7
Other Respiratory Diseases Dysentery	22.2	8.3		3.6	4'5	2'0	8.5	4'3		3.8	43	2.0	2.0
Diarrhœa Hepatic Abscess		4'2	35'3	8.4	11.0	137	10'2	21'4	30.0	154	13.0	26.3	14'6
-	1260				100	300		-	1000				-

<sup>\*</sup> For complete detail of diseases, see Table L!!!.

## TABLE III.

RATIOS of STATIONS, GROUPS, and COMMANDS. For actuals see Table IV.

	.fg.		-								ı. An	MISS	ION-I	RATE.	2.	DEA	TH-R	ATE.						-
STATIONS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Rheumatic Fever.	Heat-stroke,	ry Disea	Tubercle of the lungs.	Pneumonia,	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Venereal Diseases,	ALL CAUSES.	CONSTANTLY SICK RATE.	Syphilis,	Soft Chancre,	Gonorrhan.
Port Blair .	135 {	22'2				148'1	59'3	37'0						7'4	-		7'4		37'0	614'8 }	30.6			37'0
Rangoon .	1,240 {			10		30.6	2'4	179'0			11'3	1.6		21.8	1.01 52.0	19'4	.81	4'0	228'2	892.7 }	47'6	62'1	65'3	100'8
GROUP I.— BURMA COAST AND BAY ISLANDS.	1,375 {	2"2	-	1'5		42'2	8.0				10*2	1.2	7	20'4	22'5		1.5		209'5	6.22	46.0	56.0	5819	94'5
Thayetmyo	517{				9'7	17'4	3'9	11.6		3.5	30*9		1.0	11.6	9'7	9'7	1.03	71'6	125'7	657°6 } 774 }	48'2	44'5	17'4	63.8
Meiktila .	176 {		119'3			68.2		62'5			22		57	21.7	5'7			17'0	176'1	846.6}	68-5	68'2	45'5	62'5
Fort Dufferin	285 }					7'0		69.0			59°4 3°50	3.2		14'0	10.2	28.0	::		3'50	730'81	575	24.2	400	73'4
Shwebo .	458{	28'4			2'2	34'9		45'9		2'18	10.0	4'4		10'9	15'3	3,3		19'7	222'7	1,003.4 }	54'2	78.6	65'5	78.6
Bhamo .	170{					688'2		511.8		=	5'9			23.2				11.8	176 5	2,105°9 } 5'68 }	65'4	47"1	52 9	76'5
GROUP II BURMA IN- LAND.	1,609 {	8.1	5'59		3'7	97'0	1.3	30,1		1'2			1'2	14'3	9'9	8-7	·62		167.8	943'4}	55'9	53'4		70'9
Fort William	1,170{	2.6			3'4	224'8		127.4		4'3		3'4	6.8	117	12'0	7.7	2'6	6.8	324.8	7-693	85'2	6,0	142'7	117'6
Dum-Dum .	306 {	13"1			3.3	68-6				9'8	3'3		3.3	58.8		10.6	3'3		71'9	483.7 }	36'4	9.8	35"	26'1
Barrackpore	299 {	16.7			33'4 3'34	301.3	6.7	20"1		-	23'4			30.1	53'5	16-7	16.4	110.4	214'0	1,357'9}	75'3	46.8	93.6	73.6
2.	1113																							
GROUP IV.— BENGAL AND ORISSA.	1,775 {	6.8		-6	8.5	225'9	1"1	87:3			20.8		5'1	22.5	16.9	11.3	3.38	287	262-5	9,28}	77"1	52.4	1167	94'1
B Dinapore .	605		6.6		616	11.6	5'0	16'5		16.2	9'9	6.6		5.0	11.0	1'7	5'0	57'9	1157	398-31	25'2	19.8	33'1	62.8
Benares .	163{	6.1	55'2			110'4		22.5		12'3			18'4			18'4		30'7	92'0		42.8		3988	
Allahabad .	796{				3.8			65-6		50			6,3	25'1		50		18.8	150'5	1000	59"7	38.9		
Fort Alia- habad.	201 {			5.0	633	398.0		74'6	::		10'0	5.0		29.0	24'9	5"0		100	22879	1,094'5}	61.0	54'7	79.6	94'5
Fyzabad .	914{				13'1	76.6		172'0		1.1	13,1			31.0	12.0	18.6	1,00		81'0	207'0 t	47'3	14'2	16.4	50'3
Sitapur .	542 {	=			51°7	49*8		27.7			16.6	37	377	14'8	9.3	12'9	3'7	74	60'9	9'235	390	21.1	20'3	29.2
Lucknow .	2,497	13.6		4	36.01	133'0	=	17.6		2'0	8.4		4.0	13.3	23.6	10,1	3.0	156	997	100	62.2	26.4		57'3
Cawnpore .	1,076-{	793	==	13.0	2.28	55.8	*93			23.0	'93	.83	93		'93	***	.63	***		13.01 }	44'8	23.5	***	73'4
Fatehgarh .	77		==		12.09			26.0			26'0			13'0		13.0		26.0	00.0	1,233'8}	44'5		13.0	77.8
GROUP V.— GANGETIC PLAIN AND CHUTIA NAGPUR.		17'	174		23°3			52";	-3	11'6	10'9				14*6	10'3	2'0	17"2	107'3	1	† 51°6	100	21'8	61.3

## TABLE III—continued.

RATIOS of STATIONS, GROUPS, and COMMANDS. For actuals see Table IV.

2		1	-	-	-			-						00.72.00	- 1			_						-
	strength.							70		. An			ATE.	h	2. 1	DEATI								-
STATIONS AND GROUPS.	Average annual sto	Influenza.	Cholera.	Small-pox,	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued	Rheumatic Fever.	Heat-stroke,	Circulatory Diseases	Tubercle of the lungs.	Pneumonia,	Other Respiratory	Dysentery.	Diarrhora.	Hepatic Abscess.	Hepatic Congestion	Venereal Diseases.	ALL CAUSES,	CONSTANTLY SICK	Syphilis.	Soft Chancre.	Gonorrhæa.
Shahja- hanpur.	367	-			10,1	30.0		21'8			13.6			S*2	16'3	16'3	::	13%	1983	599'5 }	35'7	27.2	8979	81.7
Bareilly .	1,243	=			7-2	44'2		4.0			3.5		3.5	29'0	97	11.3		21.7	111.0	3,55}	47'1	22'5	12'9	75'6
Roorkee	392 }	17'9	2,10		20.4	145'4	276	61.3		2.6	128	2.6		12'8	15'3	28'1		12.8	96.9	849'5}	46.0	17'9	28'1	51'0
Meerut .	2,037 {	12'3			24'5	181'1		13'7	1'0	6.0	20'6	2'0	2'5	41'2	12-8	196	2'9	9.8	1567	1,054'0 }	71'3	57'9	23.6	74'6
Delhi	303 {	13,5			23'1	976'9					13'2	9'9		19.8	3'3	9.9		3'3	105-6	1,488.4)	69'5	297	36.3	39.6
Ambala .	2,546	14'1		1,3	5"1	115'5	1.6	25.2	.4	1.6	11'4	1'6	5'1	16.1	477	10'2	2'4	22'4	72-7	722'3 }	41.7	12%	11.0	
B Jullundur .	733			41	6.8	152.8		9.5	100	2'7	191	174	6.8	15.0	6.8	16.4	4*1	9.2	94'1	624.83	34'4	25.0	5'5	62.8
Ferozepore.	916			3.3	29°5 3°28	204'1		1987		7'6	7.6	1.1		12'0	1000	15'3		4'4	85'2	891.01	49'4	17.5	10'9	56.8
Amritsar .	201				59'7	139'3		69'7			100			10'0		14'9		50	84.6		43'7	24'9	14'9	44'8
LahoreCantt.	751 {			1.3	10.62	235'7		238.3		23,3	21,3	1'3	4'0	22.6	16.0	17'3	4°0		137'2	1,239'71	74'8	13.3	24'0	99.9
Fort Lahore	107				56'1	719'6		364'5		37'4	187		28'0	9.3		280		187	74'8	1,841-1	43'7		18-7	56-1
Sialkot .	1,271	*8			1.6	91'3		So-3		1'6	10'2	1.6	1'6	25'2	*8	14'2	6.3		54'3	764.0}	35'9	126		36-2
Rawalpindi.	2,680-{	1'5			15'3	353'0		82"1		1'5		3.0	7.8	32'1	5'2	9.0	1'9	12'3	94'0	994.81	64.0	23'9	4000	53.0
Campbellpur	252 {				23'8	43'7	7'9	39'7		15'9	7'9	11.0	27.8	7'9	4'0		7'94	2.0	59'5	634.0 }	41'7	11%	15'9	31.7
Attock .	191 {	-	::		5'2	387.4		78'5		2.5	157		11	10'5	20'9 5'24	2.5		20'9	146.6	1,041'9 }	52.6	10.2	41'9	94.3
GROUP VI UPFER SUB-HIMA- AYA.	13,989	5'5	74	. 6	15'4	20019	.5	64'2	-4	5'9	12'7	2'1	4'5	24'3	7'9	13'4	2'4	15'7	101'7	9,28	† 52'9	24'2	17*8	597
A Nowshera .	769{	11			1'3	733'4		247'1		22'1	216		7.8	10'4	11'7	5'2		2'6	54.6	1,405'7	44'7	6.2	22'1	26'0
Peshawar .	1,683 {	186'0		·6	20,5	787'3		12'5		4.8	5.0	.6	2'4	7.7	2'4	15'4	*6 *59	2'4	335	1,374'3 }	62'2	12.5	28'5	
Mooltan .	946 {	3,5			7'4	137'4	100	167.0		190	9'5		6.2	16.9	10.6	3.5	3.5	9.5	67.7	995'8}	51'3	11.6	200	45'5
C Hyderabad.	411{			7'3	2'4	661.8	4'9	2'4		7'3	="4		2'4	7'3	4'9	14.6	100	34'1	933	1,338'2 }	55'5	13'2	68:1	63.3
Karachi .	1,166 {	5'1		6.9	3'4	223.8			3	55'7	3333	26	1'7	38.6	2.6	8.6	2'6	4'3	115-8	1,149'2}	59'4	16.3	30.0	68-6
GROUP VIINW. FRONTIER, INDUSVAL- LEY, AND NW.RAJ-	4.975	64.7		2'4	9'4	513'0	-4	74'6	*4	22'3	10'9	-8		17'1	5'6	9'8	1'8	6:8	86-6	1,251'5}	† 56°2	12'3	27.0	45.4
PUTANA.					62.5	125'0											-		125'0	625'0 }		62.5		62'5
Ahmedabad	187				21'4	866.3	5'3			5'3				32'1	***	So-2		26.7		}	394	16.0	37'4	58-8
B Necmuch .	442 \$		2'3		20'4	500'0	20'4		2'3	MIN TO	4'5			15'8	15.8	31'7		20'4		26'745	65.0	29'4	72.4	31.7
No. of colors	688 {	1'5	2,36		4'52	585-8				2'26	11'6	1'5	***	20'3	1'5	21'8	2'26	2'9	***	13'57 }	59'1			43.6
	,	7'4			27'8	253'7		9'3	1.0		5'6		1.0	1145	14'8	7'4	1'45	5.6	116.4	731'5 }	72.6	167		68'5
Agra	1,093	108.0		4.6	1.85	1153			1.85	1.83	46		1.82	7'3			-	11.0	118.0	9.26 }	36.0	11'9		897
		Port			9.12	Towal-S				1.83			1.83				'91			15'55}	50'5			

<sup>·</sup> Derived from the aggregates.

	1	-						-				33/32	-					-			-			
	ength.	-				1	1	-	1. A	DMISS		-		1.5	DEA	TH-RA	ATE.	Le			-	1		1
STATIONS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases	Tubercle of the	Pneumonia,	Other Respiratory Diseases.	Dysentery.	Diarrhora.	Hepatic Abscess.	Hepatic Congestion	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK	Syphilis,	Soft Chancre.	Gonorrhea.
Jhansi .	1,068		.9	11'2	41'2	799°6 1°87		85"		1'0			5'6	1 1			3'7		179'8	1,61611	62%	23'4	37'5	118'9
Nowgong .	266-{			***	41'	259*4	3.8	157'9		7'5	7'5	11,3	3.8	41'4	150	11.3	11.3		160.5	1,165'4		97'2	18.8	52.6
Indore .	138 {	7'2			7'2	36.5		21'7						14'5	7:25		7.2	7.2	79'7	376'8 7'25	22'4	14'5	21'7	1233
Mhow .	1,811	83		17	42'5 9'39	182.3	3.5	7'2		. 2'2	8.8	17	3.8	11.6	24'3		2,21	10.2	66.8	No. 1	44'1	16-6	1000	1333
GROUP VIII.—	-	22.6	.3	4'3	34'9	369'5	2'0	25'3	-3	2.6	8.8	1'4	415	17.6	17'8	18-4	3'5	10'6	118-2	1,026'7	1	24"1		
SOUTH- EAST RAJ- PUTANA, CENTRAL INDIA AND GUJARAT.	0,249		*16	1000	7.84				16				*48		1.58		1.60			15.68	55.3	24'3	32.0	
	1				1000	-		1											-					
Saugor .	197 {		3'4		6.7	400'7	13'5	141'4		6.7	3'4	3'4	3'4	13.2	23.6	20'2	6.43	10,1	252'5	2,474'7)	77'1	53'9	114'5	84'3
Jubbulpore.	908{	***		171	31.0	47'4		1476	1'1	1,10	5.5	1,10	66	17.6	48.5	9'9	2'2	14'3	149'8	871'1 }	47'4	12'1	396	98.0
Kamptee .	970 {				5"2	207'2		61'9		3,00 3,1	9.3	2'1		10.3	30'9	21'6	3'1	8'2	116.5	839.2 }	48.7	29'9	37'1	49'5
Secun- derabad }	3,235{	1'2	3'4	*3	28'4 4'64	22,3		79'4		1.2	5'9	-6	2.2	31,0	44'2	.3	5°3 2°47	6.2	118'7	761'1 }	\$8.0	28'4	36.2	53'8
Belgaum .	1,116 {	5'4			17'9 5'38	63.6		4.2			4'5	1.8		32.3	81	2016	1,8	8.1	134'4	689.1 }	44.6	23'3	16.1	95'0
Poona .	1,850 {	3,5	3.10 3.5		29.2	117-8		20'5		1'1	6.2	2'7	3,5	8.1	22'2	13'5	10000	17%	74'1	653'5}	38.2	11.0	20'5	41.6
Kirkee .	765 {		***	1.3	15"7	75"8	1'3	6.2		1'3	2,31	1,3	6.2	14'4	28'S 1'31	7.8	3.83 9.2	10'5	139'9	601'3 }	38.2	26.1	40'5	73'3
Ahmednagar	1,047	13'4	2.9	1'0	4'8	1117	2'9	6.7	:::	:::	12'4	1'9	1.0	33'4	17.2	12'4	3.83	10.2	164'3	7240 }	45'7	23.9	27'7	112.7
												1												
GROUP IX DECCAN.	10,188 {	279	1'9	.6	21'5	88'2	.8	53'8		1.4	6.4	1'7	2'7	19'7	30°8		41 294		125'0	755'9 L 13'74 }	t49°0	23'7	33'4	68.0
Colaba .	1,122{				27	228.3		4'5		3.6	450.4	3.6		16.0	5.9	10.7		0'7	217.5	Sog 31 6'245	61'9	43.7	82'9	90.0
Cannanore .	96{					41.7		10'4						22.1	10.4		7000	10'4	177'1	770'8}	44'0		83.3	23-8
Calicut .	95 {					31,1		21"1						21'1			21,1	12"1	168-4	715'8 }	51.0	42.1	52.6	73'7
Mallapuram	130 {	=			77	46*2	::	23'1		15'4	2000	:	77	30'8	46*2			77	284-6	7691	31'5	77	53.8 2	23'1
GROUP X.— WESTERN COAST.	1,444 {				3.8	185.6		7.6	.7	4.5	ACC.	2.8	7	20'1	11'8	9'7	2.8 1	2.2	217.5	816'5 }	57'3	37'4	78*3 1	01-8
Bellary .	544 {				11.0	167'3		31'2		1.8				5'5	16'5		1000	4.7	205'9 1,	033.1	66.5	55 8	38.6	08.2
-Bangalore .	2,244	5'3			20'9	51'7		58.4			7.6			17'4	26'7	17'4	-10-	0°2	166-7	979'9 }	59'8	46.8	43'3	77'5
В						-												1	-					
St. Thomas' Mount.	389 {			308	777	77		46'3							10'3	390	2'57			545'0 }	2.2	***	23'1	
Madras .	624{		3,5	1.6	6.4	57.7	=	41.2	=-	3,5	19.2			25'6	8.0	14'4	1.00	4.0	235001	3,51 }	66'2		36-9 1	37-8
GROUP XL.— SOUTHERN INDIA.	3,802 {	3.5		171	3°16	647		50.2		 S	8.9			18.7	20'5	13.5	2.4	2.1	178*9 1	6.813	58*8	47.6	38.0	92'5
STATE OF THE PARTY	-				arlund	from th		-								+ 10.	-tond		e aggre	amakee .				17.7

## TABLE III-continued.

RATIOS of STATIONS, GROUPS, and COMMANDS. For actuals see Table IV.

- 1	4						-			1	. Ap	MISSI	ON-	RATE.		2.	DEA	TH-R	ATE.	-	-			-
STATIONS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Fe at			Circulatory Diseases.		100	Other Respiratory Diseases.	Dysentery.	Diarrhora.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK-	Syphilis.	Soft Chancre.	Gonorrhæa.
Ranikhet .	1,119{				14'3	55'4	1			700	9'5		3.6	12.2	5'4	58"1	3.6	15"2	67.0	665.8 }	41.8	18'8		48'3
Chaubuttia.	460{	2'2			8·7 4·35	1000			60	. 2	17	2'2	2'2	3.3	2"2	4'3		4'3	26.1	460°9 }	26.4	13'0	4'3	8-7
Chakrata .	1,233 {	20'3	1.6		5.7	93'3	*8	29.2	200	200	14'3	1'6	1.6	48'7	9'7	29'2	3'2	41	124'1	888.0}	55'1	36.2	22'7	64.9
Lebong .	704 {	5-7				99'4			200	-	9.0			32'7	17'0	18'5	114	8.5	123.6	582*4 }	43'0	440	227	56'8
Solon .	301 {			=	10'0	13'3		Marine Inc.	200		200			10.0	19'9	16.6		16-6	26.6	498'31	26.2			26.6
Dagshai .	662{			:::	3.05	21'1		1900	100	:	60		1'5	31'7	3.0	21.1		22'7	40*8	5997	397	60	3.0	317
Sebathu .	414 {	21'7			2.4	74'9		100		4'5	169	2*4	7'2	2.4		24.5	2,45 5,4	41"1	77.3	67877 1 2'425	44'8	9'7	2'4	65.2
Jutogh .	231 {	4'3		:::	4'3					-	=	-		8'7		39.0		4'3	69.3	467.5 }	31.6	51'9	4'3	13'0
Khyragully.	77 {	=			13'0					-	13.0			::		13.0		155'8	39.0	15,33}	20'4	::		39.0
Baragully .	56	==				=				=	17.9				17.0	17'9		17'9	35'7	660'7 }	29'3	17'9	17'9	
Kuldunnah.	445	=			-	11'2		4.00			11,5		4.5	18.0	3,32	6.7		47'2	44.0	2.52 }	23'3	6-7	20'2	18'0
Kalabagh .	56-				17'9	53.0								17'9				179	89.3	732'1}	31.6	35'7		23.6
Camp Gharial. }	467		-		2,14	19'3			000		6.4	6'4	2.1	12.8	8-5	14'9		4'3	94°2 2°14 84°0	522'3 }	27'4	2'14	27.8	51'4
Barian. S	471		***		4.52	19'3					21.3	-	2,15	1 83	3,13		3.6	4"2	77'2	339'8 }	40.0	17.0	***	
Topa. Camp	259	5 22	2		44'4		=	30.0			19'3		3,6	3.0				44'4		1,088'9)	31.0		11.0	65.6
Lower Topa.	45	5			1009	37*2		17'5			17.5			17'5					30.6	5	76.0	22'2	8.8	44'4
	370				6.20	127'0			1100					13'5				10'8	24'3	8.75)	30.2	13'5	2"7	17.5
	2,522	,				124'5		157'8	1.6		6.7		5'0	5 190	5'9	14'3			46.4		40'8			
Ramandrug	1		-		1'98	*40		62.2			*40		1'19	1	.40	-	1.24	100	562-5	937'5	39'4	112's	***	250'a
Maymyo	870						201.6	111'5			20'7	1.1	3.		8.	3'4			204.6		38'4	81.6		
GROUP XII a- HILL ST.	11,235	5 4		2 .		65-2	12.0		7	.7	14'3	1'0		9 19"				7 13"		674'7 1		22'4	16.2	39'3
TIONS.		= =	1	1	1.00	'09	.09				.18			1	1 -2	1	-8	1	.3/		-	,36		
Darjeeling					2'61	99.5		39'2			2.61		20	1	2.6		10'4	1		20.89}	42'2	24.8	3.6	41'8
Naini Tal	186				***			5'4			5,38						5'3	3	***	10.75	28-6	5'4	10'8	26.8
Landour	. 146					47'9	***				***	81	6.			47%	6.8		***	6.85	47'5	1		
Kasauli	370				20.0		8*1	57'1	1'2	1.5	15.2	2.70	5				2'7	0	***	10.81	-30	-		
Dalhousie					7'14		=	38-2			1,10		22	***		15'3	***		84'0	10'70	35.6	-		-
Taragarh	. 33	3 .						30 -				22'90		-			7.6		***	30.23			38.5	-
Mount Ab		1		000			***	972				972	***					2 27'5		844'0}	44'6	-		
Pachmarhi		5 .			. 0 8.0	104'6		120'0			16'0	***			9,1	7				18:35		24.0		40'6
_	1	4.	.   .	-		from t				***					-	ed on		in		16'00 )	45'7			-

	strength.					1.	ADM	188102	N-RAT	E.		2. Ds	ATH-	RATE.		2	, Co	NSTA	NTLY S	ICK-RATE	ē.			
Stations and Commands.	Average annual stre	Influenza.	Cholera.	Small-pox.	Enteric Pever.	Intermittent Fever.	Remittent Fover,	Simple Continued	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases.	Tubercle of the lungs.	Paeumonia,	Other Respiratory Diseases.	Dysentery.	Diarrhosa.	Hepatic Abroess.	Hepatic Congestion and Inflammation.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK-	Syphilis,	Soft Chancre.	Gonorrhea.
Purandhur .	128 {				7-8	000.00					15 6		7.8		31.5	100000		7*8		7	76'3	125'0	1700	31.3
Khandalla .	73{	***	***			287.7			***		68.5		13'7		27'4	82'2		41"1		1,095'9)	45'6	27.4	13.7	3
Wellington	1,066 {			179	4.7	13'70		1.0			17.8	1.0	4.7	55'3	15'9	8'4				1,1257	69'4	46.0	22.2	61.0
GROUP		***	***						-		'94			'94			1'88		'94	46) }	100	.94		
Hill Con- valescent Depôts and Sanitaria,	3,592 {	3,1		1'4	3'06		111	24'2	.3			2°2	4'7	28.7	15'9		4.5	17'0	104'1		t57°6	37.6	15.6	20.0
Troops marching, India.	1,387 {		7'9 5'77		10.1	129'8	2.5	17:3		3.6	5'8	2'2	7'9	18.0	27'4	11'5		6-5	75'7	7 93 }	3.3	20'2	12'3	43'3
Aden Column Field Force, (Dthalla)	79 {			-		240'5		::			25°3			25'3	25'3			25'3	63.3		22'9	38.0		25'3
Deolali Depôt	546 {	1.8			18:3	260'1				1.8	12'8	=	3 7	14'7	3'7		1.83	73	252.7	5'495	68:8	82'4	56.8	:13.6
Poonamallee Depôt .	80-{		=	12'5	11	12.2		11			12'5	12'50	::	12'5	75'0	::		37"5	362'5	1,037'5 }	303.1	1500	50'0	162'5
EXTRA INDIA Aden	886 {	0.0		:::	3.3	381.0		65.2		13.5			3'4	30'5	56'4 2'26	15'8		14'7	94'8	1,237°0 } 18°06 }	65.8	18:1	16.9	59'8
Othalla (Aden His- terland)	192{	=	::			1,0156		5"2			26.0	=		10'4	31.5		2.51	41'7	36.2	1,557'3 }	49'1	36.2	=	=
India .	70,272 {	1174	1.0	1.5		176'2 '23 6'4	3'4	55'7 '01 2'2	'3 '01 '0	5°0 '55 '2	12'2 '65 1'2'2	1.6	3°4 °28 °3	20'3	15°2 '53 1°1	13'7	2°6 1°52 '4	13'7	117'3 '10 12'3	870'8) 10'43 51'4)	t51'4	27.7 16 3.5	28'5	***
NORTHERN COMMAND.	18,699{	20'3	::		13.0	225'7	*5				11.1			1771	6.3			15'6	75'7	8479 } 8'45 }	†4S*1	14'7	14'3	46.7
WESTERN COMMAND.	18,885 {	3.5	·5 ·37	119	17'6	250.0	1'4	48.7		5'6	1211	119	3.2	20.6	19"8	167	3'4	11'6	120'6	936'0 (	†5:°0	25.5	33'4	62:0
EASTERN COMMAND.	18,850 {	17'7	.04		18'0	132'0	.02	35-6	·4 •05	5.8	14°1 'So	1.8	3.3	21.8	12.4	156	2°4 1°43	14'9	126'9	823'7 }	†54°0	31.5	29'7	65'0
SECUNDERA- BAD DIVI- SION.	8,520 {	119	1'5		18.2	59'4		53'8	==	1'2	8.7	.8		25'4	29.2	7-3	3.8	11'9	153'9	925°6 } 9°62 }	†61°5	40.5	36'9	76'5
BURMA DIVISION	3,853 {	4.5	5°5 2°34	.5	1.6	63'1	196 126	21.7		*5	19'5	1.6		16.9		10-6	1.0	14'5	191'0	898'3} 9'86}	t52'9	60'7	55'1	74'2
Lucknew! . Meerut! . Ambala! . Rawulpindi!	2,497 2,037 2,546 2,680	'4 '8 '3			3.3 8.1 11.5	5°6 7°6 '9		1°3	'0 '1 '1	·2	1°4 2°6 °9	'4 '4 '2 '5	'3 '2 1'0	-8 2'7 -9 1'3	2'4	'5 '6 '4	·5	7 6	8.0 8.0 12.0	71°3	62°5 71°3 41°7 64°0	2'5	2'6	6°5 7°5 7°4 4°7
Seconderated;	3,235	.0	18	.0		1'9		3.3		"	*7	0	-3	7	2"2	0	3	.2	147	55'0		4'3	4'4	6.0
Bangaloret.	2,244			*2	1'4	-		5'3			10	'2	-4	.8	211	-4	7 -2	.2	46	39'4		1'8	50	9.2
	d from th			-		† Worl				egates		-	Con	stanti	v sick	-rate	per t.	,000 b	v disca	ses at the	elarge	st sta	tions	-

<sup>•</sup> Derived from the aggregates.

<sup>†</sup> Worked on the aggregates.

I Constantly sick-rate per 1,000 by diseases at the largest stations.

## TABLE IV.

ACTUALS of STATIONS, GROUPS, and COMMANDS on which the Ratios in Tables I-III have been calculated.

		1								I,	Армі	5800 N	8.	,	. Ds	ATHS.		3. C	ONSTA	NTLY SIC	E.					
STATIONS AND GROUPS.		Average annus strength.	Influenza.	Cholera,	Small-pox.	Enteric Pever,	Intermittent Perer.	Remittent Pever.	Simple Continued Fever.	Rheumatic Ferer.	Heat-stroke,	Circulatory Diseases.	Tubercie of the lungs.	Pacumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhera.	epatic Abacesa.	Hepatic Congression and Inflammation.	Venereal Diseases,	Att Caures.	Syphilis.	Soft Chancre.	Gonerhon.	Tenia.	Other Redoms.
Port Blair .		35 {	3		=		30	8	5		=						-	1	-	\$	83		-		-	
Rangoen	. 1,1	240{			2		38 1°28	3	5.85	-		14	34	.10	27	31 271		1 10	5 1 '34	283	1,107 9 59°05	5'84	7'41	123	=	
GROUP IBUR COAST AND B ISLANDS.	MA I-3	75*{		=	24	 *e8	58 1.86	11	997 5'99		::	14	34	.10	28 -81	31 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	24	21.24	34	218	1,190 63'18	5'84	81 7'41	9"63		1
Thayetmyo .	-	517 {				5 1 '94	9	38	61		15	10				95	5	1 15	37	65	310	2780	***	33	-	1
Meiktsia		176 {		9 63	=	*07	13		11			76	::	*07	- 47	16		-	3	4'34	12'05	3'44	***	79		0 .
Fort Dufferin .	-	286 {	=======================================		=		"10 16		97	=	111	.75		Ξ	37	.10	.24	=	1 0 0	4760 103	17'03 463	1.40	188	1.80	-	1
Shwebe		458 {	13		=	108	143		93 87	-	'01	33	13	-	13		.03		183	8.00	24°S1	4725	3,32	3744	-	
Bhamo	-	170}	13				3,33		2'03			'01 43	3		-27	16	14	-	···· 31	2'18	1,518	*** -80 86	70	80		1:
GROUP IIBUR INLAND.	MA 1,6	0)* {	45	.63	=	1,13	4'69	-38	5'05		125	5'00	-25	*18	101	1 83	.10	15	3,61	26'47	89.95	11169	5'91	8-87	****	
Fort William .	1		3		1		263		149		5	29		8	13	14	100	3 2	8	350	1.454	70	167	137		1
Port William .	1	170 {	16	-	.01	74	10'98		4'05		-85	3'49	72	7,8	*93 18	-80	6		10	10.31	103-21	10'72	180	11/15		1
Dum-Dum .		506 {	*16			*49	1'31					.03	-	.07	1.33		*37	*04	*58 33	2°25	11'15	14		100	-	-
Barrackpore .	1	299 {	-18	=	-	3,32	4775	724	***		111	:85	-		-30	1'06	100	3	.00	5*28	33.20	- "91	201	- 111	111	
GROUP IVBE	GAL I.	775*{	.30	110	101	3.48	***	***	100	111	194	3	**	1.02	***	***	***	6	51	406 1 47°87	1,988 17 136*87	11.88	110	***	***	1
B Disapore, ,		605 {		4 3	111	1'05	7	200	740		10		*25	***	3	7	***	3 '28	35	70 5-6;	241 20 15°20		***	-		1.
Benares		153	104	9			18	- 100	93		3 "05	74		36.	713	715	3	-	·42	170	113 10 0'97		***	1731	'90	0 .
Allahabad .		795 {	111		111	1,02			53 2'45			100	'03			95	*54	193	1,13	15'97	603 8 47°56	4'45	3728		'01	
Fort Allahabad		201 {	=		Tit	*54	3.81		15		-	*10	01	-	14	725	17		11	4'18	13'87	1.76	1'01	19	= .	
Fyzabad		914	1111			1*75			4'44 15		'05	1	***7	-	1'36	**************************************	*49 7	101	1'03	7'44	45°27 359	75	2102	4-67 16		
Sitapor		542 {	34		=	5.42		1111	*57 44		5	1'00	135	10	-60 33	.30	"15 26	'33 5 3	39	3°33	3,098 28	"53 66	1'43	143		
Cawnpore .		1407 { 1407 {	95	-	15	19	14'07	1	3'17	701	'47 58 1	3'57	.03	*82	1'92	5 1	1124	1'97	1'8e 5 '40	116 16'15	859 14 48:10	25		16"15	- 09	
Fatebgarh .		77{	2"33	-	1'45	375	30	.01	3'14	*05	1'75	*59 2	.35	-03	'79				90	7 '53	95 1 3'43	3.30	105	649		1111
GROCY VGANG	BTIE 5.5	21.0{	111	13	17	160 32	736	4	363	2	80	75	15	21	117	100	71	14 7	118	737 1 83 73	5,417 83 354*83	166	150	421	8	1

					1000				1,	ADX	18810	NS.		2. Du	ATHS.		3. C	CONSTA	NTLY SEC	ε,					-
STATIONS AND GROUPS.	Average annual strength,	Influenza.	Cholera,	Small-por.	Enteric Perer.	Intermittent Perer,	Remittent Pever,	Simple Continued Perer.	Rheumatic Ferer.	Heat-stroke,	Circulatory Diseases.	Tubercle of the lengs.	Paeumonia,	Other Respiratory Diseases,	Dysentery.	Diarrhora.		Hepatic Congestion and In-	Venereal Diseases,	ALL CAUSES,	Syphilis,	Selt Chancre.	Gonerrhoea.	Trais,	Other Enterea.
A Shahjahanpur .	367 {	==		1111	7 3 1 07	13		8			5 "31	==		3	6 1 34	6 '08	1:1	 '19	73	13.11 33.00	1'53	37.03	30	:::	:::
Barelly	1,243		-		9 1'45	55 2'48	:::	5	1111	111	136	***	71	36 170	1,02	14	111	27	153	860 4 58'53	5,13	16	94  II'IS	· 06	
Roorkee	392 {	7 7	9 '01	111	1'93	57	1 74	24  '57		1		****	111	5	6		***	5	33 4°01	333 7 18'05		1108	30	111	
Mecrut	2,037 {	25	=	===	50 10 16-44		****	1'48	-	14		100	3	84	3'09	1,10	6 3	- 000	318	2,147 26 145 19	118	48	159	15	
Deihi	303{	4		111	7 3 1°04	1		111			7	740	111	6		3 '05		100	3,88	4\$1 5 21'07	9 1'27	11	13	-	
Ambala	2,546 {	36		3 3		52	100		128	-17	3,30	1111	3		1,03	101	6 . 4	57 3°45	185	1,839	33	3798	125	81	
B Juliunder	733{		111	3	1			7 78			1		3		5	-	3	200	6'07	458 3 35*19	195		46		713
Perosepore	916		111	3				183		7 3		100		14	1'17	-		4	78 *08	817 9 45'21	2'11	1'18	6.70	204	101
Amritear	201 {	111			19	***	***	14	111	1111		:::	111	2 '05		3		105	3,02	138 3 878	1'03	3	9	3	
Lahore Cantonment,	751 {		111	1 1	8 6.04		***	179		40 3 1'33	-1	-	39	202	11	13	3 1	32	103	931 13 56-18	106	18	75 8'50	5	
Fort Lahore	107 {			1111	6	77	111	39		4	.04	111	3	103				.03	8 <sub>°66</sub>	197 4'68			·50		
Sialkot	1,271 {				95	216	***	3*24	715	31	13		1		.04	***	8 4	13	7'49	971 8 45°63	1'95	7	45	10	
Rawalpindi	2,680 {	4		=======================================	41 6 8-83	946 55'42	***	920 1 10'03		4	30	- 000	21 2 2'04	86 3'45	14	24	5 3	33	252	2,666 19 171'60	6-67	46	142	3	
Campbellpur	252{		111		1'33	73	2	10	111	4	3 101		7	3 '14			2 2 .15	8	15	160 5 10'51	3	-28	8	5	=
Attock	191 {					74	==	15	=	104	31	100		14	·31	'01	=	-30	3,01	199 3 10'05	35		2":6	=	=
GROUP VIUFFER SUB-HIMALAYA.	13,989{	3'08	2 '01	1	215 43 49'00	3,810 6 113'78	7 1"05	898	73	83 7 3'10	12	4'04	7-63	330	110	188	33 16 4'38	310	1,423	13,587 134 740°06	339 38'54	249	831	36	31
A Nowshera	769			-		564		190	-	17 8			6		0 1	4		2 101	43	1,011 12 34'39	5	17	3.04		111
Peshawar	1,683	313	-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	34 5 4'73	1,325	=	4°42 21 1°41	*30	8	10	·38	465	'59 13 "71	*53	*07 26 *62	1 14	4	131	2,313	3.08	48	62		.08
Mocitan	946 {	3		===	1'24	130		5'80		18	97		777	·\$0	10	3	3	9	7'54	943 13 48'54 150	1174	10 '75 23		40	
Hyderabad	4115	=	-	·51	.03	5°21 261	.03	115	=	13	.03		714	109	.39	10	3 3	99	6.41	2279 1,340		3'09	275 ·	3	-
Group VII.—NW.	7,166 }	322	1	1'01	1*19	8·69		371	16	111	3°53	-87	*55	1'97	18	*32	.30	*47	12'28	6,226	2.80	139	231	20	
VALLEY, AND N W. RAJPOTANA.	4.975*{	7'00		1'77	7-63	67'06	2	11.87		13	1	1'53	***	3'86	1	***	1'53	1	200	279'72	9'47	6-13	37,10	55	.00

## TABLE IV-continued.

ACTUALS of STATIONS, GROUPS, and COMMANOS on which the ratios in Tables 1-111 have been calculated-contd

-									-	, An	MIBSIO	ons.		2, D	BATHS.		2.	CONST	ANTLY S	ick.				
STATIONS AND GROUPS.	Average annual strength,	Influenza.	Cholera,	Small-pox.	Enterle Pever,	Intermittent Pever.	Remittent Perer .	Simple Continued Perer,	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases.	Tubercle of the lungs.	Puesmonia,	Other Respiratory Diseases.	Dysentery.	Diarrhea.	Abscess.	Hepatic Congestion and In-	Venereal Diseases.	Au Causse,	Syphills.	Soft Chancre,	Generabea.	Tenla. Other Entozoa,
Deesa A	16 {									-			-:	=		=		=	3	10			1	
Ahmedabad	187 {				*18 4 3	163	-	-		-	-					15		5	31	*63 292	13	7	11	
B Neemuch	442 {		1		13	4'13	9	-	1	1 1	30		-	7	717	14		9	"99 59	19'15	13	32		
Nasirabad	,		103		2'34	6'55	1'43		*02		*15			35	.20	15	. 0	*44	5'00	25'13 903	1'37	3"35	1'28	1 2
	css {	10			3,31	137					77	'16	124	72	*os	*55	-68	3	14°69 63	49'94	5'71	6.66	3732	*0a *33
Muttra	540 {	110		··· 53	1'25	4'64	*00	-31	.00	.01	12		777	·26	.39	*07		'08	5'44	19.01	1'20	173	3.21	··· ·
Agra	1,093	8*01	-	10	3.31	30°07 854	1111	31		36	15	103	83.	'31	=	18		*54	11,11	65.03	1'39	1-16	484	4 =
Jhansi	1,068 {	'06		1'12	7'47	17.50	111	1,98		'03	1-27	.08	74	1'37	3.2	74	10.00		13,94	66°26	25	1'86		= =
Nowgong	366 {			=	2769	3.68	07	1'72		.08	-06	3		70	85	*14	44	·48	5'51	33,10	4 01	5	***	= =
Indore	138			-	-35	-15		3		=		***		.10	105	100	-15	-115	70	2,00		14	6	1 1
Mbow	:,811 {	15		3	77 15'35	330	73	13 -74		10	1,30	3 -Et	7	1"16	44 3 27:	35	1'1%	19	13.81	79.84 79.84	30	6.44	48	3 2
GROUP VIII-SE. RAIPUTANA, CEN- TRAL INDIA, AND GUJARAT,	6,269*{	8'95	100	37	318 49 36-37	3,300 80'41	18	-	.03	16	4113	9	2.05 3 2.05	5'45	111 8 7'32	100	31 10 2'07	66	743	6,416 91 345'68	152	204	386	23 5
Sauger					,	119		42				,		4	,	6	2	3	75	438	16	34	15	1
	297 {		···9		35			1761		11 2	.04	·65	12	11.	165	*33	.18	13	7'79	31'89 791	* 35 11	378	3'66 80	705
Jubbalpore	908 {	=		*00	3,04	773	1	4°19	733	.02	.0.	'03	17	1,00	3.31	1,01	'01	*42	8:76	43°01 814	1'15	3.95	4'05	.03 .01
Kamptee	970 {		-	***	1.02	67:		3,30		.01	'97	T	=	·33	5'45	71	,23 1	*70	12.63	47"26	3,08	4.08	***	
B Secunderabad	3,235 {	100	11 10		16.88		200	257	:::	5 1 '2)	19 3	9 "04	8	74 1 2°25	143 1 7'24	1	17 8 1-61	20	384 47163	2,463 47 187°57	93 13'76	118		4
Belgaum	1,116	.30	***		3.04 c	2.70	***	35		=	.30	.30	=	1.22	1.03	-83	34	9 9	19-11	759 8 4973	3.83	18	106	4
Poons	1,850 {	24	4	.10	54 17 8°26	7'58	-	1'83	10	3	130	1'41	6 '26	15	41 9°52	25	89.89	33	137	1,200 29 71'23	22	38	27	8 3
Kirkee	763	111		1	203	1'55	200	5		103	4 .11	1 714	5	## *64	1,02		3 3	863	107	450 9 19'45	1'95	31	55	5
Ahmednagar	1,047	144	. 2	tons	1,38	5'86	3	738		-	13 1 2 80	*63	752	35	1,30	13	3 4 30	71	13'93	758 14 47'80	25	29	118	3
GROUP IN,-DECCAR	10,188 {	30	19 16 '35		43	899 36'41	1	548 21°89	-11		68 7 8'03	17 2 2'75	27	201	314	104	42 30 3'97	105	1,374	7.701 140 499°03	30'33	340	693	35 3 51 '36
Cefaba	1,122		=		3 2 10	250		5		4	7 1	4		18	10	13	1	12	214	901	49	93	103	1:
Cannanore	96				***	4			=	-	ot.	-		5 '19	"55 1	*68	1 1 1 1 2 2 2		23*11	74		8	5'35	3 -
Calleut	95 {		-	-		97	1	3						2			2	*08	16	4°93 68		*78 5	7	7
Mallapuram .	130 {					6		3						*08	6		*05	122	3724	129	143	1'03	75	
GROUP XWESTERN COAST.	- (	1	=		4	100		11	1	04	109	.4	,0	29	17	14	4	18	314	4°10 1,179 10	54	113	147	5
COAST		. 05			3,33	19,02	'oşl	*42"	•D	'30'	74 d from	St the	15 aggre	argai	*94	71	74	3,14	28"75	83174	0,43	10'84	870	-16

									I. At	N:ssi	ONS.		2, E	DEATH		3.	Coxe	STANTL	Y SICE					
STATIONS AND GROUPS.	Average answal strength,	Influenza.	Cholera,	Small-por,	Enteric Fever.	Intermittent Fewer,	Remittent Pever.	Simple Continued Ferer.	Rheumatic Perer.	Heat-stroke,	Circulatory Diseases,	Tebercie of the lungs.	Pocumenta,	Other Rospiratory Diseases.	Dyseatery.	Diarrhea,	Hepatic Abscess,	Repatic Congestion and In-	Venereal Diseases,	ALL CANEER,	Syphile,	Soft Chancre,	Goronrham.	Tenha.
A Bellary	544 {			- 77	6	91 3*45	111	17	=	104	94			3	9	:		8	13,01	562	32 7°38	21	59	1
Bangalore	2,244	- 'go		39	47 11 10°04	116	100	131 7°03		111	17 2 179	35	728	39	4'64	95	1.48	93	374 35°35	3,199 23 134*17	105	11,30	174	9 -29
B St. Thomas' Mount	389 {		111	1	3 1 7 37	3 '08	***	18	=		106			13	4 142	*07	39		47	313,12	6	9 54	3'40	= =
Madras	c24{	=	110	 	-87	36	1111	36	=	*04	19	=	11.	1,19	33	9 34	107	15	147	891 3 41'33	38	23 T45	85 5.88	704
GROUP XISOUTH- ERN INDIA.	3,803 {	12		1'40	60 13 13°50	9'21		192 8-63	==	3	31 5'24	9	78	3.50	78 5'94	\$0	1.04	46	680	3,864 20 223 73	181	148	351 28-23	12
Hanikhet	1,119			111	3'00	62 3'42	111	31		,03	33	=	31	14 1'47	.35	65  3'03	129	17	75	745 46'83	4*19	=	6-45	2
Chaubuttia	400}	104	==	=	1'0:	6		7	Ξ	=	174	200	10.	, , ,	195	o6	=		792	212 4 12'15	6	14	4	103
Chakrata	1,233 {	*84			7 1 3'10	3'09	; ;;;				30	.85	39	207	1'21	1'05	4 2 42 1	3 '39	153	1,096 5 67'90 410	8'41 31	269	7'41	9
Lebong	704	-97	=	111	=	2.80		=		'07	67	-	-	1,33	1.28	 '\$9 5	*30		9,65	30 24	4'35	1.80	3'45	-06
Solen	301 {	111	1111	111	71	*39 14	-	63	::		=			145	43	14			74	793			···· '70	8
Dagshai	661		-	1111	1,33	***87 31		10	-		7,		33	76	777	·8,	105	76	4'16	26'31 28:	-49	19	3,48	60.
Subathu	414)	10			"11	1,13			-		·6.	-47	50	,03		48 9	'47 	1	5'41	18 55	···61		4'41	
Jutogh	251				.30	***		100	=	11 11	-	-		04	=	-67		12	3	7'32	1'28		3	
Baragelly	77 { 55 {	11	11 11	11 11	o6 		-		-	-	1	=				1		2	*13	37	1	1	-	
Kulgunnah	445{	-	11	11	-	5		2	-		5	-	43	8		3		21	34 90	162	3 '59	9	8	
Kalabagh	55}	-		-		306	-	05	-			-		3					541	41	3		3	
Camp Gharial .	407 {	7		1111	3 1	. 9	1 11	37			3	3		6		316	=	3	44 1 3'89	243	?	13	24	1
" Barian .	471 {	7 111			1'86		-	32 2'46	=		10	-	103		-48 -18	7 62	=	2	5'23	246 18'85		71	25	1 -
Upper Topa .	259 {	-			6 6	5 <sub>14</sub>		35	=		33	=	1	105	103	=	1		2'14	88		3	17	= =
" Lower Topa .	45 }	101			44				=		711	=	=	1 '20	"15	=	-	.11	-51	5'43	1	- 1	41	7
Khan Spor	457 {	*04			1.01 2	 '38		8	=		37	=		8 -47	3	<sub>41</sub>	795	-91	2'27	40.00	'40	74		01
Cherat	270	100		==	78	1'06	::	=	***			=	=	.33	.08	33	=	-4	9	3 15'10	59	;24		7 =
-	-	-							* De	rived	from	the s	agree	ates.	-			1000						

## TABLE IV—continued.

ACTUALS of STATIONS, GROUPS, and COMMANDS, on which the ratios in Tables I-III have been calculated.

						- 10				ı. A:	M 1881	ONS.		a. E	EATHS		3.	Coxe	TANTLY	SICE.					
STATIONS AND GROOMS.	Average annual strength.	Influenza,	Chotera.	Small-pox.	Enteric Perer.	Intermittent Fever.	Remittent Perer,	Simple Continued Ferer.	Rheematic Fever.	Heat-stroke,	Circulatory Diseases,	Tuberde of the lungs.	Pacumonia.	Other Respiratory Diseases,	Dysentery.	Diarrhora.	Abacese.	repair Congestion and In-	Venereal Diseases	ALL CAPPER,	Syphilis,	Soft Chancre,	Generalora.	Tenia,	
poetta	2,523 {	=	111	3	17 5 3'41	314		398	4 '21	100	17 2 61	3	14 3	48	15	36	6 4 .59	13	117	2,052 23 99'41	24 4*47	1'97	65	10	
tamandrug	16{	=	-		111			105			111	=	=			=			85	15	5				
laymyo	870{	=		-		1 05	I	3.48	=		1763	101	3 .10	14	7	106	101		178 3 21'\$3	753 5 50-83	71 3 12'77	673	4'03		
STATIONS.	11,235	51	410		19'55	1	1	26.40		35	16103	1.87	31,32	217	74 5'94	237	19	673	875 106'36	7,580 69 455719	252 4 41°38	440	441	42 ''92	
darjeeling	383 {		=		3 1 181	410	111	15		*12	4 :48	107	3 '23	4	11 1 105	1	6 4	6	38	317 8 16'18	1.08		16	10,01	
faini Tai	196	3		111	-59	70	***				1 19			3	731	1	100	1 121	41	5'32	1			103	
andour	146	8	111	*14	=,,		.18	=			-	781	 .04	*04		7 '29	100	*17	3745	6,03	1,33		14		
assuli	370 {	111	=		119	1'90	'05			101	7 706	.03	703	10	-01	3 *o5 8	.03	10.	5'45	318 4 31°55 437	1.80		3'56		
alhousle	841 {		-	*08	1 6	1,31	=	1 93		104	131			739	110	-47	-	·65	5'24	31'03	***		3,94	100	
arree	131 {	-15	-	*01			***	175		38	73	79	3	*16		*06	-21	180	3'24	17'57			114		
aragarh	109 {		-	=	711	20	1		11 11	11 11				*14		6	-	3		1'50					
achmathi	125	-		1	*03	1,	-	15				*04		7 7	5	2 81.	'28	7 723	11	3'93	3	3	s		ı
urandhur	118{	=			1 1		-	-33	111	-	2	1		19	*37 4 **36	.03 	-	1	24	106		4	-56 		ı
Chandalla	73 {		=		***	-6				-	 		11.			6		37	5	3'33					
Veilington	1,065	=	=	26	1	170	-	.13		=	1.81	40	33	3,13	17	9		***	139	1,200 5 73'98		***	4'10	100	
GROUP XIIS, - HILL CONVALENCENT DE- POTS, AND SANS- TARIA.	3,599	100	9	5	111		***		100		56 4 478	- 4	17	103	57 2 4'42	200	15 10 279	61 3 98	374 1 42°60	305.84 38 3°000	1	***	16'53	200	н
				_		4 18				1 5				25	2	8 20		9	105		3		64	1	
Iroops marching, India,	1,387			6		9 "7	8 '01	5 7	8	.03	10'		*66	*03	7	5 "16	-	*05	90	4'45		* **10	-50	-	
tden Column Field Force (Othalia).	79		-	***	=	=	9		=	=	2		111			-			5	\$1.8	1	111	=	-	
Deolali Depôt	546				***	0 34			-				2			7		4	138			***	6:		
		1	-		1.2	0 6.4			121	717	184		*14	37	71)		*26		12'97	37'5	5'1	8 9'63	4'91	103	
Poenamalice Depôt .	80				200	8	5	10	111	1111	1'69	1		170	-				10.88	8 <sub>3</sub> 24°25	460	100		3	П
ERTRA INDIA.	886	16	8	=		7 153	2		3	-86	1 2	410	.33	100	3.81	100	1	487	7'50	1,096 16 58*33	-1.24	-	44	***	

<sup>.</sup> Derived from the aggregates,

_	1				-		60.7												_
	-	-			1	-			I. ADS	ISSIONS.	3, 1	PEATHS.	3		TANTLY SI	cx.		-	-
STATIONS AND COMMANDS.	Average annual strength,	Inducata,	Cholera,	Small-pox,	Enterio Pever,	Intermittent Fever,	Remittent Fever,	Simple Continued Perer,	Heat-stroke,	Circulatory Diseases.  Tubercle of the lungs.	Pneumonia, Other Respiratory Diseases,	Dysestery.		Repatic Congestion and In-	Venereal Diseases,	ALL CAUSES,	Syphile,	Soft Chancre, Gonorrhera,	Tenla.
thalla (Aden Hinter- land.)	192 {	111				195				5		8 39	=	1	8 7	1	7 35		
The state of the s	70,373	5 804  27'80 12'62	27 46 1		1,095 224	447'43		3.917 1 154'5) B	60 0000	82 24 860 114 46 12 12 86°77 :9 84 36°83 53°52	241 1,42 20 	4 70'09	960 1		8,212 11  86479	3,471 61,195 733 59 3,614'79 21'55	240'27 2	2,005 4,1	
ESTERN COMMAND .	18,885 {	379 8'32 60 2'90 333 15'54	17	21 2 1'04 35 2 3'93 30 2'44 8	333 77 61°37 340 70	4,723 4,723 7,152.83 2,489 114.13 505	97 27 3 3 00 10 10 10 10 10 10 10 10 10 10 10 10	920 3170 671	9 105 14 80 4'44 8 110 1 5 71 4'85	207 28 10 4 1887 487 228 30 11 2 21'97 7'21 205 34 15 4 28'15 5'97	86 32 10'09 14'29 60 38 50 17'3 63 41 6'03 22'5	2 8 2 10°47 9 37 1 18 5 20°26 1 233 5 21°57	8'53 5' 315 0'59 7' 291 9'98 7'5	37 191 17 1 168 12'90 64 210 44 210 45 281 27 15'56	2,277 2,277 218-62 2,393 256-88	158 8,9'59 17,677 244 952'83 15,527 190	475 1 59°59 589	*** 100	69 89 64 64 60 1'90
BEAN DIVISION .	3.853 {	16	'30 21 9 '63	1.83	30'43	243 7'69	191	19 80	- "35 - 25	9'20 1'14 9'20 1'14	6 6	5 51 4		2 3.82	72'88	303.02 38 3°491 \$33.03	234	27'15 60'2 216 28 20'05 23'5	7
GROUPS AN	в Сомм	ANDS	8.	-		0	. 1	March	1	TRENGTH		1	ONSTA	-		0-1	N	1	Тот
The Party of					Jan.	Fe		March.	April.	May.	June.	July		ug.	Sept.	Oct.	Nov.	Dec.	
GROUP 1.—BU	RMA CO	DAST NDS.	ANE	}	98.6		1,445	71'24			1 23		100	1,383	63'77	1,315	1		
" II.—Bu	RMA INI	LAND		. {	73'9		1,187 5°296	70'32	1000		1 333	393		03'12	1,775	1,827 94°21			
1V.—BE	INGAL AN	D OR	RISSA	.{	1,75	3 100	,141 51'71	1,621			-		3 3	1,618 42*11	1,676	1,630			
	NGETIC AND CHU PUR.		LAIN		8,42 368°0		3,284 57.89	8,246 358°16	1000		1			6,282 64°47	6,292 363'74	6,222 374'86			82 4,25
" VI.—U	PPER S	ив-Н	IIMA	3 1	20,92		71"32	19,455 815'26			1 12 1			9,067 52°So	9,362 542°87	11,8to		17,599	167 8,88
1	W. I	No	TIER LLEY RTH RAJ	1	5,87		5,596	5,972	5,36	3 4,10				3,586	3,887		. 5,81	6,110	59
	PUTANA.		-	U	295'8		35							72.73	172'73	287*91			
	sames. The	STERN	N.	1	€,93	5	5,841	6,965	6,21	8 5,94	5.92	5,3	93	6,185	6,281	5,652	6,0	52 6,096	74
- 1	RAJPUTA TRAL INI GUJARAT	NA,			394'4	6 33	27'05	322'46	284"	4 263'9	240'4	4 248	80 3	24'50	445'85	464'97	461%	43 369'59	4,14

Note.—Constantly sick x 365 = total annual loss of service.

• Derived from the aggregates.

• Remaining + admitted = total treated premaining + admitted + died out of hospital = total cases.

# TABLE IV—concluded.

		-		- Inches	1.	STRENG	TH.	2. C	ONSTANT	LY SICK.				
GROUPS AND COMMANDS.		Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL
GROUP XWESTERN COAST	.{	1,436	1,617	1,504		1000				100000	333	32.53	1,373	17,33
" XI.—SOUTHERN INDIA	.{	3,812		3,904 243'54			3,755 216°48		3,825	3,854			3,301	2,684'7
" XIIa.—HILL STATIONS	.{	3,842	4,086	5,536	11,856 376°95			1			10000	2000	4,063 217'06	134,81,
" XII&.—HILL CONVALESCEN DEPÖTS, AND SAN TARIA.	:-{	1,331 82·83	78:11	1,792	3,855 168'96	30,000		5,569 331'00		5,273 305'29	-	1,754	1,324	43,10 2,483°3
NDIA · · · ·	.{	70,677 3,774°05						70,630 3,530°95				10000		843,26 43,377'4
NORTHERN COMMAND	.{	18,874 970°06	19,152	19,163	18,605	19,594 812'92	19,900	19,788	19,693	19,536	1100000	No. of Concession,	16,537 1,204°08	224,38
Vestern Command	.{	19,054	18,511	19,804 8 89°43	19,436 838-64	19,197 771°25	19,168 774'94	19,029	18,951		18,224		18,295	226,61
ASTERN COMMAND	{	19,548	20,004	19,046	19,581	19,499	19,225	18,821	19,480	19,347	18,431 1,127°80	16,532	16,686	226,20 12,218'4
ECUNDERABAD DIVISION	1	9,175 541°68	9,174	8,492 510'34	8,468	8,364 453'76	8,307 456 <sup>-</sup> 72	8,295 476'29	8,246 504'31	8,295 563'36	8,183 573'52	8,9911 637*59	8,245 555'73	6,287.0
URMA DIVISION	{	2,973 185'52	3,368	3,569 181*53	4,093	4,156	4,164	4,145	4-145	4,132	4,053	3,898	3,546	46,24 2,447'4

#### TABLE V.

ABSTRACT of the CANTONMENT SANITARY REPORTS of the most UNHEALTHY STATIONS, SANITARY DEFECTS, IMPROVEMENTS, SUGGESTIONS, etc.

(The ratios of sickness and mortality will be found in Table III.)

#### NORTHERN COMMAND.

LAHORE CANTONMENT (MIAN MIR).—The greater part of the land used for trenching nightsoil is under cultivation but more water required for irrigation. The supply of filtered water is limited and the filtration cannot be relied upon. The only other source of drinking water is from wells, the greater number of which are now more or less protected. There are no jheels in the Cantonment or the vicinity though a large number of pits still exist in the European and Native Infantry lines, but these are being gradually filled in. The filter-beds at the head works of the Cantonment water supply were improved at an estimated cost of R2,475 and improvements were made in the drainage at an estimated cost of R11,626. A Government dairy was established.

The Cantonment Committee made the following suggestions:-

- (1) A pipe water supply of good quality and of universal distribution is urgently required.
- (2) Trees for giving shade are greatly needed in the Royal Artillery lines in the vicinity of the stables.
- (3) Provision for irrigation of the filth trench sites should be made, otherwise the ground cannot be properly cultivated. This awaits the completion of the new Cantonment distributary.
- (4) The extension of brick-fields in the vicinity of Cantonments, is greatly to be deprecated.

The Principal Medical Officer of the Division states that "the most urgent sanitary need is a piped water supply from a pure source—the present source is open to every sort of pollution, and the filter-beds are unreliable."

The Lieutenant-General Commanding the Division states that "so long as the station drinks canal water it is hopeless to try and keep out enteric and cholera. As the Government of India have approved of new water works which will cost two lacs and have been for a long term of years looking for the money, it is to be hoped that the advent of the water works is approaching."

#### WESTERN COMMAND.

AHMEDABAD.—"The surface and sub-soil drainage is insufficient in the Cantonment generally. The enormous growth of trees in the lines and of trees, shrubs, bushes and cactus hedges in private compounds account for the unhealthiness of the station."

The Cantonment Committee note that "the trees that are not needed for shade will be gradually removed and shrubs and cactus hedges in private compounds thinned and cleaned out. So far as the surface and sub-soil drainage is concerned it is not considered that anything can be done owing to the sandy soil, all rain being rapidly absorbed."

The Principal Medical Officer of the Division agrees with the foregoing remarks and adds that "the trees, hedges, shrubs, etc, might well be thinned out without diminishing the shelter afforded or lessening the beauty of the station."

Apparently no works to improve the sanitary condition of the station were executed during the year.

JHANSI.—The position of the grounds used for trenching have, on account of the increase in the normal garrison, now become unsatisfactory, and steps are being taken to acquire two plots of ground outside but near the Cantonment for the special purpose of trenching. The drainage is not efficient, three nullahs running through Cantonments require attention, as water lodges after the rains. There are many pits, nullahs, etc, in the Cantonment and vicinity which retain water and are sources of danger.

A new road was constructed at a cost of R1,053 from Cantonment funds and existing roads were maintained at a cost of R1,500. The total amount expended on conservancy during the year was R17,712.

The Cantonment Committee suggest that "the three nullahs referred to should, if possible, be put in such a condition that water would not lodge in their courses and form breeding places for mosquitoes. All borrow pits should be filled up and jungle trees cut down. An arrangement should, if possible, be come to with the Civil and Railway authorities as to measures to be taken to perfect surface drainage in the vicinity of the Cantonment and in the areas under their control. If malaria could be stamped out in Jhansi, the saving in health, efficiency and service would be enormous, but this can only be done by the co-operation of all the authorities concerned."

The Principal Medical Officer states that owing to the prevalence of malarial fever the foregoing suggestions should be considered without delay. Nullahs should be rendered free from stagnant water and the surface drainage made perfect.

The Officer Commanding the Jhansi Brigade remarks that the nullahs south of the new Royal Field Artillery lines are being straightened by the Military Works Services. As regards the main (dhobi) nullah running through the centre of Cantonments, a special grant will probably be required, as the expenditure will be heavy. The Civil and Railway authorities will be addressed with a view to taking concerted action in regard to surface drainage. Jungle trees are being gradually removed. The construction of a new Cantonment Hospital will be commenced shortly.

SAUGOR.—There is a swampy stream north of the Cantonment running close to the British Infantry and Royal Artillery lines. The pools that could be drained have been so treated but will fill up next rains. Other pools have been treated with kerosine oil. The married quarters for British troops are bad. Masonry drains were constructed in the Sadar bazaar, Cantonment roads, bridges, drains, wells and latrines were repaired and latrine seats, receptacles, buckets and ablution screens, etc., were purchased. The total amount expended on conservancy during the year was R10,302.

The Cantonment Committee suggest that better quarters for married families be built and consider that the sum of R100 allotted for anti-malarial measures is quite inadequate.

#### TABLE V-concluded.

ABSTRACT of the CANTONMENT SANITARY REPORTS of the most UNHEALTHY STATIONS, SANITARY DEFECTS,
IMPROVEMENTS, SUGGESTIONS, etc.

#### EASTERN COMMAND.

Benares.—The Station Hospital, regimental bakery and soda water manufactory for British Troops are supplied for drinking purposes only with filtered water from the Municipal water works. The method of conveying the water in iron carts from the nearest stand pipe is not good as the water by so much handling is liable to contamination. A village close to the Native Infantry lines is said to be a "standing menace" to the health of the Native troops. Retaining walls and inverts were built and the main station drain improved wire gauze doors, were provided to the male hospital and Officers' ward, Station Hospital; new latrines with roofs were constructed and provided with Delhi Durbar stands, double buckets and dry earth sheds, etc.

The Cantonment Committee suggest that filtered water from the Municipal water works should be piped to the barracks, Station Hospital, and Sudder bazaar, and that an infectious diseases hospital should be constructed, as at present there are no means of carrying out the instructions for the isolation of enteric fever patients and their sick attendants.

The Principal Medical Officer of the 8th (Lucknow) Division notes that water from the Manicipal water works should be laid on to the barracks, lines and hospital; and that an isolation block for infectious cases is very much needed. The question of reappropriating the station family hospital as such is uncer consideration. He considers that the insanitary village referred to above should be included in the Cantonment area and so brought under Cantonment rules.

The Brigadier-General Commanding the Allahabad Brigade remarks that the health of the troops was excellent during the past year except for an outbreak of cholera which he does not think was attributable to the water supply. He adds that an isolation block for infectious cases among British Troops is much wanted.

#### SECUNDERABAD DIVISION.

CALICUT.—The surface drainage in some parts of the Cantonment is unsatisfactory, but proposals for its improvement by means of earthenware pipes has been held in abeyance owing to the probability of the station being closed at an early date. Meanwhile temporary measures have been adopted whereby these drains are regularly and carefully cleaned. The drain from the coffee shop kitchen requires extension down to the slope of the hill. Minor improvements for the extension of the drains, the removal of silt from one well and the covering not another and for the reflooring of some of the quarters were effected.

The Cantonment Committee state that there is only one latrine in use for the whole detachment which is very unsatisfactory, and that the construction of a latrine in place of the one closed since February 1903 has not yet been undertaken. The immediate construction of this latrine is very necessary, as otherwise it would be extremely difficult to carry out segregation of parties arriving from infected stations. The one latrine for the married quarters will be found sufficient when the strength of the married establishment is three or four, but when this number is exceeded, as at present, the want of a second latrine is greatly felt. The present latrine has no partitions and though the matter has been brought to notice, no action has been taken.

The Principal Medical Officer of the Bangalore and Southern Brigades considers the measures noted below necessary in order to remedy the existing insanitary conditions.

(1) The provision of a latrice in place of the one condemned and closed in 1901. (2) The erection of another latrine for married quarters (3) The extension of the drain from the coffee shop kitchen.

The Officer Commanding the Southern Brigade remarks as follows:—(1) A temporary latrine is being provided. (2) Arrangements will be made for the erection of another latrine for the married quarters; at present no funds are available. (3) The extension of the drain from the coffee shop kitchen has been carried out. (4) Ten partitions in the existing latrine for married quarters have been erected

POONAMALLEE.—A most round three sides of the Station Hospital in which water stagnates during the rains has been brought to notice in previous reports. Steps are being taken by the Military Works Services to have the cost of the necessary drainage included in the next budget estimate. The bazaar wells are liable to contamination through the usual native methods of drawing water.

The Principal Medical Officer of the 9th Division, and the Officer Commanding the Madras Brigade have no remarks to offer.

BII MA DIVISION.

ME's TILA .- No defects reported

## TABLE VI.

## TABLE VII.

INFLUENZA by months, stations, groups, and commands.

CHOLERA by months, stations, groups, and commands.

-	1	An		SION	S PRO		NELE	IEN7	A IN	FAC		ONTH			Anwi	5510	NS F	ROM			A IN			ONTE		-
Stations* and Groups.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Port Blair		1				-					3		3													
GROUP I.—BURMA COAST				-							3		3													
Meiktila Shwebo : : : :			ï						2		2		13								21		=	-::		21
GROUP II.—BURMA INLAND			,				1		2	6	2		13								21					21
Fort William · · · · · · · · · · · · · · · · · · ·		- : :		111			111			3 3			3 4 5					171	1111	:::			:::			
GROUP IV.—BENGAL AND ORISSA	1	1	1					1	1.	6		1	12													
Bonapore				5			1111			 3 4 <sup>2</sup>	28 34	: : "	 1 34 86	1111	1111				7		4 : : :					49
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR		1		5	2	1		2	1	45	62	2	121					2	7		4					13
Roorkee		12:2	:3::	3 2	5 ::	5 3 ::	1 2	1 4	6	1	6 9	-111	7 25 4 36						2 : : :					1111	::::	3 :: :
B Sialkot			3	7						11			1 4		11				11							
GROUP VIUPPER SUB- HIMALAVA	5	4	6	6	5	8	4	5	6	11	16	1	77						2							2
Peshawar	=	···			87	68 2	79	18	24	24		2	313				-								::	=
Karachi	1	2	1		2				***		-		6						-							
FRONTIER, INDUS VALLEY, AND NORTH- WESTERN RAJPUTANA .	1	3	1		89	70	79	18	24	24	11	2	322										-			
Neemuch Nassrabad Muttra Agra Ihansi Indore Mhow VIII.—South-East-								3 7	51	48		2	11 4 119 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				-									
ERN RAJPUTANA, CEN- TRAL INDIA, AND GUJARAT	3	5	5	4			2	10	51	49	9	3	141					1			1					2
Saugor			-	-			***		-				-											1		
Secunderabad			5 1				2			1		4 2 11	4 6 6		1111						11  2 1	-	-	=		11  3
GROUP IXDECCAN .	1		6			**	2		***	1	3	17	30	***	***	2	2				14			1		105

## TABLE VI-concluded.

## TABLE VII-concluded.

INFLUENZA by months, stations, groups, and commands.

CHOLERA by months, stations, groups, and commands.

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STATIONS® AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	Jone.	July.	August	September.	October.	November.	December.	TOTAL
Colaba																									-	
GROUP X.—WESTERN COAST			•										-		400											
Bangalore	11		2	6	2	2	11	11	11	11	11		12			::		::			::				11	
GROUP XI.—SOUTHERN INDIA			2	6	2	2			-		-		12				-			1		1				,
Chaubuttia				. 6 3 :: :: :: 9	6		3 6  1 to	3	3	3 6			1 25 4 9 1 7 1 4 52													-,
Naini Tal						3 3			···			-	3 8						1 :		::		::			-
GROUP XIIô.—HILL CON- VALESCENT DEPÔTS, AND SANITARIA		-		1	2	6	-		1	,			11								-				-	-
Troops, marching, India . Deolali Depôt  EXTRA INDIA.		=		=					-	=									4	7	11					"
Aden		7											8								4-					-
INDIA	**	21	25	31	113	95	98	39	So	149	106	27	804			2	2	3	13	10	40	1	-	,		72
Northern Command .		3	3	3	93	74	83	23	31	37	20	3	379		+											
WESTERN COMMAND	4	14	15	4	2		2			2	3	14	60			,	2	1								10
EASTERN COMMAND	6	4	4	18	16	19	7	16	56	104	78	5	333			***		2	9	2		-				17
SECUNDERABAD DIVISION .	-		2	6	2	2				-		+	16							1	"		-			13
BURMA DIVISION			1	-		-	1		2	6		1	16							-	21	**		-		21

## TABLE VIII.

## TABLE IX.

ENTERIC FEVER by months, stations, groups, and commands.

SIMPLE CONTINUED FEVER by months, stations, groups, and commands.

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STATIONS® AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Port Blair				::										32	::8			35	26	31	2 29	15	1 20	. 6	ïï	5 222
GROUP I.—RURMA COAST AND BAY ISLANDS														32	8	8	1	35	27	31	31	15	21	7	11	227
Thayetmyo						5	3	:::::	-::::	::::			5	::32		2	6	-:	 2  1 20	2	1 1 2 11	9	3 3 :: 2	5 1 1	1 6	6 11 20 21 87
GROUP II.—BURMA INLAND.	-		***			1	3		1			1	6	5	2	4	7	1	23	54	15	11	7	8	8	145
Fort William				-;	1	3	11:0		1			2	10		=	==		6	14	38	46	21	10	5	9	149
GROUP IV.—BENGAL AND ORISSA	1	1		1	2	3	2		2		1	2	15					6	15	42	46	21	10	6	9	155
B Dinapore Benares Allahabad Fort Allahabad Fyrabad Sitapur Lucknow Cawnpore Fatebgarh	15 7	111111		3 2 27 4	 2 1 10 3	3 3 3	4		8		,	111111111111	4  3 2 12 28 90 19	1 1		3 4 18 1	7 1 24 3 13 	7 1 12 1 6	 3  14  2 10	5 2 6 34 7 1 7	3 2 9 ::6 2 - 12 ::	2 2 7 1 23  25		6 4 11		10 9 53 15 158 15 44 56 2
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR	26	4	23	37	16	10	10	7	9	7	4	7	160	5	4	26	48	29	29	62	45	60	28	22	4	362
A Shahjahanpur	2	2		: : : : : : : : : : : : : : : : : : : :	13 1 1	-   - 4   -	1111-1	:: 1 4 5 ::	3 7 1	3 1 5	3 - 2	3 3 3 2 2	7 9 8 50 7	2 4	111111	3	2 4	 2 12  25		1 : 1 : 1 6	2 8 2	:: :: :: 5	2 :: :14 :: 5	:: :: 5	3	8 5 24 28  05
Jullundur Ferozepore Amritsar Lahore Cantt. Fort Lahore Sialkot Rawalpindi Campbellpur Attock	8 3 4	1		7 2 6	2 10 5 5 2 2 8 4	:: 33 :: 66 ::	5	1 : : : : : : : : : : : : : : : : : : :	1 1 2	2	111111111	51	5 27 12 21 6 2 41 6	4 1 3 3 3	3 1	1 2 9 2 3 1	3 24 43 425 13 4	34 2 36 9 15 41 	1 30 1 19 8 9 30 	46 4 27 2 11 35 	37 4 5 4 7 37 2	1 9 1 18 7 6 29 1	1 6 4 16 22 2 3	11 11 4 3		7 182 14 179 39 101 220 10
GROUP VIUPPER SUB-	20	7	5	24	55	19	9	15	17	.12	11	21	215	17	6	23	122	176	108	134	109	78	75	41	9	898
Nowshera	:31				:34	21			- ::-			2 1	31 7	1 4 3	3 5 2	3 3 3	14	35	72	47 1 43	8 3 5	534	2 1 25	35		190 21 155
Hyderabad	-		1	i	2								:			-							==	-		- :
GROUP VII.—NORTH-WEST FRONTIER, INDUS VALLEY, AND NORTH-WESTERN R. PUTANA	4	,	2	1	9	21	1		1	2		-	47	8	10	10	18	40	93	91	16	12	28	35	10	371
A Deess	-	-	=		=	-	-		-	-	-	-	: 4		-		-	-	-	==	=	==	=	=		111

### TABLE VIII—concluded.

#### TABLE IX—concluded.

ENTERIC FEVER by months, stations, groups, and commands.

SIMPLE CONTINUED FEVER by months, stations, groups, and commands.

-	1000	ADM		-	ROM I	ENTI	ERIC I	Fevi	IR IN	EAC	н мо	ONT H.			ADM	USSI	-			-	Con	TINE	-	Feve	RIN	
STATIONS AND GROUPS,	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October,	November.	December,	TOTAL.
Neemuch Nasirabad Muttra Agra Ibansi Nowgong Indore Mhow	1 2 1 6		2  1 1  16	1  4 6 1 	1 2 1 1 1 1 8	 1	 1 1 13	.: 8 .: 1 16 4 .: 9	5 2 1 20 5 1 	4 1 38 4 2 4	1 :: : : 3 :: ::	9 5 1	13 14 15 38 44 11 1 77		6	:: 2 1 96 1 ::	 6 7	 1 13 6  2	 1 10 7	13 7 2	12		11-1-4			 5 4 91 42 3 13
GROUP VIII.—SOUTH-EAST- ERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT	13	5	20	24	14	3	17	39	36	26	5	16	218	21	0	19	14	22	18	23	13	2	6	4	7	158
Saugor · · · · · · · · · · · · · · · · · · ·			1 1	9	 8 			3 3					2 29 5	3 5	1 3 1	3 3	14 2	7 7	5 4 12	9 11 4	10 23 8	15 29 11	28 2	7	2 2	42 134 60
B Secunderabad Belgaum Poona Kirkee Ahmednagar		4 1 2 1	7	2	3 3	1 2 :: ::	4 8 3 1	23 24 5	23 2 21 3	13 4 3 1	8	3	92 20 54 12 5	5	15	22 1 4 	18 2 3 1	26 2 3 	16	19	43 :: 9 4 ::	36	19	24	12	257 5 38 5 7
GROUP IXDECCAN	2	9	10	13	14	4	18	59	51	22	9	8	219	20	20	35	40	46	39	50	97	95	50	39	17	548
Colaba		::				=======================================			3				3				2 ::::		2		- : : :					5 2 3
GROUP X.—WESTERN COAST	-			9		ľ		***	3		***		4		2	100	2		2		-		2		2	11
Bellary	4	3	2	2	13	5	7	:	4	2	2	2	6 47	7	*	20	8 17	19	3 12	38	16	8	7	9		131
St. Thomas' Mount	:::	::					7.		2	"	2		3 4	2	4	2	:::	4		1	ï	1	14	3 2		18 26
GROUP XI.—SOUTHERN INDIA	5	3	2	2	14	6	8	2	9	3	4	2	60	10	8	22	25	25	15	13	17	9	22	14	12	192
Ranikhet Chaubuttia Chakrata Solon Dagshai Subathu Jutogh Khyragully Baragully Baragully Kuldunnah Kalabagh Camp Gharial Barian Upper Topa Lower Topa Khan Spur Cherat Ouetta Ramandrug Maymyo  Group XIIa.—Hill Sta-				6 1 4 4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 2	3	4 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1				16 4 7 3 3 5 1 1 1 1 3 5 6 2 2 5 5 17	3 3 1		5 3	7 3 6 3 3	10 7 1 2 2 2 3 6 7 7 2 2 8 2	3 5 3 1 1 10 5 1 65 9	3 9  1 7 7 7 7 7 1 1 28  18	1	1 2 5 5 4 7 4 3 128 15	1 1 3 2 6 6 83 14		4 15	21 7 36 15 4 10  3 2 1 37 32 8  8  8
TIONS	-	1	-	11	21	13	11	10	11	2	2		82	4	3	8	27	50	104	74	98	170	111	12	19	680
Darjeeling				3	 2 2 11 	3 2		2	2 11 11				2 4 21 5 1 1 5				4 :::::::::::::::::::::::::::::::::::::	100000000000000000000000000000000000000	5 3 3 3 1 1 1 1 1	6 :: 4 2 :: : 2 :: :	5 :: 2 ::	3	3	1	111111111111111111111111111111111111111	15 1 48 5  15
GROUP XIIò.—HILL CON- VALESCENT DEPÒTS AND SANITARIA				7	15	s	3	3	4	1	,		43				5	14	9	14	9	25	6	3		87

		AD	MISS	ONS	FROS	a En	TERI	c FE	VER I	N EA	CH a	ONT	н.		A	DMIS	SION	S FRO	BAC	IMPL CH M	e Co	NTIN	Ugo	Fevi	ER IN	
STATIONS AND COMMANDS.	January.	February.	March.	April.	May.	June.	July.	August,	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October,	November.	December.	TOTAL.
roops, marching, India leolali Depôt	1	2		3 1			2	3	2		4 :	4	14		2			3				2	6	8	2	2
den	11	::	::		1		. : :		::	=				3	3	5	2	8	13	3	6	2	1	2 1	10	3
INDIA .	72	33	64	124	161	Sp	84	137	146	76	42	67	1,095	125	77	161	3:2	455	495	591	503	502	373	202	121	3,91
ORTHERN COMMAND .	21	6	5	20	78	43	16	10	14	12	6	13	244	23	15	29	145	235	229	245	136	131	101	71	15	1,37
VESTERN "	13	13	24	33	25	10	36	78	55	25	6	15	333	40	19	40	42	59	121	86	138	195	122	32	26	92
ASTERN ,,	31	7	25	63	41	24	17	24	44	22	13	29	340	7	5	33	65	68	55	125	111	88	59	36	18	67
SCUNDERABAD DIVISION .	6	7	9	5	17	11	12	25	32	16	13	5	158	17	25	45	44	52	31	32	60	45	43	38	26	45
URMA DIVISION						1	3		1			1	6	38	11	14	14	38	59	103	58	41	42	17	34	46

#### TABLE X.

#### TABLE XI.

INTERMITTENT FEVER by months, stations, groups.
and commands.

REMITTENT FEVER by months, stations, groups, and commands.

		Ары	SSION	S FRO	om In	TERM	ITTEN	r FE	VER I	N EA	сн м	ONTH		A	DMISS	SIONS	FRO	M R	EMIT	TEN	T FR	VER	IN E	ACH	MONT	н.
STATIONS® AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Toral.
Port Blair Rangoon	2	,	::	::	::	2 4	2 10	36	9	6 2	5 4	2	20 38	::					5		-				1	8 3
GROUP IBURMA COAST AND BAY ISLANDS	2	1				6	12	9	9	S	9	2	58		,				5	1	1	1	-		1	11
Thayetmyo	2  1 1		3		 2 7	1 5 1 1 	3 1			  16	3 20	3 2  18	9 12 2 16 117					11111								2
GROUP II.—BURMA INLAND	4		4	2	9	36	13	2	18	17	25	26	156			-							1			2
Fort William Dum-Dum Barrackpore	30 3 7	11	5 7	25	18	14 8	33 1 5	28	14 1 7	1550	33 4 34	37 7 27	263 21 117	1111						:::			111	111	1111	2
GROUP IV.—BENGAL AND ORISSA	40	13	12	27	18	22	35	40	92	:6	71	71	401	-				2	-		-			-	-	2
B Dinapore Benares Allahabad Fort Allahabad Fyrzabad Sitapur Lucknow Cawnpore Fatehgarh	4  5  4 4 4 5	2 1	 2 1 1  4	55 5 6 2	1 2 2 2 1 20	3 9 10 9 :10 4 ::	 5 14 66 25 1 66 2	2 4 12 7 4 4 29 2	48 11 56 56 9	 19 12 3 10 95 8 5	1 14 8  25 17 21	 5 11 5  16 9 3	7 18 112 80 70 27 332 60 30							1		111111111	11111111111			3
GROUP VGANGE- TIC PLAIN AND CHUTIA NAGPUR.	23	5	10	24	28	43	119	64	109	152	108	49	736		1					1	1			1		-
A Shahjahanpur Bareilly Roorkee Meerst Delhi Ambala	3 2 18 1	***	12 3	5 2 0	,	8		3 1 28 63 13	10 62 70	23 61 38	14 10 64 55	5 54 15														
B Jullundur Ferozepore Amritsar Lahore Cantonment Fort Lahore Sialkot Rawalpindi Campbellpur Attock	3 3		1	4		:: :: :: 4	16 2  2 11		3 29  8	54 28 18	59 1 41 34 52 370 2	31 20 42 15 24 156	11												1111111111	
GROUP VIUPPER SUB-HIMALAYA	47	3.8	40	44	31	38	72	160	343	694	870	433	2,810	2	2		1						1	-	-	2
A Nonshera Poshawar Mooltan			1	2	3	7 5		11 1	86	303	530	336	1,325		***		111								1111	111
Hyderabad Karachi	2	7 10	1	11	3 7			4	8					=	:::	-							1	-	=	
GROUP VII.—NW. FRONTIER, INDUS VALLEY, AND N W. RAJPUTANA		9 2;	3 17	16	13	16	15	22	124	498	981	758	2,552	-		-									-	

<sup>•</sup> Stations where neither Intermittent Fever nor Remittent Fever occurred are not shown in these tables. For the annual ratios, see Table III.

		ADMIS	SION	S FRO	M IN	TERM	ITEN	T FE	VER I	N EA	сн м	ONTH			ADI	MISSI	ONS	FROS	4 RE	мітт	ENT	Fev	ER I	N EAG	сн м	ONTH.
STATIONS AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	Jone.	July.	August.	September.	October,	November.	December,	TOTAL.
_ A		1																								
Deesa	13		9	18	"11	17	15	28	12	15		5	162					***								,
Neemuch Nasirabad Muttra Agra Jhansi Nowgong Indore Mhow	3 1 2 2 21	***	523	2 4 3 2 17 	7 20 2 2 6 2 9	4 4 5 	10 11 1 4 17 1	18 11 5 16 73 11 2	45 91 25 27 114 27  65	61 81 25 24 274 11	49 1e6 35 32 230 5 	13	221 403 137 126 854 60 5 330								3	3 :: :: :: : : : : : : : : : : : : : :	-	2		2
GROUP VIII.—SE. RAJPUTANA, CEN- TRAL INDIA, AND GUJARAT .	52	19	55	61	50	43	72	203	406	536	521	282	2,309	2	1					1	5	6	-	2		18
Sauger Jubbulpore	2 4 12	6 2 1	5	7 4	7	14	2 2 17	22 2 31	30 2 43	10 5 43	4 12 18	23 13 17	119 43 201	:::						111	1	2	- :::	111		-
Secunderabad Belgaum Poona Kirkee	3 5 12  7	4 14 8	6 6	 15 4 7	8 7 7 10	 4 2 1 4	3 5 15 7 5	6 7 11 6 7	7 7 34 3 10	53 5 30	11 9 14 11 12	31 11 28 8 5	72 71 218 58 117			:::::2	-1111	:::::::::::::::::::::::::::::::::::::::								
GROUP IXDEC-	45	36	41	39	41	27	56	92	142	153	91	136	899	1		2						2	1			8
Colaba Cannanore	13	19	17	6	12	18	33	46	29	31	23 1 2 2	9 1	256 4 2 6			::::										-
GROUP XWEST-	13	19	17	8	12	19	33	47	29	31	28	12	268													
A Bellary Bangalore B	18, 19	5 20	11	5	2	14	4 8	1: 5	13	14	6	2 5	91				=				-					-
St. Thomas' Mount. Madras	2	1	3						,		25		3 36											=	=	***
GROUP XI.—SOUTH-	39	27	24	10	3	6	13	17	27	27	46	7	246					-					-			-
Ranikhet Chaubuttia	111	1111	2	15	9 3 10	13	2 17	1 1 21		15 1	2		62 6	111					-11					:::		=-
Lebong Solon Dagshai Sobathu Kuldennah Kulabagh Camp Gharial Barian Upper Topa Khan Spur Cherat Quetta Maymyo	30	7	13	13	1 1 2  3  13	5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 3 5 12		2  7 19   5  53	7 1 4 4  3  4 74 2	1. 11111111	33 5	70 4 14 31 5 3 9 1 17 47 314 29								22	26				178
GROUP XIIa.—HILL STATIONS	37	9	23	41	47	48	54	74	129		99		732	,			-			12	22	26	39	61	17	170

### TABLE X-concluded.

#### TABLE XI-concluded.

INTERMITTENT FEVER by months, stations, groups, and commands.

REMITTENT FEVER by months, stations, groups, and commands.

	-	ADM	ission	NS PRO	OM IN	TERM	ITTEN	T FE	VER II	N EAC	н мо	NTH.		-	ADMI	55103	SFR	on I	REMI	TTEN	T FE	VER	IN E	ACH 3	HONT	н.
STATIONS, GROUPS, AND COMMANDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	ToraL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL,
Darjeeling Naini Tal Landour Kasauli Dalhousle Murree Mount Abu Pachmarhi Purandhur Khandalla Wellington	4 14 11 11 2 3	2	5	6     8	6	3 1 4 2 2 9	5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 4 1 2 1 18	 5 7 12  1 1 1 1	2 2  3 10 1 7 1	 8 1  6 55		38 3 7 13 30 1 26 13 8 21 175						3 :::::::::::::::::::::::::::::::::::::			111111111111				111111111111111111111111111111111111111
GROUP XIIb.— HILL CONVALESCENT DEPOTS, AND SANITARIA	0	6	11	16	16	22	40	32	46	36	71	30	335						4				-	-		
Troops, marching,	7	,	3	1				1	1	18	85	63	180											1	2	
Aden Column Field Force (Dthalla) .	10	3	6										19			-										-
Deolali Depôt .	12	7	5	2		1	22	31	6	13	22	21	142												-	-
Poonamallee Depôt.		***			***				***				1			***	***					-				-
Extra India.	6	5	24	38	37	48	11	1	10.00	100		1	341													-
Dthalla				7	10	10	6	S	26	64	61	3	195		***	***	***	***	***	***					***	***
INDIA ·	416	212	292	336	324	387	577	803	1,441	2,438	3,147	2,007	12,380	6	5	3	2	2	11	15	31	35	44	66	20	24
Northern Command.	64	17	28	26	25	39	62	107	344	1,047	1,575	887	4,221	2	2	1			3		-	-				
Western ,,	154	103	145	176	178	159	219	389	630	903	934	732	4,722	3	1	2	1				6	8	3	3		
Eastern "	125	52	60	111	99	131	228	252	385	406	395	236	2,489		1			2	2	2	2					
Secunderabad Division.	40	33	33	20	12	16	41	42	53	37	117	56	506					-		-						
Burma Division .	10	3	S	2	10	42	27	12	28	27	41	33	243	1	1		***		6	13	23	27	41	61	18	L

#### TABLE XII.

#### TABLE XIII.

PNEUMONIA by months, stations, groups, and commands.

DYSENTERY by months, stations, groups, and commands.

	end c	omn	rana	s.	_									-						and	com	man	ds.		- 0	7.0
	-	^	DMI	SSION	S FE	ROM	PNE	UMON	I AD	N EA	СН	MONT	н.	1	A	DMIS	SION	B FR	ом П	YSE	NTER	Y IN	EAC	н м	ONTE	4.
STATIONS* AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December,	TOTAL	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Rangoon										1			1	3	1	3	2	4	3	11	1	1	3		1	
GROUP IBURMA COAST AND BAY ISLANDS										1		-	1	3	,	3	2	4	3	11	,		3			31
Thayetmyo													1				1111			3 1 3 1		1	1	=======================================		5 1 3 7
GROUP II.—BURMA INLAND		2									-			-					1	8		2	1	1	2	16
Fort William		3		1	1				1	1		1	S	1	2		1 2		2		4	1 4	1	1	3	14
GROUP IV.—BENGAL AND	-	3		1	1				2	1		1	9	2	2		3	4		2	5	5	1	1	3	30
Benares	3	1 3	2		1 1 1			-				1 :: 2	 3 5  2 10 1	:::::::::::::::::::::::::::::::::::::::		 1  9 1	# 4 3 1 4 1	  1 7		 1 1 1  2 3 	3 1	2 1 6			1 1 1 1 4	7 7 5 11 5 5 5 5
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR .	7	5	2		3	1	***			***		3	21	5	8	12	14	9	2	8	11	9	9	6	7	100
A Shahjahanpur	1 5	111110			1 2						1-1114	2	 4  5  13	:: 2 1 4 :: 1	1112		1 1 2	1 2 2	2		1 2  3 1	3 2	1 2	1 2 1 2 2	3 1 1 5	6 12 6 26 1
Jellendur Ferozepore Lahore Cantonment Fort Lahore Sialkot Rawalpindi Campbellpur Attock		2  1  4 	111111-1	1 2 2		11111111					1 1	1 2 1 4	5  3 3 2 21 7 		1	4	2	4	1 2 1			2 1 	1 4 1 3 2		1	5 10 12  1 14 1 1
GROUP VIUPPER SUB-	19	9	4	5	4		1		2	1	7	11	63	9	4	8	9	13	8	2	9	10	14	11	13	110
Nowshera		1 1	3	3			:::		::	-	2 2	2 1	6 4 9					- 0				1	4 2	4		9 4 10
Hyderabad		1				***		"1					1 2									1			"	3
GROUP VII.—NW. FRON- TIER, INDUS VALLEY, AND NW. RAJPUTANA	1	5	3	3	1			,		1	4	3	22	1		3	2		4	2		3	6	5	1	28
Ahmedabad																1			-			-				1
Neemuch Nasirabad Muttra Agra Ihansi Nowgong Modre- Mbow	1 1 1 1 5												2 1 11 6 1 			2 1			1		7	9	5 5	14	7 3	7 1 8  45 4 1 44
GROUP VIIISE. RAJ- PUTANA, CENTRAL INDIA, AND GUJARAT .	7	3	2		2	-	4	1	2	2	2	3	28	4	1	7	10	3	4	8	20	13	11	18	12	111

### TABLE XII—concluded.

TABLE XIII—concluded.

PNEUMONIA by months, stations, groups, and commands.

DYSENTERY by months, stations, groups, and commands.

		Ap	MISS	ions	FRO	M P	NEUN	IONI	A IN	EACI	M 34	ONTH			At	MISS	SIONS	F 100	ом Е	YSEN	TER	YIN	EAC	н мс	ONTH	
STATIONS AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October	November,	December.	TOTAL.
A iaugor · · · · · · · · · · · · · · · · · · ·	1			1								···	6	3	: 5 3	4	1 4 3	6	1 2	2	1 7 8	263	110	4 2	3 4	44 34
B	1 2 2 1	2 1	1		2 : : :			2				2	8  6 5	7	5 2	6 4 1 :	6	4 2 3 3 2	8	21 7 5 3	34 1 13 4 4	11 5 4 3	11 : 4 4 3	17	8 2	140
GROUP IXDECCAN .	8	4	2	1	2		1	2		1	· u	4	27	10	25	21	14	20	14	39	72	34	24	23	13	314
olaba annanore fallapuram		1							***						3				1 2			2 :::	1			10
ROUP X.—WESTERN COAST A Sellary			***									11			3			2	3	3	1	2		1	1	1
angalore B				1						1			2	5	2	2	6	6	3	10	9	6		4	7	6
ladres ROUP XI.—SOUTHER N INDIA				1						1			2	5	2	1 4	7	9	3	13	11	8	2	5	9	7
tanikhet					***		2		1	1 1			4 1			***		1	2	2			1	***		
hakrata			-	1		1111									4	3	1 2 1	1 2		7	4	2			11111	
sataguliy Culdunnah Lamp Gharial Barian				2						11111			3 2 1							1 1 1 2			11111			in the same
Upper Topa Lower Topa Khanspur herat Juetta					1 : : : :	11:17				11111			1114									5				-
ROUP XII a.—HILL STA-		6	3	5	2	3			5	2	1	2	31	-	4	2	4	9	2 10	18		9	5		1	7
Darjeeling		1	1	***		1		-					3			***			2	2	3	2	2		112	1
Vaini Tal					7	1							1 2							***	***					
Dalhousie		***			2	***				1			3					+			2	-	2			
Taragarh					***					***											2	1				***
Pachmarhi									ï								***			***		1	1	ï	2	
Khandalla		1			2	***	1			"			3	3		***	3	4	3	***	3	1	1			-
VALESCENT DEPOTS, AND SANITARIA		2	2		5	3	1		1	3			17	3	1	1	7	10	6	4	9	6	7	1	2	3
Proops, Marching, India .				1				-		2	7	1	11	2				3					1	21	11	3
(Dthalla)												-		1		2 ::	-	2				3				
EXTRA INDIA.	1			133				18												131						
Aden				2		1	=						3	3	5	6	5	1	5	5	1 2	8	3	6	3	5
INDIA .	43	39	18	19	20	s	9	4	12	16	13	30	241	48	56	69	78	89	65	122	153	112	91	101	86	1.07
NORTHERN COMMAND	20	12	16	10	16	3	1		1 +	3	10	12	86	3	2	8	11	18	7	0	8	12	22	110	8	33
WESTERN COMMAND	13	13	6	5	2	2		2	2	3	3	8	60	11	24	29	24	21	19	35	65	52	32	32	29	37
EASTERN COMMAND	9	9	5	2	7	3	7	***	5	5	2	8	62	14	17	17	24	21	17	23	31	22	17	14	16	23
SECUNDERABAD DIVISION .	1	3	1	1	4		1	2	-	2		1	16	15	12	10	16	20	16	34	47	23	15	23	20	25
BURMA DIVISION		2	1		1	I	1	1	1	1	1		6	3	1	3	3	6	6	20	20	3	4	1	2	5

#### TABLE XV.

A .- STRENGTH, ADMISSIONS from ALL CAUSES, ADMISSIONS from ENTERIC FEVER, of the Army of India in 1906, in relation to AGE and LENGTH of RESIDENCE in INDIA.

	BY A	GE.						1	BY LENG	TH OF RI	ESIDENCE	£.	
	Under 20.		and less than 30.			40 and upwards.		and less than 2.					years and upwards.
Strength	2,357	33,189	23,530	7,909	2,107	454	14.682	14,136	11,925	12,062	6,184	7,574	2,983
Per cent. of total	3	48	34	11	3	1	21	20	17	17	9	11	4
901-1905	3	45	37	11	3	1	19	16	16	13	11	20	5
Admissions from all causes	1,480	33,631	20,250	4,537	985	240	11,756	11,200	9,338	10,390	6,873	9,037	2,529
Admissions from Enteric Fever	25	729	283	46	11	1	342	283	- 146	176	74	64	10
All causes per 1,000	627'9	1,013'3	860.6	573'7	467.5	528'6	800'7	792'3	783"1	861*4	1,111'4	1,193'2	847'8
Enteric Fever per 1,000	10.6	22'0	12'0	5.8	5'2	2'2	23'3	20'0	12'2	14.6	12'0	8.4	3'4
cous column expressed in percentages)	18'34	38'00	20.76	10'03	9.00	3.81	24'81	21'30	12'99	15'55	12'78	8.95	3.6
Enteric Fever per cent. of all causes .	16,	2'17	1'40	1'01	1'12	142	2'91	2.23	1'55	1.60	1'08	*71	*4

B.—CHANGE of PERSONNEL, YOUTHFULNESS, RECENT ARRIVAL, and MARRIAGE, in relation to VENEREAL DISEASE and ENTERIC FEVER.

			-								MEN.				
				ARRIVED I	N INDIA.	N. W.	PER CE	INT. OF STR	LENGTH.		Ra	TIO PER 1,0	000.	RATIO PER	
Yı	EAR.					YEAR.	Age.	Length of residence.		Strength.		Admissions.			
				Men.	Women.		Under 25 years.	Under 5 years.	Married.		All causes.	Venereal Diseases.	Enteric Fever.	Venereal Diseases.	Enterio Fever.
76-77				8,170	591	1876	33		10'37	57,858	1,361'5	189'9	4'6	13'95	'34
77-78				9,113	482	1877	33	56	9'70	57,260	1,257'3	208'5	4'1	16'59	*32
878-79		000		13,113	575	1878	35	60	7'59	56,475	1,651'3	271'3	8.2	16'43	'51
79-80				13,342	612	1879	39	61	6.63	59,082	1,871'2	234'8	8.0	12'55	'43
So-S1				13,165	664	1880	41	65	6'36	59,717	1,754'2	249'7	7'9	14'23	*43
81-82				9,895	349	1881	43	70	5'94	58,728	1,604.6	260'5	5.6	16-23	*3
882-83				9,748	325	1882	41	72	5'43	57,269	1,444'9	265'2	6.5	18-35	*4
883-84				12,525	433	1883	41	75	5'20	55,525	1,335'7	270'3	7'7	20"23	*51
884-85				11,822	393	1884	45	75	5'05	54.996	1,513'4	293'9	11'7	19'42	7
885-86				17,766	568	1885	48	73	4'23	56,967	1,532'7	342"7	11'2	22'36	7
886-87				11,645	372	1886	52	75	3,00	61,015	1,513'9	389*5	18"1	25'73	1'2
887-88	-			11,729	459	1887	52	73	3'84	63,515	1,369*7	361'2	12'7	26'37	-9
888-80	-			12,407	506	1888	50	76	3'65	68,887	1,381'7	3700	13.6	26.82	.0
889-90				12,270	532	1889	49	78	3.60	69,266	1,498'0	481'5	22'9	32'14	1'5
890-91				14,046	542	1890	50	So	3'70	67,823	1,520'2	\$03.2	18.2	33'12	1'2
801-92				15,455	529	1891	51	79	3'36	67,030	1,379*1	400'7	20'4	29'06	114
892-93				15,894	540	1892	51	80	3'29	68,137	1,517'3	409'9	22'1	27'01	114
893-94				15,090	482	1893	53	79	3'29	70,091	1,414'9	466'0	20'0	32'94	1'4
894-95	-			15,957	317	1894	54	81	+	71,082	1,508'0	511'4	20'9	33'91	1.3
895-96				14.346	654	1895	55	83		71,031	1,461'8	522'3	26.3	35'73	1.8
1895-97		1		14,805	545	1896	56	82		70,484	1,386'7	5116	25'5	36.89	1.8
897-98				16,227	543	1897	55	84	***	68,395	1,555'9	485'7	32'4	31'20	2'0
898-99				16,911	648	1898	54	81		67,741	1,435.9	362'9	36.9	25'26	2.2
1899-1900				3,369	168	1899	53	78		67,697	1,148:7	313'4	20'6	27*28	1'4
1900-01	100			5,958	185	1900	45	69		60,553	1,143'2	298"1			17
901-02				18,594	438	1901	42	63	***	60,838	1,104'3	276.0	12'8	24'09	
1902-03				24,840	961	1902	43	68		60,540	1,078'4	281'4	16'7	26.00	1,2
1903-04				15,126	1000	1903	51	76	***	70,445	1,033'4	247'0	19'6	23'90	1.0
904-05				16,366	S20	1904	52	80		71,083	900'4	198*5	19'6	22'05	
1905-06				15,178	804	1905	52	84	***	71,343	834'3	153'7	16.1	18'42	1,0
1906-07	300			18,636	912	1906	51	84		70,272	870'8	117'3	15.6	13'47	1'7

In ordinary years the departures \$185 the deaths nearly balance the arrivals.

# TABLE XVI.

RELATION of MORTALITY to AGE and LENGTH of RESIDENCE in INDIA.

	-			A/		200					-	ana L						-	RESI			IN I	NDL		-	
		(a) D		PER I		1	(b) L:	ABIL	ITYI	N PEI	CEN	TAGES.	-	(0		D PE									RCENT	TAGES
CAUSES OF DEATH.	Under 20.	25 and less than	25 and less than 30.	35.	35 and less than	to and upwards.	Under 20.	than	ces than	less than	d less than	40 and upwards.	Under 1 year.	r and less than 2.	2 and less than 3.	3 and less than 4.	4 and less than 5.	S and less than 10.	10 and upwards.	Under 1 year.	1 and less than 2.	2 and less than 3.	3 and less than 4.	4 and less than 5.	5 and less than 10,	to and upwards.
Enteric Fever Cholera Dysentery Intermittent and Remittent Fevers Alcoholism Tubercle of the lungs Nervous Diseases Circulatory Diseases Pneumonia Other Respiratory Diseases Abscess of the liver Urinary Diseases TOTAL  Heat-stroke Suicide Other injuries  All Causes	2'12' 142' 142' 142' 142' 142' 142' 142'	4-64 -69 -63 -27 -03 -18 -24 -39 -03 -75 -12 -12 -12 -12 -12 -12	2°08 °76 °55 °42 °08 °21 °04 °55 °25 °13 2°72 °13 2°72 °13 7°95	1.64 38.38 25.38 1.33 1.25 1.33 1.90 1.10 1.04 2.5 6.83	'47 '47 '95  3'80  '47 2'37 '47	2°20 4'41	8	39 25 33 21 3 25 6 2 5. 3 10 12 19	17 28 29 33 7 34 1 5 32 12 36 13 18	14 14 13 10 11 41 4 17 17  22 26	12 17 25 36 80  45 32 48 25	74 40	3'85 '41 '82 '20 ' '14 '07 '27 '20 '07 '75 '07 '07 '07 '07 '07 '07 '07 '07 '07 '07	*35 *42 *35	*25 *17 *59	'91 '17 '75	65 '49 '65 '16 '49 '16 1'94 '16 '19 '16 '19 '49 '16 '16	26 '40 2'38 '40 '13 2'38 '26 11'49	1'01 '34 '34 '34 '34 '34 '34 '34 '2'05 '34 '36 '37 '37 '37 '37 '37 '37 '37 '37 '37 '37	9 24 8 9 7 4 9 8 6 7 12 7 5 21	20 21 16 9 16 9 15 2 9 17 12 22 15	14 9 10 11 9 10 11 12 11 15 66 13	15 21 14  27 5 15  13 26	14 15 14 27 18 32  19 10 17 14	14 18 12 45 29 17 43 35 18 15 19 27 20	388 222 3993 153 153 344 226 326 327 177
	(e	) Nu	MBER	OF D	EATH	ıs.	(d		ATHS	SITIO AT		100		(i) N	Numbi	ER OF	DEA	THS.			(j) (	THE	OSIT IN EA	CH	OF IC	00
Enteric Fever Cholera Dysentery Intermittent and Remittent Fevers Alcoholism Tubercle of the lungs Nervous Diseases. Circulatory Diseases Pneumonia Other Respiratory Diseases Abscess of the liver Urinary Diseases.	5	23 21 9	13 10 2 5 1 13 6	3 2 1 1 1 1 15 1 1 13	1 1 2 8 8 5	2	56	45 76 30 12 24 07	19 7 5 4 1 2 0 5 2 1 25 1	13 4 2 1 1 2 1 18 1 15 2	933 36 : 35 36 3	10 20	57 6 12 3  2 1 4 3	57 13 8 3 2 2 2 3 2 2 3	3  1 8 3	36 11 6 2 3 4 4 4 19 3	17 4 3 4 1 3 2 3	21 6 3 8 2 2 3 18 3 18 3	3 1 1  1  8 1	43 4 9 2 1 32 181	40 9 6 2 1 1 1 2 1 15 2	34 5 4 3 19	28 9 5 2 2 33 152	24 6 4 6 1 4 17 1	17 5 2 7 2 2 2 2 15 2 15 2	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
TOTAL .	8	270	187	54	23	3	89	79	73	64	72	30	101	118	75	88	51	87	25	75	83	78	68	71	72	64
Heat-stroke Suicide Other injuries .	" 1	7 7 22	20	5 5		=	ii	2 2 6	7 3 8	11 6 6	6 6 3	50	5 14 134	5 6 5	3 2 7	11 2 9	3 4 3	7 3 11	5 2 	100	4 4 4	3 2 7	9 2 7	4 6 4	6 2 9	13 5
All Causes		Nus						r) PE	RCEN GE T		EAT	EACH				ER OF					(I) P	ERCE DD O	ENTA	GE 12	N HAC	н
Enteric Fever . Cholera Abscess of the liver Suicide	5		18 64		5	***	2 2		22 39 60 33	6 7 12 24	1 2 5 10		57 6 11 2	57 13 21 6	33 5 18 2	36 11 19 2	17 4 12 4	21 6 18 3	3 1 8 2	25 13 10 10	25 28 20 29	15 11 17 10	16 24 18 10	8 9 11 19	9 13 17 14	1 2 7 10
All Causes	9	340	256	85	32	10	1	46	35	12			134	142	96	119	72	120	39	18	19	13	18	10	16	5

# TABLE XVII.

RELATION of INVALIDING to AGE and LENGTH of RESIDENCE in INDIA.

	1			A.—A	-		1					1	-		B.—L	ENG	TH (	OF R	ESIDE	ENCE	IN 3	INI	DIA.	1	120	
	(a		ALIDE		R 1,00	00.	(b)I			INPE	RCEN	TAGES.		(g)	NVAL	IDED	PER	1,000,		(/4)	LIAI	BILIT	Y IN	PER	CENT	AGI
CAUSES OF INVALIDING.	Under 20.	20 and less than	25 and less than	30 and less than	35 and less than	40 and upwards	Under 20.	20 and less than	25 and less than	30 and less than	35 and less than	40 and upwards.	Under 1.	r and less than 2.	2 and less than 3.	3 and less than 4	and less than 5.	5 and less than 10.	to and upwards.	Under 1.	and less than 2.	and less than 3.	and less than 4.	and less than 5-	S and less than	-
ysentery and	.42	.96	*81	.38	1'42	2*20	7	16	13	6	23	36	'54	.20	75		181	1'72	3.01	7	7	10	13	11	24	
Remittent Fevers energal Diseases ebility heumatism ubercle of the	1°27 '42 3'39	1,00	3.00	1'90	2'85 1'42 12'81 1'42	13'22	3 500 :	11 21 7 15	15 31 7 19	18 24 14 14	19 18 31 52	32	"14 "34 1"16 "14	1'34	2"35	3,12	2·26 4°37	3.83	5'70 1'34 19'44 '34	2 3 4	7 9 5	7 17 7	9 19 8 9	10 16 11 25	35 27 18 38	-
lungs ental Diseases . idepsy	'42 	1'02 1'05 '60	*85	2°53 '63 '51	*95 1*90 *95	2*20	5	12 24 22	17 19 25	30 14 19	11 43 35	26	1'02 '48 '48	'90 '92 '57	'50 '92 '42	1°24 '91 '33	1.62	3'30	2'35	9 7 9	9 13 10	5 13 8	11 13 6	15 14 15	30 25 17	
her Nervous Dis- eases re, ear, and nose	.42	*60	1.03	1'14	2.37		8	11	18	21	43		141	*64	.20			1198		5	8	6	7	18	25	
Diseases Ipitation Ivular disease	1*27			38	2'37	2,30	13	26 28	19	6	35	22	1.84	2'90	1'34	1'58	1,46	3.56 3.43	1.68 1.68	13	20 14	9	11	10	25 30	
of the heart her Circulatory Diseases		1.60	1'95	2.03	95	2,30		38	16	23	20	25	1'09	'71	*84	1.28	-S1	5'02	4.03	7	5	5	10	14	33	
spiratory Dis- eases ongestion, Inflam- mation and Abs-		*57	.64	.38	'95			22	25	15	37		*34	*28	*50	*50	'97	1'19	1,01	7	6	10	10	20	25	
cess of the liver comotive Dis-	170	100	2'51	2'66	3'32	6.61	36	5	16	17	21	42	'41 '48	1'27	*67 1*25	1.28	2'10	4'49	5'70	3	8	4	10	13	28	
juries		1'24		1.14				29	22	27	22		-75	71	-67		1.78		1.68	S	8	7	5	13	33	
Causes	11"88	27'99	29.49	29^71	41.77	41.85	7	15	16	16	23	23	14"44	22'07	20"88	26.45	33.96	63*37	70.73	6	9	8	11	13	25	
	(c)	Nus	BER	INVA	LIDED		(d	IN	VALI	SITIO DING H AG	S AT	100	10	(i) l	NUMB	ER IN	IVALI	DED.			ALIE	DINGS		EACH	PER	
sentery	1	32	19	3 21	3	1 2	4	3	3 7	1 0	3 7	5	8 2	7	9	11 21	5	13	6	4	2 6	4 6	3 7	2 5	3	
nereal Diseases bility eumatism bercle of the	8	53 55 98 14	57 72 12	15 44 3	3 27 3	6	4 29 	6	7 8 10 2	6 19	3131	32	5 17 2	19 26 3	28 35 5	32 38 4	14 27 6	29 54 11	58 1	8	6 8 1	11 14 2	10 12 1	7 13 3	6 11 2	
ungs ntal Diseases ilepsy her Nervous Dis-		34 35 20	34 20 16	20 5 4	4 2		4	4 4 2	5 3 2	9 2 2	5 2		15 7 7	14 13 8	5	15	10 6 5	25 13 7	7 3 6	7 3 3	4 4 3	4 2	5 3 1	5 3 2	5 3 1	
ases e, ear, and nose Diseases	1	20	24	9	5		4	2	3	4	6		6	9	16	7	9	15	7 5	3	3	2	2	4	3	
pitation	3 2	63 53	31	3	5		7	7 6	4 7	7	6	5	27 14 16	41 22 10	9	18	10		5	13 7 8	7 3	6 4 4	66	5 6	5	
iseases		30	9	5	1			3	1	2	1		5	12	8	4	5	6	5	2	4	3	1	2	1	
ases ngestion, Inflam- nation and Abs-		19	15	3	2			2	2	1	2		5	4	6	6	6	9	3	2	1	2	2	3	2	
ess of the liver comotive Dis- ases		25 38	59	21	7	3	14	3 4	9	9	8	16	6	18	15	19	13	34	17	3	6	3	3	6	7 2	
uries		41	22	9	2			4	3	7	2	-	0	10	8	6	11	23	5	5	3	3	2	5	5	
Causes	28	924	694	235	88	19	100	100	100	100	100	100	212	312	249	319	210	480	211	00	100	100	100	100	100	1
	(e)	Num	BER	INVAL	.IDED.		S		E TO	AGE A	AL	АСН		(h) S	UMBI	ER IN	VALI	DED.			ERIO	D OF		IDEN	EACT	
ermittent and emittent Fevers nereal Diseases	3 1 8	53 55	31 57	21	6 3		2	39	37	15	4 2		2 5	18	16 28	21 32	11	51 29	17	1 4		12 21	15 24	8	37 22	
bility	8	98	72	44	27	6	3	38	28	17	11	2	17	26	35	38	27	54	58	7	10	14	15	II	21	

#### TABLE XVIII.

#### STATISTICS OF OFFICERS.

A .- SICKNESS and MORTALITY among OFFICERS of the BRITISH ARMY in 1906. (From the Medical Returns of the Army.)

	Nort	hern nand.		etern mand.		stern mand.	Secur	nderabad ision.		irma ision.	Inc	dia.*
STRENGTH		162		655		558		276		102	-	,225
Cases REMAINING FROM 1905 .		29		16		17	1	7		3		72
	Ratios.	Actuals.	Ratios.	Actuals,	Ratios.	Actuals,	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals,
				-								****
CONSTANTLY SICK	27'8	15.65	28'8	18.89	35'0	19'54	37'5	10'35	1961	2,30	300	138
INVALIDS	02 20	23	73'28	.48	48'30	27	94'20	20	1901	2	62'02	130
ADMISSIONS.	-010	.0						1		0.00		76
Influenza	49.8	28	21'4	14	57'3	32	7'2	2			34'2	6
Cholera	0		3,1	2	1'8	1	3.6	1	196	2	2.7	
Small-pox	1.8	1 16	4.6	3						***	1.8	4
	128.1	- 30	48'9	32	25'1	14	100000	17	****	11	35'5	79 287
	5'3	72	1420	93	163'1	91	54'3	15	107'8	"	1290	
	674	39	4.6	3	401	16	***		176'5	18	3'1	125
Tubercle of the lungs	1'8	39	64'1	42	28.7	2		9		77	1'3	3
Pneumonia	3.6	2	***	***	1330	2	1		***		1'8	4
Other Respiratory Diseases	30'2	17	15'3	10	3.6		1 833	5	9'8		21'1	47
Dysentery	1.8	1	26.0	17	21'5	14	11569	8			17'5	39
Diarrhora	33.8	19	200	19	32'3	18	The state of	4	10.6	2	27'0	62
Hepatic Abscess			3.1	2	1				-		0,0	2
" Congestion and Inflammation		19	19'8	13	32'3	18	21'7	6	1976	2	26.1	58
Venereal Diseases	1'8	1	1'5	1 '3	1'8	10	3.6	1	190		1'8	4
ALL CAUSES .	715'3	403	726*7	476	818'7	468		178	823'5	84	7281	1,620
DEATHS.	7.55	100	7207	4/0	020 7	400	044.9		0.33		-	
Cholera		141	3.02	2	179		3.62		13793	2	2'70	6
Small-pox		441				-					1000	
Enteric Fever	5'3+	3	7.63	5	3.28	2	7'25	- 2			6.50	14
Intermittent Fever						11/9						
Remittent Fever				_						***	-	
Simple Continued Fever				-							-	
Heat-stroke							-		-		*45	
Circulatory Diseases			3.05	2							790	
Tubercle of the lungs										-		***
Pneumonia	1'78										'45	1
Other Respiratory Diseases		-										
Dysentery	100	***	1.23				-	-			'45	1
Diarrhea		***		-								
			1.23	1	***		***			-	100	2
Hepatic Abscess			20				A CONTRACTOR OF THE PARTY OF TH		-		The second second	
ALL CAUSES	8'90	3	24'43	16	12'54	7	10'87	3	19'01	2	17'53	39

<sup>\*</sup> Including officers on the line of march and with the Field Force. (Vide table E .- Detail of Diseases.)

B .- CAUSES of DEATH among EUROPEAN OFFICERS of the BRITISH and INDIAN ARMIES in 1906. (From non-medical sources.)

_	_													-						
uly uly	cher						1,13	1	N IND	LA.							1			
whether 1st of	Strength in Europe or bey sea on 1st July 1996, whe on furlough or sickl cave.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Heat-stroke,	Circulatory Diseases.	Tubercle of the lungs.	Pacumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhea.	Hepatic Abscess.	Тотац.	Deaths in England and other countries,	Deaths at sea.	GRAND TOTAL.	Ratio per 1,000.
2,938	627	6		14	***	***	***	1	2		1	***	-1	***	2	39	5	***	44	12'34
3,213	776	1	1	2	***	1		1	1				2		5	21	7	- 1	20	7'27
	Strength in India, leave or not, on the	Strength in India, whether leave or not, on the 1st of 1906.  Strength in Europe or be sea on 1st July 1906, wh on Indough or sick cave.	Strength in India, whether in India, whether is to diagram on the set of Strength in Europe or be sea on 1st July 1966, we on furleugh or sickl cave.	Strength in India, whether of the strope or 1996.  Strength in Europe or b sea on 1st July 1996, we contucted or sield care.  Cholera.  Small-por.	Strength in India, whether the set of seave or not, on the set of 1906.  Strength in Furope or be 250 on Iuriough or sickl cave, on Iuriough or sickl cave,  Cholera.	Strength in India, whether the set of the set of the set of the sea on the set of the sea on the set of the sea on the set of the sea on the set of the sea on the set of the sea on the set of the sea on the set of the sea on the set of the sea on the se	Strength in India, whether the set of the se	Strength in India, whether the fave or not, on the ist of 1906.  Strength in Europe or be sea on ist July 1906, w on furlough or sield eave, on furlough or sield eave, and intermittent Fever.  Enteric Fever.  Remittent Fever.	Strength in India, whether the fave or not, on the ist of 1906.  Strength in Europe or be sea on ist July 1906, we on furlength or sield cave.  Cholera.  Small-por.  Intermittent Fever.  Remittent Fever.	Strength in India, whether the strope of 1906, we can out, on the strope of bear or not, on the strope of bear on interpretation on furlength or sickl cave.  Small-por.  Intermittent Fever.  Remittent Fever.  Remittent Fever.	Strength in India, whether the factor of the st of the s	Strength in India, whether feave or not, on the ist of 1906, we are not on the ist of 1906, whether sea on ist July 1906, we can outling the sea on ist July 1906, we can outling the sea on ist July 1906, we can outling the sea on ist July 1906, we can outling the sea on ist July 1906, we can outling the sea of the sea of sea on ist July 1906.	Strength in India, whether See Strength in India, whether See Strength in Earope or best on Intended to sield eave.  Small-por.  Small-por.  Remittent Fever.  Remittent Fever.  Heat-stroke.  Tubercle of the lungs.  Paeumonia.  Other Respiratory Diseases.	Strength in India, whether feave or not, on the ist of 1906, whether sea on ist July 1906, we can out unlength in Europe or be sea on ist July 1906, we can furlength or sield eave.  Small-pox.  Britche Fever.  Remittent Fever.  Heat-stroke.  Girculatory Diseases.  Tubercle of the lungs.  Pacumonia.  Other Respiratory Diseases.	Strength in India, whethere of the art of th	Strength in India, whethere of the art of th	Strength in India, whether the art of the ar	Strength in India, whether the st of toaw or not, on the st of toaw or not, on the st of toaw or not, on the st of toaw or not, on the st of toaw or not, on the st of toam or not turbungh or sick eave.  Enteric Fever.  Brandl.pox.  Cholera.  Cholera.  Brandl.pox.  Tubercle of the langs.  Pacumonia.  Pacumonia.  Disarkora.  Disarkora.  Hepatic Abscess.	Strength in India, whether the st of	Strength in India, whethere of the very or not, on the 1st of 1906, whethere of the very or not, on the 1st of 1906, whethere of the lare.  Enteric Fever.  Small-por.  Remittent Fever.  Heat-stroke.  Girculatory Diseases.  Tubercle of the langs.  Pacumonia.

	annual.		No	MBER	OF AD	M18810	NS FRO	м Сно	DLEBA	IN EAC	H MON	тн.		oms.	e per		r 1,000
STATIONS,* GROUPS, COMMANDS AND DIVISIONS.	Average annual strength.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October,	November,	December.	Total admissions.	Admission-rate per 1,000 of strength,	Total deaths,	Death rate per 1,000 of strength.
Fort Dufferin	10		***							2				2	2000	2	200'00
GROUP II.—BURMA INLAND .	- 44					***				2			414	2	45'5	2	45'45
B Campore	26						1	***						1	38.2		38'46
ROUP VGANGETIC PLAIN AND CHUTIA NAGPUR.	197						1	-						- 1	5.1	1	5'08
В																	
ROUP VIIISOUTH-EASTERN	12			***						1				1	83.3	1	83.33
RAJPUTANA, CENTRAL INDIA, AND GUJARAT	184			-		***		-		1				1	54	1	5'43
B iecunderabad	97			ats.					1			***		.1	16'3	1	10,31
GROUP IX.—DECCAN	340								1					,	2'9	1	2'94
Colaba	45							1						1	22'2	1	33,33
GROUP XWESTERN COAST.	54							,						1	18-5	1	18'5:
			-														
INDIA .	2,225						. 1	1	1	3				6	2.7	6	3.70
NORTHERN COMMAND	562	-			-												
Vestern "	655		-					1		,		-		2	3.1	2	3003
CASTERN ,	558						1		-	-		-		1	1.8	1	17
SECUNDERABAD DIVISION .	276		-		-		***		1	***				1	3.6	1	3.62
BURMA DIVISION	102		1							2				2	19'6	2	1961

# TABLE XVIII—continued.

#### STATISTICS OF OFFICERS.

D .- ENTERIC FEVER by months, stations, groups, and commands.

	nneal		Numbe	R OF	DMISS	IONS F	ROM E	NTERI	FEVE	R IN E	ACH M	ONTH.		.500	agth.		1,000
STATIONS® AND GROUPS.	Average anneal strength.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total admissions.	Admission rate per 1,000 of strength,	Total deaths.	Death rate per of strength.
Fort William	36		1	1										2	55'6		27.78
GROUP IV.—BENGAL AND ORISSA	53		1	1		***			14					2	37.7	1	18'87
Allahabad	25 19 70			1 1				=	::					1 - 2	40°0 52°6 28°6		-
GROUP VGANGETIC PLAIN AND CHUTIA NAGPUR	197		1	- 1			1			1				4	20'3	100	
Shahjahanpur	13 17 70			3										3	76'9 58'8 42'9	=,	14'29
Ferozepore	31 5 80		,		:::		=,	=				2 11 11		2 1 2	64°5 200°0 25°0		
GROUP VIUPPER SUB-HIMA-	446	-	-	4		1	10					2		10	33,1	- 1	2*24
Mooltan	26											2		2	76'9	1	38-46
GROUP VIL-NORTH-WEST FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJ- PUTANA	136											2		2	147		7'35
Muttra B Jhansi Indore Indore Indore Indore Indox	17 40 2 54	=								=		1-1			58'8 25'0 500'0 18'5		-
GROUP VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT	184				1				1		1	1		4	217		
Jubbulpore	33 23			2						_ 1	4			5 3	151'5	-	30°30 43°48
Secunderabad	97 29 82 32	2			=-					3			2 1	5 2 7 2	51'5 69'0 85'4 62'5	1111	 12'20 31'25
GROUP IXDECCAN	340	4	1	4	2				1	4	4		3	24	70'6	4	11'76
Colaba	45		1				***	***						1	22"2	***	
GROUP XWESTERN COAST .	54	***	1	***			***		***					-1	18.2	***	
Bangalore. A	85			***	1			***	2		2			7	82'4		11'76
St. Thomas' Mount	8		***						1					1	1250		
GROUP XISOUTHERN INDIA .	128			-11	- 1	***	- 1		3		2			8	62'5	1	7'81
Ranikhet Jutogh Khyragully Cherat Quetta	30 7 11 9 92			=======================================							=			1 1 1 6	33'3 142'9 90'9 111'1 65'2		10'87
GROUP XIIaHILL STATIONS.	315		-			2		2		3	-	2		10	317	1	3'17
Landour Dalhousie Khandalla Wellington GROUP XII5.—HILL CONVALUS-	34 2 38	-	=	=;		=		3	<sub>3</sub>			=	=======================================	6 1 4	200°0 176°5 500°0 105°3	2	58'82
CENT DEPÔTS AND SANITARIA	1.56			2			- 1	4	4	1			***	12	76'9	3	19723
Deolali Depôt	27	1	•••					***	***	. 1	***			2	74'1		
INDIA .	2,225	6	6	12	4	4	7	6	6	10	8	7	3	79	35'5	14	6:29
Northern Command	562 655 558 276	-4	1 2 2	. 40	3	3 1	2 <sub>1</sub>	4	1 1	7 2	 5 1	4 3		16 22 14	28'5 45'9 25 t	352	5'34 7'63 3'48
SECUNDERABAD DIVISION . BURMA DIVISION	276 102	'			'		*		4					17	01,0		7'25

# STATISTICS OF OFFICERS. E.-DETAIL of DISEASES.

	ATT	ACHE	H OF	URO	SPEAN	ATT	RITIS FFICE ACHE NATIV ROOP	H RS D TO	of DISEASES.	ATT	RITIS	H OFI	EUROI	S PEAN	ATT	RITISI FFICE ACHE NATIV ROOP	RS D TO
DISEASES.		India.	•	Fn See	VICE.		India.		DISEASES,		INDIA.*			ELD VICE.		INDIA.	
	Admissions.	Deaths.	Invalids.	Admissions.	Deaths.	Admissions.	Deaths.	Invalids, +		Admissions.	Deaths.	Invalids,	Admissions.	Deaths.	Admissions.	Deaths.	Invalids, *
Small-pox	4 1 2		=	::		1 1	1		Tonsilitis Follicular	15 33 2		=		-	22		===
Chicken-pox Measles	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					4		-	Quinsy Inflammation of the pharyex . Gastritis Hæmatemesis . Indigestion .	1 23 1 19	-	-		=	3 8 	=======================================	=
Influenza Mumps Diphtheria Simple continued fever Enteric fever	76 1 2 125 79	14	3 38 1			39 1 50 30			Gastralgia Inflammation of intes- tines Enteritis Typhlitis Colitis	4 13 8 8				-	7 4 5		=
Mediterranean fever Cholera Dysentery Ague Remittent fever Erysipelas	6 39 286 7		10	= = = = = = = = = = = = = = = = = = = =		1 49 292 8 1	2		Ulceration of the intes- tines Sprue Hernia Constipation	2 5		2 1 1 1			1111		-
Septicæmia Tubercle of lungs Syphilis Gonorrhœa Tænia solium Tænia mediocanellata	3 3 1		-,		E III E	3			Colic Diarrhora Enteralgia Abscess of the rectum and anus Ulceration of the rectum						31 1		=
Ringworm	1 9 7					1 15 5			Fistula in ano Piles Hepatitis Abscess of the liver Congestion of liver	8 13 2 45	-	5  2			2 5 12 5 10	5	=
Lipoma	1 1 27		  1			1 1 10			Jaundice Cholocystitis Peritonitis Inflammation of lymph- glands Inflammation of lymph-	10	=,	=			9 1 8	= -	=
Other General Diseases Neuritis Myelitis Sanguincous apoplexy Vertigo Megrim	4 1 3	-		-	111111				atics Acute nephritis Granular kidney Pyelitis Congestion of kidney	3		=		=	3 1		=======================================
Headache	3 10 5 1					 2  1 2		-	Nephralgia Haemsturia Albuminuria Oxaluria Inflammation of the bladder	1 1 1 2					2	-	-
Ulcerative keratitis Iritis Inflammation of the external ear Rhinitis Coryza	3 5					3 2 3	-	=======================================	Urethritis Stricture of urethra Inflammation of the prostate Phimosis Balanitis	2 1	-						
Naso-pharyngeal ca- tarrh Valvular disease of the heart Fatty degeneration of the heart						-		-	Hydrocele of the sper- matic cord Varicocele Orchitis Epididy mitis Abscess of the testicle	<sub>2</sub>	-				1 1 4 		
Dilatation of the heart Syncope Disordered action of the heart Phlebitis	4 2			111 11		4 3			Periostitis	6 55 4 3 1	=======================================	14 ::-			25 2 3 	11111	
Thrombosis Varix Laryagitis Bronchitis Spasmodic asthma Pneumonia	3 32 1 4	-				-3 17 2 2			Abscess of the connective tissue Erythema Prickly heat	13	. I'M	1	-		9 3 1	-	
Broncho-pneumonia Pleurisy Caries of dentine Inflammation of the dental periosteum Gum-boil	1 10 1 3 5		-, -	111 11	=======================================	-4			Herpes Urticaria Eczema Impetigo Herpes Pemphigus	7		=======================================			4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	
Suppuration of perior- teum, gums and alveoli . Sore throat. Ulceration of palate and fauces .		. 17 1				4			Ulcer	16 32 4 1 10				-	13 15 1 1 1 1 2	-	-
			luding						† Inform	nation r	ot avai	lable.					

<sup>·</sup> Excluding Field Service.

<sup>†</sup> Information not available.

# EUROPEAN TROOPS, 19

# TABLE XVIII -continued.

E .- DETAIL of DISEASES-concluded.

	ATTA	CHE	SH OF D TO I	EUROI	SPEAN	ATT	FFICE ACHE NATIV ROOP	RS D TO		ATT	BRITIS	SH OF D TO TROOP	EURO	SPEAN	ATT	RITIS FFICE ACHE NATIV ROOP	RS D TO
DISEASES.	1	INDIA.	•	Fr. Serv	VICE.	10 3	INDIA.		DISEASES,	8 19	INDIA.			VICE.		India,	
	Admissions.	Deaths.	Invalids,	Admissions.	Deaths.	Admissions.	Deaths.	Invalids, †		Admissions.	Deaths.	Invalids.	Admissions	Deaths.	Admissions.	Deaths.	Invalids, †
Burns and Scalds Heat-stroke Heat apoplexy Sun-stroke Effects of cold Multiple injury Suffocation from sub- mersion Abrasions Coatusions Strains and sprains Internal derangement of joint Dislocation of other bones Gunshot wounds Wounds Foreign body in tissues and organs Fracture of base of skull Fracture of other bones Rupture of muscles Concussion of the spinal cord	1 4 9 2 14 53 52 1 22 36 1 29 3	1 1 2 2 2				1 2 5 1 5 377 32 1 8 2 32 32 17 5	1		Concussion of the brain Laceration of the brain without fracture of skull Contusion of eyeball Poison, ptomaines Poisoned wound by septic matters Poisoned wound by horse Poisoned wound by dog Poisoned wound by stinging insect No appreciable disease	14	39	138			1 1,008	11	-

<sup>·</sup> Excluding Field Service.

<sup>†</sup> Information not available.

B.-WOMEN.

### TABLE XIX.

#### RATIOS AND ACTUALS OF COMMANDS.

	Nort Comr	hern nand.	Wes		East		al	nder- oad sion.		irma ision.		India.*	
Strength	8	54	1,0	16	895	5	41	98	-	168		3,431	
	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Remainin
Constantly sick	37'2	31.80	31.0	32'46	28.4	25'46	41'3	20.20	15'7	2'64	32'9	112'95	from Igos
Admissions—		1											1
Influenza Cholera Small-pox Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery Diarriscea Anzemia and Debility Abortion and Puerperal Affections Other Diseases peculiar to women	3'5  7'0 7'0 79'6 1'2 22'2 4'7 1'2 11'7 9'4 408'7 50'4	3  6 6 6 8 1 19 4 1 10 8 14 349 43	1'0  3'0 7'9 99'4 3'9 19'7 2'0 1'0 7'9 8'9 17'7 352'4 28'5	1 3 8 101 4 20 2 1 8 9 18 338 29 71	15'6 1:1 4'5 6'7 36'9 1'1 4'5 2'2 3'4 8'9 5'6 20'1 287'2 46'9 63'7	14 6 33 1 4 2 3 3 8 5 18 257 42	100 48'2 40'2 40'2 40'1 26'1 24'1 279'1 24'1 66'3	 5 24  20 2  13 12 14 139 12	29'8  17'9 11'9 23'8 101'2 35'7	         	5'2 '3 3'8 7'3 66'2 1'7 19'8 2'9 1'5 12'2 10'5 19'8 320'4 38'5	18 1 13 25 227 6 6 10 5 42 36 68 1,120	 2 5 9 1 2   2 1 37 3
ALL CAUSES .	817'3	698	775'6	783	678-2	607	877'5	437	416'7	70	757'8	2,600	Sı
Cholera Small-pox Enteric Fever Intermittent Fever Simple Continued Fever Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery Diarrhera Hepatic Abscess Childbirth and Abortion	234 1'17  1'17  1'17 1'17		"98"		2°23 2°23 2°23 2°23 2°23 2°23	3	4'02	2	5795		*29 *87 1*46   *87 *29 *29 *29 1*17 1*46	1 3 5 	Deaths out a hospital
ALL CAUSES .	14'05	12	8.86	9	14'53	13	12'05	6	11'90	2	12'24	42	2
Percentage in 100 admissions—  Influenza Cholera Cholera Small-pox Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery District Ansemia and Debility Abortion and Puerperal Affections Other Diseases peculiar to women	5	*43 *86 *56 *774 *14 *172 *57 *14 *143 *15 *16 *16 *16	44	"13" "38" "502" "51" "54" "25" "13" "14" "28" "14" "28" "14" "28" "68" "701"	44 46	2'31 '16 '66 '39 '44 '16 '33 '49 '82 '82 '737 '734 '5'92	31	1714 5'49 4'58 46 -46 -775 3'20 1781	7.	71 29 57		*69 *04 *30 *96 8*73 *23 *262 *38 *19 *162 *138 *2*62 43*08 \$*12	
Percentage in 100 deaths—  Cholera Small-pox Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery Diarrhora Hepatic Abscess Childbirth and Abortion		1677 8°3  8°3  8°3 8°3				777	3	33'3	5	500		2'4 7'1 11'9  7'1 2'4 2'4 2'4 9'5 11'9	

# WOMEN, 1906.

### TABLE XX.

CHOLERA by months, stations, groups and commands.

	gth	1	N	UMBER	OF AD	MISSIO	NS FR	ом Сн	OLERA	IN EA	си мо	NTH.			1,000		
STATION, GROUP, COMMANDS AND DIVISIONS.	Average annual strength.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total Admissions.	Admission rate per 1, of strength.	Total deaths.	Death rat per 1,000 of strength.
В.															200		1
Muttra	21		-							1					474	,	47-6
GROUP VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT	255			-	-	-		-	1	-					379	,	379
															-		
												-		- intra			
		-	- 6					-/-		-							
																1000	
											- +		120				
					-								N	-			
				-		-			-								
																	Andrew St.
																	111
										13				1	1		-
				-													Pa libra
	3,431								1				,		.3	,	-
NDIA · ·	37,0																
																100	
NORTHERN COMMAND	854													***		***	
Western " · ·	1,016							***			200	***					
	-						-									137	
EASTERN	895			-	-				1	-				1	111		1.
SECUNDERABAD DIVISION .	498						-			***							
				1							1	Name of the last o	100			100	
BURMA DIVISION	16	3		-			***		***	***		***	241	***	***		***

# WOMEN, 1906.

### TABLE XXI.

ENTERIC FEVER by months, stations, groups, and commands.

Stations* and Groups.  Stations and Groups.  Number of admissions from Enteric Fever in each month.  November of admissions.  November of Admissions from Enteric Fever in each month.  November of Admissions.  November of Admissions from Enteric Fever in each month.  November of Admissions from Enteric Fever in each month.  Total Admissions.  Total Admissions.  Total Admissions from Enteric Fever in each month.  I It'll	Death rate p 1,000 strengt
Fort William	rate p
Fort William	
GROUP IVBENGAL AND ORISSA 106 1	
Lucknow 105 1 1 1 975	1 00
GROUP V.—GANGETIC PLAIN 290 1 1 3'4	1 . 3:
Roorkee	
Meerut	1 87
Ferozepore 61 1 1	1 165
Attock	
GROUP VI.—UPPER SUB-HIMA- LAYA	2 37
Mooltan 40	
GROUP VIL.—NW. FRONTIER, INDUS VALLEY, AND NORTH- WESTERN RAJPUTANA 214	
Nasirabad 25 1 1 1 4000	
Agra	
GROUP VIII,—South-Eastern Rajputana, Central India,	
AND GUJARAT . 255 1 2 3 11-8	
Secunderahad	1 5'8
Poona	
GROUP IX.—DECCAN	1 18
Bangalore A	
B 123 2 2	1 78
GROUP XL-SOUTHERN INDIA 239 2 2 84	1 41
Kasauli	
Purandhur 10	
GROUP XIIb.—HILL CON- VALESCENT DEPOTS AND SANITARIA	
INDIA . 3,431 1 2 3 5 2 1 5 3 2 1 25 7'3	5 1'4
NORTHERN COMMAND 854 1 1 1 1 1 1 6 70	1 11
WESTERN " 1,016 1 1 1 1 3 1 1 8 79	
EASTERN	2 2'2
SECUNDERABAD DIVISION . 498 1 1 2 1 5 100	2 40
Busma Division 168	

C.-CHILDREN.

# CHILDREN, 1906.

# TABLE XXII.

#### RATIOS AND ACTUALS OF COMMANDS.

			RATIO	SAND	ACTOA	LS OF	COMM	ANDS.				10000	
	North		Wes	tern nand.	Comm	tern nand.	Secund Divis		Bur Divis			India.*	
Strength	,	.345		,580		1,314	8	40		243		5,322	
	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals,	Ratios.	Actuals.	Ratios.	Actuals.	Remaining from 1905.
Constantly sick	15'0	20'11	18.8	29'71	15'9	20'93	28.3	23,25	5'6	1.32	18'0	95*82	
Admissions—  Influenza Cholera Cholera Small-pox Measles Whooping Cough Enteric Fever Intermittent Fever; Simple Continued Fever Tubercular Diseases Respiratory Diseases Dysentery Diarrhea Eye Diseases	1'5 	2 26 4 10 76 1 19 1 25 8 54 8	16 25'9 3'2 7'0 89'9 2'5 17'1  45'1 45'6 5'1	1 1 41 5 11 142 4 27 76 12 72 8	9'1 '8 22'1 7'6 3'0 41'1 '8 11'4 1'5 42'6 9'9 42'6 38'1	12  1 29 10 4 54 1 1:5 2 36 13 50	1'2  3'6 57'1 3'6 6'0 2'4 26'2 2'4 76'2 20'2 63'1 05'5	3 48 3 5 5 37 2 2 2 64 17 53 35	    4.1. 32'9 8'2 24'7  20'6		3'0 '9 27'1 4'1 5'6 58'1 1'7 17'1 1'3 42'7 9'4 45'1 22'7	16  5 144 22 30 309 91 7 7 227 50 240 121	
ALL CAUSES .	377'0	507	500'6	791	424'7	558	6976	586	333,3	54	469'0	2,496	46
Cholera Small-pox Diphtheria and Croup Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Tubercular Diseases Convulsions Respiratory Diseases Teething Dysentery Diarrhœa Anæmia, Debility, and Immaturity.	"1'49" "74" 2'97" 774 1'49 2'23 11'15 7'43	 2  1 4 4 1 2 3 15 10	7:59 5:79 5:79 5:79 5:79 5:79 5:79 5:44 4:43	 1 3 1 3  12 9 6 5 5 15 7	76 1'52  76 228 3'81 2'28 6'85 9'89	 2   3 5 5 3 9	2738 1°19 476 238 3°57	    1  4  2 3	4112 4112 4112		 '56 '56 '56 '56 '53 '94 3'76 3'19 2'07 7'89 6'39	3 3 3 3 5 20 16 17 11 42 34	Deaths out of hospital.
ALL CAUSES .	42.38	57	51'90	82	45'66	60	36,00	31	32,03	8	44'72	238	17
Influenza Cholera Small-pox Measles Whooping Cough Enteric Fever Intermittent Fever Simple Continued Fever Tubercular Diseases Dysentery Diarrhoza Eye Diseases	1.	"39 5'13 '79 1'97 '20 3'75 '20 4'93 1'58 4'93 1'58		"13 "13 "63 "139 "65 "139 "795 "51 3'41 "152 9'10 1'01	1	2°15  '18 '72 '72 '72 '73 '18 2°69 '36 0°04 8°96		*17 *51 *51 *51 *51 *53 *34 *375 *34 *399 *399		1.85 4.81 3.70 1.11		*64 **** *20 5'77 *88 1'20 12'38 *36 3'05 *28 9'09 2'00 9'62 4'85	
Cholera Small-pox Diphtheria and Croup Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Tubercular Diseases Convulsions Respiratory Diseases Teething Dysentery Diarrhoza Anamia, Debility, and Immaturity.	3 3 2 4	375 		11'2 377 1'2 377 1'2 377 377 4'6 1'10 7'3 8'3 8'5		177 333  177 550 833 850 370		75 75 75 79 79	12			113 113 113 113 113 211 814 677 771 466 1176	

### CHILDREN, 1906.

#### TABLE XXIV.

ENTERIC FEVER by months, stations, groups, and commands.

	anuna.	1	Numi	ER OF	ADMIS	SIONS I	FROM E	NTERIC	Feve	RINEA	сн мо	NTH.			rate	ths.	Death
Stations,* and Groups.	Average annual strength.	Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total ad- missions.	Admission r per 1,000 strength,	Total deaths.	rate per 1,000 of strength
В					1		1					17					
allundur	- 44	-	140		- 1			***				***	-	1	22'7		
ahore Cantonment .	38			***	***				***		1	100		1	26'3		
awalpindi	. 194		1	500										1	5'2	***	
ttock	21	***	444	(	1	***		***			***	***		1	47.6	***	***
ROUP VIUPPER SUB-HIMA-	931		1		2		***				1			4	4'3		
В		3 5								100		1		7			71
asirabad	27	***	***	***	1	***			***			-		1	370	100	***
gra	57	-	***			1	***	***			1			2	35'1		17'5
ansi	67		***						***		1		***	1	14'9	***	
how	119	-	1	1								***		2	16:8		-
ROUP VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL IN- DIA, AND GUJARAT.	3.55		1	1	1	1					2			6	16.0		2-8:
B .	1	1	-					1							29.4	12-4	
cunderabad	269									1			1	2	7'4	***	***
lgaum	56			***	***	***	***		1	***				1	17'9	***	
ona	16:				-		2		1	2		***		5	31.1		
ROUP IXDECCAN	835	-					2		2	3			1	8	9'6		
slaba	214	-			-		-				1			1	4'7	1	4-6;
ROUP XWESTERN COAST .	241				100	***	·				1	***		1	4"1	1	411
В																	
. Thomas' Mount	38	1			1	Same?					1000	ALL IN		1	26'3		
ROUP XI.—SOUTHERN INDIA .		***	***	100	***		***			1	***				2'4		
KOUP AL-SOUTHERN THOM	423		***	200		***	***	***	***	1	***	***	***				
anikhet	98		***		***	1					***			1	10.5		***
haubuttia	32					1	***	***				***	***	1	31,5	1	31'25
alabagh	3				***	1	***					***	***	1	333'3		***
ROUP XIIaHILL STATIONS.	796			***		3							***	3	3.8	1	1'26
asauli	79						***	1						1	12.7		***
alhousie	67		200		***	3	***		1		***		***	4	59'7	***	
Vellington	105	***			***	***			1					1	9'5		***
ROUP XIIA.—HILL CONVALES- CENT DEPÔTS AND SANITARIA	487					3		1	2					6	12'3		
onamalice Depôt . '	15										1			1	66.7		
INDIA .	5,322		2		3	7	2	1	4	4	5		1	30	5.6	3	-56
DRTHERN COMMAND	1,345		1		2	- 4		1	1		1			10	7'4		
ESTERN	1,580		1	1	1		2		2	2	2			11	7'0	1	163
STERN ,	1,314				***	3	***		***		1			4	3.0	2	1'52
CUNDERABAD DIVISION .	840								1	2	1		1	5	6.0		
RMA DIVISION	243		411		***		400	***	***	***	***	***	***	100	100		***

### CHILDREN, 1906.

#### TABLE XXV.

DEATHS OF CHILDREN BY AGES AND CAUSES.

AGE AT DEATH.	Cholera.	Small-pox.	Diphtheria and Croup.	Enteric Pever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercular Diseases.	Convulsions.	Respiratory Diseases.	Teething.	Dysentery.	Diarrhea.	Anzemia, Debility, and Immaturity at birth.	ALL CAUSES.	Average annual strength.	Death rate per 1,000 of strength.	Liability. (The previous column expressed in percentages.)
Under 6 months						1	2	1	12	4	5	1	16	31*	106	556	190.65	48'11
Between 6 and 12 months				-	,			2	2	***	7	3	11	2	50	569	87.87	22'17
" 12 and 18 "					1		1	1	5	6	5	3	9		35	551	63.25	16'03
								1		- 1								
" 18 and 24 "		***			-					3		,	2	-	12	524	22,00	578
., 2 years and 5 years .			2		1				1	2		1	2		16	1,211	13'21	3'33
5 ,, and 10 ,, .	2000			2			20	1			1			1		-		-
5 ,, and 10 ,, .			-									3		1	13	1,210	10'74	2'71
,, 10 ,, and 15 ,, .				1											4	542	7.38	1'86
., 15 ,, and upwards .																121		
										-			1000					***
	-														6			
	13																-	1
THE HARDINA											-		1	48				1
10 St. A. 1							-							-	000	100		
																1 1		
1-3-19-13	-3			1							13	186	75			188		
		-		-									1 199	- 1		130		
									-		18		150		3 8			
1000										-	1							
THE RESERVE												1		-	-			
The state of the s							1					750	-			= (3)		
1000		-		200	130		ben			4			1.26			1	1	116
12 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -					3		1						9 33		. 3	- 11	1	
		1		1									1	7 13			100	
The Contract of			1	-					-	-	-		-51				123	
							74			-		-				-	100	
												-			0.15			
								1000				40.00		The same	10000	10000		

 <sup>23</sup> Immaturity.
 Diphtheria.
 Fxcluding 2 deaths and 38 average strength of children at Deolali for which details by ages are not available.

#### TABLE H.

#### STATIONS by COMMANDS.

STATIONS.	Height above the sea- level in feet.* Authority for height.†	STATIONS.	Height above the sea- level in feet.* Authority for beight.†	STATIONS.	Height above the sea- level in feet.* Authority for height. †
NORTHERN COMMAND 1— Ambala Juliandur Ferozepore Lahore Cantonment Amritsar Sialkot Jhelum Rawalpindi Attock Mardan Nowshera Peshawar Fort Jamrud Kohat Thal Edwardesabad Dera Ismail Khan Jatta Drazand Fort Zam Multan Jandola Simla Jutogh	902 S. G 900 " 645 " 706 " 829 " 1,707 G. T 1,100 M. O 1,170 I. B 1,600 " 1,279 S. G 1,279 S. G 1,270 S	Nasirabad Ajmer Sambhar laipur Gwalior Jhansi Nowgong Goona Agar Sehore Indore Mho w Saugor Sutna Jubbulpore Kamptee Sitabaldi Aurangabad Ahmednagar Belgaum Satara Poona Kirkee	1,465 S. G. 1,461 " 1,627 " 1,234 M. D. 1,582 S. G. 1,689 " 50 I. B. 1,617 S. G 1,617 " 1,617 " 1,506 S. G. 1,753 " 1,903 S. G. 1,753 " 1,903 S. G. 1,306 S. G. 930 " 1,236 " 1,306 S. G. 930 " 1,236 " 1,305 S. G. 2,123 S. G. 2,183 " 1,909 "	Roorkee Dehra Dun Meerut Dehhi Agra Kohima Shillong Guntok Chumbi Pharijong Gyantse Almora Naini Tal	400 S. ( 417 417 414 500 S. ( 884 2,229 739 739 715 554 4,500 I. B. 4,987 S. ( 5,000 14,200 12,900 14,200 12,900 6,250 8
Dharmsala Bakloh Murree Khyragully Baragully Baragully Kalabagh Chitral Killa Drosh Malakand Fort Dargai Chakdara Abbottabad Cherat Fort Lockhart Hangu	6,111 4,585 7,259 7,678 7,800 M.O 7,936 1, B 4,039 3,889 3,889 S.G  2,500 L.B. 4,1250 L.B. 4,250 L.B. 5,66 1, B. 5,60 1, B. 6,039 1, B. 6,039	Hindubagh Mesa Khel Khan Mohamed Kot Killa Saifulla Murgha Loralai Gumbaz Quetta Peshin Shelabagh Spinwana Chaman	3,620 I, B, 4,520 S, G, 5,675 S, G, 4,600 I, B, 3,330 S, 5,690 S, 5,690 S, 5,690 S, 5,511 S, G, 5,157 G, 6,380 I, B, 5,157 G, 5,380 I, B, 5,511 S, G, 5,511 S, G, 5,515 S, G, 5,515 S, 6,380 S,	SECUNDERABAD DIVISION:— Belarum Secunderabad Cannanore Trivandrum Bellary Bangalore Trichinopoly St. Thomas Mount Madras Ootacamund Camp Lovedale "Yellenhalli"	1,890 I. I. 1,832 S. (2,47 198 M.) 1,483 S. (3,021 2,74 259 7,216
WESTERN COMMAND:—  Bikaner  Sibi  Jacobabad  Hyderabad  Karachi  Bhuj  Paikot	779 S. G. 489 ". 181 1."B. 28 S. G. 341 ".	Mount Abu Chabbar Jask Muscat Bushire Bagdad Aden Othala Suleik Nobat Dakin Khormaksar Sheikh Othman Perim	3,960 ,,  40 I.B. 26 S.G. 5,100 ,,  50 I.B.	BURMA DIVISION : Port Blair	85 S. (14 2,900 560 351 3,508 7,
Rajkot Deesa Ahmedabad Baroda Alirajpore Sirdarpore Jhabwa Kherwara Kotra Udaipur Todgarh Erinpura Neemuch Deeli	417	EASTERN COMMAND:  Manipur Sadiya Dibrugarh Fort William Alipore Barrackpore Buxa Dinapore Benares Allahabad Fyzabad	2,619 S. G. 440 M. H. I. 342 S. G. 17 I. B. 24 S. G. 2,457 " 171 " 256 " 298 ", 336 ",		

<sup>•</sup> These are usually the heights above sea-level of the survey-marks or of the mercury-surface in barometer-cisterns in the stations.

† S. G. = Surveyor-General of India; M. H. I. = Dr. Macaamara's "Himalayan India;" M. D. = Meteorological Department; I. B. = Intelligence Branch of the Division of the Chief of the Staff; M. O. = Medical Officers in charge of Station Hospitals in their Sanitary Reports.

#### TABLE XXVI.

RATIOS of COMMANDS.

The ratios of admissions and deaths to strength are taken from Table XXVIII,

The actuals will be found in Table XXIX.

										11	KATIO PER	1,000 OF TI	HE AVERAGE S	TRENGTH.	
										Northern Command.	Western Command,	Eastern Command.	Secundera- bad Division.	Burma Division.	Army o
RAGE ANNUAL S	TRENGTH									40,535	34,972	21,918	10,603	5,310	127,853
NSTANTLY-SICK-R	ATE OF E	ACH M	ONTH	-									-0-	2.00	111111111111111111111111111111111111111
January February	4 :		:	7	:	:		:	:	24'0	23.1	31,1	18'9	24°8 25°1	51,5
March	3 1 5	3.	:	1					:	18.0	19"1	18'5	17'7	21'5	18'5
May		100								18.6	18.8	22'0	19.1	20'1	18'9
June : :	1	1	-:		:			:		19'4	18.4	25.3	31.8	25.1	19'4 20'4
August September .				3						20'4	23'2 28'4	24'8	20'2	32'0	21'8
October .				-						31'5	29'6	28.3	20'1	28.7	25'9
November .			:		:				:	45'9 40'7	32'4 29'8	30°8 34°6	23°5 18°4	27'9	31.4
						OF T	не Үз	EAR		25*4	23.8	24'7	19"7	26.0	23'0
DMISSION-RATE C	P THE Y	EAR-				1				7'5	4'7	7'5	2'0	***	5'2
Cholera .										.1	1.1	*4	3'7	**2	7
Small-pox Enteric Fever	1	1	-	:	:		-		:	1'4	1'4	7 7	2'3	'2	1'0
Intermittent Four	r					15.			:	320.5	300'6	226°7 3°6	95'0	168.0	261'8
Remittent Fever Simple Continued	i Fever.							100		46'5	18'7	15'8	43'6	41'8	29.6
Tubercle of the le Pneumonia Other Respirator	angs .				:				:	3'3	0.8	7'9	5'9	2.8	2,2
Other Respirator Dysentery	y Diseases					9.			:	2S'1 37'5	4 '0	20°3 34°1	17°2 50°3	23.0	37.1
Diarrhosa .							5	-		6.1	0.0	8'4	11'6	5.8	7.2
Hepatic {Absce	stion and	Inflam	matio	· .	:	:	:			.3	7,2	1'2	.3	34	.9
Venereal Disease	.: :		:	:	:	:	:	:	:	11.1	19'6	3.2	19'1	20'0	16.5
						AL	L CAU	SES		790'5	743'3	647'0	524'4	643'7	683'5
EATH-RATE OF TH	U VV. 0-												-		100
Cholera .								-00		*07	'63	'46	2°26		'48
Small-pox . Enteric Fever	2	:	:	:		:		:	:	*32	'09	'05 '18	***66		103
Intermittent Feren									:	*27 *37	*29	'46 '50	'09	'38 '38	.31
Simple Continue	d Fever		1							441	*03		*28	19	34
Circulatory Dise Tubercle of the	lungs .		:	:	:	:	-	:	:	12	'37 '23	'32	157	"19	1 25
Pneumonia										2*24	1'69	1*28	1'04	19	1'50
	y. Discuss			:					:	10	.00	*23	119		.13
Other Respirator	100							:		'05	16	'27	19	"10	'08
Dysentery Diarrhœa		-0.0	100	-											
Dysentery .	bility		:	:					:		.00	'05	,00		'04
Disentery Diarrhora Hepatic Abscess Anzemia and De	ebility .			-		A	LL CAU	7888		6.10	8:09	6.03	773		
Discritery Discribes Hepatic Abscess Anzenia and De ERCENTAGE IN 16 Influenza	ebility .	SIONS-				A	LL CAU	7585				6.93	773		6'57
Disentery Diarrhea Hepatic Abscess Anzemia and De ERCENTAGE IN It Influenza Cholera	ebility .	SIONS-				A	LL CAU	7585		'95 'ot	8:09 '63 '15	6-93	773	4'14	6'57
Disentery Diarrhesa Hepatic Abscess Anæmia and De ERCENTAGE IN 16 Influenza Cholera Small-pox Enteric Fever	oo Admis	SIONS-				A	LL CAU	JSES		'95 '01 '04 '17	8'09 '63 '15 '18 '11	6'93 1'16 '06 '04 '11	773	4'14	6'57
Dysentery Diarrhea Hepatic Abscess Anæmia and De ERCENTAGE IN 16 Influenza Cholera Small-pox Enteric Fever Intermittent Fever	oo Admis	SIONS-				Aı	LL CAU	7888		'95 '01 '04 '17 41'65 '76	8:09 *63 *15 *18	6'93 1'16 '06 '04 '11 35'04 '56	773	4°14  '03 '03 20°10 1'43	6'57
Dysentery Diarrhea Hepatic Abscess Anæmia and De ERCENTAGE IN 16 Influenza Cholera Small-pox Enteric Fever Intermittent Fever	oo Admis	SIONS				A	LL CAT	7585		'95 '01 '04 '17 41'65 '76 5'88	8'09  '63 '15 '18 '11 40'45 '00 2'51	6'93 1'16 '06 '04 '11 35'04 '56 2'44	773	4°14  '03 '03 26°10 1'43 6°50	'04 6'57 '77 '11 '09 '13 38'31 '77 '4'34
Dysentery Diarrhea Hepatic Abscess Anzenia and De ERCENTAGE IN It Influenza Cholera Small-pox Enteric Fever Intermittent Feve Simple Continu Tubercle of the Pneumonia	oo ADMIS					A	LL CAU	7888		'95 '01 '04 '17 41'65 '76 5'88 '42 1'49	8'09  '63 '15 '18 '11  40'45 '00 2'51 '28 1'32	6'93 1'16 '06 '04 '11 35'04 '36 2'44 '39	773  '38 '70 '18 '43 '85'11 '31 8'31 '27 1'13	"" 4"14 "" "03 "03 "03 "03 "05 "1"43 "0"50 "29 "44	'04 6'57 '77 '13 '09 '13 '38'33 '77' 4'33' '33'
Dysentery Diarrheza Hepatic Abscess Anzenia and Do  ERCENTAGE IN In Influenza Cholera Small-pox Enteric Fever Intermittent Fer Remittent Feve Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery	oo ADMIS					A	LL CAU	7388		'95 '01 '04 '17 41'65 '76 5'88 '42 1'49 3'55 4'74	8'09  '63  '15  '18  '11  40'45 '00  2'51 '28  1'32 3'22 5'38	6'93 1'16 '06 '04 '11 35'04 '56 2'44 '39 1'23 3'14 5'28	773  '38 '70 '18 '43 18'11 '31 8'31 '27 1'13 3'27 9'59	4'14 '03 '03 '03 20'10 1'43 6'50 '29 '44 4'18 3'57	'04 6'57 '77 '11 '00 '13 38'31 '7' 4'33
Dysentery Diarrhea Hepatic Abscess Anzenia and De BRCENTAGE IN It Influenza Cholera Small-pox Enteric Fever Intermittent Feve Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery Diarrhea	oo ADMIS	es				A:	LL CAL	USES		'95 '04 '04 '17 41'65 5'88 '42 1'49 3'55 4'74 '77	\$'09 '63 '15 '18 '11 40'45 '00 2'51 '28 1'32 3'22 5'38 1'06	6'93 1'16 '06 '04 '11 35'04 '39 1'23 3'14	773  '38 '70 '18 '43 18'11 '31 8'31 '27 1'13 3'27 9'59 2'21	4°14  '03 '03 20°10 1°43 6°50 '29 '44 4°18	'04 6'53 '77 '11 '06 '13 38'31 '4'33 '13 1'33 1'33 1'34 1'10
Dysentery Diarrhea Hepatic Abscess Anzenia and De  ERCENTAGE IN 16 Influenza Cholera Small-pox Enteric Fever Intermittent Fever Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery Diarrhea Hepatic { Abse	oo ADMIS	es		ion		A	LL CAU	USES		'95 '01 '04 '17 41'65 '76 5'88 '42 1'49 3'55 4'74 '77 '01	8'09  '63 '15 '18 '11  40'45 '00 2'51 '28 1'32 3'22 5'38 1'06 '02 '08	6'93 1'16 '06 '04 '11 35'04 '56 2'44 '39 1'23 3'14 5'28 1'30 '02	773  '38 '70 '18 '43 18'11 '31 8'31 '27 1'13 3'27 9'59 2'21 '05 '11	"" 4"14 "" 03 "03 "03 "05" 1" 43 "050 "44 "18 3"57 "91 "05 "06	777 711 100 113 38°31 133 133 133 133 130 100 100
Dysentery Diarrhea Hepatic Abscess Anzenia and De BRCENTAGE IN It Influenza Cholera Small-pox Enteric Fever Intermittent Feve Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery Diarrhea	oo Admis	es		ion		Ai	LL CAU	USES		'95 '01 '04 '17 41'65 '76 5'88 '42 1'49 3'55 4'74 '77 '01	8'09  '63 '15 '18 '11  40'45 '00 2'51 '28 1'32 3'22 5'38 1'06 '02	6'93  1'16 '06 '04 '11 35'04 '36 2'44 '39 1'23 3'14 5'28 1'30 '02	773  '38 '70 '18 '43 18'11 '31 8'31 '27 1'13 3'27 9'59 2'21 '05	"" 4'14 "" 03 03 03 05 10 1'43 0'50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6'57
Dysentery Diarrhea Hepatic Abscess Anzemia and Do  ERCENTAGE IN Io Influenza Cholera Small-pox Enteric Fever Intermittent Fer Remittent Fere	oo Admis	es d Infla		ion		A	LL CAU	USES		'95 '01 '04 '17 '41'65 '76 '5'88 '42 1'49 3'55 4'74 '77 '01 '04 '10 1'40	8:09  163 115 118 111 40'45 100 2'51 128 1132 3'22 5'38 1'06 05 05 2'64	6'93  1'16 '06 '04 '11 35'04 '39 1'23 3'14 5'28 1'30 '02 '18 '39 3'54	7773  '38 '70 '18 '43 18'11 '31 8'31 8'31 '27 1'13 3'27 9'59 2'21 '05 '11 '40 3'63	"" 4'14 "" 03 03 03 05 10 1'43 0'50 09 04 4'18 3'57 09 06 06 03 3'10	777 711 100 133 333 333 133 333 544 1100 100 100 100 100 100 100 100 100
Dysentery Diarrhea Hepatic Abscess Anzenia and De  ERCENTAGE IN 16 Influenza Cholera Small-pox Enteric Fever Intermittent Fer Remittent Feve Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery Diarrhea Hepatic { Cong Scurvy Venereal Disea	oo Admis	es d Infla		ion			LL CAU			'95 '01 '04 '17 '41'65 '76 '5'88 '42 '1'49 3'55 4'74 '77 '01 '04 '10 1'40	\$'e9  '63 '15 '18 '11 40'45 '50 2'51 '28 1'32 3'22 5'38 1'06 '02 '05 '59 2'64	6'93  1'16 '06 '04 '11 35'04 '36 2'44 '39 1'23 3'14 5'28 1'30 '02 '18 '39 3'54	773  '38  '70  '18  '43  18'11  '31  8'31  '27  1'13  3'27  9'59  2'21  '05  '11  '40	"" 4"14 "" 03 "03 "03 "03 "20 "1" 43 "6" 50 "29 "44 "4" 18 "3" 57 "06 "06 "06	777 711 100 133 333 333 133 333 544 1100 100 100 100 100 100 100 100 100
Dysentery Diarrhea Hepatic Abscess Anzenia and Do  RECENTAGE IN In Influenza Cholera Small-pox Enteric Fever Intermittent Fee Remittent Feve Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery Diarrhea Hepatic Absc Scurvy Venereal Disea  PERCENTAGE IN Cholera Small-pox Enteric Fever	oo Admissiver in the control of the	es d Infla		ion						'95 '01 '04 '17 '41'65 '5'88 '42 '1'49 3'55' 4'74 '77 '01 '04 '10 1'40	8'09  '63 '15 '18 '11  40'45 '00 2'51 '28 1'32 3'22 5'38 1'06 '05 '59 2'64	6'93  1'16 '06 '04 '11 35'04 '36 2'44 '39 1'23 3'14 5'28 1'30 '02 '18 '39 3'54	773  '38 '70 '18 '43 18'11 '31 8'31 8'31 '27 1'13 3'27 9'59 2'21 '05 '11 '40 3'63	4'14  '03 '03 '03 20'10 1'43 6'50 '44 4'18 3'57 '91 '06 '06 '03 3'10	777 111 195 195 195 195 195 195 195 195 195
Dysentery Diarrhea Hepatic Abscess Anzemia and Do  RECENTAGE IN IO Influenza Cholera Small-pox Enteric Fever Intermittent Fever Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery Diarrhea Hepatic {Absc Conj Scurvy Venereal Disea  PERCENTAGE IN Cholera Small-pox Enteric Fever Intermittent Fever Interm	oo Admis	d Infla		ion						'95 '04 '04 '17 '41'05 '5'88 '42 1'49 3'55 4'74 '10 1'40	\$'e9  '63 '15 '18 '11  40'45 '00 2'51 '28 1'32 3'22 5'38 1'06 '02 '08 5'59 2'64  7'8 1'1 3'5 3'5 3'2	6'93  1'16 '06 '04 '11 35'04 '36 2'44 '39 1'23 3'14 5'28 1'30 '02 '18 '39 3'54	773  '38 '70 '18 '43 18'11 '31 8'31 '27 1'13 3'27 9'59 2'21 '05 '11 '40 3'63	"" 4'14  "" 03 '03 '03 20'10 1'43 6'50 '29 '44 4'18 3'57 '91 '06 '06 '03 3'10  "" "" "" "" "" "" "" "" "" "" "" "" "	777 777 711 713 38°33'77: 4'33'33'33'33'33'33'33'33'33'33'33'33'33
Dysentery Diarrhea Hepatic Abscess Anzenia and De  ERCENTAGE IN 16 Influenza Cholera Small-pox Enteric Fever Intermittent Fer Remittent Feve Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery Diarrhea Hepatic { Absc Conj Scuryy Venereal Disea  PERCENTAGE IN Cholera Small-pox Enteric Fever Intermittent Fever Simple Continu	oo ADMIS oo ADMIS ever lungs ory Diseas gestion an uses ever ever ever ever ever ever ever e	d Infla		ion						'95 '01 '04 '17 '41'65 '76 5'88 1'49 3'55 4'74 '77 '01 '04 '10 1'40	\$'e9  '63 '15 '18 '11  40'45 '00 2'51 '28 1'32 3'22 5'38 1'06 '02 '08 5'59 2'64  7'8 1'1 3'5 3'5 3'2	6'93  1'16 '06 '04 '11 35'04 '39 1'23 3'14 5'28 '39 3'54  6'6 '7 2'6 6'6 6'6	773  '38 '70 '18 '43 '8':11 '31 8':31 '27 1'13 3':27 9':59 2':21 '05 '01 '40 3':63  29':3 8':5 1'2 3'7 3'7 3'7	4'14  '03 '03 '03 20'10 1'43 6'50 '44 4'18 3'57 '91 '06 '06 '03 3'10  9'1 9'1 4'5	'04 6'53 '77 '11 '06 '13 38'31 '33 '33'33'33'33'33'33'33'33'33'33'33'3
Dysentery Diarrhea Hepatic Abscess Anzemia and Do  RECENTAGE IN 16 Influenza Cholera Small-pox Enteric Fever Intermittent Fever Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery Diarrhea Hepatic {Absc Conj Scurvy Venereal Disea  PERCENTAGE IN Cholera Small-pox Enteric Fever Intermittent Fever Interm	oo Admis oo Admis oo Admis oo Admis oo Admis oo Bear oo Dear oo Dear	d Infla		ion						1'95 '01 '04 '17 '41'65 '76 5'88 1'49 3'55 4'74 '77 '01 '04 '10 1'40  1'2 5'2 4'4 6'0 2'0 10'8	8'09  '63 '15 '18 '11  40'45 '00 2'51 '28 1'32 3'22 5'38 1'06 '06 '06 '07 '07 '08 2'64  7'8 1'1 3'5 3'5 3'5 3'2 '4 4'0 2'8	6'93  1'16 '06 '04 '11 35'04 '39 1'23 3'14 5'28 1'30 '02 '18 '39 3'54  6'6 6'6 7' 2'6 6'6 6'7 2'6 4'6 13'2	773  '38 '70 '18 '43 '18'11 '31 8'31 '27 1'13 3'27 9'59 2'21 '05 '11 '40 3'63  29'3 8'5 1'2 3'7 3'7 7'3 2'4	"" 4'14  "" 33 '03 20'10 1'43 6'50 '29 '44 4'18 3'57 '91 '06 '03 3'10  "" "" "" 9'1 4'5	777 777 711 713 38°33'77 4'33'33'33'33'33'33'33'33'33'33'33'33'33
Dysentery Diarrhesa Hepatic Abscess Anzemia and De  ERCENTAGE IN 16 Influenza Cholera Small-pox Enteric Fever Intermittent Fever Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery Diarrhesa Hepatic { Absc Conj Scurvy Venereal Disea  PERCENTAGE IN Cholera Small-pox Enteric Fever Intermittent Fever Intermittent Fever Simple Continu Circulatory Dis Tubercle of the	oo Admis oo	d Infla		ion						'95 '04 '04 '17 '41'65 '5'88 '42 1'49 3'55 4'74 '77 '01 1'40  1'2 5'2 4'4 6'0 2'0 10'8 36'3 1'2	\$'e9  '63 '15 '18 '11 40'45 '00 2'51 '28 1'32 3'22 5'38 1'06 '02 '08 5'59 2'64  7'8 1'1 3'5 3'5 3'2 '4 4'0 2'8 20'8	6'93  1'16 '06 '04 '11 35'04 '56 2'44 '39 1'23 3'14 5'28 1'30 '02 '18 '39 3'54  6'6 7' 2'6 6'6 7'2 4'6 13'2 18'4 5'38	773  '38 '70 '18 '43 18'11 '31 8'31 '27 1'13 3'27 9'59 2'21 '05 '11 '40 3'63	"" 4'14  "" '03 '03 '03 26'10 1'43 6'50 '29 '44 4'18 3'57 '91 '06 '03 3'10  "" "" "" "" "" "" "" "" "" "" "" "" "	'04 6'537 '77 '13 '33 '33 '33 '33 '33 '33 '33 '33 '33
Dysentery Diarrhesa Hepatic Abscess Anzemia and De  ERCENTAGE IN 16 Influenza Cholera Small-pox Enteric Fever Intermittent Fever Simple Continu Tubercle of the Pneumonia Other Respirate Dysentery Diarrhesa Hepatic { Absc Conj Scurvy Venereal Disea  PERCENTAGE IN Cholera Small-pox Enteric Fever Intermittent Fever Intermittent Fever Semple Continu Circulatory Dis Tubercle of th Pneumonia Other Respirate	oo Admis oo	d Infla		ion						'95 '01 '04 '17 '41'65 '76 '5'88 '42 '1'49 3'55 4'74 '77 '01 '10 1'40  1'2 5'2 4'4 6'0 10'8 36'3	\$'e9  '63 '15 '18 '11 '40'45 '50 2'51 '28 1'32 3'22 5'38 1'06 '02 '08 '59 2'64  7'8 1'1 3'5 3'2 4'40 2'8 20'8	6'93  1'16 '06 '04 '11 35'04 '36 2'44 '39 1'23 3'14 5'28 1'30 '02 '18 '39 3'54  6'6 '7 2'6 6'6 7'2 '18 '18 '18 '18 '18 '18 '18 '18 '18 '18	773  '38 '70 '18 '43 18'11 '31 8'31 '27 1'13 3'27 9'59 2'21 '05 '11 '40 3'63  29'3  8'5 1'2 3'7 7'3 2'4 13'4	"" 4'14  "" 03 '03 '03 26'10 1'43 6'50 '29 '44 4'18 3'57 '91 '06 '03 3'10  "" "" 9'1 4'5 4'5 4'5	777 111 100 133 38'31 133 33'35 133 33'35 54 11'00 133 21'31 77 44 55 33'88'8

# TABLE XXVII.

RATIOS of GEOGRAPHICAL GROUPS.

The ratios of admissions and deaths to strength are taken from Table XXVIII.

The actuals will be found in Table XXIX.

The ratios of admissions a	and determine	to strong		-	TIO PER		THE AVE	RAGE STI	RENGTH.		-		-
	Burma Coast and Bay Islands.	Berma Inland.	III Assam.	Bengal and Orissa.	Gange- tic Plain and Chutia Nagpur.	VI Upper Sub- Hima- laya.	VII NW. Frontier, Indus Valley, and NW. Raj- putana.	VIII SE. Rajpu- tana, Central India, and Gujarat.	Dec- can.	West- ern Coast.	XI South- ern India,	XII Hill Stations.	Army of India.*
I.—AVERAGE ANNUAL STRENGTH . II.—CONSTANTLY-SICK-RATE OF EACH	1,349	2,836	954	1,816	6,209	20,842	19,224	13,243	16,591	1,783	4,282	22,403	127,853
MONTH—  January February March April May June July August September October November December OF THE YEAR	10°5 11°2 12°5 14°3 9°5 22°6 29°4 25°5 25°5 18°7 17°6 16°0	27'5 26'8 22'4 18'2 19'3 25'0 23'4 30'2 35'3 31'2 29'7 26'5	22'9 20'8 19'6 17'3 28'6 20'1 39'0 29'3 30'0 29'3 23'0 25'2	33'9 31'5 23'4 27'4 23'0 21'9 25'9 25'9 35'0 39'7 36'2 48'7 50'3 32'5	16'5 16'2 14'8 14'8 13'7 13'7 17'0 17'8 20'4 25'9 24'3 20'1 18'0	20°2 17°3 14°7 17°5 19°3 20°6 20°6 19°6 23°7 27°7 27°7 34°6 30°4	33'4 29'3 19'8 14'7 17'7 18'0 18'0 19'4 21'5 30'5 48'8 48'8 48'9 26'9	24'6 19'3 14'8 14'4 15'7 14'9 17'5 21'8 27'5 30'6 37'2 32'4 23'3	19°0 19°7 20°7 20°4 19°5 16°9 20°2 21°9 22°8 24°8 24°8 22°9 21°2	21'5 22'0 20'0 18'5 20'1 24'9 25'1 27'0 21'8 27'9 35'9 46'2 25'2	20°0 21°1 17°1 19°6 26°2 31°8 24°9 15°7 11°7 14°1 24°9 17°3	26'7 25'9 21'6 22'2 22'8 22'8 22'9 26'3 34'2 33'8 36'7 39'1 27'8	22'6 21'2 18'5 18'4 18'9 19'4 20'4 22'8 24'7 26'9 31'7 28'7 23'0
III.—ADMISSION-RATE OF THE YEAR- Influenza Cholera Small-pox Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery Diarrhæa (Abscess Hepatic Congestion and	108-2 77-71-9 1-5 31-0 31-1 5-2 8-2	222'5 1'1 40'2 2'1 30'0 15'5 2'8	302'9 2'1 8'4  7'3 26'2 45'1 26'2	2'2 '66 '67 303'4 '66 5'5 41'3 43'5 12'1	10°0 '5 '2 '2 140'9 3'4 18'5 1'6 6'9 18'2 33'3 7'6 '2	3'3 '4 '4 1'3 227'7 4'8 14'9 3'2 10'3 17'7 28'3 4'5	16'2 '2 '5 1'2 468'3 7'3 17'0 2'4 10'0 25'1 49'2 7'4 '1	3'2 '7 1'8 '9 355'3 3'9 13'4 2'3 10'1 10'8 40'7 6'9	3'7 3'8 1'1 2'0 110'0 3'3 43'6 1'0 8'0 18'4 39'2 10'7	260°8 1°1 4°5 90 5°6 26°9 101°0 35°9	2'8 '7 1'6 1'4 166'0 1'6 37'8 2'1 6'1 19'4 42'7 3'5 '2	3'8 ":2 250'0 6'5 66'2 3'6 12'8 34'3 33'0 7'1	5°2 77 '6 1°0 261'3 5°0 29'6 2°5 9°0 22'9 37'1 7'2 '1
Scurvy Venereal Diseases ALL CAUSES	8'2 484'8	16.6	32°5	4'4 4'4 30'8 870'1	1'4 2'6 11'9 504'0,	.6 .8 15'8 599'5	937°9	2°3 14°0 707°2	2°3 26°3 578°9	8°4 11°8 804°3	23'8 603'1	734'5	683°5
Cholera Small-pox Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Circulatory Diseases Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery Diarrhoza Hepatic Abscess Anzemia and Debility ALL CAUSES	74	"35" "35" "35" "35"	1'05  1'05 	1'65 1'10 '55 1'10 '55 1'10 1'10  '55 1'10 	'48 '16 '48 '16 '48 '32 '81 '16 '16 '725	"34 "38 "43 "43 "157 "14 "05 "19 "05	'05 '31 '21 '31 '05 '31 2'03 '10 '16 5'20	'23 '53 '53 '30 '23 '30 '219 '08 '15 ''15 ''15 'S'08	2'35 '12 '48 '18 '36 '12 '30 '06 1'33 '06	"56 1'68 2'80 1'12 '56	'70 '23 '93 '247 '47 '23 6'31	"04 "18 "27 "45 "04 "49 1'29 1'74 "09 "22 "13 "04 6'83	'48 '03 '27 '34 '04 '25 '52 '136 '13 '20 '03 '04 '6'57
V.—PERCENTAGE IN 100 ADMISSIONS— Influenza Cholera Small-pox Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery Diarrhœa  Abscess Hepatic Abscess Hepatic Congestion Inflammation Scurvy Venereal Diseases	"15" "22"32" "15" 14883" "31" "01" 1'07" 1'08" "1"68"	 '05 33'00 '16 5'96 '31 '31 4'45 2'30 '42 '05	39°11 27 1°05 1°05 3°38 5°82 3°38 	'25 '06 '06 '19 34'63 '69 2'33 '06 '63 4'71 4'97 1'38 ''39 '50 '50 '50 '53 '55	1'77 '09 '03 24'99 '60 3'26 '29 1'23 5'91 1'34 '03 '26 '46 2'11	"555 "060 "077 "222 37"98 "84 2"499 "54 1"71 2"95 4"71 "755 "01	1'73 '02 '05 '13 49'93 '78 1'81 '26 1'06 2'67 5'24 '79 '01 '01 '13 '91	'42' '09' '24' '12' 46'31' '51' '175' '30' '175' '30' '175' '30' '175' '2' 58' 5'31' '91' '05' '31' '191'	"64 "66 "20 "35 "37 7"53 "17 1"37 3"18 6"78 1"83 "05	"07 32'43 '14 '36 1'12 '70 3'33 12'55 4'40 '07	'46 '12 '27 '23 27'44 '27 6'25 '35 1'00 3'20 7'06 '58 '04 '08 '19 3'94	1.52  '03 '10 34'04 '89 9'01 '49 1'74 4'67 4'58 '97 '02 '66 '55 2'75	'777 '111 '09 '15 '38'31 '72 4'32 '37 '1'32 3'36 5'43 1'05 '02 '08 '35 2'37
VI.—PERCENTAGE IN 100 DEATHS— Cholera Small-pox Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Circulatory Diseases Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery Diarrhea Hepatic Abscess Anaemia and Debility	16.7	10,0	500	16·7	6'7 2'2 0'7 6'7 2'2 6'7 20'0 4'4 11'1 2'2 2'2	5'4 ':: 5'4 6'2 7'0 2'3 7'0 30'2 2'3 '8 3'1 '8	1'0 6'0 4'0 6'0 39'0 3'0 3'0	2'8 6'5 6'5 3'7 2'8 3'7 27'1 1'9	25'5 1'3 5'2 2'0 3'9 1'3 3'3 '7 14'4 7	4'3 4'3 13'0 21'7 8'7 4'3	377 	77 216 319 319 319 319 257 313 313 310 20 7	7'4 '5' 4'0 4'6 5'1 '6' 3'8 8'0 23'7 1'9 3'1 1'2 1'4

# TABLE XXVIII.

RATIOS of STATIONS, GROUPS, and COMMANDS. For actuals see Table XXIX.

-						1. A		sion-		-			100			1 1 2 2		TH-RA	-	AAIA.			-	-
STATIONS AND GROUPS,	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhosa.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Angemia and Debi-	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancre.	
Port Blair	257 {	11	1.1			544'7	3.0	7*8		3.9		38.9	3.0	::		- 11	11	::	3'9	758'8 }	27.2			3.0
Rangoon	1,092{		11			5'5	11	87.0			3'7		5'5	10'1		1.8		12.8	972	420°3 } 5°49 }	15.6	1.8	6.4	
GROUP IBUR- MA COAST AND BAY ISLANDS.	1,349{			7		108'2		71'9		1.2	3'0	31'1	5'2	81		1'5		10*4	8"2	484°8 } 4°45 }	17*8	1'5	5.5	1.2
Meiktila	691 {		111		1'4	30'4	11	14'5	174		1'4	11.6	3.0	473		-		14'5	20'3	276°4} 4°34}	13.0	7.3	2'9	10'1
Fort Dufferin	1,329 {			=		132'4	5,3	26'3	2"3	1.2	3.0	38'4		-5	**			24"1		628'3 } 3'76 }	24'1	7'5	600	7'5
Bhamo	816					,231.0		84'6	1,3	4'9	1,5	31'0	45'3	4*9	-		1,3	35"5	6.1	1,085'8 } 2'45 }	41'7	4'9	1'2	
GROUP II.— } BURMA INLAND	2,836{				-	222'5	111	40*2	1.8	35	2"1	3000		3.8			-:4	25.0	16.0	674°2 }	26.4	6-7	3.0	6.0
Manipur	579{	::		***		38619	-	-	=	-	10'4						111	86		1.73	29'4		***	2017
Sadiya · · · Dibrugarh · ·	307		-			2020	6.3	26.1		-	147	52.1	55'4	16'3			11		13,0	\$	14'7	3'3	3'3	6.3
GROUP III	954 {	-	-			302'9	3°20	8.4			7'3		45"1	26'2		111		1376			25'2			157
Fort William .	640	170		1.6	1.96	10	1.26	35'9			9*4	39"1	29'7			1.6		34'4	51.6	739°1 } 9'37 }	34'4		2179	
Alipore	533{	11				585°4 3°75		1'9	1*9				61.9					13'1	24'4	1,106'9 }			18.8	3'8
Barrackpore	409{	73	3,44		4'9	300'7	9'8	19'6		4*3	***	56'2	66.0	25*9	***	17'1		7'3	12'2	4°89 §				***
GROUP IV.— )	234 {	2'2		-				20'4	-	4'27		-	43'5	-					-	4"27 \$				
BENGAL AND SORISSA .	1,815 {		1.65		*35	1.10	100			100	1283	1,10		'55		311					32'5			

### TABLE XXVIII—continued.

RATIOS of STATIONS, GROUPS, and COMMANDS.

For actuals see Table XXIX.

-	rg.	1		40	-	,	. AD	MISSIG	ON-R	ATE.	37							2. D	EATH-	RATE.				
STATIONS AND GROUPS.	Average annual strength,	Influenza,	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever,	Circulatory Diseases.	Lubercle of the	Pacumonia.	Other Respiratory Diseases.	Dysentery.	Diambora.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anamia and Debility.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK,	Syphilis.	Soft Chancre.	Gonorrheas.
B. Dinapore	527 {	3.8	3.80		1,0	104'4	1.0	1		9.5	1'9	15'2	55.0	13'3				11'4	5'7	614.83	190	410		119
Benares	615{					110'6	=	42'3			1.6	31,1	19'5				11'4	1174	6.5	403'3}	13.0	1.6	3,3	1.6
Allahabad	1,140{		:::		::	243'9	.88	61	1.8	=	1.42	31.0	41'2	*88			4'4	23'7	13.5	796.2 }	20.3	2.6	1'8	8.8
Fyzabad	979 {		:::			69.5	13'3	29.6	1.0		4'1	34'7	12.3	6.1		1,0	***	3.1	16-3	4.00}	19'4	7.2	4"1	51
Lucknow	1,827 {		=			'55	3'3	8-2			2'74	.22	2'19	1.1	'55 '55					390'8}	14'8	3.8	3.3	44
Cawnpore	76 {	57.4	.96			176'1		1.0		4°8 1°91 	1.01	13.5	47'8	3.8	=	3.8	5.0	13'2	16'3	5'745 815'8}	22'0	7'7		
	10.5				-		-	***		-				-	***					5	26'3	-	-	
GROUP VGAN- GETIC PLAIN AND CHUTIA NAGPUR.	6,209 {	100	.5	16		140.0		18.2	1'4	1.6	6'0	18.3	33,3	76	10	1'4	2.6	111'9	11'9	564.0 }	180	4'5	2.3	45'2
Α.																				5491				-
Bareilly	1,202{	-8	1.66		-8	95'7	1.4			2.2	2.0	8'3	20'0	-8		-8		14'1	10'8	4.16}	11.6	3.2	6.7	1.7
Roorkee	802 {			2'5		160'8	1,5		***	1,52	2.0	18.7	13'7	1'2	:::	=		18.7	7.5	4'995	13'7	1,5	3.7	2.2
Dehra Dun	2,902 {	16.9	*3 *34		1'4	446.5	'34	36%	34	1.38	4'8	14'8	15.2	8.6		1'4	174	18.6	31'0	7'245	43'8	12,1	11,0	7.0
Meerut	1,510 {		-7			114'6	5'3			1'3	2.65	10.6	29'1	2'0		1'3		4.0	18'5	5'30}	15.5	6'6	7'3	4.6
Delhi	907 {		1,10			830.2					2.31	13.5	76'1				17	30'9		3,31 }	28.7	5'5		1.1
Ambala · ·	1,347		1'48	1.2		146'3	1'5	46.0			74	15.0	31.0	74	::			16.3	30.8	4777.4} 6°68}	14'1	8.2	3.0	9'7
B. Juliundur	1,633 {			1'2		200.5	8.0	.6	1'2	3.1	12'2	19.6	35'5	3.1		-6	-6	17'1	5.5	567:11	20'8	3'1	1,5	1'2
Ferozepore	1,642 {	11'0	61	1'2	5*5	83'4	37	10'4	1'2	2'4	7'3	15.8	23.8	1.8		.6		4'3	9.1	431'8 }	19'5		1'2	3.0
Labore Cantonment	1,764 {				2'3	134'9	2'3	13.6		4.5	14.2	24'4	36'3	1'7		.6	1'1	5'7	12.2	493°2 } 4°54 }	15'3		4'5	2.8
Amritsar	134{					59'7	7.5				7'5	290	44'8						7'5	501,0}	7'5			7'5
Sialkot	1,714{	:::			1'2	182.6	5,3		-6	4.1	13'4	28.0	20'4	8.8	·6			22-8	8.2	8:17 }	19'8	2.9	2.3	2.0
Jhelum · ·	3,493 {				100	254"1	8.1	7'4	°32	6.2	12.2		35.3	3.6			1.6	14'9	14'2	6:145	23.0	4'8	3.5	6.1
Rawalpindi	2,102 {			:::		114'7	8.1	36.6		1'4	4.36	***	22'8	1,0			1.0	11.0	52,5	8'56 }	19'5	3,3	9'4	12'4
Attock	90{				22,5	355-6		::		-		23,5	33'3	=		=		117	=	844.4	23'2			=
GROUP VI UPPER SUB- HIMALAYA.	20,842{	3'3	'4 '34		1'3	227*;	4.8		14	2	10'3	17'7	28'3	4'5	.02		-8	14'3	15-8	599.2}	22,3	5'5	50	5'3
A Mardan · ·	1,033 {	1.9				116',	1.0	2.0	1'9	1'0	9°7 3°87	14'5	11.6	3'9			111	3.0	10.6	268.2 }	11'6	3.0	1'9	5'8
Nowshera	3,529 { 2,676 {	50'1				352'5 '57 417'8	21°5 '85 2°2	73.6		2.0	7°1 1°42 7°5	30'3	43"1	2.6			1*1	18.7	5°7 '28 8°2	10243}	23.0			'28
Peshawar 1	-10/05				27	75	*37			6	1 87		'75					-		4.86 }	24'3	***		-

NATIVE TROOFS, 1900 . . .

= 1	1		17 H h		1000	-		38						180	400	913		-	OVE	1/2				-
	ength.		1011			-	ADM.				7 7 7					10.		DEAT	H-RAT	re.		1	-	_
STATIONS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever,	Circulatory Diseases	Tubercle of the	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhosa.	Hepatic Abscess.	Hepatic Congestion	Scurry.	Anemia and Debi-	Venereal Discases.	ALL CAUSES.	CONSTANTIY SICK,	Syphilis.	Soft Chancre.	Gonorrhaa.
Fort Jamrud .	167 {	::	::			305.4	12'0				60	35'9	149'7	29'9	::	::	::	24*0	6.0	904"2 }	18:0			60
Kohat	2,822 {		::	.7:	35	450°4	5'7			7,	14'2 4'25	20.3	36.9	2'8		=		22'0	8.5	870°7 } 7°09 }	29.8	1'4	1.8	2.0
Thal	165 {				12'1	575'8	::	=	=		6.1	72.7	60%	18.3				54'5	12'5	1,430'31	42'4			12'8
Edwardesabad .	2,115 {	18.0			2'8	590'5	£*4	26'5	1'4	4'3	8°0 '47	1974	64'8	17'5			1'9	123	617	2'36 }	31.5	1'9		3.3
Dera Ismail Khan	2,415 {	12'8		.4:	271 1 "41	,196°3	4'1	3.7		*8	10'8	23'6	59*2	16-1			·8 ·41	21'1	6.6	5'80 }	4819	3'3		3'8
Jatta · ·	59 {		::	==		101'7	::	16.0	-	16.9	16.95	16.9	84'7	=				=	::	761'9}	16'9			:::
Drazand	60{					,Soo'o		=			33'3	33.3	83-3	16-7				=	=	2,400°0 } 16°67 }	33.3	:-		::
Fort Zam	58 {	::	::			465'5		17'2			34'5	51'7	86*2					34'5		34"48 }	34'5		=	
Multan	1,902 {					81.0	6-3	10.2	178	47	2.6	15'2	20'0	1.6			171	8-4	4'2	37177 }	14"2	1.6	rı 	1.6
Bikaner	30 {	11		-1-		=	=			::	33.3		=	::		-	::	:::	33.3	66'7}		33-3	=	
B. Jandola	193 {		::		20'7	279'8	10'4			::	10'4	10.4	36.3	5'2	==			5.5	2.3	55+4}	10,4			2.3
Sibi	261 {			3.8		528.7	11'5	7-7		3'83	33.6	76-6		77			19'2	80'5	49'8	1,272'0 }	30'7	3.8	15'3	30,4
C.	304 {	=	=	6.6	1 1	753'3	3'3	£3'2	11		23.0	32.0	65'8	3'3			11	16'4	3279	3,38,9 }	29%	6.6	3.3	23'0
Hyderabad	577 {		3'5	1"7	=	323,0		27.7			6'9	15.6	250	1.4		::		15.6	15.6	480'1} 5'20}	15'6	5'2	5,5	2,3
Karachi	858{	120%			1"17		8.2	-	2'3	8":	16.3	30°3	29'1	9,3		::	4'7	7.0	16'3	2.831 2.831	25'6	5'8	1.3	
GROUP VII.—N. W. FRONTIER, INDUS VALLEY, AND NORTH- WESTERN RAJ-	19,224	16":		2	31	468*3		17'0	0	3.4	10.0	25"10	49*3	7'4			1'2	18-7	8.2	937'9 }	267)	213	1.6	477

### TABLE XXVIII—continued.

RATIOS of STATIONS, GROUPS, and COMMANDS.

For actuals see Table XXIX.

		Ī	th.	12.50	mil.				-	1. A	DMIS	SSION	-RATE		SING	No	ar ba		2.	DEAT	TH-RA	TE.				
STATIO AND GROU		Contraste Super	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Ferer.	Remittent Fever.	Simple Continued Fever,	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anzemia and Debility.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancre.	Gonorrhea.
A																										
Bhuj			125 {				1	1,376'0	8.0	8.0		8.0	10.0	16.0	40.0	1600		=	8'0	8.0	64.0	1,872*0}	400	45.0		16'0
rkajkot			693{					134'2		10'1	174	14	8.7	7.2	27.4			2-9	11'5	4'3	26.0	391'1 }	20*2	10'1	11'5	4'3
Deesa .			729 {			-		9177	2.7		2.7	4"1	24'7 5'49		21'9	96			5'5	19'2	9.6	1,352'5}	39*8	2.7		6'9
Ahmedabad	1.	1	455 {					448.4	::			2,3	8.8	145'1	22'0	6-6			2.2	4'4	4.4	1,134'1 } 8'79 }	33.0	4.4		-
Baroda			647 {	***	1.22			638:3	24'7		1.2		7.7	9°3	26.3	13.9			15.2	1'5	21.6	964.2 }	32.2	18.5	3.1	
B. Alirajpore			36{							111				***		27.8		-:		11		222,5}			-	-
Sirdarpore			389 {					118,3	2*6		2'57		7'7	7'7		2.1			=	1111	20'6	393'3}	15'4	12'0	5.1	2.6
Jhabwa			35{					28.6					28·6 28·57								286	114'3} 28'57}		28.6		
Kherwara			373 {	11				67.0			2"7	2'7	40°2 8°04	16'1	13'4	2'7				13'4	13'4	514'7'	2	8.0	3.7	2'7
Kotra			157 {					318'5	6.4			=	6'37	6.4		=					25'5	5987	25'5	12'7		12'7
Udaipur			25{	-		-							28°6 28°57	-	::		=			28%		85°7 } 28°57 }			111	
Todgarh			32{	***			=	31.3	31.3			==			::					::		125'0}		=	-	
Erinpura			518{	***				243"2	1.9	77	5'8	7.7	11'6		29'0	3.0				1'9	19,3	3'86}	21,5			3.0
Neemuch			439{	::	-	63		75'2				2'3	11'4		27'3	4.6		2'3		3.58	6*8	364.2 }	15'9		2.3	46
Deoli .			577 {	=	***			79'9	1'7	36.4		1'7	5.5	10'4	17'3				3'5	5'2	20"8	461.0}	156	87	5'2	6.0
Beawar			46 {						21.7	***		21.74										43'57	21.7		=	
Nisarabad			655 }			3.1		305'3			3,1		10*7	15'3	30'5		1.2		1.2	7.6	9.3	647'3}	22'9	1'5	1.2	6.1
Ajmer			453 {			2'2		253'0	4'4		-	2.3	15'5	6-6	11'0	17'7				2.3	8.3	609,3 }	17.7	44	2,3	3,3
Sambhar		**	18 {	***				55.6						:::		::				=	=	55'6}		=		
Jaipur			40{		443	25'0		225'0-	::				50°0	25'0	20.0		11	-		=	250	425°0 }	25.0	25'0		-
Agra .			911 {	47":				227"2	3.3	3'3		3,3	13'2	17'6	49'4	23'1				27'4	12'1	3,53}	17.6	44	5.2	273

-	45		-		,		77	ı. At	MISS	sion-	RATE.		-			2.	De.	ATH-R	ATE.			-		
STATIONS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever,	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the	Paeumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhea.	Hepatic Abscess.	Hepatic Congestion and inflammation.	Scurvy.	Anaemia and Debi-	Venercal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancre.	Gosorrhaa.
Gwalior	27 {										-									:: }		-	100	
Jhansi	2,449{	=		5'3	3'7	711.7	3"3		-	2'0			107'8	57			1.3	13.0	19'2	6,206.6		4 4	1 57	9'4
Nowgong	666{			1'5	1.2	102.1		21'6		4'5			49'5	6.0				10.2	13.2	462'5 ) 7'51 )	221	5 7	5 1'3	4'5
Goona	397 {	***				110'S					2'5	27.7	5'0	:::		2.2	-:	30.5	7.6	333.2)	10,1	50		2.2
Agar	345{					127.5	8.7					58	31.9					3,0	::	347'8)	14'5			
Sehore	753{					249'7	1,33		3.7	40	6.6	27	30'5	5'3		=		10.6	6.6	706°5}	23'9	1.3	40	1'3
Indore	163-{		49'1			128.9	12'3	6.1		:::	6.1	12'3	61'3	12'3				12'3	30.7	364'4 } 18'40 }	24'5	24'5		6.1
Mhow	1,080 {			1'9	93	173'1		109'3		1.0	6.2	1914	13'9	9'3		9		3016	10'2	810°2) 16°67)	22'2	3'7	4.6	1.0
GROUP VIII.—   SOUTH-EASTERN   RAJPUTANA,   CENTRAL INDIA,   AND GUJARAT .	13,243 {	3.5	·7 '23	1'8	.9	355'3	3.9	13'4	1'0		10'1	1978	40'7	6.9		4	2'3	12.8	14'6	767°2 } 8°08 }	23'3	61	4'0	4'5
A.										1												-		
Saugor	1,233{			4'9		449'3	=	15'4	***	.8	14'6	26.8	8.9	57			3'2	7'3	15'4	875'9 } 5'68 }	22'7	8.1	=	73
Sutna	33 {			=	=	303.0							30,3				-			,00000}	30.3		-	30.3
Jubbulpore .	1,793 {	78		.26		151'7	1.15				1'12	11'2		3.3			17	-		5.28}	29.0			***
Kamptee	527 {		7°6 5°69		=	110.1		76		1.0	-	15.2		-	1000		-		13.3	4877 }	20'9	1'9		76
Sitabaldi	86 {	23.3				314'0	=	=	300	=	-		58.1	11.6						581.4}	11.6			
B. Aurangabad	1,712 {		3.2		2'3	104.0	1.8	-6	1.8		9'9	17'5		-			-6	1'2	19'9	390-2 }	15'8		1.8	140
Ahmednagar .	594	1.7	8'4			53'9	100	112'8	1'7	1.7	8'4 1'68	00 1	43000	13'5	-	1.7			58.9	)	35'4	6.7	18'5	
Bolarum	1,692 {	1.8	5'05	1,3	-6	20'1		1076	1.8		7'1	16'0	59'7			2'4	2'4		16.2	556.7 1	26'0	89	-6	71
Secunderabad .	2,943	10	6.80	'3	5'8	669	3.1	34'7	1'7	1.0	4'4	9'9		33.0	.3		3'7		17'0	496'4 }	197	4'4		78
Belgaum	1,573 {	2.2	·64	.6		129'7	1'3	40'1	1.3		10'8		31.8	3.8	1'3			57	47.7	6847 }	19'7	15'9	197	127
Satara	342 {		20 202			40.0	-	11.7			5.02 5.0	11.7	8.8	5.0	3.03 3.0			2'9	789	374'3 } 8'77 }	146	32.2	175	29.2
-		-					1	-	1	-0			-				-							-

# TABLE XXVIII—continued.

RATIOS of STATIONS, GROUPS, and COMMANDS. For actuals see Table XXIX.

	ith.						1. Ap	MISSI	ON-B	ATE.	1			-		2	. De	ATH-	RATE.			Deuti		13
STATIONS AND CROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	25	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhora.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scury.	Angenia and Debi- lity.	Venereal Discases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancie.	Gonorrhæa.
Poona	2,002 {		1'50	3'0	1.0	290				2'5	7'0			4'5		1.0	5.0	7*5	360	391.6 }	17.5	14'5	12'5	970
Kirkee	1,547 {	22'0			1.3	84*7	18-1	44.6	1'3	1,3	2,5	34'9	10.3	14'9				5.8	26.2	592'1 }	19'4	12'9	5'8	7'8
Sirur	514 {		7.8			108.0	1.0		-				54'5	3.0			5-8	3.9	27"2	459'1 }	13.6		1,0	25'3
GROUP IX }	16,591 {	3'7	3'8 2'35	1'12	2'0	1100	3'3	43'6	1.5	100	8.0	18.4	39.2	10'7	.18		2.2			578'9 }	31.3	90	6.6	10'8
Bombay	554 {			1.8		471'1	1.8		5'4-	12 6	5,43		3.61				3.61		27'1	25'27	34'3	10'8	16'2	
Santa Cruz	700 {					245'7 1'43			***	100	57		857	1143		1'4	1'43			8.27 }	25'7		4'3	2-9
Cannanore	472 {					G1.4	3,1	12-7		4'2	3.13		27'5	2-1	2'1	***		16.0	2.1	353'8}	14'8	3.1		
Irwandrum.	57 }					52-0	***	35-1				35'1	17'5			1	1			326.31	17.5	1		
WESTERN COAST.	1,783 {					260.8	171	4'5	1.08		2.80	26.0	1,13			-6	1.68		11'8	12'90}	25'2	3.0	6.7	1-1
A. Bellary	525{		3-8	3'8	9-5	135'2	5'7	3'8	3.8	3.8	7.6	21'0	17'1					2'0	610	541°0 } 7°62 }		40.0	3'3	17'1
Bangalore	2,448	4'9	3.81	1.6	*4	260°2	112	51'9	3'3	1'2	7'8		***	4'9			3.0	22'9		775'3 }	24'1	8.3	4'9	
В.				-	'41			***	-52	.41	*82	***	***		'ai				'41	6.24 }		541		-
Trichinopoly .	512 {		1,02			3,0		25'4		3'9		5'9	7-8					9.8	9'8	253'71	7.8	2'0	2'0	59
St. Thomas' }	591 {	::	-:	1*7		'	-	25.4	3'4		3'4	16.9	8.2	3'4		117		8.2	22'0	255'5}	11.8	10°2	2.1	68
Madras .	206{					=	4'9	24'3			4'9	14.6	24°0 4°85				-	140	34'0	971 }	24'3	9.7	97	146
43 - L		- 3			1													-				1		
GROUP XI.— SOUTHERN INDIA.	4,282{	2*8	.70		1-4	166°0	1-6	37.8	2.8	2"1	6.1	19.4	43'7	3.2	·23		1.3	16.3	23.8	605.1}	20'1	11'7	4'7	75
Maymyo	1,125 {				::	102'2	400			1.8	4.4	14'2	63.1	10'7	.89			34'7	42'7	757'3 }	34"7	8.0	24'0	98
Köhima	182 {		=			93.0					11	82'4	33.0	22'0	=			38.5	65'9	615,4 }	33.0	33,0	27'5	5'5
Shillong	735{	2.7			6.8	314"3	2.7		1'4	272	1'4	20*4	39'5	6-8			5'4	10'9	57'1	847'6 }	24'5	150	8'2	340
Chumbi (includ- ng Pharijong) (Tibet),	250{		=			20'0	4.00	32.0	8.0		8.0	36'0	60'0	8.0	=	11	16.0	160	28'0	38000}	20'0	16.0		120
Gyantse	75{	53'3				105'7						40.0	13.3	13'3.	-		13'3	26.7	26.7	533'3}	26'7	12.3	-	13.3
Guntok	91{		-		-	95'7		27.7			10.6	31'9	21.3	10-64				21.3	=	542'6 }	21'3		-	
Almora . 5	698 {					67'3				4'3	18.6	5'7	5'7	57					123.5	636.15	48.4	15'8 1		43
Simora	ممع		***			]				2.87										4'30}				

	ngth.				120	1	1. A	DMISS	ON-I	ATE.						2	2. Di	EATH-	RATE.					
STATIONS AND GROUPS.	Average annual strength.	Influenza,	Cholera,	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	8	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debi- lity.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancre.	Contractions
aini Tal .	129 {				7°8 7°75	7.8	7.8					15'5						62'0	38.8		23.3	21'1	15'3	T
insdowne	2,542 {			.4		103.5	5.2	8	7°57	7°5 2°75	130	27-1	47.2	2.1		-8	6-7	21.6	13.0	455'5 }	26.0		33	ı
mla	112{			::	-	44.6						8.0	17.9	8'9				26'8	17'9	392'9}	819		8.0	ı
togh	171 {									5-8	17'5	17.5	11'7	11'7		***		11'7	11.7	134'5}	5.8	5.8	5.8	
harmsala	1,367				-	11179	8-8 1-46	1'5	7	3'7	8*8 1*46	26'3	13'9	7'3		73		4'4	9.5	492'3 } 4'39}	241	4'4	212	2
akloh · ·	1,264			=	·8 ·79	172'5	11'1		·8	5.5	2'4	8.7	10'3	11'1	·8		*8	1.6	37*2	512.73	24'5		9.3	5 1
lurree	26{			=	-	=		38.5						35.2						76'9}				1
hyragully	114					87.7				8.8	26.3 8.77	25 3	8.8	17.5		8-8				473°71 17°545	17'5		***	
aragelly	74{		:::	11		40'5		***				27'0	40'5					13'5	13'5	283'8 }	13'5	13.2		١
alabagh	66 {					242'4			-		***	15'2		15'2		::		30'3	15.2	651.2}	30'3			
nitral	164		***			123'0		402'4		-	19.3		24'4	12'2						859.8}	18'3			١
illa Drosh • •	559	59.0				123'4	-	55'5	1.8	8°9 5°37	10.7	14'3	37-6	10'7		3.6		14'3	3.6		25'0			
alakand	804-{		***			365.7		48.5			24'9		43'5	1'2		1.5		74'6	1'2	81579 }	24'9			
argai	410			2'4		397·6 4'88		439		2.4	12.2		317	4'9		***	2'4	12'2	7:3	-	22'0	4'9		l
hakdara	472					442 8		14'8			14.8		59'3	2"1			2"3	106	2'1	76006}	14'8	21		
bhottabad	3,521	=			2.8			346.5	.38	7°1 3'41	258		25.8					4'0	19'9	7'67 }	42'9	40	5.6	
herat	45 {	222'2				288'9	55.5	44'4	***		22'2	88.9	177'8						***	1,355.6}	44'4			
ort Lockhart .	530	62'3				315.1	57	11.3		3.8	11'3	34'0	56.6	5.7	***		1.0	45'3	1000	996'2 }	37-7	1.9		-
angu	123	=				374'0		***	***		16.3	200	48.8	300		8.1	24'4	1000	8.1	943'17	24'4	8-1		
tir Ali Khel	So -			-		1,362'5		12'5			250	1250	1250	125*0			12'5	62.5	17788	2,25000	50'0			
ort Sandeman	460-	-				587'0	6.5	2.3	100		19'6	28-3	47-8	6.3			4'3	19.6	7	915.3	28.3	6.2	2'2	
illa Saifulla	30-	1				900,0	2005			33.3				133'3						1,6667 }	33'3			
lindubagh .	30-					666-7							33.3					33,3		1,000'0}	33'3	-		
tusa Khel	28-					1,071'4			***				71'4	35'7		***		35'7		1,464,3 }				
han Mohamed	- 1	-						-						500'0						1,500.0 }	35'7			
Kot	2-			***		- 100	***	***				441		***	***	***	•••		***	· }				
turgha	48-					3958		***	***		30/8	41'7	20'8	20'8				20'8	20'8	791.7	2018			1

# TABLE XXVIII—continued.

RATIOS of STATIONS, GROUPS, and COMMANDS.

For actuals see Table XXIX.

-	#		-	100			1, A	DMISS	ION-	RATE		-					2. Di	EATH-	RATE.					
STATIONS AND GROUPS.	Average annual strength.	Influenza.	Cholera,	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	20	Tabercie of the lungs.	Pneumonia,	Other Respiratory Diseases.	Dysentery.	Diarrhea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anzemia and Debi- lity.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancre.	Gonorrhea,
Loralai .	878 {			-	-	575-2	2"3	-	1'1	2'3	11'4	12'5	31'9	15'9			10.3	18 2	11'4	1,056'9}	34,5	5'7	171	46
Gumbaz .	25 {					423'1					38.5		230'8	38.2						1,269'2}	38.2		:::	
Quetta .	3,174			.32		358.3	2'2	-6	.32	6	1.36	2479	36.0	4'4	.32	.6	13'2	10.1	8.2	740'4 }	24.6		6	C4
Peshin .	31 {							=		*			64'5					:::		12900}				
Shelabagh .	36{		::			472'2	27'8				27.8	138-9	27'8	55.6					-	,,,,,,,}	27-8			
Spinwana .	38 {		:::			289'5					-:-					==			26.3	526'31		26'3		**
Chaman .	652 {		=			30'7	32'2	1.23			3.1	36.8		3,1			1'5	1'5	9.2	30075	13.8	6.1	3-1	::
Mount Abu .	81{	-	=			10.8		12'3	1'8	12,3	13.0	43'1	10.8				3.6	3.6	14'4	5	12'3	54	12,3	
Ootacamund	557 {	***									3'59		***					***		3'59\$	10'8	***		72
Camp Lovedale	431 {	7.0				4'6			2'3	***	7'0	***					[	2'3	20'9	232.0 }	9.3		3.3	46
Camp Yellenhalli	169					147-9			17'8		2.0	47'3	35.2				-		23.7	}	17'8	5.9		17'8
GROUP XII HILL STA- TIONS.	22,403{	3'8		·04	.18	250°0 *27	6.5	.04	110		1278	34'3	33.6	7.1	.13	.4	4.0	15.0	20.3		27'8	5.0	7'1	71 '04
Marching India	10,914		·4 ·27			1581	7-8	16'8	.1				31'8	4'7	-:-		3,8		612	37971	8-7	1.6	1.0	2'7
EXTRA INDIA.														San Salaria										
Command:									1														3	
Chabbar ,	. 52-	96"				865'4						-	76.9	1972		19'2		19"2	::	1,769*2 }	38.2	::	-	=
Jask	. 51	{ =	::	=		235'3	::		19'6			:::	19.6	196			58'8	::	=	509'8	19.6			=
Muscat .	. 21	{ ::			-	238'1					-	==	47.6	=		-		::		381.0}				
Bushire .	. 65	=		=	=	-	=		=	13'4		15'4	-	::				15'4		107'7}	15'4	=		=
Bagdad .	. 37-	1 ::		=	-			=	-				=	::		=	=			27'03}	-		:	=
Aden	634	1 :::		-	=	459'0	116		3.12	4'7 4'73	7.58	113.6	78'9	4'7		=	17'4		3'2	1,007'9}	35-3	3'2	=	-

	at h				1. A	DMISS	ION-R	ATE.	-	-				2, D	EATI	I-RAT	e.			-			-	-
STATIONS AND COMMANDS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	2	Inbercie of the	0	Other Respiratory Diseases.	Oysentery.	Diarrhora.	Hepatic Abscess.	Hepatic Congestion and Infammation.	Scurvy.	Anzemia and Debi-	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancre.	Gonorrhea.
Dthala	666 {					795'8		7.5	4'5		3.0	1'5	37'5				3,0	1975		1,220'7 }	46*3	9.0	-	21'0
Suleik	89 {		-			1,179'8						22'5	44'9	::			33'7	33'7	11'2	1,696'6 }	33'7	-		11'2
Nobat Dakin •	75 {		-			2,080°0	40.0					400	120'0				26.7	13'3	40.0	2,72000 }	40°0	26.7	13'3	
Khormaksar .	65 {					507'7		::				138.5	15'4					30.8	30'8	1,030'8 }	30.8		15'4	15'4
Sheikh Othman .	25 {								*		***									= }				
Perim (b) Not in the Indian Com-	26 {	1.1	=			76'9					***	38.5	269*2		100			38*5	=	769'2 }				
mand:- Mauritius	1,339 {				-	714'7 1'49	11.		4'5		5'2	22'4	31'4	1'5	1:49		'7	17'9	217	1,020'9 }	34'4	6.7	=	14'9
Colombo	52 {					1346	=			19'2			95'2		:::				383	442*3 }	1972			38.2
Singapore	612 {	::				62'1	1.6	50'7	-	1'63	1.6	26'1	35.0		1763			161'8	1.0	575'21	34"3	116	=	
Tientsin ·	555 {			-		=	3.6	-		126			2.5	=			***	3.6	16.5	142'3 } 5'41 }	970	72	1:8	7'2
Lutai	262 {		-		==	33,0	=		=	3.8		11'3	11'5	=				7.0	3.8	1450}	11'3	3.8	=	-:
Shan-hai Kuan	471 {	614	=		21	17'0	-		2'1	17'0		27.6	64		***	=		21"2	14'5	4725}	17.0	2'1	4'2	8.5
Tongshan .J	310{	45"2	-			32,3	=	3,5		6.45	3.5	32'3		-	=				9'7	248.4 } 6.45 }	2910	=	=	97
ARMY OF INDIA.	127,853 {	5'2	.7 .48	.63	1'0	261.8	5'0	20.6	1.1	2'5	9'0	22'9	37.1	7'2	.09	.01	2'4	14'3	1612	683.5 }	23.0	5.3	4.6	6.5
INDIA	† 124,252-{	5'3	.8			251'1			171	2'4	0,20	230	37.6	73	107	.01	2'0			686'8	227	5'4	47	6-1
Northern Comb.	1	7'5	.07		,33	'27	'37	18.7	.13	'67	2'24	'07	37.5 10 40°0	.02	*05	*03	.03		11'1	6.10)	25'4	.03		5'4 '02 7'6
WESTERN ,,	24,972 {	7.5	'63	.09	.29	22617	3.6	15'8	1.8	2.6	1.60	.09		*06	-09	1.3	20	16.3	53.0	8'09 \$	23'8	.03		
SECUNDERABAD DIVISION	10,603	20	3'7	.0	100	95'0	10	43"	32.4	1'4	5'9	17'2	50.3	11.6		.6	211	1213	191	524'4 1	197	905	3'8	'05
BURNA ,.	5,310					168%		41'8		1'9		26%	23'0		*19	4		23'4	20'0		26.0	0	8.5	

• See foot-note at the end of Table XXIX.

# NATIVE TROOPS, 1906.

# TABLE XXIX.

ACTUALS of STATIONS, GROUPS, and COMMANDS, on which the ratios in Tables XXVI-XXVIII have been calculated.

	4				-		1. 4	ADMI	8810	NS.	11/					2. Da	LÁTHS.		-		7/37		-
STATIONS AND GROUPS.	Average annual strongth.	Influenza. Cholera.	Small-pox.	Intermittent Fever.	Remittent Fever.	Simple Continued	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhora.	Hepatic Abscess. Hepatic Congestion	Scury.	Anzemia and Debi- lity.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK,	Syphilis,	Soft Chancre,	Gonorrhea.	Dracenceles Mediaensis.	Other Entoroa.
Port Blair	257 {			140		2		1		10		-	- :				195	} 7				::	-
Rangoon	1,092			6	=	95		-	4 1	32			2			10	459	} 17		7			171
GROUP I.—BURMA COAST AND BAY ISLANDS.	1,349 {		1	146		97		2	4	42	7		2		14		654	} 24	2	7	2	::	111
1																		1		2		-	
Meikţila	691 {					10										14	191			-	7		11
Fort Dufferin • •	1,329{			176	3	35	3	2	4	51				100		28	835		10	-	10	1	3
Bhamo	816{			434		69		4-	'	26	37	4			1000	5	886	} 34	1,	-	-		-
GROUP IIBURNA	2,836{			631		114	5	6 1		85	44	s	1	1:	71	47	1,912	} 75	19	11	17		3
Manipur	579 {	100 mg (50 mg)		224					6	8	20	20			5	25	519	} 17	·	7	12		
Sadiya	68 {			62		  8	-			16	17	5		-	6	4	198	} 1	-	1	2	1	
Dibrugarh	307 {				1	-					-	-	-				1	1	-	-			
GROUP III.—ASSAM .	954{			289	1				7 1	25	43	25			13	31	739	} 24	7	9:	15		-
Fort William	640 {	1 2	1 1	88	1 1	23			6	25	19	4			22	33		} 22		14			-
Alipore	533 {			312	6	s	-		2 2	19 2 23	33	5 1		8	3	13	390	} 20	3	10	1		3
Barrackpore	409 {	1		28		5		1		8	-	2 .				5	138	5		4		-	
	-341		1														9						
GROUP IV.—BENGAL	1,816 {	4 1 3	3 3	551	"	27.5	2	:	10	75 2	79	22 .			36	56	1,591	59		29	19	5 1	

	gth.				1	11/1/		1. /	DMIS	SIONS.	2.	DEAT	HS.					and the same of
STATIONS AND GROUPS.	Average annual strength,	Cholera. Small-pox. Enteric Fover.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases. Tubercle of the lungs.	Paeumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoza, Hepatic Abscess. Hepatic Congestion	Scurvy.	Anzenia and Debility.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis. Soft Chancre.	Gosorrhaa,	Medinensis. Other Entoron.
B · Dinapore · · ·	527 {	2 2 1	55		37	4 5		8	29	7		6	3	324	} 10	2		6
Benares	615 {		68		77777			13	12		- 7	7	4	248	} 8	1 2	1	
Allahabad	1,140{		278	1	7	2	7 2	25 	47	28	1 5	27	15	968 8	} 23	3 2	10	3 12
Fyzahad	979 {		68	13	29			34	12	6	1		16	557	} 19	7 +		2
Lucknow · · ·	1,827 {			6	15		20 5	20	55 4	1	3 1	23	19	714	} 27	7 4		3
Cawnpore	1,045	60 1 1	154			2 5		12	50		4 3	7	17	689	} 23	8 2	7	.6 3
Fatehgarh	76 {		38				***		2				::	62	} 2			
GROUP VGAN- GETIC PLAIN AND CHUTIA NAGPUR.	6,209	62 3 1 1	875	31	115	9 10			207	47 1	9 16	74	74	3,502	}113	28 14	32	21 17
A Bareilly · · ·	1,202	1 2 1	115			3		10	24			17	13	336 5	} .14	3 8	2	
Roorkee	802 {			1		5		15				15		303		3		
Dehra Dun	2,902 {	49 : 4	2	12	107	6 8	1	1	45	25		54	90	2,704	3	35 32	***	
Meerut · · ·	1,510		1	8		1 2	4		44	3	1		28	674		10 11		7
Delhi . · · ·	907 {			2			2		69	9		28	28	1,169		5		
Ambala . · ·	1,347 {	1 2 2 1	197	1	62		9	21	43	14				643	} 19		13	
B Juliendur	1,633		1	13		1	4		58	5		28	9		} 34	5 2	2	3 1
Ferozepore	1,642	18 1 2 9	1		17	1	1		39			7	15	709		8 2		5 E
Lahore Cantonment .	1,764				24	8	5		64		1 2		22	870	5 "	9 3		=  -
Amritsar	134		-			1 7		***	35	15 1		39	14	1,083	,	5 4		5 2
Sialkot	1,714			25	23	1 20	5	***	***	1 1			44	1,888	2 34	15 10	784	31
Jhelum	3,093			17	77	1 1	6		48	4			53	1,075	5 71	7 20		5 1
Rawalpindi	2,102 -		32					2	3	100 m				18				
Attock							-				1		***		,			1
GROUP VIUPPER }	20,842	69 8 92	8 4.744	9	311	3 5			589		13 16	298	1	12,493	462	1		49 6
A Mardan	1,033					1.	1 1c - 4		12	4		66	11	277 6 2,669	,	3 2 6 3		6
Nowshera	3,529	{   -	1 1,244	3		100	61	1	152	9			1	13	} 81			-6 :

# NATIVE TROOPS, 1906.

#### TABLE XXIX—continued.

ACTUALS of STATIONS, GROUPS, and COMMANDS, on which the ratios in Tables XXVI-XXVIII have been calculated.

	gth.										1. /	ADMIS					DEAT	HS.							
STATIONS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued	Circulatory Diseases.	Tabercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhora.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anzemia and Debility.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancre,	Gosorrhæa.	Dracunculus Medinensis.	Other Entozoa.
Peshiwar	2,676	134		1 3	1,118	6			7	20	85	199	20	111	-		78	22	2,741	} 65		8		5	1
Fort Jamrud	167 {	4-7	200 00		51	2					6	25					4		151	} 3					::
Kohat	2,822 {		***	1	1,271	16		2		40	57	104	S			2	62	23	2,457 20	} 84		5	14	8	
Thal	165 {			2 1	95	111					12	10					9		236	} 7	111	11			
Edwardesabad	2,115 {	40		6	1,240		56	3	9 1	17	41	137	37			4	26	13	2,494 5	} 66	4	2 ::	7	4	
Dera Ismail Khan.	2,415{	31	-		2,889	10	9	11	2	26	57	143	39			2 1	51	16	4,336	} 118	8		8	8	
Jatta	59 {				6		-	11		:									42	} .					
Drazand	60{				108	-	=			2 1	2					-	-		144	} =		-			
Fer Zam	58{				27	=		11		2 1		5					2		59	} 2					-
Multan	1,902 {			,	154	12 2	20	2	9 2	5 1	29	38			-	2	16	8	707	} 27	3	2		3	-
Bikaner	30 {					=			-		=	=	1000						2	}					
D. Jandola	1935				54	2				2	2	7	1				,		107	2			,		
	.40.5					-							100,000				-		113		-	-		-1	-

2	ą.			1		1. A	DMISS	ions. 2	DEATH	ıs.			-	_
STATIONS AND GROUPS,	Average as anal strength.	Influenza. Cholera. Small-pox. Enteric Fever.	Intermittent Fever. Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Preumonia. Other Respiratory Diseases.	Dysentery.	Diarrhona, Hepatic Abscess. Hepatic Congestion and Inflammation,	Scurvy. Anæmia and Debility.	Venereal Diseases.	ALL CAUSES.  CONSTANTLY SICK.	Syphilis.	Generrhea.	Dracunculus Medi- nensis. Other Entozoa,
Sibi	261 {		138 3			14 20	37	2	5 21	13	332 } 8	'	4 8	===
C Jacobabad	304 {	2	229 1	1		7 10	20		5	10	413 } 9		7	= =
Hyderabad	577 {	2 1	146	16	1000	4 9	15		9	9	<sup>277</sup> <sub>3</sub> } 9	3 .3		1
Karachi	858{	103 1				14 26 2 1	25		4		586 } 22	5		25 40
GROUP VII.—NW. FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA.	19,224	1 6		327 13		92 482 39 3	945	142 2 2 2	3 360	164 18	5,030	43 31		71 45
A Bhuj	125 {		172 1			2 2	5	The second secon		8	234 } 5		2	= =
Rajkut	693{		93	7	-	6		Control of the last of the las	83		271 4 14	8		
Deesa	729{		669 2	= .:		4	16		4 14		986 } 29			
Ahmedabad	455 {	=====	204	= :		4 66	10	THE RESERVE AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO	2	2	516 } 15	2	=	
Baroda	647 {	= 11:	413 16	= .		5 6					624 } 21	12 2		3
Alirajpore	36{				- :			:	200000	= .	8 }	= =	200	
Sirdarpore	389 {		46 1			3		2			153 6			
Jhabwa	35 {		25	1		1	5		. 5		192 } 10	3 1	1	45
Kotra	157 {		50 1	= =		3				4	94 } 4	2	2	5
Udaipur • • ·	35 {	====	= =	= :	11/00/1	: =	:::		0 0000		3}	= =		==
Todgarh	32{		1 1	4 :				2	-		320 } 11	2 6		- =
Erinpura	518 {	3	33		-	1 5 10	12	2 1 .		3	160 } 7	1	2	3
Deoli	577 {		40 1	21		3 6	10		2 3	12	266 } 9	5 3	4	3
Beawar	46 {				1.	: :	=			=	;} :	= =		===
Nasirabad	655 {		115 2			7 10 2 7 3	20			4	424 } 15 276 } 8			
Ajmer	453 {										'}	-		
						1	-					-	-	1

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# NATIVE TROOPS, 1906.

# TABLE XXIX—continued.

ACTUALS of STATIONS, GROUPS, and COMMANDS, on which the ratios in Tables XXVI-XXVIII have been calculated,

ACTUALS of STAT					-15	-	MISSION			DEATH				
STATIONS AND GROUPS.	Average annual strength.	Cholera. Small-pox. Enteric Fever.	Intermittent Fever.	Simple Continued Fever.	Unbercle of the lungs.	Pneumonia.	8 3	Diarrhosa.	Hepatic Abscess. Hepatic Congestion and Inflammation. Scury.	Anzemia and Debility.	Venercal Diseases.	ALL CAUSES. CONSTANTLY SICK.	Syphilis.	Gonorrhosa.  Dracunculus Mediracusis.  Other Entozoa.
Jaipur	40 {		9			2 1						17 }	' ::	The second second second
Agra	911 {	43	207	3 3	2	12	16 4	21			11	591 } 16	4	2 1
Gwalior	27{					:::			= ::	: ::	***	= }-		200
Jhansi	2,449 {	13 9		8 6	5	15	31 26	1		3 34	47	2,955	10 1	THE RESERVE TO SHARE THE PARTY NAMED IN
Nowgong	666{			. 14	1 1	8	15 3	3			9	308 } 15		3 .4 5
Goona · · ·	397 {		100	: :				-			3	132 } 4	2	
Agar . · ·	345 {		44	3 3	===		2			8	5	120 } 5		
Sehore	753 {		188	8	2 3		2 2			2	5	92 )		
Indore · · ·	163 {	S		. 118	2	7	21 1			1 33	11	875		2 200
GROUP VIII.—SOUTH-)	1,080 {	2 2				2	1					.9,		
EASTERN RAJEUT- ( ANA, CENTRAL   INDIA, AND GUJA-) EAT-	13,243 {	43 9 24 12		51 178	13 30 4	134 29	262 53	9 9		1 169		10,160 309	81 5	
A Saugor	1,233 {	6 1		19	1	18 3	33 1			4 9	19	1,080 } 28	10	
Sutna	33 {							1			***			
Jubbulpore	1,793 {	14 3 2 2	272	9 145	1 2	22 2	20 11	5		3 24	34	1,530 } 52	14	14 4 7
Kamptee	527 {	4	58	+	2 1	4	8		- :	5		257 } 11		
Sitabaldi	86 {	2	27			::-		1000				} 1	= :	= = = 1
В						*								
Aurungabad	1,712 {	6 4	178	3	3	17 5	30 2			2	34	668	7	24 12
Ahmodnagar .	594 {	1 5	32	. 67	1 1	5	21 1			5	35	442 } 21	4	
Bolarum	1,692 {	3 1 2 1	34	. 182	3	12 3	27 10	10		29	28	942 } 44	15	12 313
Sepanderabad .	2,943 {	3 35 1 17 20 6	197	9 102	5 3 2 1	13.	29 211	97	1 :: '	20	50	1,461 } 58	13 14	36

	2	-			-	7	7/	,	. ADM	188103	(4.		2.	DEAT	THS.		-			-	-	-
Stations AND GROUPS.	Average annual strength,	Influenta.	Small-pox.	Intermittent Fover.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhea.	Hepatic Congestion and Inflammation.	1:0:	Anæmia and Debi- lity.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancre.	Gonorrhæa.	nensits.	Other Entozoa.
Belgaum Satara Poona Kirkee Sirur	1,573 { 342 { 2,002 { 1,547 { 514 {	4	1 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	204  14  58 1 131  56	28	63  4  67	2 1	17  1 14 2 8 2	45  4  29 	50  3  48  16 	6 9 23	2 4	1	9 1 9 9	75  27  72  41 	1,077 4 128 3 784 28 916 10 236	} 31 } 5 } 35 } 30	25 11 29 20	31 6	19 10 18 12	20	5 9 2
GROUP IXDECCAN	16,591 {	61	63 19 34	1,825						651	178	S 16	38	132	437	9,604 153	}351	149	109	0.5	123	41
Santa Cruz	554{ 700 { 472 { 57 { 1,783 {			261  172 1 29  3	1	  6 1 2 	5 7 3 7 2 2 5 10 3	4 1	28 2 48	106 2 60  13 	1 64		7 2 8 1 	22  7  8 	15 5 1 21	7000 14 537 6 167 3 30 	} 18 } 7 } 1	1	3	3	4	5
Bangalore B	525 { 2,448 {	12	2 2 5 2 4 1	637	3		1	3 15		160	12	1	5	 	32  45	1,895	3	21  20 1	12		22	:: 0;
Trichinopoly St. Thomas' Mount	512 { 591 -					15	2 :	2	3	5 5	2		-	5	13	151	3 7	6	3	3		5
GROUP XI.—SOUTH-	4,282	12	3 7 6	1		162		9 20	93	183	1000	1	5	70	102		86	50			22	7
Maymyo	1,125 182 735 94- 250 75 698	1 1 1 1 1 4		23	9	2	3 2	2	15 15 11 15 11 13 11 13 11 13 11 13 11 13 11 13 11 13 11 13 13	29	4 5 1 1 1 2 1 1		4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	39 7 8 2 1 1 4 4 4	42	5 44	5 5 5		6 5	25		

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# NATIVE TROOPS, 1906.

# TABLE XXIX—continued.

ACTUALS of STATIONS, GROUPS, and COMMANDS, on which the ratios in Tables XXVI-XXVIII have been calculated.

	4		1 000				77	10.7	1. A	DMISSI	ONS.		2. Di	ATHS				-			
STATIONS AND GROUPS.	Average annual strength.	Cholera. Small-pox. Rateric Fever.	Intermittent Fever.	-	Simple Continued Fever.	Inhercie of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhota.	Hepatic Congestion	Scurvy.	Anemia and Debility.	Venereal Discases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancre.	Genorrhea.	Dracunculus Medi- nensis.	Other Entozoa.
Naini Tal	129 {	:		'	5				4			=	s	5	48	} 3		2 ::	=		::
Lansdowne	2-542{		263	14		19 19	33	69	120	13	1000	17	55	33	1,158 26	} 66	14	10	9		::
Simla	112 {		5						2		==				44	} .				-	=
Jutogh	171 {		***							2			2		23	} .					=
Dharmsala	1,367 {		153	12 2	2	1 5			19	10.			6	13	673	} 33	6	3			6
Bakloh	1,264 {			14		1 7	3 1	11	13		1	,		47	648	} 31	15	12	20		2
Murree	26 {									1 -	0.000	-			2	}					-
Khyragully	114{		10	***			3 1	3		2 -					54	} 2	=				
Baragully	74 {		3					2	3				1	1	21	} .	1				-
	66 {		16										2		43	} 2	-				
Kalabagh					66					2			***		141						
Chitral	164{		20	-		***			***		-	-		-		} 3	-				=
Killa Drosh	559 {	33			31	1 5			21		2	=			358	} 14	7.				=
Malakand	804{		294	=	39		20 5	36	35			=	60	'	656	} 20		=			=
Dargai	410{		163	2 2		= .	5 2	3	13	2			5	3	294 6	} 9		=	'		4
Chakdara	472{		200		7		7 3	13	28	1	-		5	'	359 3	} 7	'		=	==	
Abbottabad	3,521 {	FO	1,299		1,220	1 25	91 7	301	91	17			14	70	4,291	}151	14	9	47	3	=
Cherat	45 {	10						4	8	J.,						2	=			=	
Fort Lockhart	530{	33	167	3		2	6 2	18	30	3			24	3	528	20		-	2	5	
Hangu	123{		46					8	6			3			116	3			=		=

	į į						-		. AD	MISS	ions.	-	-	-	-	2,	DEAT	HS.			_			_
STATIONS AND GROUPS.	Average annual Strength.	Influenza. Cholera.	Small-pox. Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases,	Dysentery.	Diarrhora.	Hepatic Abscess.	Hepatic Congression and Inflammation.	Scurvy.	Anzemia and Debility.	Venereal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis,	Soft Chancre.	Gonorrhea.	Dracunculus Medi- nensis.	Other Entozoa,
Mir Ali Khel	80{			109		1			2	10	10	10			1	5		180	} +				1	1
Fort Sandeman .	460 {			270	3		1		9 2	13	22	3			2	9	4	421	} 13	3	1		7	1
Hindubagh	30 {			20			200 0				1					1		30	} .		:::			
Musa Khel	28 {			30			100		-	:::	2	17.00	83 B			1		 	} ,					
Khan Mohamed Kot .	2{			=	-			200	=	==	1		_	-				3	}					
KBIta Saifulla	30{			27		-			-		3	20000		-	=			50	} '					
Murgha	48{			19	2		000		-	11	28			-	=		10	38  928	} 1	5		4		::
Gumbaz	25 {			505				2	2		6			-	9	16		33	} 30					
	174		3		7 2	2	3		32	79	117	14		2	42	32	27		} 78	111	2	14	15	9
Peshin	31 {					-	,	11/4	4		2							4	}				1	
Shelabagh	36{			17					1	5	1	2						40	} ,					
Spinwana	38 {			11	::			200				-:	-					20	}	1				
Chaman	652 {			20	21	7			2	24	14				1	1	6	196	} ,	4	2		5	
Mount Abu	81{			10		1							1888 H		=			-	} :					
Ootacamund	557 {				-	8			7 2	24	6				2	2	8	158 2	} 6	3		4 2		2
Camp Lovedale	431 {					-	3	1	3	7 8	5 6						9	111	} 4		+	3		
GROUP XII.—HILL STATIONS.	169{		5 17	5,601		1,483	36	So :	287	768	753	159	3	10	90	335	453	16,455			160	160	55	30
STATIONS. 5 22.4	403 {	1	1 4	0	10	1	9	29	39	2	5	3	3	1		1	2	153		1		1		
EXTRA INDIA.	y914{	1 4	2 1	1,726	85	183	1 1	13	70 8	116	347	51		2	1 1	46	68	4.138	} 95	18	21	29		5
mand:— Chabbar	52{	5									4	1			3			92  26	} 2			***		
Jask	51 {			1000									-	***				***				***		

#### NATIVE TROOPS, 1906.

#### TABLE XXIX-continued.

ACTUALS of STATIONS, GROUPS, and COMMANDS, on which the ratios in Tables XXVI-XXVIII have been calculated.

ACTUALS of STA	4TIONS,	-		IPS,	and C	0.42		<i>U</i> 3,	on		ADMII			3	able:	EATH		XVIII	lave	been	Cia.	cula	+64.	-
STATIONS AND COMMANDS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Intermittent Fover.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercie of the lungs.	9	Other Respiratory Diseases.	Dysentery.	Diambora.	Hepatic Abscess.	and Inflammation.	Anaemia and Debi-	lity. Venercal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Syphilis.	Soft Chancre.	Gonorrhæa.	Dracencelus Medi- nensis.	Other Entoron.
Muscat	21 {		-		5										1000			8	}					
Bushire	65 {								1								1	. 7	}					
Bagdad	37														000				·					
Aden	634 {				291			1 2	3	5	72	50				1 .	19 2			2	_	***	9	
Dthala	666 {				530	***	. 5	3		2		25				2	13 20	813	} 31			14		-
Suleik	89				105						2	4			-	3	3	151	} 3			1		
Nobat Dakin	75 {				156						3	9		100	-	2 .	1 3	204	} 3	2	1			
Khormaksar	65 {				33	***		1 1			9						2 2	67	} 2		1	1		11
Sheikh Othman .	25 {				***														}					
Perim	26{				2							7					1 ::	20	}					
(b) Not in the Indian Command:- Mauritius	1.339 {				957			6		7	30	42	2		1	-	24 29	1,367	} 46	9		20		31
Colombo	52 {	-	:-		7				1	***		5						23	}.			2		11
Singapore	612 {	-			38		31	***	1 1		16	22	11	1 .			99	352	} 21				-	1
Tien-tsin .	555 {	-				2			7	:		4				-	2 9	79	} 5	4	1	4		
Lutai Lutai	262	-			6				1		3	3					2	38	2800		1			11
Shan-hai-Kuan .	471 {	3		1	8			1	8 2	3	13	3					10 7	122	} 8		2	4		11
Tongshan . J	310 {	14							6 2	'	10						. 3	- 3	} 9	-	-	3		11
ARMY OF INDIA  OF INDIA  OF INDIA  OF OF OF OF OF OF OF OF OF OF OF OF OF	127,853	671	94 62 3	4 34	422 33-478 39	633	3,783	141	67		131 2 <sub>6</sub> 934 16	85 4,748 26	926	19			75 229 33 2,067 5 8	10000	2,940	684	586	78	500	10
30	-		-			-									1	+	+							1
INDIA  INDIA  INDIA  INDIA  INDIA  INDIA  Add- mitted. Died out of hospi- tal.	124,252	654	62	79 126	32,452 37	631	3.751	134	61	163 1,141 198	128	4,669	913	17	1 1		96 2,015 5 7	85,332	2,847		582	75 764 2	499	185
NORTHERN COMMAND WESTERN COMMAND EASTERN COMMAND SECUNDERABAD DIVI- SION. BURMA DIVISION	34,972	3°4 163 165 21		13	1,007	15 155 9 70 11 17	653 346 462 3 222	5 42 13 40 7 25 6	27 73 8 56 20 15	476 91 344 59 174 28 63 1 15	3 445 8 182	1,520 4 1,399 10 748 5 533 2 122 	248 2 276 2 184 6 123 	26 32 - 322	26 5	1 54 4 7 55 3  12 1	04 687 3 1 55 502 1 2 30 202 1 1 24 106	25,995 283 14,182 152 5,560 82	833 541 209		172 206 40	219 1 265 145 145 76 	320	189 134

<sup>\*</sup> Remaining + admitted = total treated. † Excluding troops in Extra India not in the Indian Command.

Remaining + admitted + died out of hospital = total cases. 5 As far as returns have been received.

			1. /	Average	STRENG	тн.	2. Co	NSTANTL	y Sick.		143		
GROUPS AND COMMANDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October,	November.	December.	TOTAL.
I.—BURMA COAST AND BAY	1,614	1,514	1,283	1,263	1,260	1,064	1,157	1,257	1,295	1,444	1,480 26	1,564	16,195
II.—BURMA INLAND	2,796 77	2,538 68	2,546 57	2,690 49	2,694 52	2,243 56	2,607 61	2,878 87	2,916	3,146	3,304	3,667 97	34,025
III.—Assam {	1,137	1,011	1,018	866 15	838 24	846	847 33	811 24	814	1,000	1,125	1,128	11,441 286
IV.—BENGAL AND ORISSA {	2,003 68	2,031	1,926 45	1,641	1,785	1,779 39	1,812	1,684	1,585 63	1,685 61	93	1,948 98	21,789 723
V.—GANGETIC PLAIN AND {	8,163	8,101	7,072	5,612 83	5,623	5,676 78	5,758	5,741	5,534	6,460	6,102	4,670 94	74,512 1,336
VI.—UPPER SUB-HIMALAYA .	489	439	23,351 344	19,674	353	373	18,293	369	19,674	22,233 615	22,584 781	19,426 590	250,104 5,541
VII.—NORTH-WESTERN FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA.	747	633	409	259	307	316	319	352	18,298	18,800	1,009	912	230,698 6,230
VIII.—SOUTH-EASTERN RAJPUTA- NA, CENTRAL INDIA, AND GUJARAT.	15.776 388 18,155	15,242 294 17,995	204	158	172	169	205	12,198 266 16,061	339 15,504	14,569	15.529 578 17,809	469	158,914 3,688
IX.—DECCAN · · · · {	345	354	355	305	286	254	314	351	354	439	432	423	4,212
XWESTERN COAST . •{	48	48 5,073	40	32	34	43 3,991	4.179	47	33 4,186	46	57	75 4-410	546
XI.—SOUTHERN INDIA	21,571	107	72 23,668	74 24,778	99 22,960	127	22,013	22,641	22,692	23,654	20,934	19,649	1,043 268,826
	575	143,431	131,823	535	509	113,962	115,437	601	775	799	768	768	7,432
ARMY OF INDIA .{	3,239	3,039	2,435	2,171	2,170	2,208	2,350	2,556	2,957	3,640	4,454	4,046	35,265
INDIA •	3,136	139,706 2,908	2,313	2,024	2,049	2,110	2,263	2,484	2,886	3,599	4,401	3,982	34,155
NORTHERN COMMAND	45,079	45,113	43,909 789	39,696	37,730 701	36,713	37,760 678	38,648 788	39,798	1,323	1,802	1,655	12,369
WESTERN COMMAND	927	39,119 825 25,485	36,795 703 24,005	31,965 602 21,098	31,273 587 20,340	31,660 583 20,336	31,878	765 20,926	32,10S 913 20,720	36,589 1,084 22,952	38,691 1,254 24,546	36,480 1,088	9,982
EASTERN COMMAND	5.50	538	445	453 9,565	9,567	423 9,701	526	519	566	649	757	615	6,438
SECUNDERABAD DIVISION	216	241	187	163	183	211 4,255	220	206 5y097	201 5,216	229	259	211 6,260	2,527
BURMA DIVISION	145	144	123	109	99 Extra lad	107	128	141	167	162	162	162	1,649

<sup>\*</sup> Excluding troops in Extra India not in the Indian Command.

#### TABLE XXX.

ABSTRACT of the CANTONMENT SANITARY REPORTS of the most UNHEALTHY STATIONS, SANITARY DEFECTS, IMPROVEMENTS, SUGGESTIONS, etc.

The ratios of sickness and mortality will be found in Table XXVIII.

#### INORTHERN COMMAND.

Kobat.—The drainage within Cantonments is generally satisfactory. There are still some drains and water channels which require to be made pucca and this will be done as money is available. The highly-irrigated lands, held by zamindars, in and around Cantonments, are very prejudicial to the health of the station and should, if possible, be acquired by Government. The water-supply is good and sufficient generally, but there is sometimes a deficiency in the hot weather. The barrack accommodation for the 22nd Cavalry is sufficient for lighting men only and as syces also occupy the barracks there is some overcrowding. For the 26th Jacob's Mountain Battery the barrack accommodation according to Regulations is insufficient. The dhobi's ghat owing to insufficiency of water, which is also sometimes very filthy, is most unsatisfactory and dangerous to health.

The only work executed during the year to improve the sanitary condition of the station was the construction at a construction of the station was the construction at a construction of the station was the construction at a construction of the station was the construction at a construction of the station was the construction at a construction of the station was the construction at a construction of the station was the construction at a construction of the station was the construction at a construction of the station was the construction at a construction of the station was the construction at a construction of the station was the construction of the station was the construction of the station was the construction of the station was the construction of the station was the construction of the station was the construction of the station was the construction at a construction of the station was the construction of the station was the construction of the station was the construction of the station was the construction of the station was the construction of the station was the construction of the station of the station was the construction of the station of the station of

The only work executed during the year to improve the sanitary condition of the station was the construction, at an approximate cost of Rs. 300, of a few short lengths of masonry drains.

The Principal Medical Officer of the Brigade is of opinion that the most urgent sanitary requirements of the station are the following :-

(a) the provision of dry-earth sheds and appliances for working the dry-earth system efficiently;
(b) an increased pure water supply, to admit of the construction of a dhobi ghat;
(c) a new pump for the Fort well;
(d) additional water carts;
(e) lining several more channels with masonry;
(f) acquirement by Government of the plots of Zemindari land scattered through the cantonment;
(g) buying by Government of the Chikar Kote village.

He adds that "viewed as a possible future base of field operations, the santiary condition of Kohat must be considered of great military importance. Many of the above-mentioned necessities are matters of detail; but as the cantonment income is insufficient to meet them, an initial special sanitary grant, to put them on a sound working footing, is most essential. Viewed as a base of operations, the desirability of the Army Department acquiring increased water rights, in the springs, cannot be too strongly insisted on."

The Major-General Commanding the Brigade remaks:— "I concur in the recommendations of the Principal Medical Officer but as no funds are available they (with the exception of (c) which is a small matter) cannot be carried out."

JATTA. DRAZAND. FORT ZAM. No sanitary reports.

KHYRA GALL.-No defects were reported in the latrines or urinaries nor in the conservancy arrangements. Minor improvements, such as alterations to a cook-house, the construction of a latrine and urinal for men, a latrine for women and another for officers, servants and the construction of quarters for military works coolies were effected during the year at an expenditure of Rs. 5,278.

The Principal Medical Officer of the Division remarks that the station is in a good sanitary condition.

DROSH.—The ground between Upper and Lower Drosh is terraced and planted with rice every spring and in the summer it is in a marshy condition. The accommodation for the troops is deficient. Latrines are required in both bazaars. No defects exists in roads, compounds, etc., but it would be advisable if the drains outside the Fort could be made pucca for several hundred yards from

the Fort walls.

The Cantonment Committee state that the marshy condition of the rice-fields had already been brought to the notice of the Assistant Political Agent in the Annual Sanitary Report for 1904, but it was found impracticable to remedy it. In regard to the deficient accommodation the questions of abolishing Lower Drosh and of erecting a building outside the existing Upper Drosh Fort are under consideration, and if the proposals are sanctioned more accommodation will be available. In the hot weather a large portion of the garrison moves

into summer camps.

The Principal Medical Officer and the Lieutenant-General Commanding the Division make no remarks.

Malakand.—In Peacock's area each house has been treated as a separate building, but the drains have been made pueca for a distance of about 10 feet only from the walls; no attempt has been made to carry all drains outside the wall of the Fort. These defects, which apply equally to the drainage of buildings inside the Fort, have been brought to the notice of the Garrison Engineer. The troops are somewhat overcrowded as provision has been made for only one regiment on field service strength (some 700 odd men) where as about 900 men are present.

nen are present.

No works of improvement would appear to have been carried out during the year and apparently none are under consideration.

The Cantonment Committee suggest that fire-places be provided in the several barracks, guard houses and towers, an estimate for which is being prepared for inclusion in next year's budget; also that the pucca drainage should be continued as far as possible to the outskirts of Peacock's enclosure; and that a meat ration should be provided by Government once a week in the winter.

The Principal Medical Officer of the Division states that the station is in fair sanitary condition and that he concurs in the Committee's remark as to the necessity of some warming arrangement being made in the barrack rooms and also as to the extra ration, which was authorized until 1905, when it was discontinued, apparently for economic reason.

The Major-General Commanding the Nowshera Brigade considers that fire-places are necessary and notes that in his opinion it is essential that Government should give some assistance in the way of a ration.

Our and the provided that the drains in the hazarar in which water lodges continually.

DARGAL.—There are several kutcha drains in the bazaar in which water lodges continually.

The Cantonment Committee consider it would be a great advantage to have these drains made pucca.

The Principal Medical Officer of the Division remarks that the station is in good sanitary condition, except the bazaar, which is merely a collection of temporary "Shantis." He adds that it was a troublesome place to deal with during the epidemic of small-pox and recommends its demolition and the building of another bazaar on a different site.

The Major-General Commanding the Nowshera Brigade states that the bazaar will be improved when the new Levy Post is

ABBOTTABAD.—All the \*\*ullah\*s running through cantonments require small stone drains laid down along their beds to prevent the formation of stagnant pools. This matter has been strongly represented to the General Officer Commanding 2nd Division and the scheme for this drainage has been promoted from the 38th to the 7th place on the list of urgent works. There are many objectionabe streams, nullah\*s and ponds in the vicinity of cantonments and some ponds in cantonments which are being filled up. For many years accommodation has been insufficient in the barracks of the 1-5th, 2-5th and 1-6th Gurkha Rifles. An estimate for bringing their accommodation up to the authorized standard has been prepared by the Military Works Service. The 2-5th Gurkha Rifles suffer most from the deficiency in accommodation and consequently have the largest number of deaths from tubercle of the lungs. Overcrowding in that battalion has had to be prevented by putting men in excess of the authorized numbers under canvas in the middle of winter. The earthen floors of the barracks are insanitary because it is difficult to keep them clean.

A total expenditure of R55,868 was incurred during the year on the construction of drains, fire-places, and latrines, alterations to the hospital buildings, improvements in the water-supply, etc.

A total expenditure of 1855,805 was incurred during the year on the construction of drains, hie-places, and latrines, alterations to the hospital buildings, improvements in the water-supply, etc.

With reference to the suggestions made by the medical officer for remedying the defects noted in the preceding paragraph, the Cantonment Committee consider that the question of deficient accommodation in the 1-5th, 2-5th, and 1-6th Gurkha Rifles barracks should be given the first place, on account of the heavy mortality from tubercle of the lungs. Next in order of urgency are (1) the construction of pucced drains in the nullahs, as these are the cause of the great prevalence of malaria; (2) the construction of pucced floors in the barrack rooms; (3) improvements in the drainage and filling up of all ponds in Cantonments; and (4) improvement of the banks of the nullahs.

#### TABLE XXX—continued.

ABSTRACT of the CANTONMENT SANITARY REPORTS of the most UNHEALTHY STATIONS, SANITARY DEFECTS, IMPROVEMENTS, SUGGESTIONS, etc.

The ratios of sickness and mortality will be found in Table XXVIII.

The Principal Medical Officer of the Abbottabad and Sialkot Brigades states that the following sanitary measures are necessary : (1) the provision of sufficient floor area and cubic air space in barracks for all troops; (2) the proper drainage of the lines and their neighbourhood by means of properly pitched and well built pucca drains; (3) the flooring of the barracks with either flags, tiles or cement so as to allow of the floors being washed either with water or with a disinfectant when necessary; (4) the provision of a Cantonment Hospital for the treatment of contagious and infectious diseases amongst civilians.

FORT LOCKHART .- No sanitary report.

WESTERN COMMAND.

SIBI .- No sanitary report.

DEESA .- No sanitary defects.

AHMEDABAD.—The surface and sub-soil drainage is insufficient in the Cantonment generally. The enormous growth of trees in the British and Native lines and of trees, shrubs, bushes and cactus hedges in private compounds together with the insufficient surface and sub-soil drainage is said to account for the unhealthiness of the station.

The Cantonment Committee state that the trees that are not needed for shade will be gradually removed and shrubs and cactus hedges in private compounds thinned and cleaned out. So far as the surface and sub-soil drainage is concerned, they do not consider that anything can be done owing to the sandy soil, all rain being rapidly absorbed.

The Principal Medical Officer of the Division agrees with the remarks of the Committee.

BARODA.—The drainage is fair. A slope runs from north to south in which water lodges only after heavy rain. The regimental water-supply which is derived from wells is scanty in the hot season. The sanitation of the city and several villages which are adjacent to cantonments is primitive. A dhobies' ghát is needed. A total expenditure of R977-8-9 was incurred during the year by the Public Works Department on drainage, cleaning wells and encamping grounds, lengthening overflow channels of wells and constructing two new cookhouses in the Native Infantry hospital and R2,028-1-2 was expended on conservancy by the Cantonment Committee.

The Cantonment Committee suggest that the negotiations which are being carried on for the acquirement of additional land for the disposal of sewage be hastened and that a dhobies' ghat be constructed. The Principal Medical Officer and the Major-General of the Division concur in the suggestions made by the Committee.

SIRDARPORE.-No sanitary defects.

JHABWA .- No sanitary report.

KHERWARA.-There is inadequate ventilation of houses in the regimental lines and ridge ventilation, it is said, would be a great improvement.

The Principal Medical Officer of the Division considers that ridge ventilation should be provided in the lines.

The Major-General Commanding the Division concurs in the Principal Medical Officer's remarks but adds that the accommodation provided is far superior to what the men have in their homes.

UDATPUR—No sanitary report.

UDAIPUR.—No sanitary report.

Neemuch.—The water-supply is deficient during the dry months but is of good quality. The wells in the baznar are protected from pollution to some extent, but the method of drawing and distributing the water renders it liable to contamination. A sum of R165-9-2 was spent on minor works during the year.

The Cantonment Committee offer no suggestions.

The Principal Medical Officer of the Division is of opinion that the lines of the Native Cavalry have been occupied too long and that the tents are very old and defective in many respects. He adds that new barracks on a new site are needed for the Cavalry.

The Major-General Commanding the Division remarks that "the Cavalry lines are rank bad."

BRAWAR. No sanitary reports.

NDORE .- No sanitary defects.

MHOW.—The water-supply is of excellent quality but deficient in quantity in the dry weather. The sadar bazaar is too congested and except in certain special cases no more building sites are being granted. The demolition of houses and the making of new thoroughfares is being proceeded with. A total expenditure of R15,852-2-7 was incurred during the year on various sanitary improvements and

R29,067-10-10 on conservancy.

The Cantonment Committee suggest the demolition of more insanitary houses in crowded localities in the bazaar so as to provide for a free circulation of air; the provision of new drains in the bazaar; the construction of new pueca roads in opened out streets and the

planting of trees along roadsides.

The Principal Medical Officer of the Division considers the above suggestions are all very urgent requirements.

The Major-General Commanding the Division remarks that the Cavalry lines are practically touching the bazaar and some of the officers' bungalows are in it. He concurs in the Principal Medical Officer's remarks and adds that until effect is given to the first suggestion of the Cantonment Committee (which must take time) he fears no considerable improvement can be looked for.

Kamptre.—The station main drain requires thorough repairing. The accommodation is sufficient, but owing to the ruinous condition of very many of the barracks, overcrowding sometimes exists. The Officer Commanding 117th Mahrattas reports that the lines are the worst he ever remembers a native regiment being in and many of the barracks are positively unsafe. The fifth receptacles are of an inferior pattern. No defects exist; in the bazaars except that many of the private latrines are of an unsatisfactory pattern, a defect, however, which is being gradually remedied. A total expenditure of R12,159 was incurred during the year by the Cantonment Committee on improvements in drainage, anti-malarial measures, purchase of new fifth carts and repairs to old ones, increased latrine accommodation, etc. In addition a total amount of R42,566 was expended during the year on conservancy.

The Cantonment Committee remark that the Officer Commanding 117th Mahrattas has had a sum of R600 placed at his disposal for the current year's repairs to the lines and that the amount will be spent in doing all that is possible to prevent the roofs falling in; a roof actually did fall in during November 1906.

The Principal Medical Officer of the Jubbulpore and Jhansi Brigades states that the repairs to the main drain should be carried out; that proper fifth carts should be provided; and that the defects in the bazaar latrines should be attended to at once.

The Brigadier-General Commanding the Jubbulpore Brigade concurs in the suggestions of the Principal Medical Officer.

The Brigadier-General Commanding the Jubbulpore Brigade concurs in the suggestions of the Principal Medical Officer.

Anmednagar.—There is a collection of native buts, occupied chiefly by sweepers, between the Military Works Store and the Station Hospital in the centre of the European lines which is a source of danger to the troops. The Cantonment slaughter-house is very bad and requires reconstruction. There is no drainage or water-supply, the floor is of rough stones uncemented and myriads of flies haunt the place.

The Cantonment Committee state that the huts are kept under constant supervision to try and keep them in as sanitary a condition as possible and that sanction for the re-crection of the slaughter-house has been applied for.

The Principal Medical Officer of the 6th (Poona) Division remarks that the most urgent sanitary requirement appears to him to

The Principal Medical Officer of the 6th (Poona) Division remarks that the most urgent sanitary requirement appears to him to be the provision of a proper slaughter-house, the present one being a disgrace.

The Lieutenant-General Commanding the Division offers no remarks.

Poona.—The Bairoba and Marcoda nullahs pass through the cantonments near barracks and lines. They have frequently been reported as insanitary, the former more especially, owing to irregularities of the bed and banks. The latter is being flagged and when finished will be sanitary. Tanks in Sholapur Road and Staveley Road have been drained and very much improved, but very little water remains in them. A tank at the end of East Street is difficult to drain and is still unsanitary. The water-supply is neither deficient nor inferior, but possible sources of contamination are the presence of villages on the catchment area which feeds Lake Fife and the open canal, 11 miles in length, leading from the lake to Poona. There are no sources of contamination in the mode of drawing and distribution. The urinals in the native lines are obsolete an bad. A sum of R1,399 was expended on improving the surface drainage of

#### TABLE XXX-continued.

ABSTRACT of the CANTONMENT SANITARY REPORTS of the most UNHEALTHY STATIONS, SANITARY DEFECTS,
IMPROVEMENTS, SUGGESTIONS, etc.

The ratios of sickness and mortality will be found in Table XXVIII.

the Native Cavalry lines at Ghorpurie and R1,754 on the erection of latrines in the Napier and Khan roads and in the Cavalry lines. The Cantonment Committee suggest a water system for removal of night-soil and failing this a better system of removal by carts or trollies and more suitably situated filth pits. New carts which are a great improvement on the old pattern have recently been purchased. The water-supply for cleansing carts at the pits is very deficient. They recommend the cleansing of the catchment area of Lake Fife and a system of pipes for the conveyance of water therefrom: also the provision of an improved pattern of urinal for native troops.

The Principal Medical Officer states that his views are quite in accord with those expressed in the report.

The Lieutenant-General Commanding the Division offers no remarks.

Sirun.-The absence of urinals in the lines of the Native regiment was the only sanitary defect reported.

BONEAY (COLABA).—The drainage, apart from that of the latrines in the lines, is by open channels that convey washing, cook-house and rain-water to the main drain; the opening into this is very liable to be choked up. On the north-east a municipal drain, which is very foul, runs through the lines. The lines are shut in on two sides with most insanitary streets—a part of the bazaar, where plague and small-pux flourish.

The Principal Medical Officer of the Bombay Brigade remarks:—"It is evident that Colaba has been neglected in some respects for many years back. Recently there has been considerable activity but much remains to be done." As regards sewage disposal, he notes—"A main sewer passes close to barracks, but the removal system is still used. The present accommodation for followers is as bad and incanitary as it well can be and is a standing menace at all times to the health of the troops. Proper sanitary "chawls" of the same model as those adopted by the city Improvement Trust are a pressing necessity. The barracks in the Marine Lines are quite unfit for occupation and should be condemned forthwith. The materials used in construction—roofing, flooring, etc.,—are perfectly adapted for the harbouring of rats and through them for the propagation of plague. There are two drains, only partly under military control, which become horribly foul and are not only a public nuisance but a grave menace. These barracks should be demolished forthwith. With the growth of the town the present site is much too cramped for a battalion and is dangerously near the bazaar." He adds—" the above are the principal sanitary defects—there are others more or less pressing. The question is so wide, however, and so complicated owing to the numerous conflicting interest and the want of definition of authority—Military, Municipal, and City Improvement—that it is quite impossible for military authority alone to deal with it.

The Brigadier-General Commanding the Bombay Brigade states that he concurs generally in the remarks of the Principal Medical

The Brigadier-General Commanding the Bombay Brigade states that he concurs generally in the remarks of the Principal Medical Officer regarding Colaba and the Marine lines, and that the only solution of the numerous problems involved is, so far as he can see, that suggested by the Military Lands Committee, whose report is now, he believes, under consideration by the Government of India.

Santa Cruz.—The Cantonment is closely surrounded by rice fields and cultivation should be prohibited within half a mile of the Cantonment boundary. The nearness of the adjacent village is undoubtedly a blot on the sanitation of the Cantonment: its wells are too close and those immediately adjacent should be put out of use and treated with kerosine oil. No action it is said can be taken locally to remedy these defects. The latrines should be converted into moveable ones. The puddles of water at the outfalls of the various drains are sources of danger and require a good allowance of oil, which has been applied for. There are too many borrow-pits (excavated during construction of barracks); these should be drained as no amount of oil will render them safe. The Officer Commanding the Station states that owing to the fact that this station has not yet been declared a Cantonment under the Act, it has not been possible to deal satisfactorily with the bulk of the sweepers who deserted in October 1906 and that it was very difficult to replace these men.

with the bulk of the sweepers who deserted in October 1906 and that it was very difficult to replace these men.

The Principal Medical Officer of the Bombay Brigade states that the malarious condition is due to (1) the amount of wet "paddy' and other water in the vicinity; and (2) to the narrow limits of the Cantonment boundary and consequent uncontrolled excavation, particularly on the south-east side; but that these defects are beyond military jurisdiction and can only be remedied through the Civil authority. There is a grossly insanitary village outside Cantonments, on the south-east side within a few yards of the Officers' quarters, which is a source of great danger to the troops as it is frequently infected with cholera, plague, etc. The fixed latrines are insanitary and steps are being taken to provide moveable ones. The latrine trenches are too near, but even if they are removed to the extreme limit of the Cantonment on the north side, they will remain so. A scheme for their removal and for the construction of a road was submitted a year ago, but no action has been taken. The insanitary conditions are a direct outcome of the too limited area of the Cantonment and the only remedy is to take in much more ground and bring it under military control. This would be an expensive measure, but until it is done, the Cantonment will certainly continue to be unhealthy. He concludes by saying that as the Marine Lines in Bombay are grossly insanitary, their abolition, conjointly with an enlargement of the Santa Cruz Cantonment and the quartering of both native battalions there, would be a feasible scheme from all points of view—military, sanitary and financial.

The Brigadier-General Commanding the Bombay Brigade agrees with the Principal Medical Officer, that the unhealthiness of this

The Brigadier-General Commanding the Bombay Brigade agrees with the Principal Medical Officer that the unhealthiness of this Cantonment is due to its restricted area and to the fact that it is a small island in the middle of lands over which the military authorities have no control. The acquisition of land to extend the area of the Cantonment has been under consideration, but the price demanded is so high as to be almost prohibitive. He adds that it would be difficult to put the trenching area further afield as during the monsoon for some months the hills on which the Cantonment is built practically form an island.

ADEN.—There is some overcrowding in the lines of the 116th Mahrattas as regards superficial area, but the cubic space is considerably more than is required by Regulations and the rooms are well ventilated. In the hot weather most of the men sleep in the verandahs and owing to the good ventilation the slight overcrowding in the cold season as regards the superficial area is not of much consequence. The hospital latrine is insanitary and should be replaced by an iron one and the latrine in the Supply and Transport lines badly needs repairs. The Cantonment Committee state that the defects in the latrines of the Native Infantry and Followers' hospitals will be remedied at the commencement of the financial year when funds will be available.

The Major-General Commanding the Brigade remarks that, with the exception of debility due to climatic causes and malaria due to an unhealthy autumn at Dthala, the health of the station has been satisfactory. The sanitation is as good as the present system of removal and burial of excreta permits, but would be improved, he believes, by the introduction of septic tanks which, however, is not possible in the absence of a supply of fresh water. Proposals for a water-supply scheme are being worked out for submission to Government.

DTHALA .- No sanitary report.

#### EASTERN COMMAND.

FORT WILLIAM (ALIFORE).—There are many "tanks" in the Native Infantry lines. The supply of pipe-water is rather deficient in the lines. The surrounding country is damp and low-lying; a large scheme of drainage is, it is believed, under consideration.

The Senior Medical Officer suggests that pucca covered drains, with as much "fall" as possible should replace the kutcha drains in the Native Infantry lines. The tanks at Alipore (Native Infantry lines) should be kerosened, and the contracts allowing them to be used for fishing abolished—should this latter be done, they might be drained. The Principal Medical Officer of the Presidency and Assam Brigades remarks that the continuation of pucca drains in the Native Infantry lines at Alipore is the most urgent measure proposed.

ALLAHABAD.—In the fort the defect in the drainage system owing to insufficient fall still remains. The cook-houses for the hospital and British Infantry in the fort are situated at too great a distance from the hospital and barrack rooms. The quarters for the men of the Army Hospital Corps and their families are in the immediate vicinity of these cook-houses, not more than 20 feet away. The servants' quarters and cook-houses for the married people of the Ordnance Department are mingled in the various blocks in an undesirable way.

The Principal Medical Officer of the 8th (Lucknow) Division states that the quarters of the Army Hospital Corps in the fort are too near the cook-houses of the British Infantry and that they should be demolished and new ones built on a site some distance away. The servants' quarters and cook-houses of the married families of the Ordnance Department, are also far too close and one or the other should be moved to a new site.

#### TABLE XXX-continued.

ABSTRACT of the CANTONMENT SANITARY REPORTS of the most UNHEALTHY STATIONS, SANITARY DEFECTS, IMPROVEMENTS, SUGGESTIONS, etc.

The ratios of sickness and mortality will be found in Table XXVIII.

The Brigadier-General Commanding the Brigade remarks that the drainage is very defective owing to want of "fall". Sullage water must be removed by carts and this matter is under consideration by the Lieutenant-General Commanding 8th Division. He concludes by saying that the sanitary arrangements made by the civil authorities during the Magh Mela in February 1906, were very inadequate.

LUCKNOW.—Several large ponds impossible to drain, and too large to fill up without great expense, exist in Cantonments. A nullah, about 180 yards above the water-supply intake in the river is commonly fouled by native excreta. The floor and cubic space are defective in the lines at present occupied by the 8th Rajputs, but the matter is to be brought before the Standing Barrack Committee.

The Cantonment Committee suggest that the local Municipality be approached with a view to extending the intake pipe above the nullah or diverting the exit of the latter to a point below the intake. The Senior Medical Officer of the station notes that he visited the pumping station again on 13th July 1907, and found its condition unchanged.

The General Officer Commanding the Division remarks that at his recent inspection of the Cantonment he found steps had been taken to remedy the defects complained of in sanitation; and that the lines of the 8th Rajputs had been re-sited and that the work of reconstruction was about to be begun.

Dehra Dun.—Rice is largely cultivated in too close proximity to Cantonments. By the acquisition of Garhi village, which is on the road to Birpur, this defect would be mitigated to a great extent. Provision for the purchase of four new filth carts will be made in the Revised Cantonment Budget Estimate for 1906-07. Great difficulty is experienced in carryingout conservancy arrangements in the limited time in which the work can be done. There are eight or nine houses, private property, bordering on Cantonments, which are not under Municipal or Cantonment control, in which no sanitary arrangements have been made but steps have been taken to induce owners to join in the conservancy system obtaining in Cantonments, and the majority of owners have agreed. An expenditure of R1,000 was incurred during the year on the provision of urinals for the 2nd and 9th Gurkha Rifles.

The Cantonment Committee are quite in accord with the remarks made above regarding the purchase of Garhi village and the provision of filth carts for each battalion and for the latrines of bungalows bordering on Cantonments.

The Principal Medical Officer and the Officer Commanding the Garhwal Brigade concur in the foregoing remarks and the Officer Commanding the 7th (Meerut) Division states that the question of the inclusion of Garhi village within Cantonment limits is under con-

Shillong.—Various drains should be made pucca when funds are available and three swamps should be drained. The Principal Medical Officer remarks that the rebuilding or reroofing of some of the barracks occupied by the 8th Gurkha Rifles seems to be urgent as the woodwork in several places was rotten and likely to fall down and that one or two drains in the lines of the 8th Gurkha Rifles should be made

The Officer Commanding the Assam Brigade states that the lines are fairly good, but require verandahs on the west side to keep the rain off the main wall and that the married quarters are not good. He adds that much work has been done in this station in organizing a good regimental sanitary system.

GANGTOK.—The water becomes polluted during the rains as it is not filtered. A sum of R2,150 was expended during the year on repairs to barracks, improvements in the water-supply and on four new minor works. Arrangements should be made for the filtration of the water, especially during the rains, as bowel complaints are then very prevalent.

Lansdowne.—The water-supply after heavy rain gets somewhat contaminated by surface drainage. Overcrowding exists at present in the 1-39th Garbwal Rifles lines and the accommodation is insufficient for 316 men on the present allowance of cubic space, but estimates for providing the required accommodation are now being prepared. The Principal Medical Officer of the Bareilly and Garbwal Brigades recommends the destruction of night-soil in an incinerator as the most suitable form of treating it in a hill station and the Officer Commanding the Garbwal Brigade states that the provision of an incinerator has been under consideration for some time, but was prohibitive owing to the impossibility of transport; he adds that as soon as a new road is open the matter will be reconsidered.

CHUMBI (TIBET).—The accommodation for troops is inadequate, but a requisition for building a suitable barrack room has been sent to the State Engineer, Sikkim, through the Political Officer, Sikkim.

PHARIJONG POST (TIBET).—There is some difficulty in obtaining water in the winter owing to the usual supply being frozen. It has then to be brought in pakkals on ponies from a distance of about one and-a-half miles.

#### SECUNDERABAD DIVISION.

Secunderabad.—The drainage of Cantonments is satisfactory; there are in and near Cantonments numerous tanks surrounding which, in most cases, is a considerable amount of marshy ground. The water-supply is of inferior quality and is liable eccasionally to be deficient in quantity. The Jiddie Mutla tank from which the main supply of water for the town of Secunderabad is obtained is liable to pollution. Drinking water for troops is obtained from wells. It is boiled before use for British troops. The bazaars and villages are generally speaking very insanitary. Night-soil is removed in Crowley carts and is disposed of by trenching; owing to the difficulty of getting a sufficiency of ground for this purpose, the amount of night-soil put into the trenches is excessive. The disposal of dry rubbish presents great difficulties and it cannot be said that it is always effected in a manner unobjectionable on sanitary grounds. The disposal of the Hussain Saugor tank are grossly insanitary. The Hydergooda trenching ground is too near the segregation camp, entrenchment, station hospital and Officers' quarters, 2nd Royal Fusiliers. Moreover it is very objectionable on sanitary grounds that the filth carts on their way from the lines should pass so close to the hospital, entrenchment and camp as for a considerable part of the year the prevailing wind blows from the trenching ground to the places above-mentioned. A sum of R30,610 was expended during the year on additions and alterations to various buildings and improvements to latrines and urinaries generally and cook-houses and drainage.

The Principal Medical Officer of the Division remarks that a scheme is under considerable for the supply of water to the troops. from

The Principal Medical Officer of the Division remarks that a scheme is under consideration for the supply of water to the troops from the Hussain Saugor tanks; but until it is in complete working order, he considers that the present make-shift system for the supply of water should be considerably improved. He adds that steps are being taken by the local authorities to remedy the defects brought to

The Officer Commanding the Secunderabad Infantry Brigade states that for many years past the insanitary state of the Cantonments and its environs has been brought to notice and that efforts are being made to improve matters, but to effect real improvement much money will have to be spent.

BURMA DIVISION.

Nil.

#### TABLE XXXI.

TABLE XXXII.

INFLUENZA by months, stations, groups, and commands.

CHOLERA by months, stations, groups, and commands.

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STATIONS* AND GROUPS.	January.	February.	March.	Aprill.	May.	Jane.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Fort William													1					***								100
Barrackpore		***	100	***		100				3		100	3						-	1	***					1
GROUP IV.—BENGAL AND }			1				***		***	3			+							1						1
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Cawnpore							4	33	23	3	1		60		***	411	***	***	***	1	***	-		***		1
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR.		-					-	33	23	3	-	2	62					-	-	3			-		-	3
Bareilly		1											1						***	***	***			2		2
Dehra Dun	20	13	15										49		***	***				1						1
Meerut					***	-20		***										1	***		***	***	***	***		1
Delhi							***						***	***			***	***	***	110		***	***	***		1
Ambala						***				1			1		***	***	***	***	-		***		2	***		2
Ferozepore . B	6	2	-	1					1	2	3	.3	18					144			1	***				. 1
GROUP VIUPPER SUB-	26	16	15	2		***			1	3	3	3	69	-			***	1	***	1	2		2	2		8
Mardan		1								4.07			2													
Nowshera	***		1	1				***			191		2		1		***				***		***		***	1
Peshawar		2			12	29	46	19	16		2	8	134													-
Edwardesabad				3	13	13	11				***	100	40	-							***				***	
Dera Ismail Khan					27	2	2				***		31			***			***			70				
Hyderabad											7									***		***		2		2
Karachi	4	7	5	1	2	2	1	3	3	8	32	35	103												***	***
GROUP VIINORTH- WESTERN FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJ-	5	10	6	5	54	46	60	22	19	8	3+	43	312	-	1									2		3
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Agra									1	21	19	1					***									
Indore						(						-	43					8				-	-		-	8
GROUP VIII,—SOUTH- EASTERN RAJPUTANA. CENTRAL INDIA, AND GUJARAT.								,	,	21	19	1	43			-		8	1			-				9
Jubbulpore . A					9	5	-						14	-					3							3
Kamptee				**	***			***		***					***					***	1	3				4
Sitabaldi		2					***	***					2	-		***										
Aurangabad				***						***	-			-			4	1	1					-		6
Ahmednagar	1				***	***						1	1	-				***	***	5	-		***	***		5
Bolarum	1	2		***	***		***			***			3	-	***		***		- 44	***	***	1			***	
Belgaum					***		467	***			2	***	3	-		***			1	20	14	***	***	***	***	35
Satara						***				**		*	4	-				1					***		***	
Poons													***	-		1	2		-			***	-			3
Kir cee					***							34	34	-				-	-					-		
Sirut			220	***			***	181		100										4	***					4
GROUP IXDECCAN	1	4		-	9	6					2	39	61	-	-	1	6	2	5	3"	15	4		-		63
		1		2010			-64			2773				1	1	100	1 8	188		1		100		100		43

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STATIONS, GROUPS, AND COMMANDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November,	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October,	November.	December,	TOTAL.
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Bellary · · ·		***	***		***		***	***	***		***			***				***	2	**	***				***	2
Bangalore		***			***					5	7		12	-			***					***				
B Trichinepoly																1		***								,
GROUP XISOUTHERN }									***	5	7		12			1			2							3
																				-						
Shillong · · · ·	***	***	***					***	***	***		2	2		***	***	***						***	***		***
Gyantse · · ·	***		***	***	1		1	2	***			***	4			***					***					***
Killa Drosh	***							***		20	4		33									***	***	***	-	***
Cherat · · ·		***						***	7	3		***	10	***			***		***	***						
Fort Lockhart	***					29	4	101	***				33					***				***				***
Camp Lovedale	-		-			-	***			3	***		3							***				-		
GROUP XIIHILL STA-}	-	-	-			29	5	2	7	35	4	2	85										-			
Marching, India																								4		4
EXTRA INDIA.  (a) In the Indian Command:— Chabbar				-	-		-	5					5						***		***				-	
(5) Not in the Indian Command:-										-																
Shan-hai-Kuan, North China	***									-	***	3	3					***			***		100			
Tongshan " " .	3	1		-			***					10	14											***		***
ARMY OF INDIA .	35	31	22	7	64	St	65	63	52	78	70	103	671		1	2	6	11	8	35	17	4	2	8		94
Northern Command	7	5		5	52	73	53	19	24	35	0	11	304							***	1		2	-		4
WESTERM ,,	4	9	5	1	"	7	1	8	3	8	32	74	163			1	6	10	5	5	6	3		2		38
EASTERN , .	20	14	16	1.			1	36	24	27	20	5	165							5	1			2		9
SECUNDERABAD DIVISION .		2				,				8	9		21			ı			3	20	14					39
BURMA " .												-	-	-					-	1			-	-		

#### TABLE XXXIII.

#### TABLE XXXIV.

ENTERIC FEVER by months, stations, groups, and commands.

SIMPLE CONTINUED FEVER by months, stations, groups, and commands.

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STATIONS* AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL
Port Blair			::						11				=			23	iii	2	5	4	7	28	3	9	17	95
GROUP 1.—BURMA COAST AND BAY ISLANDS														2	4	23	11	2	5	4	7	10	3	9	17	97
Meiktila						=								: 2 4	4	1 2		7	 26	25	8	13	8	771	1	10 35 69
GROUP II.—BURMA INT AND							***	1					1	6	4	3	1	7	26	25	10	13	10	6	3	114
Dibrugarh										***								-						8		8
GROUP III-ASSAM		100		***					-															8		8
Fort William Alipore Barrackpore Buxa GROUP IV.—BENGAL AND ORISSA	11-11-	* : : : :		- 1 - 1 -					1			=	 2 	12	3	4  3 3	1 1 1 3	1		2 : 2 : 4	1 1				11111	23 1 8 5
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GROUP V -GANGETIC PLAIN AND CHUTIA NAGPUR.														2		4	11	10	3	13	1		9	42	8	115
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GROUP VIUPPER SUB-	-		1	1	4	4			1	9	2	5	28	-	1	2	19	S	12	33	68	48	27	23	70	311
Mardan							2	:::::	1 1				" 1 3 2		1		1: ::	13	1 7 17 	7 14	2 10	42	56	:: 43	::::	3 18 197
Edwardesabad Dera Ismail Khan Jatta Fort Zam Multan	1	2 : : : :					- : : : :		- !!!!				5	7	9	4 : : 2	: : : 3	7	1 2	4 :: : 5	4	4- :::	27			56 9 1 1 20
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Jacobahad													=					15		4	:::					16
GROUP VII.—NORTH-) WESTERN FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJ-	3	3	1		2	3	4	1	+	2			23	8	10	8	5	37	30	36	17	48	85	+3		327
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B Erinpura Deoli Agra Jhansi Nowgong Agar Indore Mhow											2	: ! ! ! » ! ! ! !	:: 9 :: 2		1 4		12 :::: 7		1 5	1 1 1 1 1 1 5	4	11 11 11 124	7 1	3		4 21 3 6 14 3 118
GROUP VIII.—SOUTH- EASTERN RAJPUIANA, CENTRAL INDIA AND GUJARAT.			-	1		3	2		,		2	2	12	2	8	5	12	"	8	9	13	29	33	23	22	178

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STATIONS, GROUPS, AND COMMANDS.	January.	Rebruary.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December,	Total.
Saugor					111	2	1		:::				1 2	4 2 ::		3	1 2	411	2 3	7 1	23 2	1 27	2 34	26	4 17	19 145 4
Aurangabad					111			1	2 ::		1	111	4		8 3	 8 10	: 40	::0	1 1 5	1 9	8 22	7 23	5 30	18	7 22	67 192
Secunderabad Belgaum Satara Satara Skirkee Kirkee								1	4	1	3		17 5  2 2	3 :: 3 3	5 4 .: 3 4	7 1 14	95 : 9 :	25 6 : 4 ::	3 7	5 9 5 5	15 4 1 7	4 12 2 2 13	9 4	3 8  5	7 2 8 2	63 4 67 69
GROUP IXDECCAN	1		1		***	2	1	3	7	5	14		34	21	27	45	39	50	34	42	93	91	107	105	69	723
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GROUP XI.—SOUTHERN					-				-			1		21	15	12	2		23	-	-	-	-	-		5
Maymyo	-									4				2			15	47		5	3	3	3	7	6	162
Shillong Gentok Chumbi Almera Naini Tal Lansdowne Dharmsala Bukloh Murree Chitral Killa Drosh Malakand Dargai Chakdara Abbottahad Cherat Fort Lockhart Mir Ali Khel Fort Sandeman Quetta Chaman Moent Abu						1							5		7	5	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7 7 13 2	1	3 1 18 1 1	1 3 10 16 4 6 6 2277 3 3	1 12 14	7 7 3 4 4 3 3 128	333::::::::::::::::::::::::::::::::::::	65	11 12 8 49 5 2 2  66 31 39 2 7 1,220 6
GROUP XIIHILL					2	3	2	1		2	4		17	8	10	26	16	30		115						- 3
Marching India	-									-		1	1	3	5	4	2	5	18	9	12	32	27	54	7	1,483
EXTRA INDIA. (a) In the Indian Command. Dthala								-						***					3	1	***		1			5
(b) Not in the Indian Command.		-													1			4	1		3		5	11	6	31
Shan-hai-Kuan North China Tongshan							=					- :-		=		::	-	=		-			1		-	
ARMY OF INDIA .	7	3	3	4	9	15	9	6	14	22	24	11	127	87	100	145	134	213	244	259	558	870	463	390	250	3,783
NORTHERN COMMAND	-	3	1	1	6	8	5		5	11	6	5	55	11	18	28	26					654	138		136	1, 85
WESTERN	1 2		1	2	2	5	3	3	4	2	6	1	29	15	15	37	35	43	16	45	72	95	99	90	63	053
SECUNDERABAD DIVISION .	-		-	-				,	. 4	7	11	,	24	32	26	31	34	83	37	22	41	34	35	59	35	345
BURMA ,	-		-				1							10	8	26	12	9	31	30	17	25	14	16	24	222
ANY AND STREET OF STREET			100							8	1			1510			711	-	mil		1	11.1		-	· ·	

#### TABLE XXXV.

TABLE XXXVI.

INTERMITTENT FEVER by months, stations, groups, and commands.

REMITTENT FEVER by months, stations, groups, and commands.

				con	ıman					1000							-	oups		-	_	-				
		Арм	188101	NS FRO	OM IN	TERM	ITTEN	T FE	VER I	N EAC	н мо	NTH.			A	DMI	1510N	S FR	MCH I	REM	TH.	NT I	Fev	ER I	N	
STATIONS* AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April	May.	June.	July.	August.	September.	October.	No vember.	December.	TOTAL.
Port Blair Rangoon	2	2	15	7	2	18	24	34	12	10	9	5 4	140					-				::				
GROUP L.—BURMA COAST AND BAY ISLANDS.	3	2	15	7	3	18	24	34	12	10	9	9	146						1						-	
Meiktila Fort Dufferin Bhamo	1 12	1 6 3	4 6 1	3 4 3	3 1 1	1 4 15	7 15 37	18 86	40 114	 30 83	1 20 48	20 43	21 176 434	:-:	111	111	111		1111					1	111	3
GROUP II.—BURMA	13	10	11	10	5	20	59	104	154	113	69	63	631	1		-		1						1	-	3
Manipur	10	3	3	2	7 1 2	3	37 1 4	17	15	62	30	35	224 3 62	111	:::						===					::"
GROUP III.—Assam	11	4	3	3	10	3	42	24	26	79	46	38	289			-			1		-			-		2
Fort William Alipore	1 20 2 2	2 9 3	-567	6 4 3 1	1 2 3 7	7 10 1	4 35 5 4	10 39 8 1	17 50 12 5	22 18 32 1	13 82 25 2	7 40 13 3	88 312 123 28							1111		11111	1	2	2	164
GROUP IV.—BEN-	25	14	19	14	13	18	48	58	84	73	122	63	551	2									2	+	2	**
Benares Allahabad	1 5 14 3 30 5	 1 5 1 8 4	 4 5 1 12 4 	7721755	10 8 1 11 12 2	5 5 4 4 10 3	5 12 8 15 9	5 12 10 5 10 12 15	12 3 18 7 17 34 10	14 4 96 15 45 52 2	9 1 82 11 17 20	9 4 20 3 4 15 	55 68 278 68 184 184 38	7 2								il and i	111111111111111111111111111111111111111			- : - :30
GROUP VGAN- GETIC PLAIN AND CHUTIA NAGPUR.	5.8	19	26	38	44	31	66	69	101	228	140	55	875	9	1	2		2			1	4	1		-	21
Bareilly A Bareilly A Roorkee Dehra Dun Mocrut Delhi Ambala	1 24 8 5 4	1 26 19 3	3 20 4 9	4 37 9 11	6 3 54 12 28 	"6 134 7 9	3 6 220 6 30	7 8 117 8 110 8	20 52 211 25 189 12	31 32 197 43 184 78	22 15 203 25 146 80	8 7 52 6 19 15	115 129 1,295 173 753 197	1111		2 2	-	2 1		:: 2 - :: ::		2 ::::::	: : : :	11-11		2 1 12 8 
Juliundur Ferozepore Labore Cantonment . Amritsar Sialhot Jhelum . Rawalpindi . Attock	21 9 19 13 25	8 5 1 4 8 3 2	8 3 916 2 2	5 4 3  2 16 4	10  9  12 12 15 1	8  3 19 21 4	3 1  18 23 11	7 1 15 32 2 3	26 11 24 2 10 97 4	152 48 111 69 144 57	71 42 58  90 272 83 11	8 13 12 2 52 120 56 6	327 137 238 8 313 786 241 32	3 1	1				7 3 1	1 3 ::	1 2 2 3	43	32    -    -	2		13 6 4 1 9 25 17 1
GROUP VI.—UPPER } SUP-HIMALAYA, }	130	80	76	96	162	213	321	319	695	1,148	1,128	376	4.744	8	4	8	3	17	16	8	8	9	10	4	6	101

			Арм	15510	NS FR	on In	TERM	ITTEN	T FE	VER I	N EAC	н мо	NTH.		ADM	11551	ONS I	FROM	RE	HITTI	ENT	Fev	ER I	N E	АСН	мо	NTE
STATIONS AND GROUPS.		January.	February.	March.	April.	May.	June,	July.	August.	September.	October,	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Torar.
rdan		4 24 114 1 1 222 9 13 3 89 2 111 3 4	1 16 4 6 32 1 1 8	3 12 2 22 4 1 18  2 1	2 14 11 3 7 1 6 14 	25 63 7 14 8 3 66  4 1 23	3 29 10 1 29 5 4 49  1	20 6 5 28 1 6 46  4	4 27 14 3 44 1 7 40 2 8 8	4 71 74 4 107 5 27 116  1	78 256 289 7 243 13 250 425  39 1	11 590 378 12 466 23 450 1,033  26 5		114 1,244 1,118 51 1,271 95 1,249 2,889 6 108 27 154	11111111111				3	5	3	3 3	3 1	18 2	-	10	77
dola	:	85	22	14	2	2 4	-;	3	-;	91	22 4	7 3	7 3	54 138				111			=	2 :-	3				
C obabad . derabad . achi .		2 4	2	2	3 3 2	3 1	=		3 2	19 1	94 5 30	53 58 54	59 69 12	229 146 110	:: :6				111	111	111	:::			1		
OUP VII.— CONTH-WEST- RN FRONTIER, NDUS VALLEY, ND NORTH- VESTERN RAJ- UTANA.	28	80	172	85	79	225	142	124	164	468	1,769	3.204	2,342	9,003	9	4		3	7	7		9		26	41	12	
A si		14 44 09	1 5 8 17 28	1 2 7 20 38	 8 16 22	2 5 7 26 12	1 4 3 15 16	6 6 12 12 21	6 9 29 11 16	26 8 38 27 14	56 15 147  33	43 14 261 7 55	30 25 135 9 49	172 93 669 204 413		100000			3	1000		1 12		11113	-		
B darpore abwa . crwara tra . dgarh . inpura inpura emuch oòli . awar . ssirabad . mer mbhar . inpur gra . ansi . owgong oona . gar . thore dore . bow		3 3 3 3 9 7 7 1 6 6 1 7	1 2	3 3 3 3 1 1 5 1 3 1 3 1 3 1 3 1 3 1 3 1	7	 1 1  4 4 1  1 1 2 3 3  1 1 1 2 4 4 1 1 1 1 2 4 4 1 1 2 4 1 1 2 4 4 1 1 2 4 4 1 2 4 4 4 1 2 4 4 4 4	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	1	11 1 1 4 46 100 11 1 9 9 4 4 12	7 5 25 16 1 2 23 236 1 2 3 3 6 6 2 4 4 5 5 7	10 26 20 22	3 1 3 11  25 11 16  65 29  92 622 8 8 13 3 9 9 43  23	 4 17 9 17 29 7 7 3 94 223 6 1 1 4 2 6 6 7	46 1 25 50 1 126 33 46 200 115 1 9 207 1,743 68 44 44 48 188 21 187				2				2	1 1		1111-1111111111111111111111111111111111		
ROUF VIIL- SOUTH-EASTER RAJPUTANA, CENTRAL INDIA AND GUJARAT.	N .	249	104	m	85	104	74	118	186	512	1,054	1,35.	755	4,706	3	2	3	5	4	2		6	10	7	5	3	

#### TABLE XXXV—continued.

TABLE XXXVI—continued.

INTERMITTENT FEVER by months, stations, groups, and commands.

REMITTENT FEVER by months, stations, groups, and commands.

DEPOS SONES OF SELECTION	W 2 'V	Армі	SSION	S FRO	m In		TTEN	r Fev	ER IN	EAC	H NO	NTH.	1	ADM	41881¢	ONS			MITT.					СН	MON	TH.
STATIONS AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Тотас.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October,	November.	December.	Тотак-
Saugot	20 5 3 3	13 3 2 1	7 4 3 2	20  5 2	7 2 5 1	52221	7 2 2 1	36	180 3 18 4	87 4 130 8 4	106 65 10 7	66	554 10 272 58 27	3	111111		11111	11111		11111	3		11111	1111: 2	11111	
B Aurangabad Ahmednagar Solarum Seunderabad Belgaum Satara Poona Kirkee Sirur	26 8 1 19 18  9 3 4	18 14 10 6 10	9  12 16 7 2 13	6 6 1 12 10 3 2 5	9 5 8 2 1 4 9 1	4 :: 7 3 :: 3 4 4	10 1 8 9 11 	14 5 3 9 15 1 2 6 5	11 2 2 35 5 2 6 10	26 1 9 27 20  9 25 3	24 4 7 15 24  3 19	21 11 31 72 3 16 20	178 32 34 197 204 14 58 131 56			111111111111111111111111111111111111111	3	3	3		1 7	1	201	10121		3 1 9 2 1 28 1
GROUP IX -DECCAN	119	78	76	73	54	37	60	108	278	3.53	310	279	1,825	6.	. 1	12	3	3	4	1	6	8	7	3	1	55
Bombay	15 7 2	9 2 3	14 6 5	9 1 6	5 2 6	11 3 3 	16 6 3	20 2 1	21 1	70 37 	54 78 	15 27	261 172 29 3			1111				11111		1111		DOM:		
GROUP XWEST-	24	14	26	16	13	17	25	25	22	107	133	43	465										77		1	2
Bellary	4 8	4 5	1 10	1 79	180	206	4 57	5 21	10 14	14 16	16 21	12 20	71 637						in			2		112		3 3
Trichinopoly					-			=					1 2				1111			1111						=-
GROUP XI SOUTHERN INDIA-	12	9	11	80	181	206	62	26	24	30	38	32	711						2			2		1		,
Maymyo Kohima Shillong Guntok Chumbi Pharijong Gyantse Almora Naini Tal Lansdowne Simla Dharmsala Bakloh Khyragully Baragully Kalabagh Chitral Killa Drosh Malakand Dargai Chakdara Abbotabad Cherat Fort Lockhart Hangu	222 1 21 21 21 21 22 22 22 22 23 3 1 220 23 3 25 25 3 3 25 25 25 25 25 25 25 25 25 25 25 25 25	77 27 17 17 17 17 17 17 17 17 17 17 17 17 17	111 2 14 4 15 5 1 1 1 1 1 2 2 2 1 1 1 3 1 1 3 3 1 1	8 8 15 9 9 6 8 2 2 1 1	3 t t 111 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1	2 1 14 1 1 22 1 20 21 2 2 5 3 3 4 8 8 1 1 1 4 4	6 3 14	2 26 18 19 19 19 19 19 19 19 19 19 19 19 19 19	8 20 2 2 3 1 27 177 353 3 7 1 8 65 50 2 81 28 5	10 4 21	18 2 30	15 37 37 3 1 1 5 40 19 42  18 8 8 8 5 2277	11.5 18 23.1 9 5 8 47 1 263 5 153 718 10 3 16 20 69 29 163 200 1,200 1,200 1,200 1,200 45	3 1 1 2 2	2	3		3	4 3 3 3	111111111111111111111111111111111111111	4	3	151111111111111111111111111111111111111			45 " " " " " " " " " " " " " " " " " " "

		ADMI	SSION	S FRO	n Int	ERMI	TTEN	T FEV	ER I	e EAC	н мо	NIH.	1	ADM	18810	Ns F	ROM	REM	ITTE	NT I	Feve	R D	6 BA	сн	моз	TH.
STATIONS, GROUPS, AND COMMANDS.	January.	February.	March.	April.	May.	Jene.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December,	Toyat.
Mir Ali Khel . Fort Sandeman Hindubagh Musa Khel Killa Saifella . Murgha . Loralai . Gumbaz . Quetta . Shelabagh . Spinwana . Chaman . Mount Abu . Ootacamund . Camp Lovedale ., Yellenhalli .	1 7 2 12 28 2 2	6	5 16	8  4 36 2 1	1 S S 1 9 1 50 2 1 1	7 20 10 3 25 1 64 1 3 2	17 9 6 6 30 48 2 1 3	11 21 3 4 3 8 104 5 162 2 5 7  3	31 42 6 1 16 3 217 2 391 6 3 1	15 72 5 1 4 1 47  217 1 7	12 56 2  37 2 66 1  2 2	7 21 2 9 9 3 1	109 270 20 30 27 19 505 17 17 11 20 10 6 2				1			6	5		+   +   +   +   +   +   +   +   +   +		2	7 7 21
GROUP XIIHILL STATIONS	172	104	128	114	173	248	296	587	1,127	1,043	910	709	5,601	12	5	9	5	12	12	17	29	9	18 1	11	7	146
Marching, India .	75	25	12	14	19	35	52	38	187	444	452	373	1,726	5	2				4	5	7	19	25	12	6	85
EXTRA INDIA. (a) In the Indian Command:— Chabbar Jask Muscat Aden Dthala Suleik Nobat Dakin Khormaksar Perim	20 5 4 24 21	 1 7 2 2 31 8	1 3 16 5 3 22 5	1 17 7 9 19 3 	2 1 26 38 21 3	3 3 26 7 5 13	2  1 12 20 1 1	6 21 4	14 :: 1 4 54 13 4 :: ::	 2 1 11 198 42 11	15  1 47 149 11 7 5	6  93 39 3 3 4	45 12 5 291 530 105 156 33 2			111111111	-								11111111	3
(b) Not in the Indian Command: Port Louis (Mauri- tius) Colombo (Ceylon) Singapore Tien-tsin Lutai Shan-hai-Kuan Tongshan	1	110 1 1	160  7   2	241  8  2 2	165	72	74 5 	3	3	7 2	7  5  4	7 2 1 1	957 7 33  6 8 10												-	
ARMY OF INDIA .	1,331	740	823	938	1,242	1,193	1,404	1,803	3.797	6,720	8,166	5.316	33.478	55	20	37	23	48	50	45	67	72	96	82	38	613
NORTHERN COM-	348	155	152	134	329	269	276	422	976	5 2,91.	4 4.374	2,995	13,34	16	11	8	8	24	25	22	19	17	34	43	18	245
Western Com-	200	275	296	269	311	312	349	684	1,600	3 2,23.	3 2,260	1,34	10,514	17	2	17	12	9	6	12	35	21	13	6	5	155
EASTERN COM-	171	122	126	1.42	:03	247	480	44	77-	92.	4 901	429	4,96	15		8		8	11	5		8	6	12	3	79
SECUNDERABAL Division .	38	31	31	101	197	218	7	7 4	6	6 6	8 61	7.	1,000		2	1.			2				3	3		17
BURMA DIVISION	. 38	19	37	25		40	8	9 14	3 17.	4 13	3 9	5 8	89	2 2	2	3	1	6	2	-	4	1	15	5 6	5	49

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# TABLE XXXVII.

PNEUMONIA by months, stations, groups, and commands.

#### TABLE XXXVIII.

DYSENTERY by months, stations, groups, and commands.

-		60	o mu ma	ands							-				_				0	0 m m	and	5.				_
		Ai	MISS	SIONS	FRO	м Pa	NEUM	ONL	IN	EACH	MO	NTH.			-	DMI	88102	S FR	om I	Dyse	NTER	Y IN	EAC	H MO	NTH	
STATIONS * AND GROUPS.	Janeary.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Port Blair										2			4						3				1			1 6
GROUP 1.—BURMA COAST						1			-	2			4						3	-	1	1	2			,
Meiktila		===								1 1		2	1 4 1		111	1 2	5		1	3 5	1 9	6	5	la.	4	2 5 37
GROUP II,— BURMA INLAND		-	-			۲	-			2	-	2	6	-	-	3	5	-		8	10	6	5	2	•	*
Manipur				111		:::						2 :::	6			. : : :	::	5	3 1	1 2 1	2 1 1	2 :: :	1 2 12	2 :: 1	4:-	20 6 17
GROUP III.—ASSAM							1	1		1	1	2	7	-			-	5	5	4	4	2	15	3	5	43
Fort William Alipore Barrackpore Buxa	1			1111					1111				6 2 1	440:	2	4	: 4 2 ::	6	1 1 2	2 33 ::		321	- 44:	6 1	400 :	19 33 27
GROUP IV.—BENGAL AND ORISSA	. 3	1	1				1					2	10	11	3	4	6	9	4	8	4	6	9	7	8	79
B Dinapore Benares → Allahabad Fyrabad Lucknow Cawnpore Fatebgarh	3	1 2 2				2 ::					3		1 1 7 4 20 10		1 3	3 1 4 2	7 2 2 4	1 2 1 3 1	:::::::::::::::::::::::::::::::::::::::	2 1 3 1	18 4 7 1 6 2	4 :: 2 38 5 :	3 7 1 9 14	10 111 7	1 5 1 2 4	29 12 47 12 55 50 2
GROUP V.—GANGETIC PLAN AND CHUTIA NAGPUR	7	5	5	2		4	2			6	3	5	43	14	5	11	15	9	6	7	38	24	35	30	13	207
Barcilly Roorkee Dehra Dun Meerut Delhi Ambala	2 2 6 3	8	1.11.1	1 :: 2 1 ::				1 1		 1 1 2		1 1 2 5	6 4 14 17 11 9	1			1 11  5 	1 1 6 7 2 3	 7 1 2 2		4 3 8	9 7 6 18 4	6 1 13 15 16	5 5 2 9 15 11	1 3 2 2 3	24 11 45 44 69 43
Jallundur Ferozepore Lahore Cantonment Amritsar Sialkot Jhelum Rawalnindi	. 3 . 7 . 8 . 8 . 8	6 1 4	3 3 6 5 1	- 1 - 2 	2 3 3 2	2			2	2 2 1	3 2 1 8 1	2 1 3  4 8 4 	20 12 25 1 23 48 24	2 2 6 : : 3 6 :	2	7 2 1 1	6 2 6 2 4 2	8 4 4 1 11 2	3 8 2 11 1	4 1 7 1	5 9 5	3 5 6 7 3	7 18 12  7 7 4	9 7 10 4 10 18 12	6 2 5  5 22 12	58 39 64 6 35 100 48 3
GROUP VIUPPER SUB- HIMALAYA	48	1	23	19	10	7	3	3	2	9	20	32	214	24	6	14	40	50	38	20	37	70	108	117	65	539

1			A	DWIS	SION	S FR	OM	PNEU	MON	II A II	N EA	сн м	MONT	н.	I	A	MISS	HONE	FRO	OM D	YSE	NTER	YIN	RAC	н м	онтн	
STATIONS AND G	ROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Mardan		3 2 6 10	2 2 4 2 6 2 1 2	3 5	6	1	1			1 1	3	1 4 4 1 3 3 2	3 6 6 6 8 1 1 4 4	10 25 20 1 40 1 17 26 1 2 5	6 5 1 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	34	1 2 4 2	2 14 13 1 6 	::7 15 16 2 4 10 ::1 8 :::	7 14 3 2 1 3 6 1	7 9 3 2 2	3 14 11 3 4 3 8 11 	77 12 4 15 12 14 15 12	6 23 22 3 19 2 8 8 13 8	18 42 2 27 2 2 31 41 1 2 2 2 8	27 52 3 13 15 25 2 2 2	12 152 199 25 100 137 143 5 11 5 38
B landola	: :		2	-		ï							- :	2 14	2 12	<sub>7</sub>	ii	2						3	1	4	7 37
C Jacobabad Hyderabad Karachi	: :		1						-::-			1 4	4	7 4 14	1 3	2	111	1 1	2 2			2 2 4	2	5 2 5	5 2 4	6 2 1	20 15 25
GROUP VII.—NW. TIER, INDUS V AND NORTH-W RAJPUTANA	FRON- ALLEY, ESTERN	43	24	34	9	7	5		3	2	7	23	35	192	50	29	25	46	69	38	31	70	74	126	187	200	945
A Shuj Rajkot Nesa thmedabad Saroda		3 1	4 2 1	3 1 2						11111		::4::	6	2 6 18 4 5	 1 3 3	:::3:	 1 1 2	···	4	2	2 5	4 2 9	2 2 3	1 2	1 1	7	5 19 16 10 17
B  irdarpore habwa therwara dalpur rinpura veemuch leoli asirabad sjmer aipur kgra hansi kowgong loona sgar sehore adore dhow		2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		3 1 1 1 2 1 1 1 1 1 1 1 1		1						1 2 2 4 4	2 2 2 2 2 3 4 7 7 1 1 2	3 1 15 1 6 5 3 7 7 2 12 18 8 1  5		15	3 1 1 2 2 2 2 3 3	2 1 2	1 13 1	1 2 3	771	2 1 2 5 44 10 5 4 3	2 4 3 3 5 2 3 3 3 3 3 3 4 4	3 1 10 21 1 2 2 1 1 2 2 1 1 1 2 2 1 1	3 16 43 6	3 3 5 5 14 34 1 1 1 1 1	15 12 10 20 5 2 45 264 33 2 11 23 10 15
GROUP VIII.—SOUT ERN RAJPUTANA, C JNDIA, AND GUJAS	ENTRAL	14	26	17	6	5	4		2	3	6	13	36	134	48	22	40	29	29	10	24	91	53	47	79	68	539
Saugor		2 7	 1	3	2 !!!!	7		1 11 1	1	-		2 5	2 2	18  22 4 	1 2 1	4	8	18	5	13	8	2 17 6	1 1 4 2 1	7 1	1 18 2 1	3	11 1 115 44 5

#### TABLE XXXVII -continued.

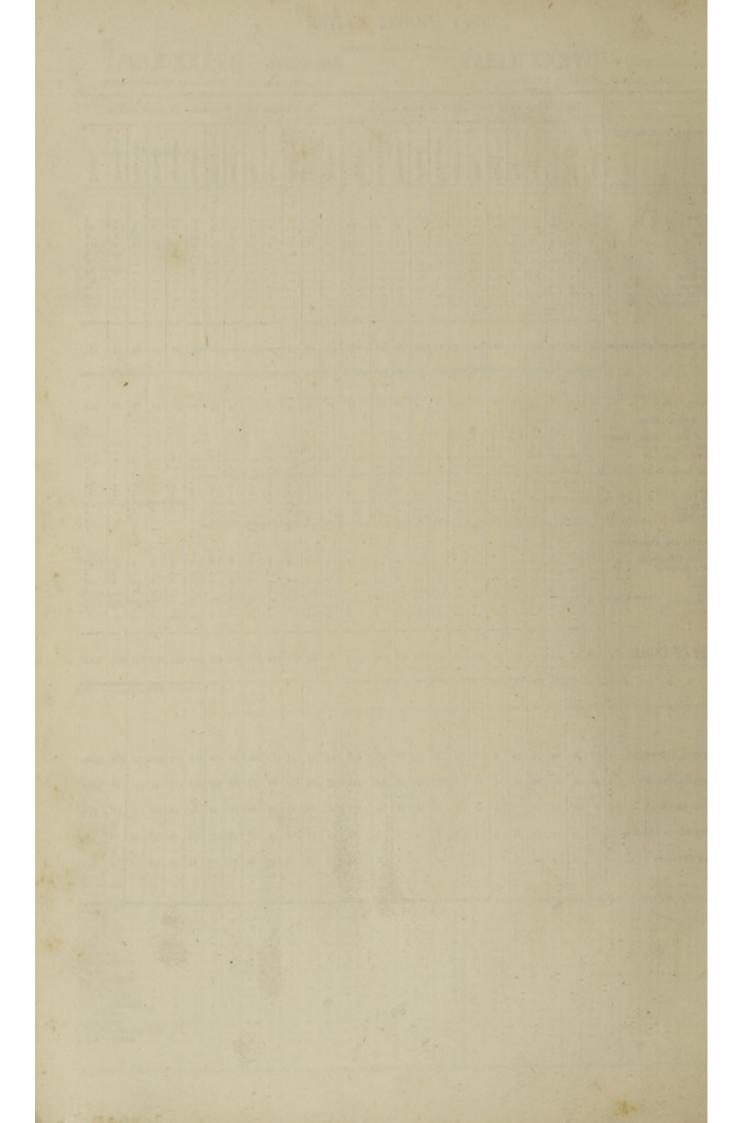
# TABLE XXXVIII—continued.

PNEUMONIA by months, stations, groups, and commands.

DYSENTERY by months, stations, groups, and commands.

		AD	MISS	IONS	FRO	м Ра	NEUM	IONL	A IN	EACI	н мо	NTH.	-		Abs	41551	ONS	FROM	Dy	SENT	KRY	IN E	ACH	MON	TH.	
STATIONS AND GROUPS,	January.	February.	March.	April.	May.	June.	July.	August.	September,	October.	November,	December.	TOTAL,	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
B Aurangabad	2 2 3 2 1 1	1 2 2	1   3   1   52			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 :::	2 1 1	1 2	3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7 6 1	17 5 12 13 17 1 14 8	1 8 20 2 1 1	2 2 9 14 1 1 2	4 2 4 9 2 :- :: ::	3 4 : 3 : : :	2 : 4 4 9 : 3 : :	16721231	8 1 27 52 11 18 7	3 3 26 29 8 1 11 6	2 1 10 50 4  3 1	3 23 5 :: : 2	3 :: :: :: 6	4 : 342 : 43-	29 12 101 218 50 3 48 16 28
GROUP IXDECCAN .	21	7	17	8	11	4	9	8	4	12	12	19	132	37	36	30	29	30	38	142	113	82	45	34	35	651
Bombay		2 1		::-:							2 ::::		5 4 1	6	21 2 3	9 :::	3 1	3 3 :: 1	5 7 1	6 21	5 15 4			4 3	45 4 3	106 60 13 1
GROUP X.—WESTERN COAST		3		,			1	1		1	2	1	10	6	26	9	6	7	13	27.	24	1	2	7	52	180
Bellary Bangalore		1 2	1 2	1 2		2	3	-:		2	1		4 19	3	3 4	1 2			: 24	54	33	1 16	1 8	8	3	9 160
Trichinopoly St. Thomas Mount Madras				2					***			::	2 1	2 2	ï		ï	 I		=======================================		111			1	455
GROUP XI.—SOUTHERN INDIA	1	3	3	5	1	2	3			2	2	4	26	7	8	3	2	5	24	54	36	17	11	8	8	183
Maymy o Kohima, Shillong Guntok Chumbi Phanjong Gyantse Almora Naini Tal Lansdowne Simla Jutogh Dharmsala Bakloh Khyragully Baragully Chitral Killa Drosh Malakand Dargai Chakdara Abbottabad Cherat Fort Lockhart Hangu Mir Ali Khel Fort Sandeman Hindubagh Musa Khel Khan Mohamed Kot Killa Saifulla	3 3 1 1 1 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1	2	1	3 4 4 1 1 1 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1	1	3 3	111111111111111111111111111111111111111	5	5	5	1		5  13  33  3  3  20 5  7 91  6 2 2 2 9	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 1	4	20	10	31 2 1 1 2 2 1 1	8 1 7 1	3	3	321 77 34 3821 72 558	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2 1 1 5 1 3 3 1 1 1 3 3 1 1 1	71 6 29 2 2 15 1 4 4 120 2 2 2 13 13 28 30 6 10 22 2 1 3

		Ap	MISS	ions	FRO	м Р	NEU	MONI	A IN	EAC	H M	ONIE	1.	1	AD	MISS	ions	FRO	м D	YSEN	TERV	IN	EACI	и мо	N FH.	_
Stations, Groups, and Commands.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December,	TOTAL.	January.	February.	March.	April.	May.	June,	July.	August.	September.	October.	November.	December.	TOTAL.
Murgha Loralai Gambaz Quetta Peshin Shelabagh Chamae Mount Abu Ootacamund Camp Lovedale , Yellenhalli	2 1	2 1 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	2	6		3			4	7	3 :::::::::::::::::::::::::::::::::::::	3	1 10 1 32  1 2 1 7 3			111111111111111111111111111111111111111	3	1 2 2	7 2	4 - 4 - 1 - 1 - 1 - 1 - 1	12	6 16	6 46	3 12 1 	1 2 1	1 28 6 117 2 1 14  6
GROUP XII,—HILL STATIONS	25	41	30	29	16	11	11	7	15	15	36	51	287	36	26	17	42	69	90	72	73	76	134	85	33	753
Marching, India Extra India.	12	8	1	4	2	1				4	8	29	70	20	9	4	+	15	34	39	21	21	57	67	56	347
(a) In the Indian Command:— Chabbar   Jask	2 1			 I 	1				1		1		::::52	3	5 1	4 2 1 1 5	6 3		2 1	5 2 3	5 1	1 4 2 1	3 : : : : : : : : : : : : : : : : : : :	10 4 1	4 3	4 1 50 25 4 9
tô! Not in the Indian Com- mand:— Port Louis (Mauritius) Colombo (Ceylon) Singapore Tien-tsin Lutai Shan-hai-Kuan Tongshan								2 : : : : :	4		-		7 1 3	4 :: 2 :: : : : : : : : : : : : : : : :	2	3 : 2 : : : : : : : : : : : : : : : : :	7	2 2	6 1 2	8	2	5  2 	6	3	:54::1:	42 5 22 4 3 3
ARMY OF INDIA .	182	158	134	84	54	39	3.2	28	-33	69	123	219	1,155	264	179	177	242	305	317	458	534	+47	610	649	566	4,748
	-			-	47															447						
NORTHERN COMMMAND .	82	70	64	38	23	9	6	9	8	17	52	98	476	72	35	33	75	121	88	72	111	123	239	291	260	1,520
	49	47		20	18	11		5		29	36		344		79		-			147			100			1,399
SECUNDERABAD DIVISION .	7	9	9	10	4	4	3	2	2		4	5	63							133				13		533
BURMA DIVISION		2	3		2	1				4	1	2	15	2	5	7	25	10	15	16	14	10	10	4	+	122
														-								-	1			-



III-PRISONERS, 1906.

#### TABLE K.

#### TAILS by ADMINISTRATIONS.

			JAILS by ADMINISTR	RATION	IS.			
Jails.	Height above the sea- level in feet.	Authority for height.+	JAILS,	Height above the sea- level in feet.	Authority for height.†	JAILS.	Height above the sea- level in feet.	Authority for height.†
AIDAMANS :— Port Blair Convict Settlement BURMA :— Mergui Tavoy Moulmein Shwegyin Toungeo	85 14 69 288 128	S. G. S. G.	BENGAL:—contd. Arrah (Shahabad) Chapra (Saran) Buxar, Central Sambalpur Darjeeling UNITED PROVINCES OF AGRA	191 181 204 500 7,168	S. G. M. D. S. G.	NW. F. PROVINCE:— Peshawar Kohat . Bannu Dera Ismail Khan Abbottabad .	1,165 1,768 1,279 571 4,166	S. G.
Rangoon, Central, Europeans Rangoon, Central, Europeans Maubin Myaungmya Bassein, Central Insein Henzada	40 10 34	s. G.	AND OUDH(a):— Korantadih (Ballia) Ghazipur Azamgarh Kasia Gorakhpur Basti Fyzabad	227 256  255 292 336	s. G. " s. G.	BALUCHISTAN:- Quetta	5,511	S. G.
Myanaung Sandoway Kyaukpyu Akyab Paungde Prome Thayetmyo, Central	44 74  32  149 145	s. G. s. G.	Sultanpur Rai Bareli Partabgarh Jannpur Benares, Central , District	305 351 317 263 256 283	I. B. S. G.	Shikarpur (b) Sind Gang Hyderabad, Central Kurrachee Rajkot Ahmedabad, Central Dhulia	194  134 28 414 170 842	S. G. 1. B. S. G.
Taungdwingyi Magwe Yamethin Meiktila Pagan Myingyan, Central Mandalay	492 653 860  243 240	s. G. s. G.	Mirzapur Allahabad, Central District Karwi Banda Fatehpur Hamirpur Orai (Jalaun)	298  415 373 367	s. G.	Yerrowda, Central (Poona) Bijapur Deccan Gang Dharwar Thana Bombay, Common House of Correction	1,951 1,998 2,385 24 } 20	1. B. S. G. S. G.
Monywa Shwebo Mogok Bhamo Katha Kindat	250 600  351 329 361	м."о. s."g. "	Cawnpore Unao Lucknow, Central District Barabanki Gonda Bahraich	417 412 400 378  398	s. G. " s. G.	Ratnagiri	110 12 26	M. D. S. G.
Eastern Bengal and Assam — Cachar (Silchar) Sibagar Dibrugarh Tezpur Gauhati	104 318 342 292 134	M. D. S. G.	Sitaper Hardoi Etawah Mainpuri Etah Fatehgarh, Central	471 449 462 498 511 550 444	I. B.	CENTRAL PROVINCES; — Damoh Saugor Iubbulpore, Central	1,236 1,753 1,306	S. G.
Sylhet Mymensingh Dacca, Central Tippera (Comilla) Chittagong Noakhali Backergunge (Barisal)	257 59 20 36 87 43 13	M. D. M. D. "" "" S. G.	Shahjahanpur Pilibhit Bareilly, Central ", District Budaoo Aligarh Bulandshahr	\$07 614 560 544 610 727	S. G.	Marsinghpur Mandla Bilaspur Raipur, Central Balaghat (Burha) Seoni Chhindwara	1,305 1,487 887 968  2,043 2,230 1,030	I. B. S. G. " S. G.
Faridpur Pubna Rajshahi, Central (Rampur Boalia) Bogra Malda Dinajpur Rangpur	70 61 72 116 108	s. G. M. D. s. G.	Moradabad Bijnor Dehra Dun Saharanpur Muzaffarnagar Meerut Muttra Agra, Central	655 772 2,229 903 790 739 576	30 29 30 30 30 30 30	Nimar (Khandwa) Betul Nagpur, Central Bhandara Wardha Chanda Yeotmal	1,042 2,189 1,025 851 935 658 1,476	I. B. S. G.
Bengal:- Khulna Jessore	280 4,987	", M. D.	, District   Jhansi	\$ 554 860  5,494 6,400	s. G. M. D.	Amraoti, Central	1,194 920 2,132	м."р.
Baraset Presidency, Central, Europeans Alipore Hooghly Burdwan Krishnagar (Nadia) Murshidabad (Berhampore)	} 17 21 34 97 32 67	S. G. I. B. S. G. " M. D.	PUNJAB : Delhi . Rohtak Hissar Karnal Ambala	715 712 689 809 902 806 1,058	S. G. 1. B. S. G.	Madras:— Mangalore Cannanore, Central	42 47 1,453	S. G.
Purneah Naya Dumka Suri (Birbhum) Bankura Midnapore, Central Balasore Cuttack Puri	121 489  208 149 59 74	S. G. M. D. M. D. S. G.	Jullundur Ferozepore Amritsar Labore, Central District Female Gurdaspur	900 645 756 706	"	Bellary Salem, Coimbatore, Palamcottah Madura Trichinopoly, Central Tanjore Cuddalore	1,433 919 1,433 129 438 274 193	
Angul . Chaibassa'(Singhbhum) Purulia (Manbhum) Ranchi (Lohardaga) Palamau (Daltongunge) Hazaribagh, Central Gaya	745 2,164  1,997 375	S. G. S. G. S. G. M. D.	Gujranwala Sialkot Gujrat Jhelum Rawalpindi Shahpur Mianwali Lyallpur	829  827 1,707 644 655	S. G. S. G. I. B.	Vellore, Central Madras, Civil Penitentiary, Central Nellore Rajhamundry, Central Vizagapatam Berhampur	} 15 57 112 14 79	M. D. S. G.
Bhagalpur, Central Monghyr Darbhanga Champarun (Motihari) Muzaffarpur Patna (Bankipore)	147 148 167 217 179 177	S. G.	Jhang	600 402 395 7,230	s. G.	Russellkonda	3,803	S. G.

<sup>•</sup> These are not the exact heights of the jails themselves above sea-level, but usually those of the survey-marks or of the mercury-surface in baromete cisterns in the stations in which the jails are situated.

+ S. G. = Surveyor-General of India; I. B. = Intelligence Branch of the Division of the Chief of the Staff; M. D. = Meteorological Department;

M. O. = Medical Officers in charge of Station Hospitals in their Sanitary Reports.

(a) Late North-Western Provinces and Oudh.

(b) Prisoners transferred to Sukkur on 28th November 1906.

#### TABLE XL.

#### RATIOS of ADMINISTRATIONS.

The ratios of admissions and deaths to strength are taken from Table XLII.

The actuals will be found in Table XLIII.

	LION III	1 1000	, comp	RATIOS	PER 1,0	00 OF TH	IE AVER	GE STRE	NOTH.			
	Burma.	Eastern Bengal and Assam,	Bengal.	United Pro- vinces.	Punjab.	NW.F. Pro- vince.	Bombay.	Central Provin- ces.	Madras.	India.*	Anda- mans.	India.†
1 -AVERAGE ANNUAL STRENGTH .	13,369	6,871	14,857	24,872	11,744	1,300	7,925	3,329	10,428	95,394	14,688	110,082
II.—CONSTANTLY-SICK-RATE OF EACH		-										
January	14'6	53'5	34°3 33°8	24'0	21.2	29'9	24'4 25'2	17'1	17'1	25'0 23'6	58.8	28'9
March	15.2	43'8 37'6	35'9	22'7	20*5	19'5	26'3	16.4	14'4	23.8	62'3	30'4
May	14.7	36.4	376	25'1	24'1	35.0	27'4	15'0	16'5	25'5	66°2	31,0
June : : : :	15.8	36'5	34'8	25'1	25.5 52.0	42°7 38°5	31.6	22'0	16'3	25.2 22.2	82'2	34'5
August	17.5	40'6	43'5	31'8	29'3	34'6	34'5	27.2	28'0	30.4	78'0	36.0
October	15'9	52°9 49°3	38'9	30'6	30.8	47'9 60'5	33'7	1975	18.3	30'8	76'5	35'4
December OF THE YEAR .	14'6	48'3	38.3	26'6	32.1	30"2	38.8	17'1	18'6	29'0	68°8	34'3
LOCK-UPS		40'1	36.4		26.1	35'3	28.0	18'4	18.6	26.6		3272
I ADMISSION-RATE OF THE YEAR-						-			1 140			
Influenza	3'3	14'4	2.8	11'1	4	29'2	5.7	14'4	7.0	5'9	56.5	8:0
Small-pox	·8	279	1'0	1'0	·6	8	6	0	1.3	11		3
Intermittent Fever	49'7	234'8	330'7	225'0	2918	809.3	139'3	196 8	60°2	207'2	1,450'0	373'0
Simple Continued Fever	14'7	9'5	6.8	90	3'7	26'2	2.2	2'4	28'9	9°7 8'8	5'4	97
Pneumonia	12'3	39.0	10'0	121	11.1	35'4	15'4	9.3 9.3	7'4	10'1	15.8	10'0
Dysentery	18.3	242'2	187.6	37'1	33.8	78'5	54'8	42°7 33°9	78'0	78'9	94'0	807 387
Spleen Diseases	9,9	73'5	- '4	'5	1-2	1.2	2.1	.3	3'3	4		3
Anaemia and Debility	2.2	39'3	10'4	10'0	33.1	25'4	3.2	14'1	5'0	12'5	***	10%
Abscess, Ulcer, and Boil ALL CAUSES .	279'5	911'8	1,008.8	79°6	736-6	1,464'6	689'3	7009	416'5	658'3	2,040'8	8427
LOCK-UPS		876.2	990'7		737'0	1,504'1	672'2	594.6	517'9	665'1		839%
IVDEATH-RATE OF THE YEAR-		-	-						-	-	-	-
Small-pox Enteric Fever	122	1.89	1'01	12			2,34		4'32	1,10	***	105
Intermittent Fever	'15 '45	2'77	13	'04	'09	1:54	"50	*30	. '67	19	95	78
Remittent Fever Simple Continued Fever	*07	15		'04		***			.10	-21	2.23	
Tubercle of the lungs Pneumonia	4'19	3'20	4'31 2'96	2'85	3.83	3'85	1,80	1'80	2'49	3.51	5'58	3'5
Other Respiratory Diseases Dysentery	1'50	771	5'72	1'89	2'64	1'54 4'62	2'02	2'10	4'32	3'25	1'23	3'4
Diarrhœa Hepatic Abscess	'45 '15	'58	'88	'76	1:36	'77	'76 '25	.30	.10	73	'34	*60
Anzemia and Debility Phagediena, Slough, and Gangrene	.07	-87	-67	'24	*85	1*54	'88	.60	*58	*55		*47
ALL CAUSES .	14'81	29'69	23'36	16.26	15'75	25'38	20'69	13'82	21.77	19'27	27*30	20"3
LOCK-UPS		27'95	23'71		15.85	24"79	21'80	13'66	20'81	19'37		20"3
V.—PERCENTAGE IN 100 ADMISSIONS				-				-	-			-
Cholera Small-pox	1,18	1,28	14	1'83	.06	2'00	'82	2'41	1.89	'90 '30	1*28	1'02
Enteric Fever	13	'02 '32	10	'17	'03	'05	'09	15	1,40	13	***	.00
Intermittent Fever	17.77	25'75	32'78	37'32	30.01	55'25	20,31	32.00	14'46	31'48	71'05	44'20
Simple Continued Fever Tubercle of the lungs	5'27	1'04	1'50	1'50	'51	1'79	'37 '73	'40	6.03	1'48	'27	1'09
Other Respiratory Diseases	1'50 4'39	'99	3.00	3'93	1'50	1'63	2'23	1,02	1'77	1'53	2'60	3'4
Dysentery Diarrhœa	6°50	26*56	18'59	6'15	4'59 6'80	5'36	7°94 873	7'13	18:72	11.08	4'61	9'60
Spleen Diseases		***	*0.4	00'	.03	111	.31	.02	09	'07	*04	*05
Antemia and Debility Abscess, Ulcer, and Boil	13.76	4'31	1.03	1'63	2'00	1'73	11'67	2.36	1'20	1'90	4'83	1°20 8 6
VIPERCENTAGE IN 100 DEATHS-		-										
Cholera Small-pox	1.2	***	.0	27			11'0		19'8	5'7	***	47
Enteric Fever	3,0		3'5	5'3	2'2		2'4	3.3	3,1	3'9	3'5	37
Remittent Fever Simple Continued Fever	'5	'5	2.0	'2			4'3	4'3	4	1,1	9'2	2
Tubercle of the lungs	38.3	10'3	18'4	17*2	16'8	3'0	91	13'0	11'5	16.7	20'4	17
Other Respiratory Diseases Dysentery	3'5	3'9	3'2	5.1	1'1	18'3	5'5	3.3	2'6	3'7	4'5 18'0	37
Diarrhoza Hepatic Abscess	370	2'0			8.0	3.0		2,5		3.8	1,5	3.
Anæmia and Debility	1 '5				5'4	6.1	4'3		100	2.8		2
Phagedaena, Slough, and												

Including Ajmer, Secunderabad, Quetts, Mercara and excluding Andamans,
 Including Ajmer, Secunderabad, Quetta, Mercara and Andamans,

For complete detail of diseases, see Table LIII.

#### TABLE XLI.

RATIOS of GEOGRAPHICAL GROUPS.

The ratios of admissions and deaths to strength are taken from Table XLII.

The actuals will be found in Table XLIII.

			-gen are				O OF THE	AVERAG	E STREET	отн		-	-
	1	11	111	IV	V	VI VI	VII	VIII	IX	X	XI	XII	
	Burma Coast and Bay Islands.	Burma Inland	Assam		Gange- tic Plain and Chutia Nagpur.	Upper Sub- Hima- laya.	NW. Frontier, Indus Valley, and NW. Rajpu- tana.	SE. Rajpu- tana, Central India, and Gujarat.	Dec- can.	West- ern Coast.	ern	Hills.	India.
I.—AVERAGE ANNUAL STRENGTH	9,576	3.793	1,430	12,457	23,376	12,351	8,447	4,595	6,840	2,452	9,429	572	95,394
II.—CONSTANTLY SICK-RATE OF EACH										.0.0			-
January February March April May June July August September October November December OF THE YEAR	13'6 13'6 12'4 11'7 12'1 15'2 16'9 16'3 14'7 16'3 15'7 15'2 14'6	17'0 20'4 27'0 21'3 21'2 17'1 20'0 14'4 14'7 15'9 13'1 18'6	45°2 40°8 40°0 37°4 37°1 39°9 43°7 42°5 39°5 44°9 34°2 27°2 39°3	47'4 44'3 41'2' 42'3 40'9 37'7 39'8 45'3 45'6 49'4 48'4 47'1 44'1	23'8 21'9 25'6 26'5 25'6 27'7 30'1 29'5 28'3 28'1 26'0 26'5	23'5 20'2 21'0 24'7 25'2 24'7 24'6 28'6 28'6 37'7 38'7 41'1 36'1 28'8	23.5 22.0 21.7 23.9 26.4 25.8 27.4 24.2 25.5 28.8 31.5 31.7 26.0	27'1 26'8 27'3 25'4 20'1 31'1 29'5 39'5 37'4 38'0 36'6 33'9 31'6	23'1 23'6 25'1 27'4 26'7 29'2 32'8 37'3 33'4 30'4 29'4 29'1 31'3	18'8 18'5 17'1 17'7 20'2 23'3 26'6 25'9 29'0 18'9 20'3 21'3 21'6	17'3 16'0 14'6 13'9 15'5 15'5 15'1 21'5 26'9 22'7 19'8 18'4	24'0 24'6 28'5 20'4 35'4 37'5 38'0 29'9 28'4 31'9 29'0 29'0 30'8	25'0 23'6 23'8 25'1 25'5'2 25'5 27'2 29'9 30'7 30'5 29'0 27'2
III.—ADMISSION-RATE OF THE YEAR— Influenza Cholera	4.6		7	9.8	3.0	13'5	50	13'5	7'2	147	1'0 7'3	227	2.0
Small-pox Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Tubercle of the lungs Pueumonia	1'0 '4 42'0 '6 18'2 9'2 3'7	69:1	260°1 7°0 4°2 7°7	16.0 16.0 16.0 0.0	77 33 231'1 '4 11'2 7'9 9'6	1°0 '3 358°9 '7 7°2 10°0 12°4	*8 *1 277*0 *6 4*0 7*6 18*1	2'0 '2 194'6 '2  4'8 18'9	189°2 1°8 1°8 3°5 5°8	15'9 109'3 7'7 11'4 3'3 12'2	1'3 2'3 57'6 2'1 30'5 10'2 7'4	3'5 8'7 237'8 17'5 12'2 5'2 31'5	1°1 207°2 1°5 9°7 8°8 10°1
Other Respiratory Diseases  Dysentery Diarrhoxa	10.2	17'4 37'2 25'6	22'4 160'1 51'7	33'9 223'8 84'1	24'5 85'5 38'9	30'4 36'4 43'6	31'8 37'5 39'5 2'0	23'1 23'7 21'8 2'0	19'7 59'9 70'2 '7	34'3 88'9 24'1	23'4 76'0 2'3	33°2 80'4 61'2	25°2 78°9 39°1
Spleen Diseases Scurvy Anaemia and Debility Abscess, Ulcer, and Boil	1'5	'3 5'3 50'4	1'4 30'1 53'8	23'4 54'2	9°0 79°1	20°2 100°1	88.3 10.3 3.0	13.3	13,5	7'3	5'4 23'4	15'7 87'4	68°9
ALL CAUSES .	247.6	359'9	757'3	986.2	680°0	818'2	689'9	613.7	779.7	499'6	418'7	891'6	658.3
IV.—DEATH-RATE OF THE YEAR— Cholera Small-pox Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery Diarrhœa Hepatic Abscess	'31 '21 '10 '10 '10 '10 '4'59 1'46 '52 '73 '21 '21	26 1'32  3'16 '53 '53 3'43 1'05	4'90  4'20  1'40 2'10 '70 16'08 '70	1°28 '08 '32 1°44 '40 4'90 3'21 '88 5'94 '72 '48	*68 *17 *04 *98 *09 *** *2*87 *2*05 *98 *2*99 *90	*08 *08 *57 *08 *3*40 3*56 *32 2*51 1*38 ***	36 '47 3'43 4'38 '59 2'13 '47	22 65 	'44  '58 '44  1'17 '73 '58 1'75 '73 '73 '73 '73 '73	6'12 'S2 1'03 1'63 3'26 1'63 4'49 1'22 '41	3'61 '42 '	19°23 3°50  3°50 13°99 8°74 5°24 3°50	1°10 '09 '19 '75 '21 3°21 2°55 '71 3°25 '73 '04 '55
Anzemia and Debility Phagedzena, Slough, and Gangrene . ALL CAUSE .	13'47	18'19	39.16	26'09	17.71	16.10	20'84	18*50	13.10	25.50	20'68	64-69	19°27
V.—PERCENTAGE IN 100 ADMISSIONS—				*00		1.65	172	2'20	*92		'23		.90
Influenza Cholera Small-pox Enteric Fever Intermittent Fever Remattent Fever Simple Continued Fever Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery Diarrhera Spleen Diseases Scurvy Anæmia and Debility Abscess, Ulcer, and Beil	1°86 '25 '42 '17 '16'95 '25 '7'34 3'71 '1'48 4'13 4'30 1'52 '59 13'62	'07 '07 '07 '19'19 '07 1'68 1'90 1'54 4'84 10'33 7'11  '07 1'47 1'3'99	"09 "65 "" 34'35 "92" 55 1'02 2'95 21'14 6'83" 18 3'97 7'11	'99 '16 '06 '13 '27'73 '30 '11 '162 '98 3'43 22'09 8'533 '03 '07 2'38 5'49	'43 '10 '11 '04 33'90 '06 1'64 1'16 1'42 3'60 12'57 5'73 01 '05 1'33 11'64	1°05 '12 '04 43°87 '09 '88 1°23 1°51 3'72 4'44 5'32 '04 '02 2'47 12'23	'72 '12 '02 40'15 '09 '58 1'10 2'63 1'02 2'63 1'02 5'44 5'73 '29 '43 2'37 12'80	"32" 04 31"70" 04  78 31"99 376 3"87 3"87 3"53 32 .04 1"99 13"23	192 106 106 24:26 23 23 23 25 25 275 275 29:50 109 1169 14:23	2*94 *16 3*18 21*88 21*88 1*55 2*29 *65 2*45 6*86 17*80 4*82 **08 1*47 4*05	1'75 '30 '56 13'75 '51 7'29 2'43 1'77 5'60 18'16 '36  '10	2°55 '39 '98 26°67 1°96 1°37 '59 3°53 3°53 3°73 9°02 6°86  1°76 9°80	'30 '13 '16 31'48 '22 1'48 1'34 1'53 3'82 11'98 5'95 '07 '09 10'45
VI.—PERCENTAGE IN 100 DEATHS— Cholera Small-pox Enteric Fever Intermittent Fever Remittent Fever Simple Continued Fever Tubercle of the lungs Pneumonia Other Respiratory Diseases Dysentery Diseases	2'3 1'6 '8 '8 '8 '8 '8 '8 '8 '8 '8 '8 '8 '9 '5 '9 '5 '4 1'6	174 772  174 279 279 1878 578	12'5  10'7  3'6 5'4 1'8 41'1 1'8	4'9 '3 1'2 5'5 1'5 18'8 12'3 3'4 22'8 2'8	3'9 1'0 '2 5'6 '5 10'2 11'6 5'6 5'5 5'5	"5 "5 3'5 "5 "21'0 22'0 2'0 15'5 8'5	1'7 2'3  16'5 21'0 2'8 10'2 2'3	1'2 3'5  12'9 23'5 4'7 8'2	3'3 	24'2 4'8 3'2 6'5  6'5 12'9 6'5 17'7 4'8	17'4 '5 2'1  12'3 7'2 2'6 20'0 '5	29'7 5'4  5'4 21'0 13'5 8'1	57 '5 1'0 3'9 1'1  16'7 13'2 3'7 10'9 3'8
Hepatic Abscess Ansemia and Debility Phagedsena, Slough, and Gangrene	1°6 '8 		8.9	1.8	2'4	3.0	6.8 6	1,5	4'4		3.1	54	2.8

TABLE XLII.

RATIOS of FAILS, GROUPS, and ADMINISTRATIONS.

-	1	-	_			_	FAILS		UPS,	and		INIST			-	-	415,000		als sec	Table	XLIII
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera,	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Con-	Tubercle of the lungs.	Pneumonia,	Other Respira-	Dysentery.	Diarrhæa.	Hepatic Abscess.	Spleen Diseases. 8	Scury.	Anemia and Beblity.	1	Phagedæna, Slough, and Gangrene.	ALL CAUSES.	Average numb. r constantly sick per 1,000 of strengt h.
Mergui .	68{	=	-			132'4			::	14'7		29'4		::		1::	147	88'2		544'1	} 29.4
Tavoy	108	1 ::				92.6	37'0				18'5				-			18.2		213'0	1
Moulmein .	619	{ ::	3,5	81		21.0			21'0	3.5	27.5	19'4	19'4			-		43'6		399.0	1
Shwegyin .	143	1 ::			=	83.0		7'0		-	7'0	42'0	14'0					62'9		496'5	} 210
Toungoo .	593	10'1			3.4	133*2	3'4		15'2	8.4	10'1	1	20'2			-	3'4	52'3		563'2	1
Rangoon, Cen- tral (Euro- peans).	} 18	1 ::		-				1117			55'6		111.1							533.3	}12'5°
Rangoon, Cen- tral (Natives).	}2,396	1 ::		·8	1	7'5		51'8	9'2	2.2	6.3	10'0	1.3				14	24.6		203.3	,
Maubin .	365	=	5'5	-		19*2			7'51		8-2	21'9					5'5	5'5		14'61	,
Myaungmya .	704	-			-	17'0			8.2	2.8	7'1	4'3		-	-	-		19'9		19'18	2
Bassein, Central	1,034	36.8	-		1'0	72'5		40'6	17.4	6.8	19'3	6.8	1.0		-	-	-	60.0		365.6	
Insein, Central	2,326				***	43'4			6.41	.0	2.6					-		28'4		15'47	} 25"
Henzada .	420{	-	4'8	-	2.4	357			3.87		2'4	9'5		2.4				23.8		259'5	,
Myanaung .	78 {	-						-			25.6	25'6		2,38			12'8	12.8		7'14	} 9.5
Sandoway .	86 {			23'3		34'9		58.1			69.8	23'3	233				46'5	1977		12-82	} 12.8
Kyaukpyu .	151			11'63		26'5					***	6.5	6-6				66	26'5		779°1 11°63	} 23,3
Akyab	467			21		94.5			86	21'4	27'8	8*6	6.62				2'1	27.8		26.49	6.6
BURMA	) (	4.6	-6	1'0	-4	42'0	-6	18'2	9'23	3'7	10'2	10'7	3.8					2'14		27-84	107
COAST AND BAY ISLANDS	9,576		-31	,31	.10	.10	,10		4'59	1.46	'52	7'3	.31	21			1.2	33.7		13'47	} 146
aungde .	188 {		-		=	2,35	-:	-	5'32	2,3	5'3	5'32		==		=			=	26°60	} 10.6
Prome	336 {					154°8 8°93			=	=	20'8	38.4	32.7	=				169.6		735'1	} 35.7
Central.	} 759{		1'3	1.3	1'32	80'4			31.1	17,1	47*4	S1.7 5.27	2'64 2'64		:::	1.3		38.3		28'99	34'3
Taungdwingyi	26 {						=	==	=	=				=		=	Si 6			192'3	9.00
dagwe .	149 {					:::	=	20'4	=	=	20'4	81.6		::		=		163.3	:::	571.4	20'4
amethin .	96 {		=	=		=	=	=	10'4	10'4		::	=		=	=	250	31.3	=	197'9	10'4
deiktila .	80{		==			75'0		=	=	:::		25'0	12'5		=	=		37'5	=	20000	1 2'5
Pagan	55{	:::	=		=	=	=	18.3	=	=	36.4				=		10000	36.4	=	218.2	36.4
dyingyan, Central.	} 770{		=	-		1,58	::	1.3	3'9 3'9	=	3'9	43.6	11.6	:::	=	=		14'1	=	143	
dandalay, Central,	} 844 {		-			109'0	1.5	10"7	4'7 3'55	5'9	17:8	15'4	178			=	2·4 	81.8		432.5	16-6
donywa .	87 {		=	::		11.2	=	11'5	-		=					=	=	=		80.2	11.5
ibwebo .	161 {		=	-	=	43'5	=	=		6.5		6-2 3	31.1		=		=	12'4		6'21	6.2
dogok	59{	=	=	=		16'9	=	=									=	=		16'9	1'2*
Shamo .	67 {	=	=	=		29'9		49'3	4'9	=	14'9	50.0		==		=	14'9	04'5		791'0	29'9
Katha	70 {		:::	=		42'9			=				42'9			***	14'3			171'4	5:30
Cindat	37{		=		=	=		=			:	-	-				54'1	=		54'1	2.00
BURMA IN-	3.793 {	92	.3	.3	3	69'1	3	6.1	5°16	5'5	17'4	37.2	25'6			.3	5'3	50'4		359'9	186
LANT.		-	150			-		•Works			STREET SQUARE	-	. 03		1					19.19	

# TABLE XLII—continued. RATIOS of FAILS, GROUPS, and ADMINISTRATIONS. For actuals see Table XLII

-	-	-	-	R.	ATIOS	-	AILS,	_	PS, a	na A	2. DE	ATH-RA	TE PER	1,000	OF S	-		ctuals	see 1	able AL	
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fover.	Intermittent Fever.	Remittent Fever.	Simple Con- tinued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respira- tory Diseases.	Dysentery.	Diarrhea.	Hepatic Abscess	Diseases.	Scarvy.	Anzemia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Slough, and Gangrene.	ALL CAUSES.	Average number constantly sick per
Cachar .	75{					26.7					::	13.3	26.7				40.0	26.7		226'7 53'33	} 26
Sibsagar .	68 {	:::			=	161.8			14.7	14'7	=	220'6 14'71	58.8				29'4 14'71	176'5		838-2	} 29
Dibrugarh .	110{	9'1	9'09	:::	:::	281.8	::			273	90.0	445'5 54'55	300,0	=	::		100,0	9'1		1,445°5 81°82	
Tezpur	303 {	:::	::		=	6.60 6.60	=	:::	6.60	3'30	19'8	85'8 3'30	19.8				36.3		=	705°3 39°60	100
Gauhati .	292 {	::	24'0 20'55		:::	311.6		=	6.8	=	37.7	147'3 51'37	51'4	::		6.8		34.3	=	705'5	
Sylhet	582 {		::	::		309'3	17-2	=	1.7	3'4	8.6	163'2	43'0		***		20'6	58.4	=	738-8	} 21
GROUP III}	1,430 {	7	4'9			260'1 4'20	7.0	::	4°2 1°40	7.7	22'4	160'1	51'7			1.4	30'1	53'8	-	757'3	} 35
Mymensingh.	602 {				23'3	260.8			1979	5'0	44'9	363.8	33 :			3":	3 26.6	2979	=	1,064'8	} 5
Dacca, Central	,165{		4'3 <sub>3</sub>		4'98	123'6			13.7	.9	65'2	813	94.4				116.7	23.5		771'7	3 4
Tippera .	335 {		3,0	:::		122'4 5'97				9,0		107.5	2000					32.8		450°7 23'88	1
Chittagong .	206			:::	=	621'4	::		4.0	4.9	48.5	305-8	72'8			***		38.8	-	38.83	1
Noakhali .	152 {					59°2	***			6.0		572'4	1000				6.6			39'47	1
Backergunge	623 {	=	=	1.6	=	1.01 200.0			4.81	8'0	770	1				1.6	1.0	120		1,537.7	
Khulna	46	=	=			521.6			21.74		43'5	369-6	-					65'2		21'74	3
Jessore	352	=				267.0	3.8	4	17.0	36.0	849	750'0	4				17.0	73'9		22'73	2011
Baraset	104-	=	::							9.6		163.2	67.3					57'7		9.61	3.
Presidency, Central (Europeans)	35	1 ::				114'3	::	==				57"1	=					28'6		462"1	3
Presidency, Central (Natives).	\$ 1.173	20*5	-	1.4	5 -85	118.2			12.8	6.8	17.1	67.3				2'6	***	34'1		16:20	
Alipore, Centra	1,832	{ ::	1.2	.3		372'6			32'8	10.6		156.4		-		1::		62'4		23.26	3
Hooghly .	399	{ ::		2'0	=	164.3			8.03	10.0	160	120'2					4'01	2.		28'06	
Burdwan .	234	==			:::	\$20.2			8.5	4'3	64.1	265'o 12'8:			8.2		8.2	-		25.64	5 8
Krishnagar .	140	{ ::				264'3	14°3 7°1	4	714	-	21.4	264'3 7'14			***		14'3	114'3	-	35'71	100
Faridpur .	354	276.8	,			372'9			28.3	33.9	62.1	251'4 5'65						81'9		1,649.7	3 9
Pubna	193					3316				10'4	25.0	139'9	93,3	=		***	5,5	52.0		15'54	3 2
Murshidabad	253		4'0 3'95	40		521.7			3,82	4'0	27.7	47'4	63.2				4.0	19.8		1976	3:3
Rajshahi, Central.	797				-	76'5	2'5	5	7.5	6'3	22.6	3'76	10.0	::		1.3	2.0	21.3	=	456.7	} 2
Bogra	188					143'6				5'3	5'3	180'9	16.0		-		5'3	16.0	=	446°8 5°32	3
Maida	104			-		1,067'3	9.6		9.62		38.2	278-8	230'8		=	96	48'1	86.2	=	2,038'5 19'23	}67
Dinajpur .	272	1 ::	37		37	338°2 3°68	14.7	=	11.0	11103	47'8	250°0 11°03			=		11.0	47'8	=	1,058.8	
Rangpar .	169					416.4		-	22'3	11.5	37'2	479'6	37*2	=			18.6	14'9	-	1,182'2	} 3

	7		1			. Admis			1 0		1	KATH-R	ATE P	1 4	1 2	STRE	1	_			per
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fover.	Simple Conti-	Tubercie of the lungs.	Pacumonia.	Other Respira- tory Diseases.	Dysentery.	Diarrhosa,	Hepatic Abscess	Spleen Disease	Scurvy.	Anzemia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Slough, and Gangrene.	ALL CAUSES.	Average number
Ipaiguri .	124 {		::			2016 8'06			8-1	::	8.1	112.0	161.3				8-1	16.1		709°7 40°32	} 3
rneah .	270 {			3'7		237.0	7'4		40'7	3'7	11.1	148°1 7°41	22.3				37'0	14'8		881°5 18°52	} 5
ya Dumka	132{	=				371'2			7.6 7.58	15'15	53.0	318:2	60.6				76	68.2		1,143°9 45°45	}:
	235{					400'0	4'3	8.2	***	8.2		85*1	29'8				4'3	22.3		808'5	}
kura .	239 {		8'37			154'8	:::	4'2	4,5	4'2	33.2	121'3	450				8'4	2019		510°5	}
napore, }	881 {	***	4'5 4'54	***		355'3	2'3	1174	12.2	57	34'1	310.0	261°+ 4'54		1.1		9't 1'14	135.1		1,683°3 55°62	}
asore .	151 {					205.3			33.1	13'2 6'62	46.4	238'4	112.6					9)'3		956'9	3
tack .	313 {					73'5	70.3	-	3.15 6.6	6.39	25%	143°8 9°58	28.8		3.3	-	19°2	54'3		601.0	}
	147 {		-			476-2			13.6		136	122'4	27'2	***			27.2	27'2	*	795'9	1
OUP IV.—	77 {	***							13,0		13'0	12,00	103,0				130	103,0	1	38°96	3
ENGAL AND	} 12,457 {	9'8	1.58	6 08	1,3	273'64	3'0	1.0	10.0	3,31	33.0	223.8	84'1		.3	-6	23.4	54'2	I	26.03 26.2	3
A. ibassa .	183{		5'5 5'46	5'5		360.7			10'9	10'93	54'6	92'9	245'9					125'7	5.5	1,377'0	2
ulia .	282 {			7'1		435'2			39°0 3°55	49'6	113'5	166.7	173'8				28'4	63.8		1,446.8	}
chi	212{					132.1			14°2 9°43		9'4	221'7	1819				4.7	47'2		509'4 23'58	}
amau .	105 {					285*7	::		9°5	19-0	9.2	209'5	85'7					142.9		1,009'5	1
raribagh, }	916 {		3.18	1,1		185%	11	1.1	3,3	3'3	10,1	196.5	22,0		2'2		2'2	49"1		593'9 593'9	}
в	515 {			1.0	1,0	77.7	1.0	147'6	3.0	9'7 1'94	31,1	40°8 1°94	31.1	:::			1.0	85'4		617'5	}
galpur,	1,818{		1.10			320'7	=		3'39	14'3	42'4	170°5 3°30	129'3			1.1	3.30 0.0	83.6		1,112'2	1
nghyr .	341 {					369'5		2.0	5°93	5.03	14"7	85°0 2°93	176				2*9	20'5		633'4 17'60	}
bhanga .	315{					88.0			3'17	::	50.8	174.6	44'4				9'5	60.3		581'0 3'17	}
amparun .	352 {			***		116'5 2'84		:::	57 284	8.2	11'4	113.6	1174					22.7		431.8	}
zaffarpur .	357 {	47°6 2'80				112°0 2'80		16.8	8'4 2'80	5.6	140	159'7	2'80				3.8	70'0		694'7	}
na	354 {					32,83 32,5			5'6	56	45°2 2'82	127'1	31.1				:::	73'4		595'0	}
ab	285 {	=				207'0	3.21		17.2	10.2	14'0	266.7 7.02	126'3				10'5	108.8		31.28 31.28	}
ipra .	330{		==			245'5 3'03	3.03	::	27'3	2,03	12"1	331,3		==	:		6.1	21'2	:::	878·8 21·21	}
ar, Central	1,218		1.6	1.6	·8	977.8		/	3.58 6.0	0.0	28.7	7,11 380.8	83.4	::	=	4'9	33'7	87'0		1,801'3	}
antadih .	35 {					400'0 28'57	:::	:::	=			114'3						-	=	685'7 57'14	} .
azipur .	346{		8·7 8·67		=	251'4		=		5'8 5'78	57'8 5'78	40'5 2'89	20°2 8°67			:::		18'5		592'5 46'24	}
amgarh .	362 {		13.8 5.25	100000		154°7 5'52 125°0	=			8.1	35 9	58'0			-	-		30'4	=	444'8 13'81 750'0	3
rakhpur .	516		=			391.5		=	3.0	17'4	25'2	152,00	60.1	::	=	=	64'0	85.3		1,333'3	10
ti	290	=	=		==	334'5				13.8	3'4	75'9	6°9 3°45	::			10'3	27.6		29°07 513'8 24'14	3
rabad .	450		3,3	4'4		144'4			6.4		42°2 2°22	33'3	13.3		***		44'4	66.7		17.78	1
ltanpur . i Bareli .	237 {			8.4		78'1			25'3 4'22 7'6	57	16.0	16'9 4'22 24'8	16.9				4'22	78'1		578'1 29'54 381'9	
	525 {					-			571				1,00					***		10.02	1

# TABLE XLII—continued. RATIOS of FAILS, GROUPS, and ADMINISTRATIONS. For actuals see Table XLIII.

Participant   1997					R	ATIO	s of F	AILS,	GRO	UPS,	and A	ADMI	NISTR	ATIO					_	e Tab	le XL	
Partakagah   1954		3					1. A		N RAT	- 1	-		EATH-R	ATE P	22.5	201	F ST	_		70 1		nber k per
Participant   1997	AND	Average annu- strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever	th	50	Pacumonia.	Other Respira- tory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess	Spleen Disease:	Scurvy.		Abscess, Ulcer and Boil.	Phagedæna, Slough, an Gangrene.	ALL CAUSES.	Average nur constantly sich
Participate   1997	aget						83'3				20'8	36'5	20.8					15'6	41'7			} 150
Benerick   1.505	Partabgarh .	192 {	***					-			5'21		0.00					***	100			} 117
Central   1-90		343 {	***	***			***				***		875	3,03				***	***	***	11.66	,
Mirapur . 204	Central,	1,297 {	77	7000					1775	4'63	1'54	*77	2.31		-			3.08	***	-77	23.90	,
Michapher   264	Benares, Dis-	344 {	200	0.000		30 9000			10000000		2'91				10000	2000		2'91	***		20"35	,
Allahabada   All		204 {		1000	000	170.5			245350	4,00				100000	10000	10000	_	_	***	_	4.00	
Mandard	Allahabad, Central.	1,331 {	2700	1000	100	1,000	32'3		100000			47°3 1'50		100000	100000	100			*75		9.77	
Banda   190   368   187	Allahabad, District.	537{	1000		200	700	1000000		1000000	1000				13.0			10000	-			24.21	} 35%
Fatchpur	Karwi	33{		0.000	200	2000			100000	7000			-	10000			100000	70.0	777733	1000	121'21	} 300
Hamirpur . 1596	Banda	190 {	1000000		200	10000	1.0000000		100000					10000	1000	100	10000					\$ 574
Hamirpur   139	Fatehpur .	321 {	000	1000			CV0000000	2000	1	0.00	0.000		0.55			1000000		-500	10000	0.00		} 154
Cawpore . 435	Hamirpur .	139{	100	VE		27.7	101000		100000		100000		28°8 7°19	360		100000	1000000	2000	10000			} 364
Campore . 435   230	Orai	164{	10000		-	100	100000000000000000000000000000000000000		0.0000000000000000000000000000000000000							100000	75523	7000	0000			} 36
Unano   308	Cawnpore .	435 {	0.50000		10000	2000			1000000					10000	1000	100000	1000000		The second second			} 25"
Lucknow, Cartal.   1.532	Unao	308{					68'2		10000000	3'2		19'5	100		10000	100	100000	100000		1000	269°5 6°49	} 00
District.   Apple   Dist	Lucknow,	1,532 }					109'0			7.2	4.6	2.6	31.3	10.4			1000000	10000	100000	220	251'3	} 13
Barabanki	Lucknow, }	499{					42'1				8.0	4'0	18'0	24'0		1000	80000	10000	100000000000000000000000000000000000000	15555		} 161
Gonda . 349 {		347 {		180			144'1			2'9	11'5	5.8	14'4	37.5			1000000		_		521.6	} 20"
Bahraich . 249 \ 4'0		349 {								2'9	14'3	8-6	5'7					14'3	8.6		237'8	} 17
Kheri . 299 \				4'0									12'0					12'0	136.2		1000	} 24
Sitapur	2000				3.3	anna l	1300		1000			1				1100		3'3	87.0		625'4	} 20"
Hardoi . 337 {					-		1.00				13'0	29'8	1990			77.6		33			491'6	3 137
Etawah 305 { 13'1 3'3									and the same		-		720	1				100			495'5	1 119
Etawah 305 378			***				5'93			***		***									629'5	3 197
Mainpuri       310 \$\frac{1}{2}\$       311 \$	Etawah	- 1		3.58			***			3'28	3,18	3.58	3'28		***			200	1	12.30	11000	} 35%
Etah	Mainpuri .		***	***				***											***		10000	2 25%
Fatehgarh,   1,771		308-{								3'25											3.52	3000
District. 343	Central,	1,771 {	200	200		1 / 60	2.83	900000	1000000	5'65	***	.20	2.50						***	*56	14'68	,
GANGRTIC PLAIN AND CRUTIA NAGPUR.  A.  Shahjahanpur  335{	Fatehgarh, District.	343{	100		0.000	700			0.000					10000	100000	100000	1000	337		100000		\$ 20%
A.  Shahjahanpur 335 { 209'0 3'0 131'3 6'0 14'9 14'9 74'6 23'9 101'5 722'4 } 23'  Pilibhit . 38 { 52'6 26'3 52'6 26'3 52'6 26'3 52'6 26'3 52'6 26'3 52'6 26'3 52'6 26'3 52'6 26'3 52'6 26'3 52'6 26'3 52'6 26'3 52'6 26'3 52'6	GANGETIC PLAIN AND CHUTIA	3,376{				·3 ·04	231.1					24°5 '98				1000						} 26.5
Pilibhit . 38 {														-					is	19.53		
Pilibhit . 38 { 52.6 26.3 52.0	Shahjahanpur	335 {		192.74	100		10000		7000			1000	7.0	1000000	200		2000		0.00			} 23%
Bareilly } 1.88c 5 '5 367'1 12'2 4'2 20'7 6'4 11'7 '5 11'1 29'2 534'7 } 26	Pilibhit .						526	26.3		52.6		26.3	52.6					26'3	52'6		657 9	} 521
Central. ,	Bareilly }					.2	367'1			12'2	4'2	20'7	6.4	11.7		*5		11'1	29"2		5347	} 26%
	Central. 5	1,000	***	***	***	***	*53	***		1.20	.23	'53	'53	33		***		***	-	-	90	-

1	1 3							ADMI	SSION-	RATE.		2. DE	TH-RA	1 12	_	000			-		200
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever,	Intermittent Fever.	Remittent Fever	Simple Con- tinued Fever,	Tubercle of the lungs.	Pneumonia,	Other Respira- tory Diseases.	Dysentery.	Diarrhosa.	Hepatic Abscess	Spleen Diseases	Scury.	Anaemia and Debility.	Abscess, Ulcer, and Boil.	Phagedaena, Slough and Gangrene.	ALL CAUSES.	Average number constantly sick per
trict.	751 {	126'5				328.9	1,3	-	30 6	146	55'9	28'0	25'3			1.3	5'3	38.6	=	818'9	} 25
udaun	351					122'5		-::	57	11'4	7'5	8.2	2.8					91.3		376°1 8°55	} 17
ligarh .	374	=				173'8	8°0 2°67	==	5'3	32'1	32.1	5'3	13'4				5'3	90'9		660'4	} 32
slandshahr .	231 {				4'3	147'2		-	-	8'7	8.7	60°6 4°33	17'3		13'0			26.3		467'5	} 21
oradabad .	378{					981.2			13*2	13.5	34'4	53°2	39.7					156'1	=	1,587°3 15'87	} 52
jnor	274				***	135'0	3.6		7'3	146	36'5	47'4	40'1	1			14.6	142'3		536.5	} 21
ehra Dun .	95 {			42°1 10°53		189.2	10'5		10'5	10"5	31,1	21.1	53'2					42"1		631'6	} 31
haranpur .	336			6.0		586'3			60	29"8	23.8	285'7	85°3 5'95				11.0	77'4	-	1,345'2	} 59
uzaffarnaga	167 {			6.0		610'8		60	12'0	71'9	29'9	41'9	18.0				35'9	35.9		1,149 7	} 41
eerut	569 {	1178				388-4			14'1 S'70	10'5	66.8	12.3					43'9	79'1		929'7	} 29
elhi	475 {					235'8			14'7	27'4	4"2	61.1	31,1				16.8	46'3		498.9	} 25
ohtak .	117 {			100,		700'9						34'2	153'8				25'6	17'1		1,102'6	} 17
issa	182 {	***				412'1			11,0	16.2	33.0	54'9	192.3				10000	269'2		1,285.7	} 49
arnal	107 {					794'4			9'3	6.3	93'5	5'49	46.4					65'4		16'48	1 -8
mbala -	592					239'9		23.6	6.8 6.40	16'9	49'0	69'3	94'6				0.00	121.6	***	9'35	, \
								***	0 70	3.38	1,69	16'89	5'07			***				24"23	5 33
В	200		1 13	1		12							73						111		
dhiana .	211{	23.7		4'7		232'2	***		9.2	9'5	9'5	23'7	175'4	***			14'2	151.7	=	810'4	} 23'
oshiarpur .	54{			18.2		481.5			=	***	18'5	74°1 18°52	166.7				18.2	9276		1,277.8	} 18
llunder .	221-{					239'8			4.5	6,0	22.6	54'3	679	***	::		9'0	76.2		705°9 4'52	
rozepore .	379{					25.8		71.3	7°9 2°64	18.2	26.4	10'6	58.0				26'4	110'8		580*5	
nritsar .	209{					770'3			4'8	23'9	47.8	57'4	205'7				28.7	86-6		1,746-4 9'57	
hore, Central	}1,580{			1'3	·6	381'0			7°6 5°06	10.8	37'3	19'6	36.7			*6	3'8	1000		943'7	
, District	498{			2'0	2'01	363.1			6.0	3,01	40'2	10'0	74'3				10,0			797*2	
" Female	179 {		::			296.1			5'6	5.6	33.3	1172	27.9				44'7			821'2	
rdaspur .	199{					155'8			5'03			25'1	15.1		:::		-	70'4		361.8	
jranwala .	285{		=			326.3	3.2	10'5	10'5		58.1	35'1	38.6		1		1923	94.7		775'4	
lkot .	270{			-		222'2			37	7'4	44'4	18.5	2976		-		33,3	70'4		559*3	
jrat	79{					455'7				12'7		25'3	63.3				333	64.6	1	,075'9	} 25
dum .	179 {					217'9			22'3	11'2	11.5	5.6	16.8				- 1	39'1		469'3	
walpindi .	751 {					64415 2.06		-	2,3	8'0	22'6	42'6 7'99	46.6					91.9	10.3	29,29	-
OUP VI.— PPER B-HIMA- AYA.	12,351-{	13.2	=	1'0	·3 ·08	358'9	.7 .08	7'2	100	12'4 3'56	30'4	36'4	43.6		.3	'2	20*2	100'1	0	318'2	281

99

P

# TABLE XLII—continued. RATIOS of FAILS, GROUPS, and ADMINISTRATIONS.

For actuals see Table XLIII.

				R	-	of F	_		PS, a	nd Al	and the same	_	ART					tuals s	see l'al	ble XLI	
145	lan	1		T		DMISSIC		-2- 1	the	1	-	LATH-RA	TH PER	4 1	41	STRE	Pue	Ulcer,	pur		umber ick pe
JAILS AND GROUPS.	Average annual strength.	Influenta.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever	Simple Conti- nued Fever.	Tabercle of t	Pacumonia.	Other Respira- tory Diseases.	Dysentery.	Diarrham.	Hepatic Absces	Spleen Disease	Scury.	Anzemia Debility.	Abscress, Uland Boil.	Phagediena, Slough, Gangrene.	ALL CAUSES.	Average number constantly sick per
A Peshawar .	379 {	65.6		17		704'7 3'45		58.7	10'4	36·3 3·45	43°2 1°73	84-6	69'1			3.2	32-8	176:2	-	1,462°9 36°27	380
Kohat	123 {				::	788.6			16'3	16'3	8-1	65'0	24'4		8.1		S'1	1626		1,252'0	} 2474
Bannu	124 {	=		=	=	387'1			8.1	8.06	55°5 8°06	56.2	72.6		Z.		40*3	96'8		32°26	} 32'3
Shahpur .	174{	==		5'7	=	304.6					=	-57-5	57'5	7.			11.2	92'0	7.	729'9	17'2
Mianwali .	242 {	-				293'4	=		8:3	12'4 4'13	16.2	86·8 4·13	140'5		::	=	12'4	247'9 4'13	=	1,148°S 16'53	} 248
Lyallpur .	392 {	=	=	=	::	71'4	=		5'10	15.3	=	84'2	7.7	==	-	-		89.3	=	362'2	} 153
Jhang	209{	::			=	148*3			=	47°8 4°78	2000	19'1	57"4				7'6	210'5		655'5 9'57 432'6	} 191
Montgomery, Central.	} 1,972 {					206'9			6.20	2.03	23.8	18.3				5	3,01		.21	19.78	} 21.3
Mooltan, Cen- tral.	} 1,235 {			-8		135'2		==	11'3 4'86	3.4	31.6	26.7	27'5		1.6	*8	47.0	86.6	-	516·6 9'72	3374
trict.	} 653 {		-	=		75'0			6.1	4'59	15,3	32.2	1.23				3.1	38.3	***	303,5	} 19.0
Dera Ismail Khap.	} 395{					1,179'7			2.2	7.6 5.23	30'4	2.00	3.0	=	2.2	2,1	15°2 2°53	232'9		1,840'5	} 35'4
Dera Ghazi Khan.	} 282 {	=	=		=	1,007*1	::		3.2	3'55	67.4	56.7	159.6		::		17'7	1950	=	1,858°2 7°09	} 313
C *Shikarpur .	467 {	4'3		2'1	=	34'3			15'0	15'0	47°1 4°28	10'7	6.4	3,1	2.1	6.4	10,13	12'8		310°5 44 97	} 107
Sind Gang .	444 {	=		2'3		67.6	6.30			94.6	13.2	3.52	11.3			4'5	4.3	23		47'30	} 1173
Hyderabad, Central.	} 854{		***			152'2			3'51	15'2 3'51	58.2	21°1 4'68	73*8		12'9	7'0	11.12	77'3		640.2 23.42	} 384
Kurrachee .	302 {	6.6		66	=	178'8	3.3		3'3	23,3	72'8	92.3 3.3	86-1		3.3	26°5	16-6	86'1		923.8	} 360
GROUP VII NW. FRON TIER, INDU- VALLEY, ANI NW. RAJ PUTANA.	8.447	5.0		-8		277 0	·6 ·47	4.0	7.6	18'1		37'5	39'5	7	2'0	3'0	16-3	\$8-3	112	689'0	3 2670
A Rajkot .	96-	:	-			281.3			:::	10'4	31.3	72'9	10'4		-	-		31'3	-	614'6	} 2018
Ahmedabad, Central.	} 832	:::				121:4	=	:::	9.6	12'0	10,3	10.8	4.8		-	1'2	13.2	697	=	425°5 13°22	} 25"
Almer	465	2,1	s			68.0	3,3		4'3	6'45	3.6 2.12	8.6	8.6		=	=	12'9	75'3	-	412'9	} 1974
Muttra	255	-		=	::	415'1 7"5			=	7'5	34'0	41°5 3°77	491			-	3'7	86.8	=	S71°7 18°8;	30.3
Agra, Central	2,142	27'1		1'9	-47	192*8			4°2 2°80	28.0	28'5	13.1	19.1	-	'5 '47	=	14'0	65'4		613.9	} 387
,, District	513	58		78	-::	245*6			5'8	5.8	19.5	39.2						107*2		762'2	} 25%
Jhansi	224	=	-	4'5		236.6				17.9	13'4	156.3	26.8		35'7		35'7	332.1	-	1,053'6	} 317
Lalitpur .	58	:			::	310'3		=	-	17'2		==	=		=		=	120'7		724'1	} 341
GROUP VIII S, E. RAJPU- TANA, CEN- TRAL INDIA, AND GUJA- RAT.	} 4.595 {	13,2		3.0	*22	194'6			4'8	18°9 4°35	-87	23'7	110		2'0		12'2	1	-	613"7	2 317

	7					I. ADMI	ASSESSMENT OF THE PARTY NAMED IN	1	10	2. 1		RATE P	ER I,O	1 10		KNGT	_	10	19		ber
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever,	Remittent Fever.	Simple Con- tinued Fever,	Tubercle of the lungs.	Pacumonia.	Other Respira- tory Diseases.	Dysentery.	Diarrhora.	Hepatic Absces	Spleen Diseases	Scurvy.	Anæmia and Debilky.	Abscess, Ulcer, and Boil,	Phagedæna, Slough, and Gangrene,	ALL CAUSES.	Average number
A moh	43{					627'9				23.3		69.8	69-8				46.2	139'5	-	1,372'1	2 4
gor	88 -{					3750		34"1	-		22'7	159'1	125.0				22'7	147'7		1,215'9	1 3
oulpur, entral.	} 789 {	21.2				17.7	2'5		2.2	7.6	17.7						21'5	53.5		243'3	} :
singhpur .	50 {			***		33.0						-					16.9			152'5	} 5
dla .	71 5					98.6			14"1		42'3	56.3						183.1		535'2	} '
spur .	109{	192'7				220'2	18'3	45'9		9°2		91'7	22.0				9.5	18:3		So7*3 18*35	} '
balpur .	113					366'4	8·8 8·85				44°2 8'85	Marie .	371.7				26.2	106'2		1451'3	} :
pur, Cen-	} 441{					151'9	9'1		4°5 4°54	4'5	15'9	40°8 4°54	52'2				11,3	40'8		548-8 20'41	}
ighat .	56{					196:4			17'9	17'9		17'9					35'7	250'0		767'0	} '
ni	44 {				22.7	90,0					45'5	=			::	::		45'5		613'6	} 4
indwara .	22 {				=	272'7					45'5	90°9 45°45	00.0				45'5	45'5		818°2 45°45	} 4
hangabad	71 {					183'1	14'1	:::		14"1	14'1	225'4	84.2				==	14'1		704'2	} 2
ar	74{		-		=	459'5	-		:::	27'0	=	175'7	310.8	==			27'0	1.48*		1,770'3	} 4
ı	31{			-		645'2	=	=				64'5	161.3		32'3	=	64'5	225'8		1,580°6 32°26	} 3
pur, Cen-	} 637 {	11,0		371		4568			6.3	1.6	12.6	25'1	15'7				914	78'5		860°3 4°71	} '
indara .	78{	-	::		=	115'4			12.83	25.6	::	12'8	25.6		-	:::		12.8		243°6 12°82	} '
rdha .	49 {					81.6					20'4	61'2	-					102'0		387-8	} 2
nda .	62{	-:	=	16.1		177'4		:::		16.1	16.13	16.1	16.1		:::			80.6	::	16.13 16.13	}
																			0 1	C. ITTE	
В													37.0							1,172'8	,
underabad	81-{	13.3		-		271'6	:::			25.0	12,3							175'0		1,172'8 24'69	
otmal .	40-{					425'0				25'00	8.0	75 0	175'0				13'4	31.3	-	25'00 25'00	
raoti, Cen-	} 224		4'5			1027			4'5			38.3	-				10,2	83.6		454:3 26:79	
ola, Centra	287-{	10'5				108'0			3.2	3.48	3.2	74"1	18.2		-			120.6		494'8 17'42 537'0	
ldana .	54	-		-	-	110'8	2.2		4'9	19'7	33.0	18'52		2.5			4'9	44'3		537'0 18'52 448'3 19'70	
ulia	405		2,3		1.3	4'93			3.0		30'7		2'46		2.6	2.6	20'9	179'4		19'70 1,253'1 8'48	
Central.	}1,533 {	=	1.06			115.2			3'3		19'8	89"1	16.2				9'9	13'2	-	8:48 531'4 19'80	
apur .	303 {	-	1'4			127'0		5.8	5.0	11'5	3,30					4'3	3,30			942'3	2 .
ccan Gang	693-{	-	-			78.2	-			1'44		2.8 <sub>9</sub>	39'3	1'44			2.6	157		434°6 5°24	,
arwar .	382{	=	=		-				=		-	5'24								5*24	,
DECCAN.	6,840	7'2	1'5		'4	189'2	1'8	1.8	3.2			59'9	70'2	3 '3	1 7	1'0	13'2	111.0		77'97	

# TABLE XLII—concluded. RATIOS of FAILS, GROUPS, and ADMINISTRATIONS.

-					RATI	OS of	FAILS	GRO	OUPS,	and	ADM.	INIST	RATI	ONS	-		For	actua	s see	Table 2	
1. 501	_					1	DMISSIC	N RAT	-	2.		H-RATE,	PER I	,000	200	TREN	_			11. 11.	1 × 1
JAILS AND GROUPS.	Average annual strength.	Influenta.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever	Simple Con- tinued Fever.	Tubercle of the langs.	Pacumonia.	Other Respira- tory Diseases.	Dysentery.	Diarrhota.	Hepatic Abscess	Spleen Diseases	Se urvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil,	Phagedæna, Slough, and Gangrene.	ALL CAUSES.	Average number constantly sick per 1,000 of strength.
Thona .	619{	::		::	-	50'1		6.2	-	4°8 1°62	22'6	72:5 1:62	25'8				97	27.5	=	400.6	} 21'0
Bombay, Common.	} 423{	=	85'1 35'46	2'4	::	267'1	40°2 7°09	4.7	7°1 4°73	44°9 7°09	82.7	94.6	42.6 4.73				16.2	21.3		844'0 80'38	} 26.0
Bombay, House of Correction.	) 218{	=			:::	125'4				4.6 4.59	18.3	36.7	73°4 4°59				9.2	45'9		651.4	} 32'1
Ratnagiri .	134{		=		::	::		67.2	::		22.4	149'3	14'9	=				14'9	:::	395'5	} 14'9
Karwar .	143 {			::		76.0					7.0	49.0				70	14'0	14'0		370°6 13°99	} 21.0
Mangalore .	143{		=		==	14'0		14'0	::	14'0	::	28'0								97°9 6°99	} 70
Cannanore, Central.	} 772{			1,3	3,88 20,2	107'5	216	14'2	6.2	6.5	35.0	117'9 777	3,1				1.3	22'0		463'7	} 220
GROUP X WESTERN COAST.	} 2,452 {		6-12	3	15'9	109'3	77	11'4	3'3	3.50	34'3	88°9 4°49	24'1		::	*4	7:3	33.5	=	409°6 25°29	216
A	100		1			1-22											100		1000	- abilia	1
Bellary, Central	634{	=	631	47	3'2	211.4	3,5	6.3	31.2	9'5	25.2	15'77	=	=		1.6	3,5	44'2	-	916'4 39'43	} 26'8
Salem, Central	811 {		=	=	1,5	1196	::	39,2	8-6 2'47	9'9	23.4	48°1 1°23	-				=	12'3	=	352'7 9'86	} 1111
Coimbatore, Central .	} 1,318 {		0,10 10,8		76	14'4		88.0	100	6.8	11'4	91°0 4°53		::	::		-8	-6.1	11	424'9 23'52	} 17.5
Palamcottah .	386 {	=	2.20	::	2.3	90'7	=	2.5	2.6	==	7.8	103'6	=	=		::	2'6	44'0	=	411.0	} 20.7
Madura .	448 {		13'39	::	2,53	44-6	3.3		6.7		6.7	67.0	=		=		8'9	20'1	=	26.79	} 15'6
Trichinopoly, Central.	}1,059{				:::	28'3		.1'9	3'78	2.8	30'2	32°1 2°83	==	=			'94	23'6	=	314'4	} 17.0
Tanjore .	328{	==	=	3.0		30'5	42'7	30.2	3.0	12'2	3,02	3°05	3,0	=	::	-		27'4		426'8 18'29	} 21'3
Cuddalore .	347 {		==	::	=	28.8			5-8	5.8	1414	20'2	2.0			=	3,0	17'3		227°7 5°76	} 1414
Vellore, Central.	} 1,260 {	=		79		20'6	=	60'3	1.20	8.7	33,3	1,20						20.0	2'4	380°2 4°76	} 18.3
Madras, Civil.	39 {	=	=	25.6		=	-::				==	::	=							25.6	} -6•
Madras Peni- tentiary, Central.	} 1,010{			3,0	::	25'7	=	1.0	7°9 5°94	3.96	47.5	19.8	=		=		979	9.9		254'5 22'77	} 15.0
Nellore C	238 {		4'2 4'20	=	4'2 4'20	29'4	8'4	16.8	=	4'2	21'0	37.8 4.20	=		==	4"2	=	4.5	=	201'7 16'81	} 84
Rajahmundry, Central,	} 976 {		6.12			80'9	::	41'0	13'3	S-2 3'07	28.7	271.2	-			2'0	21.8	27.7	::	694'7 40'98	} 31.8
Vizzgapatam.	4 {	20,1	8.95	3,3		111.0	3,5	3,3	2'2	6°7 2°24	26.8	58'2 2'24	44'7					13'4	=	416'1	} 20'1
Berhampur .	128 {	::		!!	=			: :	7°8 7°81	7.8	15.6	781 781	140'6			=		15.6	=	242°2 23°44	} 15.6
GROUP XI.— SOUTHERN INDIA.	9,429 {	1'0	7'3	1'3	2°3 °42	57.6	2,1	30'5	10'2	7:4 1:48	<sup>23'4</sup> '53	76.0				.4	5'4	23'4	-3	41S'7 20'68	} 18'4

163.5	Ison	-	-			1. /	ADMISSI	-	-			DEATH-	RATE	7.1	2.1	OF ST	1				neg per
JAILS, ROUPS AND ADMINIS- PRATIONS.	Average annual strength.	Influenza.	Chotera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever	Simple Con- tinued Fever.	Tubercie of the	Pneumonia.	Other Respira- tory Diseases,	Dysentery.	Diarrhora.	Hepatic Abscess	Splena Diseaser	Scurvy.	Anzenia and Debility.	Abscess, Ulcer, and Boil.	Phagedaena, Slough, and Gangrene.	ALL CAUSES.	Average number constantly sick per
llong .	57 {		4		87*7	228'1					17.5	210'5	35'1		***				::	710'3	} 35
jeeling .	88 {		-	22'7		340'9	-	45'5	22'7	45°5 34°09	47'7	181.8	90'9				68-2	90.0		90'91	} 79
ora .	59{					152'5			16.92	-	16.0	33,5	50.8					152'5		651.0	} 10
i	14{	=			-		642'9	142'9											=	857"1	} 23'
ni Tal .	20-{		::			250'0		50.0	:::	50°00		100-0	***			=		50.0		50'00	} 5
h	18 {		=		=	111-1							55'6							277'8	1 5
bottabad .	79{		=	-		417'7				50%	12'7	75*9	25'3				25'3	5006		8228	} 2
etta	58 {					52.6	10.2	=	-	63'2	17.2	21.1	105.3	-			10.2	431.0	-	378'9	3
rcara .	95 {		154'8							31'58			31.28				10.23			105'20	3 11
ssellkonda.	84 {		130'95														***			130'95	
OUP XII	} 572{		19723	3.2	3.20	237*8	17.5	12'2	2.20	31.2	37,5	80'4	5:24				3.20	87'4		891.6	} :
TRA INDIA-	76 {					131.6		13'2				13'2	13.3				13:2	21.6		289'5	} 1.
DIA (a)	95-394 {	5'9	2.0	.0.	111	207*2	1'5	9'7	3.31 8.8	10'1	25-2	75°9 3°25	39"1	.1	-91	.01	12'5	(8.9	103	658-3	} =
RMA .	13,369	3.3	·\$ •22	·8	·4 ·15	49.7	.5 .07	14'7	8.5	4'2 1'20	12'3	1812	979	.15		*1	2.2	38.4		279'S 14'81	},
STERN ENGAL ND ASSAM.	6,871 {	14:4	2°0 1°89	-1	2'9	234 <sup>-8</sup> 2 <sup>-77</sup>	2'5		9.2	3,50	3)'0	242'2	73'5	s		1.0	39'3	41.0	=	911·8 29·69	
NGAL	14,857 {	2*8	1.4				2.7	6.8	15'1		30'3		84'9	8	14	7	10'4			1,003-8	5 } 3
PROVING	24,872{	11.1	7.44	1.0	.3	225.0	7		7.6	12.1		37'1	21'5		·5 -04	.0	10'0		4 '0	603,0	6 }
NJAB .	11,744	74		-6	3	291'8		3'7	7'3	11.1	27.5	33'8	50'1	6	'2	.3	22'1			736-6	1
FRONTIER PROVINCE	1,300 {	20.38	=	*8		809°2 1°54		26-2	7.7	23.8	35'4	78'5	51.5			3,1	25'4 1.5.	:76-9	-	1,464.6	1
MBAY .	7,925 {	.5	5.7	-6		139'3	2'9	2.2	5'0	15.4	32'9	54°8 2°0	60'2		2*1	3,2	11.2		=	639'3	1
NIWAL PROVINCES.	}3,320 {	14'4		.0	.3	196*8	2-7 -0c	2'4	3'9	63	13'2	42.7	33'9				14'1		=	398-1	1
ADRAS .	10,429 {		7'9	1-2	5'8	60.3	2-1	28.9	9'7	7.4	23.8	78'0		0	==	-4	5.0		-3	416.5	3
DAMANS .	14,688	26'2				1450'0	4'4 2'52	5'4	6°9 5°58	15'8	53'0					.9		98.6		2,040*8	3
									-								4		- 10		-

\*Worked on the aggregates,
(a) Excluding Andamans.
(b) Including Andamans.

## TABLE XLIII.

ACTUALS of TAILS. GROUPS, and ADMINISTRATIONS on which the ratios in Tables XL-XLII have been calculated.

ACTUALS	of FAII	S, GI	ROUPS	, and	ADM	INIS	TRA	TIO.	NS o	m whi	-	he r	ratio	-	ATHS	-	XL—X	LII ha	De bi	een	calc	ulat		-
JAILS AND GROUPS.	Average annual strength.	Inflaenza.	Choler a. Small-pox. Enteric Fever.	Intermittent Fever.	#	Simple Con- tinued Fever. Tubercle of the	lungs.	Pneumonia.	Other Respira- tory Diseases.	Dysentery.	-	Hepatic Absces	Diseases.	Scurvy.	Ansemia and Debility.	rî l	Phagedana, Slough, and Gangrene,	ALL CAUSES,	Tania,	coides, tumbris-	Dracunculus Medinensis.	Strongylus duo.	Other Entozoa,	constantly sick,
Mergui	68{			9				1 1					***		1	6 2		37 2 23					-	2
Tavoy	108 }				1	10V	000		1	***					***		***	247	5				,	
Moulmein .	619{		2			1	5		17	12 2	12					27		14						18
Shwegyin .	143{					E 100000		***	'		2	-				9		71					- 3	3
Toungoo .	593 {	6	2	79	2	=	9 1	5		27	12				2	31	:::	334		-			- 3	24
Rangoon, Cen- tral (Europeans)	} 18{	=		=		0.000			1		2	-		:::			=	6					: }	
Rangoon, Cen- tral (Natives).	} 2,396{		2	18			18	6 2	15	24	3					59		487 35					}	24
Maubin	365{		2	7			-		3	8					2	2	=	44 7	1000				}	
Myaungmya .	704 {			12		-	6	2		3						14		97 4				=	}	5
Bassein, Central	1,034	38					18 7	7 4	20	7	1					62	=	378 16		2			:: }	26
Insein, Central.	2,325 {			101			16	2	6			1 1			1	66		294 20					::}	19
Henrada	420 {		2 1	15					'	4		1				10	=	109				-	3	
Myanaung .	78 {					7.00				2				-			=	17						18
Sandoway .	86 {		2											-	4	17		67 1	-			-	- 1	,
Kyaukpyu .	151 {			4			1				1					13	-	147				-	- 1	5
Akyab	467 {		- 1-	44		=	4 2	4	13			-				-1	***	13				***	5	,
GROUP I.— BURMA COAST AND BAY IS- LANDS.	9,576{	44	6 10 4		6		88 44	35	98 5	102	36 2	2 2			14	323	=	2,371	5	3				140
Paungde .	188 {			16	***	=	:			9								49 5 247	-				-	
Prome	336 {			52 3		=	=	-	7	13	11			***	100	57	-	9	-				-	12
Thayetemyo, Central.	} 759{		1 1 1	9	::	=	16 7	13	36	62 4	53		::		7	29		413	-					26
Taungdwingyi	26 {	=		1000000		=	=											5	-	-				
Magwe	149			10000	***					4					4	8		25				***		
Yamethin .	96							1				-				3		16						-
Meiktila .	80-	=				=	-		2			-				2	***	11						;
Pagan Myingyan, Cen	. 55	1000					3		3	34				***				112						5 ,
tral. Mandalay, Cen	779			. 1		9	1 4	5	15	2	15				2	69		363						} 14
tral.	3 844					"	3											1				-	-	
Transition .	87-	1		. 7		-	-	1			5					2		24	80			100		} .
	59	3		. 1								1												}
Bhamo .	1 60			. 2		10				1330			70	:	. 1	. 7		5				=		} ,
Katha				3	1						3			1:		1 200	CO CONTRACTOR			***	-		-	}
Kindat	37	{ =			***	=								:-		-	0.00	-	-		=		-	} -
GROUP II.— BURNA IS- LAND	3,793	1 =		26:		23	26 12	21 2	66						20	191		1,36			-:		-	} 70

	Ten -		1			Ę.	1	9 1	- 1	THE SEC	IISSION		r sé l	4 1	2. 1	PATE	1 5				1.4		L	-	Per C
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Enteric Fever.	Intermittent Fever.	Remittent Fever	Simple Con-	Tubercle of the lungs.	Pacumonia.	Other Respira- tory Diseases.	Dysentery.	Diarrhosa.	Hepatic Abscess.	Spleen Diseases	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedaena, Slough, and Gangrene.	ALL CAUSES,	Tænia,	Ascaris lumbri- coides.	Dracunculus Medinensis.	Strongylus duo- denalis,	Other Entozoa.	Average number
char	75{				2							2				3	2		17						}
osagar	68 {						=			::	15	4	100	-		2	12	::	57						+
brugarh .	110{				31				3	10	49	22	100			11			159						+
tper	303 {				57 2			2 2	5	6	26 1	6	100			11 3	18		214		::	::			ł
uhati	292{		7 6		91 4	=		2		11	43 15	15	532	-	2	4	10		206 25						}
het	582 {		20.0		180	10			2	5 1	95	25		000		12	34	`	430 3						}
OUP III	1,430{		100		372	10		6 2	11 3	32	229	74			2	43 5	77		1,093				1000		}
		-	1	I									T	T	1	1	T						1		
mensingh .	602{		00000	14				12 2	3 2	27	219	20		-	2	16	18	=	641					- }	}
cca, Central	1,165{		4		144	=		16		76 2	95	3		-		136	62		899 28		6	2		- }	
pera	335{		1		41 2 128				3 1		36 1 63	15		**	-	1	 8		151 8 281					: }	
ittagong .	153				9				1		87				-		1	-	119	-				- 1 (	
kergunge .	623 {			1	125			3	15	48 5	360 8	57 -			1	52	23		958 26	0				-	
ulna	46 {				24			1		2	17	188					3		61					-	
pore	352 {				94	1		6	13	15	264	7				6	6		481 8	1				- 3	
sidency, Cen-	} 35{				4						2		-				1		19					- 3	
sidency, Cen- ral (Natives)	} 1,173{	24		2 1	139			15	8 2	20	79	- CO.			3	8	40		542 19	-			7	3	
pore, Central	1,892{		3 .		705			62 20	20 4	49	295 5		100	300		1	118	=	1,945 44	***			1	-	-
oghly	399 {			1	82 1		***	14 4 2	5 3	8	60 2	1 .			-	12 2	33		422 14 436	3	***	-		-	
rdwan .	234 {				37	2		2		15 3	3	8			-	1 2	15		176					1	
idpur .	354 {	98			132	-		10 1	12	22	89 2	92			-		29		5 584 8	-				1	3
bna	193{				64				2 2	5	27	18					5		154	_				1	
rshidabad .	253{		1	-	132		==	3 1		7	12	16	1000			1	5	=	230					1	
pshahi, Cen-	188				6t 1	1		3	3	18	173	100000			-	4	3		364 18					1	
gra	104				111			"		4	29	24			1	5	9		212				,	5 1	
The state of the s	-				92	***		3	4	13	68	29 -	-	1		3	13		288					1	

### TABLE XLIII—continued.

ACTUALS of FAILS, GROUPS. and ADMINISTRATIONS on which the ratios in Tables XL-XLII have been calculated.

ACTUALS	_	LS,	GA	ROUP	S. and	1 AL	MIN	151	KALI	ONS	on w	nten t	2. Di	LITT	IN .	Laoses	AL-	-ALII	nav	- 00	en c	calcul	irea.
JAILS AND GROUPS.	Average annua strongth.	Influenza.	Cholera.	Small-pox. Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Con- tinued Fever.	lubercle of the lungs.	Pneumonia.	Other Respira- of tory Diseases.	Dysentery.	Dearrhosa. Hepatic Abocess.	Spleen Diseases.	Scurvy.	Anemia and Pobblity.	Abscess, Ulcer, and Boil.	Phagedama, Slough, and Gangrene.	ALL CAUSES.	Tania.	Ascaris lumbri- coldes.	Dracunculus Medinensis,	Strongylus duo- denalis.	Average number constantly sick,
Rangpur .	269 {		-		112			6	3 2	10	129	10			5	4		318 6					
Jalpaiguri .	124 {				25			1		1	14 2	20				2		88 5				= :	100
Purneah	270 {			I	64	2		11	1	3	40 2	6			10	4		238	-	***		=======================================	} 15
Naya Demka .	132 {				49			1 1	2 2	7	42 2	8			1	9		151				== ==	- 4
Seri	235				94	1	2		2		20	7			1	13		190			***		4} 3
Bankura .	239		5 2		37		1	1	1 1	8	29	11			2	5		122		-	***	444	}
Midnapore, }	381 -		10.		313	2 2	10	11 5	5	30	281 23	230	1		8	119		1,483			-	=	} 60
Balasore .	151		-		31		***	5	2	7	36	17	1000			15		146		10000	***	444	} :
Cuttack	313				23	22		3	7 2	8	45	9	. 1		5	17		190					-} ,
Puri · ·	147	-	-		70			2		2	18	4 -			4	4		117	,	١.	***	-	}
Angul	77		-	-	21		-	1	***	1	8	8			1	8	-	61					- }
GROUP IV BENGAL AND	12,457	12			3,408 18	37	13	199	120	422	2,788	1,048	4	8	292			12,289	13		2	6	57
ORISSA.		3	1	1 14		5		1	40	11	74	9	1					325	1	1	-	1	- 5 34
Chaibassa .	183		- 4				=	2	2 2	10	17	45		1000		23		252	-			=	}
Purulia	782 -	-		2	123	***		11	14	32	47	49	3	-	8	18	=	405		-			5 } 10
Ranchi	212		-		28			3 2	***	2	47	4		-	1	10	=	108	_				- }
Palamau .	105	1 :	SH \$ 530		30			1	2	1	22	9		-		15		106					} :
Hazaribagh, Central.	916-				170	1	1	3	3 2	18	180	21			2	45	=	544 25					} =
Gaya B	515			1.1.1	40		76	1	5	16 2	21	16			1	44		318					} 10
Bhagalpur, Central,	1,818	-	1		583		::	20 6	26 4	77	310	235		2	18	152		2,022					} 30
Monghyr.	341					:::	1	2	1	5	20	6			1	7	=	216				_	-} .
Darbhanga .	315		_		28			7		16	.55	14	7.00		3	19	:::	183		=		_	8 } 5
Champarun .	352				41 1			2	3	4	40	4 ::	-373			8		152				=	: } ;
Muzaffarpur .	357	17			40		6	3	2	5	57	4			1	25		248				100000	} 13
Patna .	354	1 ::			33			2	2	16 1	45	11			***	26		211	-		-	=	} 12
Arrah			-		59  81	1 1		2 0	3	4	76 2 106	36 -	-		3 2	7		281 9 290	-				} 10
Chapra	330		-	2 1	1,191			11	11	35	342	102		6	41	106		2,194					6 2 6
V	35				14			4			5							23					} 65
Ghazipur .	346-		. 3		87				2 2	20 2	14	7				41		205	-				} 10
Azamgarh .	362		. 5	2	56				3	13	21	2				11		161 5	-		-	1	3 } 3
	8-		-	===	1		=				1			-	=	=	-	6	1				Contract Con
	516-		-		97				9 1	13	159	31	-	-	33	44  8	-	688 15 149	1				1
Fasti	450		1		65	-		3	3	1 19	15	6	-	-	20	30	-	262	1111	-	-		1
F 19	237			2	48			6	4	4	4 1	4 :		-	5	20		137			-		3 6
AND DESCRIPTION OF THE PARTY OF	1		-	10000	****		***	1 '	***	***			1		1			7	100		***		- ,

	3		1	II	1	1 6	1	10		. 2. 1		MISSION	21 2		1 -	ATHS.	1	F6-7-0	1 1			2	
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox.	Intermittent Fever,	Remitten prover.	Simple Con- tinued Fever,	Tubercle of the lungs.	Pneumonia.	Other Respira- tory Diseases.	Dysentery.	Diarrhora,	Spleen Diseases	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagediena, Slough, and Gangrene.	ALL CAUSES.	Taenia.	coides,	Dracunculus Medinensis,	Strongylus duo- denalis.	Other Entoron.
Bareli .	525 {		1		41	-		4 3	3 3	4	13	4	2000			41		201 IO	100			_	10
tabgarh .	192{				16				4	7	4				3	8		59				:	- 3
unpur	343 {				24	1			1	2	10	6	-		8	16		85				:	- 3
nares, Cen-	1,297 {				262			10	4 2	8	40	23			5 4	129	1	669			***		100
, District	344 {			100 100	40			1	1	6	+	3			3	43		165			***		10
irzapur .	204 {				33			4 1	1	1	7	1				6		60 I		-			- }
lahabad, Cen-	1,331 {		***		43 1		160	11 7	6	63	23	59				259		904 13		-		:	10
. District	537 {		1 1		31			1	11 5	27	20	7 -			9	61		303	1 .			:	10
irwi .	33{				5				2	1		2						29	000			:	16
inda	190{	7	3		152			2	6	22	23 1	27		-	10	52		433					16
tehpur .	321 {		-		107				2	5		10				9		155	3 .				16
amirpur .	139{		***	1	114		6	2	1	9	4	5	***		1	22		197	55				16
ai	164{				8o 			2 1	1	4	22 2	3			1	24		163	100				16
wapore .	435{		-	1	115	-	***		·2 1	8 2	2	5			4	29		241 11	RO 100				1.6
ao	308{				21		3	1		6	7	1			***	17		83	5240				16
cknow, Cen-	1,532 {				167			11 7	7	4	48	16				58		385 15	100				
, District	499{				21				4	2	9 2	12				35		160					
rabanki .	347 {				50			1	4	2		13			1	40		181				3 -	- 14
nda	349{	***	-		17			1 2	5	3	2					3		83					
hraich .	249{				28		8		2	1		4 -			3	34		121					-}
seri	299{			1	66			2	3	13	3	5			1	26	***	187	1	1	***		: }
apur	537 {	37			82		***	3	7	16	9	9				30		264 5					-}
ardoi	337 {				73 2			1		1	3	4			2	41		167					: }
awah	305 {	4			95			5	17	6	20	1			=	6		192	000		***		-}
ainpuri .	310{	4		3		=		5	1	11	22	24			1	28		357				1111	: }
ah	308 {				1 000			4	6	5	21	6			11	24		184				300	}
tehgarh, Cen-	}1,771 {			1				14	7	11	30 4	7				93	2	512 26					}
" District	343 {	***			1			5	12	8	4	9				26		190	8000				1
GANGETIC PLAIN AND CHUTIA NAGPUR.	23.376 {	69	25	17 6	5,403	10 2	261	184	225 48	572 23	1,998	910 .			211	1,850		15,895 414		3	2		23 }
A mahjahanpur.	33 {					- 1	44	2	5	5	25	8			***	34		242					
llibbit	38{				2	1		2		1	3	1 :: :			1	2		25				***	}
reilly Cen-	}1,885{							23	8	39	12				21	55		1,008	1.				

TABLE XLIII—continued.

DMINISTRATIONS on which the ratios in Tables XL—XLII have been calculated.

ACTUALS	of FAIL	S, GI	ROUP	S, and	ADA	IINIS				ich the	rati		n Tal		XL—X	LII ha	ve be	en ca	lcul	ated	THE PERSON NAMED IN
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera. Small-pox.	Intermittent Fever.	Remittent Fever.	Simple Con- tinued Fever. Tubercle of the	langs.	Respira-	Dysentery.	Diarrhora. Hepatic Abscess.	Spicen Diseases.	Scurvy.	Anzemia and Debdity.	5	Phagredgena, Slough, and Gangrene.	ALL CAUSES.	Tsenia.	coides.	Strongylusduo-	Other Entozoa.	Average number constantly sick,
Bareilly, District	751 {	95		1 100	1		23 5	11 41	7,000	19		1	4	29		615					} 19
Budaun .	351 {	***					2	4 :	0.00	1				32		132	1000100		1 200	_	} 6
Aligarh	374			1000	3		2	12 12		5			2	34		247			_		} 12
Bulandshahr .	231 {	***		34		100000		2 1	14	4 -	-			13		108	100000		6 100	_	} 5
Moradabad .	378{	=					5	5 1.		15				59		600	1000				} 20
Bijnor	274{						2	4 10	-05	11		***		39		147					15 %
Ochra Dun	95{		4		1	***	1	1	2	6			***	4	***	60				000 000	} 3
Saharanpur .	336{		2	197			2	10 :	95	29			4	26		452					} 20
Muzaffarnagar	167 {					1	2	12		3 ::			6	6		192			SH 50K		16 7
Meerut	569{	67	==				8 5	6 3	7	=======================================	441		25	45		529			60 BS	201	6 14
Delhi	475 {		===	. 112			7 2	13	2 29	10	100		8	22		237			91100	100	1.6
Rohtak	117 {									18			3			129					16 1
Hissar	182		===	75			2	3 .	5 10	35			7	49		234					1
Karnal .	107 {		:: :: ::	. 85			1 1	1 1	100000	5	200			7		137					18 3
Ambala	592 {		22.00	142		14	4 4	10 2	1 10	56	***		24	72		496 25					10 20
100 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		191		1 4			1												1		100
В		5	1	49			2	2	2 5	37			3	32		171			_	-	10 3
Ludhiana .	211 {		1					***	00000	9		-	1	5		69		-			3 .
Hoshiarpur .	54 7							2	1 12	15	1		2	39		156					3 3
Juliundur .	221 {	***					3	7 1		22		1	10	42		230					3 11
Ferozepore .	379 {						1	5 1		.43	-		6	39	-	365	-				3 .
Amritsar .	1,580 {	***	2	1 602			12	17 5	31	58	- 60	1	6	3:3		1,491	3				
Lahore, Central	498 {		1	1 131			3	1 2	5	37			5	62	-	397	-				1 2
, District	179						1		4 2	5			S	25		147	-				16 4
Gurdaspur .	199{	0		31	***		1 1 1		. 5	3				14		72	-				10
Gujranwala .	285 {	***		93	1	3	3	00000	8 10	11			5	27		221				201 101	} 6
Sialleot	270 {			60		-	1 2	2 1	, 5	8		111	6	19		151				_	10 00
Gujrat	79 {			36					. 2	5				13		85			"	-	1
Jhelum	179 {			. 39			4	2 .		3	53.5		-	7		84			9		3
Rawalpindi	751{				-	=	4 3	6 1	7 32 6	35	-::	-	So I	6)		887					
GEOUP VI) UPPER SUB- HIMALAYA.	12,351 {	167	12	4 4-433	91		42	153 37 44	449	538		2	250	1,236		10,106		1 2			} 359

B. Marie	7			101		F	TAT	9	-	. ADM	13310 N	1 .	161	16		2, DE				1	4		l å		ber
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Con- tinued Ferer.	Tubercle of the lungs.	Pneumonia.	Other Respira- tory Diseases,	Dysentery.	Diarrhea,	Hepatic Abscess	Spleen Diseases.	Scurvy.	Anzenia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Slough, and Gangrene.	ALL CAUSES.		Ascaris lembri- coides.	Dracunculus Medinensis.	Strongylus Duo- denalis.	Other Entozoa.	Average number
A			1	11	1								1							i	-			1	
shawar .	579{	38 7		1	408		34	6	21 2	25	49	40			2	19	102		847					3	-
hat	123 {				97			1	2		8	3		1		1	20		154					]	+
snu	124{		1000		48			1	1	7	7	9				5	- 12		111	-		7		}	}
hpur	174			1	53		,		***		10	10		***		2	16		127	1		1		}	
anwali .	242{	***			71			2	3	4	21	34	-			3	60		278			4		}	
allpur .	392 {				28			4 2	6 2		33	3					35	=	142						1
ing	209 {		1000		31				10	7		12					44		137	1				- 1	3
entgomery, }	1,972 {	***		. 1	408	1		11	18	47	36	26 2			1	15	79	1	853 39		1	10			
oltan, Cen- }	1,235{			1	167			14	3	39	33	34		3	1	58	107	-	638	1	***	5		}	
" District	653 {				49			4	14	8	21	8				2	25	==	198	1	***			- 1	-
ra Ismail }	395 {				466				3	12	32	13			2	6	92		727		***	18			}
ra Ghazi }	282 {				284				3	19	16	45	1			5	55		524 2			3			-
С										-															
karpur* .	467 {			1	16			7 4	7 5 42	2 6	4	3 5			3 2	3 2	6		145					3	-
d Gang .	444 {				130	3			13	50	18	63	-		6	10	66		21 547						
Central.	854 {	2		2	54	1		3	3	22	4 20	25	-		1 8	5	26		279					3	
ROUP VII	302{					1			3		1	1	-	***	1				10						•
L-W. FRON- IER, INDUS ALLEY, AND JW. RAJ- UTANA.	8,447 {	42 7		7 1	2,340	\$ 4	34	64 29	153 37	269 5	317	334		17	25 2	138	745	1	5,828 176	3		48		]	}
A	96 {				27					3	7						3		59				***		
nmedabad, }	832{				101			8 4	10 1	16	9	4			1	11	58		354	3		20		!	
В						- 03						20	H						3.0			100			
mer	465 {	1		-	46			1	3 2	1		4				6	35		192		***	10		3	
uttra	265 {	58			413				60	61	28	13				30	140		1,315	4	***				
ra, Central .	2,142 {	3		4				3	13	10	13	31		1			55		391						
	513 {	3: 1		1	53				4	3	35	6		8		3	52		236	-		1			-
alitpur	224 { 58 {				18				1								7		42	-					
ROUP VIII.—	4,595 }	6:		9 1	S94	1		22	87	106	103	100		9		56	373		2,520	8		32			-
CENTRAL   INDIA, AND   GUJARAT.	41393 {	1		1	3			11	20	-	7			1	-	1		***	85		***	***	***		,

### TABLE XLIII—continued.

ACTUALS of FAILS, GROUPS, and ADMINISTRATIONS on which the ratios in Tables XL-XLII have been calculated.

ACTUAL	of JAI	,	GA	OUL	-	-		-		. ADI	MISSIO	W G				z. De.	THE				ocer	- Charles	tenta	-	-
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Small-pox. Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Con- tinued Fever.	Tubercle of the lungs.		Other Respira- tory Diseases.	Dysentery.		Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anzemia and Debility.		Phagedæna, Slough, and Gangrene.	ALL CAUSES.	Tzenia.	Ascaris lumbri- coides.	Dracunculus Medinensis.	Strongylus duo- denalis.	Other Entozoa,	Average number constantly sick,
A Damoh	43{	***			1000000				1		3	3				2	6		59	11		3			
Saugor	83 {						3			2	14	11				2	13		107						3
Jubbulpore, Cen- tral.	} 789 {	17			14	2		2	6	14			-	***		17 2	42		192			5			8
Narsinghpur .	59{			::::								***				1	***		9					]	}
Mandla	71 {			::::	7			1		.3	4						13		38						1
Bilaspur	109{	21			1 1000	2	5		1		10	. 6					2		88 2	-			::	}	2
Sambalpur .	113{				64	1 1				5	12	4 <sup>2</sup>				3	12		164					}	4
Raipur, Central	441 {				0.00	4		2 2	2	7	18	23				5	18		242					}	. 8
Balaghat .	56 {							1	1							2	14		43						
Seoni	44 {		-		4					2	==						2		27 I	1					} 2
Chhindwara .	22{				6	-		-		1	2	2					1		18						} .
Hoshangabad.	71 {		-		13	1			1	1	16	6					1		50		***			}	2
Nimar	74{		-	-	1				1		13	23	-			2			131					}	. 3
Betul	31 {				10000				-			5	-	1		2	7		49 1					]	} .
Nagpur, Centra	637 {	7		2			-	4		8	16	10	-			6	50		548 3					1	12
Bhandara .	78 {		-	-	9	***		1	2			2		***					19					}	. 1
Wardha	49 {		-			-				1							5		19					}	
Chanda	62{			1				-	1	1 1		1					5		30 1						1
B Secunderabad .	81{	1					=			1	9	3					10		95	-		::		-}	,
Yeotmal .	40 {								1 1	1	3	7				=	7		47				-		
Amraoti, Central	224 {		1		23			:	1	2	20	10		***		3	7		104			::		-	
Akola, Central.	287 {	3					1.	1	1	1	11 2	3				3	24	-	142			5	-	}	
Buldana	54 {				0.000						4 1	1					7	=	29 1			-		3	
Dhulia	406 {							2	8	13	25	10	1			2	18		182	-		19	-	: 3	8
Yerrowda, Cen- tral.	} 1,533 {		8 3	2				6	3	47	123	248		4	4	32	275		1,921	3	6	49		3 }	94
Bijapur	303{	7.				1		1		6	27	5	-			3	4	::	161 6	_		21		-}	5
Deccan Gang .	693 {	***	1		88		4	2	8	18	38	44	1		3	2	198		653			19			17
Dharwar	382 {				30				::		34	15	-	-	-	1	6	=	166			92		-	6
GROUP IX}	6,840 2	49	10	3 3	1,294	12 3	12	24 8	40 5	135	410	48o 5	2 2	5	7	90 4	759		5.333	-		145		4 }	198

	2 1		1111			-	-		-	. ADM	ISSION	s.		2. 1	DEA	THS.	-			-11			-		_
JAILS AND GROUPS.	Average annual strength.	Influenza.	Cholera.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Con- tinued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respira- tory Diseases.	Dysentery.	_	Hepatic Abscess.	Spleen Diseases.	Scurvy.	and y.	Abscess, Ulcer, and Boil.	Phagedgena, Slough, and Gangrene.	ALL CAUSES.	Trenta.	Ascaris lumbri- coides,	Dracunculus Medinensis.	Strongylus duo-	Other Entozoa.	Average number constantly sick.
Thana	619 {			-	31		4	101	3	14	48	16				6	17		248			24			} 13
Bombay, }	423 {		200	1	113	17	2	3 2	19	35	40	18				7	9		357 34			2		}	11
Bombay House of Correction.	218 {			-	28			***	1	4	8	16				2	10		142	-		2			} 1
Ratnagiri .	124 {	::					9			3	20	2					2		53						} 2
Karwar	143 {									1	7					2	3		53 2		1	1			} 3
Mangalore .	143{				2		2		2		4							:::	14		1		0.00	}	} .
Cannanore, }	772{			39	83	2 1	11	5 2	5 2	27	91	7				1	17	:::	358 20		2			}	17
GROUP X WESTERN COAST.	2,452{		36	39	268	19	28	8 4	30 8	84 4	218	59		=		18	57	::	1,225 62		4	29		111	} 54
A Bellary Central	63.		5	3 2 1	134	2	4	20 4	6	16	65					2	28		581 25	2		45			} 17
Salem, Central	SII			. 1	57		32	7 2	8 2	19	39						10		286 8			16		1	9
Coimbatore, }	1,318 {		25 12	15	19		116	14 2	9	15	120					1	8		560 31		3	51	4	-	23
B Palamcottah .	386 {		1	2	35		2	1		3	40 1					1	17		159		1		1000		} 8
Madura	448 {		20	:	20	1		3		3	30					4	9		130			2	:::		} 7
Trichinopoly, Central.	1,059 {		-		30		2	23	3 2	32	34		-			1,	25	=	233	-	3	29			} 18
Tanjore	328 {			1	10	14	10		4	5	19	1					9	:::	140			3	***		} 7
Cuddalore .	347 {				10			2	2	5	7		-				6		79	-		5			} 5
Vellore, Central		***		3	26		76	2 2	16	28	25				***		63		479		8	9			25
Madras, Civil .	39 {	***		1	***																	***		_	}
Madras Peni- tentiary, Central.	1,010 {			3	26			8	4	48	10					10	10	::	257 23			3		1	} 13
Nellore	238 {		1:		7	2	4	11		5	9 1		-	::			1		48 4			9 :			} 2
C Rajahmundry, )	976		12.		79		40	13	8	28	265				2		27		678		10000	18			} 31
Central. 5	447 {	0	5		50	1	1	1	3 1	12	26	20	1001			5	6		186						} ,
Berhampur .	128							-		2	18						3	=	31		123				} 2
GROUP XI SOUTHERN INDIA.	9,479 {	9	100	1 4		20	288	96 24	70	221	717 39	23			1	1 2	221	3	3,94 <sup>8</sup> 195	3	15	183		3 1	} 174

### TABLE XLIII—concluded.

ACTUALS	S of FA	ILS,	GR	OUPS	S, and	AD.	MIN,	ISTR		-	OM TO		_	DEAT		ables	XL—X	KLII h	ave	beer	ı ca	loula	ted	-
Jails, Groups, and Adminis- trations.	Average annual strength.	Influenza.	Cholera.	Small-pox. Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Con-	Tubercle of the lungs.	Paeumonia.	Other Respira- tory Diseases.	Dysentery.		Hepathe Abscess.	1	and .y.	Abscess, Ulcer, and Boil.	Phagedæna, Slough and Gangrene.	ALL CAUSES.	Taenia.	coides.	Medinensis.	Strongyius duo- denalis.	Other Entozoa.	Average number constantly sick
Shillong .	57 {			5	13					1	12		: :			=	::	41 5	1000				-}	2
Darjeeling .	88 {	441		2	30		4	1	4 3	13	15	10000	: :		6			143	4	4		100000	- }	. 7
Almora	59{	***			9			1		1		3		0.00		9		39					: 3	2
Pauri · ·	14 {					9	2					***				***	=		***				- 3	
Naini Tal .	20 {				5	***			1									13	***	-	-		- 3	0328
Simla	18{			***						2		***		1000	***	==		5					- 3	-
Abbottabad .	79 {	***		***	33				4			2	-			4		65						
Quetta	58 {		***	****	39				3			4	- :		-	25		133	***					
Mercara . Russellkonda .	95		13	*** ***	5				3		,	3 5				3		10 23				=		
GROUP XII	} 572{		13	2 5	136	10	7	3 2	18	19	46 5	35		T	9 2	50		510 37	10	4				18
EXTRA INDIA-Aden	76 {				10		1				'	1	:: :		1 11	4	=							
Remaining from 1905 Admitted .  Died Out of hospital	95,394	10 565 12	187	4 7701 9 18		5 140 20	13 930	180 844 306	59 963 243 	119 2,400 68 	259 7,525 310	57 3,734 70 	5 4		1,193	6,362	3	2,073 62,795 1,838	1	45	7468	36	36 1	2,601
BURMA	13,369	44	7 3	11 5	664	7	197	114	56 16	164	243 20	133	2		-	514		3,736 198	6	4		1	- }	210
EASTERN BENGAL AND }	6,871	99	14	1 20	1,513	17		65	62 22	268	1,664	505		. 7	270	282		6,263	5	6	2	5	1	295
BENGAL	14,857 {	41	21 15		4,013	40	:01	225 64	148	450 11	2,787 85	1,261		5 11	100	1,026		14,988		6			23 }	363
UNITED PRO-	24,872 {	275	17	26 7 3 1		18	225	188	301	590 21	923 47	535 19		3 1	245	1,979	5 2	14,998		3	4	4	4	666
Punjab	11,744	5		7 3	3,427	2	44	86 45	130	323	397 31	1000			259	1,279	1	8,651		1	49		}	308
NW.,F. PRO-	1,300 {	38 7		1	1,052		34	10	31 5	46	102	67 I		2		230		33	-		25		3	45
Вомвач .	7.925 {	4	45 18	5 2	1,104	23 7	20	40	122 29	261 9	434 16	477	3 1 2 .			705	:::	5.463		7	180		3 }	
CENTRAL }	3,329 {	48	1	3 1	655	9 2	8	13 6	21 4	+;	142 7	113		: :	- 4	236	=	1,991			15		- }	
MADRAS	10,428 {	9	8 <sub>2</sub> 45			22	301	101 26	77	248 6	813 45	34		0.00	1 6	238		4,343			183	3	2 1	} 190
Andamans .	14,688 {	385			21,297	65 37	So	to1 82	23 <sup>2</sup> 79	778 18	72	536	1 .	100		1,448		29,975		-	3		-	}1.03
Remaining from 1905 Admitted Died Died out of hospital	1,10,082	13 950 12	187	-		205	13	319 945 388	7t 1,193 322		8,905	74 4.270 75	6 4	2 11 72 1 2	1,193	8,010	3	2,916 92,770 2,239 56	1	46	7 471	5 36 4	36	3,63

<sup>\*</sup> Resnaining + admitted = total treated; Remaining + admitted + died out of hospital = total cases.
† Including Ajmer, Quetta, Secundershad, and Mercara, and excluding Andamans.
(a) Including the subsidiary jails, the total figures are:—Average strength 1,00,949. Average constantly sick 2,689. Number of deaths 1,935. Number of deaths 2,356. Number of deaths 2,356. Number of deaths 2,356. Number of deaths 97,120.

		-		1. A	VERAGE ST	RENOTE.	3. Co	NATANTLY :	SICR.		,		-
GEOGRAPHICAL GROUPS,	January.	Pebruary.	March,	April.	May.	June.	July.	August.	September,	October,	November,	December,	Average for
GROUP IBURMA COAST AND BAY	9,313	9,152	9,098	9,108	9.333	9,593	9,663	9,767	9,837	9,978	9,993	9,985	9,376
GROUP II.—BURMA INLAND	3.755	3,684	3,701	3,755	3,769	3,791	3,758	3,799	3,812	3,921	3,900	3,963	3,793
SROUP I 1.—Assam	1,305	1,298	1,009	1,364	1,403	1,428	1,465	1,505	1+493	1,51 s 63	1,578	1,506	1,43
GROUP IV BENGAL AND ORISEA .	11,609	11,912	11,835	12,110	17,254	12,518	19,678	12,746	12,899 583	12,774	12,052	12,959	12,45
GROUP VGANGETIC PLAIN AND E CHUITA NAGER.	22,340 532	12,573 502	13,017 535	23,350 620	23 <sub>6</sub> 329 619	23.739 607	23,852 662	24,005	24,058 20)	23,813 675	23,275 653	22,820 593	13.22
SROUP VIUPPER SUB-HIMALAYA .	12,176	12,264	13,343	12,477 308	12,430	12,479	12,659	12,502	12,530	12,350	12,128	11,874	17,25
ROUP VIINW. FRONTIER, INDUS VALLEY, AND NW. RAP-	8,337 196	8,319	8,355 181	8,410	8,486	8,362	8,661 237	8,776	8,631	8,405	8,275	8,10)	8,4
GROUP VIIISE. RAJPOTANA, CENTRAL INDIA, AND GUJARAT.	4,451	4,631	4,535	4.567	4.514	4,604	4.709	4,710	4-734	4,605	4,553	4,515	4,5
BOUP IX-DECCAS	6,895	6,8;8	6,857	6,820	6,712	6,759	6,893	6,860 ag6	6,9:6	6,916	6,835	6,675	6,8
GROUP XWESTERN COAST {	2,335 44	2,381	2,396	2,479 44	3,511	2,530 59	2,592 69	2,514	2,517	2,431 46	2,358 48	2,346	2,45
ROUF XI.—SOUTHERN INDIA	9,659	9,503	9,342 136	9,162	9,201	9,183	9.357 160	9,305	9×354 252	9,544	9,618	9,690	9.4
ROUF XIIHILLS	549	529 13	517 15	539	565	\$35 22	658 25	6 j.2 26	\$93 17	565 18	552 16	245 15	5
NDIA*	99,001	92,493 2,208	93,465	94,339	94,630 2,415	95,001 3,444	97,061	97,924	97.524	96,796	95,099	95,031 2,755	95.36 2,60
					I. AYERA	SE STRENGT	m.	2. CONSTAN	TLY SICK.				-
ADMINISTRATIONS,									, i		er.	1 5	for for
	January	February	March.	Aprill.	May.	June.	July.	August.	September	October,	November	December	Average
5	13,065	12,835	12,799	12,863	13,101	13,383	13,416	13,566	13,709	13,799	13,591	13,945	13,3
ASTERN BENGAL AND ASSAM		6,297	6,322	6,545	193 6,678	6,908	7,068	7,161	7,275	7,221	7,418	7,230	6,8
. ,	333 14,095	275 14,365	14,390	14,019	14,790	251 14,991	15,212	15,154	296 15,157	381 15,063	363 15,070	351	14,8
(	483	487 24.755	516 24,888	552 25,051	555 24,899	531 25,349	551 25,424	664 15.337	646 15.333	25,017	586 24,418	578 23,870	24,87
(	510 11,50)	553 11,517	565 11,553	11,671	616 11,747	635 11,777	650 11,936	752	866	766	758 11,783	64E 11,473	11,7
The state of the s	248 1,238	228 1,295	1,085	1,352	302 1,341	1,313	301	1,059	354 1,359	367 1,295	380	368 £4200	1,3
5	37 7,997	7,939	7,937	7,940	7,927	56 7,98a	51 8,160	47 8,143	8,050	7,924	7,649	47 7,588	7,9
(	193 3.387	3,348	3,355	3,295	3,341	3.371	3,518	281 3,105	278 3,291	267 2,284	169 3,246	3,001	3,1
	58 10,684	53 10,447	55	6a 10,334	10,140	10,234	74	10,357	75 10,595	64 10,556	57 10,617	15	10,41
	183	165	145	1.44	04,630	167 95,001	97,061	97,224	991	235 95,796	194	95,051	05,30
	69.000	00.000	02 166	04.555		Sections.	81,000	27,144	21.221	2011/4	20,000	371031	10000
	17.000	92,498	93,405	2,357	2,415	2,414	2,544	2,903	2,998	2,079	104	2,755	2,00
	14,627	The state of	1000000		1 700	2,414 14,715 1,033	2,544 14,729 2,110	1,255	2,998 E4,701 F,147	2,979 14,703 1,125	14,633 936	2,755 14,619 1,906	2,00 14,08 1,03

<sup>\*</sup> Including Aden and excluding Andamans.

<sup>9</sup> Including Aimer, Quetta, Secunderabal, and Mercara, and excluding Aniamans.
2 Including Aniamans.

### TABLE XLIV.

ABSTRACT of the SANITARY SHEETS of the most UNHEALTHY FAILS, SANITARY DEFECTS, IMPROVEMENTS, SUGGESTIONS, etc.

#### BURMA.

Pagan.—The three prisoners who died, one from ulceration of the stomach and two from leprosy, were suffering from those diseases prior to admission into the jail. The Inspector-General remarks:—"Line plan and plinth area estimate for the leper jail at Myingyan have been submitted to the Chief Engineer, Public Works Department, Burma, for administrative sanction and it will probably be some time before the prisoners from Pagan are transferred to Myingyan.

#### EASTERN BENGAL AND ASSAM.

Dibrugarh.—The overcrowding which lasted for 262 days during the year was avoided by accommodating the excess number of prisoners in the under-trial wards. The drainage is defective and it would be well to replace the present kutcha latrines by iron ones. The sickness and mortality are said to have been due chiefly to dysentery and diarrhosa. No local insanitary condition is assigned to account for the first-named disease which prevailed in an epidemic form in the town and among the military police, whose lines are adjacent to the jail. No fewer than six of the eight men who died were epium eaters.

Gauhati.—The under-trial ward was overcrowded at times. A portion of the oil-mill shed was used, from 1st May to 1oth December, as a segregation shed for prisoners under observation and new arrivals from parts of the country affected with epidemic diseases. The whole of the jail site is water-logged during the rains and on one occasion during June after 4 inches of rainfall certain parts of the jail of polluted water from the municipal drains and adjacent shallow sheets of water was considered to be the chief cause of the continuance of dysentery and other bowel complaints. The precautionary measures adopted to stamp out dysentery were effective to some extent as there was a considerable decrease in the number of cases admitted into hospital for that complaint compared with the previous year. The Superintendent of the jail considers that the disease is not eradicated and that it will continue to re-appear in a more or less virulent form every year until the defects in the drainage are remedied.

Backergunge.—The cane shop was invariably used as a sleeping barrack and the denki shed was similarly utilized for a short time to relieve the overcrowding which existed more or less from February to December. The Superintendent of the fail considers that wooden beds or bamboo platforms might, with advantage, be substituted for the brick beds, in the upper story wards. The jail is surrounded on three sides by a khal (artificial canal), which is to all intents and purposes a sewer, the drainage is bad, the site low and the water at high tide flows into the compound through the drains. The health of the prisoners shows no improvement as dysentery, epidemic dropsy and anæmia are still rife and their cause has not yet been satisfactorily determined. A new female ward and civil jail were completed during the year and a dysentery camp which provided accommodation for all cases of dysentery and diarrhea was in use from 9th October.

Shillong.—The overcrowding, which existed more or less from 1st April to 20th September and again from 13th October to the end of the year, was partly relieved by transferring the prisoners to other jails. The mortality was entirely due to enteric fever and dysentery, and these with ague were the cause of all the sickness. The dysentery mortality is attributed partly to the scorbutic taint which co-existed, as vegetables were deficient and of bad quality, the jail garden having been neglected. The two first-named diseases are said to have been probably contracted when the men washed their clothes in the river, a custom since discontinued. The Inspector-General is of opinion that the great mortality was due to the habit of allowing the prisoners to bathe and wash their clothing in an adjacent small stream into which a good deal of sewage flowed, and he states that they doubtless drank the water at such times.

#### BENGAL

Krishnagar.—A kutcha shed in the compound, with 33 beds, was used to relieve the overcrowding in the under-trial ward which lasted for 33 days in July, August and September. The dormitory accommodation was insufficient and additions and improvements are needed in the workshed. The accommodation provided in the hospital is poor and defective, the ventilation being unsatisfactory, as there are six rows of beds between doors, but this will be remedied when openings have been constructed in the partition walls and "ship funnel ventilators" provided in the roof of each ward, for which the Public Works Department is preparing plans and estimates. The ground is flat and the drainage detective, particularly to the west and south of the jail, causing occasional water-logging in the garden. The sickness was due chiefly to dysentery and malarial fever, and the Superintendent of the jail states that it is difficult to say whether the attacks of fever while in jail were primary or relapses, since a large percentage of the inhabitants of the district suffer from enlarged spleens. Hollows that need to be filled afford lodgment for water during the rains and are breeding places for mosquitoes. The Inspector-General remarks:—"Improvements to wards and worksheds are in progress and plans for a new hospital are being prepared."

Midnance Central — The investile ward was constituted at the same workshed of No. a ward was continuously used at

Midnapore Central.—The juvenile ward was overcrowded during the year and the cane workshed of No. 3 ward was continuously used at night by convict warders and overseers. The ventilation of the wards and worksheds is defective but measures are being taken to reconstruct these buildings; the drainage also is very defective, as there is not a single surface drain in the jail compound. The principal causes of sickness were ague and tubercle of the lungs, the latter being attributed to the poor physique of the prisoners who are therefore very susceptible, admissions for the first-named disease are said to be partly attributable to the large number of mosquitoes; the bad health of the prisoner class was conductive to bronchitis and/diarrhæa; and dysentery, the Superintendent considers, was undoubtedly imported from outside through newly-convicted and under-trial prisoners. No special causes are assigned for the prevalence of pneumonia. The Inspector-General remarks that this jail, though always unhealthy, has few sanitary defects and that many proposals for its improvement have been made. Improved ventilation of all the wards and worksheds is being provided at a cost of over one lakh. He adds that the prisoners suffered considerably from dysentery which was prevalent in the district.

Angul.—Overcrowding which lasted for 67 days was relieved by using the verandah of ward No. 1 at night for a week in August. The accommodation in the under-trial ward is very limited, having a capacity for five under-trials only, while the daily average in the last three years exceeded that number. The rain water round the hospital and cookshed has no easy outlet, the two existing drains being insufficient for the purpose. An ejector is urgently needed as the present system of removing the night-soil through the main gate is objectionable, especially in the rainy season. The sickness and mortality were not due to any particular local conditions.

Chaibassa.—The overcrowding which lasted for 104 days during the year was relieved by accommodating the excess number of prisoners in a pucca workshop, used as an oil-mill shed during the day time. The sickness and mortality were due to serious and accidental illness and cannot be attributed to any defects in the jail. The Inspector-General states that this is a fairly good jail and attributes the high death-rate this year to bad management, in that sufficient use was not made of the hospital for men in a weak and sickly condition.

Purulia.—Workshops were utilized as sleeping wards throughout the year and four tents from 31st March to 13th June to relieve the overcrowding. There were 14 deaths during the year, ten of which were from lung diseases, including eight from acute pneumonia, which is attributed to overcrowding and bad ventilation of the sleeping wards. The Inspector-General remarks that this is an old jail in which the main ibarrack is defective and that a scheme has been submitted to Government for a new barrack and for enlargement of the jail area.

Darjeeling.—The Superintendent considers that two sheds are necessary outside the jail for the accommodation of patients suffering from cholera and other injectious diseases, as at present a temporary shed is erected for small-pox patients. He adds that no special local cause can be assigned to account for the diseases which occurred in the jail and that the high mortality was due to prisoners being received in bad health. The Inspector-General remarks that this is a small jail which, though subject to overcrowding, is usually healthy, the water supply is good and no serious sanitary defect exists. He adds that a new segregation ward is being built and will soon be ready.

### TABLE XLIV—continued

ABSTRACT of the SANITARY SHEETS of the most UNHEALTHY FAILS, SANITARY DEFECTS, IMPROVEMENTS, SUGGESTIONS, etc.

#### UNITED PROVINCES.

Korantadih.—Overcrowding existed for 96 days during the year. Two deaths occurred among under-trial prisoners but there was no sickness in the jail worthy of notice. The Inspector-General remarks that this is a small lock-up in which the sanitary conditions are good.

Ghazipur.—Ague was prevalent during the year, especially during April, May, October and November; when large numbers o mosquitoes were observed, particularly so in October. Bronchitis occurred in old prisoners who had suffered from it more or less chronically and who were influenced by climatic changes. Dysentery was also rife among the old and infirm, most of whom had contracted it prior to admission into the jail. The contagion, though not traced, is said to have been carried by flies either to the food or water used by the prisoners who contracted the disease. The Inspector-General remarks:—"This is an old jail but its sanitary condition is good. The district was unhealthy during the past two years and the jail usually contains a very large number of aged prisoners." prisoners.'

Kassia. - Overcrowding lasted for 7 days in January. This small lock-up has now been abolished.

Gorakhpur.—Tents were used to relieve the overcrowding which lasted for 36 days during the year. The jail not being large enough to accommodate all the prisoners convicted in this district, frequent transfers had to be made to prevent overcrowding. As prisoners in good health only were thus transferred, the result was that all those in bad and indifferent health remained and gave rise to a higher sick and death-rate than would otherwise have been the case. More than half of the 690 prisoners admitted in good health were transferred. The death-rate was high but it was a sickly year and the 15 deaths—nine of which were due to dysentery—all occurred in the last half of the year. The Superintendent considers that the scarcity which prevailed in parts of the district during the latter half of the year, was doubtless the cause of a number of prisoners being in bad health on admission. The Inspector-General remarks:—"This is a comparatively new jail and is probably one of the best designed and best constructed jails in India. Its sanitary condition is perfect. The district is unhealthy and malarious and the condition of the prisoners on admission to the jail is bad."

Karwi.-There was overcrowding for 26 days during the year. The sickness, excepting malaria, was due to no particular local or other conditions.

Banda.—The jail was overcrowded for 77 days. The greater part of the sickness was due to the characteristics of the district as a whole, as it is very malarious owing to the number of tanks close to every village site and most of the prisoners on admission showed signs of malarial poisoning. The Inspector-General remarks that the sanitary condition of the jail is good except for a defective water-supply. The jail wells, which are being deepened, and those in the city are drying up, but the question of a new water-supply has not yet been solved. All the drinking water is boiled. The district is very malarious and last year scarcity prevailed. The death-rate depends to a great extent, on the condition of the prisoners on admission.

Saharanpur.—Overcrowding existed for 12 days during the year. There is an objectionable ditch surrounding the jail. The district is notoriously malarious and a large proportion of the prisoners admitted suffered from enlarged spleens and other symptoms of malarial poisoning, probably due, in the opinion of the Superintendent, to the large amount of irrigation in this district. He also attributes the prevalence of malarial fever and dysentery to climatic causes. The Inspector-General remarks that the sanitary condition of this jail, which was originally an old Sikh fort, is very fairly good, though it usually has a high death-rate due to the wretched condition of the prisoners on admission. He adds that a new ward for the treatment of dysentery cases will soon be built and that during the past winter, malaria of a bad type was very prevalent in the city and district.

Naini Tal.—The male ward was overcrowded for two days during the year. The Inspector-General remarks that this is a small lock-up in which the sanitary conditions are good.

small lock-up in which the sanitary conditions are good.

### BOMBAY.

Sind Gang.—There was no overcrowding as throughout the year a detachment of nearly 194 prisoners was employed on ballasting work on the Hyderabad-Badin Railway. They were accommodated in tents and their camp was gradually shifted from place to place along the railway line as the work progressed. Pneumonia, though kept much under control for the last three years, had not completely disappeared from the gang, although measures were adopted for the prompt isolation of the patients; unlocking of the juil at a late hour in the morning; numbering of prisoners' clothing and bedding and the burning of those articles used by pneumonia patients and administration of hot conjec before sending them out to work in the morning, still accounted for 42 admissions, to of which proved fatal. The Inspector-General remarks that he is not satisfied with the arrangement under which this gang has been worked with one detachment always absent from the main body and that when the ballast work is finished he intends to keep the whole gang in one camp under the immediate supervision of the Superintendent and Medical Officer. He considers that the gang was fortunate in escaping with so few cases of fever and attributes the good results to the free use of quinine prophylactically.

Karachi.—The prevalencel of dysentery, diarrhoza and bronchitis is said to have been partly due to the exposed situation of this inil. In addition fever (much of which was probably influenza) and malaria, which prevailed in Sind during the cold season, were causes of debility in prisoners admitted from the Province and may have predisposed to other diseases. The Inspector-General remarks that though the daily average strength was higher in 1905, there were more admissions into hospital and 10 deaths in 1906—six of which occurred in December—against four in 1905. He considers that this prison should be very healthy as it is well built, is at so me distance from all buildings and has a good water-supply and drainage. He intends to supply prisoners with a third bla

Bombay Common.—The overcrowding which existed throughout the year was relieved by using for barrack accommodation two workshops for the entire period and a third for a part of the year. The ventilation is defective. The Inspector-General remarks that this prison is always overcrowded, though frequent transfers are made; and that it was a disappointing year, as up to the end of October, it appeared as if the mortality for the prison would be low, when the cholera epidemic suddenly occurred. He adds that plans and estimates for a new prison are being prepared and that the Common Prison, which is a source of anxiety to all concerned, will be given up when the building is completed.

#### CENTRAL PROVINCES.

Chhindwara.—There was no overcrowding throughout the year as the excess number of under-trial prisoners was accommodated in an empty barrack. Lateral ventilation was provided in barrack No. 6 (female) and the well inside the jail was covered over to protect it from debris, etc.

#### MADRAS.

Russellkonda.—The cause of the unusual high mortality was an outbreak of cholera which was raging in the district and city itself and made its appearance in the jail in the middle of July. The Inspector-General remarks that the sick-rate diminished, but the death-rate increased considerably owing to the cholera outbreak and that as the population is small, the rates are subject to great fluctuations. He adds that some sanitary improvements have been suggested which he hopes will soon be carried out.

Mercara.—There was no overcrowding as the extra five male under-trials and civil debtors were accommodated in empty wards. The Chief Commissioner remarks:—"I have to-day inspected the jail. The drainage system, water-supply, ventilation of wards, kitchen, and dry earth latrine are all excellent and I am unable to suggest any sanitary improvements."

### TABLE XLV.

### TABLE XLVI.

INFLUENZA by months, Fails, Groups, and Administrations.

CHOLERA by months, Jails, Groups, and Administrations.

		Ap	MISS	IONS	FRO	м 1:	NFLU	ENZA	IN	EACH	Mo	NTH.			At	MISS	HONS	FRO	м С	HOL	ERA	IN E	ACH	MON	тн.	
Jails * and Groups.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Moulmein				11111				11111	5 :: 10 ::	28			 6  38 				11111								11-11	
GROUP I.—BURMA COAST AND BAY ISLANDS		-							15	28		1	44			1			2	1					1	6
Thayetmyo, Central																			-						1	
CROUP II BURMA INLAND																									1	0000
Dibrugarh											1		'	=				-		3						-
GROUP III.—ASSAM	-				-		-		-				1				4			3		-				
Dacca, Central Tippera Presidency, Central (Natives) Alipore, Central Faridpur Murshidabad Dinajpur Bankura Midnapore, Central	9 :: : : :	15	11111111111						11111111111	74	20		24 98 :::::::::::::::::::::::::::::::::::					1111111111			3		11111111	5 3	1.11111111	in land
GROUP IV.—BENGAL AND ORISSA	9	15			-	-				74	20	4	122	2	2		-				3	3		9		20
Chaibassa					-	=	-							-	==			11								
Bhagalpur, Central Muzaffarpur Buxar, Central Ghazipur A zamgarh Fyzabad Allahabad, District Banda Orai Cawnpur Bahraich Sitapur Etawah Mainpuri				17	2		30	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				3	17 :: :: : : : : : : : : : : : : : : : :				3		111111111111111111111111111111111111111							-
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR.	1	,		21	3		33	6		-	2	3	69	-	1		5	2	,	3	6		5	2		. 2
Bareilly District	13	12 7	10	8 3	6	32		15	35	- : :	11.	::	95 67			::	::					1.1	11.	::		
Ludhiana											5		5												-	
GROUP VIUPPER SUB-	13	19	25	11	7	33	4	15	35		5		167	-	-											
Peshawar		-	-		29	9		-	1 2		-	-	38	-	-	-	-	-	-				-	-	:	-
† Shikarpur Kurrachee		=			::		==		==		2	2	2 2			=	=			=	-			=	=	
GROUP VII.—NW. FRON- TIER, INDUS VALLEY, AND NW. RAJPUTANA					29	9					2	2	42													

Jails where neither Influenza nor Cholera occurred are not shown in these tables.
 For annual ratios, see Table XLII.
 † The prisoners were transferred to Sukkur on 28th November 1906.

		ADI	MISSI	ONS	FROM	IN	LUE	NZA	IN E	ACH	MON	тн.			ADM	ISSIC	NS F	ROM	Сн	OLER	A IN	EAC	н м	ONT	н.	-
Jails, Groups and Administrations.	January.	February.	March.	April.	May.	Jene.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September,	October.	November.	December.	TOTAL
В		1					T																			
jmir gra, Central Do. District					1-1	46	10						1 58 3			!!!					11				1111	
ROUP VIII.—South-East Rajputana, Central Indi and Gujarat	-	1	-		1	49	10	1	-		-	-	62		-	-		-	-	-			-		-	
A shbulpore, Central	6	::;		19	17 2	1111						111	37 21 7			:::		:::			1111	1111	:::			
	11111			=======================================			3 ::					-	3								:- :8 -					
ROUP IXDECCAN .	: 6	1	-	19	20		3						49								10	-				,
ombay, Common .		-	-										***				-							36		
ROUP X.—WESTERN COAF	-												***											36		1
ellary, Central	-		::	::						::	: :				111			-	-	3	-	- :	25	::		2
alamcottah	=			-	111		::		+ : :				1.1	111		111		-		20 I					-	2
ajahmundry, Central .	:		-	-		5								1 1					2		12 2	1.1		::	1 1	
ROUP-XISOUTHERN INDIA.		-			4	5			-	***		-	9						2	25	15	2	25			
cussellkonda								-					101							10	3					
ROUP XIIHILLS .	-	-	100					-												10	3	-			-	1
INDIA*	29	36	25	51	64	56	50	22	50	102	30	10	565	2	3	1	9	3	5	42	37	5	3/0	47	3	18
CURMA ASTERN BENGAL AND ASSAULENGAL INITED PROVINCES UNIAB LW. FRONTIER PROVINCE OMBAY ENTRAL PROVINCES ADRAS	9	15 19	25	 17 15  19	 11 29 19 4	82 9 15	47	22	35	28 74	21 2 5 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 2	44 99 41 275 5 38 4 48 9	- 110111	2 1			- :: : : : : : : : : : : : : : : : : :	2 1 2	3 :: :: :: :: :: :: :: :: :: :: :: :: ::	5 4 :: 9 - 18	3	5 :: :: :: :: :: :: :: :: :: :: :: :: ::	6 4 36	2 1	12114 8
ANDAMANS	8 37	36	1 26	51	64	6	50	37 59	5 55		317	10 20	050		3			3		42	37		30	47	3	18

<sup>\*</sup> Excluding Andamans,
† Including Andamans,

### TABLE XLVII.

### TABLE XLVIII.

ENTERIC FEVER by months, Jails, Groups, and Administrations.

SIMPLE CONTINUED FEVER by months, Fails, Groups, and Administrations.

Jails* AND GROUPS.  Admissi	i April.	May.		RIC	1	: 1	EAC	1	1	-		ADM	ISSIC	Ns F			ONT		TINU	ED F	EVE	IN	
January, February		May.	Je.	1		1	1						1	1		1	1		100	1	1		
Shwegyin			June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December,	TOTAL
Toungoo Rangoon, Central (Europeans)		11111111	1111111				-				2	5	7	6 1	: 5	15	 22 9 	32 9	42	1 12 5	 1 6 1  2	 8 5  3	1 2 124 124 42
GROUP I.—BURMA COAST				3	1				-		2	5	7	7	5	25	31	42	6	18	10	16	174
Thayetmyo, Central			1							1		-		1 2	3 1	4		111113	11 11 13				 9 1 10
Mymensingh Presidency, Central (Natives) Suri Bankura Midwayara Central	3	2								4				1111		- 11111-		111113	11111				
GROUP IVBENGAL AND	3	2		-	1				2	16			1	-	2	1	2	3	3	-			13
A Hazaribagh, Central							, .		-		-				1						1		-
Buxar, Central Allahabad, Central Hamirpur Unao Bahraich Mainpuri				-						1		-:::::::::	2 4 2	2	2	5	21 44 2	16	8	7 5 33 	10	2 :: 5 :: : : : : : : : : : : : : : : :	76 1 6 3 8
		-	1	2						6	-	2	8	14	33	16	37	48	30	49	17	7	261
Bareilly, Central								111111	11111				  1 12		22	20	19181	2 : : : :	8				4 :: - 4
Do. District	. 1			-							3		4	3			1111	1	-	6	5	2 . 2	27
HIMALAYA	1					1	-			4	3	3	17	3	13	21		3	9	7	6	4	89

The state of the s	A	DMIS	SSION	S FR	ом 1	ENTE	RIC	Feve	R IN	EAC	ен м	ONTI	1.	A	DMIS	HONS	FR	ом S		E C		NUEL	FE	VER	IN E	ACH
JAILS, GROUPS, AND ADMINISTRATIONS,	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October,	November.	December.	TOTAL.
A								1			j	1													-	
shawar ontgomery, Central : :									1			***			***							20	14	***		34
GROUP VII.—NW. FRON-S TIER, INDUS VALLEY, AND NW. RAJPUTANA			***						1				1									20	14			34
B ra Central			-	-								1	1		-											-
OUP VIII.—S. E. RAJ- OUTANA, CENTRAL INDIA, AND GUJARAT			-	-				-					,	-	-			-			-		-		100	
A	-																									
aspur							=						Ξ,							1	3		-			-
B rrowda, Central ccan Gang				1				1					2			***								·;		
OUP IXDECCAN .				2				-			***		3				1			-	5	1	3	1	***	2.5
ana mbay Common tnagri angalore nnanore, Central	:::::							21	::::5				39							1 12 1		2 1  1	a la la	14144	4.1-1.4	i i
COAST					1	4	5	21	5	2		1	39	1	1	1	2	3	2	3	3	4	6		2	21
Allary, Central	1							5	1 5	1	2		2 1 15	2 5 2	8 2	19 9	5	14			3	30		14	1 5	3 11
B lamcottah adura ichinopoly, Central njore Bore, Central adras Ponitentiary, Central illore	9	11111111						1111111	-	1111111	1111111		: :: :: :	10	3	-   n   -		5 -	3	111-411	3 2 1	2 2 5	 1 24 	8 1	1111111	1 7
ajahmundry, Central				=	=							::		6		5	9	3	3			7	4 1	2		7.4
OUP XI.—SOUTHERN	4					1	2	5	6	2	2		22	25	14	37	21	22	27	17	9	46	32	28	10	28
illong					1			3	1	-			5			1111		2	2	2					***	
GROUP XIIHILLS .	-	***						3	1			***	5	-				3	2	2				-		
ctra India— Aden	-			-								***					***			***	1				. 77	
INDIA*	11		4	3	5	7	14	33	14	4	2	4	102	31	26	71	52	85	99	94	117	123	130	62	40	93
JRMA ISTERN BENGAL AND ASSAM INTED PROVINCES INJAB ORTH-WEST FRONTIER PROVINCE	-		3		3		3 :: 2 2 :: :: ::	- 4-       -		111111111111111111111111111111111111111		2	5 20 3 7 3	3	6 3	7  3 7 16	10 3 12 3	9 4 46 1 1	30 8 31 1	32  25 16 	45 20 33 1	10  11 13 1 20 3	19 12 38 6	10 11 7 5	17 2 5 4	10 22 4
ENTRAL PROVINCES	4	-	-		"	5	7	26	iii	4	2	ï	61	26	15	38	21	24	28	18	5	47	34	28	ñ	34
NDAMANS	11	1	4	3	5	7	1.4	33	14	4	2	4	102	31	26	71	52	85	124	94	132	17	150	65	40	1,0

### TABLE XLIX.

### TABLE L.

INTERMITTENT FEVER by months, Jails, Groups, and Administrations.

REMITTENT FEVER by months, Fails Groups, and Administrations.

Jails* AND GROUPS.  Mergui Tavoy Moulmein Shwegyin Toungoo Rangoon, Central, Natives Maubin Myaungmya Bassein, Central	6 January.	February.	.: 1 : March.	NS FRO	i May.	Jane,	Jely.	August.	September, NA				-	To	DMIS			ACH	мо	NTH.		1	R
Mergui . Tavoy . Moulmein . Shwegyin . Toungoo . Rangoon, Central, . Natives . Maubin . Myaungmya .	5 1 1 1 9		=			June.	July.	ugust.	ember.		Xer.									Der.	Der.	Ser.	
Tavoy Moulmein Shwegyin Toungoo Rangoon, Central, Natives Maubin Myaungmya	5 1 1 1 9	3	=,	***				<	Sept	October.	November.	December.	TOTAL.	January.	March.	April.	May.	July.	August.	October.	November.	December.	Terat.
Insein ,, Henzada	  	4 8	7 3  2 8 2 	5 1 5 1 9	5	19 2 1 2 9 6 1 ; 4	1 2 2 17 3 2 2 1 2 2 1 2	"" 6 2 2 7 7 1 1 1 2 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1	4 4 4  2 2 3  9 41 2 1  2		3 2 3 3 1	1 5 3 2 4 1 13 6 t 2 1	9 10 13 12 79 18 7 12 75 101 15 3 4 4							2	3		
GROUP I.—BURMA COAST AND BAY ISLANDS	19	18	36	25	13	45	32	36	70	31	38	39	402	-					-	2	3	-	6
Paungde Prome . Thayetmyo, Central Meiktila Myingyan, Central . Mandalay , Monywa Shwebo Mogok . Bhamo . Katha .	2 1 2 14 	 5  4 5 	17111411111	7	 12  6 	,	9 11 12 15 5	3  4 	2 13 3 3 2 1	2 7 3  3 19 	3 1 5 16 1	388 67	16 52 61 6 21 92 1 7										11111 11111
GROUP II.—BURMA	21	15	5	12	20	11	31	26	25	35	27	34	262		1								
Cachar	2	36	:: 6 3 6	 3  9 10	 4 2 6 16	 3 7 7 18	 1 4 5 25 15	1 4 15 12 30	 4  8 7 13	2 5 6 19	1 2 9 5 20	 2 2 3 21	2 11 31 57 91 180						1111			11:1	
GROUP III.—ASSAM	11	10	21	23	29	36	50	63	32	32	37	28	372		,		3	1 1		-	3		10
Mymensingh Dacca, Central Tippera Chittagong Neakhali Backergunge Khulna Jecsore Baraset Presidency Central, Europeans Presidency Central, Natives Alipere, Central Heeghly Burdwan Krishnagar Faridpur Pubna Murshidabad Rajshahi, Central Bogra Malda Dinajpur Rang pur Jalpaiguri Purnea Naya Dumka Suri Bankura Midnapore, Central Balasore Cuttack Puri Angul	9 12 2 6 6 2 6 10 1 1 1 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1	10 6 6 4 4 4 2 8 8 8 1 1 3 3 6 6 2 3 2 2 10 5 9	8 4 2 1 2 2 4 1 3 2 2 4 1 3 2 2 4 1 3 2 2 4 1 3 2 2 4 1 3 2 2 4 1 2 2 1 6 6 1 1 2 1 6 6 1 1 2 1 6 6 1 1 2 1 1 6 6 1 1 2 1 1 6 6 1 1 2 1 1 6 6 1 1 1 2 1 1 6 6 1 1 1 2 1 1 6 6 1 1 1 2 1 1 6 6 1 1 1 2 1 1 6 6 1 1 1 2 1 1 6 6 1 1 1 1	13 14 18 3 2 9 3 7 1 10 40 10 11 12 2 10 3 2 17 1 19 2 19 19 19 19 19 19 19 19 19 19 19 19 19	11 20 11 5 5 11 5 29 9 3 3 3 3 1 1 1 2 3 3 1 1 1 1 2 4 4 1 1	10 16 55 1 2 2 5 5 2 2 5 5 3 3 10 10 34 4 5 3 3 2 2 3 3 9 6 6	15 9 2 7 7 3 1 1 5 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1	19 6 4 4 17 8 2 2 11 12 15 15 14 7 7 2 2 3 3 4	15 16 2 29 9 3 100 13 17 75 2 2 3 5 5 8 4 4 26 1 1 2 7	16 26 1 32 2 2 244 682 25 6 4 22 25 6 6 20 25 6 20 25 6	20 5 3 13 2 43 4 4 9 6 10 10 10 10 10 10 10 11 10 10 11 10 11 10 10	11 10 26 35 4 21 11 14 4 4 11 16 12 27 65 35 3 2 12	157 144 41 128 9 123 24 69 69 139 705 82 132 64 132 64 132 111 111 112 112 112 113 113 114 115 115 115 115 115 115 115 115 115						2		1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		
GROUP IVBan-	162	167	173	240	163	193	285	335	319	513	472	386	3,408	-		3	1.	3	2	2	10	3	37

### TABLE XLIX—concluded.

## TABLE L-concluded.

INTERMITTENT FEVER by months, Jails, Groups, and Administrations.

REMITTENT FEVER by months, Jails, Groups, and Administrations.

-				A	lminis	tratio	ns.							Groups, and Administrations.
		- 1	ADMISS	IONS F	ROM I	TERMI	TTENT	FEVER	IN E	сн м	ONTH.			ADMISSIONS FROM REMITTENT FEVER IN EACH MONTH.
JAILS AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January. February. March. May. June. June. June. October. October. D ccember.
Peshawar Kohat Bannu Shahpur Mianwali Lyalipur Jhang Mostgomery, Central Mooltan, Central Dera Ismail Khan Dera Ghazi Khan	7 3 2 3 5 2 2 9 1: 4 13 16	2513-5294176	7 3 2 4 16 16 16 16 16	26 2  4 6 4 10 15 5 19	15 2 3 3 1 8 35 19 9 21	17 8 3 1 4 2  27 7  28 17	11 17 7 4 4 2  36 8 2 14 25	14 9 4 8 7 2  25 13 3 16	23 8 2 8 6 15 14 2 13 36	95 19 12 12 12 12 13 16 	148 15 9 4 14 1 6 68 22 8 157 57	42 12 5 7 6 3 0 107 14 5 69 17	53 71 28 31 408 167 49 466	
Shikarpur* Sind Gang Hyderabad, Central Kurrachee GROUP VII.—NW. FRONTIER, INDUS	 6 7	13 2	 6 1	 7 5	3 8 6	5 5	96	2 5 5 4	3 10 2	"2 15 1	1 9 29 8	8 2 16 7	30	
VALCEY, AND N W. RAJPUTANA .	109	74	91	111	139	130	141	136	143	381	556	326	2,340	1 1 2 5
Rajkot . Ahmedabad, Central	38	4	4	2	3	1 2	1	8	3 20 20	12	5	26		
Ajmer Muttra . Agra, Central . , District . Jhansi . Lalitpur .	12 13 1	96	3 2 20 8 1	1 2 24 6 5	1 3 33 10 9	6 55 28 1	3 40 4 2 	4 4 20 10 11	6 11 52 13 7 5	13 47 54 13 13	5 26 64 8 2 8	9 6 21 7 2	46 110 413 126 53 18	
GROUP VIII.—SE. RAJPUTANA, CEN- TRAL INDIA, AND GUJARAT	37	23	39	. 41	59	93	54	70	117	155	129	77	894	
A Damoh Saugor Jubbuipor e, Central Narsinghpur Mandia Bilaspur Sambalpur Raiper, Central Balaghat Seeni Chhindwara Hoshangabad Nimar Betul Nagpur, Central Bhandara Wardha Chanda	5					3 2 1	2 6  3 11 9 1  3 2 18 4	1 4 2 1 5 138 2 2 1 62 5 2	11 5 3 3 1 4 9 2 1 1 4 2 3 3 2 1 1	111 3 4 4 2 13 15 2 1 1 1 3 3 67 67	3 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 8 2 6 3 3 3 5 3	27 33 14 2 7 24 64 67 11 4 6 13 34 20 20 20 1	
Secunderabad Yeotmal Amraoti, Central Akola, Central Buldana Dhulia Yerrowda, Central Bijapur Deccan Gang Dharwar	4 1 3 3 3  6 2 1 4	1  2 4 1 4 10 2 9 2	37 37 34 37	1 1 1 1 4 9 3 10 2	3 1 1 17 8 1	  4 26 3 6	3 2 3 5 40 48 3	3 4 3 2 4 42 3 2 3	1 1 7 2 2 1 40 6	5 3  4 35 10 12 3	2 2 3  7 48 5 9 4	1 3 3 3 1 7 45 	22 17 23 31 7 45 355 35 88 30	
GROUP IX DECCAN .	35	62	82	50	48	58	134	176	138	201	165	145	1,294	2 2 1 2 3 1 1 12
Thana . Bom bay, Common . House of Correction Karwar Mangalore Tannanore, Central	18 5	3	3 1 1 4	1 5 4 	2 2 	7 1 4	<sub>2</sub> 5 4 1	1 9 2 5 	8 4 1 2 5	7 15 4 4	4 20 	5 23 	31 113 28 11 2 83	2 1 2 9 3 17
	1000	Francisco I	_									11	Track Comment	

ABLE LL TABLE LIL

PRISONERS, 1000,

	100		ADMISS	IONS F	ном І	NTERM	ITTENT	FEVE	RINI	ACH M	ONTH.				-		EVE							
GROUPS AND ADMINIS- TRATIONS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	May.	June.	July.	August.	September.	October.	December.	TOTAL.
1 1	-									1				T	Ī	T				1		1	T	
ellary, Central	20 6 1	3 4 1	2 4 2	5 1	5 5	3 9 3	7 11 4	39 4 1	25 9 	12 9 2	11 24 4	6 7	134 97 19		***									
B alamcottah . adura richinopoly, Central anjore uddalore ellore, Central adras Peniten-	3 3 1 2 4	6 3	12 1 1 2 	5 1 7 2 1 1	6 ::::	1 1 1 1	 2  1 1 2	5 2	 4  7	3  4 1  5	1 1 2  4 2	2  5  4	35 20 30 10 10 26	111011	***			4	1 1/4 1	1 2			1	
tiary, Central .		3	+	4		2		1	1	1 1	2		26 7	1										
cajahmundry, Cen- tral	5 3	3 3	7	7	1 4	2 3	5 2	- 4 12	6 13	7 4	6 4	26	79 50							11				
GROUP XI.— SOUTHERN INDIA	52	30	37	35	26	26	35	71	65	49	62	54	543	3	1			4	-	3	1	2	3	
				3						F						1	1				1	-	T	-
hillong barjeeling lamora 'auri 'auri 'aini Tal 'mila 'bbotta bad lecta dercara	3			3 2 1 1 2	5 1 	:: :: :: 6 4	2 1   4	3 1 2	1 2 1 2 4 2	2 7 2   9	5  2  1 4	3 :: : : : : : : : : : : : : : : : : :	0.0	1111111111				6	11111			1.		
GROUP XII	4	3	3	9	13	13	10	19	12	31	13	6	136					-	-		-	1	. !	
ADEN	1	-	1		8								10						-	-		-	-	-
INDIA.	865	673	900	1,163	1,177	1,237	1,686	1,906	2,502	2,893	2,846	1,917	19,765	9	13	9	6 10	16	10	9	9	22	26 11	
BURMA EASTERN BENGAL AND ASSAM BENGAL JNITED PROVINCES PUNJAB V.W. F. PROV-	182	33 77 172 141 109	41 76 245 224 142	37 131 380 253 208	33 108 271 366 235	56 110 338 378 177	63 133 558 438 242	62 169 513 551 255	95 145 487 1,010 448	66 211 363 915 573	65 193 674 744 516	73 165 544 364 340	664 1,613 4,913 5,597 3,427			5	1 .	4	1 1 8 1	2	1 2	- 3	1	
INCE . BOMBAY CENTRAL PROV-	23 62 18 56	15 59 32 32	28 67 30 42	33 53 17 47	41 60 18 36	62 67 15 30	60 47	53 99 108 88	50 103 84 71	121 119 53	330 160 85 67	128 162 69 59	1,052 1,104 655 628			1	1	1		2	1	1	9 4	
MADRAS	1,099	1,176	1,550	1,662	-	1,837	2,741	2,778	1,856		2,009	1,084	21,297	11	1	6 6	3	5		-6	-,	3	- 13 26 24	-

Including Ajmer, Secunderabad, Quetta, and Mercara and excluding Andamans.
 † Including Ajmer, Seconderabad, Quetta, Mercara and Andamans.

### TABLE LI.

### TABLE LII.

PNEUMONIA by months, Jails, Groups, and Administrations.

DYSENTERY by months, Jails, Groups, and Administrations.

1		ADI	MISSI	ons	FRO	M PN	EUM	ONIA	IN	EACH	мо	NTH.		1		AD	MISS	IONS	FRO	м Dvs	ENTER	Y IN E	асн м	ONTH.		
JAILS® AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March,	April.	May.	June.	July.	Angust.	Scottember.	October.	November.	December.	Torat.
Mergui								,					,											1		
Moulmein	***	***			***		***			1	1	***	2	2		1	2	2	1	1	1		i	2	***	
Shwegyin	***			***	2						1	2	5	4	"	1	2		3	4	1	4	" 2	3	2	100
(Natives)						3	1	1					6	2			,	,	1	7	2	2	3	100	2	100
faubin																		1	1		1		1	3	1	
Iyaungmya	***	"			7			***	1	7	2	"	7	***	***	1			***	3		***		,	I	п
nscin, Central .	***		***		1	***				***	1		2		***				3		***		***	***	***	0
lyanaung						***												1		1	***			***		
andoway	***	***			**				***			***						***	1		***	***		***		
kyab · ·		1			2	3		2				1	10	1						***	1		1	1		
ROUP I.—BURMA COAST AND BAY					-										-											-
ISLANDS	***	2		***	6	6	2	4	3	2	7	4	35	0	2	4	6	5	13	19	8	7	8	14	7	
	-																				dan De				1	1
Paungde		***			340	***			1				1		***		1 2	2		2	2		1			
hayetmyo, Central	"	1	4	4	1		1	"		***		100	13	6	"	7	3	5	14	10	6	3	"2	1 2	3	
Magwe	***	***					***	***	***	***	1		"1			1				***	***		***	2	1	
Meiktila Myingyan, Central	***		***	***	***		***	***		***	***	***		***	1111	***	***	1	101	9	***		1	***	1111	100
Mandalay, Central							***	***	"	2	***	2	5	2	,	3	3	i	3		3	4 2	3	3	2	١
Shwebo	***		***					***			1		'		1					,			***			ı
Katha	***									***	***		***		***	***	-100		1		***			***		1
GROUP II BURMA INLAND		1	4	4	1		1	1	2	2	2	2	21	9	4	12	12	10	22	25	12	10	8	9	8	
Cachar															1										1	1
Dibrugarh				***			1		";	1	***	***	3	1	1		4	"	5	18	1	5	7	6	"	
Tezpur	***		***			3	1		101				5	3	1	5	2 2	13	5 4	5	3 4	3	5	1	4 2	
Sylhet									***		2		2	1	1	2	5	18	9	7	5	11	12	15	9	_
GROUP III-	407	١			Y-	3	2		1	2	2	1	11	5	3	9	13	35	29	33	_15	21	24	25	17	
									1										1			10				
Mymensingh Dacca, Central	1						2	-:					3	13	7 5	29	29	15	10 8	24	20	11	21	22 8	9	13
Tippera						1		1	***		1	***	3	1	1	***	***		5	4	13	3	5	4	10	
Chittagong					***			***	1		***	1	1	10	3	8	3 9	7 9	16	7	5	4	23	16	7	
Backergung Khulna		1	-	1	***		***		4	3	3	3	15	16	21	25	15	27	19	37	45	35	48	42	7 27	1
Jessore	2	1	***	1		2	ï	1	***		2	3	13	44	35	28	16	25	10	25	25	25	14	10	7	
Baraset Presidency, Central,				***	-	-	***	***			1	***	1	1	1		1	3		3	2	3		,	1	
Europeans Presidency, Central,		-	-				***	***	***	***				-	***	***		1		1				***		
Natives .	***	6	!	1	-	2	***	1	-			1	8	14	3	5	5	2	1	9	10	5	4	11	10	100
Alipore, Central . Hooghly .	2		1	3	3		***	***	1		"	1	5	37	37	26	13	32	15	37	6	16	10	18	29	1
Burdwan Krishnagar		-					-		***	-	1	***	1	1 2		3	1	+	9	10	"	4 3	5 7	5	9	
Faridpur		1	1			2	1		***	+	3		12	1	2	6	12	4	1	3	22	9	10	8	06	
Pubna Murshidabad	7		***			2				***		***	1	8		3	3	1	9 2		1	***		2	4	1
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### TABLE LI-concluded.

### TABLE LII-concluded.

PNEUMONIA by months, Jails, Groups, and Administrations.

DYSENTERY by months, Fails, Groups, and Administrations.

		Ap	MISS	IONS	FRO	м Р	NEUR	ONL	A IN	EACI	н мо	NTH.	1			ADM	118810	ONS I	ROM	Dysg	NTERY	IN EA	сн мо	NTH.		
JAILS AND GROUPS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Torat.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Peshawar	1	11111114	2	41	6					4	3		21 2 1  3 6		5 : : : : : : :	1 1 5 2	1 13 1	1 1 4 9	52 :2 41	2 1 	3 1 1	6 2 1 2 1	3 3 1	14 1 1 3	5 :: 2 2 :: 1	49 8 21 33
Montgomery, Cen- tral . Mooltan, Central . District . Dera Ismail Khan . Dera Ghazi Khan .	0 10 11	1		1 2 4 1	2 :: ::			1	1		1 2	9 :: : : :	18 3 14 3 3	7 1 3 3 1	1 1 3 1	7	1 2 1 5 4	2 2 2 3	4484-		3 2 2	3 1 1	3 3 1	2 4 2 4 1	17 6 1 1	36 33 21 32 16
Shikarpur Sind Gang Hyderabad, Central Kurrachee GROUP VII.—N.— W. FRONTIER, INDUS VALLEY,	8	7 1	2 2 1	1 2 	1	1	1	1	3 ::		3 3 1	4 5	7 4 <sup>2</sup> 13 7	3	2 1		-		1 2	8 4	3			- 1	1 4 5	18 20
AND NW. RAJ- PUTANA	17	15	10	17	15	4	4	5	7	0	15	35	153	23	18	21	29	26	32	25	16	22	23	36	46	317
Rajkot Ahmedabad,Central B Ajmer Muttra Agra, Central , District Ibansi Lajstpur	3	2 : :5" : :	1 6	- 11-11	3	1	9 - 1	: : 3 : 1		1 12 11		2 :: 2 :: 1	6 2 60 3 4 I	3 :: : : : : : :		1 111101		3 :		1 7	2 10 5 5	10 2 6	4 - 1 2	" 1 2 " 5 " 5	3 3 1	11 25 13 31 31 31 31 31 31 31 31 31 31 31 31
GROUP VIII.—S E. RAJPUTANA, CENTRAL INDIA AND GUJARAT .	3	8	11	2	6	12		4	6	3	2	17	87	6	3	1	7	7	2	10	25	19	9	8	10	10
A Damoh Saugor Jubbulpur, Central Mandla Bilaspur Sambalpur Raiper, Central Balaghat Chair dwara Hoshangabad Nissar Betul Nagpur, Central Bhandara Wardha Chanda	1	1			2							2	1 6 1 2 1 2 1 2 1 2 1 2 1 1 2 1	1	4	2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	141441111111111111111111111111111111111		1 2 4 5 1 2 1 1	4 16 5 1 2 1 1	3 3 1 6 6	3		3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 mm
Secunderabao Yeotmal Amraoti, Central Akola, Central Buldana Dhulia Yerrowda, Central Bijapur Deccan Gang Dharwar	101111111111111111111111111111111111111	6	11111111	1									 1 1  8 3  3	5 2 1 6	1 2 5 2 4 1	4 2 1 5	4 3 3	6	3 2 6	3 2 4 5  5 18 11 9	3 12 4 4 3 3 3 13	3 3 30 5 3 1	52 - 2	10 11 11 11 11 11 11 11 11 11 11 11 11 1	5 : :	21 11 12, 12, 33 34
GROUP IX.— DECCAN	6	9	4	4	4	2		3	,	3	1	3	40	19	22	20	16	to	21	86	100	60	23	16	17	410
Thana Bombay, Common House of Correction Ratsagiri Karwar Mangalore Cannanore, Centra	-	1 2		3	1 1 1 1 3	- 9 :::::1			-	-		3	3 19 1 2 5	7 1 3	9	6 5	36 !!!!8	3 3	1 4 5 2 10	6 2 2 6 2 1 7	8 4 1 2 2 2 2 2	11 1-11-	3 6	10	1 3	48 40 8 30 7 4 91
GROUP X,-WEST ERN COAST	2	3	2	3	5	5	3				2	3	30	11	20	12	17	46	28	26	21	6	12	13	6	218

W-12 (12)		ADM	IISSIC	ONS I	FROM	PNI	EUMO	NIA	IN E	лси	MON	TH.			1 /4	ADM	issio	NS F	ком	Dysen	TERY I	N EAC	H MON	ти.		
Jails, Groups and Adminis- trations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Bellary, Central . Salem, "Coimbatore B	2	111	3 1	: 2 2	2	:: :3		1	1	1	1	1	6 8 9	354	8 1 6	6 3	2 2 4		3 3	16 3 12	9 9 11	7 4 16	6 3 49	3 8 4	2 4 6	65 39 120
Palamcottah Madura Trichinopoly, Cen-	***											***		3			2	3	4	4 8	7	7	6		17 2	40 30
Tanjore		::::				1		1		1	1 9 1 4	1	3 4 2	5 2 : 2	6 2	2		1 1	2	4	3 3 1	5 4 1 1	5 8	4 2 8	2 2	34 19 7 25
Madras Peniten- tiary, Central . Nellore C	2		2	3	2	***		1	1	1	1		14	3	1	2	1	3	3	2 1	4	3	3		"	20 9
Rajahmundry, Cen- tral . Vizagapatam . Berhampur .	1	111		1	-			2		1	1	2	8 3	5 1	5	5 1	2	8	13 3	24 2 2	53 0	87 5 2	30 2 2	17 3	16 3 	265 26 18
GROUP XI.— SOUTHERN INDIA .	7	3	6	9	7	5	4	6	2	6	10	5	70	37	30	21	13	20	31	82	118	142	117	51	55	717
Shillong Darjeeling Almora Naini Tal Abbottabad Quetta Mercara Russellkonda	1	111111111111111111111111111111111111111		2		3				11111111		9	4 4 36 	-				1 2 2	2	4 4 1 2	5 4 1	3			1	12 16 2 2 6 5 2
GROUP XII	1	2	1	3	4	3	1		1			2	18	1			2	5	5	11	11	4	2	1	4	46
EXTRA INDIA.—		4117																1								1
INDIA.	95	88	71	70	85	83	54	45	67	68	101	133	963	432	336	446	534	572	568	855	1,079	794	756	615	538	7,525
BURMA EASTERN BENGAL AND ASSAM	1	3	4	4	7	6	3 6	5	4	4	9	6	56 62	18	68	16	18	15	35	171	20 18o	17	16	23	15	243
BENGAL UNITED PROVIN- CES	3 13	13	6 31	8	12	16	7 23	7	23	7 24	9 14 30	32	148	95 182 36	135	118	132 229 64	136	131 223	354	436	125 277 120	199	150	68	923
PUNJAB NW. F. PRO- VINCE	16	111	6	10	12	6	3	13	7	7	15	29	130	22	12	27	38	33	26	14	32	36	56 8	50	51	307
CENTRAL PRO-	15	20	11	10	8	6	6	3 36	3	3	9	28	122	20	29 8	25	6	16	26	26	79	19	27	27	10	142
ANDAMANS INDIA	10		16	6 76	7	6 89	9 63	36 84	17 84	18 86	82	18	232 1,195	126 558		S2 528	85 619	150	47 150 718	161 1,016	101	143 134 928	118 116 872	98 713		813 1,381 8,906

Including Ajmer, Secunderabad, Quetta, and Mercara and excluding Andamans.
 Including Ajmer, Secu erabad, Quetta, Mercara and Andamans.

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U

### TABLE LIII.

-			EUROPE	AN ARM	-	NDIA							
		Men, 7		ALV PIKE	WOMEN	1	CHILDRE	N, 5,322.	Present		127,853 148,714	TION OF	INDIA.
DISEASES.	Admis- sions.	Constantly sick.		Invalids.	Admis- sions.		Admis- sions.	Deaths.	Admis- sions.		Invalids.	Admissions.	Deaths.
Small-pox	87	9'47	4		13	3	5		79	4		82	9
Cow-pox	15	*36					3	***	59	***		29	1
Chicken-pox	18	1'06			. 1		49	***	134	200		561	
Measles	60	3'71			9		144	5	380	1		46	
Rubella	19	1'29	100		1		10		30				
Scarlet fever	15	1.77			6		7					***	190
Typhus fever		-	-	'					1	1			
Plague	17	4'27	2		1	1			147	83		11	8
Relapsing fever	1	'03							31	5	***		
Dengue	282	9'88			8		4		14				
Influenza	804	27'80		3	18		16	1 13	671			950	12
Whooping cough							22						10000
	8	***	-	1	1120	1	1		***	***	1	***	-
Diphtheria	2	100	1	-	2		19	-	566	-	-	735	,
	1000	1		-	- 200	1	5.	3	1		1		***
Cerebrospinal fever	* 017		-		68	****			3	2	***	12	12
	3,917	154'53	1	10			91	3	3,783	5	1	1,010	***
Enteric fever	1,095	224'11	224	115	25	5	30	3	127	34	***	101	18
Mediterranean fever		1.96		4			1	100	38	1	***	3	2
Cholera	64	2.28	46		1	1		***	94	62	- 141	186	105
Choleraic diarrhœa	S	.33	***		***	***	***	***	5	***	***	1	***
Epidemic diarrhora	144	-	***		***	100			100		***	9	***
Dysentery	1,068	79.9	37	59	36	1	50	11	4,748	26	4	8,906	382
Beri-beri	50	8.98	3	60	***	***	***	444	41	3		38	6
Intermittent fever	12,361	417'43	16	135	227		309	3	33,478	39	47	41,052	85
Remittent fever	240	13.18	5	1	6	***	9	1	633	43	4	205	57
Phagediena	1	'21	100			***			***	**	***	***	***
Sloughing phagediena	1	.13		***	***			***	3	***	***	***	-
Erysipelas	15	'95			2	***	1	***	19	2	***	29	12
Pyzemia	4	.53	3			196	***	101	2	1		8	8
, puerperal		***		***		***		***					
Septicæmia	4	*14	3		***	***			7	5		10	10
" puerperal					5	2				***	***	6	4
Tetanus	5	'03	4		***	***	1	***	4	3	100	14	3
Tubercle, not defined	101							***	4		- 111	1000	-
" general										100		2	1
,, of the meninges	***			***			***		***	***		3	2
" of the brain	1	'03	1					***			***		
of the membranes of brain .	***				***		- 1	1				***	
p of the brain and its mem-			1 2			-							
branes					***	***	444	***	2	2		***	***
" of the larynx	***	*02	***		***		***		101		***	1	1
" of the lungs	114	19'84	12	92	10		4	3	323	67	156	922	368
" of the lungs, and general .	100000				***					***		2	2
" of the lungs, larynx and intestines		1										2	
" of the lungs and liver				1								1	1
" of the lungs and intestines.	The Later of the L								-			13	13
of the lower and planes	1000					-			-				1
of the larger and plands	-	100		1 1/2 -								2	1
of the elemen		-	-		1000	1333				-		3	
of the intentions		'01	-		***			-	3		2	18	9
of the bladder	1	1000								100		1	,
	121	-					***					1	
, of abdomen	-				***		***	***	***	***	-	-	

		1		FUROP	EAN AR	MY OF	INDIA	-	-	1	_	-		
			Мя		DAIN AIL		MEN.	Сип	DREN.	NATIVE	ARMY O	INDIA.	Popul	LATION NDIA.
	DISEASES.	Admis- sions,	Constantly sick.	Deaths.	Invalids.	Admis-	Deaths.	Admis-	Deaths.	Admis-	Deaths.	Invalids.	Admi s-	Deaths.
Tuberole	of spinal meninges													
	of the nachaneum	***				***	***		***					1
10		***		***		***	***	***	"	3	3		5	5
"	of lymphatic glands	1	*02		1		***	2	1	13		1	22	1
-	of mesenteric glands .	***				***		***	***	***				2
	of the testicles	2	75		2	***			***	1				200
	of bones	1	'23		3	***	***			***		***	***	***
10	of joints	8	1'22		5				***	3	***	2	3	***
	of the lungs, peritonæum, and abdomen			- 20	100					***			1	
	of pleura and pericardium			***							***		- 1	
	of the lungs, intestines and		-	***	***			-						
	pharynx	***					***		101		***	***	1	1
,,	of lymph glands and intestines							·		-		***	1	,
eprosy		***	***	100	***	1.	***			9		7	93	12
Syphilis		1,945	249*27	10	120	2			***	684	6	50	1,377	10
,,	inherited						***	5	2	1				
Jonorrh	œa	4,287	406°96		11			1	***	797	2	4	466	
lydroph	obia	2	'01	2					1	1	1			***
anthrax		1	102			5000			***	1			13	7
	m crassum					***				1				
ctinom		1	'07			****		-	***	***			1	***
alasza				1		***				9	3		1	,
	hæmatobia	9	2'08	***	10	***	***							
	ephalus latus	1	'05	***		***	***	***		1			7	
	Market No.			***	***	***	***	***			The same of		3	
		:00		***		***	***	19		24			60	
	W	8	5.00	***	***	4	100	2		5			6	
	Control of the second	0	.10	***		***	***	7730		1	***	1000		
	liptica		***	***		***	***	***	300		***			
	cus tenuicollis	***		***		***	***							
		2	'15	***		***	***		37.6	52	***		46	
	THE RESERVE TO THE PARTY OF THE	5	'19	***	***		***	1		4				
	phalus dispar	***	***	***	***	***	***		***	500	***			
	worm	3	.11	***	***	***			***			4	471	
	anguinis hominis	***			***						***	***	36	-
	us duodenalis	***			***	***	***				***	***		
	worm	1	102			1	***	5	***	5	***		92	
	nominivora	1	*01								***	***		***
	s capitis	***				***		2	***		***	***		
**	vestimenti	6	-17					***	***	1	***	***		
	s inguinalis	38	189		***				***	1		***		
	ritans			***	***	***				- ".	***	***		
	nnulatus				***			***		1		***		***
15 B	nxifer	6	.32		***			148	***	***	***			***
Scabies		374	16:77		***	2		3	***	1,450		***	894	
Chionyp	he vel Streptothrix Carteri .	1	*05				***	***					-	
Mycetor	ma	***		***		***	***			2		1	3	1
Tinea fa	ivosa			***						2	***		27	***
Ringwo	rm	377	12.04		***			1	***	377	***	***	165	***
Tinea v	ersicolor	11	'36				***	***	***	***	***	***	***	***
Oidium :	albicans	1	.02			***		1	***			***	2	***
Surfeit				***	l.			1					9	
Scurvy	5. · · · · ·	2	*29				***			307	10	9	72	1
Alcoholi	iste	163	:7'41	4	3	1		***		2				

### TABLE III—continued.

		R	100	AN ARM			-				- 1	1.	
Diseases.		Мк			1000	48N.	Сни	DHEN.	NATIVE	ARMY O	F INDIA.	POPUL OF IN	ATION
	Admissions.	Constantly sick.	Deaths.	Invalids.	Admis- sions.	Deaths.	Admissions.	Deaths.	Admis- sions.	Deaths.	Invalids.	Admis- sions.	Deaths
Delirium tremens	7	*59	2						,				
Rheumatic fever	23	2.20	1	5	1		1	***	55	1	1	18	- 1
Rheumatism	839	56'90		32	16		1	***	1,293	2	73	924	3
Gout	8	' '41		***			***		3	****		3	100
Osteoarthritis	4	777		3			***		8			***	***
Cyst	42	1'95		1	1		1	***	51	***	***	18	-
" of kidney		***				***	***	***	***	***		1	1
" of brain			***	***	***							2	***
Ranula				- 111		4				***	***	3	* ***
New growth, non-malignant, not		*76		1	Service 1				19	100	1	9	***
defined	9	14	***	***	***				32	***		10	***
Pterygium	3 8	14	***						10	-93		7	3
Lipoma		1.13	***		13.0				13	***		6	
Fibromai	15		***	***					1	***		1	
Chondroma	3	*25		2						***		1	
Osteoma		*61							3	-			
Myxoma	7			***	1				3	***		2	-
Mucous polypus	***								2				
Myoma		71											
Glioma		'05		7					1		1		
Lymphadenoma		"14	200		1								
Angioma	10	'44							1			1 2	
Papilloma	284	17777			,				6			1	
6 11-									2		***	20	
Adenoma		'31		,					2				
New growth, malignant, not defined .	3						2		2			1	
Sarcoma		'26		3				,	5	4		. 6	-
Carcinoma		-61	4		2				1	1		5	3
Glandular carcinoma					1								
Epithelioma			***			-	***			***		3	
Rodent ulcer												,	
Rickets							2	***	***				
Anzenia	97	568		5	19	***	17	,	484	3	7	588	14
Chlorosis			***		1		***		181				
Idiopathic ancemia		*11		1			2	1	3			6	1
Purpura		17					i		3			7	100
Leucr cythæmia	2			1					4	2	***		***
Hodgkin's disease									3	1	1	***	
Hæmophilia · · ·	***					***						1	
Diabetes mellitus					2				5	. 1	2	17	3
" insipidus	4	30		1					6		2	2	
Immaturity at birth							24	23				4	***
Congenital malformation, not defined .	. ,	10"					8						
Congenital malformation, deformed ear		10							***	***			***
Single harelip								-				3	
Malformation of digestive system not defined .	1	1	1	1	1	1			1			***	***
	1000	-							1				
Spina bifida	-		***						-	-			
Congenital phimosis	1	101	1										
Congenital malformation of testicle				255	1,101		331	10	1,349	2	121	537	17
Debility			1	-					1		,		21
Oldage					-	1	1 -	1	1	1			50

				EAN AR	0.		1		N	Armi	- I	Popul	ATL
DISEASES,		- Me	N. 2		Wo	MEN.	CHIL	DREN.	NATIVE	ARMY O	F INDIA.	OF I	NDIA.
	Admis-	Constantly sick.	Deaths.	Invalids.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Admis-	Deaths.	Invalids.	Admis- sions.	Dea
eoritis	27	2'44		7	1		-		42		3		-
altiple neuritis	. 24	3'38		11					8			5	
egeneration of the nerves									1000	***	. 3	3	100
leningitis							***	***	***				
achymeningitis (83a)		101			***	***	***		- 1				***
fyelitis			***		**	***	***		***		***	,	
atada a Van a Val		'32	1	2			***		4	3	1	1	
		'06		**	***		3	1	1	***		***	
described to the		.13		***	***		***	***	2				
osterior sclerosis	3	'23	101	1		***	***		2			1	
	4	1'37	***	2	***				6		1	6	
ostero lateral sclerosis	' '	'23		***	***		***		1	***	1		***
isseminated "	1	'30	***	***				***	1		1	***	
cute ascending paralysis	-			***					1	1			
erebral meningitis	4	*14	3	***			9	8	6	6		15	
achymeningitis (89a)	1	101	1	***		***						1	
eptomeningitis	2	*28	1	1							***		-
semorrhage into the membranes o	f												
the brain	-						***		1	2		1	
kternal hydrocephalus					***		1		***				
		***				***						3	
bscess of the brain	1	*03	2		***	***						4	
lerosis , , ,		'27		1						***			
ternal hydrocephalus					1						***		
oftening of the brain					***	***	***		2	2			
anguineous apoplexy	. 2	'12	1	1					6	3	1000	4 7	**
yperæmia of the brain	. 1	103										15	
poplexy					-							2	
ralysis									2	2		10	
raplegia	5		***	2					8		***	3	
emiplegia	7	*44			-				5	1	, 1	27	
		1'73	1	4					14	***	3	28	
								***	1	***	1	***	
	11	*83		5		***	***		37		1	10	
	9	1.01	***	4		***	***		4	-	1	2	**
				-15	***				1				
	-				***	***			2		1		
aralysis agitans		10"				***			2	***	1	4	
horea	6	'91		4	1	***							
ramp				***					8				
parm of muscles	. 1	*25		1	***		***						
/ry-neck	2	'11					1	***	6				
clampsia	. 1	*03					9	6	100				
fantile convulsions							18	14					***
verperal "									***				***
pilepsy	62	7'27		42		i			***	***		2	***
		-		1000	4			***	34	2	13	123	
1		***		***	***	***			1	***		1	***
			***		***		2	1			***	***	
		1,23	***		- 1				11		1	9	
lamin	100	2'44	**		3	***			*48			21	
egrim	J mile	'03	***		***	***			40		***	15	***
næsthesia						***			2		***	2	-
euralgia	262	12'87		9	13			1	362		10	120	-
acial hemiatrophy								***				1	

### TABLE LIII—continued.

				DIAIL O		Mara.		-			-		
in the last week to	-	-	EUROPI	EAN AR	MY OF	INDIA.	_		Namuu	ARMY O	m lumr.	J	AIL
DISEASES.	-	ME	N.		Wo	MEN.	CHIL	DREN.	IVALIVE	AKSIY U	FINDIA.		LATION VDIA.
Made The Street of	Admis- sions.	Constantly sick.	Deaths.	Invalids.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Invalids.	Admis- sions.	Deaths.
Hysteria	10	60			12				7			9	
Catalepsy	2	*04	***	***	***								
Somnambulism	1	*14							***				
Trance									1		*		0.000
Aphasia			***						2	-			***
Hiccough			***						1			2	
Nervous weakness	36	2'97		4	1				9	-			0110
Idiocy												3	1
Mania	11	1'77	1	8	3				20			58	
" puerperal					1						11112		-
Melancholia	42	9'74		34	1				8		3	8	
Dementia	7	1*82		5					3		1		
Mental stupor	1	'15		1					3 2	1	2	13	4
General paralysis of the insane	,	*24		1					1			***	
Delusional insanity	17	3'80		15						1		1	
Conjunctivitis	313	20'51	***	3	32		114		7		7	***	***
Granular conjunctivitis						***		***	2,004	***	5	1,040	***
Ecchymosis					***	***		***	82	***	2	56	***
Œdema of the conjunctiva		*03	***	***	***	***	***	***		***		1	
Variablelia			***			***		***	***	***		***	***
Description of the con-			***				***	***	***	***		2	
Managhala.		***	***		***	***		***	1				
Village and the Accordance	9	1'03	100		***		***		49		. 2	37	***
Gangrene	52	4'15	***	2		***	4		201	***	10	273	***
	***	***	***			***		***	***	***		1	***
Opacity of the cornea	4	'40			***			***	13	***	4	11	
Staphyloma	***		***		***		***	***				1	
Fistula of the cornea	1	*04		1	***			***	1			2	-
	***					***			1				
Scleritis	***			***	***							1	
Iritis	59	5.89	***	3	1	***	***	***	80		3	32	
Iridoplegia			***	***					1				
Choroiditis	6	.48		3	.**	***			2				
Glaucoma	6	.22	***	2					4.			. 6	
Hypopyon	***		***		***	***						1	
Optic neuritis	4	.76	***	3	***			***	4		1	1	
Congestion of optic disc							***	***	1		***		
Atrophy and degeneration of optic	2	'24		***			***		1			-	
Retinitis	6	'53		6							1		***
Degeneration and atrophy of retina .				***					4		1		
Detachment of retina	2	.16						The same				1	-
Lenticular cataract	2	'18		2			3						
Dislocation of lens							1000	1000	200		4	20	
Opacities												-	
Panophthalmitis									***		-	1	
Amblyopia and amaurosis	. 8	*69		3			-			***		3	
Functional night blindness	3	38					-		12		***	3	
Sympathetic irritation	1	'13							10		4	2	***
Ametropia	9	*55							-				***
Myopia	22	*89											
Hypermetropia	26	1.32		4					4				-
Astigmatism	20	1,22	***	5	***	100	***		3		5		
Presbyopia				"					'			***	
Too Topia			***	***					2			***	***

		-	EUROPE	AN AR	MY OF	NDIA.			N			_ J	AIL
DISEASES.		Mg	N.		Wor	EN.	Сип	DREN.	NATIVE	ARMY OF	INDIA.		NDIA.
	Admis- sions.	Constantly sick.	Deaths.	Invalids.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Admis - sions.	Deaths.	Invalids.	Admis- sions.	Deaths.
Anisometropia	1	'02	***						***	***		-	
Asthenopia	1	'03	***		944	***	100				***	1000	
Squint	3	16			***	***						***	
Inflammation of lacrymal gland .	***				100		100	***	2			1	
Stricture and obliteration of puncta					-		100		1				
and canaliculi	***	***						**	1	***	***		***
Chronic dacryo-cystitis	3	'93	***	400	***	***			1	***	***	***	***
Abscess of lacrymal sac	4	*37		***	1	***		***	3		***	8	
Fistula of lacrymal sac	1	*25	***	***	***	***		***		***		3	***
Obstruction of nasal duct	2	15		***	1	***	***		***	***	***	***	
Epiphora	1	.13	***	1		***			1				***
Dacryo-lithiasis				***	1		***	***	***		***	***	400
Blepharitis marginalis	25	1.60	***	2	***				4		***	3	***
Stye	12	24			***	***			87			22	***
Abscess of the eyelids												1	***
Exophthalmos	1	10'	***	***			***		***		***		100
Trichiasis	-	-							4		***	8	
Entropion	***								;"		***	2	
Œdema of the eyelids							'		2		***	2	
Ptosis		-		***	***		***	***	1			1	
Inflammation of the external meatus .	628	23*84		6	4	***	8		262	***	1	270	
Abscess ,, ,,	1	'02			***	***			14		***	8	
Hæmatoma of the auricle		-		***		***		***	3		144		***
Accumulation in external meatus of wax or epidermis	4	'13					***		2	***		- 1	
Inflammation of the middle ear .	133	6.88	1	1	2	100	2	1 33					1
suppurative .	36		1	12			1	***	35	200	, 2	42	
Ulceration of the membrana tympani .	1	2.77			***				53		1	32	
2.4.4.	132	***					***		3			3	
		9.29	***	51			***	***	9	***	1	1	***
Ankylosis of ossicles		***	***		***					1	1		
Deafness	21	1,03		11		***	***	***	22	***	9	2	***
Necrosis of internal ear		10		***			***		***	***		***	
Tinnitus	-1	,09		***		***	-	110	***	***	***	***	***
Rhinitis	12			, 2	1		1	***	4	***		15	***
Coryza	95	3,31	***	***	2		11	***	79	***	***	60	***
Ozena	2	114		,			1	***	***	***	***	12	
Abscess of the nose	***				***				,2			1	
Necrosis, and caries of bones of nose .	3	'22	***	1			***	""	3		1	***	***
Perforation of the septum	4	15	***					***				***	
Epistaxis	9	*28	***		2			***	11	***		23	
Inflammation of the accessory sinuses				***		-		100	1	***		**	***
Етруста	1	*20	***	***				***	***			***	***
Inflammation of the naso-pharynx .	2	106	***						28			1	100
Pericarditis	5	*60	3			***			2	1		13	9
Calcification of pericardium	***	***		***		500		***	1	1		1	1
Endocarditis	4	'40	1	1	-		-	***	11	5	1	1	3
Ulcerative Endocarditis		***	***					***	1	1			-
Valvular disease of the heart	168	27'92	15	118	11	2	3	2	47	14	. 14	113	30
Abscess of the muscular substance of the heart									***		***	1	
Fatty degeneration of the muscular	5	*14	1 7	1	1	1			3	3	1	18	15
substance of the heart	-						The same	1				1	.,
Hypertrophy of the heart	1		2			***			1			101	
Dilatation of the heart	13	1'07	3	2	***	***	-	-	11	***	2	10	10

### TABLE LIII—continued.

grade and the same			EUROPI	SAN ARI	MY OF	THE PARTY.					-41	14	IL
DISEASES,		Me	N.		Wo	MEN.	Сип	DREN.	NATIVE	ARMY O	INDIA.	POPUL	ATION NDIA.
Disease,	Admis- sions.	Constantly sick.	Deaths.	Invalids.	Admis- sions.	Deaths.	Admis- sions.	Deaths,	Admis- sions.	Deaths.	Invalids.	Admissions.	Deaths
Excessive growth of fat on the heart .	1	101	1				-						
Aneurysm of the heart	1	*10	***									1	
Rupture of the heart				***		***				1			
Embolus							-		1			-	
Angina pectoris	1	-01	1		1		-		4	1	1	1	
Syncope	6	*10	5				,	2	5	5	200	3	8
Disordered action of the heart	492	43'87	1	104	4		1		45	1	3	14	
Endarteritis deformans	***								***	***		2	,
, obliterans			***						2				
Degeneration of arteries	***											1	,
Aneurysm of arteries	7	1'29	6	2	1				3		2	6	3
Aneurysm by anastomosis			Total Control					1000	11/2		11000	1	
Ttis	2	*17				***	-				***		100
Rupture of artery	1	'04	2		***	***			1		***		
Thrombosis	3	.46		2	***	***	1000		***	-	***	and the	***
Paration		-	***		***	***	***	***					
D # F			-		***	***	***	***	1	***	-		
DILLIN.					***		***	***	***		***	10	***
The state of the	27	1'79	***	14	4	***	***	***	13		***		***
Thrombosis of veins	31	2,30	***	9	3		***	***	5	***	***	2	
Phlegmasia dolens	1	*08	***		***	***	***	***	3	***	1		***
Varix	87	6.10	***	13	9	***	***	***	13	***	4	2	***
Varicose aneurysm, including Aneurysmal varix.							***		,			**	***
Nævus	1	*04					***	7					
Laryngitis	43	1.81		4			3	1	127	1		22	1
Œdema of glottis	***		***	***				100	***	***		1	
Tracheitis	1	'02	***					***	5				***
Bronchitis	1,152	49'45		9	35		186	5	2,350	8	17	2,202	25
Dilatation of bronchi	1	*20	***	144								4	1
Spasmodic asthma	35	2.23		6	2	***			145	1	13	647	8
Congestion of the lungs	3	'10				***		***	10	***		17	8
Hæmoptysis	6	.20							11	1		47	***
Pulmonary apoplexy		***				- I		***	1			,	1
Œdema of the lungs				***								4	4
Pneumonia	241	24'08	20	7	5	. 3	17	4	1,155	199	4	1,195	322
Broncho-pneumonia	11	-89	1	1			19	6	29	1	***	36	10
Abscess of the lungs			***						1		1	2	2
Gangrene of the lungs		'01	1		***							16	ñ
Cirrhosis of the lungs	2	'30		2								2	
Phthisis (non-tubercular)	3	'35		2					2		1	1	
Emphysema	4	*34		il					7		1	3	
Collapse												. 1	1
Asthma not defined			***						2				**
Pleurisy	162	10°75	2	5	4		2		276	3	3	168	8
Empyema	3	'44	2	1	,				5	. ,		4	4
Hydrothorax		"							1				
Adhesions, including thickening and					1				- 18		3320	100	
calcification		05		1			-		2	-	1	-	
*** ** *****	***	-						***	3	-			
				***		-	**	***				0.00	***
Fissure of the lips	***	***	***			***		***	***	***	1 111	1	***
Stomatitis	213	*98			***		4		79			99	***
Ulceration of the mouth	2	.02			1			***	21			7	

			EUROP)	EAN AR	or or	MUIA.			NATIVE	ARMY O	FINDIA	Popu	LATION
DISEASES.		Mgs			Wos	MEN.	CHIL	DREN,	NATIVE	AKMY	F INDIA.	OF	INDIA.
With the same of	Admis- sions.	Constantly sick.	Deaths.	Invalids-	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Invalids.	Admis- sions.	Deaths
angrene of the month							2	,	2	2		3	1
isorders of dentition							82	14	3				
, with convulsions						***	3	2					
" " diarrhœa .					1000	2000	3	1					
, convulsions and diarrhoea			***	***	***	***						5	
flammation of the dental pulp		***	***	****	***	""	***			***	1000		
appuration of the dental pulp		.09						3	2	***	***		1000
aries of dentine	***		***		***	***	***	***	,				***
	246	8'41	***	38	9	***	2		34	***	***	18	***
flammation of the dental periosteum	89	2'73	***		1	***	1	***	11	***		. 4	***
um-boil	182	5'76	***		3		4		148	***	***	167	
flammation of the gums and periosteum	9	-35					***		14			7	***
uppuration of the periosteum, gums, and alveoli	7	*33		2					24			6	
liceration of the gums and periosteum	1	.07				***			4	***		20	
aries of alveoli	23	'53					,		5		***	2	.,
lecrosis of "	2	*34		1				***	3		***		
falposition of teeth						***				***	***	2	
mpaction of "				-	***				3		***	***	
Coothache			100	1 day					4				
ilossitis		112		***					8			2	
bscess of the tongue		1			***							3	
iceration of the tongue		14	***		1		1						
ore throat		- mil	"		8							5)	
liceration of the palate and fauces .	563	17'01		***				***	149	***		4	
fitte	10	*46	***	1	***	1 "			6	***	***		
-Ni-to-Assolution	51	1,30		***	11		5		***	***		62	
	1,146	41'00	***	***	17	***	38		277	***	***		
Quinsy	70	3'42			3				7	***		35	
lypertrophy of the tonsils	6	*16		***	***	***	2		***	***		1	***
longated uvula					***				3	***		2	
nflammation of the salivary glands .	3	'13		119	1		744		9			6	
appuration of salivary glands . ,	ins	.03			***		***						
alivary fistula				-								1	***
alivation	***		***		344							1	
nflammation of the pharynx	***			***		***			65	***		32	
nflammation of the pharynx and cosophagus	24	1'02		-	2								
Diceration of the pharynx	***			-	201	1			1		***	***	
Gastritis	251	9'16	2	2	23	1	15	1	102	3	***	53	3
Diceration of the stomach	1	*17		1	1				2	1		7	
, , perforating					1		***		-			7	
Gastric fistula	1	'02	***										
Hæmatemesis	3	16	,						3		1	2	
Dilatation of the storach	1	3.50		2		1		***	2			4	
Stricture of stomach	1 198	. '24	1										
Stricture of pylorus				-								2	
Indigestion	883	A Barrier	1 338	5	1	1	14		260		3	730	
Vomiting			-					***	1		1	4	
Gastralgia	1 93				-				6		1	3	
Loss of appetite	1	7	1000	-	-				2		-	2	1
Inflammation of the intestines				1	5		1					. 2	1
The same and the same and the same as the	7	- 34	-	200	9		1 33	100000					1
Enteritis	73	3-64	3	1	7		6*	57	52	8		46	1

DETAIL of DISEASES.

			EUROPE	CAN ARI	MY OF I	NDIA.						JA	IL
DISEASES,		Mer	N.		Wox	IEN.	CHIL	DREN.	NATIVE	ARMY O	INDIA.	OF I	NDIA.
	Admis- sions.	Constantly sick.	Deaths.	Invalids.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Admis- sion«,	Deaths.	Invalids.	Admis- sions.	Death
Colitis	134	6:11	2	4			2		52	1	-	21	
Catarrhal inflammation of the intestines	80	2"70			7		16	6	5		1	385	4 33
Ulceration of the intestines	4	*24		1								1	D 3
" " perforating					2000							2	80
" " tubercular	1000			1333								1	1 10
Gangrene of the intestines	***				***		1330	- 12 3				1	
		***			***				2			6	2
About a of the Intentions	1	*07				***		100	1000			1	- 10
Constitue	***				***			***					
	***					***		***	2	13200		11	
Tit	9	'31			1	***	***		1	***			
	5	'53	***	1		***	***	***	***				
Sprue	2	'54	1	1	1		1	1	1	3	***	67	7339
Hernia	104	815		15	2	***	4	***	28	***	11		100
Inflammation of hernial sac						***							746
Intussusception	1	.11							1		***	5	1
Volvulas									2			3	-3
Internal strangulation of the intestines	3	.03	3		***				2	2		1	379
Stricture of the intestines	1	.03										1	***
Obstruction ,	2	*06	1			***	1	1	2	2		14	1
Compression ,	***									***		2	113
Perforation ,	1					***	-					2	1
Intestinal dyspepsia					111		1					1	
Constipation	217	5'48			19		9		158			139	***
Paresis												1	
Colic	372	8'72			18		4		261			424	100
Diarrhœa	960	31'97		4	68	1	240	42	926	10	5	4,261	1
Enteralgia		1			1				***				
Proctitis		1							1			2	
Periproctitis		95	1	1					1 4			***	
Abscess of the rectum and anus .	9	-0.	-		2		-		10			6	
Ulceration ,, ,, ,,				***		***			6			3	
Fissure of the anus	19	1			***			***	16			5	
Firtula in ann		2'50			***	***			49			72	
Party period Satula		1		1	***	***			1			1	***
Gangrene of the rectum and anus .	***	'02	***	***	***	***				***			1000
Hypertrophy of the rectum and anus .	1	1		***	***	***						-	***
Prolapse of the rectum and anus .	***			***	***	***	"		1		***	16	***
Dilac	2	16		***	***							300	-
	393	1		1	9		1		179	-	5	455	***
Pruritus ani	1	*04	-	***					2	1		***	
Hepatitis	350	27'56	3	36	9		2		37	1 30	1	40	1 9
Abscess of the liver	183	25.30	107	67	6	4			19	12	1	6	1
Cirrhosis " "	8	.90	2	1			1	***	7	2	1	62	1
Perihepatitis	10	'53			2	***			5			1	
Congestion of the liver	599	25'87		12	9		5		35		1	55	
Acute yellow atrophy of the liver .	1	.03	1						1	1		3	1 3
Fatty degeneration of the liver				***								1	***
Hypertrophy of the liver	1	'09				***			1			8	
Jaundice	293	1467	***		3		8	2	253	1	*	185	20
Cholecystitis	43	3.30		-					8	1		25	
Gall stones	1	'06	1 - 1		1				2	1		1	-
Accumulation of bile												1	
Biliary colic		*02	-	-	1				1			3	
THE RESERVE THE PARTY OF THE PA	170	1		1							10		

				EUROPI	EAN AR	Y OF	INDIA.			Name	Anun	OF INDIA.	Popul	LATION
DISEASES.		3	Mes	v.	anne.	Wo	MEN.	CHIL	DREN.	NATIVE	ARMY	OF INDIA.	OF I	NDIA.
	9	Admis- sions.	Constantly sick.	Deaths.	Invalids.	Admis- sions,	Deaths.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Invalids.	Admis- sions,	Deaths
offammation of the pancreas .										1				
eritonitis		10	165	3	1	4	2	2	2	7	4		22	20
scites		***		***		1				2			27	5
dhesions of the peritoneum .			***	200		***	100		***	3		40		
Omental hernia		1	'12		1			-						
iplenitis		17	1,10							128		3	18	
erisplenitis		5	*34			***				***				
bscess of the spleen													1	-
Congestion of the spleen		***			1					5				
Typertrophy of the spleen .					***				1999	23	7000		12	1000
nflammation of lymph-glands .	100	902	87.55	***					***	2763		1000		
suppuration of lymph-glands .		177		***	10		***	7	***	302		3	194	
		30	2'97	***	2		***	***		15	1		140	
Hypertrophy of lymph-glands .		1	(0)	***		***		***	***	7			4	***
nflammation of lymphatics .		22	171		1	1		2.00		16	-		13	***
Obstruction of lymphatics .		,	'04		1	***		***		***				
Dilatation of lymphatics .		***	***	***		***	***	***		1			***	
Elephantiasis (522)				101		***	***	***	***	***	***		6	
nflammation of the thyroid body			***		***	***		***		1	,		***	
Goitre		8	-65	***	3		***	***		22			1	102
Atrophy of the supra-renal capsule				***		***				***			3	***
Acute nephritis		25	2'48	4	5	2	***	2		16	2	2	23	
Bright's disease		4	.23		2	***				10	***	5	55	
Chronic nephritis		1 7	'97	2	4	,2	***			8	2	3	54	1
Granular kidney		6	'54	2	***	***	140			2	***		17	5
Abscess of kidney				**.	-	***								1
Pyonephrosis		. 3	'36	1	1		***			***			***	
Perinephritic abscess		1	'07				***	-			***		***	
Pyelitis					***		***		***	***			1	
Congestion of kidney		1	14		***			111				***		-
Movable kidney		3	*42		1	2	***			2		1		
Calculus in kidney		1	'10				207			23			3	1
Cirrhosis of kidney													,	18
Calculus in ureter						2				8				
Nephralgia			1							8			3	
Glycosuria		,												-
Suppression of urine				1	1								,	
		-	1		4	1 20				6	1 100	-	12	
	1		- 13	1000	1 - 5 - 1		1000		10000	1	9274		1	
Gangrene of kidney					7	""		1000					,	-
Hæmoglobinuria		375	1		-					-	1		0	1
Albuminuria		,	1	100	0			1		4		-	- 1986	1
Lithuria		1	-		***			***		2	1		18	-
Inflammation of the bladder .		34	277		2	2		2		9	1	-	11 /80	1 3 6
Suppuration		1	***		77	-				3				
Calculus of the bladder			7/00	1000	***					10	1 333	,	12	-
Irritability of the bladder			4	1 2 2 2			- 12	1		***	***		2	
Retention of urine		1 02		1 37/4						3	***		6	
Incontinence of urine		36	1	200	2	,		4	-	2	1		1	
Urethritis		45	1.48	***						6			8	
Gleet		1	*06			***				1			2	
Abscess of the urethra			181					***			***			
Stricture of the urethra .		44	2*81		3		200			1 17		2	50	1

137 W

#### DETAIL of DISEASES.

	EUROPEAN ARMY OF INDIA.							-	-	-	last.		
DISEASES,		Me			2,000	MEN.	CHILI	DREN.	NATIVE	ARMY O	F INDIA.	POPUI OF I	ATION NDIA.
Dispused	Ad mis- sions.	Constantly sick.	Deaths.	Invalids.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Invalids.	Admis- sions.	Deaths.
Urethral fistula	4	'45							3			8	
Recto-urethral fistulal						***		-		***		1	
Extravasation of urine	***	*12		1	101					***		3	3
Impacted calculus	1	*03							1		100	1	***
Inflammation of the prostate	4	18			***				1	***		***	***
Prostatorrhœa	1	*07		***	***	***			-	***		***	***
Abscess of the prostate		100		***				***	***		***	- 1	***
Hypertrophy of the prostate									***			5	
Œdema of the prepuce	2	*13	***							***		1	
Phimosis	104	6.22					29	***	19	***		67	***
Paraphimosis	22	1'78							8	***		15	
Balanitis	168	7'02							13	***		10	***
Ulcer of the penis	14	*69							31		1	18	
Gangrene . "							***	***	٠.,	***		1	1
Œdema " "	***					***			2			1	
Soft chancre ,, ,,	2,003	208:56				***			586		1	105	
Inflammation of the scrotum	***											7	
Abscess of the scrotum	3	*37	***	***					1	***		7	***
Sloughing " "			***		***	***						1	
Soft chancre , ,	,	***			***	***		***			***	13	
Pruritus	***	***			***	***		***	1	***		***	
Inflammation of the spermatic cord .	4	15			***	***			2				***
Hydrocele " " " .	6	*37	***	1	***	***			3		,	1	***
Varicocele	67	4'25		5	***		1		6	***			***
Inflammation of the tunica vaginalis .	1	.03			***			***			***		***
Hæmatocele ,, ,, ,,	3	'21			***	***	***	***	3	***			
Hydrocele	47	2'44	***	***	***		***		42		1	95	
Inflammation of the testicle	**	***			***			***	3			54	***
Orchitis	453	26.26		5	***		***		216	***	2	70	***
Epididymitis	35	2'05		1		***			33			9	
Abscess of the testicle				***	***			***			***	-	
Atrophy , ,	2	*09						***	-				
	2	.11		1			-			***		126	
Distension of the Fallopian tube		***		***	9		***	"					-
Perimetritis			***	***	6								
Parametritis					2							3	
Ulcer of the uterus													
Metritis					28							,	
Endometritis					13	,							
Hæmorrhage from the uterus					2	1							
Hypertrophy of the uterus					5								
Abrasion " "					4								
Anteversion " "			***		3			-					
Retroversion "					7					***			
Retroflexion					1								
Prolapsus " "					9							1	-
Procidentia " "					1								
Stricture " "					2								
Laceration or rupture of the cervix .					2							-	
Inflammation of the vagina		***	.		2		3					***	
	Total Control	-	-	-	The same of the last	-		-	-	-		-	

	1		EURUP	EAN AR	MY OF	INDIA.			N		-1		II.
DISEASES.	1	Me	N.		Wo	MEN.	CHIL	DREN.	NATIVE	ARMY O	F INDIA.		ATION NDIA.
	Admis- sions.	Constantly sick.	Deaths.	Invalids.	Adm is- sions.	Deaths.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Invalids.	Admis- sions.	Deaths
rolapse of the vagina					1								
nflammation of the vulva					101	***	2						
bscess of the vulva					1		1	1 21					
lypertrophy ,, ,,				-		1	101			***	***	1	***
lome			***			447	***		***	"	-	3	400
	***		***			***	146	***		***			***
humanarhan	***		***		15		***	***	***	***			***
fan dechanda			***			***	***		***	***			-
letrorrhagia	***		***	***	37	***	***		***	***		3	***
encomban	***	***	***	***	15		***		***	***		4	100
aflammation of the uterus			***	***	3	***	***		***	***	***	1	***
			***	100	1	***	***	***	***	***		***	
ruritus	***		***	110	***	***	1		***	***		***	***
ramp and spurious labour pains .	***	***	***	***	12	***	***		***	***		3	
denstruation		-	***		4	100	***			***		***	***
Hæmorrhage from the uterus (699) .	***		***		11	***	***		***	***			100
Abortion	***	***	***		104	481		***		***	***	16	***
Carneous mole						***						***	***
esicular mole	***	***	***		1	***	***		***	***	***	***	***
Atomy of the uterus	***		***	***	***	***	***	***	***		***	2	
fechanical obstacle to the expulsion of the feetus		***						***				3	,
dæmorrhage, unavoidable, from										1			
placenta przevia		***		***	1	***	***	***	***	***	***	***	***
Rupture or laceration of the uterus .	-	""	***	-0.0	2	2	***	***		***		***	***
Rupture of perineum	***		***		1	***	***				- ***	,	***
Retention of the placenta	***		*"		2	***	***	***	***			. 1	***
Still birth			***		5	***		***	***	***		***	
Metritis		***	***		1	1						***	***
Sloughing	200		***	***	1.		"	***					***
Abscess of the areola	***		***	***	1							***	
Mastitis	***		***		7	101	***		1			3	
Mastitis, puerperal	***		110	***	4	***	***	***			-	***	***
Suppuration of mammary gland .	*** -	1	***	***	2	***		***					
", ", puerperal .			***	***	5	151	***						25
Hypertrophy of the breast			***	-		***	***		1				
Inflammation of the male breast .	2	*07		-	111	***	***		***			1	
Ostitis	15	.03		2	***	141			3			***	
Septic osteo-myelitis					***	***		***				1	
Periostitis	70	4'90	***	3	3		2	***	54	***	4	23	
Periostitis, circumscribed	***		***		841	***	***		12		1		***
, diffuse	***		***	-91	241	***	141		5	***	1		
Chronic abscess of bones	1	15			-			***		***		1	
Caries of bones	5	1 3		2	-		1	***	5	***		25	
Necrosis of bones	18	1.68		2	2		***	***	14			50	1
Osteo-malacia		1	***	-	***		***		1	-			
Atrophy of the bones					***		***		1	***	1	***	***
Inflammation of joints, not defined .	5	*47								181			
Synovitis	Son	45'30		21	3	***		***	501	1	11	162	1
Ankylosis	4	*44		1			***		11		4	1	
Dislocation of articular cartilage .	19	1.64		4					9				
Loose body	2	102		1					2		***		****
Inflammation of the spine				1					***				***
annummerous or one observe													

#### DETAIL of DISEASES:

	EUROPEAN ARMY OF INDIA.								_	-			
Diseases.		MES		AIX AIX	Won		Сипл	DREN.	NAT	INDIA.	YOF	POPUL OF IN	ATION DIA.
Diseases.	Admis- sions.	Constantly sick,	Deaths.	Invalids	Admis -	Deaths.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Invalids.	Admis- sions.	Deaths.
Psoas, lumbar, post-pharyngeal,	1	°10										-	
Posterior curvature of the spine .	2	.03	***	ı		* ***	1	***	1	***		3	
Dislocation of the spine	***	***		***		***	***		1	***			***
Inflammation of muscles	1	'02	***	***	***		***		16	***	***	5	***
Abscess " "	1	*05	***	***	***			***	***	***	***	***	***
Suppuration , ,		***	***	***	***	***	***	***	1	***	1	5	-
Atrophy " "	***	***	***	***		***	***			***		1	-
Pseudo-hypertrophic paralysis		***		***	***	***	1		200		***	***	
Contracture of muscles			***	***	***	941	***		1	***		***	***
Idiopathic muscular atrophy		***	***	***	***	891	***		***	***	1	***	***
Myalgia	187	676	***		3	101	***		425	***	5	123	***
Contracture of fascize	1	'13	***	1		***		***	1			1	***
Inflammation of tendons	***		***	***	***	***		***	2	***	***	1	
Adhesions ,, ,,	1	.03	***	Y	**	***	1				***	200	***
Contraction ,, ,,	5	-29		i			***	***		***		1	
Tenosynovitis	5	17					***	***	12			10	
Thecal abscess		***	***		***		***	***	6	***	***	7	
Ganglion	8	*28		***	***	***	***	100	7	***		4	***
Inflammation of bursae	30	1.40	***	***	2	***	981		26	***	,	***	***
Abscess " · · · ·	2	119	***	-	***		***	-	2			2	***
Bunion	7	'49	***	1	***		***	***				-	***
Bursal cyst	,	'12	***	200	101		***	***	3	400	-	***	
Bursal tumour	***	-			101	***	100		1	***	-	***	***
Club-hand	***		***	***	***				1		-	***	
Club-foot	. 1	111		2	***		1	100				***	
Flat-foot	24	2.08	-	16				-	2		-		
Deformities of the great toe		*13		1		-			-	-		***	***
Hallux valgus	5			4					***		1 100	***	***
Hammer toe	35		***	1								-	
Inflammation of the connective tissue	854			2	10		9		399		3	541	11
Abscess ,, ,, ,,		48°co		10	12		to		1,620	100	3	3-492	
Gangrene " " "	2	.00	1	100		100	6	-	1	1	1	10	3
Œdema " " "	12	.28			***		1	***	8	***	***	15	3
Hæmorrhage " " " .	404	141	***			***		***	4		***	2	
Elephantiasis (803)		-		***		***	***	***			***	5	***
Emphysema		'02				***					***		***
Undue formation of fat	,	'01			***			***	***		***	2	***
Erythema	19	1,50		1	2		***		12	***	***	3	
Roscola	5	15	***			***	1	***	1		-	1	
Pityriasis rosea	3	,30		***	***	***		100					
Urticaria	51	1'74		***	3	***	2	***	94	***		89	***
Prickly heat	54	1.83		100		**		***	6	***	***	3	
Eczema	441	23,08	ster.		7	***	22	****	430		3	343	
Impetigo	97	4'39	100		2	***	14	***	52	***		16	
Pityriasis rubra	3	+39				***		***	6	10000		1	
Pruigo	1	02	100	***	1 11 14	***			4			3	
Lichen	2	'05	***		***				10	***		16	
	59	2.13			***	***	***		23	***		101	100
4411.4.1	5	313	1		***	***	***	***	100	***	- 3		-
Herpes	37	1000	444	***	400	200		285		741	-		
Zona	14	1'44		***	***		5	***	91	***		49	***
0		100	***	***	***	***			57			27	
remphigus	125	5'43	***	***	2	***	4		8	***		75	

The state of the s	-	ŀ	UROPE	AN ARA	IY OF I	NDIA.			N		Loren	p. J	AIL
DISKASES.		Мв	N.		Wos	EEN.	CHILI	OREN.	NATIVE	ARMY OF	INDIA.		NDIA.
	Admis-	Constantly sick.	Deaths.	Invalids.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Invalids.	Admis- sions.	Death
rmatitis herpetiformis	5	'43	1000						17			3	
ne	16	'94	200	-"			1		14		***	6	
cosis	32	1,00	***	-					25			1	
borrhœa	15	*85	***	3						***	***	***	***
ucodermia				***		1			1	***		1	
loasma	1	'05	***		110	***					***		
opecia	6	'31		- "								447	
ilblain				***	***				7			,	
cer	541	27'00	***				5		3,185		9	3,223	
atrices	34.			2	13		1	***	1			1	
1	1,100	42.22			***		23		2,611		,	1,295	
rbuncle	19	1.18		***	11				38			176	
ngrene			. "	***				10000	1		1	1	
hitlow	148	6'86	***				" ,		373			343	
ychia	200	11'02			3		2		38			41	1
ratosis pilaris		1	***	***	2				1				
	1	12	***		***	***			4			2	
	2	*05		***	***	***	-		17			4	
	36	1'23		-101	***	***		***	1	1000			1
m	2	-16	***	***	***	***	***	***	6			24	
eloid		***		***	***	***		***	2				1
	40	1.34		***		***			1	***		***	
lluscum contagiosum	1	***	***			***		***		***			
peridrosis		'42	***	***					1	***		***	
emidrosis	2	.07				"	***			***	***	***	1
drosis	-	-		***	***				1				1
iritus	1				"	***		***	-	-101	***	2	1
pus · · · · ·	2	*28		1		"		***	65	***		4	
lhi boil			***			***	***	***		***	1	***	
radermia maligna	***						***	***	1	***		***	
CIDENTAL :	186	8:53	32	7	2	3	7	2	9	2	***	58	
Sen-stroke	143	5'32		1	1		1	1	28	1	***	35	
Heat-apoplexy	22	'72	7		1	,		***	6	3	***	43	
Effects of chemical irritants and													
corrosives	1	.27		***	1			***	1	***		***	1.
Lightning stroke	***		***	**	1	***	***	***	2	2		***	1
Multiple injury	8	.20	3			***			1	'	***	35	
Suffocation from submersion	1000		19		***			***	2	9		***	
passages with foreign substances .		-	1					1		***	241	***	1.
Suffocation from overlaying	1		1					***					
Starvation	***							***		***	***	2	
Exhaustion	4	'12	1		1		1	1		- 111		***	
Shock			1								***	3	
Burns and scalds (general and local)		4'35	***	1	1	***	7	1	290	3		295	
Frost-bite				441	***					1		***	
Abrasions	1	23'95			1		1		1,999			109	-
Contusions		63'90		3	6		6		2,437	1	5	698	
Wounds		80'62	1	15	5		29		3,763	1	12	3,049	
		3,33	5	3			-		71	2	8	4	
gun-snot		59'56		3	3		1		1,429	-	8	186	
Dislocations		6.24	1	6					Sp	***	8	23	
PARTICULAR	4	- 34			10	1						2	
Rupture of muscles, tendons, and		1							-				

#### DETAIL OF DISEASES.

	EUROPEAN ARMY OF INDIA.											- In	
*****	- 95						Curr	DRDN.	NATIVE	ARMY O	INDIA.		ATION NOIA
DISEASES.		Me	N.	1967	Wox	ten.	CHIL	DRDN.	1975			-	
	Admis- sions.	Constantly sick.	Deaths.	Invalids.	Admis-	Deaths.	Admis-	Deaths.	Admis-	Deaths.	Deaths.	Admis- sions.	Deaths.
	Sions-	SICK.		1	DIOLOG.							-	-
Rupture of membrana tympani .	***	***		***	***		***				***	1	-
Fracture of the vault of the skull .	1	***	11	-	***	***	411		7	6		1	1
Rupture of lung		***	***	100	***	***	***	***			***	1	
Fracture of skull	***		***		***	***	***	***		1	***		3
" of the base of the skull .	8	*60	8	2		***	2	1	10	7	2	3	3
" of other bones	443	44'23	2	23	5	***	26	***	389	1	38	385	100
Foreign bodies in tissues and organs	4	721	***	***	***		***					1	
Fracture-Dislocation of spinal column		***	***		411	***				1			
Rupture of intestines			***		***	***	***					-	
Dislocation of spine	2	*27		100		***	***		2			17	
Effects of irritants and corrosives .	***	***	***	***	***		-					1	
" mechanical injury				***					1			***	
Compression of nerves	1	*07								-			***
Rupture of nerves	3 49	3.62		3			- 2	1	42	1	4	1	
Concussion of the brain	1	'26		1									***
Laceration of brain without fracture	100							-				- 1949	
of skull	1	•••	,		***				-				
Compression of the brain	***			-				***				4	
Injury of the teeth			***		***	***		***		***	***		
Sub-conjunctival hæmorrhage .	***	***	***	***		***	"				***		1
Rupture of aneurysm of aorta	***	***	***	***	***	***	-		-				
Contusion of the eyeball	100	*04	***		***	***			9	-			
Wound of cycball (sclerotic)	2/8/2	'18	1		***	***	-	-			ELL		
Internal hæmorrhage of liver, spleen and small intestines	***									-	***	***	
Fracture of ribs		'13		***	***				277		***	***	***
Simple fracture of the spine	2	*28	1	1				***	1	***			
Concussion of the spinal corc	2	'55							***	***			***
Compression of the spinal cord .		***						***	1	***			***
Rupture of the spleen with contusion of abdominal parietes	1	.01	,							***			***
Rupture of viscera · · ·			***	***			-	-	,	***		2	2
" of spleen · · ·									***	***			1
" of wrethra · · ·		***		***	-	***		***	1	***	***	2	
Internal derangement of joints .	1	101		2		***	***		***				
Separation of cartilage from bone .	1	'06		***	***	***			***			-	
Poisons:-			1			100	3.9			100	1		1 1 1 1 1
Antimony · · · ·		-		-						in			1
Arsenic · · · ·		***							1			1	***
Copper		***								. 1		-	
Mercury							100		5	1			***
Petroleum							1	1			***		***
Oxalic acid	1	'07					***				***		***
Carbolic acid · · ·	-				***					***			
Croton oil		***			***		***	***				-	
Indian hemp				***				***				2	
Diatura			***					***				7	
Opium .	. 1	.03	***	-		-	***		1	-	2.		
Loizonone range				1			-						
Decayed and possess	. 6		1						4	4		1	1
Liourines	21		1			-					1		
Chloroform vapour	1	'07	1			1					1		-

A STATE OF THE PARTY OF THE PAR		1	UROPE	AN ARM	Y OF I	NDIA.		- 1	1.		4	JAIL POPULATION	
DISHASES,	100	Me	N.	3037	Wos	MEN.	Сип	DREN.	NATIVI	ARMYO	F INDIA.	of I	ATION NDIA,
	Admis-	Constantly sick.	Deaths.	Invalids	Admis- sions.	Deaths.	Admis- sions.	Deaths.	Admis- sions,	Deaths.	Invalids.	Admis- sions,	Deaths,
Vegetable, not defined								1					100
Irritant drug, not defined	""	***	***		***	***		ant .	***	410	***	11	
Poisoned wounds:-	***				***		***	***	***	***	***	2/	
Poisoned wound, not defined .		Mer y	-	100				11		-			
	***		***	***	***	1111	***	***	11	411	***		***
" by seakes by scorpions .				***	***	***	100		9	3	***	17	***
b	***	***	***	***	***	***	· ···	***	2	***	***	***	***
1		'01			***		· .	*** /	- '	***	1	58	***
	***	***	***	***	***	***	***	***			***	3	***
	***		***	***	***	***	***	***	1	***		***	
	-1	'02	***	***	***	***	***		9	***		3	
" " by dog .	60	17'11		***	3	***	10	***	-	***	***	-	
» p by jackal .	1	***	***	***			***		***		1	13.3	***
" " by horse	3	'09		***	***	***	***		149	***	***		
" by septic matters .	5	*20	***	- 111	***	***	***	***			***	***	
by tattooing .	2	109	***	***	***	***	***	***	***	***	***	1	
" " by mosquitoes .	5	*16	***	***	***	***	***	***	***	***		-	
HOMICIDAL :		-	-	3			137.3				100	10 CC	
Gun-shot wound		144		***	***	***	141	100		2	***	***	
Hanging				***	***		***		***	1	***	-	
Not defined	***	-	***	100	-	***	***	***	***			***	4
Murdered	***		***	***		***		***	***	4		481	. 1
			1										
SUICIDAL :-					1							1	
Multiple injury			1					***	***			***	***
Drowning	100	-	2		***		***	***	***	3		***	3
Hanging	1		2		***	***	***	***	***	1		***	5
Gun-shot wound	2		6						***	. 1			***
Cut-throat	5		8		***	***					***	1	1
Poison, oxalic acid	1		1			***		***	***	***			
" strychnine	***		1										
Opium									***	1	***	1	1
Not defined	***		***	***						***			2
Decapitation by a railway train .										1	-		
JUDICIAL :-			13.1					1	1		1	1	
Hanging			***	***	***		***						9
Punished												53	
		3	1										177
NOT DEFINED :-	1	1				- 1					100		
Cut-throat		***	***	***	***		***	***			200	8	2
No appreciable disease	197	10'41			66	***	45	***	11		***	23	***
Not yet diagnosed					***	***			6			33	
Cause unknown									***	2	***	***	2
Hæmorrhage unknown			***		**		***		***	1			
Absent deaths			***		***		***	-		341	***	***	***
	-											5 79-	
GRAND TOTAL	61,138	3,612'98	732	* 1,993	2.600	42	2,496	238	87,390	1,181	902	92,770	2,239
		orthern Com		1	1		1				1		-

# TABLE LIII—concluded.

DETAIL of DISEASES.

	-		1111
	EUROPEA	N TROOPS.	To the state of
	ADEN COLUMN	FIELD FORCE.	The sales
DISEASES.	Average annu	al strength 79.	
19 1 19 1 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Admissions.	Deaths.	*
学生的 "			
Dysentery	*		
Ague	19		
Syphilis	3	,	
Gonorrhoxa	2		
Rheumatism			
Other general diseases			
Conjunctivitis			
Other diseases of the eye			
Disordered action of the heart	. 2		
Bronchitis			
Tonsillitis			
Inflammation and congestion of the liver	2		
Jaundice			
Other local diseases	16	*	-
		-	The state of the s
Other injuries	3	-	The same of the same of
TOTAL .	57	-	4 4
		100	







## ANNUAL REPORT

OF THE

# SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA,

1906,

WITH

APPENDICES AND RETURNS OF SICKNESS AND MORTALITY AMONG-EUROPEAN TROOPS, NATIVE TROOPS, AND PRISONERS, IN INDIA, FOR THE YEAR.







CALCUTTA'
SUPERINTENDENT OF GOVERNMENT PRIN'ING, INDIA
1908.