

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

Contributors

India. Sanitary Commissioner.

Publication/Creation

Calcutta : Superintendent of Government Printing, [1900]

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ANNUAL REPORT

OF THE

SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA,

1900,

WITH

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



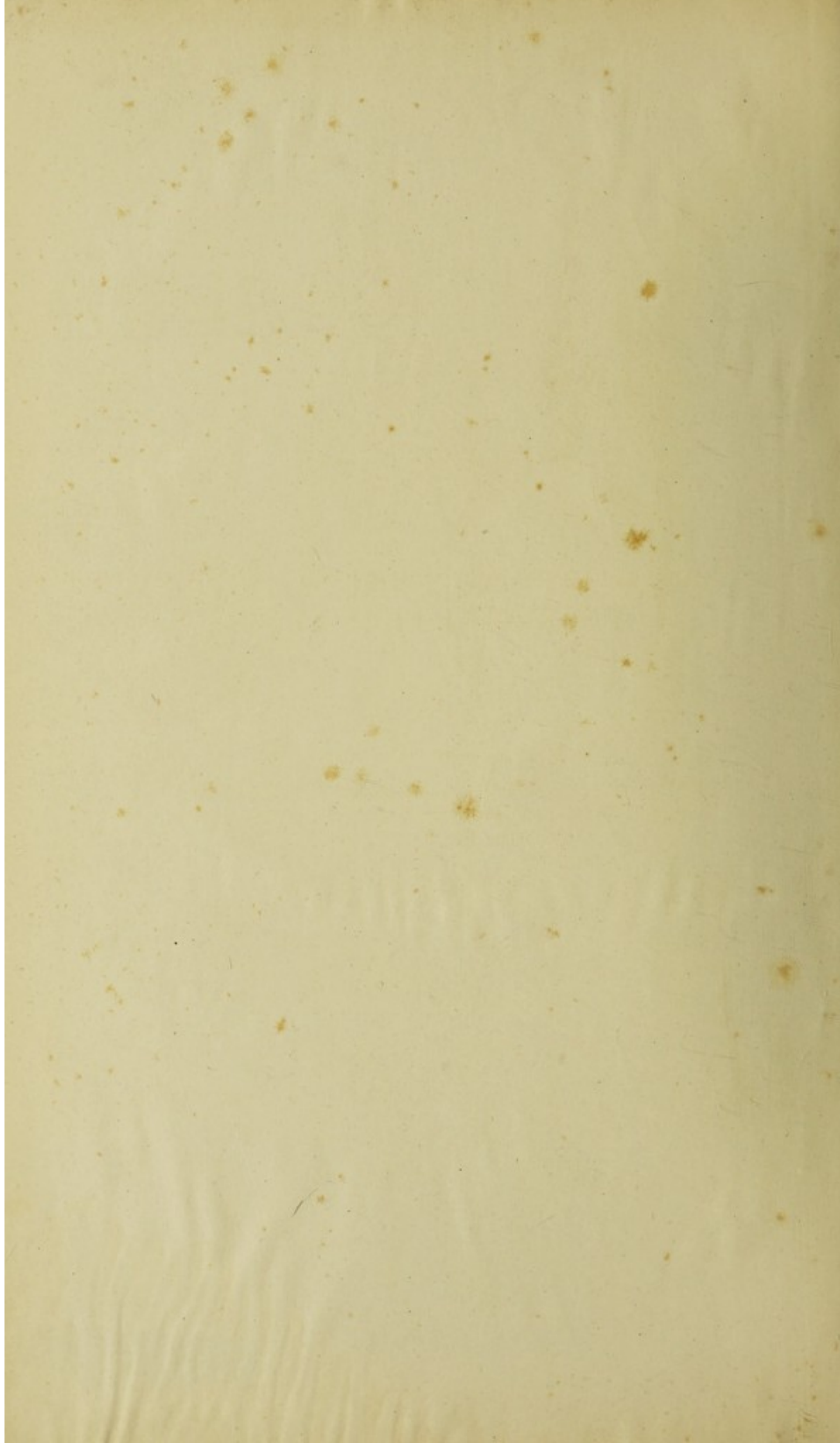
CALCUTTA:

OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA.
1901.



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1900

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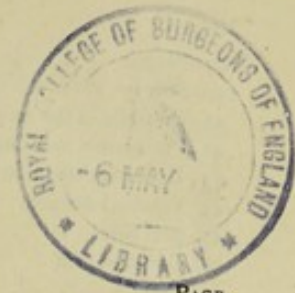
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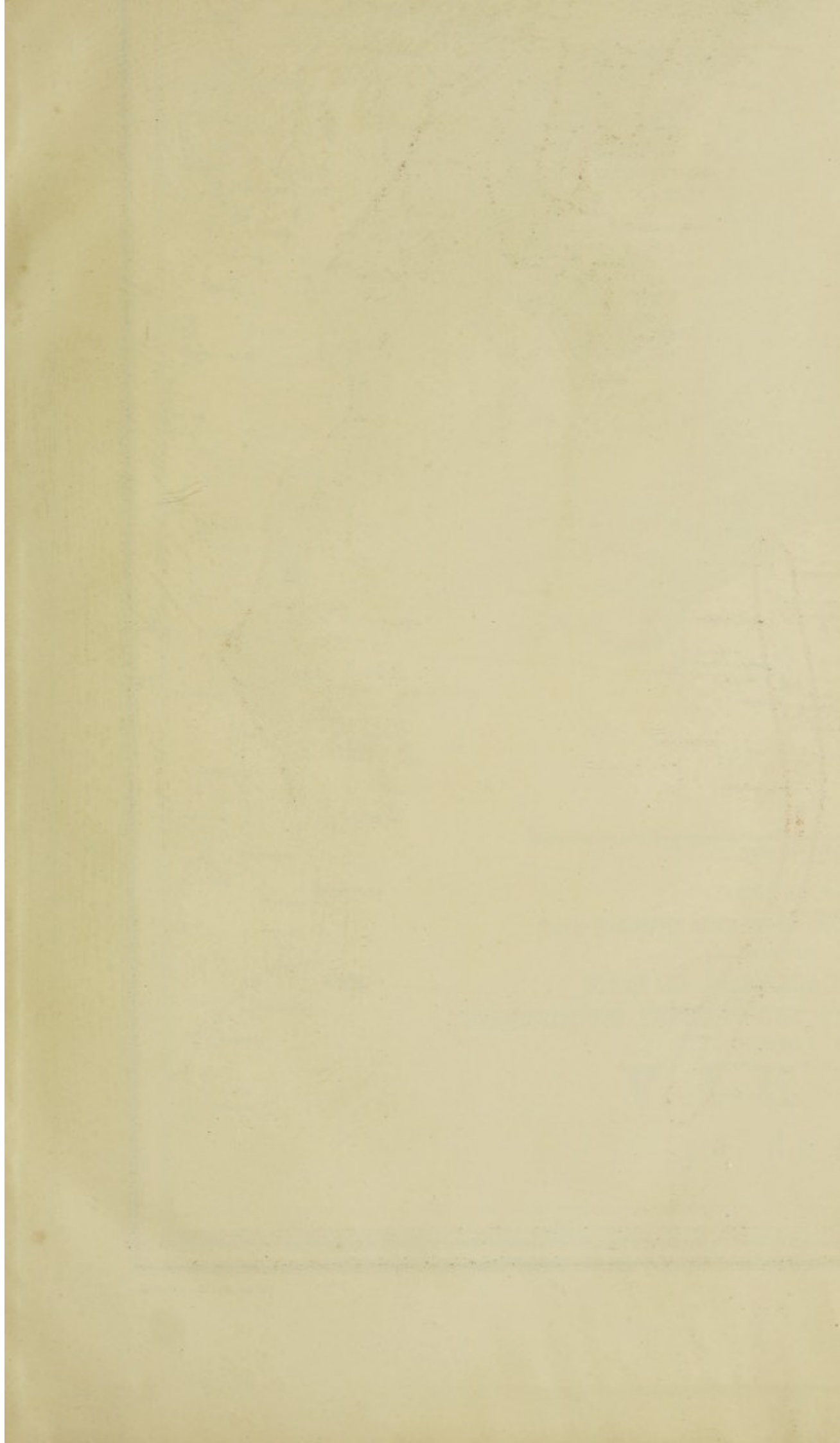
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Map of INDIA

TO ILLUSTRATE
 THE ANNUAL REPORT OF THE SANITARY COMMISSIONER
 WITH THE GOVERNMENT OF INDIA,
 showing
 MORTALITY FROM CHOLERA DURING THE
 YEAR 1900.

Scale 1 inch = 50 Miles or 80 Kilometres



REFERENCES.

- District Groups ————
- Sub-Groups ————
- Civil Stations ————
- Districts ————
- Main Roads ————
- Railways ————

NOTE.

Group XII = British India, Burma, India, Aden, Persian Gulf, &c.

Indicates areas not under registration or places for which no information is given.

Indicates a death rate from Cholera of less than 1 per 1,000	
Da.	Do.
Indicates a death rate from Cholera of 1 to 2 per 1,000	
Da.	Do.
Indicates a death rate from Cholera of 2 per 1,000 and above	
Da.	Do.



ANNUAL SANITARY REPORT FOR 1900.

SECTION I.

METEOROLOGY OF THE YEAR.

1. The following report on the Meteorology of India has been kindly furnished by the Meteorological Department of the Government of India :—
- Summary of the Meteorological phenomena of the year.

Year.—The mean temperature of the year 1900 was, like that of 1899, higher than usual. In April and October the mean temperature of the whole Indian land area was about normal, but in all the remaining months it was in excess. The excess was greatest and more than 2° in February and March.

The mean temperature of the months of January and February was above the normal over the whole area except in parts of Upper India and of the West Coast. The variations were largest and more than 3° in Chota Nagpur, Orissa, Berar, the Central Provinces, the Deccan and Mysore. Cool waves passed from west to east across Northern India between the 16th and the 20th of January, between the 20th and 26th January and between the 23rd and 28th of February. There were in all six depressions during February but they were unusually feeble and gave very light snow so that the cool waves during February were of very slight intensity compared with the two cool waves in the preceding January. The absolute minimum temperatures of the year were recorded in North-Western and Western India between the 18th and 26th January, *i.e.*, during the existence of the second cold wave. At the commencement of the hot weather period the mean temperature was above the normal in North-West and below over North-East India but a feeble disturbance advanced across Northern India between the 6th and the 10th of March. This was followed by a rapid increase of temperature and the heat on March 17th over Northern and Central India was, relatively to the normal, very great. This hot period was succeeded by a slight storm which gave snow on the hills and was followed by a considerable reduction of temperature over Upper India on the 21st and 22nd. The mean temperature of March was normal or in slight defect over the West Coast districts, East Bengal and Assam and was in excess over the whole of the remainder of India. The excess was largest and between 4° and 7° over the Punjab, Rajputana and Upper Sind. Fine weather with increasing temperature held from the 10th to the 19th of April but the weather was feebly unsettled during the remainder of the month so that the temperature was unsteady and exhibited large changes. The variations of the mean temperature conditions of the month were small in amount over the greater part of India, the only important abnormal feature having been a moderate to considerable deficiency in the Punjab and North-Western Provinces. The weather was more or less disturbed during May. A cyclonic storm gave heavy rain to Burma and caused a large reduction of temperature on the 4th, 5th and 6th. General rain fell in North-West India on the

6th and 7th and a cold wave of considerable intensity crossed Northern India between May 7th and 10th. A period of thunderstorms then set in over the greater part of Northern and Central India and the mean temperature was more or less below the normal from the 13th to the 20th May. Another depression affected the weather between the 25th and 29th but the cold wave due to this storm did not extend beyond the Punjab. The mean temperature conditions of the month of May differed very slightly from the normal but there was a moderate excess of heat in the Deccan and Mysore. The highest temperatures in India are usually recorded in the months of May and June in the dry area in the north-west. In 1900 the period of high temperature was unusually prolonged owing to the delay in the advance of the humid winds and during these months periods of great heat were experienced. The periods of greatest excess of temperature were from the 1st to the 6th of May, the 23rd to the 25th of May and the 1st to the 14th of June. The hottest day in Sind and Rajputana was the 14th June when temperatures between 118° and $124^{\circ}5$ were recorded and in the Punjab the 21st and 22nd June and the 2nd and 3rd of July when temperatures between 115° and 118° were registered. Very high maximum temperatures were recorded all over Northern and Central India during the first ten days of July but between 10th and the 16th a temporary advance of monsoon winds caused a rapid reduction of temperature. Between the 16th and the 26th there was again a partial break in the rains over Northern India and during this hot period very high temperatures were again recorded over Northern and Central India. During June, July and August temperature was more or less considerably above the normal over the whole area dependent on the Bombay monsoon current and was generally normal over the area dependent on the Bay monsoon current while in September the temperature was generally low except over the Peninsula. During the three last months of the year the temperature on the mean of the period differed only slightly from the normal in North-East India, Burma and North-West India. In North-West India however temperature during November was in considerable to large excess. The mean temperature was in defect in October in the central parts of India but was in excess in the Deccan while it was in excess in both areas during November and December. The mean temperature of the year at the hill stations in the Western Himalayas was generally below the normal. At the remaining hill stations the variations from the normal average were small.

The pressure variations for the whole year show that barometric pressure on the mean of all the months was 0.010° in excess of the normal. In January, February, August and November the mean pressure of the whole country was lower than usual but in all the remaining months it was in excess—more particularly in May and October. The only division which reported a deficiency on the mean of the year was Orissa where the mean pressure was 0.005° below the normal.

The mean relative humidity of the whole of India for the whole year was slightly below the normal. With the exception of April, September and December this feature was common to all months of the year but was particularly marked in January, March and June when the deficiency in the humidity amounted to 5 per cent. The driest area was the Nerbudda Valley where the deficiency on the mean of the year was 6 per cent. but the humidity was almost equally low over the south of the Central Provinces, Berar, the Konkan and the Deccan districts where the deficiency amounted to 4 per cent. On the Himalayas, the

Punjab plains and in Orissa the humidity on the mean of the year was in trifling excess.

The cloud amount for the whole country was more than usual on the mean of the year. Along the West Coast in Western Rajputana and over the Eastern Himalayas the sky was somewhat clearer than usual and in Arakan the cloud amount was exactly normal but elsewhere the sky was more cloudy than the average. January, September and December were the most and June the least cloudy month relatively to the normal condition.

The rainfall of the whole of India for the year 1900 was in defect by 0.52 inch so that the rainfall was approximately normal. In 1899 the rainfall variation was -11.14 inches and in 1898 $+0.43$ inch. The total rainfall of the year was apparently in excess in Burma. It was in general defect in Assam, it was also in defect in Bengal except deltaic Bengal but was normal in Bihar and in excess in Orissa and Chota Nagpur as well as in deltaic Bengal where there was a very large excess owing to the heavy rain in September. In the North-Western Provinces the year's rainfall was approximately normal. In the Punjab the total rainfall of the year was heavier than usual. In the Central Provinces the rainfall was also excessive more particularly in the east while in Central India and Rajputana it was normal or in slight excess. In North Bombay including Gujarat, Sind and Kathiawar the year's rainfall was short of the average. Over the Peninsula the rainfall was generally in defect but in the extreme south in South Madras and Malabar it was in some excess.

In the cold weather period the rainfall was generally in excess over Bengal, the North-Western Provinces and parts of the Punjab but was in defect elsewhere—more particularly over the Peninsula where hardly any rain fell. In the hot weather period the distribution of rain relatively to the normal altered the rainfall having been normal or in slight excess in Madras and parts of North-West India and in defect elsewhere. During the monsoon the rainfall was in defect over Assam and parts of Bengal as well as over Bihar, the North-Western Provinces, Khandesh, Berar, North Bombay and Madras and was in excess elsewhere—more particularly in deltaic Bengal, Orissa and the east of the Central Provinces and locally in the hill and submontane divisions of the Punjab and the south of the Peninsula. In the autumn the rainfall was heavier than usual over Bihar, the North-Western Provinces, the Punjab, Sind, Baluchistan, Rajputana and Central India but was in defect elsewhere. In Madras the north-east monsoon rainfall was much lighter than usual during this period.

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SECTION II.

EUROPEAN ARMY OF INDIA.

2. The health of the European army of India, though unfavourably affected as to mortality by the epidemic prevalence in India of cholera, bowel complaints, small-pox, and malaria, was as to sickness better than in the previous year; the increase in mortality and invaliding, however, somewhat outweighing the decrease in sickness.

*India. Appendices A and B.
Tables I, LIII, and III.*

The chief causes of admission were ague and venereal disease. Among the diseases with increased admission rates were cholera, small-pox, and malarial fevers. On the other hand, the admission rates from influenza, respiratory affections, enteric fever, simple continued fever, and venereal diseases were lessened. Ague and venereal diseases caused respectively 27 and 26 per cent. of the total sickness.

The chief causes of death were enteric fever, and then hepatic abscess and cholera. Among the diseases with increased mortality were cholera, small-pox, malarial fevers, dysentery, diarrhoea, and hepatic abscess. On the other hand, the mortality from enteric fever and pneumonia was lessened. Enteric fever caused 33 per cent. of the total deaths, hepatic abscess 11 per cent., and cholera 10 per cent.

The chief causes of invaliding were, in order, syphilis and gonorrhoea, debility, malarial fevers, disordered action of the heart, tubercle of the lungs, and valvular disease of the heart.

The chief causes of admission in the China Field Force were ague, dysentery, venereal disease, and diarrhoea, and the chief causes of death enteric fever and dysentery.

3. Madras was the most unhealthy of the four commands, Bombay coming next, and both being more unhealthy than in 1899. Bengal had the highest mortality from tubercle of the lungs, dysentery, and abscess of the liver; the Punjab from remittent fever, heat-stroke, and pneumonia; Madras from cholera, ague, and dysentery; Bombay from small-pox, enteric fever, and diarrhoea. The highest death-rates among stations of over 100 strength were those of Fort Lahore, Barrackpore, Delhi, Neemuch, and Nasirabad; and the highest among stations of over 1,000 strength those of Secunderabad, Meerut, and Mhow. In all these stations cholera was a factor in the mortality. In addition there were high ratios at Barrackpore from hepatic abscess, dysentery, and enteric fever; at Delhi and Neemuch from enteric fever and dysentery; and at Nasirabad, Secunderabad, Meerut, and Mhow from enteric fever. All the stations mentioned had greater mortality than in 1899.

Commands and stations. Appendix A. Tables I, III, IV and V.

4. Judging by the constantly sick rate, Gangetic Plain and Central India were the most unhealthy groups for the decennium, and the Hills and Western Coast the most healthy. The highest decennial admission ratio for cholera was in Gangetic Plain, for enteric fever in the Hills, for ague in Indus Valley, for pneumonia in Indus Valley, and for dysentery in Bengal-Orissa. Only for dysentery was the relation the same in 1900. An examination of the figures of the longer period for

Geographical Groups. Appendix B. Table II.

European troops, native troops, and prisoners shows that for all three influenza was least in Western Coast, ague in Southern India, venereal disease in Indus Valley; and small-pox most in the Deccan, pneumonia in Indus Valley, and dysentery in Assam and Bengal-Orissa.

5. The absolute and proportional amounts of influenza fell greatly. The admissions, which had fallen at the end of 1899, began to rise in February, reached a maximum in June and a second, somewhat higher, in September, and then fell to the end of the year. The first epidemic year was 1890. The actual maximum of the individual years of the eleven occurred in various different months, but over the eleven year period as a whole the greatest numbers of cases occurred in April and March, and the smallest numbers in August and September. Groups IV, VIII, and X were affected in 1900, but not in 1899; while Groups II and VII, which had been affected in 1899, escaped in 1900. The other groups containing British troops were affected in both years. Twenty-two stations returned cases against twenty-eight. The highest numbers were at Barrackpore, Dum-Dum, and Lucknow. In Barrackpore the disease attacked only the British troops, was severe in type, sometimes resembling scarlet fever, often left behind great prostration, caused two men to be invalided, and in two cases was followed by abscess of the liver.

6. General questions regarding cholera, and the circumstances of each important outbreak viewed as a whole, will be discussed in Sections VI and X.

Cholera. Appendices A, B, and Q. Table VII.

The amount and proportion of cholera was much greater than in the previous year, the admissions having risen from 1 to 107. At Secunderabad, where the highest number of cases occurred, cholera was prevailing in the city and surrounding villages almost as soon as the monsoon began; and, though all infected places were put out of bounds, and native cooks dismissed, cholera of a virulent type attacked all the corps in barracks, except the artillery, of which, however, two men in hospital were attacked. In the case of the other stations also with comparatively high numbers, it is mentioned that the disease was prevalent in the civil population; and it is believed that but for the precautions taken, the troops would have suffered more severely. Some of the famine tracts were areas of special danger. The ratios were less than in the native troops and prisoners. Four (non-fatal) cases of "epidemic diarrhœa" were returned from a cholera camp at Shalimar, near Lahore and Meean Meer.

7. The admission rate from small-pox was three, and the death-rate five-times greater than in the preceding year; and the admissions and deaths were 36 and 3 against 14 and 1. The disease was prevalent in the country, and here, again, the influence of the famine was unfavourable. The highest number of cases was 10 at Kamptee. No other station had more than 3 cases, and no station had more than one death. The Deccan had most small-pox.

Small-pox. Appendices A and B. Tables III and IV.

8. Ague gave rise to nearly 27 per cent. of the admissions from all causes. Both the admission and the death-rates were raised, and the increase, where it was greatest, was usually ascribed to unusual rainfall and floods. The greatest outbreaks were those at Ferozepore and Fort Dufferin (Mandalay). At Ferozepore the increase, gradual at first, became explosively sudden in October, and the type of the disease altered for the worse, many of the patients exhibiting alarming symptoms, though few died. At the same time mosquitoes were

Ague, remittent fever, simple continued fever. Appendix B. Tables X, XI, and IX.

unusually abundant and troublesome, and *anopheles* was found in barracks, bungalows, and hospital. The women, children, and bandsmen returning from the hills were all attacked; and from their cases it was judged that the incubation period of the disease is about 14 days. The whole wing of the Oxford Light Infantry had to be sent to Kurrachee* for change of air, being completely prostrated and incapacitated for duty. The other classes of the population also suffered. At Mandalay the men of the 2nd Durham Light Infantry, stationed within the walls of Fort Dufferin, suffered severely, while the artillery, stationed near Mandalay Hill, were "practically free". This is said to be due to the infantry barracks being situated in a marsh, not capable of being rendered habitable by drainage, "a locality so notoriously unhealthy that in King Thebaw's time the place was abandoned by the Burmese". About 350 men of the regiment had to be sent away to healthy stations for change, and at last the regiment had to be sent out of the country to Wellington. Some of the troops at Aden had come from malarious stations in India, but the Isthmus Position was considered to be an undoubted local source of malaria, especially after a heavy rainfall in February, and had to be evacuated for the second time in ten years, with good effect to the health of the men. It is said to be low and damp, so that one inch of rain is enough to turn it into a marsh. The finding of *anopheles* was recorded also at Delhi, Roorkee, Agra, and Deesa. On the other hand, it is said to have been rare at Rawalpindi, and not to have been found at Colaba, though it is stated that it is common in some other parts of Bombay, especially Malabar Hill; and in the room at Bangalore, occupied by the company chiefly affected, only *culex* could be discovered. In the hospital at Nowgong two cases of fresh infection occurred in a ward on the ground floor. In front of the ward there was a small masonry tank, from which the garden was watered, and this was found to be a haunt of *anopheles*. The tank was cleared out, and the patients removed to the upper floor, and no further cases occurred in hospital. The prophylactic use of quinine was found disappointing at Ferozepore, Mandalay, and Nasirabad; of doubtful benefit at four stations; but good at nine. In cases of apparent failure, present knowledge would indicate, not the stoppage of the issue, but an endeavour to find the cause of the failure, so that it might, if possible, be removed or avoided.

There was also, naturally, an increase in remittent fever. The monthly distribution was not quite the same as that of ague, but there seems no reason to doubt the correctness of the opinion of medical officers that in most cases the disease was malarial. The highest numbers were at Fort William, Peshawar, and Rawalpindi. There were no cases in the Ferozepore malarial outbreak, described above, and only 11, none fatal, at Mandalay.

There was a reduction in simple continued fever. The most frequent causes assigned for the attacks were high air-temperature, exposure to the sun, especially if combined with fatigue, digestive derangements, and chills. Any indefinite fever which seemed to be neither malarial nor enteric was so returned. It was suspected that some cases might have been mild enteric fever or influenza; and some of the cases at Calcutta suggested Malta fever, though no case of Malta fever was returned anywhere in India. The probability was entertained that some cases were really malarial, and the rise in October seems to support this idea. The results of postmortem examination in the two fatal cases did not show that any error in diagnosis had been committed; and the deaths were

* This, of course, affected unfavourably the health statistics of Kurrachee.

considered to have been accelerated by the very high atmospheric temperature prevailing at the time. A reaction, supported to some extent by the results of serum testing, has set in against the extreme opinion that all cases of so-called simple continued fever are in reality cases of enteric fever.

9. The riddle of the exact relation between the enteric and the colon bacilli is still unread; and, therefore, the bacteriological examination of water, among other things, is still in a state of uncertainty. Houston appears to think it safer in the meantime to acknowledge as enteric only those bacilli which respond to all the known bacteriological tests; while Chantemesse, Rémy, and others, have shown reason for believing that the enteric bacillus living in association with other micro-organisms may lose certain of its classical characters, but most frequently its specific agglutinating power; and it is not infrequent in the reports of water examinations to read of suspected bacilli which answered to all or nearly all the tests except the serum one. To show, according to Rémy, that a bacillus giving the cultural characters of the enteric bacillus, but failing to stand the agglutination test, is really the enteric bacillus, it is necessary to inoculate it into a guinea-pig, and then with the serum of the animal to obtain the required specific re-action with an authentic culture of the enteric bacillus. Horrocks, on the other hand, in describing the discovery in water of coliform bacilli which could hardly be distinguished from the enteric bacillus by cultivation, but refused agglutination, states his opinion, one somewhat widely held, that a bacillus not agglutinated is certainly not enteric, but that a bacillus agglutinated by a moderately dilute serum is not necessarily enteric; while Houston has isolated from water a few colilike microbes, which were certainly not *Bacillus typhosus* and could not be classed as *Bacillus enteritidis*, yet which clumped in marked fashion with one or other or both sera. Again, Houston agrees with Horton Smith as to the fallacy of considering an unknown bacillus as Eberthian simply because it responds to the agglutination phenomenon, without seeing whether it answers to other tests for the typhoid bacillus; and Sternberg is of the same opinion, and also Hunter, and Köhler and Scheffler. In view of the difficulty of separating the enteric from the colon bacillus, new processes are continually being devised. Cambier and also Gabritschewsky attempt to attain the end desired by utilizing the greater motility of the enteric bacillus; while, with special reference to water, Chantemesse has introduced a method which consists in collecting the microbes from a considerable quantity of water, and then using an enrichment process. Others, despairing of being able to isolate small quantities of the microbe diffused in immense masses of water, have endeavoured to ascertain what commoner microbes might be regarded, when found in water, as signs of fæcal pollution. This matter has been referred to in former reports. In answer to the query whether the presence of the colon bacillus in water taken from a well 15 feet deep would justify one in stating in court that this was evidence of contamination by excreta, the *British Medical Journal* replied that no categorical answer could be given; that the bacillus coli is an excremental organism, but is so ubiquitous that the reply must depend on the number of bacilli present, that is, in what minimal quantity of the water at least one representative of the *B. coli* is present; that if in the well in question the *B. coli* is found in 10 c. c. of the water or less, it is evidence of contamination, if in 10-50, contamination is dubious, if only in over 50 c. c., it is devoid of significance; but that much depends on the method adopted for its detection. But Pakes declares that any sample which contains the colon bacillus in 50 c. c.

Enteric fever (?) Water and the
Bacillary Diagnosis in general.
Filters, etc. Milk

should be condemned ; while Weissenfeld asserts that the colon bacillus is not characteristic for the fæces of men and animals, and will be found present in all water, if enough is examined. By an ingenious application of his own observations Horrocks seeks to get over the difficulty. He found that as regards reaction to antityphoid horse serum the varieties of the colon bacillus isolated from typhoid stools showed much greater sensibility to agglutination than the varieties of the same bacillus isolated from healthy stools ; and therefrom draws the conclusion that if varieties of the colon bacillus isolated from a water-supply are found to be agglutinated by antityphoid horse serum in 1-500 dilution, there appear to be reasonable grounds for the assumption that the water-supply in question has been fouled with specific dejecta from cases of enteric fever. The success of this test would probably depend on the length of time the bacilli had been in the water. The whole subject is lucidly reviewed by Houston. In India the opinion of Hankin is well known, that pure water, from the absence of competition, suits the enteric bacillus, and that the infection of a pure water-supply is therefore particularly dangerous ; and Wanklyn has stated that the most dangerous water is one highly charged with organic matter, but almost free from organisms. So, Johnston mentions that Jordan of Chicago has kept the enteric bacillus alive for 93 days in sterilized Lake Michigan water. Again, Groves quotes Frankland's experiments in which the enteric bacillus ceased to be infective in 5 days in river water which contained millions of organisms in the c. c., but remained infective after 35 days in deep well chalk water containing less than 150 in the c. c. Houston mentions that while most continental observers are of opinion that the typhoid bacillus loses its vitality somewhat rapidly in unsterilized potable waters, Klein's results indicate that the distinction has been overlooked between a great decrease in number and total disappearance. By paying attention to this point Klein was able to show that some typhoid bacilli persisted in unsterilized water long after the majority had perished. Cases in which the infection seems to have survived travel in the volume of a river in company with other microbes and to have then originated outbreaks in towns miles down the river have been reported by Fosbroke at the Cheltenham meeting of the British Medical Association, and by Johnston, Mills, and others at the Michigan Conference of Medical Officers of Health. Besides detailing the proofs that the infection was so carried down stream, Johnston states that the Massachusetts Board of Health took Merrimac River water and experimented with it, and found that typhoid germs would live in it 25 days, long enough for them to be carried 685 miles down the Merrimac River. And Mills remarks that hitherto it has been taken for granted that polluted water poured into a running stream becomes purified within a short period of time ; but that this is now questioned, and it is believed by many that the germs of typhoid fever have been carried long distances by flowing streams, as from Port Huron to Detroit, a distance of 60 miles. Some new instances have occurred of the use to which the purposive or accidental admixture of yeast, absinthe, or fluoresceine has been put for the detection of the source or course of a water. The *British Medical Journal* in a leading article on the Waste of Life and Efficiency in South Africa remarks that the exact proportion between waterborne infection and infection by other means—infected dust clouds, flies, etc.—cannot be stated, but that, as a working and probable hypothesis, it might be assumed that in half the cases the infection is waterborne ; that in one-fourth it is carried by specifically contaminated dust or by flies ; and that in another fourth there is direct personal infection. Again, at the Michigan Conference, Riggs

brought forward the statistics of the alleged causation of 31,264 cases of enteric fever, derived from the reports of the Michigan State Board for 10 years, and after studying them, concluded by saying that he believed that a careful study of the disease based on full and complete reports would show that 90 per cent. of all cases are directly or indirectly traceable to contaminated water, and that a further analysis would trace the source of this contamination to sewage, garbage, cesspools, etc.; and in this connexion it may be pointed out that Parkes and Kenwood, in noticing Klein's results as to the very favourable medium which nitrate sewage presents to the enteric bacillus, remark that crude sewage is, as a rule, free from nitrates, whilst sewage that has been filtered through soil contains nitrates as a result of oxidation, which may be the reason why well-waters polluted by drain or cesspool leakage through the soil have the capacity, apparently, of retaining for considerable periods the infective properties introduced by the specific pollution. Leigh Canney in polemical writings or papers has contended for the supreme pre-eminence of water as the vehicle of the infection; and believes that enteric fever will have to be met and overcome, in no matter what part of the world, on the waterborne theory mainly, though without neglecting other avenues of infection. On the other hand, Professor Victor Vaughan, at the Michigan Conference at Grand Rapids, stated that he had been in the habit of saying to his students, until a year ago, that 90 per cent. of the cases of enteric fever were through infected water, but that he would not say so now; he believed that enteric fever in civil life is largely disseminated through the drinking water; but that in military life it is often spread by other means, such as dust and flies. Washbourne agrees with Canney that epidemics of enteric fever are waterborne and not airborne, but believes that sporadic individual cases are infected otherwise than by water. So, Barr remarks that pure water-supply has abolished widespread epidemics; but that as an endemic, enteric fever is as prevalent and of as severe a type as it was a quarter of a century ago; and Parkes and Kenwood that it is the experience of numerous places that enteric fever may be endemic, notwithstanding a water-supply of undoubted purity. With regard to India it may be said that the medical officers on the spot seldom believe in any exclusive water theory, and that they have advanced good grounds for their opinions. As to filtration, Fuller, the New York Consulting Expert, insists that it is of prime importance to know the individuality of a water as a first step towards its successful purification, in order that the processes associated with filtration, such as storage, subsidence, coagulation, and aëration, may be properly considered. Houston reminded his hearers that though efficient sand filtration is a great safeguard, there is no reliable evidence to show that it more than greatly lessens the danger; and that filters on the small scale are usually quite untrustworthy. Horrocks states that if there are no flaws, the enteric bacillus cannot get through the walls of the Pasteur-Chamberland filter; but that it can get through the Berkefeld in from 4 to 11 days, so that the candles have to be boiled every third day. Munson's opinion that both the Berkefeld and the Pasteur-Chamberland filters, if given proper care, serve an excellent purpose in fixed camps or garrisons, but that the difficulties attending their liability to clog or break and the necessary periodic sterilization are such as to render them often a trouble rather than an advantage in the field, is confirmed by experience; but even in fixed sites, such is the care required that they are sometimes not a success. The Waterhouse-Forbes water sterilizer is described by Munson, who considers it the best form of heating sterilizer. It was favourably reported on in America by a board, which found

that a single apparatus would suffice for the needs of two companies or, where storage of water was possible, of a battalion; and also at Netley. It may be of interest to note that the frequently extolled Schumburg bromine process is reported by Schüder to be unable to accomplish the destruction of the enteric bacillus in water.

Klein has shown that milk is a better medium for the enteric bacillus than cream, and cream than cheese.

S. Martin continuing his experiments, under circumstances more favourable to the microbe than before, found that the enteric bacillus died out in unsterilized soil within 12 days, owing to the antagonism of the soil micro-organisms. Mentioning these results and taking into consideration some of his own, Houston comes to the conclusion that surface soil is unfavourable to the growth and vitality of non-sporing microbes of intestinal origin, though he desires to speak with great caution on the subject, in view of the puzzling features connected with the endemic and epidemic prevalence of enteric fever in certain localities. Rullmann was able to recover the enteric bacillus from unsterilized earth after 100 days, and notes that the length of survival depends on the chemical composition of the soil. Vaughan is of opinion that the German experiments prove that the bacillus can be destroyed by drying, but not that the disease is not airborne or may not be so, and gives some practical reasons for believing that it is spread in this way; and Tooth, Church, Chiene, and others were impressed with the probability of this mode of dissemination in South Africa; but Sir Charles Cameron appears to be alone in thinking that it may almost be said that the disease is generally airborne. Houston, on the other hand, finds it difficult to believe that a non-sporing bacillus of comparatively speaking delicate sort can remain dormant for long periods, neither multiplying nor dying, in the form of dust; though he agrees that excreta and particles of soil and the fluff of soiled linen may, when the specific contamination is comparatively recent, be brought into relation with articles of food or drink in the form of dust. A very interesting observation is recorded by Vaughan, in which when lime had been sprinkled over the contents of the latrines, a short time afterwards flies could be seen with lime on their feet crawling over the potatoes or meat and bread that the men were going to eat; and Simons quotes another American case in which the use or non-use by three bodies of men of fly-proof cages for their provisions, seemed to determine attack or non-attack; and relates an experience of his own in which soil specific contamination acted directly in the winter and by means of flies in summer. Finally, Howard in America found that it is only diptera which go to human excrement, in all 77 kinds, of which 36 feed upon it. It appears to be generally acknowledged that the disease is frequently communicated by personal intercourse, and fresh instances have been adduced by S. Murphy, Handford, Gualdi, Kruse, and Guinon. Vaughan says that it can be carried on the hands, under the finger nails, in the clothes or blankets, and impresses upon his hearers that it is a "fearfully infectious disease"; and Houston that it needs to be remembered that the direct spread of infection from the sick to the healthy is no idle myth but a dangerous fact.

It has been mentioned in former reports that the bacillus appears in the urine in about 25 per cent. of cases. In 12 cases Neufeld found the same proportion,* and observed the sudden onset of the bacilluria marked by clouding of the urine. Houston,

* Schüder in D. M. W. XXVII, page 762, reports 5 out of 22; and shows that for all examined and recorded cases the percentage is something under 30.

while believing that the potentialities for evil of a convalescent with specific bacilluria are so great as to be almost inconceivable, and accepting the fact that a case may for months or even years be a manufactory and distributory of the morbid virus of the disease, a fact which may explain some puzzling features in the spread of the disease, is struck by the difficulty* of understanding why some places, after being visited by a severe epidemic, may remain for long periods afterwards almost free from the disease, notwithstanding that probably many of the inhabitants are carrying about within their bodies the living germs of the disease, and that some of them are possibly discharging enteric bacilli broadcast in their urine. Handford has suggested that the bacilli excreted in the urine may not always be in a virulent condition. In a case of cystitis caused by enteric bacilli that had come from the kidney, Curschmann found that the bacilli in the urine, so far as could be judged by agglutination, were not reduced in virulence. The routine exhibition of urotropine (see former reports) is advocated by Houston, as by Richardson, Horton Smith, Clifford Allbutt, and others; but there are certain drawbacks to its use. For, while at least 5 cases of haematuria from its use have been reported, and Neufeld confirms the fact that the bacilluria is apt to recur, Schumburg states that the drug merely inhibits the bacillus, which can be found in a condition capable of activity in the urine cleared by the use of urotropine, and concludes that the urine voided by the patient should be disinfected with mercury perchloride. It is in cases with pneumonic complication, while the expectoration is coloured by blood, that the bacillus has been found in the sputum. Its presence may persist into convalescence, so that a man may be dangerous to others after he has apparently recovered.

The investigations of Lewis and of Andrewes and Lawes have shown that

Sewer air. (*) Sewage. Nitrate sewer air and foul emanations from cesspools have sewage. probably no part in the direct conveyance of the

fever. The search for the enteric bacillus in sewage is acknowledged to be almost hopeless; but Houston has pointed out that, judging from the behaviour of other microbes which can be more easily isolated from sewage, there can as yet be no confidence felt that the enteric bacillus may not be contained in sewage effluent from biological process tanks. When the enteric bacillus is planted in sewage to which 1 per cent. of potassium nitrate has been added, it retains its vitality for a considerable period, and undergoes rapid and continuous multiplication. In media containing 4-5 per cent. of nitrate the enteric microbe is reported to grow almost like a blastomyces.

The occurrence of non-Eberthian enteric fever has long been suspected

Non-Eberthian fevers. (°) Widal's test. Enteric fever without intestinal lesions. The bacillus in the blood.

or recognized. Cases have been quoted in former reports, and the views of Durham were given on page 26 of that for 1897. Petruschky refers such cases to members of the coli group.

Some fresh cases have been reported, by Firth in India, and by Kurth and Schottmüller in Germany. The morbid agents in Firth's cases were the bacillus of Gärtner and members of the coli group, in Kurth's bacilli differing from those of Eberth and of Gärtner, and in Schottmüller's a bacillus standing between the enteric and the colon bacilli. Such cases, if not recognized, might, of course, contribute to the number clinically diagnosed which fail to react, or react irregularly, with Widal's test. But the test may fail also when typical lesions are present, or when the bacillus of Eberth is found in the blood or organs, and it is

* See also Neumann in D. M. W. XXVII, page 769.

occasionally positive in the absence of Eberth's bacillus. And Koch has lately acknowledged that the reaction is not absolutely specific. However, it is rumoured that he will shortly bring forward a new test for the presence of genuine Eberthian fever. Fresh cases without intestinal lesions have been reported by Stewart, Lazarus-Barlow, Weichardt, Guizzetti, and Barjon and Lesieur; but the best recent commentary on the whole subject is that of Opie and Bassett, who, though unable to deny that enteric fever may occur without intestinal lesions of the intestine, consider much of the evidence furnished by the published reports as inconclusive. The case which led to their remarks did not run its course without intestinal lesions, but the circumstances were such as might have led less careful observers to return it as one without intestinal lesions. They point out that the Peyerian swelling probably frequently subsides without going on to ulceration, and that cases in which death occurs early in the disease can alone furnish conclusive evidence that lesions of the intestine have not been present. As the result of the examination of 15 cases Cole concludes that it is apparent that enteric bacilli occur in the blood with much greater frequency and during a much longer time through the course of the disease than was formerly supposed, and in six the bacilli were found in the blood before Widal's reaction was present. The results of Scholtz and Krause were similar. Others have also been successful in cultivating the bacillus from the blood and the roseola.

As Houston remarks, "the greater our knowledge of the channels of infection and modes of dissemination of the disease, the greater becomes the probability of preventive treatment; the measures of prevention being vaccination, early diagnosis by means of Widal's test, protection of water-supplies and sterilization, filtration, etc.; shielding all articles of food from objectionable contamination; keeping conservancy, sewers, and drains in good order; disinfection of the stools, urine, and soiled linen of enteric fever patients; early recognition of bacilluria and exhibition of urotropine, which must have a most important influence in the future in controlling the spread of the disease. As Duclaux well says, the enteric bacillus becomes difficult of recognition once it has escaped into outer nature, and it is far better to destroy it when it leaves the body than to wait till it gets into the water. The opinions of medical officers as to the prophylactic results of inoculation are conflicting, and there are various difficulties in the way of obtaining, or obtaining at once, the accurate statistics required for the formation of a legitimate conclusion. Some of the unfavourable results may have been due to ignorance of the fact, which Wright has just discovered and published, that when the reaction produced in the subject of inoculation is very marked, there is at first an increased liability to enteric fever; so that when enteric fever is prevalent, small doses should be used and mild reaction aimed at. The prophylaxis of enteric fever has been treated of in detail by Schjerning, Vaughan, and Munson.

10. As was to be expected, a number of medical officers attribute the diminution of enteric fever to the absence of drafts from England, owing to the South African war. In a few cases it is stated that particular barracks or corps were more affected than others, or that the disease was equally distributed among them; but in the majority of instances they appeared to be affected indiscriminately. At Agra 10 out of 19 came from two barracks that showed want of supervision and cleanliness, and little attention to the boiling and pinking of the water. No reason could be discovered at Nasirabad why, though cases came from nearly every

barrack, eighteen came from Nos. 12 and 18. Nowgong's cases were all in the North Staffordshire Regiment; and none occurred in the battery, which had been longer in India, and had already suffered severely in 1898. Enteric fever at Thobba was confined to the Bedfordshire Regiment, which had rested one day at the Meean Meer Rest Camp, where the water was reported to be open to filthy pollution. At Aden the disease was almost confined to the Royal West Kent Regiment in the Crater Position, and this was considered to be due to the fact that that position was much more exposed to dust than Steamer Point. As usual, many cases had not been contracted in the stations in which they were treated; and not infrequently, especially with cases in the Hill Stations, the infection had been acquired on the march. In many cases the origin of illness was ascribed to the partaking of unauthorized or unselected food and water at stalls, tea-houses, and refreshment rooms in the bazaars, cities, or villages; at segregation, rest, or practice camps; at manœuvres or on the rifle range; when out walking, shooting, climbing khuds, travelling by railway. Dirty irrigation channels are one of the dangerous sources mentioned. One case in the Dagshai military prison (a man who had been 125 days in confinement) was traced to the use of a dirty surahi; one man was believed to have ingested the infection by swallowing water while bathing in a dirty tank; another had been eating water-cress bought from natives; while in two stations it is mentioned that men attacked had consumed unauthorized water because they objected to the taste or to the want of coolness of the boiled water. It is reported that the first six cases at Quetta appeared in the fife and drum band of the Wiltshire Regiment, after a big Christmas dinner, most of the food and drinks for which had been bought in the bazaar. At Dagshai two men were supposed to have got the fever through milk purchased from a filthy hawker; the Kasauli dairy was reported to possess every possible defect from a sanitary point of view; while with regard to Subathu it is stated that on the 10th May all milk was ordered to be boiled, and that the epidemic ceased within 14 days. Other sources of the disease were believed to have been—the occupation of contaminated sites; specific inoculation of the trenches by post-mortem washings or by the stools of ambulant cases, especially when the trenches were to windward and, from want of water, were not cultivated; the distribution of dust from such places by the wind; the laying down of dirty river sand in the horse lines, and carelessness in the protection of drinking water there and elsewhere; insufficient conservancy staff, resulting in want of promptitude and completeness in the disposal of nightsoil; neglect, and consequent uncleanness, of barrack cisterns; the use of specifically polluted municipal water for the manufacture of aerated waters in the city, while the troops were intended to get only specially protected and treated well-water; the use of leather pakhsals; bhists taking impure water from roadside pools and horse-ponds. Men were supposed to have been rendered more liable by exposure to sun, heat, bad drainage, &c., or by diseases that arise therefrom, such as simple continued fever and tonsillitis. In some instances it seemed clear that the first case or cases were imported. Among the circumstances from which *patients* dated their illness were overexertion, overheating, oversunning, fatigue, and chill from field days and manœuvres, or from bicycling; a long journey by train; getting wet and sitting in wet clothes; bad cooking or bad food; bad smells from latrines or gardens; getting food or drink from hawkers or in the bazaar; swallowing dirty water while bathing in a buffalo-tank; nursing a case of enteric fever. The medical officer in charge at Lucknow cannot understand why there should be little difference in the enteric fever ratio, though a fifth of the men were inoculated, though no drafts

arrived from home, and though many men had been sent to the hills before the enteric fever season; and from Nasirabad his complaint is echoed. On the other hand, the comparative immunity of Wellington and Mandalay could not be explained, especially as in the latter the water-supply was bad and very liable to pollution. Fifteen medical officers ascribed the reduction in enteric fever to the absence or smallness of drafts, and one to the large number of young men sent to the hills early in the year, while one notes that the men, retained in India, had become more acclimatized. At Subathu the good new water-supply gets the credit. By various medical officers some of the following measures were believed to have been effectual—douching the latrines twice daily for a fortnight with perchloride of mercury; treating the wells, latrines, and urinals with permanganate of potassium and hydrochloric acid; cleansing cooking vessels and mus-sacks with potassium permanganate every morning; mounding the night-soil, and using it to manure indiarubber trees; closing manure and nightsoil depôts that lay to windward; discontinuing sewage irrigation; avoiding as much as possible the use of barracks that had given most cases in previous years; putting the bazaar out of bounds (Umballa, Poona, Nasirabad, Neemuch); using Pasteur filters; boiling or pasteurizing the milk; on receipt of enteric convalescents from another station, keeping them to a separate latrine and destroying their stools and urine by fire. The presence of a number of men inoculated is also mentioned as a possible factor in reduction. Some officers speak of a lower degree of heat, and of fewer flies and less dust in consequence of thunder storms. Bringing the troops up earlier in the year than usual was thought to have had a good effect at Chakrata and Landour. At Raniket there were no convalescents, fewer young men, cooler air, fewer flies, and less dust; while at Chakrata the garrison came up earlier than usual, contained fewer young men, and had marched from the plains by a new route, thereby avoiding the suspected camps and wells of the old route, and used barracks and latrine to which special attention had been given. The dryness of the year and the saltness of the soil are mentioned at Kurrachee, but it is doubtful whether either of these would really have a favourable effect. The use of Widal's test is said to have reduced the number of cases to be returned as enteric fever. One medical officer thought that the stopping of pinking and boiling conduced to reduction of the disease, apparently because the water was less handled. The water-supply of four or five stations is distinctly stated not to have been concerned in the origin or spread of the disease. At Lucknow, Agra, and Kurrachee the intake of the water was not sufficiently protected; at Umballa, Meiktila, Mandalay, and Shwebo the water was very liable to contamination; at Poona distribution, treatment, and storage were all defective, and to the canal which brings the Poona water natives had free access in places, and could be seen washing themselves and their clothes in it; at Ahmednagar and Nasirabad the supply was deficient, as well as liable to pollution; at Kurrachee the pressure was insufficient, so that men got into the habit of keeping a receptacle below the tap, and dipping their vessels into that; at Roorkee the water contained excess of chlorides from having passed through polluted soil; at Agra the soldiers could get the bad municipal water in the city, though not in cantonments; at Nowgong and Agra, respectively, the dairy well and a sanitary camp well were found to be in an unsatisfactory condition; at a few stations pakhals were still in use; at some stations, such as Calcutta, Fort Allahabad, Agra, Madras, Wellington, Secunderabad, Thayetmyo, Nasirabad, and Aden, there was a double water-supply, one for drinking, and one for other purposes. Of the fifteen stations which mention the carrying out of water

analysis, eight return the result as good, bacteriologically good, or chemically and bacteriologically good. The water at Quetta was found to be originally very pure, but a bacteriological examination, not completed at the time of report, suggested that contamination possibly took place in barracks, from leaky pipes. In the water of Roorkee and Nasirabad there was excess of chlorides. "A" Spring at Chakrata yielded the colon bacillus in August and November; and an enteric-like bacillus was found by Mr. Hankin in a specimen of the Baircha water from Mhow. The Chemical Examiner for Burma did not consider the Meiktila lake water fit for drinking purposes, and Captain Rost, I. M. S., is said to have isolated the enteric bacillus from it. At Agra the water was examined weekly by Mr. Hankin, who found the enteric bacillus in samples from No. 43 standpost and from the river Jumna in May, in a sample from No. 43 standpost in July, and in a sample from No. 53 standpost in November, though in the last two instances the microbe reacted but feebly with serum. In 25 other samples of Agra water there was found a bacillus having many of the cultural characters of the enteric bacillus, but which did not react to the specific serum, and gave a yellow growth on potato. No enteric or enteric-like bacilli were found in wells Nos. 4 and 5 in the British Infantry lines, the wells from which the drinking water for the troops was drawn. No system of purification of water was employed at Barrackpore, Dagshai, and Rawalpindi; Peshawar used the Pasteur filter; but in most stations the water was subjected to the action of boiling, potassium permanganate, or alum, each process alone or in combination with one or both of the others. In a few stations stress was laid upon the danger of contamination from handling during or after the process; but this danger is minimized wherever the Larymore boiler and its accessories are introduced. In some aerated water factories great care was observed, not only with regard to the water to be aerated, but also with regard to the cleansing of the bottles with permanganated water, acidulated water, boiled water. It has not been possible to obtain correct statistics whereby to compare the incidence of enteric fever on total abstainers with that on non-abstainers. A few of the men attacked stated that they never drank plain water; and about 170 never drank milk, about 30 not even in their tea. At Quetta all enteric stools have for two years been destroyed by fire; and in the reports of several other stations similar destruction of the fæces or of the fæces and urine is mentioned; and, as all stations possess the means to do so, the process has probably been carried out in many unreported cases. From a few stations it is reported that the men have begun to do their own cooking. Several medical officers were convinced that flies were important agents in the dissemination of the disease. Thus, from Mhow it is reported that flies were very numerous, that ambulant cases of enteric fever occurred, and that the filth carts were not properly cleaned from want of water. Dust and duststorms were considered to have been spreaders of the disease in several stations, perhaps most especially at Aden and Quetta. The medical officer at Quetta is of opinion that efficient watering of the roads would do much to check the extension of the disease. On the other hand, it is pointed out that at Nasirabad there were no cases in June though duststorms occurred, while there were cases in September in the absence of duststorms. In a good many hospitals the serum reaction of patients was tested, at some stations more systematically than at others every case at Kasauli, for example, in the latter part of the season, that lasted more than two days being thus tested. In many cases both enteric fever and Malta fever were tested for. Cases reacting negatively were often put down as simple continued or

as remittent fever, though in a few cases the diagnosis remained enteric fever. At Jubbulpore there appears to have been a case without intestinal lesions, and another in which there were only two small ulcers in the caecum. In nine cases enteric fever and dysentery were concurrent or closely connected in time of occurrence. In the Murree case the patient was convalescent from enteric fever, when dysentery developed, and was followed by abscess of the liver. At Chakrata abscess of the liver followed enteric fever in one case. Out of the 970 cases of enteric fever which occurred throughout the army of India in 1900, 27 are noticed as having declared themselves among patients in hospital or among attendants. Out of these, 8 were in hospital for early venereal disease (the secondary symptoms in one case running concurrently with the enteric fever); and 12 for other diseases; and 7 were attendants on enteric fever cases. Two men at Quetta suffered from second attacks, the first attacks having been in 1898; while at Chakrata one man is said to have suffered from his third attack in three successive years. At Khyragully, it is reported, one native follower suffered, and another who nursed him also contracted the disease, both recovering. The serum test appears to have been frequently used in the diagnosis of cases.

11. The officers on special duty for sanitary investigations have submitted full reports on different points, and on various stations.

Results of special sanitary investigations.

An extract from Major Davies' report on the SECUNDERABAD water in 1899 is given on page 53 of S. C. I.,* 1898. On the occasion of a second visit to Secunderabad in April 1900, he found that the condition of the wells was better, in consequence of measures taken to protect them from dust, though the arrangements were susceptible of still further improvement. On the other hand, the Jeddmutla tank, formerly considered an unsafe, was found to have become an impossible source of supply; the water being a suspension of putrefying mud, and unfit even for washing purposes. The bed of the tank was so foul that, perhaps for years to come, water coming in contact with it would be polluted; and contamination was still going on from cattle-dung and from natives washing and bathing in the tank. No coliform bacteria were detected; but "the water was so full of *Proteus vulgaris* (the commonest putrefactive organism), that probably few disease-germs, except those of cholera, would be able to live in it". The objectionable features of the catchment area remained as before.

The water-supply at DEOLALI being, at the time of his visit in February 1900, derived from shallow wells, exposed to possible contamination by ingress of surface and subsoil water, and to certain contamination from access of dust and casual impurities, Major Davies recommended that certain wells should be deepened, protected, and reserved for drinking purposes.

The state of things at SHWEDO is described in S. C. I.,* 1899, page 38. In the end of May 1900 Major Davies found that the drinking water reservoir, being in periodical communication with the King's Tank, furnished water of a dangerous character; while the water of No. 2 well was also unfit for use on account of the large quantity of saline matter in it. On the other hand, No. 8 well was found to be of good construction; and to yield water of chemically fair quality, but in quantity not sufficient for the requirements of the station. The results of the bacteriological examination were unsatisfactory for both the reservoir and the well waters. He recommended that steps should be taken to stop contamination of the reservoir-water by the impure tank-water; that the clean

* See table of references at end of section.

catchment area draining into the reservoir should be measured, and its yield of water calculated, if the necessary rainfall observations exist; and that trial borings should be made to find water of good quality in or near the cantonment. And he concluded with the following weighty pronouncements with regard to the value of water-analysis standing alone, and with regard to the undesirability of secondary purification of water as a substitute for primary purity:—

The Officiating Superintending Engineer, writing to the district military authorities on 17th August 1899, stated, in effect, that a series of analyses of the water objected to by the local medical authorities (*i. e.*, the reservoir water contaminated by overflow from the King's Tank) would be necessary before any action could be taken in the direction of protecting this water from the contamination. It cannot, however, be too strongly insisted on that no analysis, or series of analyses, can counterbalance the evidence of the senses of a competent observer as to liability to dangerous pollution of a water-supply. It was pointed out by the Senior Medical Officer that the King's Tank was grossly polluted; its bed being cultivated and manured during part of the year, and several villages draining into it. Chemical and bacteriological examinations (as well as the obvious physical characters of the water) have shown that the water is polluted, though no definite evidence of excremental contamination was afforded by the bacteriological tests. An outbreak of enteric fever or cholera would have given, from an evidential point of view, a more satisfactory proof. But it should be understood that it is not necessary to await these corroborations; and that if every kind of examination, physical, chemical, microscopical, and bacteriological, were to fail to show pollution of the water, there is still no justification for supplying the troops with water that, from the nature of the case, must be polluted with human excreta. Evidence of contamination, or liability to contamination, outweighs any number of analyses; which if giving positive results, only confirm what was obvious; and, if giving negative results, cannot diminish the force of the evidence. There appears to have been a great disinclination to take action on the part of the engineering authorities, when the dangerous character of the water was pointed out. Perhaps it has been thought that there is no danger so long as the drinking water is boiled. In my opinion, all measures of purification, such as boiling, filtering, etc., should be considered exceptional, and in no way justifying the continuance of a supply that at its source, or place of collection, is obviously bad or suspicious.

From inspection of the sources of supply at WELLINGTON both for the main barracks and for the hut barracks and East Subalterns' Quarters, Major Davies considered that there was liability to contamination in each case from pollution of the surface soil and subsoil. The channel supply also, supposed to be used only for washing purposes, was found to be liable to contamination along the whole length of the open runnel, but more particularly from the drainage of the cultivated and inhabited valley (amounting to about one-third of the total flow) which joins the channel after it has passed the village of Bandunin. The bacteriological examination of the samples showed that an organism very closely resembling *Bacillus typhi*, and, in his opinion, equally dangerous (though it did not then seem to have been in a virulent condition lately) was present in the hut barracks supply. An organism similar to this, belonging to the coliform group, was found in the channel supply, indicating its liability to contamination with fecal matters; and in the main barracks supply a somewhat suspicious organism was found. The opinion formed from inspection of the sources and from the bacteriological results was that all three sources were unsatisfactory, but that the hut barracks supply and the channel supply were unfit for drinking or domestic purposes. Major Davies suggested improvements in the channel supply, or a search for deep spring water in the hillside above all habitations.

Of two samples of water from RANGOON, Major Davies found that one was not fit for drinking, on account of its bad physical characters and the large

number of organisms present; and the other showed evidence of excremental contamination in the presence of an organism intermediate between the *Bacillus typhi* and the *Bacillus coli*.

The large number of germs present in the water of BHAMO indicated probable contamination by dust; but Major Davies found no suspicious organisms, and the physical characters were good.

The supply of water to the troops in FORT ST GEORGE is a double one: that for drinking and cooking purposes being derived from the Red Hills reservoir, which supplies the greater part of the city of MADRAS; that for washing purposes from the Seven Wells in Black Town. Both these supplies are laid on to standpipes, marked respectively "for drinking" and "for washing". The drinking water-supply was found by Major Davies to be liable to contamination at its source and during transit to the city; though at the time (April 1900) of examination the water delivered in the fort was of good quality. The Seven Wells are open, and exposed to great chances of contamination; and the water actually furnished a large number of germs, amongst them an organism indistinguishable from the typhoid bacillus. This was believed to be a chance contamination from the natives employed in drawing the water; but, although it was present in small numbers only, and was absent from the supply as delivered in the fort, the fact that it was found at all shows that the wells as at present worked furnish a supply which is dangerous. It is not quite clear why the Seven Wells waterworks should continue in existence, when the other pipe supply from the Red Hills is available; but, if they are to be used, the Seven Wells should be protected.

At MANDALAY an inspection of the moat and its surroundings, of the Aungbinle Lake, and of the channel connecting these two bodies of water showed Major Davies that all kinds of pollution might occur, and that immediate steps were necessary to provide a fresh supply of drinking water for the troops and residents in Fort Dufferin. Meanwhile measures were called for to obviate or diminish pollution, to secure supervision of the boiling and storage of the drinking water, and to get on with the borings for the proposed new supply from deep wells near Nyaunggwe.

Major Davies, from an examination in October 1900 of the two springs furnishing the water-supply to KASAULI, concluded that the Sapper spring on the south side of the hill was likely to afford a water of good quality (the surface catchment area being clean and free from any likelihood of contamination); while the North or Brewery spring was certain to yield a water of exceedingly dangerous character (the immediate catchment area being liable to gross pollution from a native village very near to it, and from the drainage of the hotels and the thickly populated area immediately above). The bacteriological, physical, and microscopical characters of both springs were satisfactory; but chemically the North spring showed some signs of contamination. It was recommended that the North spring should be closed. The proposed scheme for a pipe-supply will draw the whole required quantity from the Sapper spring. The water will be pumped up to reservoirs on the top of the hill, and thence be distributed to all barrack bungalows, wash-houses and cook-houses; but not to private bungalows, which are intended to be supplied from standposts. Major Davies placed on record his opinion that it was most necessary that the water should be laid on to private bungalows, or, at any rate, into their compounds; as otherwise *ohistis* with their *mussacks* would continue to be used.

Major Davies, in the end of December 1899, examined three possible sources of supply for SIBI, and, subsequently in agreement with a previous report of

Major O'Sullivan, recommended the Nari river; the water to be taken at the gorge and piped into Sibi, sedimentation and filtration to be adopted, and measures to be taken to prevent contamination above the point of intake. *

At a second thorough inspection of QUETTA in the end of 1900 it was found by Majors Davies and Elliott that the water supplied was of excellent quality; but deficient in quantity, especially in the hot weather. Unfortunately, a standing menace to the health of the community was discovered in the leaky condition of the joints in the water mains, which would allow of the insuction of impurities. The causation of the 1900 epidemic of enteric fever was not clear; but from a consideration of all the circumstances, and bearing in mind the possibility of carriage of infection from Quetta city, or by means of cream from the native dairy at Sukkur, it appeared on the whole to Major Davies to be more probable that faecal infection of the soil by the use of a bad pattern of native latrine, followed by conversion of this infected soil into dust, and its dispersion throughout the lines by wind and duststorms, would afford the true explanation. The blowing of faecally infected dust from the filth trenches, which was supposed to have caused the 1898 epidemic, had been put an end to; but the faecal infection of soil due to the native latrines had continued.

The total number of SPECIMENS EXAMINED for the enteric microbe by Mr. Hankin was 326. In 42 of these microbes resembling the enteric bacillus in their cultural characters were detected, but only in three instances did they react with antityphoid serum.

12. There was again a great decrease of both morbidity and mortality from enteric fever. The admission ratio was the lowest that had been seen since that of 1888, though higher than in any of the years before that except 1885. Of the causes of decrease mentioned in paragraph 10, probably the most powerful were the almost complete absence of drafts from England and the freedom from field service. But the reduction is not so great as might have been expected, had the great prevalence of the disease been entirely due to the supply of fresh susceptible subjects. And the statistical evidence shows that of late years men of the higher ages and of the longer periods of service have been attacked in higher proportion to their strength than formerly; which seems to mean that the virus of the disease is now more widely spread and virulent. With the resumption of the ordinary annual reliefs, this condition will probably go from bad to worse. Hence the protection of the individual men by inoculation would be valuable. Unfortunately the feeling with regard to that prophylactic is at present one of hope rather than of confidence. One hopeful measure which ought to be generally and thoroughly carried out is the routine disinfectant treatment, wherever it is possible, of all enteric fever patients from the beginning of the third week with urotropine, and the immediate re-disinfection or destruction of the urine after it has been voided. It appears pretty clear that the water-supply as such is not always to blame, and equally clear that, even when the supply is pure, the virus must be frequently ingested in portions of water which have been casually contaminated after delivery, or which come from sources other than the pipe supply. And this local infectiveness which threatens the men through their water, is likely to be dangerous also through the food, and perhaps through the air.

* This account of the Sibi supply was accidentally omitted from S. C. I., 1899.

Though it had no greater proportion of drafts than the others, the Bombay Command was the only one with a higher admission ratio than in 1899, due principally to the increase at Quetta, Poona, and Nasirabad.

There were 970 admissions and 289 deaths, against 1,392 and 348 in 1899. The average duration of a case was nearly 53 days; and the average number constantly sick 140.70, which being multiplied by 365 gives 51,355.50, the total annual loss of service from the disease.

13. Groups XIIIa, VIII, V, and VI had, as usual, high decennial ratios of admission; and Groups II and X, and, to a less extent, I and IV, low ratios. In fact the coast groups seem to have least enteric fever. In 1900 all the groups except I were in ratio below their decennial average, the reduction being especially great in VI, XI, and V.

Enteric Fever in the Geographical Groups. Appendix B. Table VIII.

14. Leaving out the small station of Taragarh, the highest ratios of 1900 were those of Nasirabad and Quetta. Certain points about these outbreaks have been mentioned in paragraphs 10 and 11. There is a double, but insufficient, water-supply, exposed to contamination by flies and dust, at Nasirabad; and the men are apt to use the wrong supply because the boiled water takes long to cool. The highest decennial ratios were those of Subathu, Cherat, Taragarh, Dagshai, Benares, Agra, and Lucknow; while low ratios were most common in Burma stations and stations near the sea.

Enteric Fever in Stations. Appendix C. Tables III and IV.

15. In 1900 the greatest liability to suffer and die from enteric fever was between the ages of 20 and 25 and in the first three years of Indian service. In 1899 the incidence of the disease had been less at all ages and in all periods of service than in the preceding year; but in 1900 it was greater in all age periods except the second, and in all service periods except the first two. If the 24 years beginning with 1877 be divided into 4 periods of 6 years each, it will be found that for all the age periods from 20 to 40 the death ratios of the last are higher than those of its predecessors, and in some cases the increase is progressive through the lustra. Owing to a break in the system of record the results cannot be tabulated for periods of service in such detail, but, so far as they go, the results are similar. The serious meaning of this has been touched upon in paragraph 12.

Relation of Enteric Fever to Age and Length of Residence in India. Tables XV and XVI.

16. In the decennium 1891-1900, so far as can be gathered from the non-calendar returns of the army, the maximum months for India as a whole were May, April, and August. But the maximum period differs in northern and in peninsular India, as has been shown, among other things, in Section II of the reports for 1886 and 1888, and in Section X of that for 1899. The bulk of the enteric fever at Quetta during six years has been from May, June, or July onwards to the end of November, 89 per cent. in the second half of the year; while at Nasirabad admissions in the same period have been much more equally divided between the two halves of the year, 51 per cent. in the last six months. An attempt to connect this difference clearly with the meteorology has not been successful; though it may be noted that the increase of mean temperature and the increase of range in the second-half of the year were proportionally higher in Quetta than in Ajmer (the nearest meteorological station to Nasirabad), while the increase of relative humidity and of rainfall were proportionally less. Quetta also exhibits a

Enteric Fever and Season. Table VIII.

remarkable annual alternation of much and little enteric fever, the years of much enteric fever being 1896, 1898, and 1900; and 1901 appears likely to continue the alternation by being a year of comparatively little enteric fever. In contrast to this Nasirabad's enteric fever remained nearly constant from 1895 to 1898, but rose in 1899 and again in 1900. All endeavours, even with the kind help of the Meteorological Reporter, to connect these peculiarities with the available meteorological data have failed. Some attribute the outbreaks at Quetta to contaminated dust, others to contaminated water; but the curious alternation just mentioned seems to indicate the existence also of some unknown factor. The wind records of Quetta have also been examined without result.

17. In the European army of India there occurred 6 cases of plague with 1 death. There were 2 cases at Bangalore and Belgam, and 1 each at Aden and "on the march", the death happening at Aden. The man on the march contracted the infection in Belgam, and in all three stations the disease was present among natives. The man attacked at Aden was employed in the kitchen. At Bangalore one of the men attacked had up to the date of admission been keeping a native woman in one of the most infected streets in the Ulsoor district; infection in the other case was supposed to have been contracted in some similar way; and the medical officer considered it marvellous that more cases had not appeared, as the women the men went with were of a low dirty type, and lived in plague districts. No officers, women, or children were attacked.

There were 7 dengue cases at Fort William and 1 at Poona. Mooltan had 6 cases of scarlet fever and Quetta 2. The three first cases at Mooltan were men who had arrived from Dublin in the last draft. At Quetta some cases had occurred in the previous year, and the disease was also present in the civil lines. There were 7 cases of measles at Meerut and 5 at Dum-Dum, and not more than two at any other station. Mhow had 2 cases of rubella, and three other stations 1 each. The cases of beri-beri occurred in Burma, or originated there, Mandalay returning 13 and Rangoon 10. Rawalpindi, Chakrata, and Jhansi had most cases of rheumatic fever, the highest number being 8 at the first-named. The medical officer at Ranikhet notes the connexion between tonsillitis and rheumatic fever, and considers their causation to be directly associated with the wooden floors and with the insufficient space allowed in the barrack rooms. Two cases of diphtheria came from one barrack at Ranikhet. The diagnosis was confirmed by complete bacteriological examination, and in one case also by the supervention of the characteristic paralyses. A lady was also affected about the same time, but no other cases, and no suspicious sorethroats, occurred among the other residents, who included a large number of children.

18. There was a slight increase of morbidity and mortality from tubercle of the lungs. No remarks of general interest are made in the annual reports of the stations where most cases occurred. Flügge has recently published an important addendum to his previous work on the conveyance of tubercle infection through the medium of the air by means of cough-spray or sputum-dust. These experiments show clearly the great danger created by the patient and incurred by those in contact with him from ignorant or wilful carelessness, and justify the utmost hopefulness as to the adequacy of precise, scientific, yet simple, measures of prophylaxis.

Tubercle of the lungs. (*) Appendices A and Q. Tables III and IV.

19. The admission rates and death rates from pneumonia were low as compared with the ratios of both the preceding year and the decennium. Indus Valley usually has the highest proportion; but in 1900 Bengal-Orissa stood first, and this may be connected with the fact that Bengal-Orissa had more influenza than any other group, while Indus Valley returned none. January was the maximum month, and February came next. At Kurrachee the disease was attributed to a cold land wind in January, when the men were in camp.

Pneumonia and other respiratory diseases.
Appendices A, B, K, and Q.
Tables XII and IV.

Burma Coast had the highest ratio for other respiratory diseases, but Mhow, Rawalpindi, and Quetta were the stations which had most cases. Bronchitis was the most common of these affections.

20. Both the admission and the death ratios from dysentery rose, and medical officers of stations having many cases notice the severity of the type of the disease. Dysentery was, as usual, most prevalent in the Bengal-Orissa group; but it was more prevalent in the Madras and Bombay Commands than in that of Bengal. The maximum month was August for India, Central India, and the Deccan, but not for Bengal-Orissa. By far the highest ratio was that of Barrackpore, where, the medical officer says, severe dysentery, very apt to be followed by liver abscess, prevails yearly. Something has been done to improve the drainage of Barrackpore, but it is reported that more requires to be done. Contaminated water from surface drainage is mentioned at Rangoon; and at some stations damp, chill, and errors or carelessness as to food and drink are cited as contributory causes. In addition to these last, there is noticed at Neemuch the danger from the crowds of famine people wandering about.

Dysentery and diarrhoea.*
Appendices A, B, and Q.
Tables XIII, III, IV, and V.

In France Comte has lately emphasized the infectiousness of the disease, and attributed it to a coliform bacillus: while Lesage has isolated a balloon-shaped diplococcus from the blood, stools, sputum, and organs of patient suffering or dead from dysentery. In a recent paper Flexner announces that he has had an opportunity of comparing in a thorough bacteriological manner the bacilli of Shiga, of Flexner, of Kruse, and of Strong, and has no doubt of their identity; "so that the justification for the view of a specific organism of dysentery would therefore appear to be near at hand." See also Section IV, paragraph 73.

The admission rate from diarrhoea was slightly increased, but the death rate much greater. High rates were those of Barrackpore; of Neemuch, Nasirabad, and Mhow, in the famine tract; and of Ranikhet. The second group had copious rain after drought; and during the outbreak at Mhow the water contained more vegetable debris and suspended matter than usual, and the disease ceased by September, when the water had cleared a good deal. The epidemic at Ranikhet was of "hill diarrhoea", and was attributed to chills from the great fall of temperature on the onset of the rains.

21. Both the admission and the death rates from abscess of the liver rose. The Bengal Command and the Burma Coast Group had the highest mortalities. There were 5 deaths each at Rangoon, Barrackpore, Lucknow, Mhow, and Poona; and the highest death ratios were those of Barrackpore, Ahmedabad, and Saugor. Two of the fatal cases at Barrackpore, one with a single abscess and one with multiple

Hepatic abscess (*) Appendix A. Tables III and IV.

* Shiga in D. M. W. XXVII, page 785, has since given a similar opinion.

abscesses, occurred immediately after attacks of influenza. At Rangoon one man just recovered from abscess of the liver associated with dysentery contracted enteric fever and died. A case at Jutogh was diagnosed by the help of the serum test as Malta fever, but on postmortem examination the disease was changed to abscess of the liver.

As due to abscess of the liver were returned 95 deaths, but to these may be added 15 returned under other heads (enteric fever, dysentery, heatstroke, ague), in which examination of the body after death showed the presence of abscess of the liver. In these 110 the postmortem record is complete only for 86, of which 46 were associated with ulceration, and 40 not associated. Out of the 40, 4 had scars of former ulceration, 2 had dysenteric symptoms without ulceration, and in 34 there was no trace, and no history, of either ulceration or dysentery.

Excluding 38 cases in which postmortem examination was omitted or was incomplete, the total number of fatal cases in which abscess of the liver was found in the 5-year period 1896-1900 was 453. In 238, or 53 per cent., there was found ulceration of the intestine, and in 215, or 47 per cent., no ulceration; in 161, or 36 per cent., there was a single abscess, and in 292, or 64 per cent., there were more than one.

Among the 238 associated with ulceration, there was a single abscess in 66, or 28 per cent., while there were multiple abscesses in 172, or 72 per cent. On the other hand, when the suppurative hepatitis was unassociated with ulceration, there were 95 cases, or 44 per cent., in which the abscess was single, and 120, or 56 per cent., in which the abscesses were multiple.

Again, out of the total of 161 single abscesses, 66, or 41 per cent., were associated with ulceration, and 95, or 59 per cent., not so associated. In contrast to this, among the 292 cases of multiple abscess 172, or 59 per cent., were associated, 120, or 41 per cent., unassociated with intestinal ulceration.

It appears that a considerable proportion of cases of abscess of the liver are not connected with ulceration in the intestinal canal; that the ulceration leading to liver abscess may be of any kind; and that when there is no ulceration, there is a greater chance of the abscess being single than when there is ulceration.

Another case of multiple abscess from appendicitis has been recorded, also a case due to ascarides. A dysenteric abscess of the liver has been described in a child of 6 years of age; and years ago in India a case was reported in which the child was only 6 months old, the cause unknown. Washbourn has noted that abscess of the liver is a rare complication of dysentery in South Africa, and Macfarlane that he has never seen a case in a native at Lagos, though dysentery is prevalent. Mott and Durham suggest that abscess does not supervene when the environment is normal; but that there is something wanting in this explanation seems to be suggested by the frequency with which dysentery and abscess of the liver are said to be associated in Bosnia and Roumania.

The mortality from abscess of the liver in 1900 was 31 times greater among European than among native soldiers, while in 1899 it had been 32 times greater, and 25 times greater in 1898. On the other hand, the admission ratio from dysentery in 1900 among European soldiers was to the ratio of the native soldiers as 1:1.95, the difference being greater than in the four years preceding.

22. The admission rate from venereal disease for India was 298.1, against
 Venereal diseases. 313.4 in the previous year, and 362.9 in 1898. In
 Tables III and IV. other words, in 1900 for every 1,000 men there were
 about 15 fewer admissions to hospital for venereal disease than in 1899. From

the reports of medical officers it appears that the decrease was believed to be principally due to the absence of drafts of young men, to measures taken under the cantonment act for the expulsion or treatment of diseased women, to measures taken to warn the men, to keep them out of mischief, or to improve their cleanliness, and to the frequency with which bazaars, villages, localities, and areas were placed out of bounds on account of the prevalence of venereal disease, plague, cholera, or small-pox; and that the ratio would have been still lower, had it not been for the increase of solicitous prostitution caused by the famine. Other causes of the decrease of admission are mentioned, such as: the continuous treatment of patients, which prevented relapses; the out-patient system; the prevalence of ague, which weakened the men, and rendered them less inclined to venery; confinement to cholera camps; various measures adopted to remove temptation or lessen risk, such as: public lectures and private warnings with the object of increasing moral tone and self-control, and explaining the risks run; the encouragement of temperance in drink; warning the men against specially dangerous places, as on the march up to the hills; encouraging games and athletics by day, and providing amusements and comforts in the evenings; the provision of places and means of ablution; encouraging the men to point out the women from whom, or the places where, they contracted disease; laying down a rule that venereal patients after discharge from hospital had to make up the guards, &c., which had fallen upon others owing to their being in hospital. Various causes of local increase are given. In several cases putting the bazaar out of bounds was not productive of much or any benefit; and at Poona the measure was followed by a great increase of clandestine and roadside prostitution. In fact, both in the plains and in the hills clandestine prostitution down the khuds and on the roadside was both more dangerous and more difficult to deal with than bazaar prostitution; and prostitutes, when driven from one place, simply went to another beyond the limits of the commanding officer's authority, and let the soldiers know through touts. Soldiers often refuse to point out the women from whom, or the place where, they contracted disease; and, of course, if the disease has been contracted in a locality out of bounds, they are only refusing to incriminate themselves. The amount of success attained in inducing the women to submit to treatment was very different in different stations; and no doubt, personal influence counts for more than the mere taking of pains.

In 1900 there were 1,630·33 (against 1,851·31) men constantly sick in hospital from venereal disease. The average stay of a case of venereal disease in hospital was 32·97 days (against 31·89); and the total loss of service was about 595,070 days (against 675,728). There were 14 deaths (0·23 per mille of strength), and 380 invalidings (6·28 per mille) directly due to venereal disease—against 14 or 0·21 per mille of strength, and 442, or 6·53 per mille.

The only ratios over 600 per mille of strength were those of Neemuch and Deesa. The greatest increases of ratio (increases of more than 100 per mille) were at Subathu, Gharial, Lower Topa (strength 59), Meiktila, Pallaveram (strength 81), Deesa, Neemuch, Nasirabad, Indore, Mhow, Satara, Mount Abu (strength 95), and Purandhur. The medical officers of Deesa, Neemuch, Nasirabad, Indore, Mhow, and Mount Abu refer to the large amount of disease caused by the numbers of famine-stricken women who resorted to prostitution to earn money enough to buy food.

Only the Bengal and Madras Commands shared in the decrease, there being a large increase in Bombay (influence of the famine), and a small increase in the Punjab.

In 20 stations the ratio of primary syphilis *plus* soft chancre was over 150 per 1,000 of strength, the highest ratios being those of Taragarh (strength 47), Pallavaram (strength 81), Neemuch, Ahmedabad, Madras, Deesa, Jhansi, Nasirabad, Indore, and Rangoon; and in 28 other stations it was over 100 per 1,000. In 20 stations (against 26) the admission rate from secondary syphilis was over 100 per 1,000 of strength, the highest ratios being those of Poonamallee, Purandhur, Deolali, Mount Abu, Murree; and in 15 other stations (against 18) it was over 75 per 1,000.

For India the ratio of primary syphilis *plus* soft chancre diminished by 10·9 per mille of strength, the ratio of secondary syphilis diminished by 9·4 per mille; while the ratio of gonorrhœa increased by 4·8 per mille. The Madras Command had the highest ratio for primary syphilis *plus* soft chancre, and as usual, for secondary syphilis; the Bombay Command the highest ratio for gonorrhœa.

As usual, proposals are made by some medical officers that no distinction should be attempted in returns between infective and local sores, until time shall have shown; and it is pointed out that the personal equation enters largely into the present differential diagnosis for returns. With regard to the cases returned as non-venereal buboes, there is, as usual, some difference of opinion. Some officers content themselves with saying that they were non-venereal, or had no venereal history. Others suspect that they really depended on previous venereal affection. Others, again, regard them as climatic, and believe that the Indian climate produces a condition in which a slight irritation may give rise to bubo. A third body of officers regard them as due to strain, and think that relapses may be induced by alcoholism. One medical officer is of opinion that they are due to septic absorption from excoriations in the flexures of the thighs; while another suspects that they are often the signs of a past venereal affection that has been treated outside and concealed from the official medical attendants, and says he has verified this.

23. There were only 4 deaths from alcoholism, giving a ratio of 0·07, both figures being below those of the two years preceding.
Alcoholism. Tables XVI and LIII. The yearly average number of deaths in the decennium 1891-1900 was 7 (0·11 per mille of strength); so that the figures of 1900 were decidedly below the average.

24. The heatstroke death rate for India rose, the greatest shares of the increase being in Madras and the Punjab. Nowgong, Meean Meer, and Benares had the highest admission ratios, and Meean Meer and Meerut the highest numbers. The ratios of mortality from heatstroke are highest after 30 years of age, and in the earliest and latest years of service in India. No remarks of etiological interest are made by the medical officers. Washbourn reports that in South Africa he never saw or heard of a well-marked case of heatstroke; and considers this to show that something more than the actual heat of the sun is necessary for the production of the disease, and to support the view that the disease is due to some infection. Griffin has published an interesting case occurring at sea, and Schmidt has written ably on the subject.
Heatstroke (°) Appendix A. Tables XVI and LIII.

25. In the ten years 1891-1900 there were 194 suicides, or about 19 per annum. There were 14 in 1900, of which 7 were by gunshot, 3 each by cutthroat and drowning, and 1 by poison.
Suicide. Tables XVI and LIII.

26. In the whole army of India 2,026 men were invalided, or 33·46 per mille of strength, against 2,142 and 31·64 in the preceding year, the increase being greatly due to the larger number of men invalided for rheumatism and for debility, and being shared in by all the commands except Bengal. The proportion of invalids to strength was lowest in the Punjab and, as usual, highest in Madras. The percentage of men who were invalided while under 25 years of age to the whole number invalided was 52, against 59 in 1899. Of the total number of men invalided, 33 per cent. (against 38) were of less than two years' service, and 72 per cent. (against 81) were of less than 5 years' service.* Invaliding from venereal diseases takes place pretty evenly through year by year of service and mostly at the ages of from 20 to 30. Invaliding from hepatitis, from debility, and from rheumatism is more affected by advance of age than by length of service, though the last service-period given in the table is that which sees the highest proportion of invaliding from these causes. For palpitation and valvular disease the greatest proportion of invaliding usually falls in the period between 20 and 25, though sometimes in that over 40, and in the first 3 or 4 years of service.

27. The chief causes of admission among officers were ague and simple continued fever; and while the admission rates from cholera, small-pox, ague, and influenza rose, those from pneumonia, other respiratory diseases, enteric fever, dysentery, and hepatic affections fell. The chief causes of death were enteric fever and cholera, but the ratio of the former was lower than in the previous year. Among the increased ratios were those of cholera, small-pox, and circulatory diseases. The admission rates from ague, tubercle of the lungs, respiratory diseases, hepatic abscess, and venereal diseases were lower than among the men; as were those of all the causes of death tabulated, except cholera and small-pox. One officer suffered from a second attack of enteric fever. Three cases were contracted in one hotel; two were attributed to impure milk; and two officers were supposed to have become infected when out shooting. One of the two stayed in a native village without filter or soda-water, and drank from any source when he was hot and thirsty.

28. The health of the women was not so good as in 1899. The chief causes of admission were debility, ague, and the diseases peculiar to women. All the diseases tabulated had higher admission rates, except pneumonia and dysentery. Debility caused about 38 per cent. of the total admissions, and ague about 18 per cent. Here it may be noted that at Subathu 21 of the cases of "debility" were due to childbirth; that at Rangoon 15 women were wrongly entered as debility simply to enable them to be with their sick children; and that at Meerut one death from debility and one from ague occurred in women recently delivered. The chief causes of death among women were enteric fever, dysentery, and cholera. All the diseases tabulated gave increased mortality, except pneumonia, hepatic abscess, childbirth, ague, and simple continued fever. Enteric fever caused nearly 14 per cent. of the total deaths. No special remarks of value are made by the medical officers as to the causation of the enteric fever of women and children. Their remarks on the general causation at stations have been summarized in paragraph 10.

* The percentage strengths at these ages and periods of service will be found in Table XV.

29. There was a falling off in the health of the children. The chief causes of admission were ague, respiratory diseases, and measles. All the diseases tabulated gave increased admission rates, except whooping cough, measles, influenza, and enteric fever. Ague caused 22 per cent. of the total sickness, respiratory diseases 12½ per cent., and measles nearly 9 per cent. The chief causes of death were diarrhœa, debility, and respiratory diseases. There were increased death rates from all the diseases tabulated except convulsions, respiratory diseases, teething, simple continued fever, and cholera. Diarrhœa caused nearly 17 per cent. of the total deaths, debility (including immaturity at birth) over 12 per cent., and respiratory diseases over 10 per cent. Cases of measles were most numerous at Calcutta, Subathu, Rawalpindi, and Ferozepore. Three cases of scarlet fever occurred at Quetta, and 1 at Rawalpindi. The 7 cases of diphtheria were divided between Fort William (2), Dum-dum, Sialkot (2), Peshawar and Bangalore. At Sialkot it is stated that insanitary conditions likely to cause the disease were sought for but not found. There were 17 admissions from tubercle, the intestines or peritonæum being affected in 5. The age of the only child that died of tubercle of the intestines (and lungs) was 16 months. No remarks are given about these cases.

The liability to death was greatest under 6 months, the height of the percentage being, as usual, to a considerable degree due to cases of immaturity at birth. The liability gradually decreased up to 15 years of age.

Papers and Books referred to in Section II.

Abbreviations used below.

- L. = Lancet.
 B. M. J. = British Medical Journal.
 J. C. P. T. = Journal of Comparative Pathology and Therapeutics.
 J. T. M. = Journal of Tropical Medicine.
 J. H. = Journal of Hygiene.
 N. = Nature.
 I. M. G. = Indian Medical Gazette.
 S. C. I. = Annual Report of the Sanitary Commissioner with the Government of India.
 B. J. H. H. = Bulletin of the Johns Hopkins Hospital.
 H. O. M. = Proceedings and Addresses of the Fourth General Conference of the Health Officers in Michigan.
 M. O. L. G. B. = Report of Medical Officer, Local Government Board.
 V. J. = Virchow's Jahresbericht.
 Z. H. = Zeitschrift für Hygiene.
 Z. K. M. = Zeitschrift für Klinische Medicin.
 A. H. = Archiv für Hygiene.
 C. B. = Centralblatt für Bakteriologie.
 H. R. = Hygienische Rundschau.
 F. M. = Fortschritte der Medicin.
 D. M. W. = Deutsche Medicinische Wochenschrift.
 M. M. W. = Münchener Medicinische Wochenschrift.
 A. K. G. A. = Arbeiten aus dem Königlichen Gesundheitsamte.
 A. P. = Annales de l'Institut Pasteur.

J. P. P. G. = Journal de Physiologie et de Pathologie Générale.
S. M. = La Semaine Médicale.

- (1) Houston, reported in B. M. J. of 17th August 1901, page 389; Chantemesse in S. M. 1901, page 186, quoted in H. R. XI, page 752, and the same in Le Bull. Méd. 1901, No. 44, quoted in F. M. 19, page 714; Rémy in A. P. XIV, page 705, and in A. P. XV, page 145, and Rémy quoted in B. M. J. of 20th April 1901, epitome-page 64; * Horrocks in B. M. J. of 28th April 1900, quoted in V. J. XXXV. 2-1, page 19; Sternberg in Z. H. XXXIV, quoted in V. J. XXXV. 2-1, page 18; Hunter in L. of 2nd March 1901, page 613; Köhler and Scheffler in M. M. W. 1900, Nos. 22 and 23, quoted in C. B. XXVIII, page 332, and in V. J. XXXV. 2-1, page 19; Cambier quoted in L. of 6th July 1901, page 58; Gabritschewsky in Z. H. XXXV, page 104, quoted in C. B. XXIX, page 497; B. M. J. of 2nd February 1901, page 319; Pakes reported in B. M. J. of 17th August 1901, page 399; Weissenfeld in Z. H. XXXV, page 78; and quoted in C. B. XXVIII, page 258; Horrocks in J. H. I., page 202; Wanklyn in B. M. J. of 17th August 1901, page 399; Johnston in H. O. M., page 97; Groves in B. M. J. of 17th August 1901, page 399; Fosbroke in B. M. J. of 17th August 1901, page 400; Mills in H. O. M., page 142; Miquel quoted in L. of 20th July 1901, page 176; L. of 14th September 1901, page 763; Hanriot quoted in C. B. XXIX, page 910; B. M. J. of 19th January 1901, page 165; Riggs in H. O. M., page 43; *Hygiene and Public Health* by Parkes and Kenwood, page 479; Leigh Canney in *Typhoid the Destroyer of Armies*, in B. M. J. of 24th August 1901, and in subsequent correspondence; Vaughan in H. O. M., page 80; Washbourn in B. M. J. of 24th August 1901, page 467; Barr in L. of 29th September 1900, page 920; Fuller in H. O. M., page 76; Horrocks in B. M. J. of 15th June 1901, page 1471; Munson in *Military Hygiene*, pages 151 and 142, and quoted in B. M. J. of 28th September 1901, page 901; Schüder in Z. H. XXXVII, page 307; Klein summarized in M. O. L. G. B. 1899-1900, page xxiii.
- (2) S. Martin in M. O. L. G. B. 1899-1900, page 548; Houston, as above; Rullmann in C. B. XXX, page 321; Vaughan as above; Tooth, Church, Chiene, &c., in B. M. J. and L.; Cameron in B. M. J. of 7th September 1901, page 625; Vaughan as above, and also quoted in V. J. XXXV. 2-2, page 349; Simons in B. M. J. of 24th August 1901, page 468; Howard in Proc. of the Washington Ac of Scis. 1900, Vol. II, quoted in D. M. W. XXVII, page 206; Murphy, Handford, Gualdi, Kruse, Guinoa, respectively in L., B. M. J., L., C. B. and H. R. and F. M., H. R.
- (3) Neufeld in D. M. W. 1900, No. 51, quoted in C. B. XXX, page 258; Houston as above; Handford in B. M. J. of 10th August 1901, page 342, and 17th August, page 398; Curschmann in M. M. W. 1900, No. 42, page 1449; quoted in V. J. XXXV. 2-1, page 14, and in H. R. XI, page 663; Houston as above; B. M. J. of 15th and 29th June; Schumburg in D. M. W. 1901, No. 9, page 134, and quoted in C. B. XXX, page 41, and in H. R. XI, page 837; Edel, F. M. 19, page 301; and quoted in C. B. XXIX, page 911; von Stühlern in C. B. XXVII, page 353, quoted in H. R. XI, page 131; Dieudonné in C. B. XXX, page 481.
- (4) Johnston as above; Houston as above; Parkes and Kenwood as above, page 153; Clowes and Houston quoted in B. M. J. of 2nd February 1901, page 287; Leader in B. M. J. of 13th April 1901, page 902; Discussion reported in B. M. J. of 11th May 1901, page 1342; Leader in B. M. J. of 17th August 1901, page 421; Parkes and Kenwood as above, page 479; Pakes in L. of 11th May 1901, page 1335.
- (5) Petruschky in Z. H. XXXVI, page 151; Firth in B. M. J. of 19th January 1901, page 168; Kurth in D. M. W. XXVII, pages 501 and 519; Schottmüller in D. M. W. No. 32 of 1900, quoted in C. B. XXIX, page 457; Schottmüller in Z. H.

* Also in H. R. XI., page 996.

- XXXVI, page 368, quoted in C. B. XXX, page 26; Koch reported in B. M. J. of 3rd August 1901, page 320, also in L. and N.; Stewart in B. M. J. of 15th June 1901, page 1463; Lazarus-Barlow in B. M. J. of 10th August 1901 and of 21st September 1901, and in L. of 17th August 1901; Weichardt in C. B. XXX, page 28, and in Z. H. XXXVI, page 440; Guizzetti in Clin. Med. Ital. 1900, No. 6, quoted in F. M. 19, page 95; Barjon and Lesieur in J. P. P. G., III, page 250; Opie and Bassett in B. J. H. H., XII, July 1901, page 198; Cole in B. J. H. H., XII, July 1901, page 203; Scholz and Krause Z. K. M. XLI, page 403, quoted in C. B. XXVIII, page 883; see also C. B., XXIX, F. M. 19, and V. J. XXXV. 2-1.
- (6) Houston as above; Duclaux in A. P. XIV, page 816; Wright in L. of 14th September 1901, page 715; Schjerning, Lecture and official publication noticed in V. J. XXXV. 2-2, page 347; Vaughan, official report noticed in V. J. XXXV. 2-2, page 349; Munson, as above.
- (7) Flügge in Z. H. XXXVIII, page 1.
- (8) Comte in Le Bull. Méd. 1901, No. 30, quoted in F. M. 19, page 635; Lesage quoted in L. of 31st September 1901, page 622; Flexner in B. M. J. of 21st September 1901, page 786, and in C. B. XXX, page 449; Shiga in D. M. W. XXVII, page 741.
- (9) Stooke and Watt in B. M. J. of 9th February 1901, page 342; Gneftos in D. M. W. of 9th August 1900, quoted in V. J. XXXV. 1-2, page 380; Washbourn in L. of 10th August 1901, page 394; Macfarlane in J. T. M. of 1st August 1901, page 258; Report of Drs. Durham and Mott on Colitis and Asylum Dysentery, presented May 1900; S. C. I. of 1894, page 39.
- (10) Washbourn in L. of 10th August 1901, page 394; Griffin in L. of 12th January 1901, page 87; Schmidt in Arch. für Schiffs and Tropen-Hygiene, July and August 1901, noticed in *Janus*. of 15th September 1901, page 512.

SECTION III. NATIVE ARMY OF INDIA.

30. The health of the native troops, like that of all other classes of the population, was worse than in the preceding year. The year was one of famine and bowel complaints, of malaria, cholera, and small-pox.

The chief causes of admission were ague, dysentery, and venereal disease. Though there were lessened admission ratios from influenza and respiratory diseases, there were raised ratios from cholera, enteric fever, ague, dysentery, diarrhœa, small-pox, venereal diseases, scurvy, and tubercle of the lungs. Ague caused 41 per cent. of the total admissions. The chief causes of death were pneumonia, cholera, and remittent fever. Among the diseases which caused increased mortality were cholera, diarrhœa, debility, dysentery, enteric fever, small-pox, malarial fevers, and tubercle of the lungs. Pneumonia caused nearly 24 per cent. of the total deaths, and cholera over 22 per cent. The total number invalidated for discharge was 1,378, and the chief causes of invaliding were debility, rheumatism, and venereal diseases.

The small Mishmi Field Force (Table XXVIII) suffered chiefly from ague and dysentery, and the China Expeditionary Force from ague, dysentery, and respiratory diseases.

If Table XXVI be compared with Table I, it will be seen that the native soldier suffered less from enteric fever, simple continued fever, diarrhœa, hepatic affections, and venereal diseases; equally from small-pox; and more from each of the other causes of admission given, than his European comrade. He also suffered more from scurvy. These relations are usual, except with regard to influenza, small-pox, and tubercle. The comparison may be carried into further detail with the aid of Table LIII. See also Appendix Q to Section IV.

31. Of the commands, Bombay was the most unhealthy, and it was also more unhealthy than in 1899. It had the highest mortalities from remittent fever, pneumonia, other respiratory diseases, dysentery, diarrhœa, and hepatic abscess. The highest mortality from enteric fever and from tubercle of the lungs was in Bengal, from cholera in the Punjab, and from small-pox in the Hyderabad Contingent.

32. The most unhealthy group for the decennium was Assam; but for 1900, Bengal-Orissa. The change was not due so much to increase of disease in Bengal-Orissa as to improvement in Assam, an improvement of health shared in by the prisoners and by the general population. In 1900 Burma Inland had the lowest admission ratio from pneumonia, and the highest from other respiratory diseases; Bengal-Orissa the highest from ague and dysentery; Gangetic Plain the highest from influenza and enteric fever; Indus Valley the highest from cholera and pneumonia, and the lowest from venereal disease; Central India the highest from remittent fever, scurvy, and venereal disease; the Deccan the highest from small-pox; Western Coast the highest from diarrhœa and hepatitis, and the lowest from ague;

Southern India the highest from simple continued fever, and the lowest from dysentery and scurvy; the Hills the highest from tubercle of the lungs. In the decennium also pneumonia was most prevalent in Indus Valley and least so in Burma Inland, and remittent fever was least prevalent in Southern India.

33. The highest death rates of the large stations throughout India with a strength of not less than 1,000 were those of Kohat, Bombay, Edwardesabad, Secunderabad, and Abbotabad. In all these cholera broke out, very severely at Kohat, and severely at Secunderabad. They also all had high ratios from pneumonia, especially Edwardesabad. Bombay had in addition high ratios from diarrhœa, dysentery, ague, and plague; Edwardesabad from remittent fever; Secunderabad from beriberi and remittent fever; and Abbottabad from tubercle of the lungs and remittent fever. Besides the detachments of the 2nd Punjab Infantry on the frontier, which suffered principally from ague, the most unhealthy regiments were the Mewar Bhil Corps at Kherwara, the 19th Punjab Infantry at Sialkot and Kohat, the 2nd Bombay Grenadiers at Bombay, the 5th Punjab Infantry at Edwardesabad and Miranshah, and the Malwa Bhil Corps at Sirdarpore. The first two had outbreaks of cholera and much malarial fever; and at Kherwara there were in addition badness and dearness of supplies, with the result that the nutrition of the men was below par, and bowel complaints were common. At Sirdarpore also the water was scanty and bad and the grain mouldy and fermented, causing dysentery and diarrhœa and guinea-worm; and, besides, there was more malaria, and detachment duties were more frequent. The 5th Punjab Infantry had less influenza, malarial fever, and dysentery than in the previous year; but there was an epidemic of pneumonia.

34. Influenza greatly decreased, the admissions and deaths being fewer than in any year since the disease invaded India in 1890. July and March were the maximum months in 1900; but for the eleven years' period April and March, with the minimum in October and September. The highest number of cases was 39 at Doranda in the Gangetic Plain. The native troops were far less affected than either the European troops or the prisoners. That prisoners are fonder of going to hospital than free men and that their being cooped up renders them more liable to pulmonary complication may explain their comparatively high ratios. A comparison of 1891—1900 with 1880—1889 does not reveal the expected increase of pneumonia, perhaps because, in accordance with the Nomenclature, influenzal pneumonia is returned as influenza, and not as pneumonia.

35. There were 666 cases (641 admissions) of cholera with 390 deaths, against 126 with 68 in the preceding year; and the admission and death rates were, of course, much increased, and also much above the decennial rates. Cholera reached its maximum in July; but it was present every month, especially May-September. By far the most important outbreak was that at Kohat, in which the 19th and 6th Punjab Infantry, and the 3rd Punjab Cavalry, specially participated; and the next highest numbers were at Secunderabad and Kherwara. A special investigation into the Kohat outbreak was made by Major Firth, who agreed with the local medical officers that it was directly attributable to specific pollution of the irrigation water which runs freely through Kohat. Though he was unable to satisfy himself of the existence of Koch's spirillum in the irrigation water, the ready detection of spirillar and allied forms was considered sufficiently confirmative of the suspicion attaching to the stream. The 19th Punjab Infantry,

which was the regiment most severely affected, arrived, free from cholera, in Kohat on the morning of the 6th July. Either from a misconception as to the propinquity of the pipe supply, or from ignorance of the danger from the irrigation water, the men, under the stress of marching in on a July morning, consumed large quantities of the irrigation water. During the next 48 hours 26 cases of cholera occurred among the sepoy and followers, and on the next day 61 more. Removal of the corps to a camp away from all irrigation and to a water above suspicion rapidly checked the outbreak. It is not known how the irrigation water became infected, but the disease was at the time spreading epidemically in the Punjab, and the first reported death in Kohat city occurred on the 5th July. The men of the 6th Punjab Infantry and other regiments are also supposed to have drunk the polluted irrigation water, because it was so much cooler than the pipe water. At Secunderabad the disease had become epidemic in the city and neighbourhood before it appeared in the regiments. The 24th and 11th Madras Infantry suffered most. With regard to the Kherwara cholera in the Mewar Bhil Corps, it is stated that it was probably caused by a polluted water-supply, and ceased when some wells sunk in the old river bed were closed.

36. There were 78 cases of small-pox with 4 deaths, against 46 with 2 in the preceding year, and the admission ratio was above the decennial. The cases were mostly mild, in vaccinated men. Thus, Secunderabad with 21 cases had only 1 death. No other station had more than 4 cases. The 11th Madras Infantry had 10 cases, and no other regiment more than 4. The infection was derived from the general population, in which there was a recrudescence of the disease.

37. To ague was due nearly 41 per cent. of the sickness of the native army. The year being wetter than its predecessor, an increase of ague was to be expected, and the increase was, of course, not confined to the native troops.

Ague, remittent fever, simple continued fever. Appendices L and M. Tables XXV, XXXVI, XXXIV.

The most malarious group was Bengal-Orissa, but it was less malarious than in 1899. The greatest increase was in Group VIII, which comprises many of the districts where plentiful rain succeeded famine-drought and the next greatest in Group VI, wherein is included much of that part of the Punjab in which the conditions were somewhat similar. The most malarious month was October, and the least malarious March. The highest number of cases was in the 5th Bombay Infantry, its first year at Aden; the 28th Punjab Infantry at Wana; the 12th Bengal Infantry at Alipore, but fewer than in the previous year; the 8th Bombay Infantry at Delhi, newly arrived from Ahmednagar at a time when malaria was rife at Delhi; the 1st Bengal Infantry in Mauritius; and the 13th Bombay Infantry at Deesa in Group VIII. The medical officer of the 1st Bengal Infantry mentions that there were fewer cases in the regiment owing to its being stationed on a healthy plateau in the interior of the island, where he was only able to find one specimen of *anopheles* in the course of the year; and that most of the admissions took place early in the year, while the men were still feeling the influence of the malarious climate of Port Louis, where *anopheles* is plentiful.

Remittent fever caused 9½ per cent. of the total deaths; and prevailed most in October and least in February, though it was pretty evenly distributed throughout the months of the year. The death-rate was high, the admission rate rather low. It was most prevalent in Groups VIII, XII, I, and VII. The greatest numbers of cases were at Kohat, Rawalpindi, Kila Drosh, Edwardesabad,

Peshawar, Maymyo, and Agra; and hill stations garrisoned by Gurkhas had high numbers, which is suggestive in view of the fact that Gurkhas suffer much from tuberculosis as well as comparatively much from enteric fever. The 10th Madras Infantry at Maymyo, and the 4th Bengal Infantry at Agra (from Calcutta) had the highest numbers; and next came regiments at Kohat, Almora, Sirdarpore, Abbottabad and Kohat, and Peshawar.

That the reports of medical officers are not uniformly favourable, is, in the light of present knowledge, a call to more method and perseverance in the prophylactic use of quinine in sufficient doses.

The 4th Infantry, Hyderabad Contingent, at Ellichpur, and the 26th Madras Infantry at Vizianagram, had the most cases of simple continued fever; and in the latter they are said to have been due to exposure to the sun at musketry and to fatigue duties in building the new barracks. In the 16th Madras Infantry at Singapore the cases were afterwards thought to have really been influenza. Exposure and chill were the causes assigned in the 3rd Madras Lancers at Secunderabad.

38. There was a great increase both in the admission and in the death rate from enteric fever. The ratios for European troops are very unlike those for native troops and prisoners; and, as the total death ratio for fevers (ague, remittent, simple continued, enteric) among European troops was to that among native troops as 2.5 : 1, the difference cannot have been altogether due to want of recognition of the disease among the latter. As usual, the ratios of the Gurkha regiments taken together were higher than those of the native troops as a whole.

The results obtained by Major Freyer in the testing of the blood reaction of natives were criticized in the report for 1896, page 71, and have been finally disposed of as erroneous in a recent paper by Captain Lamb. In the same paper by the narration of 11 cases it is shown that enteric fever among natives of India is commoner than is sometimes supposed, and that the serum* test is a trustworthy means of recognizing it, the diagnosis in two of the cases being supported by the results of *post mortem* examination. Major Burke has lately stated that the disease though rare in ordinary natives of India, has been seen by him many times among Parsis and among members of the native aristocracy, the former having no caste, and the latter being often above caste prejudices. But it is noteworthy that, though 4 of the patients reported on by Lamb were native Christians and 1 a Goanese, 3 were Brahmins and 3 Hindus, and therefore not likely to be Europeanized in food or other habits. According to what has been said in Section II, it seems possible that the increase in cases returned among natives may not be altogether due to the improved methods of diagnosis now available, but in part also to a greater prevalence and intensity of the infective material. If this be so, the increase should continue. Evidence as to the frequent occurrence of the disease among the Chinese goes on accumulating, one of the most interesting recent contributions being that of Clark, which offers anatomical as well as clinical proof.

In the whole native army of India 54 cases with 18 deaths were returned, as against 18 with 3 in 1899. Abbottabad, Benares, and Dehra Dun had the highest numbers of cases. To the total 16 regiments contributed, but the 42nd Gurkhas no less than 29 admissions, mostly at Benares and on the march. Neither in the case of this regiment nor in that of any other do the annual reports throw any light on the origin and causation of the disease. In some cases the serum reaction test was used in diagnosis. In only two of the fatal

Enteric fever (1). Appendices L. M. and G. Table XXXIII. Malta fever. Table LIII.

cases was a *post mortem* examination obtained, but in both the result was quite confirmatory of the clinical diagnosis.

There were returned 7 cases of Malta fever, 2 from the 23rd Pioneers at Meean Meer, 2 from the 29th Punjab Infantry at Peshawar, 1 from the 7th Bengal Mountain Battery at Datta Khel, and 2 from the Malakand Force. The diagnosis in the cases of the last two corps was clinched by the sedimentation test with the *Micrococcus Melitensis*. In addition, Lieutenant Greig of the Malakand Force tested the blood of 15 men who had been in hospital with prolonged "remittent fever", and with that of one, several months after his discharge from hospital, obtained a positive reaction.

39. In 1900 there were 56 cases (55 admissions) of plague with 29 deaths, against 76 with 45 in 1899, and 94 with 58 in 1898.

Plague.

The comparative immunity of the sepoys as compared with the populations surrounding them is ascribed to the large number of men inoculated, many of them twice, and to the immediate segregation of patients and evacuation of buildings whenever cases did occur. The 15th and 21st Madras Infantry at Belgam, where plague was raging, had between them 31 cases and 13 deaths, and the case which occurred at Vizianagram was imported from Belgam. Four corps at Bangalore had only 12 admissions and 4 deaths among them. All the five cases in the 27th Madras Infantry in Mauritius were fatal; but the disease was checked by removal to the uplands. Four cases at Bombay, one at Poona, one at Alipore (imported from Fulta), and one on the march at Ratlam, make up the total.

40. The ratio of scurvy admissions was 3.2 against 2.4 in 1899. There were in all 398 admissions against 305 in the preceding year: 49 per cent. in the Bombay Command, and 26 per cent. in the Punjab Command. Twenty per cent. occurred in Central India, and twenty per cent. in the Deccan. Again, 8 per cent. occurred at Aden, 7 per cent. at Aurangabad, and 6 per cent. at Hingoli. In the 3rd Infantry, Hyderabad Contingent, at Aurangabad, it was found that vegetables were deficient in the dietary of the Jat recruits, and when they were supplied, the disease ceased. In the 5th Bombay Infantry at Aden mild cases occurred in addition to those severer cases which were returned. Fresh limes, fresh milk and mutton were found effective. The monotony of the vegetable ration made the men reluctant to use it, and the issue of onions and potatoes was recommended. The flour was also difficult to keep, apt to taste bitter and breed maggots; and the medical officer, while on service in East Africa, had noticed the same combination of bad flour and want of vegetables to be coincident with the prevalence of scurvy. He wishes to be allowed to order dates and oranges as well as limes. The medical officer of the 23rd Bombay Infantry at Fort Sandeman and neighbourhood points out that it is difficult, and at times impossible, in these districts to obtain fresh vegetables in any quantity; and that the men not only suffered this deficiency over a considerable period, but were severely exposed to the pernicious effects of constantly operating malarial influences; and adds that it seems more than questionable whether limejuice, however freely supplied, is able under such conditions to do more than perhaps modify the disease. The detachment of the 43rd Gurkha Rifles at Udalguri (Manipur) also suffered from want of vegetables and from a bad climate. At Hingoli and Deesa the famine was considered the ultimate cause. In some cases limejuice seemed to be more potent as a preventive than as a remedy.

Scurvy (*) Tables XXVIII and XXIX.

It has been suggested that the failure of limejuice in certain cases may be due to an obscure gradual decomposition, and that the limejuice used should always be as fresh as is obtainable.

41. There was a rise in the admission and death rates from tubercle of the lungs, the rise of the former being greatest in Bengal and of the latter in Madras. The Bengal Command had the highest admission and death rates, and the highest group admission ratio was that of the Hills; these relations being connected with the fact that the Gurkhas suffer more than other native soldiers from pulmonary tuberculosis. The five highest numbers of cases were all in Gurkha regiments. The highest number of cases was in the 1-2nd Gurkha Rifles at Dehra Dun, but no reason is given. The medical officer of the 1-4th Gurkha Rifles at Bakloh blames insanitary barracks and the overcrowding of the married quarters, and the medical officer of the 43rd Gurkha Rifles at Shillong says that the remarkable and sudden increase is attributable to the overcrowding associated with small cubic and superficial space per man in the barracks. In the 1-1st Gurkha Rifles at Dharmasala the liability of his men is connected by the medical officer with their "fatal habit" of alternating woollen and cotton clothing regardless of the time of day or of the season of the year. Nothing is said as to any special racial liability of Gurkhas; and if their higher ratios are simply due to bad sanitation, it is high time that something was done to prevent waste of life among these valuable soldiers. The space per man should be made ample, and never encroached upon; and European methods should be adopted to secure ventilation at times when the doors and windows are closed on account of cold.

As non-tubercular phthisis were returned 25 cases with 6 deaths. Because it is not likely that all these cases were really non-tubercular, it is to be hoped that fewer will be so returned in future.

42. Coincident with, and perhaps partly dependent on, the decrease of influenza, there was a fall in the admission and death rates from pneumonia. In 1900 pneumonia caused 24 per cent. of the total mortality, and was, as usual, the chief cause of death. Admission was, as usual, highest in Groups VII and XII, and mortality in Group VII; but Western Coast and Central India had both higher mortality than the Hills. Both in Group VII and in Group XII pneumonia was most prevalent in the cold months, especially in January; and the same was the case for India as a whole. Among the stations with the highest ratios were Sibi, Miranshab, Edwardesabad, Mir Ali Khel, Kohat, and Naini Tal. The regiments which had most cases were the 5th Punjab Infantry at Edwardesabad and Miranshab, the 11th Bengal Infantry at Miranshab, the 6th Punjab Infantry at Kohat, the 2nd Sikh Infantry at Datta Khel, the 8th Bengal Infantry at Lucknow and Naini Tal, and the 4th Punjab Infantry at Kohat. In the 5th Punjab Infantry the disease was epidemic for about two weeks, and then suddenly subsided, though there were a few dropping cases afterwards. Malarial debility from former residence at Wana was considered to have rendered the men unduly susceptible. In the 11th Bengal Infantry the disease is described as having been epidemic malignant, septicæmic, and infectious; and the sick-attendants were not allowed to stay in the hospital longer than 48 hours. In the 2nd Sikhs the disease was ascribed to cold winds and chill; and in the 8th Bengal Infantry to malaria, chill, and dust, and not in any case to infection. The 3rd Punjab Cavalry at Kohat had only 8 cases, and the medical officer says that the disease was "non-infectious

Pneumonia^(*) and other respiratory diseases.

Appendices M, L, and K. Tables XXXVII and XXVI-XXXIX.

this year," and due to malaria with chill. He adds that pneumonia patients must always have plenty of ventilation and cubic space, and that the sick attendants must be frequently relieved and never allowed to sleep in the ward. The carrying out of these rules may have been the reason why his cases were non-infectious and therefore few. At any rate, and especially if preceded by early diagnosis, they are sound preventives of spread.

Evidence as to the infectiousness of pneumonia is not confined to India, and there seems some reason to believe that, when the disease is about, the nasal secretion as well as the sputum may be infectious. Pneumonia is, of course, only one of the pathological results which may be achieved by the pneumococcus. The period of incubation appears to be very short.

Other respiratory diseases were most prevalent in the Bombay Command, in the Burma Inland and Assam groups, in the stations of Mir Ali Khel, Wana and Fort Sandeman, and in the 23rd Bombay Infantry at Mir Ali Khel and Fort Sandeman, the 6th Punjab Infantry at Kohat, and the 8th Bengal Infantry at Lucknow and Naini Tal. The causation is referred to chills, especially at the beginning of the cold weather and in malarious subjects.

43. The admission and death rates from dysentery in 1900 were high. The greatest increase and the highest ratio were in Group IV. Of the 25 stations of over 100 strength which had ratios over 100 per 1,000, eleven were on the north-west frontier, five in the famine districts of Group VIII, three in Bengal, two in Ceylon, and one each in Groups III, X, V, and VI. Among those stations the highest admission ratios were those of Jandola, Kajuri Kach, Sarwekai, Tank (with Jatta and Draband), and Dibrugarh; and the highest death ratios those of Kherwara and Kajuri Kach. The 27th Punjab Infantry, and the 12th, 23rd, and 7th Bombay Infantry, all on the north-west frontier, the 13th Bombay Infantry at Deesa, and the 9th Madras Infantry at Colombo, had the highest numbers of cases. In the 12th Bombay Infantry the causes assigned are cheap fruit and polluted river water full of silt; in the 7th Bombay Infantry the cold of the climate after Jubbulpore; and in the 9th Madras Infantry change of diet and climate. Dysentery prevailed more in the second half of the year than in the first, the maximum month being October.

The diarrhoea ratios were considerably increased, and the greatest prevalence was in Western Coast. The 2nd Bombay Infantry, as in the previous year, had by far the largest number of cases, which the medical officer attributes to insufficient warm clothing in the wet cold months. The next largest number was in the Mewar Bhil Corps at Kherwara in the famine area, and the causes assigned are the poor quality of the food and the deficient water-supply.

44. While among European troops an average strength of 60,553 gave 18,049 admissions, in the case of native troops an average strength of 123,463 gave only 5,242 admissions. In other words, there were only 42 admissions for every 1,000 men among native troops, against 298 for every thousand among British troops.

The admission rate was 8.4 per 1,000 of strength more than in 1899. There were 9 deaths and 129 invalidings, directly due to venereal disease. The Bombay Command and the Hyderabad Contingent had the highest ratios and the greatest increases, and only Madras had a lower ratio. In all the commands the ratios of native troops were much lower than those of European troops. In 25 stations (against 20) the admission rate from secondary syphilis

Dysentery and Diarrhoea. Appendices L. and M. Tables XXXVIII, XXVI-XXIX.

Venereal Diseases. Appendices M. and I. Tables XXVIII and XXIX.

was over 20 per 1,000 of strength, and in 46 it was over 10 per 1,000. In India the ratio of primary syphilis *plus* soft chancre rose by 4·3 per mille of strength, that of secondary syphilis by 0·5, and that of gonorrhœa by 3·6. The Bombay Command and the Hyderabad Contingent had the highest ratios for primary syphilis *plus* soft chancre and for gonorrhœa, and the Bombay Command and the stations outside the Indian Command the highest for secondary syphilis.

As usual, the Gurkhas suffered much. The high ratios of the Gurkhas and of the troops stationed in Ceylon illustrate the well-known fact, referred to in the reports for 1895 and 1896, that men in a strange land, and perhaps separated from their families, are more prone to contract venereal disease. The Gurkhas also take no trouble to save themselves by cleanliness. Various minor reasons are given for the prevalence of venereal disease in different stations. But by far the most important increase of disease was in certain stations and regiments of the Bombay Command and the Hyderabad Contingent; and in the case of at least a dozen regiments, stationed at Erinpura, Deesa, Ahmedabad, Sirdarpore, Ajmere, Mhow, Sehore, Aurangabad, and Hingoli, the medical officers attribute this to the extension of prostitution caused by the famine. This cause of increase, as has been mentioned in Section II, was also potent in the case of European soldiers.

45. All the 146 cases of beri-beri (against 202) occurred in Madras regiments, 95 in the peninsular part of the command, 42 in Burma, and 9 in the Bengal Command. The

Beri beri (*) Table LIII.

regiments which had most cases were the 11th Madras Infantry at Secunderabad, the 8th Madras Infantry at Rangoon and Port Blair, the 9th Madras Infantry at Bellary, Colombo, and Trincomalee, and the 26th Madras Infantry at Vizianagram. In the first it attacked natives of the east coast, who are considered to be very subject to the disease, and was most prevalent when the men were exposed to cold and wet in cholera camp. In the second the disease was almost entirely confined to the Hindu sepoy, at least in the case of the detachment at Port Blair. The rest of the free population and also the prisoners were quite free from the disease, and no explanation could be found in dietary, etc. In the third there was improvement after resort to the issue of 4 oz. of meat daily. The medical officer of the fourth considered locally grown rice to have something to do with the causation, and issued bread instead.

Other evidence besides the above has been brought forward as to difference in racial liability. Fresh circumstances have also been recorded which tend to emphasize the part which articles of food are supposed to take in the spread of the disease. A new hypothesis is that *Blatta orientalis* serves as an intermediary between the man already infected and the man to be infected. Captain Rost believes that he has discovered the microbic agent of the disease in an angular bacillus found on rice; and the claim of a new coccus has been put forward by another observer. Some attention has been drawn to the possibility that cases of chronic arsenical poisoning might be wrongly diagnosed as beri-beri.

46. The admission rate from guinea-worm rose from 5·4 to 5·7, and the

Guinea-worm. Tables XXIX and LIII.

number of cases from 698 to 708. By far the largest number of cases occurred in Group VIII, and, as usual, Group IX came next. Of the total number of cases between 8 and 9 per cent. declared themselves at Sirdarpore, between 5 and 6 per cent. at Poona, and between 4 and 5 per cent. at Kirkee and Kherwara. The Malwa Bhil Corps at Sirdarpore had by far the largest number of cases; and the medical

officer attributes the increase to the drought and the intensely polluted water-supply consequent thereon. The sepoy's contracted the disease when on out-post and detachment duty, it being rarely seen in the inhabitants of Sirdarpore. With regard to Bhuj, too, the medical officer says that guinea-worm is not endemic there, and that the disease seemed to have been introduced by men returning from leave. A dirty tank used by the men for washing purposes was supposed to be the cause of the infection, and the disease gradually subsided when the tank was put out of bounds for the troops.

47. During the ten years 1891-1900 there were 162 cases of suicide, or an average of about 16 per annum. There were only 13 in 1900, of which 8 were by gunshot, 3 by drowning, and 2 by hanging.

Suicide. Table LIII.

Papers and Books referred to in Section III.

For explanation of abbreviations see end of preceding section.

- (1) Lamb in I. M. G. of April 1901, page 123; Burke in B. M. J. of 10th August 1901, page 349, and in J. T. M. of 15th August 1901, page 269; Clark in B. M. J. of 26th January 1901, page 211.
- (2) Gordon-Tucker in I. M. G. of September 1901, page 323.
- (3) White, J. of Bost. Soc. of the Med. Sc. III, page 197, quoted in C. B. XXVIII, page 609, and in B. M. J. of 15th December 1900, page 1704; Wood in B. M. J. of 23rd February 1901, page 455; Foulerton quoting Brodie and Rogers in B. M. J. of 10th August 1901, page 345; Moore quoted in B. M. J. of 2nd March 1901, page 558.
- (4) Van der Scheer in J. T. M. of November 1900, page 96; Clarke in I. M. G. of March 1901, page 114; Joynt in J. T. M. of 1st May 1901, page 141; I. M. G. of May 1901, pages 185 and 196; L. of 11th May 1901, page 1342; Anderson in I. M. G. of September 1901, page 330; Rost in I. M. G. of December 1900, page 458, in L. of 5th January 1901, page 66, in J. T. M. of 1st February 1901, page 42, and in I. M. G. of July 1901, page 255; Dalton in Navy Report for 1899, page 67; R. Ross in L. of 8th December 1900, page 1677, and leader on page 1659; I. M. G. of February 1901, pages 64 and 71; R. Ross in L. of 3rd August 1901, page 339; Ross and Reynolds in B. M. J. of 5th October 1901, page 979; Newall and Prytherch in L. of 2nd November 1901, page 1227; Manson in L. of 23rd November 1901, page 1391.

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SECTION IV. JAILS OF INDIA.

48. The year 1900 was hot and rather dry with an approximately normal rainfall. But actual famine here, and the effects of famine there, were still present ; and cholera, small-pox, and some other epidemic diseases were active ; so that the health of the prisoners, like that of the general population was bad. Many of the prisons also were overcrowded.

India. Table XL.

The chief causes of admission to hospital were ague, dysentery, abscess, and diarrhœa. Among the diseases with raised admission rates were cholera, small-pox, influenza, dysentery, ague, and tubercle of the lungs. Ague caused 37 per cent. of the total sickness, and bowel complaints 18 per cent. The chief causes of death were dysentery, pneumonia, and tubercle of the lungs. Among the diseases with increased mortality were cholera, small-pox, gangrene, malarial fevers, pneumonia, and bowel complaints. Dysentery and diarrhœa caused 28 per cent. of the total deaths, pneumonia 13 per cent., and tubercle of the lungs 12 per cent.

A somewhat serious feature of the year was the increase and spread of cerebrospinal fever.

49. The prisoners of Assam, the Andamans, and the North-Western Provinces alone had better health than in the previous year ; and the difference was considerable only in the case of Assam. The three most unhealthy administrations were, in order, the Andamans, Berar and the Central Provinces ; and the three most healthy, in order, Madras, Burma, and the North-Western Provinces and Oudh. Of the former group, the Andamans and Berar had ratios higher than those of the quinquennium. As compared both with the previous year and with the quinquennium the year 1900 had increase of mortality in the Andamans from remittent fever, pneumonia, diarrhœa, and debility ; in Berar from cholera, respiratory diseases, bowel complaints, and tubercle ; and in the Central Provinces from cholera, small-pox, remittent fever, tubercle, and debility. Of all the administrations the Andamans had the highest death rates from remittent fever and tubercle of the lungs ; Berar from pneumonia, other respiratory diseases, dysentery, and diarrhœa ; and the Central Provinces from cholera, small-pox, and debility.

Administrations. Appendix N. Table XL.

Some explanatory details with regard to the unhealthiness of individual jails are given in Table XLIV.

50. The rainfall was somewhat below that of the previous year, and much below the lustral average. Sickness and mortality showed a slight improvement.

Andamans.

Increase of malarial fevers began with the advent of the south-west winds and rain in May ; but many of the cases treated were relapses in old cases from exposure. Quinine and cinchonidine were issued as prophylactics during the ainy season. An epidemic of influenza began in April, and another in November.

The presence of a certain amount of scurvy, beyond what was returned, is attributed to the absence of good fresh vegetables and the rather monotonous diet of the prisoners. The list of vegetables given by the Senior Medical Officer is certainly not satisfactory, and it is to be hoped that the measures mentioned in the report for 1898 are being continued and pushed. Boiled water is provided at all the stations where many labouring convicts reside; but it is stated that cases of acute diarrhœa, often fatal, are caused by prisoners quenching their thirst at wayside sources. Efforts should be made to ensure that labouring prisoners always have ready access to the boiled water. After the invalid gang, the new arrivals had, as usual, the highest proportional mortality. The settlement has generally been distinguished by high death rates from remittent fever, tubercle of the lungs, and dysentery. Now, if the death rates of the ten years period before the report of Mr. C. J. Lyall and Dr. Lethbridge, 1882-1890, be compared with those of the ten years 1892-1900, the result is—

	Remittent fever.	Tubercle of the lungs.	Dysentery.	All causes.
1882-1890	2'97	4'28	4'16	27'33
1892-1900	4'11	4'29	10'08	33'89

The worst years in the second period were 1892, after the cyclone of November 1891, and 1899, a year of drought. Taking the above-given rates of the first period as the standards, then remittent fever and all causes had high mortality in all the years of the second period, except 1896, 1897 and 1898; tubercle of the lungs in the years 1897, 1898, 1899 and 1900; dysentery in all the years. Separate accommodation has been provided for tuberculous patients, and reforms have been carried out in the water and vegetable supplies, etc., but the above statistics show how much remains to be done.

51. The prisoners in Burma were fairly healthy. The Prome jail was over-crowded throughout the year, but was not unhealthy, perhaps because the population was kept in movement by monthly transfers. The overcrowding in eleven other jails was transient. The well water of some of the jails contained from 70 to 100 grains per gallon of total solids, but no ill effects were observed. The system of conservancy by trenching in the jail gardens is not found to be a cause of ill health in the jail population. The increase of tubercle was chiefly in the Central jails of Insein and Mandalay; and it is noted that the cases were segregated "as much as possible," and that care was taken to detect them at an early stage. The chief outbreak of cholera was at Bassein. Its origin was not traced, but food and flies were suspected to have been carriers of the infection. The medical officer of the Moulmein jail says that nothing short of removal of the jail to a higher and dryer site will effect permanent improvement, especially with regard to tubercle and dysentery.

52. The health of the prisoners of Assam was most unusually good, and the population of the province was "fairly healthy". The chief feature was the great reduction in cholera, diarrhœa, and non-pneumonic respiratory diseases. There was also less malarial fever, and prophylactics were administered with apparently good effect. Improved accommodation is believed to have lowered the mortality in the Sylhet jail. The Tezpur jail, which recorded increased sickness and mortality, was situated amid a population extensively affected by bowel disease. As to the effect of the partial stoppage of extramural labour during

the year by order of the Chief Commissioner, the Inspector-General considers it too early to judge.

53. The health of the Bengal population was bad, and so was that of the prisoners. Some jails were overcrowded as the result of disturbances and scarcity among the people. The statement that "even when there is no actual overcrowding, if the numbers are kept up continuously to the limit of the capacity, there is a marked increase in the number of cases of pneumonia and phthisis," seems to indicate that the officially sanctioned allowance of floor and cubic space is not sufficient. Excluding subsidiary jails, there were 169 cases of cholera, of which 87 ended fatally, distributed over 21 jails; the most severe outbreaks being those of Palamau, Alipore, Chapra, and Champarun. At Alipore the disease appeared suddenly in the jail, and coincidentally in various parts of Calcutta, after a heavy shower of rain. Prisoners from a cholera district were supposed to have brought the infection into the Palamau jail; and, indeed, it is stated that in nearly all cases the introduction of cholera was traced to newly admitted prisoners, to prisoners attending court, or to contaminated water outside the jail. Cerebrospinal fever and plague also occurred, as will be noticed below; and there was an increase of mortality from remittent fever (though malarial fever was less frequent) tubercle of the lungs (attributed to the increased crowding in jails), pneumonia, other respiratory diseases, dysentery, diarrhœa, and debility. There is reason to believe that some of the attacks of bowel disease were dependent upon the presence of intestinal parasites; and pneumonia appeared in the Ranchi jail in an epidemic form at the time when it was overcrowded with prisoners, owing to disturbances among the people. Table XLIV classes 21 jails as unheathy. The Inspector-General notes that the seven Pasteur-Chamberland filters installed in Bengal jails have not proved very successful, while they are very costly and liable to get out of order.

54. The North-Western Provinces and Oudh were "healthy, though not free from epidemic disease", and the health of the prisoners was fairly good, cholera, small-pox, and debility being the only diseases in the table with increased mortality. In the districts of Jhansi, Orai, and Lalitpur many of the men admitted into jail were suffering from the effects of famine. Every endeavour was made by transfers to prevent overcrowding of particular jails. The Inspector-General favours the reduction of the height of inner dividing walls, and an increase of the vegetable ration. There were no great outbreaks of cholera, but cerebrospinal fever appeared in three jails. The substitution of a new jail for the old one has been successful in reducing the once notorious mortality at Gorakhpur. The use of quinine prophylactically is only mentioned with regard to one jail.

55. The standard of health of the prisoners admitted to the Punjab jails in 1900 was low, on account of the prevalence in the province of famine, fevers, and bowel affections. The jails had increased mortality from cholera, small-pox, tubercle of the lungs, pneumonia, dysentery and debility. There was a high mortality from sunstroke, owing to the late appearance of the monsoon rains. A great increase in the jail population made it necessary to accommodate large numbers of prisoners in tents in different jails; and tubercle of the lungs increased. The Inspector-General is taking measures to secure the construction of a special tubercle ward for the segregation of phthisical patients. The prisoners did not

suffer so much as the general population from malaria, owing to their being placed in better sanitary conditions, and being defended by prophylactic doses of quinine. Cholera prevailed to a serious extent only at Mung Rasul. The outbreak was attributed to the drinking of water from an infected village well by prisoners working on canal excavation. At Ludhiana a virulent form of dysentery disappeared after the prisoners had been supplied for some time with fresh potatoes and onions. The Inspector-General believes that under the circumstances of the year mortality from pneumonia would have been higher, had it not been for the attention paid to ventilation and cleanliness.

56. Famine and disease were prevalent in the Bombay Presidency, and the health of the prisoners was bad. The jail population was much increased, and all the jails, except three, were overcrowded throughout the year, so that relief could not be afforded by transfer. There was increased mortality from cholera, small-pox, remittent fever, tubercle of the lungs, pneumonia, dysentery, diarrhoea, and debility; and cholera, relapsing fever, and plague occurred in certain jails. The most serious outbreaks of cholera were at Thana and Dhulia. In both cases cholera was prevalent outside the jail. In the former the origin of the disease in the jail was not traced, and 19 buildings out of 21 furnished cases. In the latter the first case occurred in a man who drank water from a contaminated *nala* that flowed through the jail garden. It is not stated how such a *nala* was allowed to run open within the jail enclosure. Malaria was also prevalent, and cinchona alkaloids were issued prophylactically where necessary. Other measures adopted to improve the health of the prisoners were the issue of wheat instead of inferior cereals, the issue of potatoes instead of inferior vegetables, the issue of extra diet, special diet, extra clothing to weakly prisoners. The insanitary moat which surrounded the Thana prison has at length been filled up.

57. Berar also was afflicted with famine and disease, and the prisoners admitted to jail were below par. The prison population was greatly augmented, and mortality from cholera and bowel complaints, from tubercle of the lungs, pneumonia, and other respiratory affections, was much increased. But the heavy mortality was confined to Amraoti, Akola and Basim. At Amraoti there was an epidemic of severe influenza, frequently ending in fatal pneumonia, an outbreak of cholera, and, during the rains, a food grain which was believed to be deficient in nutritive value. This last was brought to notice by the medical officer, and the necessary change was at once made. The difference between the high mortality in these three jails and the low mortality at Ellichpur, Buldana, Yeotmahl, and Secunderabad is not fully explained.

58. Famine and disease were rife in the Central Provinces, and though special executive orders prevented the swamping of the accommodation by hordes of physically deteriorated prisoners, yet all the jails, except two, were overcrowded at some time. Relief was obtained by utilizing worksheds inside the jails as sleeping barracks, and by extramural camps, the latter being, on the whole, a great success. It is noted that the physical condition of men admitted to jail was on the whole better than in the famine of 1897. There was increased mortality under all the heads given in the table; and cerebrospinal fever also occurred, especially at Raipur. In eleven jails there were 64 cases of cholera and 44 deaths, the highest numbers being at Nagpur, Nimar, Sambalpur, and Seoni. It is stated that the disease at Seoni was traced to impure milk, the boiling having

been neglected. For the difficulty mentioned by the Inspector-General as to different systems causing variations in the number constantly sick a solution was provided in paragraphs 7 and 8 of Chapter VII of the report of the jail commission of 1889, and sanctioned by the resolutions of the Government of India founded thereon.

59. Scarcity and disease in the Madras province increased the number of prisoners, and made their physical condition bad. The general death-rate, though higher than in the previous year, was less than the lustral ratio. The increase was greatest in the district jails, and least in the central prisons. There was increased mortality from all the diseases shown in the table, except non-pneumonic respiratory diseases and debility; but only the ratios for remittent fever, tubercle of the lungs, diarrhœa, and debility were above their quinquennial ratios. Privation had affected many of the men admitted into the Cannanore and Vizagapatam jails; there was dysentery at Russellkonda, thought to have been caused by the effect of drought upon the water-supply; and Nellore and Russellkonda were the jails which suffered most from cholera. It was not discovered how the disease, which was prevailing in the town, got into the jail, especially as the persons and clothes of all newcomers were washed and disinfected; though it was thought that perhaps the warders might have been instrumental. The first man attacked had been 13 days in jail, and came from a locality where there was no cholera. Into the Russellkonda jail it is said to have been imported from a cholera area. Quinine was issued prophylactically with fair regularity in five jails, the reports from three being favourable. The Parvatipur jail was closed, as it was found the hillmen could be kept in good health at Vizagapatam.

60. The Mercara jail was more healthy than in the previous year, the Ajmer jail much more unhealthy, and the Quetta jail slightly more unhealthy. The Ajmer jail was overcrowded, and the prisoners admitted were suffering from the effects of the prevailing scarcity.

61. There was an increase in influenza, there having been increase and decrease in alternate years ever since the beginning of the epidemic prevalence of the disease. It was most prevalent in the Bay Islands, Bengal-Orissa, Upper Sub-Himalaya, and Gangetic Plain groups; and in the Andamans, Berar, Bengal, and North-Western Provinces administrations. Thirty-five jails were more or less affected; but by far the largest outbreaks were those of the Rajshahi Central Prison, with 479 cases, and of the Bareilly District Jail, with 272 cases. There were two distinct outbreaks at Port Blair and Rajshahi, while at Bareilly the disease was present throughout the year.

62. There was a great increase of both morbidity and mortality from cholera, and the death-rate was higher than the quinquennial and decennial means. As usual, there was no cholera in the Andamans; but it appeared in jails of every other administration. The highest admission ratios were in the administrations of the Central Provinces, Bombay, Berar, and Bengal; and in the Western Coast, Hills, and Deccan groups. No less than 70 jails returned cases, but the highest numbers of cases were 62 at Thana and 56 at Dhulia. Russellkonda was the only hill jail in which it occurred. The maximum prevalence was in July and August. The circumstances under which certain of the outbreaks occurred have been noticed above in the paragraphs regarding administrations; but the

subject will, as usual, be dealt with more fully in Section VI. On the whole, because importation by prisoners is so frequently mentioned, it seems that while the measures adopted to prevent the continuance and spread of cholera in a jail are generally effectual, the arrangements in force for the defence of jails against the entrance of cholera are still defective. When cholera is prevalent, new prisoners should be detained in the observation wards for a time; and extramural gangs should either be stopped, or, on return from work, should not be allowed any further into the jail than the observation wards or tents. The danger from warders should also be remembered, and guarded against as much as local circumstances permit.

63. There was a great increase in the admission and death rates from small-pox; and there were 116 cases, with 14 deaths, against 22 and 5 in the preceding year. The worst figures are those of Ahmedabad, 19 cases with 1 death, and Dhulia, 16 cases with 2 deaths; but seven other jails had from 3 to 7 cases. The disease was prevalent in the outside population, and the jails were overcrowded. At Sambalpur the infection was supposed to have been derived from Public Works Department labourers.

64. Of the total number of admissions ague furnished about 37 per cent. as in the preceding year; but the ratio to strength was increased. As usual, October was the most malarious month, and January and February the least malarious. The most malarious groups were I, which includes the Andamans, and VI; and the most malarious administrations the Andamans and the Punjab. Of these group VI and the Punjab had higher ratios than in the previous year. Such scanty information on malaria and its prophylaxis as can be gleaned from the reports of the Inspectors-General, has mostly already been given above under the various administrative headings. With regard to the Yerrowda Central Prison it is stated that there were no stagnant pools or neglected drain channels, and that mosquitoes were fewer than usual in and around the prison; and with regard to the central prison of Ahmedabad that the increase was due to greater rainfall, but that no presence of mosquitoes was noticeable. Sulphate of quinine was issued prophylactically in all the jails of the Punjab, except the Simla jail; and most medical officers reported favourably as to the result. In future the drug will be given according to the method recommended by Professor Celli of Rome, and control experiments will be made by selected medical officers. Some useful research work has been done by Captain Fearnside at Rajamundry, by Major A. Buchanan at Nagpur, by Major W. J. Buchanan at Bhagalpur, and probably by others.

65. There was a decrease of sickness, but an increase of mortality from remittent fever, which was most prevalent in the Andamans and Bombay among administrations, in Western Coast among groups, and in August among months. In some cases the history or postmortem record shows that the original diagnosis was wrong, and the medical officers ought to have changed the name of the disease in their returns. But there is no reason to doubt the expressed opinion of medical officers that nearly all the cases returned as remittent fever were malarial. Of one case in Assam it is said that it might have been *kala azar*; but no cases of *kala azar* were returned from any of the jails. With regard to the Thana jail, its unhealthiness in this respect is attributed to its tidal marshy surroundings, and it is said that the whole town of Thana is noted for its malarial fevers, particularly of the remittent type. The country where the Sind Gang works is flat,

sandy, and irrigated by canals for cultivation; and the prisoners have to sleep out on account of the unbearable heat, and, all the more that they remove much of their clothing, are exposed to the bites of mosquitoes and to variations of temperature.

66. Inquiries from medical officers have elicited the fact that at least five classes of cases were in 1900 returned as simple continued fever. Firstly, an ephemeral febricula caused by constipation, exposure to the sun, fatigue, etc., or of unknown causation. Major Buchanan at Bhagalpur placed in this category only such cases as showed no plasmodia in the blood. Secondly, a longer fever, not fatal, but often producing considerable debility. Thirdly, cases really malarial. Captain Fearnside at Rajamundry found malarial parasites in the blood of cases exactly similar to such as had been previously returned as simple continued fever. Such a blood examination is very necessary, as the personal equation seems often to decide that quite similar cases shall here be called malarial and there simple continued. Fourthly, symptomatic fever, the fever being returned instead of the local lesion (tonsillitis, orchitis, etc.). Fifthly, cases of influenza, cowpox, etc.

67. Throughout the jails of India there were returned 34 cases of enteric fever with 17 deaths. Eleven jails had only 1 case each. In Yerrowda the man attacked had been four years in jail, and the medical officer is not quite satisfied with the diagnosis. Drinking unboiled water was supposed to have caused the Meiktila case. Five jails had two or three cases each. From Fatehgarh it is reported that the origin of the disease was unknown. In the Vizagapatam jail occurred 11 cases with five deaths. By a study of dates it was made evident that four of the cases, including the first two, must have contracted the disease before admission to jail. A further report is promised by the late superintendent, who has taken the documents with him to England. In eight of the Indian cases there was perforation of the bowel, and in all the fatal cases the postmortem record is fairly characteristic of the disease. In two of the Vizagapatam fatal cases the enteric fever had been preceded by dysentery.

68. There were 99 cases of cerebrospinal fever with 79 deaths in 1900, as against 29 with 24 in the preceding year. The admissions from 1896 have been 7, 13, 24, 29, 99. In 1898 eight jails were attacked, in 1899 six, and in 1900 seventeen. Two jails were affected in 1898 and 1900, and four in 1899 and 1900, while the remaining were affected only in the last of these three years. The Bhagalpur jail alone was attacked in all three years. Most of the jails had but one case or two cases, but there were four larger outbreaks—25 cases at Bhagalpur, 22 cases at Raipur, 18 cases at Fatehpur, and 9 cases at Allahabad (district jail). In the cases examined after death the appearances recorded are sufficiently characteristic, except when death occurred at a very early period of the disease. At the Bhagalpur Central Prison the morbid agent was found to be the *meningococcus intracellularis*,* the virus was supposed to have been disseminated by dust, and there was no evidence of personal contagion, nor of importation from outside, the men first affected having been from six weeks to one year in jail. On the other hand, at Allahabad, Moradabad, Sultanpur, Jhansi and, with a less degree of certainty, at Fatehpur, it was believed that the disease might have come from without; and the civil surgeons of Allahabad and Jhansi had actually treated

* The investigation does not seem to have been made at any other jail.

cases among the free population.* At Fatehpur the first man attacked had been only six days in jail. In the experience of the medical officer of the Rawalpindi jail the disease is one of jails rather than of the free population, and he refers to the want of really thorough change of air in the restricted area of a jail. In the Raipur Central Prison there was a case remaining from the previous year, and the monthly admissions were 7, 2, 3, 3, 0, 0, 0, 2, 1, 1, 2, 1, the break coming with the removal to camp. The first case was an undertrial man who had been only 11 days in jail, but no cases were known in Raipur or the district. In the Bhagalpur jail men employed on dusty work seemed to be most liable; but the men who died in other jails were employed on about 30 different kinds of work, and the only class showing a slightly greater liability were the undertrials. The period spent in jail before attack varied in the men who died in the jails of India from six days to something under three years, the average being between three and four months. The period of incubation of the disease is not known; but Captain Smith (Soudan) believes it to be from $1\frac{1}{2}$ to 3 days, Major Buchanan from 2 to 7 days, and Major Brown from 6 to 37 days. All the cases at Allahabad occurred in December. The distribution for Raipur has already been given. That for Bhagalpur was 0, 0, 3, 13, 2, 0, 2, 0, 0, 4, 0, 1; and that for Fatehpur 0, 1, 2, 13, 0, 1, 0, 0, 0, 0, 0, 1. It appears that dropping cases are apt to occur at wide intervals. The medical officer at Jhansi notes that 50 days elapsed between the death of the first and the arrival in jail of the second man attacked, and an interval of 102 days between the death of the second and the arrival in jail of the third. The presence of overcrowding at the time of the outbreaks is generally denied, and, though there was a certain amount of site overcrowding in the Fatehpur jail, the disease also appeared in jails where there was no such defect. At Sultanpur the prisoners sleep in large and lofty barracks originally erected for the occupation of British troops. The Inspector-General, North-Western Provinces and Oudh, is inclined to believe that the disease is mildly epidemic among the population of certain parts, especially the Fyzabad and Allahabad Divisions,† and that isolated cases sometimes occur in jails without being recognized. The fact that low as well as high case mortalities have been observed elsewhere, while in the four jails chiefly affected the case mortality varied from 65 to 91 per cent., being 76 per cent. on the whole for these four jails, and 78 for all the jails affected, may possibly indicate that only the severer cases were recognized. If certain recent results be confirmed, bacteriology may prove a means, perhaps the only means, of identifying these cases. Whether overcrowding was or was not a factor in originating the jail outbreaks; there can be no doubt, now the disease is present and threatening to spread, that special attention must be given to the prevention of overcrowding, the remedy of site-crowding, and the improvement of ventilation. That the disease is known in Europe and America as a disease of military barracks and camps, shows that it must have some connexion with overcrowding or with place infection or with both. Cleanliness in every part of the jail is called for, personal cleanliness in the prisoners, cleanliness in their clothing and bedding. No article of clothing or bedding used by a prisoner who has been discharged dead or alive, should ever be re-issued without previous thorough disinfection. The measures actually adopted in the jails where outbreaks occurred were isolation of the sick, evacuation of buildings

* Other civil surgeons might give this subject their attention.

† He points out that the first men affected in the Emigration Depot, Calcutta, came from the North-Western Provinces and Oudh. Since then the existence of the disease in the free population of Calcutta has been proved by the admission of numerous cases in the Campbell Hospital and Medical College Hospital (Buchanan). See also I. M. G. of October 1901, pages 386 and 388.

or of the whole jail, disinfection more or less on the same lines as for plague, the destruction of all reasonably suspected clothing and bedding, and a general overhauling of sanitation. To this in future might be added the destruction of all discharges and excretions of the patient, and a closer attention to the disinfection of his person and surroundings; and, when possible, the institution of a bacteriological watch over both the sick and the well who have come in contact with him; for, whether the living virus of the disease is communicable directly or indirectly, it is important to prevent its being shed abroad by the sick man. The specific microbe of the disease, the *diplococcus intracellularis* has been found in the nasal cavities not only of the sick but also of contacts, and in the former case it is said that the discharge has been so profuse as to cause the disease to be mistaken for influenza. Again, it, or a near relation, has been found in the juice of the lung of a patient dying of apparently simple bronchopneumonia; and it is possible that it may occur in the sputum when pneumonia complicates the disease. Williams and Williams, though their observations require confirmation, especially as others have not been so successful, report that they found it in the blood, sweat, saliva, nasal secretion, and urine, not only in severe but in mild ambulant cases. Then, again, Hunter and Nuthall have demonstrated its presence in sporadic cases of basal meningitis. The Inspector-General, North-Western Provinces and Oudh, was able to show that bad grain had nothing to do with the causation of the disease at Fatehpur; but he was wrong in thinking that the native troops were being attacked in the provinces. In 1900 only three cases were returned from the native army of India, two at Kamptee, and one at St. Thomas' Mount. The ratios for native troops for admissions and deaths were in 1899, 0.1 and 0.09, and in 1900, 0.02 and 0.02; and those for prisoners, 0.3 and 0.22, and 0.8 and 0.65. With these may be compared the statistics given by Munson for the American, German, and Belgian armies.

69. There were no cases of typhus. Relapsing fever, 118 cases and 24 deaths, occurred only in the Bombay Common Prison. Its presence was supposed by the medical officer to be connected with a manure

Typhus. Relapsing fever. Plague.

heap out of place in the jail; but the disease was reported among the free population of Bombay at the time. Of plague 31 cases, one not admitted to hospital, and 23 deaths occurred. The jails affected were Bombay Common (19), Bombay House of Correction (1 not admitted to the jail hospital, but sent to another hospital), Yerrowda (5), Thana (1), Cawnpore (1), Chapra (1), Monghyr (2), Gaya (1). In the Bombay Common Prison moisture from watering plants was supposed to have encouraged the disease. The first four Yerrowda cases are said to have had a common possible source of infection in a bale of wool brought to the prison. At Monghyr one man was found to have plague on admission to jail; and at Gaya and Cawnpore the men affected were under trial. At Gaya all "contacts" were isolated, and all prisoners inoculated. That plague should have succeeded in entering so few jails is creditable to the executive officers, as is also the success with which it is prevented from spreading when it has effected an entry.

70. The admission ratio for scurvy was 1.1 per mille, the same as in the previous year. There were 130 cases, of which 30 per cent. were in the Bombay

Scurvy. Table XLIII.

jails, 26 per cent. in the Punjab jails, and 21 per cent. in the Bengal jails; 10.8

per cent. in the Dera Ismail jail, 8.5 per cent. in the Shikarpur jail, and 7.7 per cent. in the Rangoon Central Prison. Of ten jails with more than five cases each, five were in the Bombay administration. No doubt, as usual, there occurred milder cases, which, not having gone to hospital, do not appear in the returns. And there are indications of the usual differences of opinion as to how much of the gum-signs is due to scurvy, or to malaria, or to neglect of the toilet of the mouth. Some remarks on the scurvy of 1900 will be found above under the administration headings. The political prisoners at Dera Ismail Khan disliked vegetables, and frequently threw them away.

71. There was an increase both in admission and in death from tubercle of the lungs, the highest ratios of mortality being in the Andamans and Bengal. All

Tubercle of the lungs. Appendices N and Q.

the provinces had increased mortality as compared with the quinquennium, and all, except the Andamans and the North-Western Provinces, as compared with the preceding year, the increase from 1899 being greatest in the Central Provinces, Burma, Berar, and Madras. It is believed that more care is now taken to return as tubercle cases in which tubercle is ultimately discovered to have been the cause of "anæmia" or "debility"; and therefore the increase of anæmia and debility in 1900 is probably due, at least in some cases, to the prevailing scarcity. Another cause for the increase of cases returned as tubercle of the lungs is given in an excellent report by Captain Deare of the Midnapur Central Prison; which is—greater care devoted to the detection of the disease not only among prisoners some time in jail but among men on admission to jail. He shows that in both, the more tubercle is sought for, the more it is found; and he clearly shows how the amount of tubercle in the Midnapur Central Prison was apparently increased during the incumbencies of two medical officers who took a personal interest in the detection of cases. The discovery that so many men come into jail already tuberculous relieves the jails of the charge of causing all the tubercle that occurs within them; but it does not relieve the jail authorities from the responsibility of detecting cases and of preventing the affected men from infecting their neighbours. There can be no doubt that the overcrowding which has been so common of late years in the jails of India must have increased the number of men infected in jail and diminished the chances of cure or amelioration. Probably some jails would be all the healthier for total temporary evacuation; but whenever a prison becomes noted for tubercle, the floor and cubic space allowed per prisoner should be increased. As recommended last year, every jail should have a separate tubercle ward, and the establishment of a tubercle prison for a province would be a sanitary advance. Separate accommodation is mentioned only in the reports from the Andamans, Burma, and the Punjab; but that the subject is receiving attention elsewhere is shown by Captain Deare's report, wherein he describes the excellent arrangements adopted in the Midnapur Central Prison. The cases are treated in a separate ward, the floor of which is frequently washed with an antiseptic, and the walls whitewashed four feet up every fortnight. The patients are encouraged to take as much food of a suitable kind as possible, and arrangements are made in suitable cases to have the beds in the open air by day under the shade of trees. Two gumlahs containing carbolic solution are provided for each patient for expectoration, one in use and one being disinfected; and not only the sputa but the stools are incinerated. The highest admission ratios were in Bankura, Bhandara, Darjeeling, Bogra, Bareilly District, Bombay House of Correction, and Insein. Of Insein and Bareilly it is stated that many prisoners came in tuberculous, and at Bankura

several were received on transfer for the benefit of their health. In the jails of India 33 cases, 8 of them fatal, were declared to be non-tubercular phthisis; but it is very doubtful whether the tubercle bacillus was really absent in all of these cases.

72. There was a slight increase of morbidity and a greater increase of mortality from pneumonia. No doubt physical deterioration from famine, overcrowding, and influenza all tended to increase mortality, which would assuredly have been greater but for the skilled attention of medical officers. The mortality ratios of Burma and the North-Western Provinces and Oudh alone were below both those of the previous year and those of the lustrum. The greatest increase was in Berar, and after it in Bombay and the Andamans. In the Berar jail of Amraoti 13 of the deaths were due to influenzal pneumonia. The highest admission ratios were at Ranchi, Karnal, Shikarpur, Delhi, Suri, and Banda. The disease at Ranchi was attributed to overcrowding, which existed the whole year; and it is said to have diminished when the excess prisoners were located in tents.* In some of the others overcrowding, infection, and malaria, are mentioned. In the North-Western Provinces and Oudh a circular was issued to all superintendents for their opinion regarding the closing up of the gratings of the sleeping barracks in the cold weather; and the Inspector-General sums up the result as showing that leaving the gratings open certainly does not tend to give the prisoners pneumonia. Stuffiness and closeness increase the liability to infection, while draughts and chill diminish the resisting power of the men. The combination of the two places the prisoners in the worst possible circumstances. These facts should be borne in mind in the endeavour to solve the often difficult problem of ventilation without chill in Indian jail barracks in the cold weather. The admission ratios from other respiratory diseases were highest in Lahore Central, Purulia, Seoni, Rajamundry, Shillong, and Quetta. No information of importance is given regarding their causation.

73. There was a decided increase of dysentery both as to admissions and deaths. The mortality ratios of only the Andamans, Burma, and the North-Western Provinces and Oudh were below those of the previous year and of the quinquennium; and increase was greatest in Berar and the Central Provinces, and then in Bengal, Bombay, and Madras. This was to be expected in a year of famine and scarcity; and it is repeatedly noted by medical officers of jails that many men were admitted to jail suffering from the disease, or having lately suffered from it. Thus, the majority of the fatal cases at Raipur belonged to a famine-stricken batch from the Khariar State, admitted to jail in a hopeless condition. But, of course, not every jail can plead such circumstances. Thus, the Chittagong jail, which had the highest admission ratio of all, seems to have suffered from gross mismanagement, necessitating a change of staff. The next five highest ratios, headed by Baraset, where the enforced change of habits as regards food, bathing, and sleeping, is blamed, were also all in Bengal, where dysentery, and sometimes scarcity, was rife in the free population. It is curious to note in Berar the Yeotmahl and Basim jails with admission rates almost equal, but with a more than four times greater death rate in the second. Whether this is due to a lower state of health in the men admitted to Basim jail, or to better arrangements at Yeotmahl, is not explained; though what the Inspector-General does say, and the remarks of the medical officers quoted in Table XLIV, seem to point to the latter.

*See Table XLIV.

In the same table are given particulars regarding Balaghat, Betul, and Sambalpur, which had the highest mortalities in the Central Provinces. The Inspector-General, Madras, remarks that the advisability of separating cases of dysentery is now fully recognized by all medical officers of jails, as also of the speedy destruction of the dejecta in such cases. That severe sloughing dysentery is not so common as it used to be, and that the isolation of dysentery cases, and the careful destruction of the stools, must have an effect upon the spread of the disease, is the belief of the Inspector-General, North-Western Provinces and Oudh. But, on consulting his medical officers, he found that, while all were in favour of isolation, only half of them considered the disease infectious. A consideration of what is known of the etiology of dysentery will show that those are on the safe side who destroy the stools as well as isolate the cases. It has long been suspected that dysentery is but a group of symptoms which may arise from various causes; and this seems now placed beyond doubt by the fact that the serum of patients in each of several outbreaks apparently caused each by a different organism, re-acted only with the organism of its own outbreak. The newer bacilli found to be associated with the disease, those of Shiga, Flexner, and Kruse, all belong to the enteric or Eberthiform group; while micrococci have been observed in the asylum dysentery of England by Durham and Mott, who class dysentery as an acute infective disease, in Austria by Lewkowitz of Cracow, and by Lieutenant Greig, confirming Lewkowitz, in India. The rôle of the amœba is restricted by Flexner to one variety of chronic dysentery; and the coliform bacilli are not now so much in evidence as formerly. Now-a-days chill is supposed to be a factor in causation only by abasing the resistance of the patient. To the best of present knowledge, therefore, the causes of dysentery are organisms, living, capable of multiplication, destructible, and that ought to be destroyed.* With the prevalence of malaria, cholera, and famine, diarrhœa increased; mortality being much augmented in Berar and the Central Provinces. Hooghly and Palamau had the highest admission ratios, famine being a causation-factor in the case of the second. As both in jails and on army field service it is often impossible to draw a sharp line between dysentery and diarrhœa, it would be safer to destroy also the stools of, at least all suspicious; cases of diarrhœa.

74. Thirteen cases, only two fatal, of beri-beri were reported; four from
 Beri-beri. Burma, one from Assam, two from Bengal,
 and six from Madras.

The present Senior Medical Officer of the Andamans agrees with his
 Intestinal parasites.(*) Table XLIII. predecessor that the statements published
 with regard to the prevalence and importance etiologically of *strongylus duodenalis* (*dochmius*, *ancylostomum*) in the settlement were much exaggerated. A systematic search for the ova was made among the convicts and new arrivals in the Rajamundry Central Prison. Of 678 new arrivals 68·1 per cent. harboured the *S. duodenalis*, 36·1 per cent. the *ascaris lumbricoides*, and 7·5 the *trichocephalus dispar*. A large proportion of the men harbouring *S. duodenalis* were in good health. After six months in jail the percentages were found to have dropped. In 74·3 per cent. of 105 postmortems the presence of *S. duodenalis* was revealed. Captain Fearnside says that the parasites seldom occur in such numbers as to cause true "ankylostomiasis", and that it is their secondary effects which are most injurious. In the Darbhanga jail Captain Calvert examined microscopically the stools of 100

* See also Section II, paragraph 20.

prisoners, and found the ova of *S. duodenalis* in 83, of *ascaris lumbricoides* in 39, of *trichocephalus dispar* in 12, of *oxyuris vermicularis* in 9, and no ova in 8. Statistics for the Muzuffarpur jail also have been published by Major Green. It is said that Annett has confirmed Major Giles' account of the life history of *S. duodenalis*. Looss of Cairo has lately published what he considers experimental proof of his long held opinion that this parasite obtains entrance to the body through the skin. An hour before an amputation of a leg, a drop of water full of larvae was placed on the skin, and allowed to dry. After the operation a patch was cut out, and examined microscopically, and the larvae were found in various stages of entrance through the hair follicles.

75. Cases of guinea-worm were, as usual, most frequent in the jails of the Deccan and Southern India; and, as usual, the administrations with the greatest numbers of cases were Bombay, Madras, and the Punjab. The Yerrowda Central Prison had 95, the highest number for an individual jail.

Guinea-worm. Table XLIII.

76. During the ten years, 1891-1900, there was an annual average of 382 admissions and 5 deaths from jaundice in the jails of India, the years of maximum prevalence being 1898 and 1900. In 1900 there were 522 admissions and 6 deaths, the highest numbers being at Akola and Bassein. At Bassein no special cause could be assigned; at Fatehgarh, Amraoti, and Mung Rasul the disease was not confined to prisoners; at Yerrowda nearly all the cases came from the printing press, and it was considered advisable to improve the ventilation of the building.

Jaundice. Table LIII.

77. The Andamans returned 41 deaths from anæmia and debility, but sent in no postmortem records; and for at least 52 other deaths in India postmortem records were not furnished. The greatest numbers of deaths under this head were 15 at Ahmedabad and 14 at Jubbulpore. In nearly every province there was an increase in mortality, this being probably due to the famine and the seasonal character of the year. But in one point there is on the whole a decided improvement, in that postmortem records do not show so many cases which ought to have been returned under tubercle, dysentery, etc. It is to be hoped that this heading may show fewer numbers year by year, and that medical officers will realize the reproach which long lists of anæmia and debility cast upon them.

Anæmia and Debility.

78. Though the comparison made in Appendix Q is, of course, not quite fair, yet it may serve to emphasize the truth that the heads of jail mortality requiring special attention are bowel complaints, tubercle of the lungs, and respiratory diseases.

Mortality of troops and prisoners compared.

Papers quoted in Section IV.

For explanation of abbreviations see end of Section II.

- (1) Buchanan in J. H., I, page 214, and in I. M. G. for February 1901, page 78 ; Brown and Rogers in I. M. G. of January 1901, pages 4, 11, and 30 ; *Hygiene and Public Health* by Parkes and Kenwood, page 564 ; Eyster in J. of the Am. Med. Assoc. XXXIII, page 187, quoted in C. B. XXIX, page 266 ; other authors quoted in former reports ; Wells in Proc. of the 4th Conference of health officers in Michigan, page 122 ; Bernheim in D. M. W. of 1900, No. 40, page 643, quoted in C. B. XXIX, page 453, and in H. R. XI, page 665 ; Williams and Williams in J. T. M. of 15th January 1901, page 22 ; White in J. of the Boston Soc. of the Med. Sciences, III, page 197, quoted in C. B. XXVIII, page 609 ; Hunter and Nuthall in L. of 1st June 1901, page 1524 ; *Military Hygiene* by Munson, page 651.
- (2) Shiga, see references in former reports ; Flexner, see B. M. J. and J. T. M. of 1900, C. B. XXVIII, and J. T. M. and I. M. G. of 1901 ; Kruse, see B. M. J. and J. T. M. of 1900, H. R. XI, C. B. XXIX, and D. M. W. XXVII ; Report of Drs. Durham and Mott on Colitis and Asylum Dysentery, presented May 1900, noticed in B. M. J., L., and I. M. G. of 1901 ; Durham noticed in J. of Mental Science XLVII, page 415 ; Lewkowicz, noticed in C. B. XXIX, page 635 ; Greig in I. M. G. of August 1901, page 293 ; Long, quoted in J. T. M. of 1st May 1901, page 151 ; Strong, quoted in B. M. J. of 6th July 1901, page 37 ; Valagussa, quoted in C. B. XXIX, page 639.
- (3) Calvert in I. M. G. of April 1901, page 136, and quoted in J. T. M. of 15th May 1901, page 172 ; Green in I. M. G. of May 1901, page 173 ; Looss in C. B. XXIX, page 733 ; Sandwith on Looss, reported in B. M. J. of 10th August 1901, page 349, and in L. of 17th August 1901, page 480, and in J. T. M. of 1st October 1901, page 319, and in I. M. G. of October 1901, page 387.

SECTION V.

VITAL STATISTICS OF THE GENERAL POPULATION.

79. Those whose duty or interest in the subject has led them to a perusal of this section in previous years will be acquainted with the difficulties that confront the vital statistician when dealing with the figures presented in the annual reports of the provincial Sanitary Commissioners.

General remarks. In view of the recent orders of the Government of India to bring the remarks on this subject within a briefer compass, it is not considered desirable to restate these difficulties, and to those unacquainted with the conditions a reference to the report for 1899 is recommended. But it may be said that as regards the year's results now to be reviewed the prospect of arriving at exact conclusions must necessarily be more remote from the fact that the census figures of 1891 are still the basis of calculation of the birth and death rates and of the quinquennial averages, and that the calamitous famine, which directly affected four large provinces and, indirectly, others, has profoundly altered the population figures both in actual numbers and in distribution.

And in addition to famine, pestilence in the form of cholera and epidemic fevers which prevailed to an extent without a parallel in previous records, has introduced another vitiating factor into the account of inestimable force. Beyond the extra loss of life thus involved over and above what may be deemed due to "natural causes," the effect of these visitations in setting up tides of immigration and emigration would suffice to impair the validity of the best accredited registration returns. But we know that, as regards the effect of cholera, the returns are defective, and although many of the deaths so caused have doubtless been reported under other heads, it cannot be doubted that a considerable number have escaped all record. If to these considerations be added the fact that at present nothing is certainly known of the alteration in the distribution of the population due to the more permanent and normal inducements to change domicile which have operated during the decade, it will be admitted that close reasoning based on the recorded ratios is a task beset with fallacies.

80. The final enumeration of the census of India was made on March 1st and the provincial totals were published just two weeks later, a remarkable feat due to the adoption of a new system and to the perfection of the arrangements made by Mr. Risley, C.I.E., the Census Commissioner; unfortunately the provincial sanitary reports are compiled for the most part during the first quarter of the year, and the new figures will not be taken into general use until 1902. It has subsequently transpired that the corrected totals vary from those first announced to an altogether

The census of 1901.

infinitesimal degree, and the broad results may be stated, while at the same time no attempt will be made in this report to discuss their significance in detail, a task that must be reserved till after the publication of the final and full results by the Census Commissioner.

So far it is known that the population of all India, British and Native territory, has risen in the decade from 287,317,048 to

*Shan States and Chin Hills.
Sikkim.
Kurram Valley.
Baluchistan Agency.
Bhil tracts and Rajputana.
Nicobar and Andaman islands.

294,266,701 giving an increase of only 2.42 per cent., which, however on account of the inclusion in the gross total for 1901 of the population of several outlying tracts* never before enumerated, gives an unduly favourable result; comparing the areas actu-

ally enumerated in both census years, the increase in the latter amounts to only 4,283,069, a rate of 1.49 per cent., as compared with an actual rate of increase of 11.2 per cent. in the previous decade.

But this result is again considerably modified if we differentiate between British territory and Native States; in the latter the aggregate population has fallen off by nearly 3 millions, *i.e.*, by 4.34 per cent. on the population of 1891, which stood at 66,050,479, while the actual increase of nearly 10 millions in the former, from 221,266,569 to 231,085,132, is at the rate of 4.44 per cent.

The figures for the different Native States are terribly significant of the effects of famine, which were not alleviated, to anything like the same extent as was found possible in British territory, by organized measures of relief; for this we must look partly to the smaller financial resources of these States, to the greater extent to which they suffered, as a rule, from the failure of the monsoons and to the lower standard of living and the less resistant powers of the aboriginal tribes. Baroda shows a decrease of 19 per cent.; the Bombay States one of 14 per cent.; Rajputana and the Central India States suffered losses of 18 and 17 per cent., respectively, figures which are far greater than those afforded by any of the British provinces, the details for which are given in the accompanying statement:—

Province.	Census variation per cent. 1881-91, + or -	POPULATION AS SHOWN BY THE CENSUS.			NATURAL INCREASE OR DECREASE AS SHOWN BY EXCESS OF RECORDED BIRTHS OVER DEATHS, OR VICE VERSA.			
		1891.	1901.	Census variation per cent. 1891-1901, + or -	Total Births 1891-1900.	Total Deaths 1891-1900.	Difference.	Percentage natural increase or decrease, + or -
1. Burma, Lower . . .	+ 23.38	4,408,166	5,371,328	+ 21.84	1,360,361	1,056,735	+ 303,626	+ 6.8
2. Assam	+ 11.31	5,433,668	6,122,201	+ 12.67	1,606,764	1,733,679	- 126,915	- 2.5
3. Madras	+ 15.58	35,630,440	38,208,609	+ 7.24	9,513,153	7,127,850	+ 2,385,303	+ 7.2
4. Punjab	+ 10.71	20,866,847	22,440,484	+ 7.58	8,446,435	7,059,027	+ 1,387,408	+ 6.8
5. Bengal	+ 6.89	71,346,961	74,713,020	+ 4.72	24,390,880	22,349,462	+ 2,041,418	+ 2.9
6. Coorg	- 2.93	173,055	180,461	+ 4.28	40,030	52,540	- 12,510	- 7.2
7. North-Western Provinces and Oudh.	+ 6.34	46,994,791	47,696,324	+ 1.84	17,695,271	15,312,938	+ 2,382,283	+ 5.1
8. Bombay	+ 14.34	18,873,342	18,584,496	- 1.53	6,427,142	6,668,689	- 241,547	- 1.3
9. Berar	+ 8.41	2,897,040	2,752,418	- 4.99	1,091,157	1,243,960	- 150,803	- 5.4
10. Central Provinces	+ 9.61	10,784,294	9,845,318	- 8.71	3,387,780	3,767,950	- 380,180	- 4.0
TOTAL	+ 9.5	217,318,004	225,923,659	+ 4.0	73,960,973	66,363,820	+ 7,597,083	+ 3.6

Here again we cannot avoid the conclusion that famine and prolonged scarcity have played a chief part in producing the extraordinary variations in the actual increases and decreases, though subsidiary factors have doubtless been in operation. The first two areas on the list have certainly been free from famine and plague, but both have the advantage of a considerable and constant influx of immigrants. Madras has suffered from scarcity (in 1896-97 and again in 1899-1900), plague though not widely epidemic has figured in the returns of 10 districts, and it has lost by emigration, to an extent not at present known.

In the Punjab famine was prevalent in some 10 districts in 1899, which returned to these and extended throughout 3 other districts in 1900, when scarcity was elsewhere generally felt; plague may be said to have been endemic in at least two districts since 1897, while cholera prevailed widely in 1892 and 1900.

In Bengal, while actual famine has not declared itself, widespread scarcity and high prices have been a feature of its economic history during three of the ten years; plague has claimed a larger number of victims than the records take account of, and cholera is reported to have been the cause of about 1,300,000 deaths in five of the ten years in question, a number nearly equal to the death-roll of the previous decade from this one cause. In the North-Western Provinces famine, which had prevailed in Bundelkhand in 1896, extended over a much larger area in 1897, while to cholera 542,000 deaths were ascribed in the three years 1891, 1892 and 1894, a number which is little short of the total for the whole of the previous decade from this cause. As to the Bombay Presidency, Berar and the Central Provinces, the history of the first has been writ large in the public journals; plague has been endemic for five years, famine and scarcity have been superadded, and in five of the ten years cholera has been exceptionally prevalent. In Berar, the year 1897 was one in which the people stood upon the verge of famine, and in 1900 famine was at its worst throughout the year; in four of the ten years cholera was abnormally severe. Lastly, in the Central Provinces the people have passed through two of the severest famines on record, from the autumn of 1896, throughout 1897 and in 1900; five of the ten years were also marked by exceptionally heavy cholera epidemics.

It is certainly not desirable, nor is it desired, to minimise the significance of the facts disclosed by the recent census; the above sketch of the untoward conditions against which the people have had to struggle, if it affords a knowledge of the proximate causes, serves at the same time to direct attention to the economic conditions and sanitary shortcomings under which existence is passed by masses of our fellow-subjects, and which a failure in the supply of the natural fertilizing agent of the soil and of the prime necessity of life—water—brings out with such lamentable emphasis. For the facts set forth are susceptible of only one interpretation as regards the proximate cause of a situation that is receiving the earnest attention of the Government of India. Those parts of India, British or Native, which are adequately watered naturally or artificially, and which escaped famine, show an advance, modified doubtless in parts from their physical and economic relations to the rest; while those where rain is under ordinary circumstances capricious and scanty, and where in the last half of the decade it may be said to have failed, and where there are no systematic irrigation works, we have the famine areas with consequent mortality, emigration and impaired fecundity, all inducing a decline in population. (See this report for 1899, Section V, p. 103, *et. seq.*)

Allusion has been made to the capricious as well as to the scanty character of the rainfall, to which many parts of the country are frequently subject. And

truly it may be said that the results of an ill-distributed and superabundant precipitation are on the whole more disastrous than even drought, they are certainly more dramatic and ultimately, more tragic and exhausting. The effects of floods and of the consequent epidemic fevers are writ large in the statistical annals of the year and of the decade, and, if the truth could be demonstrated, it would be evident that the people have suffered more severely, directly and indirectly, on this account than from famine and its results. Beyond the immediate prostration by fever of practically the whole population in areas subjected to floods, so that agricultural operations are suspended, and whole tracts thrown out of cultivation, there is the terrible mortality and the long persistent debilitation of the survivors which has a far more marked effect in impairing fecundity, and so of delaying restoration, than famine. One example of this state of affairs is cited later in this section, but these facts must be borne in mind in endeavouring to appraise the causes that have led to some of the remarkable results disclosed by the census.

If we take the nine provincial areas under registration in British India (excluding Burma) we find a net increase during the last decade of 7,641,893; had the natural increase followed in the same proportion as in 1881-1891, the

*Distributed thus :

Bombay	... 3	Millions.
Madras	... 3	"
Central Provinces.	2	"
North-Western Provinces and Oudh	2	"
Bengal	... 1 $\frac{1}{2}$	"
Punjab	... 1	"
Berar	... 1	"

number would have risen to 20,271,548; that is to say, there are over 12 $\frac{1}{2}$ millions* less than under ordinary conditions might have been expected. But it is altogether fallacious to take this figure as the measure of the direct loss due to excess mortality. Account must be taken of the effect of migration and of the lessened fecundity, due to famine and scarcity, on the birth-rate, that is to say, we have to distinguish between loss from excess mortality and

a diminished source of supply. A reference to the birth statistics of the affected areas (see appendix† to this section) will show how far short of the normal expectation recruitment fell during the last half of the decade, with the notable exception of the year 1899, having due regard to the natural increase in the population since 1891. But neither the actual numbers nor the millesimal rates represent the truth in any year; the births registered may roughly be said to fall short of the true number by from one-third to one-fifth in different provincial areas, and the difficulties in arriving at any reliable estimate of the loss caused by a lowered birth-rate are very great. But a study of the available data, read in the light of this knowledge, would appear to indicate that under the stress of famine and pestilence there were at least some five millions fewer children born than might have been expected under ordinary conditions, this figure being arrived at provisionally and pending the further light which the Census Commissioner will doubtless throw upon the subject. In endeavouring to arrive at an estimate of the true loss from this source, account must be taken of the mortality which this number of infants, if born, would have suffered, which may be put at from one-third to two-fifths of the whole in the first year of life.

While we repeat that no one can study these results without grave concern, it must be admitted that the outlook has some redeeming aspects. Newspaper critics, whose conscientious sympathy one may well respect, have pointed to the actual and the might-have-been as indicated by the last two census returns, and have deduced a wholesale loss to the population without alluding to any modifying factor or its source and without discriminating as to its results. It has been

† Statements I and III of Appendix to Section V.

shown that the estimated loss is, to a large extent, not to be attributed to excess mortality, and it may be added that the period of enforced celibacy and physiological rest will have its reaction on the return of normal conditions; fecundity will be increased and in this sense a considerable part of the "loss" is in the nature of a deferred interest or increment which will later appear in the account. The birth rate may be expected to rise by one-fourth or one-fifth on the normal in the year following restoration and to a smaller extent in the subsequent year, and this will probably mean an addition of some 3 millions to the population in British territory only, and beyond the normal increase, (see section V, of Annual Report for 1899, pages 103-106). Beyond this, regrettable as the loss by excessive mortality has been, it is not a theoretical assumption that this has fallen to the largest extent on the unfit, the diseased, the unproductive, on those who consume at the expense of the productive and who are a burden of more than the proverbial feather's weight when the balance between income and expenditure is so narrow. The facts furnished by the history of the Central Provinces, which are given in some detail under the provincial sub-section, may be considered in support of this assertion. If, as we may perhaps reasonably hope, the cycle of deficient and ill-distributed rainfall has worked itself out and a cycle of normal conditions is to set in, we may at least congratulate ourselves that we enter the new decade with a population much better equipped for the ordinary struggle of existence, more resistant, and with a disproportionate number in the reproductive age periods, which will by being less subject to mortality further tend to ensure a balance of increase.

Indeed, the considerations of gravest concern to which a study of the vital statistics and of the habits of the people give rise are, perhaps, those which are at present inherent in the normal conditions, and especially one would point to the high infantile mortality rate which accompanies prosperity and to the undoubted fact that though the large majority of the people are at a great disadvantage in the struggle on account of deficient nourishment on which powers of "resistance" so largely depend, yet it may be asserted that the physiological value of the food ration they usually obtain is ample to sustain that measure of health which depends on a sufficient supply of nourishment. The explanation of this paradox lies in the nature of the food to some extent, but more largely on its methods of preparation from the stage of the raw grain to the stage when it is considered fit for consumption in the universal form of unleavened cakes. The grain is, as a general rule, dirty and very imperfectly ground and sifted, and cooking is but half consummated, so that much of the food is literally consumed raw with adventitious indigestible material; defective mastication is also a common and serious factor in the sum of the causes that go to produce the economic loss which in the aggregate is enormous, especially when the proportion of unassimilated proteid in vegetable food is considered. Any one who has conducted sewage purification experiments in this country will confirm these views; it is not only that the average weight of the daily solid excreta is on the average quite $2\frac{1}{2}$ times that of the European on a mixed and well cooked diet, but that in the excreta are incorporated a quantity of raw or semi-digested food materials. This is not only so much food-value lost, but as shown by the habitual double daily evacuation, the energetic peristalsis set up is inimical to the full assimilation of the rest. The art of cooking receives very little attention, and indeed has developed, among the masses, little beyond the stage of primæval man, and when the food consists almost entirely of grain and pulses this defect is the more serious, for adequate cooking goes far towards producing the results which it is the function of the digestive organs to complete. It is

therefore not difficult to understand why bowel complaints occupy such a prominent place in the true causes of mortality and why the natural resistance to all forms of disease is wanting. It is in this direction, as well as in the reform of marriage customs, in the diffusion of knowledge as to the care of infants and in the awakening of the spirit of enterprise that will lead the surplus population of congested areas to seek fresh and freer fields elsewhere, that "civilization" in its best sense, has so large a part to play for the welfare of the people of India: these are reforms that can only come from within, but while the fundamental functions of self-preservation and propagation are either so misunderstood or so misapplied, the vital statistics will always bear the stamp of a lamentable waste of lives.

As regards the effects on the records of mortality, of famine and pestilence during the year under review, the reader is referred to the admirably careful and lucid discussion of the subject presented in the Report of the Famine Commission of 1901. In a final summary, the total number of deaths recorded in the five actual famine areas (British) during the year 1900 is compared with the decennial average number and a balance of excess to the extent of about $1\frac{1}{2}$ million deaths is exhibited against the year under review. But, as has been pointed out, the number was inflated to a large but unknown extent by the deaths of immigrants from Native States, who came across the borders in a deplorable state,—often in a dying state. The impression left by the evidence was that one million excess deaths occurred among British subjects, and that at least one-fifth of this mortality was due to cholera alone.

Referring to the census table on page 56 it will be noticed that the "variation per cent." based on the registration returns of births and deaths, is in some cases very similar to the actual variation per cent. as disclosed by the census; in other cases there is a strong contrast. It need only be said here that no reliable indication of the correctness or defectiveness of registration is afforded by this comparison. This important question is about to be examined critically on receipt of the full and final Census Report, which among other data will furnish estimates of the gains and losses in each province by migration, and the general results will be set forth in the Annual Report for 1901. Apart from the disturbing effect of migration, it may merely be noted that even where registration is notoriously defective a variation based on the records may approximate closely to that disclosed by the census, if the registration of the births and deaths is proportionately defective. If the recorded average birth-rate is 30 per mille against a true rate of 45, and if the recorded death-rate per mille is 22 against a true rate of 37, it is obvious that the "natural increase" is the same in both cases. To mention only one case, *viz.*, that of the Madras Presidency, the variation by natural increase based on the records is 7.2 per cent., and the census variation is identical, yet there is abundant evidence to show that registration is defective, if not to the precise extent, yet in the nature of the example just quoted. The whole subject is beset with difficulties which arise partly from the great variations in the effectiveness of registration in different areas, and no one modifying factor applying generally, and partly from the extraordinary variations exhibited by the recorded "actuals," which are truly "tropical" in their ebb and flow under stress of the changing conditions of life. No better evidence of this can be desired than the figures recorded in most provinces during the last three or four years, and some striking examples are quoted in a subsequent part of this section.

Taking the Central Provinces during the last five years we get the following birth and death rates:—

				Birth-rate.	Death rate.	Natural increase or decrease.
1896	...	...	...	31·72	49·31	—17·5
1897	...	...	...	26·83	69·34	—42·5
1898	...	...	...	29·91	24·30	+5·6
1899	...	...	...	47·35	28·09	+19·2
1900	...	...	...	31·90	56·75	—24·8

Nothing could testify more eloquently to the vicissitudes under which the people have lived and died, while at the same time the actuary and the vital statistician may well find themselves at a loss before the uneven tenour of these figures.

Before leaving the subject of the preliminary results of the recent census allusion may be made to a feature of great sanitary interest disclosed by the figures returned for a large area in the Western Doab (the Ganges-Jumna Mesopotamia) of the North-Western Provinces. The area comprises some eight districts where canal irrigation is systematically carried out, with the consequence that up to the early part of the last decade water-logging of the soil was a general feature of the country. Not only had the fertility of the soil deteriorated by the efflorescence of "reh" in many parts, but the prevalence of fatal forms of fever laid a heavy tax on the life of the population, and when the census of 1891 was taken it was found that in the four northerly districts the population had only advanced by 3·4 per cent. on the figures of 1881, against an average of 6·34 for the whole province and this in spite of a never-failing series of good harvests. But the four southern districts which had also suffered from floods and the epidemic fevers consequent thereon, actually showed a decrease of 4·3 per cent., and in the early "nineties" the revenue assessments in many villages had to be revised and reduced owing to the depopulation and the poverty induced by disease and by the deterioration of the soil. Since then drainage operations on a very extensive scale have been undertaken, many hundreds of miles of drainage "cuts" having been made and beyond this, the alignment of many of the irrigation channels having been redressed. The results of this beneficent policy are apparent in the new census figures; the percentage increase of population in the first four districts is no less than 14·4 per cent., and in the lower four districts 12·2 per cent., the most astounding contrast with the previous census results being furnished by Etah, perhaps the most severely affected in the former period. At the census of 1891 the percentage *decrease* for the decade was given as 7·25, while at the recent census the population of this district was shown to have increased to the extent of 23·09; doubtless emigration in the former period and immigration in the latter played a considerable part in the results. As has been observed, one can scarcely doubt that the cost of the drainage cuts and of the remodelling of the canal-channels will be more than repaid by the increase of assessment which the increased cultivation in this area will properly admit of in the revenue settlements now in progress. The people of this area have enjoyed complete immunity from anything approaching scarcity in contrast to the lot of their fellows in other parts of the province and in the Punjab, and indeed they have reaped a rich harvest in ministering to the necessities of the latter from the ample stock of surplus food grains at their disposal. The object lesson is one of great importance and of far wider application.

The usual statements showing the Birth and Death Statistics recorded in all Provinces under registration, are given in the tables referring to this section in the Appendix at the end of this report.

81. In 1899 the total number of births registered in Bengal was 3,053,178 the highest on record, yielding a ratio per mille of 42·96; in 1900 the actual number fell to 2,749,582, which is 28·68 on the old census population, and 36·95 on the figures just announced (1901), while the mean of the previous quinquennium is 37·66, which is of course not corrected for the increase in population; the birth-rate may therefore, be described as fully up to the average of recent years. A falling-off in the number of births of 303,596 as compared with the total of the previous year, large as it may seem, loses its significance when the circumstances are considered; the high birth-rate of 1899 was due to a return of prosperity and plenty after a period of scarcity and wandering in search of work. During the later months of 1899 the tide again turned; scarcity and high prices began to prevail and extended through the year under review, and this, together with the excessive prevalence of epidemic disease, makes it a subject of congratulation that the birth-rate was, at any rate, fairly maintained at the recorded normal. This, then, was the outstanding feature of the general provincial birth-rate, and it will serve no useful purpose to contrast more closely the phenomena in different areas in the two years. The birth-rates in districts (including towns and rural areas) ranged from 49·19 per mille in Noakhali and 46·83 in Tippera, to 28·53 in Hooghly and 15·8 in Calcutta; in towns, we have, at one end of the scale, rates of 62·63 in Garulia and 56·23 in Joynagar, and at the other end 5·07 in Jhalakati and 4·94 in Nawabganj, all situated in or near the area of the 24-Parganas, and all subject to great fluctuations of population which make the recorded ratios fallacious.

As regards rural areas, Sherpur (Mymensingh) is credited with a rate of 57·66, and Chandpur (Tippera) with one of 54·86, while Nawabganj gives 20·49 and Serampore 16·93, and these last again are both in the Presidency area where as a general rule the sex-distribution and a floating population militate against high birth-rates, a subject that has frequently been discussed in these reports.

Throughout the province as a whole 105 males were born to every 100 females, but this proportion was subject to large variations in different areas.

The total number of deaths registered in 1900 was 2,503,736, which is 34·99 per mille on the census population of 1901, but amounts to 36·63 on the old census figure (in either case the highest on record), against 31·21 in the preceding year and 30·12, the decennial mean (1890-9). While therefore in 1899 the births exceeded the deaths by 834,935, the "natural increase" in 1900 was only 145,146, a deficit of not far short of three quarters of a million. As we have seen, the birth-rate was extraordinarily high in 1899, and about the average in 1900, and, consequently, it is the rise in the mortality in the latter year which at once claims attention. Now, as regards mortality the year 1899 was about the average, but there were 385,493 more deaths recorded in 1900, an increase of about 5·4 per mille on the last census population. The increase per mille in the districts, excluding towns, amounts to 5·17, while in the towns (containing about 5 per cent. of the whole population) it rose to 10·3 per mille. The following statement exhibits the factors of this increase:—

	Districts.	Towns.
Cholera	3·37	2·89
Small-pox	·08	·64
Fevers	1·28	2·91
Dysentery and Diarrhoea	·30	·93
All other causes	·19	3·02
	<u>5·2</u>	<u>10·3</u>

The cholera mortality is dealt with under the provincial heading in Section VI of this report; 345,878 deaths were recorded from this disease, giving a ratio per mille of 4·86, against 1·51 in 1899, and 2·5 the mean of the decennium.

To "fevers" are ascribed no less than 1,703,804 deaths, equal to 66 per cent. of the total mortality; this number yields a death-rate of 22·9 per mille on the last census, the decennial mean (1890-99) being 21·8. In this respect, again, the year stands out as one of exceptional unhealthiness, the districts of Dinajpur, Jalpaiguri, Faridpur and Malda having as usual an unenviable pre-eminence, with death-rates ranging from 35 to 40 per mille from this cause alone. The physical causes to which this high mortality is attributed, in the brief but graphic accounts furnished by the local medical officers, leave little room for doubt that true malarial fevers are a predominant factor in these deplorable results; we read of the silting-up of rivers and the consequent stagnation of drainage water; of floods due to abnormally distributed rainfall; of large tracts of country becoming stagnant marshes in the monsoon period; and, for the rest, bad drinking-water from surface sources, and overcrowded ill-ventilated dwellings.

As might be expected with cholera everywhere epidemic, the same causes were in operation to raise the death-rate from Dysentery and Diarrhœa. To these diseases 64,664 deaths were attributed (0·86 per mille on the recent census) whereas the mean for the decennium is only 47,304. As usual the urban rate was more than five times that of the rural, a result largely due to more exact diagnosis in the towns, and which suggests grave doubts as to the correctness of the returns, as regards the prevalence of bowel complaints, among the great mass of the population.

One of the striking features of the statistics of the last three years is the extraordinary rise on the mortality under "all other causes." In 1898 the total returned was 320,081; in 1899 it rose to 413,301, and for the year under review it is 436,568. The increase is more notable in urban than in rural areas, and must be considered too large and too sudden to be altogether referable to improved diagnosis. It is significant that this great rise has been synchronous with the prevalence of plague, and that about 40 per cent. of all this excess mortality since 1898 was returned from one division, Patna, where plague has been endemic. It is well known that deaths from plague are often ascribed by the people to any and every other cause, to stave off preventive measures, and when the medical history of the year is summed-up the conclusion can scarcely be avoided that plague, which is dealt with in a subsequent section of this report, has been second only to cholera as a cause of the extraordinary transformation that the vital statistics have undergone.

Further particulars as to the incidence of mortality will be found in the tables relating to this section, which are relegated this year to the Appendix at the end of this report. As regards the death-rates reported for the different sects, Muhammadans and Hindus suffered at the rate of 38·36 and 36·48 per mille, respectively; Christians follow with 27·06, then Buddhists with 26·58, while Other classes, for whom the returns are least reliable, died at the rate of only 23·36 per mille.

82. The year 1900 was one in which the number of births recorded was considerably above, and the number of deaths considerably less than the decennial average, which was however raised by the enormous mortality of 1897; if this year be excluded,

the number of deaths in 1900 is quite up to the average. There is however some justification for congratulation on "a fairly healthy year," if only on the ground that it was one of the three in the decade in which the births exceeded the deaths. If the total number of deaths registered in Assam during the 10 years 1891-1900 is set against the total number of births, a natural decrease of 126,915 or 2.5 per cent. is exhibited. The new census however shows an actual increase of 688,533 or 12.67 per cent. To what extent this increase is due to immigration cannot be estimated until the Census Report is available, but the province has not suffered from famine or scarcity and is, indeed, considered to be free from the risk of such a calamity, and the contrast exhibited above must, to a considerable extent, be attributed to defective registration of births, of which the returns exhibit abundant evidence. The alternative conclusion is that the natural conditions of life in Assam are so bad as to rapidly lead to depopulation by excessive mortality, which is not warranted by the evidence available. This question will be dealt with in a survey of the results of registration of vital statistics in the different provinces based on the disclosures of the recent census which will be instituted by order of Government when the full census report is available.

The total number of births recorded was 184,427, a ratio of 34.96 per mille on the recent census figure; in the previous year the actual number was 176,770, or 35.5 per mille on the uncorrected population, the mean of the quinquennium being only 30.63. When the figures for the two great valley areas, into which the province is naturally divided, are examined a notable difference is disclosed; the Surma Valley yielded a birth-rate of 39.14 and a mean of 33.07 for the previous 5 years, while the Brahmaputra Valley returned a rate of only 30.73, which is only about 2 per mille above the quinquennial average. This great contrast is largely due to imperfect registration in the latter area, though doubtless epidemic disease has been more prevalent, and the general standard of health and of living are lower, in the Brahmaputra Valley. The question of registration is however one to which the Government of India have directed the serious attention of the local authorities with a view to the reconsideration of the employment, for this purpose, of unpaid village headmen, or if this agency be found indispensable, to the adoption of more stringent control and check of their work. In this respect there appears to be room for great improvement, as a study of the returns furnished by the Police and the Vaccination Staff abundantly proves.

The total number of deaths rose from 154,326 in 1899 (ratio per mille 31.0 on the old census figure) to 161,631 or 30.64 on the population enumerated in 1901, the mean of the previous 5 years being 35.44 per mille. While the quinquennial averages recorded for the two valleys are 36.08 for the Surma and 34.80 for the Brahmaputra, the death-rate in the former in the year under review was 29.9 against 31.39 for the latter. The districts of Nowgong and Darrang in the latter area stand out from the rest with rates of 53.03 and 44.09 respectively, and this is due to the prevalence of cholera and fevers in epidemic form. The history of the former disease is detailed in Section VI of this report, but it may be noted here that 60 per cent. of the total mortality from this cause in the valley occurred in these two districts; 24.95 per mille of the population were reported to have succumbed to this disease in Nowgong and 9.6 per mille in Darrang.

To "fevers" 77,557 deaths altogether were ascribed, giving a death-rate of 14.7 per mille of population against a quinquennial average of 20.13, and this

includes 9,036 deaths from "Kala-Azar," which recent research has shown to be probably a malignant form of malarial fever. The disease was first recognized in Nowgong in 1891, and during the last seven years no less than 65,590 deaths have been ascribed to it in this district; it subsequently spread to Darrang, Kamrup and Goalpara, all in the same valley, and it has recently made its appearance in Sylhet in the other valley. It is satisfactory to be able to report that the mortality which averaged annually 16,138 in the four districts named for the five years ending 1899, fell in 1900 to 9,012, of which about one-half were reported from Nowgong alone.

The average death-rate in districts was 30·64 per mille, for towns 38·62, and for rural areas 30·48, and a comparison of these figures affords further evidence of the defectiveness of registration among the bulk of the population. The towns in Assam are comparatively small, nineteen having an aggregate population of only 102,574, and the conditions cannot be greatly dissimilar to those prevailing in the rural areas with which they are associated. Taking the mean rates for the last 3 years the following contrast emerges :—

	Cholera.	Small-pox.	Fevers.	Dysentery and Diarrhoea.	Other causes.	All causes.
Rural ...	1·7	0·5	15·1	2·4	7·5	27·5
Urban ...	3·0	0·3	18·1	6·0	9·8	37·8

The excess of 10 per mille in the towns, amounting to over 36 per cent. on the rural rate, is significant, if not convincing, of the failure to secure full reports of vital phenomena in the villages.

Further particulars of the incidence of mortality are given in the tables in the appendix;* but here it may be noted that for the different sects the death-rates were as follows: Other classes, 54·67; Muhammadans, 30·71; Hindus, 26·76; and Christians, 25·64.

83. The number of births registered in 1900 was 1,892,169, against 2,255,627 in 1899, the millesimal ratios being 40·34 and 48·09 respectively calculated on the uncorrected census figure of 1891; on the new census the rate amounts to 39·7, and the quinquennial mean is 37·37, so that all that can be said is that while the extraordinary fecundity displayed in the previous year (due to the circumstances fully described in the last report) has not been maintained, the birth-rate is well above the average. In 25 districts the rate is above, and in 23 below, the average for the province, and once again, the Western Doab area, where irrigation is very generally in operation, holds pride of place. The only noticeable features of what is described as a healthy year are the very low rural death-rates in the Kumaon (26·4), Lucknow (27·4), Allahabad (28·0) and Gorakhpur Divisions (24·6), and, with this, the comparative rise in the birth-rates generally in the eastern and central areas of the province, where as a rule they are notably lower than in the western area.

The deaths numbered altogether 1,460,139 against 1,556,821 in 1899, giving ratios of 31·13 and 33·19 respectively, against a quinquennial mean of 32·7. On the new census figure the rate for 1900 is 30·6.

The Sanitary Commissioner remarks that "there is no great departure from the average to call for any special comment beyond the fact that the year was a healthy one, although not free from epidemic disease." It must however be pointed out that the urban mortality was exceptionally high. The quinquennial mean for all towns having a population of 10,000 and upwards is 39·16, but in 1900 it rose to 42·13, while the rural rate for the whole province was only

* Statements of Appendix to Section V.

30·31. Forty-eight of the 99 towns return death-rates above the quinquennial (urban) mean, eighteen have rates of over 50 per mille and in 24 more the rates are between 40 and 50. That nearly 50 per cent. of all the municipal towns should record this high mortality, while doubtless indicating effective registration, is also suggestive of specially untoward conditions to which the urban population is subject, especially when the year is pronounced to have been "healthy."

Cholera, which is dealt with in a subsequent section of this report, is reported to have caused 84,960 deaths (1·81 per mille), the most considerable outbreak occurring in the Sultanpur district, where there were 17,174 deaths equal to a rate of 15·96 per 1,000 of population.

To fevers 1,106,030 deaths were attributed (23·58) against 1,245,260 (26·55) in the previous year, the quinquennial mean ratio being 25·89. The districts most severely affected were those situated in the canal irrigation areas and those bordering on the notorious Tarai. Much has been done to secure the adequate drainage of the former, with a result which has been noticed in the prologue to this section (see page 61), but it is almost inevitable that the inhabitants of irrigation districts should pay for their abundant crops by a somewhat greater incidence of malarial fever (see Section IX).

The mortality from dysentery and diarrhoea was slightly higher and that from "all other causes" notably less than in the previous year, and, as regards the former, considerably less than the quinquennial average.

The death-rate among Muhammadans was 30·89 against 31·55 in 1899; among Hindus, 31·22 against 33·52; among Christians, 13·79 against 11·62; while among Other classes it was 22·61 against 18·36 in the previous year.

84. If we compare the births and deaths registered in the Punjab in the last two years, the following striking result is shown:—

Punjab.			Births.	Deaths.	Increase or decrease.
1899 ...	...	...	994,001	607,725	= +386,276
1900 ...	...	...	843,970	980,211	= -136,241

Now the average annual number of births registered for the decade was 844,643, and of deaths 705,902, so that the births in 1900 were up to the average, while the deaths were in excess by 274,310. While this leaves out of account the increase due to a larger population, it focusses fairly the main features of the vital statistics for the year, *viz.*, an average birth-rate, and an excessive death-rate.

The births give a ratio per mille of 37·76 per mille on the new census, and one of 41·1 on the population of 1891, and this is 7·3 below the rate returned in 1899, a year of exceptional fecundity, and even at the reduced figure the Punjab maintains its foremost position in this respect. As compared with the previous year there was a notable falling-off in twelve districts, and this is justly attributed to severe famine in some, to scarcity in others, and to general movement of population from most of these. On the other hand, in no less than 14 districts, out of the 31, the birth-rate was actually above the quinquennial mean.

In spite of a considerable disproportion between the sexes in the Punjab, and in spite of notoriously defective registration in the frontier districts, the provincial rate is always exceptionally high in comparison with that of other provinces; the ratio for the past decade calculated on the population of 1891 works out at just over 41 per mille, and if the calculation be made on double the female population, it rises to 44·3 per mille. This is doubtless partly due to efficient registration over the Cis-Indus area, and for the rest we must look to factors of race, to

marriage customs and environment, including food. In the famine affected areas the birth-rate fell off in different districts to the extent of from 8 to 20 per mille, but the population was so affected by emigration that it is impossible to make any exact deductions of the actual effect of the calamity in this respect, and the returns for next year must be awaited.

The total number of deaths recorded was 980,211 or 372,486 more than in 1899, and 274,309 above the decennial average. The ratio per mille on the new census figure is 43·9 and 47·7 on the population of 1891, against 29·6 in 1899 and a quinquennial mean of 30·5. In 12 out of the 31 districts there was an excess of deaths over births; Hissar heads the list with an excess of 71·8 per mille, then follow Ferozepore with 44·0, Rohtak with 35·2, Karnal with 33·9, Umballa with 24·5, Ludhiana with 15, Lahore with 12·6, Gurgaon with 11·6, Delhi with 10·4 and Montgomery with 7·8. These were the districts most severely affected by famine and scarcity and, to some extent, as a consequence by epidemic disease cholera and fevers, to which three causes the excessive mortality is attributed, and which gave rise to a death-rate of 96·4 in Hissar, 86·8 in Ferozepore, 73·7 in Karnal, 68·0 in Rohtak, 61·5 in Umballa, 60·4 in Ludhiana and 59·4 in Lahore district.

The average death-rate recorded in the towns was 54·55 against 46·92 in the rural circles. Some of the towns situated in the famine areas suffered very severely, but much has to be attributed to the confluence of refugees to relief works. Kaithal in Karnal (population 15,768) had a death-rate of 161·59, chiefly due to epidemic "fever" and to cholera; Zira (Ferozepore) with only 4,356 inhabitants returned a rate of 160·47, of which fever accounted for 134·3 per mille; and Sirsa (Hissar) with a population of 16,415 lost 2,571, giving a ratio per mille of 156·63, of which fever and cholera claimed the great majority. On the other hand, in the frontier districts many towns had a rate of less than 20 per mille.

The facts as regards the mortality from cholera are given in the subsequent section; there were in all 23,260 deaths recorded from this cause (1·37 per mille), and considerably more than half the total were registered in five of the districts most severely stricken by famine.

Small-pox was just twice as prevalent as in the previous year, and here again the famine districts suffered most heavily along with Peshawar, where the disease is endemic.

The mortality ascribed to fevers accounted for 685,895 deaths or 70 per cent. of all recorded; this number gives a ratio per mille of 33·37 against 19·54 for the quinquennial mean. In Hissar and Ferozepore the mortality amounted to 70 and 69 per mille of the population respectively, and in Karnal and Rohtak it was over 50 per mille. All these districts were famine stricken, and the fatal form of the disease burst out with epidemic virulence in September "in consequence," it is said, "of floods due to excessive rainfall." In August the number of deaths recorded was 39,060, in September it rose to 66,351 and, in the following months of October and November, the appalling figures of 129,170 and 125,410 were registered. No details of any researches into the special pathology of the disease are recorded, but it is believed to have been a malignant form of malarial fever acting on a population enfeebled by privation.

Dysentery and diarrhœa, as was to be expected, were more fatal than usual, and the increase over the average mortality was fairly general throughout the province, though it fell with special force upon the famine stricken areas.

Further details are given in the tables included in the appendix to this section to be found at the end of the report ; it only remains in this brief review to give the incidence of mortality on the different sects. Hindus died at the rate of 52·83 per mille against 30·7 in 1899; for Muhammadans it was 43·62 against 28·55 in the previous year ; for Native Christians 32·16 against 18·23 ; while for Other classes the enormous rate of 170·6 was recorded against 138·45 in 1899, but it is noted that the classification under this head is erroneous, and it may be added that there were only 6,067 persons included therein at the census of 1891.

85. The number of births registered during the year was 303,121, a decrease of 146,774 on the total of 1899, when, however, the highest number ever attained was recorded. The ratio per mille of the population of the recent census was 30·8 and on the old census 31·9, against 47·35 in the previous year and a quinquennial mean of 33·98. The falling off then is not so great as might be expected in a year described as "one of dire famine and distress." In 1897 when famine was also widely prevalent "but in a less severe form," the number of births fell to 254,973, or 26·83 per mille, but it must be remembered that this rate was greatly influenced by distress and scarcity and even famine in the latter half of 1896.

All districts share in the decrease when the figures are contrasted with those of 1899, and in all save two, the rate was below the decennial mean, and in all save five, the number of deaths exceeded that of the births ; all over the province the "natural decrease" amounted to 236,113 or 24·85 per mille.

The causes to which these results are attributed are summarised by the Sanitary Commissioner as follows : severe and wide-spread famine, with all the "hard conditions of life" connoted thereby, unsuitable and deficient nourishment and deficient clothing ; epidemics of cholera, autumnal fevers and small-pox ; a deficient and contaminated water-supply and the "special unhealthiness of the year due to heavy rain after unprecedented drought." To these may be added the distress consequent on the wanderings of large numbers of sickly and famished people in search of work and relief, which was complicated by the influx of unknown numbers of equally distressed people from over the borders. It will be obvious that the sum of these disturbing factors produced such alterations in the distribution of the population in the different registration areas that the purely local rates recorded afford no satisfactory indications for comparison with normal years, and a comparison with the famine year of 1897 is not likely to lead to useful conclusions, inasmuch as the vital statistics of that year were profoundly affected by the distress in 1896, whereas the two years antecedent to 1900 were a period of renewed prosperity and extraordinary fecundity. Thus it happened that when the people had to face the calamities of the year under review, they were as a body the survival of the fittest in the former struggle, fortified by a period of rest and good nourishment, while at the same time there was a far larger infantile population than in 1897. Here was its most vulnerable point, and we find that the tribute paid by the infantile section was far higher than in the previous famine. Altogether the age constitution of the population was radically altered by the previous famine and the subsequent prosperity, and in 1900 everything was in favour of far greater resistance to the renewed untoward conditions, save only as regards the infantile section. These considerations are supported by the general statistics of mortality, the main features of which

are: (1) a large excess over the mean, but a decrease when contrasted with the figures of 1897, (2) lower death-rates at all age-periods save the first (under one year) in 1900 as compared with 1897. It is not denied that the arrangements made for the supply of food and shelter and for all measures of amelioration which foresight and the experience of the previous famine dictated, operated to a large extent in producing these results, but when all the facts are fairly considered, there can be no doubt that the previous calamity, followed as it was by a period of prosperity, contributed to the comparative immunity of the people in 1900.

Altogether 539,234 deaths were registered against 266,930 in the previous year and 658,822 in 1897, figures which yield ratios per mille of 56.75, 28.09 and 69.34 respectively; it may further be noted that the non-epidemic mortality during 1900 was only 49.31 per mille, against 62.94 in 1897, which must be subject for congratulation, whether we look to the measures of relief afforded or to the natural immunity acquired by previous elimination of the most unfit. As compared with 1897 the death-rates were lower in 11 districts and higher in 9, the increase varying from 7.56 per mille in Betul to 73.65 in Sambalpur, and again, it is to be noted that where the rates had been lowest in 1897, these were, generally speaking, highest in 1900.

Calculated on the obsolete census population, the death-rate of children under one year of age was 580.19 per mille for males and 506.12 for females; calculated on the number of births recorded during the year, the figures are 493.2 and 463.6 respectively. Keeping to the births as the basis, the mortality rates in 1899 were 241.5 and 215.7, and in 1897 they were 407.4 and 391.8, respectively.

As regards the chief diseases to which the people succumbed, cholera (see Section VI) accounted for 63,114 deaths (6.64 per mille of population) the highest number recorded since 1869, when a ratio of 10.5 was reached. Small-pox carried off 7,005 individuals, of whom 4,221 were children under 10 years of age, the ratio per mille being 0.74 against a quinquennial mean of 0.42. The unusual concentration of children in relief camps and the influx of unvaccinated persons from Native States might have been expected to promote wide epidemic prevalence of the disease, but vaccination operations appear to have kept it in check.

To fevers were ascribed 272,683 deaths against 153,647 in 1899 and 389,335 in 1897, which yield millesimal ratios of 28.7, 16.17 and 40.98 respectively. The disease "appeared to be of the ordinary malarial type" and was most prevalent as usual during and after the rains; no cases of "famine" or relapsing fever were observed, though carefully looked for.

As was to be expected, the death-rate (5.16) from dysentery and diarrhoea was exceptionally high, indeed it amounted to double the decennial mean and to more than four times the rate for 1899 (1.25); it was however much lower than in 1897, when a rate of 8.53 was recorded. The figures however are so unreliable, and so many of the deaths really due to these causes were ascribed to fever, that one can only derive an idea of their importance in the death returns from the fact that they were at least twice as fatal as in an ordinary year. The failure of the rains converted all water sources into "stagnant and stinking pools," and the people, deprived of their natural food grains, had to subsist on inferior and less wholesome substitutes.

Among Hindus the death-rate was 49.32 in 1900, against 25.46 in 1899 and 59.72 in 1897; among Muhammadans, the respective rates for the same three

years were 50·4, 29·87 and 52·61; similarly, for other classes, they were 99·48, 42·35 and 126·23, respectively, a comparison which is, again, favourable to the effects of the last famine.

Lastly, it may be noted that the important questions briefly touched upon in this, necessarily, cursory review of the effects of the famine on the vital statistics of the affected areas have received the most careful and detailed examination, but it is impossible within the limits set to this report to give the results in extenso; some of the main conclusions have been set forth in the prologue to this Section and in this sketch of the figures furnished by the Central Provinces, but these should certainly be supplemented by a reference to the Report of the Famine Commission of 1901.

86. This small province, having a population of between 2½ and 3 millions, is contiguous to the Central Provinces, and the history of the year 1900 is very similar to that just related; a severe famine prevailed in a highly prosperous agricultural community which had never previously known straiter times than those brought about by high prices, and hitherto Berar has been considered free from any great risk of this visitation.

A simple comparison of the main vital phenomena recorded in the last two years will show the enormous fluctuations to which these are subject among a population living close to the soil and vibrating to the capricious processes of nature.

		Births.		Deaths.		Increase or decrease.
1899	...	144,034	...	113,992	=	+ 30,042
1900	...	89,302	...	236,022	=	-4 6,720

That is to say there were 54,732 fewer births and no less than 122,030 more deaths in 1900 than in the previous year. The discussion of the significance of these figures is beset with difficulties owing to the intrusion of the unknown factor of immigration from Native States, and owing to the wandering of the indigenous population in search of work and relief.

The birth-rate, which stood at 50·5 per mille in the previous year, fell to 31·3, the mean of the quinquennium being 39·4, these calculations being made on the census population of 1891; on the recent census figure the ratio for 1900 works out at 32·4 and a reference to the figures given for the Central Provinces will show that similar causes produced almost identical effects as regards the fecundity of the people. The highest district rate was returned by Wun, 34·2, and the lowest by Buldana, 26·9.

The total number of deaths recorded was 236,022, giving a ratio per mille of 82·7 against 39·9 in 1899 and 41·9 the mean of the quinquennium, the increase being general in all districts; Basim with 110·8 and Buldana with 95·4 returned the highest death-rates, and it was hither that destitute refugees from Native States chiefly flocked, the lowest rates being 73·4 in Amraoti and 67·2 in Ellichpur.

The excess over the rates recorded in the neighbouring and probably equally affected Central Provinces is largely due to the fact that this was the first famine in Berar; scarcity due to high prices was the worst effect experienced in 1897, and consequently the process of elimination was very imperfectly effected in that year, and the people fell a ready prey to famine and epidemic disease, the death-rate being raised by the mortality among destitute refugees from outside.

From May to October when conditions were at their worst, the people died at the enormous rate of 111·2 per mille per annum. One of the notable features

of this mortality was the severity with which it fell on the most robust age-periods: between the ages of 10 and 15 it was nearly four times the normal, while for the combined procreative age periods (10 to 40 years) it was $2\frac{1}{2}$ times the normal average; nothing could more clearly indicate the serious and searching nature of the distress when it is borne in mind that the total death-rate was only about twice the normal.

Turning to the infantile mortality rates, we find them rising from 231 in 1899, with a range of from 196 (in Wun) to 264 (in Ellichpur), to 490 in 1900; in Basim it was 619 and in Buldana 540, showing that in these districts considerably more than half the children born died within the year.

The urban mortality was at the rate of 87·2 against 82·1 in rural areas.

One of the severest epidemics of cholera on record afflicted the famished people, 18,375 deaths being recorded, or 6·4 per mille against a quinquennial mean of 2·4, but the Sanitary Commissioner affirms his belief that probably 10,000 deaths from this disease were registered under other heads.

The mortality from "fevers" rose from 49,938 in 1899 (17·5) to 84,017 in 1900 (29·5), the increase being general in all districts, Wun furnishing the highest rate, 41·3, and Ellichpur the lowest, 20·7. Influenza was present in epidemic form, but there was no "famine" or relapsing fever; towards the autumn the type was definitely malarial, with hepatic complications and jaundice, and these cases were notably fatal.

Dysentery and diarrhœa, which accounted for 20,263 deaths in 1899, were reported to have caused no less than 63,860 deaths in 1900, this enormous increase being ascribed to the consumption of bad grain which was removed from underground pits to meet the demand, as also to imported lentils to which the people were unaccustomed, and to contaminated water.

The rise in the mortality ascribed to "other causes," which amounted to over 50 per cent. on that of 1899, was, it is said, chiefly due to the prevalence of lung diseases which followed influenza, and carried off large numbers of the very young and the very old.

Muhammadans, a very small section of the population, died at the rate of 66·8 per mille against 36·4 in 1899; the rate for Hindus was 81·3 against 40·0 in 1899; for Christians, 128·9 against 27·1, and for Other classes 140·1 against 44·4.

87. The total number of births recorded during the year was 1,049,199, against 1,048,335 in 1899, and the ratios per mille on the old census population are 31·8 and 31·3 respectively; it is at present impossible to say how the new census figures will affect these rates, as although the provisional total has been furnished, an unknown number, some 2 or 3 millions, are not under registration; it may however prove that the true birth-rate for the year is just under 30 per mille, the quinquennial mean being 29·3.

The birth-rate has shown a consistent tendency to rise throughout the decade, to an extent not altogether due to the increase in population, and this must be attributed in part to better registration, a matter for which there is still room for considerable improvement. For here we have a large Indian population (some 35 millions in all) with a birth-rate on the estimated population ranging during the last 10 years from 22·0 to 27·4 per mille, and yet increasing at a substantial rate. The recorded death-rates on the census population have similarly varied

from 19'3 to 26'2 during the same period, so that if these figures could be accepted, the natural increase would be accounted for. Such low death-rates however at once throw doubt on the reliability of the registration returns, and a study of the statistics raises the strongest presumption that both births and deaths are gravely understated.

This is indeed the opinion of the Sanitary Commissioner, who last year affirmed that in the opinion of the registration agents the birth of an infant who did not survive the first year of life was often deemed unworthy of record, and again, on the other hand, "there is a tendency to ignore the deaths of infants". The low birth and death-rates and the wide range of variation in the rates in different areas, are the outstanding features of the vital statistics of this Presidency, and obviously the pressing need is a reform in registration. To this end, the new Act for compulsory registration of vital phenomena in villages was brought into partial operation towards the close of the year under review, 400 village communities being included in its scope as a first step, and it is scarcely too much to hope that surely, if slowly, a complete revolution in the character of the statistics may be looked for.

The City of Madras stands first as usual with a birth rate of 46'1 and is followed by Chingleput District (near Madras) with 40'2, while the rates for Nellore and Cuddapah fall to 27'0 and 26'5, respectively, the urban average being 36'9, against a mean rural rate of 31'4. Where the birth-rate fell off in comparison with the previous year it is generally attributed to the effect of high prices inducing scarcity, which in four districts bordered on famine.

The deaths recorded in 1900 aggregated 770,859 or 23'4 per mille, against 675,094 or 20'1 per mille in 1899, and a quinquennial average of 21'3. All save four districts shared in this increase, which is attributed chiefly to the unusual mortality from fevers and bowel complaints. The highest death-rate was recorded by Madras city (46'8) followed by the Nilgiris (34'4), while at the other end of the scale, Ganjam had a rate of 16'4, and for three other districts it was below 20 per mille. The average urban rate was 32'6 against only 22'6 in rural circles.

The infantile mortality rate, calculated on the births, rose from 159 in 1899 to 164'9 in 1900, with a range of from 115 in Malabar to 282'8 in the Nilgiris. An average rate which is less than that of France, is obviously open to more than suspicion.

The death-rates recorded against the different sects are as follows: Hindus, 23'5 against 20'3 in 1899; Muhammadans, 22'3 against 18'6; Other classes, 11'2 against 23'6; and Christians, 22'1 against 16'3 per mille.

The details as to the chief causes of mortality will be found in Section VI, and other particulars in the tables included in the appendix.

88. Under the instructions recently issued by Government for the condensation of reports, the materials furnished this year from the small province of Coorg are extremely meagre and indeed consist, so far as at present available, of the bare tables of statistics. From these it appears that the total number of births recorded during 1900 was 4,542 or 26'25 per mille of the population, the previous year yielding 4,427 or 25'59 per mille, and the mean for the quinquennium being 23'0.

The aggregate number of deaths which was 4,845 in 1899, a ratio per mille of 28'0, rose to 6,302 in 1900 or 36'42, as compared with an average for the previous five years of 33'04. The urban rate was 52'48, against 34'83 in

rural areas. No fatal case of cholera was recorded during the year; small-pox accounted for 314 deaths (1·81 per mille) which is twelve times the average for the quinquennium; and for the rest it may be said that to "fevers" which carried off 4,840 persons, 77 per cent. of the total mortality is ascribed. The infantile mortality rates, calculated on the births, were 318 for males and only 260 for females, which suggests that many of the deaths of the latter are unrecorded.

Muhammadans died at the rate of 37·19 per mille; Hindus at 35·7, and Other classes at 65·44 per mille.

89. The history of this Presidency in 1900, as disclosed by the vital statistics, is a pitiable one, and all the more so that it is the climax of a long period of distress and retrogression due to the prevalence of pestilence and famine. The deaths exceeded the births in the year under review by no less than 813,121; the death-rate rose to 70·07 per mille, which is by far the highest on record, the highest annual rate during the previous 20 years having been 39·84 registered in 1897.

The birth-rate, on the other hand, was the lowest on record, having fallen from 36·42 in 1899 to 26·87, the decennial average being 35·32 per mille.

There would be nothing gained by contrasting the rates of the different local areas, or by instituting comparisons with previous years; famine or dire scarcity prevailed everywhere, save in the southern registration division embracing only 4 districts; and throughout the Sanitary Commissioner's report one is constantly baffled in trying to arrive at definite conclusions by the extraordinary movements of the population which are incidentally referred to. Famine drove large numbers to relief camps and raised the rates in poor-houses included within municipal limits; plague is said to have caused movements in the opposite direction, *viz.*, from the towns to the rural areas, to escape the sanitary regulations; cholera caused large numbers to fly panic-stricken from one place to another, and beyond these inter-provincial tides there was probably a considerable outflow of emigrants. And this complex movement of the people has probably been to some extent in operation for the last few years, so that all deductions based on the distribution of the population in 1891, on which the rates are calculated, are subject to fallacies it would be impossible to avoid. As regards the birth-rate, then, it will serve no useful purpose to enlarge upon the facts given in the table in the appendix to this section.

In 1899 the number of deaths recorded was 672,269, a ratio of 35·72 per mille; in 1900 the figures rose to nearly double, *viz.*, 1,318,783 and 70·07 per mille, respectively. This enormous mortality is referred to the different chief causes in the annexed statement, which also affords a comparison with the mean of the quinquennium 1891-95, when normal conditions may be said to have prevailed.

	Quinquennial mean, 1891-95.	1900.	Increase.
Cholera	... 24,416	... 163,889	... 139,473
Small-pox	... 2,636	... 9,885	... 7,229
Fevers	... 397,211	... 543,319	... 146,108
Plague	... Nil	... 33,196	... 33,196
Dysentery and Diarrhoea.	35,223	... 218,243	... 183,020
Other Causes	... 91,053	... 342,027	... 250,974
		TOTAL EXCESS	... 760,000

Criticism is baffled in face of these figures, and moreover the Sanitary Commissioner furnishes evidence that they fall short of the truth. At the same time it is to be noted that of the total excess (762,298 deaths) no less than 610,959

deaths are distributed between two registration divisions only, the Western and the Gujarat; in the former the death-rate is 82·96, and in the latter 156·47 per mille, and it was here that the effects of famine were most severely felt.

Cholera is dealt with in the subsequent section. The mortality from small-pox was the highest on record for the past ten years, and the circumstances under which the people lived afford a sufficient explanation. The total number of deaths, given above, is equal to a ratio of 0·52 per mille against a quinquennial mean of 0·12; in the City of Bombay it was 3·71, largely due to the influx of destitute refugees.

The deaths from fevers gave a ratio per mille of 28·87 against 12·14 in 1899 and a decennial mean of 20·57, and this latter includes the plague deaths registered from 1896 to 1899. The mortality was greatest in the famine areas, and notably in Gujarat, in two districts of which the rates rose to 111·27 and 167·77 per mille, but these figures certainly include very many deaths from other causes. A careful investigation failed to produce evidence of relapsing fever save in Bombay City, where this disease has been endemic for years.

The deaths ascribed to dysentery and diarrhœa are equal to a ratio of 11·59 per mille against a quinquennial mean of 3·07.

"The consumption of badly cooked or of raw grain, of grain to which the people were unaccustomed, and even of wild seeds, leaves and roots, * * these are the chief causes, along with a deficient and contaminated water-supply, of the epidemic of dysentery and diarrhœa".

The extraordinary rise in the mortality from "other causes" is attributed to the prevalence of plague, "which has made registrars careful not to put too many cases down to fever, which attracts enquiry"; to famine and, to some extent, to improved registration.

A closer analysis of the incidence of mortality than is afforded by the tables in the appendix, is little likely to yield reliable results, for the reasons given in the discussion on the birth-rate.

The death-rate among Muhammadans was 43·59 per mille against 26·98 in 1899; among Hindus, 77·36 against 38·12; among Christians, 52·64 against 38·66; among Parsis, 35·74 against 32·06; and among Other classes, 20·20 against 12·74 per mille in the previous year.

90. The annals of this province for the year 1900 afford a striking contrast to those of the peninsular areas it has just been
Burma.
our melancholy duty to discuss.

The extraordinary increase in the population during the decade has been alluded to in the prologue to this section, and though the facts as to immigration have not yet been disclosed, it cannot be doubted that the "natural increase" has played a predominant part in the result.

The total number of births registered in Lower Burma which was 165,229 in 1899, a ratio per mille of 37·04, rose to 171,183 in 1900, or 38·37 on the old census figure, against a quinquennial mean of 32·85. On the new census population, the births recorded in 1900 give a millesimal rate of 31·8, and this is only one indication that the efforts made to register the simple vital phenomena are only very partially successful. This is a matter which is receiving the careful attention of the authorities, and a high standard at this stage of our relations with a comparatively recently acquired province and a shy people could scarcely be expected. The rates vary from 48·17 per mille in Sandoway district and 47·96 in Pegu and 47·12 in Hanzada, to 32·93 in Akyab, 31·95 in Thaton and 17·43 in

Rangoon City, the last result being largely due to the relatively small female population and to the floating nature of a large proportion of the whole population, this being the gate of Burma by which large numbers of emigrants enter.

The average urban rate is 27.55 against 39.06 in rural areas, the former being lowered by the very unequal sex-distribution of their population in many of the towns. For all this, there are signs of greater care in registration in the rural areas than in the towns, and when the average rate in the 13 selected towns in Upper Burma (which can legitimately claim more indulgence) is found to be 36.87 per mille of their population, the case for more energy in, and more stringent scrutiny of, the work of registration in the towns of the lower province, is emphasized.

The record of births in Upper Burma is confined to 13 selected towns, the rate for which has been given.

The total number of deaths registered in Lower Burma was 122,714 against 121,771 in the previous year; the ratios per mille on the census population of 1891 being 27.51 and 27.30, respectively, and the quinquennial mean, 25.14. If the rate for 1900 is calculated on the new census figure, it amounts to only 22.8, which is scarcely consistent with the evident probabilities, with the evidence of defective registration which an examination of the statistics discloses, notably the wide range of variation in the total rates and in the infantile mortality rates.

The districts of Kyaukpyu and Myaungmya furnish death-rates of 33.31 and 33.20 respectively, while that for Rangoon City is 42.39; on the other hand the Mergui rate is 21.49, that for Thaton 21.34 and that for Prome only 19.59. In the towns the death-rates range from 48 per 1,000 in Myaungmya to 16 in Prome, the average urban rate being 32.7, while that for rural areas is 26.71.

Calculated on the births, the infantile mortality rates ranged in the 5 different divisions from 207.9 in Arakan to 135.14 in Tenasserim, figures which indicate approximately the attention paid to registration in the two areas. At the best the rates must be held to be gravely inaccurate, and when they are worked out for males and females separately, still greater anomalies are exposed. For instance, in Amherst district the female infantile mortality rate is only 83, and in Margui only 97, and it is quite evident that while the deaths of many infants of both sexes are lost to account, the error is gravest as regards the females.

In Upper Burma, while only 13 selected towns return birth statistics, deaths are registered in a larger area comprising a population of about 2½ millions. The total number of deaths recorded in 1900 was 53,496, a ratio of 21.8 per mille, against 51,615 and 21.03 per mille in the previous year; no quinquennial mean is available for comparison. The average rate for districts was 21.8 per mille, ranging from 32.91 in Kyaukse to 13.96 in Myingyan; the mean rate for towns was 32.83, and for rural areas 20.19. Registration is of so recent institution that further discussion of these figures is unnecessary, but it is hoped that, if only for purposes of education, the area under registration in the upper province will soon be extended, and this might, it is thought, be done forthwith as regards the births, if only to assimilate the population under registration for both births and deaths.

The incidence of mortality from the chief causes presents no special features of interest, the figures under each head approximating fairly to the average; the tables in the appendix will therefore supply all necessary data.

As regards the incidence on the different sects in Lower Burma, the record is as follows: Hindus, 39.04 per mille; Burmese and Buddhists, 27.38; Muham. madans, 24.6; Other classes, 31.85; Europeans and Eurasians, 17.31; all these rates showing very little variation from those of the previous year.

The first part of the paper is devoted to a general survey of the history of the subject, and to a consideration of the various theories which have been advanced to explain the phenomena observed. It is shown that the theory of the continuity of matter, as proposed by Descartes, is not only inconsistent with the facts, but also with the principles of mechanics. The theory of the discontinuity of matter, as proposed by Leibniz, is also shown to be inconsistent with the facts, and with the principles of mechanics. The theory of the continuity of matter, as proposed by Newton, is shown to be consistent with the facts, and with the principles of mechanics. The theory of the discontinuity of matter, as proposed by Laplace, is also shown to be consistent with the facts, and with the principles of mechanics. The theory of the continuity of matter, as proposed by Laplace, is also shown to be consistent with the facts, and with the principles of mechanics.

The second part of the paper is devoted to a consideration of the various experiments which have been performed to determine the nature of matter. It is shown that the experiments of Boyle and Mariotte, of Cavendish, of Laplace, and of others, all tend to show that matter is continuous. The experiments of Laplace, and of others, also tend to show that matter is discontinuous. The experiments of Laplace, and of others, also tend to show that matter is continuous. The experiments of Laplace, and of others, also tend to show that matter is discontinuous.

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SECTION VI. GENERAL POPULATION.

HISTORY OF CHIEF DISEASES.

Cholera.

91. The mortality from cholera which in 1898 and 1899 had been the lowest on record during the eighteen years then concluded, rose with an appalling bound in 1900 to the highest total of which we have any authentic record. The number of deaths recorded in British territory which was 152,703 in 1898, giving an average ratio per mille of the total population under registration of $\cdot 70$, rose to 171,410 in 1899 (ratio per mille $\cdot 78$) which, however, is considerably less than the average annual mortality in the single province of Bengal. In 1900 the number of deaths registered reached the enormous figure of 797,222, equal to a ratio per mille of $3\cdot 7$ as compared with the quinquennial mean of $1\cdot 5$. If the returns from Native States be included, and if defective registration be allowed for (and many deaths from this cause escaped recognition or were returned under other heads in the tracts affected by famine), there can be no doubt that the true aggregate number of victims exceeded 900,000.

This exceptional prevalence of the disease was very generally, if not equally, distributed all over India Proper, but in Burma the mortality was considerably less than the average (see Statement No. III in Appendix A to Section VI at end of this report). It will be remembered that an exceptional feature of the epidemic of cholera in 1899 (see report for that year) was the abnormal incidence upon the last quarter, no less than 44 per cent. of the total mortality falling within that period, and the months of November and December ranked first in point of unenviable precedence. Deaths were reported from all provinces in December, —except the very small areas of Ajmer-Merwara and Coorg,—and in numbers generally in excess of the normal prevalence at this time of the year. Only five districts out of 46 in Bengal, and only two out of 11 in Assam were reported free of fatal cases in December; nearly one-third of the districts of the North-Western Provinces and Oudh and of Madras were infected, and serious outbreaks were reported in three of the districts of the Punjab; Bombay and the Central Provinces alone were comparatively free, though three districts in the former and two in the latter reported deaths in the last month of the year.

The *materies morbi* was, then, extraordinarily widespread at the commencement of the year under report, and it only required a continuation of favouring conditions of environment and a susceptible population to produce the results we have to deplore. And so far as our present knowledge enables us to

indicate and appraise the favouring conditions, they were abundantly forthcoming. It would be difficult, as of course it would be fallacious, to endeavour to summarise in a sentence the general meteorological features of the year over the vast area of this continent, but generally speaking it may be said that the monsoon ceased exceptionally early in 1899, and that the conditions thus produced were intensified by the comparative lightness or absence of the winter and spring rains and by the late onset of the great monsoon in 1900. Looking no further than to the effect thus produced on the drinking-water supplies, which for the enormous majority are drawn from superficial sources (rivers, open "tanks" and shallow wells, all within, or close to, crowded inhabited sites and almost invariably subject to gross pollution), it is not difficult to follow the course of events produced by prolonged drought among a population as careless, ignorant and fatalistic as that of India. The supply of one of the prime necessities of existence—and the most imperative—was cut off at innumerable habitual sources, causing an overwhelming call on those that remained which were for long months at their lowest ebb and subject to all the deteriorating influences of stagnation, and to greatly enhanced risks of pollution. Add to this the widespread presence of the specific agent of the disease, and it is difficult to understand how any but the naturally immune escaped the penalty of infection. Briefly, the number of available sources of water-supply was enormously diminished, while those that remained were exposed to inevitable specific pollution and radiated a far wider malign influence in proportion to the greater call made upon them. Scarcely any precautions would avail against such conditions; counsels of perfection are frequently a bitter mockery to those for whom they are proposed, and surely to the enormous mass of the famine-stricken and to the majority who were not far from famine, advice to boil their drinking water would have come with the force of the bitterest mockery.

The districts which were infected at the end of the previous year, and those which suffered most during 1899, were generally speaking those in which the disease first assumed epidemic force in 1900. Then month by month as the unfavourable conditions developed, as the drought became more intense and wide-spread and as scarcity became famine over large tracts,* the mortality rose steadily or by bounds, the result being that although the prevalence of the disease varied considerably in different areas with the sum of the conditions that go to favour its propagation, yet it may be said that only nine districts within the bounds of British territory, from which alone approximately accurate records are received, were entirely free from fatal cases throughout the year.

This brief general survey may conclude with an allusion to cholera in Native States and in the neighbouring territories of Afghanistan and Baluchistan so far as the imperfect records available permit. In the twenty States included in Rajputana, where registration is very defective, 28,719 deaths were reported during the year, giving a ratio of mortality of 2·4 per mille on the census population of 1891, and a ratio of 2·9 on the population of 1901. Famine was generally prevalent throughout this area and the more or less aboriginal tribes (Bhils) suffered very severely.

In the States comprised in Central India, 18,545 deaths were reported, giving a death-rate of 1·8, but here as in Rajputana there can be no doubt that many deaths escaped record.

In the seven cantonment stations in the Hyderabad State from which reports were received, there were 3,813 deaths registered, which yield a ratio of 10·4 per

* For a more extended reference to the effects of Scarcity and Famine see Section V on "Vital Statistics" and the account of cholera in the different Provinces which follows in the present section.

mille on the aggregate population. In all the above three areas the disease may be said to have first appeared in March or April and to have attained its greatest intensity in May, June and July, with the culmination of the heat and drought, and to have died out in October after replenishment or reinforcement of the scanty water sources and the fall of the temperature.

In June the Government of India received intimation of an outbreak of cholera in the Khyber area of Afghanistan, and a little later, authentic reports of a widespread and virulent epidemic in other parts of the country, Kabul itself suffering severely. The disease appears to have disappeared in September, at any rate in its epidemic form, but no official record is available. The facts as to an epidemic in Baluchistan can merely be recorded in much the same terms; the disease was believed to have been introduced by travellers from both India and Afghanistan; the epidemic was at its worst during June and the three following months.

In August, cholera was reported to have broken out in Kashmir, and its introduction was traced, on reliable evidence, to importation from the Punjab where the disease was, and had for months been, epidemic. The year closed with the disease still widely prevalent.

The foregoing details may afford a bird's-eye view of a historic epidemic; we see cholera abnormally prevalent in the true endemic area of Lower Bengal and the Assam valleys at the end of the preceding year. There was in this area a comparative lull, but still widespread prevalence, during the early colder months of 1900, and then following the normal epidemiological course, there was a rapidly progressive rise to the highest development in the hottest and driest period preceding the monsoon, no marked depression occurring until the rains were well established. Beyond this area as we move westward the maximum prevalence is, as usual, found to be later and coincident with the first rainfall, the epidemic tide rising to its highest in the North-Western Provinces in June and in the Punjab in July, while at about the same time it pursues its ravages in the trans-frontier territories and then flows into Kashmir.

The Madras epidemics pursue their normal characteristic course, subject to the influence of the two monsoons, a matter to which attention was directed in the last Annual Report (see page 136).

The statements given in the appendix at the end of the Report will serve to elucidate the foregoing sketch.

92. Before reviewing the most prominent features of cholera prevalence in the

General considerations on the subject of cholera and sanitation in India.

different Provinces, it is impossible to refrain from a few remarks on the significance of the facts summarised. Taking the last four quinquennial periods, it cannot be said that any appreciable effect has been made upon the death-rate from this disease among the general population. While the mortality among British troops and the prisoners (with a daily average strength of 75,000 and of a little over 121,000 respectively) has been steadily reduced (and it must be borne in mind that among these classes registration of death-causes may be said to leave nothing to be desired), cholera comes and goes and leaves its mark upon the general population with a rhythmic intensity and lull that so far has defied our efforts to control it. It is late in the day to affirm that, in a true and broad sense it is "a filth disease," and that its prevalence connotes a failure to secure a certain standard of hygienic righteousness. While allowing for the special difficulty this country labours under from the fact that the causative flora find an indigenous

habit at in many parts, the lesson of such epidemics as fall to be recorded here from year to year is plain, if the practical issue involved be one of enormous difficulty. It is true that to some extent the figures recorded have previously been so defective that the improvement which has recently been secured must lead to the impression of a larger comparative mortality. Any comparison with the past is subject to the gravest fallacy, but still it is certain that the figures as they stand are considerably short of the truth. Figures which run to millions are apt to be unduly staggering, and it may be urged that an all-round rate on the total population of less than 2 per mille is a comparative trifle when set against a total death-rate of 30·5 (the mean for the five years ending in 1899 for all India, under registration). But it must be confessed that it has a far deeper significance for the sanitarian and the State. The conditions which favour cholera are similar to those which probably favour the whole class of bowel complaints, which doubtless claim something like one-third of the total harvest of death in India, though the imperfect records fail to exhibit them in this light. While laboratory research will doubtless elucidate many of the epidemiological problems, the cardinal principles of prevention were firmly established before the discovery of the true living agent, and we know that in Sir John Simon's words that this is a "disease against which there may be found security in the cultivation of public and private cleanliness;" * * * "such cleanliness as consists in the perfect adaptation of drainage, water-supply, scavenging and ventilation to the purposes they should respectively fulfil," conditions which may, in this connexion, be summed up in the securing of a pure soil and pure water.

How do we stand in regard to this obligation? The conditions under which the great bulk of the population lives makes the task of applying our knowledge of the etiology of these "filth diseases" one of extraordinary difficulty. Nine-tenths of the people live under conditions that do not permit of constant effective sanitary control by the comparatively small organization at our disposal. At the census of 1891 only some 27,000,000 souls (less than one-tenth of the whole) were to be found in towns containing a population of 3,000 and upwards, and the larger urban communities alone are subjected to constant expert sanitary supervision though efforts have been made, in recent years, to reach the villages. Probably not more than an aggregate population of 5,241,265 enjoy the benefits of a properly conserved public water-supply, and certainly far less than that number avail themselves of it, and this fact at once brings to light the almost ineradicable prejudice for standing upon the ancient ways that has to be encountered in this question of cholera prevention, as, indeed, in every direction.* The result on the water-supply of a calamity such as a failure of the rains has been briefly touched upon. Then as regards pollution of the soil, the almost universally prevalent "trenching system," which probably has no rival when carried out with due regard to all the essential conditions, opens the way to very special and obvious dangers when it resolves itself into dumping filth anywhere and everywhere within and around inhabited sites and near water-sources, as is generally the case. Where adequate knowledge and control are available (as in the larger towns), the difficulties are often insuperable, while, where as in the case of village communities

* Take the metropolitan city of Calcutta for instance, which has a filtered water-supply. The Health Officer in his report for 1900 says:—"Mud is required for the coating of walls of huts" and for building purposes. "To provide this material holes have been dug in the soil with the result that every little collection of huts or houses contains one or more 'tanks' * * * used for bathing, washing clothes and even for drinking and other domestic purposes. Nothing could be more filthy than the water of these tanks." And again: "in the central part of the town there are not many tanks left, but in all the suburban area the number is enormous." "There are still a great number of wells in the town, and the water they yield is not safe to drink." Year by year a number of these tanks and wells are filled up, but the difficulties are very great, and as the water-supply is not constant, it is not possible to insist on a general measure of filling up.

" trenching " might be carried out to the best advantage, the essential knowledge and control are, as a rule, wanting.*

In face of these conditions and of the ignorance and apathy which beget them, it is incumbent upon Government to reorganize and extend the sanitary service, to bring it into closer touch with the scattered rural masses and to bring them education and assistance, while redoubling efforts in the larger centres. A scheme to this end doubtless presents difficulties; the " silent deep disdain " of an oriental people must be treated with consideration, and they cannot be dragooned into western methods in matters concerning their private life. There are also financial difficulties in a country which has recently passed through a series of crushing calamities from the failure of several harvests. But it is believed that these difficulties are not insuperable, and that Government is prepared to consider proposals which have been put forward for the reorganization and extension of the sanitary department, which it is hoped will mark a new era in the campaign against the more preventible causes of disease and death. (See also remarks on the subject of Malaria in Section IX.)

93. In Bengal, in 1900, the total number of deaths registered as due to cholera was 345,878 or 4·86 per mille of the population, against 107,678, or a ratio of 1·51 per mille in the previous year, and 65,020 (0·91 per mille) in 1898. Previous records of the disease in this its so-called " home " and endemic habitat, afford no parallel to the mortality of the year under review. The disease prevailed severely in every district, in no less than 35 out of the whole 46 the death-rate being in excess of 2 per mille; deaths were reported from 33,142 villages (about one-seventh of the total), while it assumed epidemic form in 228 registration circles, or in nearly one-third of the whole number, only 17 circles being exempt against 89 in 1899 and 130 in 1898.

The highest district death-rates were 23·77 in Purnea and 11·74 in Champaran; Cuttack, Palamau, Bhagalpur, Muzaffarpur, Shahabad and Dacca also suffered severely, the rates ranging from 8·48 to 7·1, while in 13 others the range was from 6·25 to 4·0 per mille. This exhibits the widespread nature of the epidemic in its most virulent form.

In 19 towns the death-rate ranged from 10·14 (in Kendrapara in Cuttack) to 30·42 (in Daltonganj in Palamau), and in 47 rural areas, from 10 per mille in Madhuban in Champaran to 42·08 and 57·23 in two areas in the Purnea district. The urban mortality as a whole was at the rate of 5·06 per mille against 4·85 in rural areas, where, however, registration is far less reliable.

94. The number of deaths attributed to cholera in Assam was 23,761, a ratio per mille of 4·51 on the census population of 1901. In the previous year 8,380 deaths were recorded, of which more than half occurred in the two last months. When the local distribution of the disease is examined, the fatal pre-eminence of the Brahmaputra Valley area, a constant feature of the reports, is at once apparent. The population of the Surma and Brahmaputra Valleys is approximately equal, but whereas in the former 6,791 deaths were reported, giving a ratio per mille of 2·56 and registration is here at its best, in the latter there were no less than 16,970 deaths, or a ratio of 6·47; the records show that in only two years has this mortality been exceeded.

The disease fell with the severest force upon the three districts of Nowgong, Darrang and Kamrup, in which deaths were reported from all the registration

* See Section X, Annual Report for 1898, pages 272 et seq.

circles and from about one-sixth of the total number of villages, the mortality giving death-rates of 24.95, 9.6 and 7.35 in the three districts, respectively. Nowgong is on the south bank of the Brahmaputra, adjoining Kamrup and facing Darrang; it is notoriously the most unhealthy district in the Province. Cholera was present during the last months of 1899, and to about the same extent in January of the year under report; there was a considerable increase in February and a sudden virulent outburst in March, maintained throughout April, during which two months 4,521 deaths out of the total of 6,529 occurred; after June, the disease suddenly lost its epidemic character, but deaths continued to occur in each of the remaining months of the year. This is the sixth, and by far the most severe, epidemic from which this district has suffered during the last 12 years, there being an outbreak after a quiescent interval of two or three years in each case.

The particulars afforded of the epidemics in the neighbouring districts of Kamrup and Darrang in 1900 are stated in very similar terms and, the area may be considered one and practically undivided, for the river which courses through is rather a connecting link as regards the propagation of the disease. The Sanitary Commissioner confesses that he is "unable to say to what these repeated outbreaks can be due" • • • "the habits of the people are as dirty and insanitary as possible; they never change for the better, and they could hardly ever be worse." Here we have another endemic area, in an alluvial valley, from which the disease can never be said to be absent, though for considerable periods it assumes a more or less sporadic form. Then at short intervals the conditions become favourable for a wide extension, and we see the disease suddenly assuming a virulent epidemic force, indicating contamination of a common fomite, such as the water-supply, under certain climatological conditions. In this comparatively compact area with a population of a little over one million souls, no less than 10,221 deaths out of the total of 14,103 occurred in the March—June period just before the onset of the rains. Over 20,000 persons must have been attacked in this period, giving an *annual* morbidity-rate of about 50 per mille! Much as there is to learn as to the conditions of life of the germ in the environment, it is surely not difficult to understand how, given its presence therein, a people whose personal habits are so forcibly described in the words quoted and who depend on surface streams and collections of water, should pay the penalty in this deplorable way.

It is worthy of note that the death-rate among the immigrant coolies on tea gardens was considerably less than that furnished by the general indigenous population, which is quite contrary to the usual results recorded. There were about 662,471 coolies employed in 1900, and of these 2,085 died of cholera, giving a ratio per mille of 3.15. The three districts which suffered severely are important centres of the tea industry, and a comparison of the death-rates suffered by the indigenous population and the garden coolies brings out the comparative immunity of the latter very strongly. In Nowgong, the general rate was 26.7, that furnished by the coolies was 2.3 only; in Darrang, the rate excluding the gardens was 10.95, and in the gardens 5.17; in Kamrup, the rates were 7.37 and 3.99, respectively. Some part of this relative immunity may perhaps be fairly ascribed to the effect of inoculation with Haffkine's "vaccine," while for the rest, there is good reason to believe that the sanitation of tea-gardens is receiving a larger measure of skilled attention, a matter for congratulation.

95. The total number of deaths recorded from cholera in 1900 was 84,960 against 8,142 in 1899, the millesimal rates being 1·81 and 0·17, respectively; the mortality has been exceeded on five occasions during the last 23 years, but while it is about $2\frac{1}{2}$ times the average for the last quinquennium, it may be noted that the death-rate vies with those of the Punjab and Madras in being the lowest recorded in India Proper during this disastrous year.

In fourteen districts the number of deaths reported did not exceed 107 in any one, and in two others no deaths occurred, so that in about one-third of the Province the disease did not assume a serious form.

The highest district death-rate was that furnished by Sultanpur (Oudh), *vis.*, 15·96 per mille; while among the towns, Ghazipur stands first with a rate of 4·82.

It is satisfactory to note that the Hardwar and Magh Mela (Allahabad) fairs again passed off without the appearance of epidemic disease, and this must undoubtedly be attributed, in a year like that under review, to the careful and systematic sanitary measures carried out. Here, indeed, we have the other side of the picture to that touched upon in the remarks on page 80, and one that redeems the record of our efforts from the reproach of futility.

96. The year 1898 was one of almost total immunity from the disease in the Punjab; in 1899, the deaths numbered 1,816, more than half of which occurred in two districts, where famine was prevalent. In 1900 the mortality figure rose to 28,260, giving a rate per mille of 1·37, against a quinquennial mean of 0·08; indeed, in only one previous year, that of 1892 when the deaths amounted to 75,959, has this mortality been exceeded within the last generation. But there were very special factors in operation to produce this result, as will be seen when it is stated that, of the total number of deaths recorded (28,260) no less than 15,731 occurred in the famine districts of Hissar, Rohtak, Karnal, Ferozepore and Lahore; in Hissar alone, where famine was at its worst, 6,399 deaths (or 23 per cent. of the whole) were reported, giving a death-rate of 8·25 per mille of population.

With the exception of Hissar and Rohtak, the Province was entirely free from cholera for the first three months of the year. In the two districts named, the epidemic was a continuation of the outbreak of the previous year, and the disease was at first confined to the famine relief camps. It is most unusual for cholera to appear in the Punjab in the winter months, and much must be ascribed to the constitutional effects of famine and the aggregation of debilitated refugees. It is supposed that the source of infection was a tank, the water of which was drunk by these refugees; the disease spread from camp to camp and subsequently to many towns and villages in the Hissar district. Thence the disease is stated to have been conveyed to a relief camp in the Rohtak district by famine labourers, and next it appeared in a relief camp in the Delhi district, among a gang of lower caste people (sweepers) who had been imported from Rohtak for duty. Next, in April, the disease broke out in Karnal, the first case being furnished by a pilgrim who had just returned from the Hardwar Fair. Thus the disease spread from place to place until in July, 26 of the 31 districts were infected and the epidemic was at its height, 9,711 deaths occurring in this one month, or one-third of the annual total. In August and September, though approximately the same area was affected, the mortality fell off greatly, and thenceforward the disease suddenly abated until in December only one district recorded deaths, *vis.*, Dera Ghazi Khan (17).

In the Punjab we find, as usual, the percentage of villages attacked very small compared with that in the endemic areas; in Bengal it was 14·8, in Assam, 16·8, while in the Punjab, where famine prevailed widely and refugees were passing to and from nearly all parts of the Province and where also every district was infected, we get only 6·6 per cent. For one thing the water-supply which is largely from deep wells is naturally more easily conserved.

97. In 1898 there were only 7 deaths reported in this area, and in 1899 the

Central Provinces.

number was only 76, a condition of immunity without a parallel in its annals. But in 1900 the mortality was the highest on record since 1869, 63,114 deaths being reported, giving a death-rate of 6·64 per mille against a quinquennial average of 2·65.

The Central Provinces, as is well known, had passed through the ordeal of a very severe famine in 1897, but it is said by the Sanitary Commissioner that "the actual physical famine-producing conditions were much less severe in extent and degree in that year than in 1900." Here then we have again the key to the enormous mortality recorded from a disease which finds in famine its chief ally, and unfortunately it cannot be doubted that very many cases escaped registration.

It is said that the infection was introduced on one side into Chhattisgarh from Orissa (Bengal) and the Feudatory States, and into the west from Berar and Indore, and it must be remembered that all these areas were affected and that continuous to-and-fro tides of immi—and emigration were in progress throughout the year, the people seeking escape from both famine and pestilence and large numbers restlessly moving on from one centre of relief to another.

In January only one district was infected, and the same applies to February if we exclude the Mahanandi Zamindaries from which the records are inaccurate. In March the disease spread to the districts contiguous to the Zamindaries, and altogether the death-roll rose to 1,252 from 40 in the previous month; in April only 8 districts were free, and 7,338 deaths were reported; the number rose to 11,811 in May and to 20,158 in June, falling to 13,148 in July and to 7,893 in August. Thereafter the disease lost its epidemic character until in November it was practically extinct, no deaths being recorded in December. Its progress in the earlier part of the year "was accompanied by unusual heat and dryness, for it was not until the second week in July that the monsoon was established"; thenceforth a rapid subsidence of the disease ensued. The Sanitary Commissioner reports that "the most strenuous efforts were made to combat the disease, and were most successful where the water-supply could be controlled; it is a fact worth recording that the disease never really gained a hold in the Public Works camps," though the figure he gives to support this view is open to criticism, possibly due to a clerical error. He goes on to say that during epidemics "all wells, small tanks and *jhiras* supplying drinking water to the affected localities, including famine-relief camps, were systematically disinfected with permanganate of potash, and it is reported that this was generally attended with good results." He furnishes various opinions by medical and civil officers in support of this view and in refutation of the recent tendency to question the value of such "disinfection." It is to be hoped that more definite and reliable facts may in future be obtained as regards the practical utility of permanganate in this connexion, based on simple records maintained at the time, and which it is proposed to issue on a uniform plan.

It remains to add that no less than 8 towns had a recorded mortality from this cause of over 20 per mille, the highest rate (37·7) being that returned from a small town in the Sambalpur district. No less than 21·3 per cent. of all the

villages were attacked, the disease was therefore widespread, and no object would be served in indicating here the special incidence in different districts.

98. The Hyderabad Assigned Districts have, physically, many features in common with the Central Provinces, and in 1900
Berar. a disastrous famine prevailed; in 1898 the area was entirely free from cholera; in 1899 only 541 deaths were reported, but in the year under review a severe epidemic claimed 18,375 victims, a death-rate of 6·4 per mille, which has, however, probably been exceeded on three previous occasions, *vis.*, in 1875, 1878 and 1883. In three of the six districts the disease was present during the last quarter of 1899; it appeared in a fourth district in January, in a fifth in March, and in April all districts were affected. It rapidly assumed epidemic proportions during the hot, dry period and culminated in July, when 6,452 deaths were reported; the number fell to 2,498 in August, after which the disease died out as rapidly as it had advanced. Registration is perhaps as complete and accurate in Berar as in any area in India, and it is therefore noteworthy that the Sanitary Commissioner believes that "over 10,000 deaths from cholera were erroneously registered under other heads, through ignorance, superstition or laziness;" possibly then the aggregate mortality numbered 30,000. It was impossible to trace the source of importation—if indeed we need to assume importation—as famine-stricken refugees from the Hyderabad State and from Bombay had wandered into Akola and Buldana. But, as already stated, the disease was present, many of the water-supply sources dried up and left the rest concentrated and subject to pollution; in addition to this famine stalked through the land. Whenever cholera was reported from a village, a hospital assistant or a vaccinator was deputed to "disinfect" all water-supply sources, "and four or five days after this, the epidemic in almost every case ceased. This procedure answered admirably," says the Sanitary Commissioner, "during the cold and hot weather months. When, however, the rains set in it was found impossible to 'disinfect' all available sources, and the villagers helped themselves to any pool or puddle they came across, and these very soon became infected and spread the disease." Still it is noteworthy that cholera rapidly disappeared with a full replenishment of the water sources. In the Basim district, where famine was at its worst and where the total death-rate amounted to 110·8 per mille, cholera claimed about one-third of the victims that succumbed to this disease, the rate recorded here being 15·0 per mille from this one cause. All over Berar 18·2 per cent. of the villages were attacked.

99. The total mortality from cholera in 1900 amounted to 60,662 cases, or
Madras. 1·8 per mille of population, (which is about the quinquennial average) against 29,082 cases, or 0·9 per mille, in the previous year, which was one of the lowest incidence on record.

The districts of Madura, Tanjore, Tinnevely and Godavari suffered most, the death-rates therein having ranged from 4·7 to 3·0 per mille; all the 22 districts were more or less affected, though two (Nilgiris and South Canara) had only two cases each.

As previously pointed out, the incidence of mortality was heaviest in the districts affected by the south-west monsoon in July, August and September, and in those under the influence of the north-east monsoon in October, November and December. From 49 out of the 61 municipal towns, 5,789 deaths (equal to 2·7 per mille of the total urban population) were reported; Periyakulam with 20 per

mille, followed by Tinnevely with 13·8 and Palni with 12·4 being highest; the rate in rural areas averaged 1·8.

100. As was the case in the previous year, no death from cholera was recorded in this small province during 1900.

Coorg.

101. The terrible experiences through which the Bombay Presidency passed in 1900, have been faintly indicated in Section V

Bombay.

of this report; cholera vied with famine in their devastations, and plague has now become an only too familiar feature in the death statistics. In 1899 only 8,579 deaths were reported from the first named disease, but the number rose in 1900 to the appalling figure of 163,889, yielding a death-rate per mille of 8·71, by far the highest for any province in India, and nearly five times that of the quinquennial average. The number recorded is fully one-eighth of the total mortality (all causes) for the Presidency, and there is ample evidence that very many deaths from this cause escaped registration.

Every district was affected though the Collectorate of Kanara escaped with only 82 deaths; but the epidemic fell with exceptional virulence upon the Gujarat and Western Registration districts, where, excluding the city of Bombay (5·27), the death-rates ranged from 10 to 22 per mille of population. In December 1899, the disease was present in the collectorates of Dharwar and Bijapur and in the City of Bombay, and in January we find the same areas affected with Khandesh in addition. In February and March, beyond a rapid extension in Khandesh, matters were in about the same state till in April the disease had spread to fourteen districts yielding 15,086 deaths. In May the mortality rose to 32,929, and in June to 33,625, Sind having now become infected, and in July, with an aggregate death total of 44,521, the epidemic reached its culminating point, the monsoon rains having been very light and partial until the end of this month. With the second onset of the monsoon and during August and September though all districts were affected, the mortality fell off markedly, the former month yielding 23,123 deaths, and the latter only 4,924, the subsidence continuing until in December there were only 488 recorded and these from nine districts, the Gujarat area having been practically free from October.

For the most part the epidemic fell with the greatest force upon the famine-stricken areas, and on those centres to which the necessitous refugees flocked. Out of 220 rural circles, 201 were more or less severely affected, and in 58 the death-rate exceeded 12 per mille, the highest rate recorded (in Vada in the Thana District) being 39·67. Of 56 town circles 51 were attacked, and 29 of these recorded rates of 10·47 and upwards, 12 being in the Gujarat registration district. The town of Borsad (population 12,159) in the Kaira Collectorate suffered the appalling death-rate of 126·9 per mille of its population.

The affected area included 8,461 out of the 25,143 villages in the Presidency (33·8 per cent); but in Karachi district, the percentage affected was as high as 87·7; in Hyderabad it was 66·9; in Kaira, 50·7; in Broach, 50·1; in Thana, 47·9; in Surat, 43·5; and in Satara, 42·5.

The officers of the sanitary department record similar impressions as to the causes that led to this deplorable mortality; they refer to scanty and polluted water-sources, to insufficient and unsuitable food ("badly cooked or raw grain, wild seeds, leaves, bark of trees, roots, etc.," and, in some cases, the flesh of

animals that had died of disease), and to the fact that crowds of beggars and wanderers left their homes to seek relief in the larger villages and towns, thus disseminating the disease and its readiest victims broadcast. Again, when the disease broke out on relief works or in camps, a stampede frequently followed which it was impossible to control. Nothing, surely, is wanting to such a picture of accumulated horrors, or to account for the results.

102. There were altogether 3,481 deaths from cholera recorded in Burma during 1900, of which 41 only were reported from Burma. the Upper province; the death-rate per mille in Lower Burma, 0.77, is below the quinquennial mean (1.09). The highest mortality was returned by the Thongwa, Murgui and Myaungmya districts, with 2.75, 2.38 and 2.28 per mille, respectively. The urban rate exceeded the rural, as is usual, owing partly to density of population and partly to better registration. Sixteen of the 34 town circles and 6 per cent. of the villages suffered. "Civil Surgeons submitted detailed reports of the outbreaks in their districts, but these reports bring nothing new to light as regards the origin or spread of the disease, and it would serve no useful purpose to review them here. An impure or infected water-supply was generally associated with these outbreaks," and the seasonal incidence was chiefly upon the hotter, drier months ending with the onset of the monsoon.

103. This year (1901) it has been decided that no detailed summary of the "cholera registers" should be given in this place, though the facts disclosed have been used for instruction and the promotion of remedial action where such has been indicated. No fresh light has been thrown upon the etiology of the infection, though the lessons to be derived from the facts summarized in this section from year to year have been confirmed. The Government of India has recently issued orders for the discontinuation of the "cholera register" which the medical officer concerned has hitherto submitted. This is one of the results of the deliberations of a Committee entrusted with the task of examining the value of the numerous returns and reports furnished on all matters concerning the health and the economy of the army in India. This, of course, does not imply the abolition of records of cholera outbreaks in future, but these will take a different form, and it is the intention to revise and codify the general lines on which a single cholera report for each outbreak is to be drawn up in future, while it is hoped to direct attention to all the more important questions of the etiology of the disease. It is confidently anticipated that with the facilities provided by the new command laboratories, more exact and scientific data will take the place of vague guesses and opinions on this subject, and that, starting from the broad general conclusions established, a new departure based on more exact methods of research will be made. At this point, then, the broad facts and the incidence of the disease on the troops and prisoners will be briefly stated, concluding with a short summary of the main indications they afford.

104. In last year's report only one fatal case of cholera fell to be recorded for the year 1899 in the whole European Army in India. It could not be expected that such phenomenal immunity should be maintained during 1900, when the disease was almost everywhere at its maximum epidemic prevalence and when, consequently, the troops were surrounded by foci of infection. Under these circumstances it is matter for some satisfaction that the total number of cases recorded among

all ranks of the European troops was 107 with 88 deaths, a case mortality of 82·2 per cent., while among all classes of followers there were 101 cases and 68 deaths, or, altogether, 208 cases and 156 deaths. These were reported from 28 communities (Station Hospitals, Regiments, and Batteries) in 28 different stations. The death-rate on the aggregate average strength of the troops (excluding followers) was therefore only 1·45 per mille, against 3·70 per mille for the general population, and as we have seen the latter must be accounted short of the truth owing to defectiveness of registration. In many stations where cholera prevailed in the surrounding communities, no case was recorded among the European troops or followers.

105. The returns show that 112 bodies of men located in 76 separate cantonments or camps were attacked during the year 1900; there were altogether 641 cases, of which 390 proved fatal among the rank and file of the native army, while among the followers, etc., there were 409 cases and 212 deaths; that is to say, altogether 1,050 cases and 602 deaths. Calculating the total mortality on the aggregate average strength, the death-rate among the troops (excluding followers) was 3·16 per mille, against 3·70 per mille for the general population; in many stations, contiguous to or surrounded by communities in which the disease was present among the general population, no case occurred among the troops or followers.

Of the total number of cases and deaths recorded, it may be noted that not far short of one-half occurred in the Punjab, and fully one-third of the whole in the North-West Frontier stations and outposts. In Kohat alone there were 314 cases with 151 fatalities, to which five regiments, one infantry depôt and two mountain batteries contributed, and this outbreak may fitly receive more detailed notice.

The first cases occurred on July 3rd among the men and followers of the 3rd Punjab Cavalry and the Hazara Mountain Battery, and in the next few days the disease became general throughout the garrison, no less than the full number of casualties stated occurring within 16 days of the outbreak. Major Firth, R. A. M. C., in his report lays stress on three notable features of the epidemic: (1) that not one of the 60 European residents was attacked; (2) that in one unit (the Punjab Garrison Battery) only one case occurred; (3) that in another unit (the 19th Punjab Infantry) no less than 126 attacks with 56 deaths were reported. These facts have an important bearing on the elucidation of the etiological problem. It is necessary to remember that by the end of June the disease had appeared throughout the Punjab from Hissar on the east to Peshawar and Dera Ismail Khan on the western frontier. Kohat is the great centre to which all trans-Indus roads lead; it is a market for trade with Peshawar, a centre for enormous traffic from India *via* Khushalgarh, and it is the distributing point for a large trade along the Bannu road to the salt districts, and along the Hangu road to the Samana and Miranzai Valleys. Although there is no official evidence of the emigration of an infected individual along these much frequented routes to Kohat, our knowledge of the habits of the people and of the natural history of cholera suffice to suggest how readily the many way-side water-courses in and around Kohat could be polluted by the specific cholera virus, and given that, how readily the infected water would disseminate the disease. The disease certainly existed in Bannu and Peshawar in June. Major Firth, who was deputed to enquire into the outbreak, emphatically states his conclusion that it was "directly attributable to specific pollution of the irrigation water which runs freely through the station," an opinion shared by the medical officers on the spot.

This irrigation water runs in two main open channels, giving off innumerable subsidiary branches in every direction. One main channel passes through the city, where it is much polluted before skirting the lines; the other channel is almost equally subject to contamination by being used for public bathing purposes, and it rapidly becomes still fouler

as it subsequently passes between the lines. Beyond this, the springs from which these channels derive are probably subject to pollution. Now Kohat city and cantonments have an adequate supply of water for domestic purposes, delivered by pipe from springs situated some two miles distant. These springs, the whole course of the pipe line and the reservoir were carefully examined at the time of the outbreak, and analyses of the water at various points gave results that showed it to be "pure and quite above suspicion". Major Firth then states his opinion that one if not both of the main irrigation channels referred to became specifically contaminated on or about July 1st. This water is largely used by the native population and the native garrison for bathing, drinking and other domestic purposes; the disease was thus acquired and thus disseminated. In support of this opinion he refers to the immunity of the European residents, who studiously avoid the use of this irrigation water for any purpose. Next, the Punjab Garrison Battery, located in the Fort, escaped with only one case, which occurred in the person of a man known to have close domestic relations with the city; the men in the Fort rarely left it, and used, exclusively, water from the Fort well.

The incidence on some of the units attacked was in direct proportion to the proximity of their barracks to the open irrigation channels, and this was notably the case of the deplorable outbreak in the 19th Punjab Infantry, details of which are given which may be said to be convincing. There was at once a marked diminution in the disease following removal of corps from the neighbourhood of these channels and the placing of them on ground remote from temptation to use this water. Finally bacteriological examination of samples of this water showed it to be teeming with micro-organisms only present in foul media; special efforts to isolate the vibrio were made, but without success as regards the eastern channel, but in samples from the western stream large numbers of spirilla were found, mostly in the involution stage. Gelatine work was impossible, and only one of the pure cultures (broth and agar being used) gave the indol reaction. It has to be remembered that the water was very foul, and that the conditions of bacteriological work in Kohat in July are very embarrassing, but although Major Firth could not satisfy himself of the actual presence of the true vibrio, the ready detection of spirillar forms is rightly held to be sufficiently confirmatory of the grave suspicion attaching to this water (see Annual Report for 1899, Section VI, p. 127, *et seq.*).

It is only necessary to add that the obvious lessons of this outbreak have been clearly set before the authorities in the most emphatic terms and it may be remarked that in 1897, in reporting on a previous outbreak of the disease in this place, Surgeon-General Harvey, late Sanitary Commissioner with the Government of India, came to almost identical conclusions and set forth the necessity, among other measures, of cutting off access to the open irrigation channels in their course through the inhabited site and through cantonments by covering them over.

106. Among the Jail population with an aggregate strength of 116,408 there were 515 cases of Cholera, of which 286 terminated fatally, giving a death-rate of 2·5 per mille of population against 3·7, the rate for all India under registration. In all, 70 different jails were affected, of which six were in Burma (34 cases and 21 deaths); one in Assam (one fatal case); twenty-seven in Bengal (191 cases and 101 deaths); six in the North-Western Provinces and Oudh (14 cases and 8 deaths); five in the Punjab (35 cases and 14 deaths); seven in the Bombay Presidency (128 cases and 67 deaths); two in Berar (14 cases and 11 deaths); nine in the Central Provinces (63 cases, 43 deaths); six in Madras (33 cases, 20 deaths); and the Ajmer Jail in Rajputana which reported two non-fatal cases. If the death-rates afforded by these fatalities, calculated on the annual average strength of each provincial group, be compared with those of the general population of the province in each case, it will be found that in only two cases did the Jail rate exceed that of the province; *e.g.*, in Burma the jail rate was 1·7 per

* The figures in this Section differ from those in section IV of this report, as in the former data are given for subsidiary as well as for Central and District Jails and for all the cases of cholera that occurred.

mille against the provincial rate of 0·77, and in the Central Provinces the rates were 7·6 and 6·64, respectively, in Bengal they were approximately equal. But it has to be remembered that while the jail rate is absolutely accurate, that recorded for the general population is subject to a grave error of defectiveness. In Assam the Jail rate was less than one-sixth of that of the Province; in the North-Western Provinces only about one-ninth; in the Punjab a little more than half, and in Bombay Presidency about one-half of the general provincial rate. When the fact that the disease was present in every district, and when the disadvantages incurred by an aggregation of individuals in jails are considered, and, in addition, the low standard of physique and resistance of the criminal population, the results may fairly be deemed satisfactory and to represent the results of the care bestowed on all matters of hygiene.

107. Still when we come to investigate the evidence afforded as to the causes to which outbreaks among the troops and prisoners were attributed, there are admittedly facts which indicate that, in some cases, much remains to be done in this respect. In last year's report the state of the drainage of the Mian Mir cantonment was referred to, and this is again the subject of animadversion; but what is perhaps of far more urgent importance is the necessity of extending the pipe-water supply to the native lines in this station. The danger arising from the open irrigation channels in Kohat has been alluded to; these are examples of a small minority of cases where reform is urgently called for.

For the rest we have the universal prevalence of the disease in its worst epidemic form, and nearly every community was situated in a centre of contagion. In the majority of cases the outbreak was traced to polluted water obtained outside the regular supply provided, in villages, bazaars and elsewhere when the men were "out of bounds". In a few cases attacks were attributed to a too liberal diet of raw fruit and vegetables or to milk obtained as a rule from places known to be infected; the carriage by flies of the virus into the institution attacked is suggested in no less than five cases as the most feasible hypothesis.

In the great majority of instances the first cases had had direct personal communication with an infected environment; among European troops the first attacked were those who had been "out of bounds;" among Native troops, sepoys returning from leave and travelling through an infected area, and among prisoners, admissions from infected areas, and first attacks among those on duty outside the jail, introduced the infection as a rule.

The one other established fact as to which the records leave no doubt is the efficacy of movements from the infected site; in the majority of cases this measure was adopted with almost immediate and conclusive results.

Lastly, it may be noted that of the total number of attendants on the sick, among troops, followers and prisoners, only 49 persons in all were attacked with the disease, a ratio of 1·7 per cent.

108. In the year 1899, the total number of operations performed at the Purulia depôt in Bengal, the only place where inoculation is systematically carried out, was 2,388; in 1900, the number rose to 13,291, and the subjects were all emigrants proceeding to the labour districts of Assam and Cachar.

It is, to say the least, unfortunate that the duty of furnishing returns of cholera cases and deaths is not made incumbent upon the employers of these

labourers; it is now permitted to be optional, and returns were received from only five gardens. This is a matter to which attention will be directed, as it is obviously desirable from every point of view that the results of inoculation should be ascertained with some approach to accuracy, and that its efficacy be established or refuted. The only material available for the year under review as a contribution to this question is the record furnished from Goalundo. Of 1,527 un-inoculated coolies who passed through Goalundo from April to June, 32 or 2·09 per cent., were attacked by cholera, of whom 17 died; while among 873 who had been inoculated there were only 2 cases (0·22 per cent.), both, however, fatal.

109. A most interesting series of observations made by Captain Lamb, I.M.S., of the Bombay Research Laboratory, and Major Buchanan, I.M.S., on the effects of inoculation on a large number of prisoners in Nagpur Jail will shortly be published in a forthcoming issue of the Scientific Memoirs (new series) by officers of the Medical and Sanitary Departments of the Government of India, but the results may briefly be summarised in this place:—

A study of the effects of inoculation.

- (a) A preliminary injection of a dead "vaccine" a few days before the living material is inoculated has the effect of causing the constitutional disturbance which follows the latter inoculation to be more severe than when no such preliminary injection is employed. The larger the dose of dead material, the greater is the reaction following the injection of the living vaccine.
- (b) Women exhibit a greater constitutional reaction than men.
- (c) A slight increase in the amount of living material used causes a great increase in the severity of the constitutional reaction.
- (d) A previous attack of cholera, recovered from a fortnight to a month previously, has the effect of decidedly lessening the constitutional reaction following a dose of living cholera "vaccine."
- (e) Finally, an endeavour was made to appraise the effect which these inoculations had on the weight of the inoculated when compared with the ordinary fluctuations in the weight of the uninoculated, and the figures presented show that no appreciable difference in this respect can be demonstrated between the two classes.

110. The mortality ratio of India from smallpox rose in 1900 by 75 per cent, but was slightly lower than the quinquennial ratio. All the months of the year, but especially the earlier, showed a greater number of deaths. The total number of deaths in the preceding year had been 53,347. In Lower Burma the epidemic, which started in 1898 is now abating. Thirteen cases were detected in the Port of Rangoon: the number of deaths is not stated. In the rural areas of Upper Burma compulsory powers are wanting for the protection of the people, and the law, as it stands, has no authority to prevent the inoculator disseminating the disease, and keeping up a source of contagion which infects the towns by importation. It is believed that small-pox is in a fair way of being eradicated from Assam. The Bengal mortality from smallpox was, as usual, highest in Orissa, Cuttack alone returning more than one-third of the total deaths recorded under this head in the whole province; and this severe local prevalence of the disease is said to be attributable to the aversion of the people from vaccination and their preference for inoculation. Only 3 cases, of which one proved fatal, were detected by the Port Health Officer of Calcutta. That the urban mortality was greater than the rural is an unusual feature of 1900 in Bengal, but all the other provinces, except Burma, Madras, and Mysore, show the same. The ratio of the North-Western Provinces and Oudh is the lowest on record, and no district, except Aligarh, had

Smallpox. Appendix B, Table I.

more than 100 deaths. Into the Central Provinces the disease made its entry from the Bombay side, and invaded every district but one. The Sanitary Commissioner was able to secure the vaccination of no less than 28,160 children among the large numbers collected in the famine relief camps. In Berar the badly vaccinated district of Wun suffered most. The Sanitary Commissioner of Madras insists that until vaccination is made compulsory in rural areas, more satisfactory results cannot be hoped for. Although vaccination is appreciated by the bulk of the population, mothers are still reluctant to submit their children to the operation; and the people are often unwilling to undergo it while the disease is present in their midst. The mortality in Bombay was the highest recorded for the past ten years. No district was free, though some were visited lightly. Both in the city of Bombay and in the districts adjacent the outbreak was much increased by the large influx of strangers. In the city of Bombay over 34,800 vaccinations and revaccinations were performed. With regard to Gujarat it is said that considering the enormous influx of people from surrounding states during the famine, the number of deaths was not large, which testifies to the good work done by the vaccination staff. As to the Port of Bombay, it is stated that there were 1,392 cases of small-pox, against 2 in the previous year, detected at the outward and inward inspections and on board the vessels lying in the harbour. The number of deaths is not stated.

111. For India as a whole there was a decided decrease in plague mortality. The decrease took place principally in Bombay, Madras, and Hyderabad State; while the greatest increase was in Bengal. Assam and Coorg remained unaffected, and Central India recorded no mortality.

Plague in India. Appendix B,
Table IV.

The main points of interest with regard to plague have been dealt with so fully in Chapter III of the Report of the Indian Plague Commission, that it is not necessary to touch upon them here; but the following are a few jottings.

Gottschlich in Egypt found virulent bacilli up to the 76th day in the sputum of a man who had recovered from plague; in dried sputum the bacillus was still virulent for a month; in the peritoneal exudation of guinea-pigs for three weeks; in dried up urine only for three days, because urine dries very thoroughly; in old agar cultures for $8\frac{1}{2}$ months; in the buboes of corpses for 12-16 hours; in the buried bodies of guinea-pigs for 3, but not 5, days; in the organs of dead animals for 24 hours, but not for 2 days; in the sputum of a pneumonic-plague patient kept in a covered spittoon in darkness at 25° - 28° C for 4-10 days. On the other hand, Mélin's experience was that the sputum was innocuous when ten days had elapsed from the complete fall of the fever and the disappearance of stethoscopic signs; while Schottelius states that when the bacilli become generalized (septicaemia) they may be found in the sputum even of non-pneumonic cases. Rosenau in America kept the bacillus alive for 75 days in the dry state, but confesses that complete dessication was not attained; and Schultz states that when kept cool and sheltered from light, it can preserve its life and virulence for 4 years. Rosenau's experiments are said by him to show that the plague bacillus is not a frail organism, that temperature is the most important factor in its viability, that moisture favours its life, that sunlight kills it in a few hours, that its virulence is often lost before its vegetability, that clothing, bedding, and food products may carry the infection, that the organism may live a long time in water, &c; and Sata reports that in dead bodies and earth most of the bacilli perish, but that those which survive become gradually more virulent.

Sputum. Persistence of the bacillus. (1)

From Robertson at the Cape comes the statement that plague occurred and the specific bacillus was found in cats, rats, a ferret, a guinea-pig, a mouse; and that care has to be exercised not to take the bacillus of chicken cholera for that of plague. Thomson in Australia found the bacillus in rats, in a cat, and in a flea from a rat sick of plague. Opinions as to the part which the rat plays vary from that held by Davies that plague is primarily an epizootic disease communicable to man rather than an epidemic disease communicable to animals, to that of Abel who believes that man is the most dangerous spreader of the disease, and points out, as the result of a study of the old literature, that past European epidemics appear to have run their course without any important participation of rats and mice. In this connexion it may be interesting to note that Kitasato and others reporting on the plague in the Japanese towns of Kobe and Osaka, record that out of 291 dead rats examined in the former the plague bacillus was found in only 61, and out of 200 in the latter in only 23. The Australian reports of Ashburton Thompson and others are strongly in favour of rat agency. But, granted that plague-infected rats are dangerous to man, it is difficult to understand how the infection is conveyed. As Ashburton Thompson says, if the rat is required to explain the local diffusion of the disease, another intermediary, the flea, is required to explain the conveyance of the infection from rat to man. This supposed rôle of the insect, first suggested by Simond, appears, especially at the present time, so natural and likely that it is accepted as true by many, including Thompson, Manson, and Klein. On the contrary, Nuttall, Kolle, Galli-Valerio and others have failed to verify by experiment any such transference of infection; and if it be a reality, there must be some necessary condition in natural infection which has not yet been fulfilled in the laboratory experiments. Kolle has been so impressed with Ashburton Thompson's evidence that he proposes to renew his experimental investigation. Thompson himself in the few experiments he was able to make did not succeed in conveying the infection from rat to rat by means of fleas. In one case he found the plague bacillus in a flea from a living sick rat from an infected house. In the case of 2 out of 9 rats brought in, the flea found on them was *P. serraticeps* (the ordinary dog and cat flea), and in 7 *P. fasciatus*. Manson is reported as having stated, on what authority is not clear, that the fleas of the rat, like those of dogs and fowls, will attack man, if driven from their own host. The weak points of the following fresh case of infection supposed to be due to rat-handling are, that no evidence is offered that there were fleas on the rat or that the rat had died of plague, and that the incubation time seems too short, though the situation of the bubo minimizes this second objection. A daughter of the native head warder of the Yerrowda Reformatory (Poona) died of plague on the 9th October. The family, after segregation, returned to the quarters on the 20th, these having been disinfected and whitewashed. Their second child found a rat dead on the evening of the 22nd, carried it for a minute or two in her right hand, and then threw it away. She developed plague on the 23rd, and died on the 29th, the bubo being in the right axilla. Holub has been experimenting successfully on the use of living insects as a culture medium, but so far he has only used the microbe of soft chancre. The continued experiments in Europe and India (Hankin) on the use of Danysz' bacillus for the extermination of rats do not promise the probability of practical usefulness on the large scale. Bronstein claims to have been more successful than his predecessors through the use of alkalinized feeding media, but, though this may secure a larger number of initial infections, it does not

Rats and other animals. Insects.
Mode of entrance (?).

make any more certain the desired subsequent spread from animal to animal. The old idea that the ground being defiled with the excrement of plague-sick rats or with the excretions of plague-sick men, the virus enters through abrasions of the bare feet of the habitually unshod natives, and so produces a relative frequency of femoral and inguinal buboes, receives much acceptance still both among Indian medical men and among foreign savants visiting Bombay for purposes of investigation. But in Sydney 73 per cent. of the buboes were in the groin, and, as Ashburton Thompson says, "the inhabitants of Sydney no more go barefoot than do the inhabitants of London"; and this only confirms what was observed in the case of British soldiers at Hongkong. Simond has shown how the frequency of buboes in that region can be reconciled with the flea hypothesis. But in any case it is evident that the barefoot hypothesis can no longer be supported by the fact of the relative frequency of buboes so situated. Kolle and also Kossel and Overbeck have confirmed the observations of the Austrian Plague Commission as to the ease with which certain animals can be infected by gentle friction of the uninjured skin. Several cases of infection through injuries have been reported.

An Arab deadhouse servant observed by Gottschlich injured his left little finger on the 29th May, and on the 3rd June a plague bubo was found in the left axilla. On October 8th 1900 a warder at the Brisbane General Hospital assisted at two plague postmortems, on the morning of the 11th he was ill, and on the 12th it was proved by clinical and bacteriological examination that he was suffering from plague. Dr. Hutchins, who reports the case, does not say that the man wounded himself. Klein and Markl both report favourably on the diagnostic value of the serum test. The *Indian Medical Gazette* of February 1901, page 72, gives a list of the countries affected by plague at the end of 1900.

112. The incidence of plague was very much less in 1900 than in the two previous years. In every circle, except Kurrachee, the attacks and deaths were very much lower than in the previous year. Whether this was due to the waning of the disease, to the less severe measures, to inoculation, to non-registration of plague deaths, or to the numbers of those liable to plague having been reduced by causes such as famine, the Sanitary Commissioner leaves to the future to decide. In the whole presidency there were 43,064 attacks and 33,196 deaths, or, excluding the city of Bombay, 25,151 attacks and 19,911 deaths; and 587 towns and villages were affected. In 1899 the whole presidency had had 126,287 attacks and 96,596 deaths, and 2,256 towns and villages affected. The epidemic continued throughout the year, was at its lowest intensity in July, and reached its maximum in October. The districts of Broach, Panch Mahals, Thar and Parkar, Shikarpur, and Jacobabad remained uninfected throughout the year. Most deaths occurred in the city of Bombay, and in the collectorates of Poona, Belgam, Kurrachee, Thana, and Dharwar; and the highest death rates in the city of Bombay, and in the collectorates of Poona, Belgam, Kurrachee, and then Thana, Nasik, Dharwar, and Sholapur. In the Poona collectorate plague occurred in all the talukas, except Junnar: 86 towns and villages were affected and there were 6,086 attacks and 5,086 deaths reported. Only in June was the collectorate free from the disease. There was a large and sudden increase in the mortality in August, and the maximum was reached in October. In the Belgam district, as in 1899, the disease was present during the entire year. The maximum was reached in October. Ninety-three towns and villages were affected, and 6,498 attacks and

4,647 deaths were reported. The increase which took place in the Kurrachee district towards the close of 1899, continued in the first months of 1900, and reached its maximum in April. The disease ceased in June, and the district was then free till the close of the year. In the whole collectorate 16 towns and villages were affected, and 3,164 attacks and 2,446 deaths were reported. The Kurrachee town circle suffered most. Thana district was affected during the whole year, as in 1899. The plague in 51 towns and villages amounted to 2,402 attacks and 2,046 deaths. The maximum was reached in April and there was a secondary increase in August and September.

113. As in 1899, plague was prevalent in the city of Bombay throughout the year. The Municipal Commissioner, writing of the period ending 31st May 1900, says that experience has thrown no new light upon the ways of plague. He quotes various district officers to the effect that the disease is one of localities rather than of particular classes of people; that it appeared to be more localized than in previous years; that the disease sticks to certain buildings with great persistency; that instances occurred where attention to sanitation appeared to confer immunity; that as a rule once a house has been thoroughly disinfected, plague does not visit it again that year, though it is almost certain to do so during the next epidemic. During the year 59 persons affected with plague were not permitted to sail on outgoing vessels; 14 persons on inspection were found to be plague-stricken on vessels and native craft in the harbour, docks, and bandars; and 11 cases occurred in vessels on or before arrival at Bombay from other infected ports, making a total of 84 plague cases in connexion with the harbour. The falling off in the number of cases detected was due to the fact that most of the rejections during 1900 were turned into the town, whereas in previous years they had been kept under observation for some time in a camp. In no instance could plague breaking out at foreign ports be traced to the crew or passengers on vessels from Bombay. The known rigorous nature of the examination prevents persons likely to be rejected from presenting themselves.

114. The Rajshahi and Chittagong Divisions were entirely, the Dacca, Orissa, and Chutia Nagpur Divisions almost entirely, free from plague, which was severest in Calcutta, Patna, Saran, and Monghyr almost throughout the year, and in Gaya during October to December. The total number of seizures was 40,294, and of deaths 38,412. A feature of the disease, noticed by the Sanitary Commissioner in all places where it prevailed, was that it continued with intense virulence throughout the winter, culminating in March; and that it practically disappeared or remained dormant throughout the hot and rainy seasons, to recrudescence early in October with the advent of the winter. The attitude of the people was always troublesome at first; but after they had been taught by the hard facts of experience, they learned to accept, or even to welcome, the measures instituted for their good. Disinfection of huts, houses, and clothing was largely resorted to in plague-infected areas. As a rule, the result of evacuation, which was sometimes voluntary, was satisfactory; but in some cases the villages were unfortunately reinfected by the too early return of the villagers, or by the admission of people from other infected villages. The people, however, are said to be learning to guard themselves against these dangers. The district of Patna, which was infected from Calcutta, suffered more than any other, and especially the towns of Patna, Dinapore, Barh, Bihor, and Mokameh. As each village became affected, it acted as

a centre for disseminating the disease to its immediate neighbours. Villages situated near main roads were always more likely to be infected early than those more remotely situated ; and in the latter class of villages the disease was nearly always spread by the better class of natives, Rajputs and Babhans. A few cases of gastro-intestinal plague were found. Evacuation of villages showed its best effects when carried out at an early stage, when rats were dying. Towards the end of the year a demand for inoculation arose. In the Gaya district plague was first detected in October in the new town of Gaya. An unusual mortality among rats was soon observed, and the plague bacillus was identified in their blood. Voluntary inoculation was extensively resorted to in Gaya, and became so popular that a whole village asked to be inoculated as soon as plague came near it. In Saran up to the middle of January plague was only known to exist in two circles of the Sudder Subdivision ; but thereafter it was found that a village 8 miles east of Chapra was affected, and this proved to be the centre of an extensive spread of the disease. In the Bhagalpur Division the towns of Monghyr and Jamalpur, and several villages were affected. The first outbreak occurred in the villages of Ganga Serai and Jaidpur, near the border of the Patna district, whence the infection was imported. Pneumonic plague was prevalent. An extraordinarily insanitary practice prevailed, the use of large deep pits alongside the houses alternately as grain stores and as receptacles for house sweepings and refuse and for human and animal faeces. Into the town of Monghyr the disease was introduced in March by a Marwari, who had a wedding in his house, to which a large number of Marwaries from Calcutta were invited, with the result that presents of cloth and wearing apparel were brought from the infected localities of that town. Within a few days of the wedding two servants of the Marwari fell victims to plague, and the Marwari himself and his daughter died of the disease. From this centre plague spread very gradually to different parts of the town, by infected people being taken from place to place. It was noticed that mehtars and domes suffered very severely in the town, and women and children far more than men. The civil surgeon reported that many cases occurred of plague breaking out again in disinfected houses, because the disinfectant did not get a proper chance, and was of opinion that the only effective measure is evacuation.

115. The recrudescence of plague in Calcutta in 1900 began in Ward V, and by the end of March it was raging more or less severely in seventeen wards. As in previous years, the wards most seriously affected were generally those in the northern half of the town. The epidemic of 1900, which consisted of 8,822 seizures and reached its culminating point in March, was much more severe than that of the previous year, which had attained its climax in April. Ward V is composed of bustees of the most filthy condition, and of high masonry buildings divided up by streets of the narrowest possible dimensions, which from their narrowness are useless for ventilation, and are rendered more so by the hanging verandahs on both sides of the streets. The plague authorities of Calcutta have not made up their minds as to the part to be ascribed to rats in the spread of the disease ; but, unlike most other plague authorities, appear to have satisfied themselves that " disinfection is efficacious, while evacuation is unnecessary." Meanwhile the disease has been seriously increasing every year in virulence, and threatens to continue to do so.

No case of plague was found on any of the 462 vessels which arrived during the year from infected ports, and no " infected " ship arrived. Among the

crews and passengers of outgoing vessels no case was detected, though it is not known whether some of the rejected persons may not ultimately have developed plague.

116. As far as British districts are concerned, plague in the Punjab was confined to two well defined areas in the Jullundur and Hoshiarpur districts and in the Gurdaspur and Sialkot districts. During the first half of the year plague was limited to the former of these two areas. This epidemic had begun in October 1899, and was at its height during the month of March 1900, though it was severe from February to May. It completely subsided during June, but was followed by another outbreak in October. Early in November a village in the Gurdaspur district was declared to be infected; and subsequent investigations tended to show that the disease had probably been introduced the previous May by a man who had returned from Bombay and Kurrachee. The disease had remained latent during the hot weather; but broke out in October, and by the end of the year had attacked 6 villages in the district and 2 in the Sialkot district. In the Punjab 308,548 inoculations were performed, all but a small minority in the Jullundur and Hoshiarpur districts. The only outbreak in the native states dependent on the Punjab was at a village in the Patiala State, situated not very far from the Jullundur-Hoshiarpur infected area, whence, in all probability, the disease was introduced in March.

117. Out of a total of 170 cases with 135 deaths, 145 cases with 115 were recorded in the Mau Aima circle in 1900. Elsewhere 25 cases occurred, of which 20 were imported. The Cawnpore district had 6, and the Mirzapore district 5; and cases occurred also at Benares, Agra, etc. The village of Mau Aima in the Allahabad district contains about 6,000 inhabitants, mostly Muhammadans, including about 1,500 *julahas* (weavers). Plague was introduced by a *julaha*, who, with his son and daughter, arrived from Bombay city on the 24th November 1899. Some of the inhabitants left the village at the first alarm, and went to other villages, and there was the further danger that at that time a large number of *julahas* were returning to the neighbourhood from Bombay, having been thrown out of work by restrictions of employment in the Bombay cotton mills. The Lieutenant-Governor therefore ordered that a large tract of country in the Allahabad and Pertabgarh districts should be brought under a system of inspection similar to that previously established at Hardwar and in some of the eastern districts. On the 17th and 24th January more cases occurred outside the evacuated area at Mau Aima, and it was resolved that the entire village should be evacuated. This was effected by the 2nd February, and the actually infected houses and those adjacent to them were burned. Similar measures were carried out in three neighbouring villages, which had become infected. The result was quite successful, and all four villages were reoccupied in May and June.

118. In the Central Provinces in 1900 there were 634 cases and 590 deaths from plague, of which 627 cases and 585 deaths occurred in the Nagpur district and 527 cases and 493 deaths in Nagpur city. All the deaths among indigenous cases occurred in the Nagpur district. The Nagpur plague of 1900 was a continuation of the second outbreak of 1899, which began in August of that year. The plague in Nagpur city was pretty generally diffused over the city, but was most severe in

the Itwari quarter, especially in Circles 14 and 15, which are the most densely crowded and dirtiest parts of the city. Five plague villages in the district were infected from Nagpur city, one in 1899 and the others in 1900. In the case of the latter, thanks to the prompt and adequate measures adopted by the authorities, the disease was soon stamped out. The districts of Wardha, Nimar, and Bhandara had only 7 cases and 5 deaths between them, and none of them were indigenous.

119. The epidemic in Mysore was very widespread, no district escaping altogether, though Hassan, Chitaldroog and Kadur had only a few cases each.

Plague in Mysore, in the Madras Presidency, and in Madras City. Appendix B, Table IV.

The Madras Presidency as a whole was not affected, the indigenous cases throughout the year having been confined to the Salem district, chiefly to the Hosur taluk, which is in immediate juxtaposition to Mysore, a result only attained by great efforts and unceasing watchfulness. The plague followed a very similar course to that taken by it in the preceding year. The severe outbreak in Tiruppur, alluded to in last year's report, was almost exactly duplicated in regard to point of time, insidious and unrecognized onset, gradual spread, etc., in the neighbouring town of Vaniyambadi, inhabited by Mahomedans of a very ignorant and obstructive race. The relationship between plague and temperature was as clearly marked as usual. No fewer than 57 cases were imported to Bellary, Ganjam, Chingleput, North Arcot, Vizagapatam, Madras, South Canara Nilgiris, Tinnevely, Anantapur, Trichinopoly, and Malabar; but in none of them did the disease obtain a foothold.

120. Plague was at its maximum in Lingsugur in January, rose again in March, but after September completely disappeared

Plague in Hyderabad State. Appendix B, Table IV.

from the district. The disease subsided still more rapidly in Naldurg, and by April had become extinct in that zilla. There were small outbreaks in the districts of Bidar, Gulbargah, and Aurangabad, but they were of short duration, and easily stamped out. The dominions were free from plague from the 16th September to the 24th October. The disease was, however, imported from Nasik into Begumpura, a suburb of Aurangabad city, on the 25th October by a Brahman clerk, who had contracted it from his mother in Nasik. This outbreak in Aurangabad reached its greatest height in the last week in December; but, as it had been discovered at an early period in its development and promptly combated, it never attained the dimensions of a serious epidemic, and did not spread beyond the suburbs or invade other districts. This result is said to have been due to the kiln method of disinfection, and to the detention of all suspicious passengers at the three observation camps. In all there were in the Hyderabad State 771 attacks. The total number inoculated in the dominions was 634.

121. None of the 12 cases recorded in Rajputana were indigenous: they

Plague in Rajputana, Berar, Burma and Baluchistan. Appendix B, Table IV.

were all imported from plague infected areas, and detected by the inspecting officials at the railway stations. There were two fatal imported cases, one suspected and the other undoubted, at Khamgaon in Berar; the former coming from the Bombay direction, the latter from Rajputana. Four cases were imported into Burma from Calcutta by sea, two of which at least were undoubtedly plague. In one case the disease did not manifest itself for six days after the infected area had been left. In Baluchistan two fatal cases occurred at Naka Khari in Las Bela State. The two

men were travellers by road from Kurrachee to Son-Miani, and had contracted the disease at Kurrachee.

122. The fever mortality ratio of India increased by nearly 19 per cent., and was nearly 11.5 per cent. above the quinquennial ratio; the number of deaths rising from 4,126,384 to 4,919,591. The increase affected all the months of the year, but was especially great in the last four. The heading "fevers" includes, of course, many cases for which a more definite diagnosis might be desired, and Garvie has shown reason for believing that many cases of influenzal pneumonia are so included; but the experience of the other classes of the population already related shows that there was a decided increase of malaria during the year. With reference to the remarks recorded on page 196 of the report for 1898, it is interesting to note that Celli states that the waters in which hemp, and to a certain extent those in which flax, is macerated, during and some time after the maceration, kill the anopheles larvæ. In Burma the steady and progressive increase in the number of packets of quinine issued to vendors for disposal goes to show that the drug is slowly gaining popularity with the people. In Assam fevers were less prevalent than usual, and this is believed to be the reason why the sales of quinine fell off. The total given for fevers includes 9,036 deaths from *kala asar*, nearly all of which occurred in the districts of Goalpara, Kamrup, Darrang, and Nowgong. But lately portions of the Sylhet district have become affected. In Bengal the year was an unhealthy one, and this was thought to be connected with the deficient and irregularly distributed rainfall. The greatest number of deaths occurred, as usual, in the period following the cessation of the rains. A special report was submitted to Government on the growing unhealthiness of Faridpur, which is supposed to be due to the silting up of the rivers, and to be aggravated by certain local causes. It is said that in Bengal the proportion of deaths returned as from fever is diminishing owing to more skilled diagnosis. The largest sales of quinine corresponded generally with the period of highest mortality from fever. In the Port of Calcutta there were 6* deaths from enteric fever among the European seamen, and 61 from fevers in the native floating population. The Sanitary Commissioner of the North-Western Provinces and Oudh fears that, even with the best system of drainage, the inhabitants of irrigated districts must expect to pay for their abundant crops and independence of rainfall by a somewhat higher death-rate from malarial fever, especially in a wet year. Quinine was sold in the post offices of every district; it was sold by vaccinators in the majority of districts; and the experiment of selling it through landlords or their agents seems likely to be successful. A great rise in the fever mortality of the Punjab took place in September in consequence of the heavy rainfall in that month. In certain districts quinine was freely and gratuitously distributed by vaccinators, zaildars, lumbar dars, and the medical staff; and the Sanitary Commissioner recommends the further development of the arrangement. In the Central Provinces the fever appeared to be of the ordinary malarial type; but there was reason to suspect that deaths from acute dysentery and diarrhœa and other diseases were included. No cases of "famine" or relapsing fever were observed by or reported to the Sanitary Commissioner. The increase of fever in Berar was general in all the districts. Owing to the drought, fevers were not very prevalent in the beginning of the year. Afterwards influenza became prevalent, then simple continued

* 17 out of 22 cases were admitted from one steamer from a South African port. In the filters were found "organisms which resembled those of enteric fever," and in the firemen's water "an organism which appeared to belong to the higher grades of the coli group."

fever; but after the rains began, the malarial type prevailed. All these were registered under the head of "fevers". Hepatic complications with symptoms of jaundice were common, not only among the general population, but also in the jails, and in the Hyderabad Contingent. The low death-rates in certain towns of Madras are believed to have been due to a large proportion of the deaths from fevers in these plague-infected localities having been registered under "other causes" to avoid the inquiry as to the cause of death consequent on a report of "fever". In Bombay the number of deaths registered was the highest for ten years past. In some of the districts the increase was to a great extent due to famine causes. A sharp watch was maintained for relapsing fever in the famine tracts, but expert bacteriological research failed to detect it. In two districts an anomalous statistical result was the means of showing that cases of cholera during an epidemic had been returned as "fever".

123. The mortality ratio for bowel complaints for India rose by more than Dysentery and diarrhoea. Appendix B, Table III. 111 per cent. and the number of deaths from 252,025 to 530,654. The ratio was also nearly 94 per cent. above the quinquennial ratio. The increase ran through all the months of the year, but was most marked from the beginning of March to the end of September. The high death-rate in the Meiktila district is noted as having been probably due to a contaminated water-supply. The Sanitary Commissioner of Assam cannot understand why the death-rate from acute bowel complaints should always be so much higher in the Sibsagar and Lakhimpur districts than elsewhere, and is causing inquiries to be made. It is stated that in Bengal the increase was chiefly due to causes which contributed to the greater prevalence of cholera; but most of the worst districts have had high mortality for several years past. The mortality was greater in all but four districts. There were 7 deaths among the European seamen of the Port, and 9 in the native floating population. The increase in the Punjab was most marked in the famine districts, especially Hissar. The points of causation noted by the Sanitary Commissioner of the Central Provinces are the failure of the rains in 1899, leading to the use of foul, stagnant, concentrated water from pools; the carrying into the water channels by the rains of 1900 of an unusual accumulation of impurities; the inferior quality of the articles of diet on which the people had to subsist; the ravenous consumption of indigestible vegetables when the rains had set in. The causes cited by the Sanitary Commissioner of Berar are much the same, namely, the consumption of bad jowari and of imported peas to which the people were not accustomed; the want of fresh vegetables during the cold and hot weather, with a scorbutic taint as result; the use of bad water owing to the water-famine; gorging with green fresh vegetables after the onset of the rains. In Bombay the increase was even greater than in the famine year of 1897. These complaints were most prevalent in Gujarat during and just after the rains, when damp and chills were added to the chief cause—unsuitable food, which consisted of badly cooked or raw grain, grass seeds, leaves, bark, roots, anything that would help to fill the void.

Plague Literature referred to in Section VI.

For explanation of abbreviations see end of Section II.

- (1) Gottschlich in Z. H. XXXV, page 195; Métin in A. P. XIV, page 597; Schottelius in H. R. XI, page 105; Rosenau quoted in B. M. J. of 3rd November 1900, in J. T. M. of 1st October 1901, page 322, and in *Janus* of 15th September 1901, page 509; Schultz in C. B. XXIX, page 169; Sata in A. H. XXXIX quoted in C. B. XXIX, page 216, and in A. H. XXXVII and XXXIX, quoted by Schottelius in H. R. XI, page 222.
- (2) Robertson in J. C. P. T. XIV, page 143; Ashburton Thompson, "*Report on an Outbreak of Plague at Sydney 1900*", also article in J. H. I, page 153 quoted in D. M. W. XXVII, page 141, and L. B., page 168, in J. P. P. G. III page 503, and in L. of 26th January 1901, page 24; Davies in B. M. J. of 10th August 1901, page 337, in B. M. J. of 23rd November 1901, pages 1556 and 1572, and in L. of 23rd November 1901, page 1448; Abel in Z. H. XXXVI, page 89; Kitasato, Takaki, Shiga, and Moriya, "*Bericht über die Pestepidemie in Kobe and Osaka vom November 1899 bis Januar 1900*" (official report), quoted in H. R. XI, page 793, in C. B. XXVIII, page 707, in D. M. W. XXVII, page 472, and in B. M. J. of 23rd March 1901, epitome, page 48; Kolle in Z. H. XXXVI, page 411; Manson reported in B. M. J. of 1st June 1901, page 1344; Bronstein in D. M. W. XXVII, page 577; Holub in C. B. XXX, page 284; L. of 14th September 1901, page 764; Kolle in Z. H. XXXVI, page 397, quoted in C. B. XXIX, page 948; Kossel and Overbeck in A. K. G. A. XVIII, page 114; Zabolotny in Arch. de Sc. biol. de St. Petersb. VIII, page 57, quoted in F. M. 18, page 1037, and in C. B. XXVIII, page 881; B. M. J. of 26th January 1901, page 246; Valassopoulo quoted in L. of 6th April 1901, page 1031.
- (3) Gottschlich, as above; Hutchens in L. of 1st December 1900, page 1612; Klein reported in B. M. J. of 1st June 1901; Markl in C. B. XXIX, page 810.
- (4) Garvie in I. M. G. of September 1901, page 332; Celli quoted in I. M. G. of April 1901, page 145, and in B. M. J. of 27th April 1901, page 1030.

THE GOVERNMENT OF INDIA

(1) The Government of India have received from the Government of Madras a report on the progress of the work done during the year 1914-15 in the various departments of the Government of Madras. The report is herewith submitted for the information of the Government of India.

(2) The Government of India have also received from the Government of Madras a report on the progress of the work done during the year 1914-15 in the various departments of the Government of Madras. The report is herewith submitted for the information of the Government of India.

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SECTION VII. GENERAL HISTORY OF VACCINATION.

124. The abnormal and untoward conditions which the population of large areas had to face during the year have been the constant subject of remark in the two preceding sections. It might then have been predicted that in the Punjab, the Central Provinces, Berar, Bombay and Ajmer-Merwara there would be a considerable falling-off in the work of vaccination, and a large increase in

Vaccination in India as a whole. the prevalence of small-pox, and such indeed has been the case. The contributory causes may be briefly stated; famine and epidemic disease prevailed in these areas; the birth-rate was exceptionally low and the infantile morbidity and mortality exceptionally high; the ordinary avocations of the people were suspended, families were broken up and many of the people wandered far from home in search of work and relief; the vaccinating staff of all grades were largely occupied in carrying out relief and sanitary arrangements and consequently their ordinary functions, inspecting and executive, suffered; and, lastly, the congregation of children at the susceptible age in relief camps where they were brought into contact with destitute refugees from Native States where the protection afforded against the disease is very inadequate, set up conditions favourable to the spread of small-pox.

A decline in the total vaccination operations performed among the civil population of India during the year 1900-01 was therefore inevitable, the aggregate number having fallen from 8,125,337 operations in 1899-1900 to 7,874,392 during the year under review, yet the result is better than in either of the years 1897-98 and 1898-99, when the totals stood at 7,829,983 and 7,515,527 respectively. Compared with the preceding year, the results of 1900-01 exhibit a decline in Assam, Burma, the Punjab, the Central Provinces, Berar, Bombay and Ajmer-Merwara; as regards the five latter areas the causes have been sufficiently indicated. In Assam the decrease was insignificant, and to the case of Burma further allusion will be made in the course of this review. Elsewhere, on the other hand, where the above-mentioned untoward conditions were absent or less marked a satisfactory increase in the work has to be noted.

The effect of the presence of plague which has been the subject of remark in previous reports has not altogether disappeared, but it is markedly less as the people are becoming acquainted with the true purpose of preventive operations.

Comparing the year under review with that immediately preceding, the primary vaccinations in the aggregate fell from 7,500,113 to 7,235,020, but the revaccinations rose from 625,224 to 639,372, which is evidence on the one hand

of the results of the high infantile mortality and the diminished birth-rate, while the increase in revaccination was largely due to the greater energy displayed in Bengal, where alone the number rose by about 7,000 cases above that of the previous year. The ratio of success obtained in primary cases was, on the average, 94·5 per cent. against 94·6 per cent. the year before; and for revaccinations 64·4 per cent. against 58·7.

As in the previous year, Ajmer-Merwara reported the highest result as regards the percentage of success in primary vaccination, *viz.*, 99·2 per cent., and Madras again takes the lowest place with 89·2 per cent. In revaccination the Central Provinces takes the lead with 83·8 per cent., Berar again occupying the last place with 20·9 per cent.

The variation in the results recorded for primary operations is largely due to the use of different kinds of lymph and lymph compounds, which are now on their trial in India, where the conditions vary so greatly in different areas; the range in the success claimed in revaccination must, to some extent, be attributed to the differences that prevail in the protection afforded by the primary operation, but much more, it is to be feared, to a lax interpretation of the proper standard of success, a most important matter which is receiving attention.

The foregoing details relate to the combined work of the special staff and of the dispensaries. For the former a total of 7,076,514 primary operations is recorded, 6,700,990 of which (94·7 per cent.) were successful, and 579,274 revaccinations, 378,640 of which (65·4 per cent.) were successful.

As to dispensaries, no operations were conducted at such institutions in Berar and Ajmer-Merwara. Elsewhere 145,252 primary operations were performed, of which 92·9 per cent. were reported as successful, and only 60,098 revaccinations, of which 55·4 per cent. were successful.

With the decline in the total combined operations noted above, only 31·8 per mille of the population can be regarded as having been protected from small-pox, while the year before the estimate stood at 32·86 per mille. As the population figures are, however, those of the census of 1891, the figures are necessarily subject to correction, the difference on the aggregate population only amounting, however, to about four per cent.

The average number of operations to the credit of each operator was highest in the Punjab, *viz.*, 2,590, Berar following close with 2,449; Burma next with 2,160. Ajmer-Merwara stands last on the list with 763 operations per vaccinator, due to the decline of work in the province, which was severely affected by famine.

The protection afforded to the infant population is at the rate of 33·9 per cent. of the births calculated on a hypothetical birth-rate of 40 per mille of the population, which is an improvement on the record for the years 1897-98 and 1898-1899, but less than that for 1899-1900, when 38·11 per cent. of the infants were protected on the same computation. The percentages ranged from 55·7 per cent. in the Punjab, to only 12·2 per cent. in Coorg, the lowest returned: the next lowest ratio was 20·7 per cent. in Bengal.

The ratio of deaths per thousand of population due to small-pox, which in the calendar years 1898 and 1899 had been 0·26 and 0·23 respectively, rose in 1900 to 0·41: the circumstances leading to this result have been referred to. The increase was most notable in the areas affected by famine, while elsewhere, generally, there was a decrease, *viz.*, in Assam, the North-Western Provinces and Burma.

The total expenditure incurred by the Department in 1900-01 was Rs. 11,53,452 compared with Rs. 10,98,661 in 1899-1900, and each successful case cost 2 annas and 7 pies, against 2 annas and 5 pies in the previous year. The provincial rates ranged from 8 annas and 2 pies in the Bombay Presidency to 1 anna and 4 pies in Bengal.

Further particulars will be found in the tables included in the Appendix* at the end of this report and in the subsequent statement of the work in each provincial area.

125. As usual, the majority of the vaccination operations conducted in the country were carried out with bovine lymph, either pure or in combination: still humanized lymph is the staple protective medium resorted to in certain areas, notably in the North-Western Provinces and Oudh, though calf-lymph has long been prepared on a small scale in some of the larger towns for local use. But a site for a large central depôt in the Hills near Naini Tal has been selected and plans and estimates for the necessary buildings are under preparation, and it is confidently anticipated that, at no distant date, animal lymph will be available for the entire province and that the present arm-to-arm system will be gradually superseded. In Bengal in addition to the vaccine depôts at Calcutta and Darjeeling one is to be established at Pusa, and the Provincial Sanitary Commissioner advocates another at Orissa. In Burma the Taunggyi vaccine depôt was closed owing to the generally bad quality of the lymph produced there; the entire supply required for the province is to be prepared at the Rangoon depôt pending the construction of a new depôt at Meiktila or other convenient centre: plans for the building are under preparation, and the plant has been ordered from England. There is no mention in the provincial report of the contemplated central vaccine depôt for the Madras Presidency, but it is known that active steps are being taken in the matter for establishing one in connexion with the Bacteriological Laboratory which is projected.

As regards the several kinds of lymph used, it will be convenient to note the facts when dealing with the work in each provincial area. As already mentioned, the whole important subject of the best form of lymph for use in India is now on its trial. The experiences of recent years have served to bring to notice the rival claims of various calf-lymph compounds, no one appearing, at the present stage of enquiry, to possess exclusive advantages. Owing to various circumstances—differences in climate, and the absence of Deputy Sanitary Commissioners on plague duty, &c.,—many questions still await solution, but experiences are being exchanged, comparative tests will be rigidly employed and the results will be more fully and accurately recorded.

As the main features of this review present some marked departures from the practice followed in previous years, it may be well to indicate here that particulars as regards the work performed by the Dispensary staff as distinguished from that done by the special staff will not be further discussed in the text, as they are given in the tables referring to this section and now included in the Appendix* at the end of this report. The same remark applies to the average work performed by each vaccinator, to the percentage of available infants protected, and to the cost of the Department in each Province. No allusion has been made to the *personnel* of the staff as this is now definitely established and has been described again and again in previous reports; moreover, no reference will this year be made to

* Statements in Appendix to Section VII.

the results (as regards the quality of the work) of the tests applied by the Inspecting staff, as, generally speaking, the returns do not distinguish between primary cases and revaccinations in this respect. This is a matter in which reform is very desirable and the necessary orders have been issued to local authorities and the distinction will be observed and reported in future. The following sketch will be confined to a broad statement of the general results of the work, in quantity and quality, together with a brief allusion to the kind of vaccine or compound lymph employed.

126. Including the dispensary work a total of 2,346,311 operations were performed against 2,252,521 in the preceding year.
 Bengal. Of this number 2,227,942 were primary cases and 118,369 revaccinations the corresponding figures for 1899-1900 being 2,203,984 and 48,537, which shows an increase in both classes of work, which is very marked in the latter. The success attending the work was also better, 97.75 per cent. of the primary cases and 59.22 per cent. of the revaccinations proving successful, while the year before the rate per cent. was 97.67 and 49.59 respectively.

The aggregate increase of 93,790 operations was not equally distributed all over the province: 31 districts show an increase and 18 districts a decrease on their respective results during the previous year—Mymensingh, which in 1899-1900 reported a great improvement, was at the head of the list in the year under review, with an increase of no less than 16,492 cases.

As regards the districts where a decrease occurred, the causes assigned are generally the presence of plague, the effects of the floods of September 1900 in inducing widespread prevalence of malaria and cholera.

In response to the Sanitary Commissioner's remarks in last year's report, the protection of infant life in Municipalities has received more attention. Deducting the number who died before completing the first year of life from the total number of births recorded in the year, 60 per cent. of the remainder were successfully vaccinated against 44 per cent. in the previous year. This, while a decided improvement, still leaves much to be desired in places where the compulsory Act is in force.

During the year 280,502 primary operations were performed with calf-lymph, 220,347 with lanoline-lymph, and 1,727,093 by the arm-to-arm process. The ratio per cent. of success of these methods and media was 98.46, 94.54 and 98.04 respectively. The quantity of lymph the two depôts at Calcutta and Darjeeling are capable of supplying is said to be insufficient to meet the increased needs, especially as the arm-to-arm system is gradually being superseded, but steps are being taken to relieve the principal depôt of the duty of supplying vaccinated calves and lymph to the Calcutta Municipality which will no doubt go far to meet the difficulty.

The Nepal Darbar and the Sikkim State each received 440 and 2,458 grains of lymph respectively from the Darjeeling depôt; no record of the results appear to have been received, and as regards the former only it is merely said that they were excellent.

127. The operations during the year numbered altogether 271,466 or 799 less than in 1899-1900, and this represents the work of all the agencies employed.
 Assam.

The primary operations amounted to 251,219 and revaccinations to 20,247, while in the preceding year the corresponding figures were 255,131 and 17,134 respectively; the percentage of success was 95.99 in primary cases and

79.99 in revaccinations, results which are lower than in 1899-1900, when 98.50 per cent. of success was claimed for the former and 88.90 for the latter. This decline is apparently due to the inferior quality of the first two supplies of lymph issued at the beginning of the season, a defect which was promptly rectified.

The distribution of the work among the staff shows the paid and licensed vaccinators and apprentices to have performed 240,308 operations, an increase on the 236,031 cases to their credit the previous year, and the dispensary staff only 17,904 or about three-fourths the results of 1899-1900.

The work of the Tea Garden Agency increased from 11,519 to 13,254: these were exclusively primary cases.

The percentage of success in the primary work was 96.16 for the paid staff, 94.26 for dispensaries and 95.32 for the Gardens Agency: in revaccinations the paid and dispensary staffs secured success at the rate of 79.58 and 88.18 per cent. respectively.

The Compulsory Vaccination Act was not further extended and continued in operation in 11 towns, wherein 70 per cent. of the available children under one year of age were vaccinated.

The Vaccine Depôt at Shillong continued to work successfully, and 387,557 tubes were loaded with calf-lymph, which is the highest number on record at the depôt: in 1899-1900 317,382 tubes were filled. The work of the province was entirely performed with this lymph, which in expert hands yielded a percentage of success of over 98 on all cases operated on. The experiments to test the effects of storage on glycerinated lymph, referred to in this report for 1899, were being continued during the year under review.

128. In the aggregate 1,549,233 operations, an increase of 37,797 on the results of the preceding year, were performed by the ^{North-Western Provinces and Oudh.} special staff in 1900-01, there being 36,522 more primary cases and 1,275 more revaccinations, which is a continuation of the progress noted last year. The percentages of success attained were 97.30 and 85.33 as compared with 97.00 and 81.93 in 1899-1900 for primary vaccination and revaccination respectively, and thus the steady improvement noticed in the course of the last four years has been maintained. This progress is most satisfactory, especially when it is borne in mind that some of the most experienced vaccinators were deputed to plague and other special duty and extra caution was necessary in districts where plague prevailed, especially so in the districts of Ballia and Benares.

Vaccination in Municipalities declined by 3,381 successful primary operations and the proportion of persons successfully vaccinated fell to 36.60 per 1,000 of population from 37.97 per mille in the previous year. As stated in the preceding year's report, though the Vaccination Act is in force in all Municipalities and Cantonments, its provisions are enforced with a varying degree of energy, and here there is certainly room for criticism and improvement.

The humanized lymph supply from the hills with which operations were started was of good quality and received in almost all districts on the plains on due date. Bovine lymph depôts were maintained at Lucknow, Bahraich and Allahabad, but chiefly for the supply of the lymph to vaccinators working in those localities. Calf lymph is used only to a limited extent at present in the united Provinces, arm-to-arm vaccination being generally practised; the approaching establishment of a large central lymph depôt has been alluded to, and it is hoped that the present system will gradually be superseded.

129. The combined efforts of the staff resulted in a total of 782,496 operations or 160,578 less than in 1899-1900, which latter figure includes 117,163 primary cases and 43,415 revaccinations. This decrease is attributed to there having been over, 150,000 fewer births in the year compared with the number born in 1899, to the prevalence of famine and scarcity and of epidemic disease which rendered children unfit for vaccination, to the difficulty in obtaining calves and to the employment of vaccinators on cholera duty. The percentage of success was 94.44 in primary cases and 63.04 in revaccinations, while in the preceding year the results were 94.68 and 62.55 respectively.

No returns for the Native States which maintain their own staff have been furnished in the Report for 1900-01, beyond the bare statement that 48,407 primary and 30,377 secondary vaccinations were performed.

The work of inspection is claimed, on the whole, to have been satisfactory, but it was only on the part of the Divisional Inspectors that there was an improvement on the amount of work recorded last year, while the percentage of successful cases to the total inspected was also much the same, save in respect to revaccinations inspected by Native Supervisors, who found only 32.16 per cent. successful against 77.59 the year before, a remarkable contrast which is significant of an awakening to an appreciation of a better standard.

The engagement of the Deputy Sanitary Commissioner on plague duties interfered with his vaccination work, and the recrudescence of plague has decided the Local Government to apply for the services of another officer to relieve the Deputy Sanitary Commissioner and set him free for plague duty.

The Punjab Vaccination Notes for the year under review afford no particulars as to the lymph depôt maintained nor of the yield of vaccine therefrom, but comparative trials of vaseline vaccine and glycerine lymph were instituted on a small scale, the results being inconclusive, and they will therefore be repeated. The great majority of operations are performed with simple calf-lymph, a large and increasing proportion with vaseline lymph, while arm-to-arm vaccination is practised in a small minority. No comparative results are given in the report for the year under review.

130. The total vaccination operations in this Province numbered 437,596 or 46,939 less than in 1899-1900. Of primary cases there were 370,563 against 436,704 in the preceding year, and of revaccinations 67,033 against 47,831, that is a decrease in the former and an increase in the latter. The percentage of success in the primary work was 96.97 and in revaccinations 84.73, while in the preceding year the results were 96.50 and 82.73 respectively.

The primary operations in both the British districts and in Feudatory States declined from 354,655 and 82,049 to 303,559 and 67,004 respectively, though the percentage of success was higher, 97.13 per cent. in the former area against 95.65 the year before and 96.23 against 95.82 in the latter area. The number of revaccinations however rose from 41,739 to 52,054 in British territory and from 6,092 to 14,979 in the Native States. The percentage of success in the former was 84.94 against 81.32 in the previous year, and in the latter areas, 84.02 against 92.42 in the year before, results which give rise to grave suspicion.

The explanation of the decline in primary work is the low birth-rate and the heavy infantile mortality, combined with the closure of famine camps which had in the previous year afforded facilities for vaccinating a large number of children.

As regards the increase in revaccinations, this is said to be due to the greater attention paid to the matter in consequence of the comments of the Chief Commissioner on the previous year's results, which were not held to be satisfactory.

At Dispensaries in addition to the foregoing 17,801 operations, 14,930 primary and 2,871 revaccinations, were performed: this is 6,987 less than in 1899-1900. A decrease of over 5,000 primary operations occurred at Dispensaries in the British districts, where also revaccinations fell to nearly half the number recorded in the previous year. The reasons assigned are that no work was done at two Institutions, and that poor-houses and kitchens, where in the preceding year much work had been done, were closed.

As in the previous year four kinds of lymph were used, *vis.*, plain calf-lymph, humanized lymph, glycerine lymph and lanoline lymph, nearly two-thirds of all cases being treated with the first named which yielded success at the rate of 95.6 per cent: glycerine lymph again gave improved results, the percentage of success being 86.97 against 86.27 in 1899-1900 and 72.69 in 1898-99. The arm-to-arm process by which about 79,000 operations were done, gave successful results in 95.1 per cent., and the 25,000 cases in which lanoline lymph was used yielded, 99.5 per cent. of success.

131. Owing to famine, the prevalence of epidemic disease and the absence of the staff on special duty connected therewith the total number of operations during the year amounted to only 107,788 against 175,901 in 1899-1900 or a decrease of 68,113, and a decrease of 25,115 compared with the results of 1898-99. Of the total, 74,707 were primary operations and 33,081 revaccinations, the corresponding figures in the preceding year having been 120,772 and 55,129 respectively; of the former 96.6 per cent. and of the latter 20.9 per cent. were claimed as successful against 95.8 and 17.2 per cent. respectively in the previous year.

Owing to the famine, calves were not available in sufficient number and lanolinated calf-lymph, manufactured at Amraoti, was used from April to November, thereafter to the end of the working season fresh calf-lymph was employed.

132. The total vaccination operations performed during the year in this Presidency numbered 1,245,719, an increase of 97,899 operations on the results of 1899-1900, of which 84,502 were primary cases and 13,397 revaccinations. The percentage of success in the former was practically the same as in the preceding year, *i.e.*, 91.9 and 91.8 respectively, while for revaccinations it rose from 76.2 to 77.6 per cent.

The total work done in municipalities increased by about 11,000 operations, and though there was an improvement in the district totals as a whole, yet in six districts there was a decline during the year. Various causes are assigned for this, the chief of which is the absence of members of the vaccination staff without substitutes, on census and other special duty: the lymph supply is also complained of as ineffective in certain places, and attention has been drawn to this.

On the whole the improvement noted last year is maintained, and the plague inoculation scare seems to have entirely disappeared.

As in previous years, four kinds of lymph were used to the following extent, with the results noted against each:—

	No of cases.	Percentage of success.
Fresh calf-lymph	210,960	98.8
Do. in tubes and plates	70,045	94.8
Glycerinated lymph	404,232	91.5
Lanoline ,,	383,485	79.1 to 93.4

As usual fresh calf-lymph yielded the best results, and those from glycerinated lymph show a steady improvement year by year. The locally prepared lanoline paste yielded success at the rate of only 79·1 per cent. in local fund areas, but it rose to 88·5 per cent. in municipalities, while the paste obtained from Bangalore yielded 93·4 and 92·3 per cent. of successful cases in the two different areas named respectively.

The projected establishment of a Central lymph depôt for the Presidency has been alluded to.

133. The total work of the staff in this small province consisted of 11,380 operations, an increase on the number for 1899-1900, which was 9,996. Of the total 9,618 were primary cases and 1,762 revaccinations; one-half of the primary cases were performed among children above one and under six years of age, an indication of the risk to which infants are subjected and which is a feature of other provincial reports; the percentage of success secured in the two classes of work was 93·89 and 77·01 respectively, while in the previous year the corresponding figures were 94·93 and 76·48.

It is satisfactory to note that the recovery noticed in this report for 1899, from the effects of the plague inoculation scare, has been maintained.

The entire work done in the Province was as usual effected exclusively with unmixed calf-lymph.

134. The total number of operations performed throughout the Presidency was 661,001, which is a decrease of 108,266 compared with the work of 1899-1900, of which latter number 92,917 were primary cases and 15,349 revaccinations. This is attributed to the wide-spread famine and to the epidemic disease which lowered the birth-rate and raised the infantile mortality-rate and set up other adverse conditions to which allusion has already been made.

Of the number primarily vaccinated 532,845 or 90·86 per cent. of the cases were successful, the results in no less than 47,603 cases being unknown, while in revaccinations 42,062 or 56·96 per cent. succeeded: here also the results of 23,246 cases could not be ascertained chiefly owing to wandering life led by the people under the stress of famine and pestilence.

In the Native States also the primary cases fell from 185,162, the number recorded in the previous year, to 133,720, and the percentage of success from 95·76 to 92·66. But revaccinations rose from 7,116 to 9,756, the percentage of success being 65·76 against 70·04 in the preceding year.

Calf and humanized lymph were used during the year, but the relative results obtained are not stated; it is intended in future to present a detailed statement of all the kinds of lymph employed, the extent of their use and the relative results. Glycerine lymph was tried in Bombay City with encouraging results.

135. The total number of operations performed was 80,426 less than in 1899-1900, *i.e.*, 410,461 against 490,887. The decrease was generally distributed, occurring as it did in 29 of the 38 districts, and is attributed to closer supervision of work and to the severe penalties imposed on the staff for bad work and for falsifying returns.

The details given in the report scarcely bear out the former reason, for Civil Surgeons are said to have inspected only 21·55 per cent. of the total operations and Native Superintendents only 14·92 per cent., against 22·91 and 14·13 per cent. respectively in the previous year, when a larger amount of work was performed. The number of primary operations fell off by 71,110, and revaccinations to the extent of 9,316, the percentage of success claimed for the former

being 91·69 and for the latter 50·26, against 94·71 and 58·72 respectively in the previous year.

If these results indicate a better standard of work on account of stricter supervision, they are not to be regretted, the higher figures of previous years having apparently been inflated by false returns on the part of vaccinators. The working of the Burma Vaccination Law Amendment Act (Burma Act II of 1900) is not alluded to, and it is not clear if it was brought into operation during the year.

The work of the Department in Rangoon continues to be far from satisfactory. Only 2,265 primary operations and 2,677 revaccinations having been performed: returns which are even lower than last year, which were the lowest during the preceding quinquennium. A number of causes conduce to these poor results, the chief of which are the inadequacy of the staff and of supervision. The total number of births recorded in Rangoon during 1900 was 3,143 and 1,186 infants died within the first year of life, leaving at the least 1,957 to be protected, whereas only 1,046 successful operations were performed on infants below the age of one year. The compulsory Act is in force, but is not enforced and the local municipal authorities are clearly responsible.

The lymph supply from the Taunggyi depôt proved to be generally defective, and this was attributed to prolonged storage before use and to exposure in transit to the site of the operations. The depôt was closed and the staff transferred to Rangoon, which will supply the entire Province with lymph until buildings are erected for the proposed new depôt at Meiktila or other convenient station.

Lymph manufactured at the Rangoon depôt was issued in sufficient quantity for 60,000 operations, in compressible leaden capsules and glass capillary tubes, with satisfactory results.

The practice of inoculation is carried on throughout the province and unfortunately the sympathies of the people are in favour of it and against the legitimate operation. The local authorities have, however, not deemed it advisable to take steps to suppress inoculation by legal process, it being thought desirable, in the present stage of public opinion, to depend on vaccination to produce the desired effect on public opinion which in Burma is very backward in its appreciation of sanitary measures. The position in Burma, as regards small-pox and its prevention, would provide an excellent object lesson for the anti-vaccinator, the average death-rate from the disease during the past decade is 0·59 per mille or just fifty per cent. higher than in India, and yet registration is very much more defective in Burma.

136. The staff performed a total of 10,681 operations, a very large decrease compared with the 27,080 operations recorded in 1899-1900. Of the number, 10,660 were primary cases and only 21 revaccinations, against 26,077 and 1,003 respectively in the previous year. The percentage of success secured in the primary work was slightly higher than the preceding year, *vis.*, 99·20 against 99·08, but in revaccinations it fell off, from 90·83 to 61·90 per cent.

As only advance statements giving the bare figures have been furnished, it is only possible to conjecture the causes which brought about this great reduction in the work of the Department. Famine and epidemic disease prevailed and militated against the work in the several ways to which allusion has already been made.

137. Statistics of the vaccination operations conducted among European and Native troops will be found in statement III of this section in the Appendices at the end of this report.

Vaccination among troops.

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SECTION VIII. SANITARY WORKS.

138. Two municipalities were added to the list in Bengal during 1899-1900, the number now standing at 153, excluding Calcutta, and their total income amounted to Rs. 46,84,589, of which 44·93 per cent. was spent on sanitary works (original and recurring), 11·38 per cent. on roads and 30·8 per cent. on other requirements, the corresponding figures of the previous year being 44·75, 9·97 and 33·8 per cent., respectively.

Bengal.

Under ordinary sanitation charges nearly eleven lakhs were spent on conservancy, nearly 2½ lakhs on water-supply, and nearly 1½ lakhs on drainage, showing an advance under each head over the figures of 1898-99, the most notable increase (Rs. 39,000) being under water-supply, which was due chiefly to the extension of the filtered supply to new areas in Howrah and to special repairs to the pipe line in Darjeeling. An increase of nearly one lakh under other sanitary works is due to the large expenditure incurred in plague preventive measures. On original works only ten municipalities, or the same number as in the previous year, spent over 10 per cent. of income, 20 against 17 spent between 5 and 10 per cent. and 55 against 48 between 1 and 5 per cent., while 48 against 54 spent nothing on this account; the last number includes many important communities, and the fact calls forth a renewed protest from the Sanitary Commissioner against the lack of enterprise and public spirit displayed by these local bodies.

The total cost of various new works carried out by municipalities and District Boards, by Government and by private individuals, either completed or in progress, amounted in towns to Rs. 4,15,276 against Rs. 3,07,766 in the previous year, and in rural areas, to Rs. 4,96,957 against Rs. 5,49,386; a list of the more important of these undertakings, chiefly "tanks" and hospitals, is given but need not be detailed here.

139. The Board held three meetings during the year, and business was also largely conducted by the circulation of papers to members. Among the more important subjects discussed were the improvement of the Darjeeling water-supply and the health conditions of the Hooghly riparian municipalities, referred to in Section X of this report for 1899. The more important preliminary estimates prepared were those for the Patna water-works and a combined scheme for the water-supply to the riparian municipalities.

Sanitary Board.

Plans and estimates were considered, and an opinion given, on eleven important water works and drainage schemes, details of which are furnished and

exhibit the valuable functions performed by the Board in its consulting capacity, which was also exercised in disposing of numerous miscellaneous references made by Government and by local authorities. The Sanitary Engineer inspected critically the water-works in eight towns, and, in addition, visited several others in his consulting capacity for various purposes.

A useful report on the results of the sewage purification experiments conducted by the same officer at the Presidency jail was issued and distributed to the authorities of the larger municipalities.

140. The total income of municipalities and local bodies during the fiscal year was Rs. 2,44,225 as compared with Rs. 2,75,921 in 1898-99; deducting the amount spent on "roads and bridges" (Rs. 50,471), the amount spent directly on sanitation was Rs. 1,18,732 or 44.69 per cent. of income, against 42.74 per cent. in the previous year.

Under conservancy Rs. 67,802 was spent against Rs. 79,532 in 1898-99; under drainage Rs. 10,685 against Rs. 12,395; and under water-supply Rs. 21,700 against Rs. 25,870. The proportion of income spent by local bodies on sanitary works ranged from 70.43 per cent. in the Habiganj union to 18.8 per cent. in the Jorhat union. A list is given of the various sanitary improvements effected by Local Boards in rural areas, chiefly in connexion with the extension and conservancy of the sources of water-supply, sinking of wells, excavation of "tanks," etc.

141. The Board held three meetings during the year, and at other times views were exchanged by the circulation of papers.

142. No details of the income, nor of the expenditure on sanitary works are furnished by the Sanitary Commissioner of the North-Western Provinces and Oudh. North-Western Provinces and Oudh in his report for the year under review, beyond the fact that Rs. 10,83,208 were devoted to the general purposes of Conservancy, the sum thus spent in the previous year having been Rs. 9,71,262.

The more important sanitary works undertaken during the year included no new departure, but were in development of schemes already commenced, notably extensions of the sewage works at Benares, measures for the prevention of the pollution of the Ganges at the same place, and extensions and remodelling of the water-works at Cawnpore, Naini Tal and Mussoorie.

An important scheme for the drainage and sewerage of Cawnpore city was under consideration throughout the year, but any active progress in its realization will fall to be noticed in next year's report.

Along with these, much attention was paid to the improvement in detail of the water-works in several of the larger cities, whereby the greater purity of the supply will be safeguarded and enormous wastage prevented. Very useful, if partial, works of drainage were either carried out or planned for the towns of Saharanpur, Aligarh and Farrukhabad. The detailed summaries presented by the Sanitary Commissioner and the Sanitary Engineer leave the impression that the local authorities are pursuing a vigorous policy of sanitary reform in the larger urban centres, and that, especially as regards the splendid water-works that have been inaugurated during the past decade and which bring an excellent drinking supply to about one-third of the total municipal population, every care is devoted to all details of management and to improvement.

The amount of filtered water consumed per head of population where water-works are in operation may be briefly stated as of interest for comparison with European standards. In Benares it was 12·7 gallons per head per diem; at Lucknow, 4·1 gallons; at Cawnpore, 10·5; at Agra, 8·2; at Allahabad, 9·4; at Meerut, 8; at Dehra, 6·6; at Mussoorie, 5·4; and at Naini Tal 9 gallons. It may be added that frequent systematic analysis of the water "showed good results" throughout the year, save only in that supplied to Agra, measures for the protection of which at the intake have since been carried out. It may be added that beyond the attention devoted to sanitary works in towns, rural areas have not been neglected, many improvements of a minor character having been effected as a result of the visits paid and reports made by medical officers in the course of their ordinary duties, and especially in connexion with plague preventive measures.

143. Seven meetings of the provincial Board were held during the year, when projects and estimates amounting to Rs. 2,10,438 for the sanitary improvement of municipalities were considered. Various schemes for the extension and improvement of existing works for water-supply and drainage were considered, while plans for slaughter-houses and markets also received attention. The reports on the working of the Village Sanitation Act (1892) were read, and the Board noticed with satisfaction the increased attention paid to the conservancy of wells and the evidence of general improvement of the sanitary condition of villages to which the Act has been applied.

144. The aggregate income of all municipal towns in the Punjab for the fiscal year 1899-1900 was Rs. 58,08,562, including the opening balance, against Rs. 57,79,059 in the previous year. Altogether a sum of Rs. 13,30,367 or 22·9 per cent. of income was expended under all heads of sanitary works, a little over 1 per cent. less than in 1898-99, but this includes the expenditure on "roads and bridges" (Rs. 2,41,569), and if this be excluded the percentage falls to 18·7.

Under conservancy Rs. 6,40,852, under drainage Rs. 1,09,676, and under water-supply Rs. 2,87,086 were spent, or about Rs. 84,000 less under the second head, and about one lakh more under the last named than in the previous year, no material difference appearing under the first head.

The income derived from the sale of night soil for manure in all municipal towns amounted to Rs. 1,62,173 as compared with Rs. 1,42,809 in 1899; it is considered that far more should be realized if proper care were devoted to the subject to which attention is repeatedly directed.

The chief original works undertaken were extensions to the water-works in Delhi, Simla and in Fort Dalipgarh in Bannu district; the water-supply scheme to the civil station of Dharmsala is under consideration. The Chandni Chauk section of the Delhi drainage works was nearly completed. The extension of the sewage works in Simla is in progress, and much was done towards the completion of the drainage scheme for Fazilka in Ferozepore. Three separate projects for the improvement of the drainage of Lahore city were practically completed and similar works in Rawalpindi, Hazro and Abbottabad are in progress, while several other drainage schemes are under consideration.

As regards rural areas, a considerable amount of activity was displayed by most district boards; the village sanitary note-books are in use in every district, and they are reported to be fulfilling the function for which they were designed.

The Sanitary Board has drawn up a new Inspection note-book from which much is hoped, and the system of granting monetary rewards to the village in each tahsil which shows most improvement is being developed, while at the same time the chief considerations which should influence a judgment in these awards, were discussed and formulated.

There is indeed good evidence for the Sanitary Commissioner's statement that the cause of sanitary reform is generally progressing in the Province, and that a greater impetus will now be given to it by the recent appointment of a Sanitary Engineer.

145. The Board held two meetings during the year, and business was also conducted by the circulation of papers. Their attention was devoted to the measures cited above for the encouragement of improvements in village sanitation and to questions arising out of the vital statistics of certain towns which have been supplied with drainage systems and water-works, and where, *prima facie*, improvement in the public health has not been exhibited; but the premises on which this assumption was based were shown to be partial or misleading.

146. The total income of the municipalities in the Central Provinces for the year 1899-1900 was Rs. 10,70,346, or Rs. 61,402 more than in the previous year. Of this total, it is said that 28·18 per cent. was spent on "original and recurring sanitary works," but details are not given for the separate heads. So far as can be judged this is about 10 per cent. less than in the previous year, and this is scarcely matter for surprise in view of terrible famine through which the province passed and which must have involved heavy calls on the resources of local bodies.

The chief sanitary works undertaken were in connexion with the extension, maintenance, or completion of the water-supply projects for the following towns, Khandwa, Burhanpur, Harda, Nagpur and Wardha. A considerable extension was effected in the drainage system of Jubbulpore city, and beyond this, a long list is given of minor works carried out by the municipalities chiefly in connexion with the improvement, amplification and conservancy of water-supply sources, a question of the gravest and most urgent importance in view of the great drought that prevailed; a good deal of this work was done by famine labour.

As regards rural areas, a summary is given of the notes submitted by Deputy Commissioners on the working of the Village Sanitation Act, which is by no means generally in force and the results of which, in the year under review, were not so favourable in all cases as might be hoped owing to the prevalence of famine. Progress in this direction must be slow, but with the return of prosperity there is justification for the hope of better things.

147. The Sanitary Commissioner observes that "owing to the adverse condition of the province, no meetings of the Sanitary Board were held during the year. In several districts the work of sanitary reform was, on account of the general distress and consequent paucity of funds, much curtailed, while in some others it was brought to a standstill." However, a good many minor works, chiefly for the improvement of water-supply sources, were carried out under the Board's direction.

148. The estimated income of the municipalities in Berar in 1899-1900 was Rs. 2,85,275, or Rs. 13,548 more than in the previous year. The total expenditure, under all heads, on sanitary measures was Rs. 1,27,244 or 44·6 per cent. of income, against 48·4

per cent. in the previous year, this decrease, which is shared by each head of expenditure, being attributed to the large extra charges involved in combating famine and epidemic diseases. Outside the municipalities a total sum of Rs. 1,07,901 was expended by District Boards chiefly on drainage (Rs. 3,815), water-supply (Rs. 61,869) and "domestic cleansing" (Rs. 41,895), sums fairly equivalent to those devoted to the same purposes in the previous year excepting that on drainage which shows a considerable fall.

149. The District Sanitary Board met once at each headquarter station during the year to take stock of what had been done on the suggestions made by Sanitary Commissioner in his survey-notes on the several towns and villages inspected in past years. A large amount of work devolved on the medical and sanitary executive in the supervision and control of famine relief camps, and it was only to be expected that village sanitation should receive less attention than usual.

150. Excluding the Presidency town, the estimated income of the sixty municipal towns in Madras for the first nine months of the fiscal year was Rs. 28,73,050 as compared with Rs. 34,98,110 in the similar period of the previous year. A sum of Rs. 17,40,791 was allotted for all sanitary purposes, and the aggregate actual expenditure up to the end of December 1900 was Rs. 11,77,351 against Rs. 9,13,559 in the corresponding period of 1899. The relative distribution of these sums in the 2 years may be seen by a glance at the subjoined statement, which also gives the figures for the city of Madras for comparison:—

Heads of expenditure.	SIXTY TOWNS. POPULATION 1,720,202.		MADRAS CITY. POPULATION 438,375.	
	1899.	1900.	1899.	1900.
	Rs.	Rs.	Rs.	Rs.
Conservancy	4,89,766	5,24,800	3,38,986	26,409
Improvement of village sites	1,74,487	1,92,220	69,263	98,048
Water-supply	1,96,227	4,05,956	42,270	21,798
Sanitation of Fairs	7,556	6,820	...	...
Markets and slaughter-houses	14,528	11,874	75,321	68,936
Other miscellaneous Sanitary works.	30,995	35,681	69,839	6,70,393
TOTAL	9,13,559	11,77,351	5,95,679	8,85,584
INCOME	34,98,110	28,73,050	14,47,510	15,92,740

Very considerable differences will be noticed in the expenditure under water-supply in the sixty towns and under miscellaneous works in the city, which account for the large aggregate increase in each case during the year under review, but the Sanitary Commissioner affords no clue to the cause of the contrasts exhibited. He reports what was said last year that the necessity for retaining a reserve for the emergency of plague, and in certain cases, the incurring

of increased expenditure on account of threatened or actual invasion, has so tied up or crippled the resources of local bodies that these have been unable to undertake any sanitary works of importance.

The actual achievement in this respect and the different works in various stages of consideration are set forth in the report of Sanitary Engineer. The programme for the year embraced schemes for the water-supply of Berhampur, Negapatam, Tiruvannamalai and Calicut, and for the drainage of Madura. The projects for the first and third named towns were worked out completed and submitted to Government, and the others are still in various stages of progress. But beyond these, plans and estimates were drawn up for schemes of water-supply to Chidambaram, Tuticorin, Madura (extension), Trichinopoly and Masulipatam, and for the drainage of Ootacamund. The construction of infiltration galleries in connexion with both the Trichinopoly and Cuddapah water-works was completed during the year. Of the 60 municipalities, 38 have been surveyed for water-supply schemes and 25 for drainage projects, and as regards 12 in the former category, schemes have either been completed or are in active progress, and some 17 more schemes are under consideration or in abeyance; while as regards drainage four schemes have been completed or are in progress, and in five cases they are still under consideration or in abeyance. The report affords very full and interesting particulars regarding each town or area which comes into the above statement.

The sanitary works carried out by the local (district) boards during the year consisted in sinking and repairing wells, construction and repair of tanks, latrines, markets, slaughter-houses, &c., and the improvement of village sites. The aggregate estimated income of these district boards amounted to Rs. 1,20,20,070 against Rs. 86,14,840 in the previous year. Of the former sum Rs. 6,36,362 or Rs. 5·3 per cent. was set apart for sanitation purposes, but little more than half of this was actually spent; in only four districts was the allotment fairly worked up to. Thus in spite of a very large increase in the resources the sum spent was less than that so devoted in the previous two years, but the necessity of retaining resources in hand for possible or actual plague measures has been the cause of this lack of enterprise. And thus although the fear of plague has been the beginning of wisdom as regards sanitary effort in many other parts of India, it is to be feared that Madras has lost ground in the general campaign against dirt and disease even if it has succeeded, in large measure, in keeping plague itself at bay.

There are however abundant signs that the sanitary executive is fully alive to its duties and responsibilities; 237 reports of sanitary inspections of towns and villages were received during the year from District Medical and Sanitary Officers, and it is certainly not from lack of the best scientific and practical advice of which the Sanitary Commissioner's report is witness, that local authorities are at any disadvantage.

151. The Board scrutinized and advised on plans, estimates, &c., for works for a very large number of municipalities, district and taluka boards, and type plans for rural hospitals were drawn up and issued.

152. No particulars of municipal income are given in the advance proof of the report which alone is available at the time of going to press, but it is said that the sum of Rs. 259 was expended by the Public Works Department, and Rs. 650 by the various municipalities on sanitary works during the year.

153. It is also stated that the Sanitary Board held four meetings during the year at which plague preventive measures and some minor matters were discussed.

Sanitary Board.

154. During the year 1900 there were 165 municipalities in the Bombay Presidency, excluding the capital city, with an aggregate population of 2,196,359 souls; the total income, including opening balances, amounted to Rs. 68,95,003, against Rs. 55,26,695 in the previous fiscal year. Of this sum Rs. 14,57,687 was expended under the three chief heads of water-supply, drainage and conservancy, which is about 21 per cent. of income or a little less than the allotment for the previous year. No details are given of the expenditure incurred under "other sanitary works," "markets and slaughter-houses," "town-sites," etc., which in the previous year involved an outlay of some 8½ lakhs, but it is presumed that these responsibilities were not neglected.

Bombay.

The entire income of the 23 District Boards, including 205 Taluka Local Boards amounted to Rs. 45,42,921, out of which Rs. 3,22,449 were expended on the three main heads of sanitary works, a sum approximately equal to that so spent in the previous year.

The Village Sanitation Act (1889) has been introduced into 301 villages, or one more than in 1899. It would appear that owing to plague and famine, which has absorbed the attention of district officers, no progress has been made in the establishment of village committees under the Act, and better times must be awaited. The same must be said as to the number of selected villages into which the sanitary inspection note-book has been introduced, though there is evidence of the greater use to which these records have been put.

155. The more important sanitary works undertaken during the year are

Sanitary Board.

alluded to in the report of the Sanitary Board, which opens with the remark that plague and famine pressed hard on the municipalities during the year, though Government gave considerable grants-in-aid for plague expenditure to many of these local bodies.

The water works at Sukkur and Hyderabad were supplemented by additions to the machinery, and plans and estimates were prepared for extending the filtering area of the latter works. Plans for the Kaira and Mehmabad water-supply schemes have been prepared, while that for Poona is now before Government. Of the Yeola works it is reported that they have been at a standstill for over two years, the municipality being unable or unwilling to provide funds.

The water-supply project for the town and cantonments of Belgaum has been transferred to the Madras military authorities for disposal.

The Ahmedabad drainage scheme which was shelved for more than a year has lately been taken up, but the prospect of progress is not good as the Executive Engineer has not time to devote proper attention to it, and a special Sanitary Engineer, who can give his whole time to the work, is considered essential. The great Poona sewage scheme which comprises the bacterial purification of the sewage and the utilization of the effluent for crop-irrigation has now assumed definite, if not altogether final, shape; the plans and estimates have been submitted to Government, but it is said that neither for the sewage nor for the water-supply scheme is there much hope of realization without a liberal loan from the Imperial authorities.

Finally, the Board advert to their previously expressed opinion as to the advisability of their being endowed with executive as well as consultative powers, to enable them to initiate and supervise sanitary works. They also point to the serious drawback to progress involved in the multifarious duties which occupy Executive Engineers, who have no time to give proper attention to large sanitary works. It must be admitted that these considerations are well worthy of the attention of the authorities.

156. The number of municipal towns, 41, remained the same. Their total income, including opening balances, was Rs. 46,12,670, against Rs. 58,42,141 in the previous year. Altogether 55 per cent. of income was spent on sanitary works; 9 per cent. on drainage, 11 per cent. on water-supply, 14 per cent. on conservancy and 21 per cent. on miscellaneous "other sanitary works"; on the previous year only 34 per cent. was thus expended in the aggregate.

Burma. Prome was the only municipal town where anything appreciable was expended on water-supply or drainage. The laying-on of the river water, though unfiltered, has proved of great advantage to the public health, and a system of drainage is in active progress. Schemes for the extension and improvement of the water-supply of Mandalay and Rangoon are under consideration; it is said that the latter, to cost 11 lakhs, is to be taken in hand without further delay.

Various other projects for which surveys and plans have been completed, are under consideration; *e. g.*, an artesian well for Paungdé; water-supply schemes for Moulmein and Meiktila, while the drainage scheme for the latter has been completed.

On rural sanitation a sum of Rs. 1,55,949 was expended from District Cess Funds, 12 per cent. of which was on the water-supplies, 28 per cent. on drainage works, 25 per cent. on domestic cleansing, and 35 per cent. on miscellaneous works.

While much actual achievement has not marked the year under review in regard to large sanitary works in either urban or rural areas, there is evidence of awakening on the part of the responsible authorities, and the next few years should see many useful and important projects completed, while the task of educating the backward population of the rural tracts is not being neglected.

157. Of the Sanitary Board it is said that proposal for its reorganization were submitted to Government during the year, but these proposals are not given in the report.

Sanitary Board. 158. The total expendirure on Military Works in India during the year 1900-01 was Rs. 90,94,940, against Rs. 99,26,242 in the previous year.

Military Works. Details of the Sanitary Works executed in cantonments will be found in Tables V and XXX of the statistical series at the end of the volume, in which the chief sanitary defects of the most unhealthy stations are also briefly referred to.

SECTION IX. GENERAL REMARKS.

159. The century which has just closed, and with the last year of which this report deals, has witnessed great progress in the sphere of preventive medicine in India.

The outlook ; past and future.

The subject is a fascinating one, whether regarded as in great measure the harvest of the work of one man, Parkes, who laid the foundations of the Netley school of Hygiene and whose inspiration has descended upon successive bands of students unto the present day, or, in its larger aspect, as an important contribution to State economics. But a recital of the achievements of the medical services in this country in the control of sickness and mortality among the British and Native troops and the Jail population, to which classes of the people alone sanitary measures can be adequately applied in the present stage of public opinion, deserves a separate essay for its adequate presentment rather than a concluding paragraph in this report, the authorised limits of which have been reached. A statement of the kind indicated is, however, projected, and will, it is hoped, appear before long in another place. Here, in the fewest words, it may be stated that for the quinquennial period 1861-65, the average annual ratio per mille of strength of admissions to Hospital (all causes) among British Troops in India was 1,636.3, while the death-rate was 25.95; whereas for the five years just concluded (1896-1900) the figures are 1,328.6 and 16.52 per mille respectively; in 1899, the admission-rate was 1,148 and the death-rate 12.75, while in 1900 the former rate was 1,143 and the latter 14.62 per mille. And this large saving in life, which is equal to a British regiment per annum, has been effected in spite of the changes in the *personnel* from the older long-service men to the younger and less-developed components of the present army who furnish the largest proportion of sickness and mortality.

Going further back we find it stated on good authority* that the average annual death-rate per 1,000 of European soldiers in India was 84.6 for the period 1800-30, and that it was 56.7 for the period 1831-56, against the present average rate of 16.

The official records of sickness and mortality among the native troops which are immediately available extend over the last 21 years; in the first quinquennium embraced by this period (1879-1883) the average ratio per mille of strength of admissions to hospital (all causes) was 1,336.2, and the average annual death-rate was 23.95, whereas for the period 1896-1900, the ratios are 781.4 and 11.81 respectively, showing an enormous saving in valuable lives and in effectiveness for service; but the comparison is, to some extent, vitiated by the effects of the Afghan campaign which occurred in the former period, though it is to be noted that the Tirah and other frontier campaigns (1896-97-98) come into the latter period. In the quinquennium 1889-93 the annual average admissions ratio was 1,013.3 and the death-rate 13.92. Lastly, as regards the Jail population, it will suffice to quote the figures for three periods for which authentic records are available. During the first, extending from 1832-33 to 1854 † (about 21 years) the average annual ratio per mille of

* Professor J. Lane Nottet, quoted in "Indian Lancet," 16th June, 1896.

† "Indian Annals of Medical Science," October and April 1856, and the Report on the Sanitary condition of the Madras Jails, 1856.

admissions to hospital (all causes) was 1,230·2, and the death-rate on the same basis was 70·7; next, taking the first and last quinquennial periods of the last 21 years (1879-1900) we find that for the former the ratios are, for sickness 1,194·6 and for mortality 48·86, while for the concluding period, they are 980·7 and 29·97 per mille respectively. This last period coincides with the widespread prevalence of famine and scarcity and the consequent excess of epidemic disease among the general population, conditions which drove large numbers of the destitute to crime and flooded the jails to overcrowding, by the dregs of the population, who never robust, were often in the last stages of disease.

The above facts may be better appreciated if stated in tabular form, thus, referring to the mortality ratios only:—

Death-rates per mille of strength.

	1800-30.	1831-56.	1861-65.	1869-78.	1895-1900.
European Troops	... 84·6	56·7	26·95	19·3	16·52
Native Troops	... ..	... ..	... ..	1879-83.	1895-1900.
				23·95	11·81
Jail Population	... ..	1833-54.	... ..	1879-83.	1895-1900.
		70·7		48·86	29·97

This record, remarkable as it must be accounted, is but the earnest of further progress, standing as we do at the opening of a new era in the study of the etiology of tropical disease. The new departure evidenced by the establishment of the schools in London and Liverpool, together with the development of the best methods of pathological research at Netley, has been reflected in the general spirit of enquiry that animates the medical services in India more markedly than ever to-day and which affords ample promise that the high traditions of the past will be maintained. These traditions may be to some extent appraised by the fact that during the past century, at least fifteen officers of the Bengal service have received the high distinction of the fellowship of the Royal Society, the year 1901 being signalised by two such awards. It is true that the ordinary executive duties of medical officers have for the majority been too engrossing or too distracting (from the constant changes due to the exigencies of the service) to permit of the steady concentration of effort which research work demands. This disability the new bacteriological department will largely remove, and while scope and opportunity for the elucidation of the problems of disease will be afforded to the select few best qualified for the work, an impetus will be given to similar efforts throughout the service. Officers know that the official seal of approval has been set upon the work and that there is a career open to them in the special department if their tastes and talents qualify them for it. The record of the past year affords abundant and gratifying evidence of this, as will appear in the subsequent remarks.

When we come to survey the progress made in the amelioration of the health conditions of the general population, we are met by grave difficulties, with the nature of which those who have followed the facts set forth year by year in the section on vital statistics in this volume, will be familiar (see also the remarks on page 55 of this report). The registration of vital phenomena is everywhere, but in varying degree, gravely defective, and as it tends to improve, as is undoubtedly and markedly the case, the mere records do not afford much ground for congratulation, for a higher death-rate may not, often does not, connote a greater proportional mortality. In previous sections* of this report some of the main outstanding conditions of life of the people have been alluded

* See pages 59-60 and 79-80.

to, and many of these are beyond the influence of sanitary effort save that which is embodied in precept and example which is alien to their sympathies and traditions. The gigantic problem of providing a sanitary environment for the masses who dwell in towns and villages which have grown up without regard to sanitary principles, is one which has long exercised the wit and resources of the authorities, and it can truly be said of the effort that "it moves." In the matters of water-supply and conservancy much has been done; we are encroaching steadily and persistently on the realm of dirt, and we are undermining the apathy and ignorance that beget it. Still this is from the outside, and the homes of the people, which have, for the most part, defied our efforts, present conditions that call for reform, especially in the towns, where overcrowding on the site and in individual dwellings, and the absence of due provision for ventilation favour all the factors that go to make an insanitary environment.

The people while generally scrupulous in the performance of the rites of which the daily life is one long procession, and which are often based on fundamental principles of personal hygiene, have no notion of *public* health, and very little of corporate effort; each man, in this respect, is a law unto himself and provided he escape defilement the law is well observed. Moreover the large number of natives who have been trained in medicine and in the elements of hygiene exercise very little influence on their fellows; they rarely lose their own inherited prejudices and consequently fail to proselytise to their merely formal faith. Our efforts in the sphere of clinical medicine and surgery are appreciated and yet, to a large extent, still suspect and only appealed to as a last resource; they appeal to the people as something occult, ultra-rational and capricious and as exacting no obligation to defer to the doctor's preventive ordinances.

The provisions of any legal code can only be effectually realized in so far as they represent the conscientious convictions of those to whom they apply; they will be null and void in proportion as they are in advance of, or behind, the stage of opinion reached by the majority. The experience of the results of endeavouring to apply reasonable (to our notions) preventive measures in the campaign against the plague is a case in point; the contrast in the attitude of the people in Glasgow and in Bombay is very suggestive of our limitations in this country, and one of the outstanding mysteries of our policy in regard to plague in the eyes of intelligent foreigners is the fact that the epidemic is treated rather as a political emergency than a matter of public health. It is satisfactory to find that many inclined to scoff at this attitude end by appreciating the necessity for it;* but all this is by way of explaining why Municipal and Village Sanitation Acts fall short in practice of the effects they are intended to realize, why even their simple provisions cannot be rigidly enforced, even if we could trust the native agents to whom the duty nominally falls. At the same time much can be achieved by patience and persuasion as in the case of vaccination against small-pox; here the relation of cause and effect is much more simple, direct and obvious, than the relation which dirt and overcrowding bear to plague, for "dirt and overcrowding" are terms which bear a different connotation in the minds of the people to that we attach thereto. Where we can appeal to their reasoning faculties and instincts they follow, as in the matters of vaccination and of the evacuation of plague infected sites; and herein lies the hope for the future, our practical efforts being directed to the extension of education on the one side and of the sanitary organization on the other and so to the fostering of co-operation, while at the same

*See "Ueber einige Beobachtungen während der die-jährigen Pestepidemie in Bombay, von Dr. Martin Hahn; an address before the Berlin Medical Society, 26th June 1901.

time we press on with all those general measures of public health that properly belong to the sphere of the State and its local representatives.

Active measures have hitherto necessarily been for the most part of the nature of a compromise with physical conditions already long established, as well as with ingrained prejudices. The native quarters of the larger towns and of the capital cities have grown without regard to hygienic considerations into the similitude of huge irregular honey-combs. The outbreak of plague has brought this state of things home to the authorities of some of the largest cities, and they are now grappling with gigantic schemes involving the provision of more space, which means more light, more air and a purer soil, in the more densely crowded parts of the inhabited sites. The nature of the problem thus presented may be, to some extent, appraised by the case of Calcutta; at the census of 1891 the density of the population in the town wards was at the rate of 116 per acre, but in 1901, in spite of a natural decrease (excess of births over deaths) during the decade of some 125,000 souls, the large influx of immigrants, estimated at 270,130 persons, has increased the pressure of the population on the inhabited site to the average rate of 145 per acre*. With the growing tendency to industrial development, the steady and rapid growth of town populations must be anticipated and a great responsibility rests upon local authorities to provide for this by the rigorous enforcement of building laws to prevent the gravest evils to the public health, *vis.* space overcrowding and defective ventilation. With the rapid development of railways and the consequent establishment of new centres of population, the responsibility for preventive measures in this respect is equally great, and in this case, the task should not be insuperable. The problem is one which now affects fully one-tenth of the huge population of the Dependency, and this proportion is likely to be rapidly increased in the near future; and its gravity is enhanced by the consideration that all measures of public health largely depend for their success on its solution.

Meanwhile, as regards the mitigation of the chief cause of sickness and mortality to which this vast population is subject, the future is bright with promise. The idea of banishing malarial fevers entirely from the list of ills in this country is magnificent, and it is impossible at this stage to forecast how nearly that consummation might be achieved if the interest and intelligence of the people could be enlisted in the campaign, but it need scarcely be said that the practical problem is altogether on a different scale to that presented in Italy where the State is taking vigorous action in pursuit of the policy indicated by the new researches. Here indeed it may be said that the harvest is great and the labourers comparatively few and, for a considerable time, efforts will have to be concentrated on the more populous and enlightened centres, on cantonments and on the jails and their surroundings. No apprehensions need be entertained for the present of the embarrassing effects of the general success of these efforts on the natural increase of the population, though this aspect of the question has more than a merely speculative and academic interest. The transformation brought about in the Western Doab districts of the North-Western Provinces by large drainage operations has been described (see page 61), and yet malarial fevers have certainly not been banished from this area, and could we look forward to this achievement the contest of man with his environment would doubtless in the long run result in the same issue; prosperity and a high birth-rate induce overcrowding and the natural check to increase in one or other form of disease. Malarial disease must be said to be the direct cause of at least one-third of the total mortality all over India, and of a far larger proportion of the total morbidity, and

* In many of the wards it is much higher, and in Bombay city the average in 12 of the wards amounts to no less than 438 persons per acre.

if we could anticipate its elimination, the normal natural increase of population, which may be put at an average of ten per cent. in the decade, would rise to nearly 25 per cent., and this without taking account of the increased fecundity of the people which malarial disease so markedly impairs.

Before proceeding to a brief review of the work accomplished during the year under the inspiration of the new researches, the lesson of the results of large drainage operations may well be emphasized, especially in view of the desirability of extending irrigation works in tracts where the rainfall is scanty and capricious, and at a time when the railway construction programme is being vigorously pursued; skilful alignment and adequate drainage are inalienable responsibilities accompanying such public works. For, if from any cause, natural (as by floods and the silting up of river beds) or artificial, the ground water level is permanently raised to within a few feet of the surface, and if water-logging of the soil is induced, the evidence is now undeniable of the deleterious effect on the population, the cattle, the soil and the water-supply; while, on the other hand, these conditions being established no sanitary works can vie in efficacy with those adopted to reduce the water level. The evidence afforded as to the transformation effected in the Western Doab is only a repetition of similar testimony previously furnished as regards the area irrigated by the Western Jumna canal*. Water is an indispensable servant but an inexorable master in a tropical country.

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160. In last year's report a résumé of the work accomplished on the formidable task of differentiating the various forms of febrile disease which have long been a reproach to our nosology, was given, and that statement may be supplemented by the remark that the evidence since forthcoming has demonstrated the wide distribution of Malta fever, which may be said to have been found wherever carefully looked for; it has been found in the wilds of the Swat Valley, on the Himalayas at a height of over 7,000 feet above sea level and in the crowded low-lying cities of Bombay and Calcutta. Similarly, Cerebro-spinal Meningitis and Typhoid fever have been found to have a far more general incidence on the natives of, at any rate, the more populous centres than has hitherto been recognized.

In at least one large centre, Bombay, the practical bearing of a careful discrimination between the various fevers is being realized. Systematic efforts are being made, under the direction of the Health Officer to mark down the specific nature of all the anomalous fevers that have been classed as "remittents." A great deal of valuable work is being carried out in the separate wards of the city by the Divisional Health Officers, and the microscope and the serum sedimentation tube are being enlisted in the cause of preventive medicine by these busy executive officers, with the result of indicating special foci of disease which raise the general death-rates in large wards.

It is to work of this kind at the hands of medical officers of regiments and of jails that we must look for the all-important and pressing obligation of purging our nosology of obsolete and meaningless terms and for obtaining a scientific survey of the field of Indian febrile disease. No case of fever should henceforth be returned without an attempt at accurate diagnosis; the reform of the nomenclature will necessarily follow, and the all-embracing bane "Ague" will disappear from the records; a diagnosis of ague in an untreated case of fever, without the

* See Dyson, Trans. Ind. Med. Congress, Calcutta, 1894.

identification of the parasite, must be held to connote incompetence on the part of the responsible medical officer.

161. And it is chiefly in respect to the various problems connected with the

causation and distribution of ordinary malarial fevers
Researches on malarial fevers. that the work of the year demands notice. The arrival

of two Commissioners, Drs. Stephens and Christophers, delegated by the Royal Society to pursue researches into this subject, and especially as regards prevalence of "Black-water fever," afforded the Government of India an opportunity of associating with these gentlemen Captain S. P. James, I.M.S., who had already distinguished himself by his observations in Southern India. The main objects of the Commission's work have been the study of the problems of malarial disease as presented in different districts among the general population, and further, an enquiry into the best practical means of reducing and preventing the incidence of the disease on the inhabitants of cantonments and jails, where the conditions are more easily attacked and controlled. Up to the time of going to press with this report, the town of Calcutta, four districts in Lower Bengal, four districts in the "Duars" (Darjeeling-Tarai), the hill station of Kurseong (5,500 feet elevation) and the cantonment of Mian Mir on the Punjab plains have been visited and surveyed from this point of view.* The routine work has comprised the examination of specimens of blood from large numbers of children and adults of the general population; the dissection of a large number of *Anopheles* mosquitos to ascertain the percentage of infection; a study of the various species of *Anopheles* present in different districts, and the investigation of their habits and breeding places; an examination of cases of malaria under treatment in hospitals; and, lastly in Mian Mir, practical experiments in prophylaxis. Premising that true "endemicity" may be determined by the proportion of children and of *Anopheles* found to be infected (the "endemic index"), it has been found that what is true for Africa in regard to the infection of children and the relative non-infection of adults in malarious places, is true for India. The amount of the infection of children is a reliable index of the general prevalence of malaria. The endemic index was found to range from *nil* in Calcutta to 43, 55 and 72 in the "Duars." The Calcutta districts chosen were those in which all the conditions usually associated with the development of malaria were present, including *Anopheles* in abundance. It is remarkable that not one of the 140 children examined had parasites in their blood, and that not one of the 342 *Anopheles* dissected was infected. In the height of the "fever" season (September) 42 more children were examined with the same results—no parasites and no enlarged spleens. The results of the examination of patients in the hospitals were practically the same, and parasites were only found during relapses in two cases of a chronic type. There are indications that such ordinary malarial infection as occurs in Calcutta is derived from outside the city, and that the risk of contracting the usual forms of the disease therein is remote. But the Commissioners are careful to distinguish between malarial disease accompanied by parasites in the peripheral blood, and a form where this diagnostic evidence is wanting. The latter appears to be common in Calcutta, and is of a grave type which passes into a true malarial cachexia, the main indication presented by a microscopic examination of the blood, being a large increase in the mononuclear leucocytes, a fact to which attention has been drawn by a French Army Surgeon in Algeria.

* These facts are taken from a preliminary report by Captain James, I.M.S.; the reports of the Commissioners will be published by the Royal Society.

Proceeding from Calcutta, a definitely increasing endemic index was found as the investigation was pursued across the plains to the Terai country at the foot of the hills, until at Nagrakata parasites were found in the blood of 72 per cent. of the children examined. It is suggested that these marked contrasts might be due either to differences in the actual number of *Anopheles* present, or to differences in the species of *Anopheles* in different places. It is certainly demonstrated that the actual number of *Anopheles* present is no criterion of the prevalence of malaria; in Calcutta they swarm, and there was, it is said, no obvious evidence of malarial infection (parasites in the peripheral circulation), while in the Duars where the endemic index is very high it was often difficult to capture a specimen of *Anopheles*. This brings out the all-important question as to the particular species of *Anopheles* one or more, to which the reproach attaches. The Commissioners have themselves met with 20 different species in India,* and this cannot be said to exhaust the list, and they conclude that certainly all cannot be regarded as equally implicated; and as regards *A. Rosii* evidence is detailed that goes far to show that this very prevalent species is hostile to or immune from the parasite.

The question of the value of the symptom of enlarged spleen as an index of the prevalence of malaria was also examined, and it is concluded that only among children is a relation established (and that not definite) between the "spleen rate" and the "parasite rate"; it is said that the percentage of children with enlarged spleens in any place gives a fair indication for purposes of comparison, and in the absence of blood examinations, of the prevalence of malaria and the liability to infection.

The Commissioners are now pursuing the study of the practical problems of prophylaxis in the cantonment of Mian Mir, one of the most notoriously unhealthy places in India. The breeding places of *Anopheles* are being marked down, and (the soil is dry, sandy and porous and not subject to the retention of surface collections of water) these have been traced to irrigation channels, wells, "tanks" and small receptacles (tins, &c.) near dwellings. Six species of *Anopheles*, two of which are newly identified, have been detected in their transition-stages in the environment and in their adult stage in the occupied houses. The problem of exterminating the former in the long irrigation channels is a serious one, but hope is entertained that by cutting the banks to a smooth inclined surface, by the removal of weeds and sheltering inequalities and so promoting the velocity of the current, a large measure of success will be attained, and experiments are to be made to test this. Among the children in the Bazaars, 30 to 50 per cent. of those examined were found to harbour parasites, and the "spleen-rate" was from 70 to 90 per cent. We have then in this cantonment the two essential conditions of endemicity, *vis.*, high percentages of children and of *Anopheles* infected with the specific parasite, and it is not therefore surprising that the troops should suffer grievously from malarial disease. Work on the lines indicated will be pursued in other cantonments.

One of the results of the Commission's labours is to demonstrate that Black-water fever is far more prevalent in India than has hitherto been supposed, but details are held over for publication later.

In connexion with the experiences of the Commissioners as regards the prevalence of true malarial fevers in Calcutta, the observations of Captain Rogers, Indian Medical Service, as set forth in the October number of the "Journal of

* It may be mentioned that two species, not previously described as occurring in India, were found to be prevalent in the Duars, *vis.*, *A. funestus* and *A. costalis*, the two species which convey malarial infection in tropical Africa.

Hygiene," are of interest. Briefly, he exhibits by means of a graphic chart the divergence—the contrast—between the maximum seasonal prevalence of *Anopheles* in "tanks" and of malarial fevers as manifested by the hospital returns, and further he shows that the fever curve always rises with each "break" of a week or more in the monsoon precipitation, and that the specially unhealthy years are those in which such breaks are most frequent, quite irrespective of the total amount of the rainfall. These breaks are effectual in drying up a very large proportion of the smaller pools and so in diminishing the number of larvæ to be found.

The importance of "tanks" (ponds and lakes) as breeding-places of *Anopheles* is emphasized in view of some earlier authoritative pronouncements to the contrary, and the fact is of practical moment from the enormous numbers and large extent of these tanks in many parts of the country, for it obviously enhances the difficulties in the way of effective measures of prevention. With the exception of this remarkable prevalence of the larvæ in the tanks during the hot weather (season of minimal fever prevalence) the facts set forth show that the seasonal distribution of these mosquitos in small collections of water, pools, drains, etc., and of malarial fevers, respectively, coincides generally, and are in accordance with recent observations in other parts of India. With the knowledge that *A. Rossi* is the most generally prevalent species in Calcutta, and that there is good evidence for absolving it of any part in the harboring and transmission of the parasite, the apparent anomaly disclosed in these observations presents less difficulty than would *primâ facie* appear. Captain Rogers has many pertinent suggestions to offer upon the facts disclosed by his enquiry, and his paper is a valuable contribution to the study of the problem of prophylaxis, while incidentally he discloses the enormous difficulties in the way of the successful application of certain methods that elsewhere appear to afford the best hope of success.

Another example of admirable work is the detailed description of a year's experience of the habits of *Anopheles* in Ellichpur, a cantonment in the northern part of the Deccan* by Captain Glen Liston, Indian Medical Service.

This touches an altogether different side of the subject, while not neglecting the more direct and obvious connexion between the seasonal prevalence of the incriminated insect and that of the disease, for, as the author remarks, it is evident that the habits of *Anopheles* vary in different countries and in different parts of the same country, where the area is so vast as that of India.

Following an account of the seasonal incidence of malarial disease among the troops, the cases being verified by blood examinations, we get a description of the breeding-places of *Anopheles* at different seasons of the year, important variations in the distribution of the larvæ being shown to occur under the varying conditions of the environment. This is supplemented by a series of interesting experimental observations on the eggs, larvæ and pupæ, which serve to elucidate the life-history of these different developmental stages and the conditions favorable or inimical thereto. Lastly, a closely detailed description of the several species of *Anopheles* hitherto found in the area surveyed during the year is given, and illustrated by excellent reproductions of photographs taken from water-colour drawings. On the main facts of the epidemiology Captain Liston's observations are in accord with those already fairly established; the maximum fever incidence coincides with the maximum prevalence of *Anopheles*. The breeding-places may be said to altogether disappear in the hot dry weather; the adult insects, however, survive in large numbers in the Deccan climate until the rains set in, and thereafter a new generation spreads over the country, one

* See "Indian Medical Gazette," October and December, 1901.

collection of water after another becoming infected, this being the period of most general human infection.

To complete this sketch of the work now being prosecuted in different parts of India, a brief reference may be made to the labours of Major A. Buchanan, I. M. S., who is in charge of the Central Jail, Nagpur, and who has recently published an elaborate essay on "Malarial fevers and malarial parasites in India", the result of his enthusiastic application to the subject during the past few years. This is a notable contribution to the literature of the subject based on actual daily observations over a prolonged period, and it affords a comprehensive and stimulating record of observations and experiments on the facts and problems as they present themselves to an acute and resourceful worker who is at the same time a skilful clinician. A remarkable note is struck at the outset, in the acknowledgment made by the author of the capable assistance rendered in these researches by several of his Burmese prisoners, whom he trained to the use of the microscope and who soon became expert in detecting and distinguishing the various kinds of parasites. This is a significant episode affording a gratifying prospect of the multiplication of skilled observers which cannot fail to influence in a marked degree the future progress of the task before us. It is difficult, in the space at command, to summarise even the outstanding features of this suggestive book, which throughout bears the impress of honest work and personal experience guided by imaginative insight. Besides a systematic clinical account of the different forms of fever and the associated parasites, which is the first attempt of the kind in India, there are most interesting and suggestive sections devoted to various special practical aspects of the subject: notably an account of the results of experiments on the action of quinine and arsenic in quartan fever and to determine the prophylactic dose of quinine in each variety of fever; a summary of the facts showing the relation of the seasonal prevalence of *Anopheles* to the incidence of attacks; experiments exhibiting the protective effects of mosquito curtains; inoculation experiments; researches on the blood-parasites of birds; an exposition of the clinical facts and appearances in what the author designates "Flagella Fever," and many other points, which well repay study, and the book is altogether one that no worker on the subject can afford to neglect.

Space does not permit of a notice of several interesting inoculation experiments, notably those conducted by Captain Fearnside, I.M.S., on himself and on a warder in the Rajahmundry Jail, and those carried out by Major Buchanan, I. M. S., at Nagpur and described in the book to which reference has been made. Nor can we pause to notice the many attempts now being made by health officers and others to pursue the methods of prophylaxis indicated; these efforts are necessarily in the tentative stage, but, so far, and especially where carried out in connexion with small communities and institutions, they are giving promise of gratifying success.

It will, it is thought, be seen from the above brief sketch, and from what follows, that active work is being prosecuted in many different directions of the field of malarial research. As the increasing band of workers gets into closer touch with the varied aspects of the subject, the lines along which enquiry may best be directed become more definitely indicated, and it may be useful to briefly summarise some of these, as they bear on the desirable end of obtaining a survey of endemic malarial disease in this country. The work of the Royal Society's Com-

missioners, alluded to, affords most useful suggestions, and it may be said that workers should endeavour—

- I.—(a) to determine the "endemic index" (the parasite rate) together with the "spleen-rate" among native children; it would be well to classify the children examined, by age-periods, 0-5, 6-10, 11-15.
- (b) In connexion with the above, the seasonal variation (of the endemic index), month by month, should be determined.
- (c) With this, we need to know the distribution of the different species of parasites in place and season; *i.e.*, the percentage of each variety of parasite found in a particular series of blood examinations.

II.—In connexion with I (a) it is necessary to determine the local distribution of *Anopheles*, the percentage of each variety found, and the monthly variation in prevalence.

III.—The characters and distribution of the breeding places of each species of *Anopheles* is also a question of the first importance.

Of course the determination of the fact of infection or non-infection of different species of *Anopheles* (II) should be effected where possible.

It was considered very desirable to hold a conference on the present position of the whole subject, at which active workers and those especially interested could exchange views on some of the practical problems. The proposal, which was originated by Colonel Scott Reid and Major A. Buchanan, I. M. S., received the approval of the Government of India, and medical officers serving in different provinces were encouraged to attend at Nagpur as the most central rendezvous, and where the work, which has long been in progress, affords special facilities for instruction and experiment.

The Nagpur Conference.

The work engaged in was extremely practical, consisting of a series of lectures on, and demonstrations of, the well-established facts and of the more recent and unconfirmed observations of the experts, while experiments on new lines were also pursued. Altogether this new and promising departure was characterised by a thoroughly practical spirit and a subordination of paper eloquence, that marks it off from the usual order of congresses, and that cannot fail to leave its mark on the history of the campaign in India, if only on account of the inspiration and instruction carried away by many officers to all parts of the country.

Among those present were some who have devoted themselves entirely to the scientific investigation of the more esoteric, as well as the comprehensive, aspects of the subject in West Africa and in India; others who have studied the parasites more exclusively in their clinical forms; naturalists to whom the various species of *Anopheles* and their life-history have afforded an interesting field of study; and lastly, those, who as sanitarians, are chiefly interested in the practical questions of prophylaxis. All set to work to demonstrate practically their contributions to the common stock of knowledge with the result that a comprehensive survey of our present position was obtained. To Drs. Stephens and Christophers, especially, the other members of the Conference acknowledged their indebtedness for the generous way in which they devoted themselves to the demonstration of the more difficult and abstruse phases of the development of the parasite in the definitive host. The daily work in the laboratory was supplemented by a series of lectures of which the following deserve mention: Dr. Stephens on malarial fever without parasites in the peripheral circulation; Dr. Christophers on the relation of the species of *Anopheles* to malarial endemicity; Major Buchanan, I. M. S., on the malarial parasite in human blood, with lantern

demonstrations of the different forms of the parasite, of *Anopheles* larvæ and clinical charts; another paper by the same officer on the so-called "Flagella Fever", in which he showed that a secondary rise of temperature takes place in malignant Tertian fever, at the time when the crescentic parasites reach maturity, and when the ex-flagellating forms are found in the blood drawn from the patient; Captain Rogers, I.M.S., discussed the diagnostic value of examination of the blood, with special reference to the varying proportions of leucocytes in different fevers. Captain Liston, I.M.S., and Mr. Aitken contributed papers on the classification of *Anopheles* and their natural history; while Captain Birdwood presented a lucid summary of the practical indications for prevention applicable to different communities in India, a question which engaged the Conference in an extremely useful discussion during which the most effectual practicable measures were formulated and embodied in resolutions for presentation to Government; and to these we shall allude immediately.

Lastly, some of the immediately pressing problems of the parasitology received attention. It was clearly enunciated that certain species of *Anopheles* may abound where malaria is not endemic, and that it is probable that certain species are not effective hosts to the parasite; moreover, the different species vary much in their life habits and particularly in their choice of breeding-places; all these points raise questions for study, as has been pointed out in a previous paragraph indicating the lines for further enquiry. Again, it was found that while, in the cold weather, the zygotes would not develop beyond a certain stage at the temperature of the air, development progressed to the stage of sporozoites when the infected mosquitos were kept in a higher temperature by means of an incubator. This throws a light on many failures in inoculation experiments, and has an interesting bearing on the seasonal prevalence of the disease.

In conclusion, a brief reference may be made to the general plan of campaign which we are now in a position to formulate, but which will, necessarily, require modification according to local social and physiographical conditions. It is of course obvious that surface collections of water cannot be abolished or "disinfected" where the population depends solely thereon for its water-supply, though even here much is possible in the way of conservancy by clearing the banks of tanks of weeds, etc.; and, again, certain measures may be applied more successfully to a cantonment than to a crowded native city.

What can be done, and ought to be done forthwith, is to carry out test experiments, in various places under different conditions, such as, indeed, are now in progress at Mian Mir and other places; there is, at least, no excuse for delay in applying preventive measures in all cantonments, civil stations, jails, etc., where the medical staff and the requisite labour is available.

Educational.—One of the first requirements is to propagate as widely as possible a knowledge of the simple facts of the etiology of malarial disease and of the rational prophylaxis based thereon. Much is being done in this way, by the circulation of literature to medical officers and of pamphlets to all municipal and district board authorities. A clear exposition of the whole case with adequate illustrations has been drawn up for the instruction of medical subordinates and others, at the instance of this office, by Captain James, I.M.S., and the Nagpur Conference, has agreed upon the terms of leaflets for the guidance of different local authorities. The propaganda is being disseminated in ever-increasing measure by the precept and example of medical officers in many places. It is not too much to hope that the simple principles may be inculcated along with the elements of hygiene, in all educational institutions, and that medical officers will train subordinates in the use of the

microscope, and in the detection of the different forms of the parasite and of the effective host.

Sphere of the State and of its local representatives.—Allusion has been made to the enormous benefits of large public drainage works, and to the necessity that these should accompany all irrigation and railway works and public water-supply systems that affect deleteriously the natural ground-water level, and the surface and sub-soil drainage.

The extension of impermeable brick or stone-lined surface drains, with direct house connections, involving the total abolition of waste-water catch-pits so common in the basements of dwellings, is an imperative call on the resources of all municipalities and local bodies and cantonment authorities. Such a measure will effect much more than the prevention or diminution of malarial fevers. Legislation must provide against the common practice of making excavations in the soil of the inhabited site for building purposes, brick and pottery and road-making, etc. Stagnant collections of water in and near the site must, as far as possible, be removed by drainage and levelling up of inequalities in the site. Old disused wells must be covered in, and the area around those in use must be carefully drained to connect with the main drainage system; stand-pipes, where there is a public water-supply, must be similarly treated. The cultivation of rice should be prohibited within a mile of inhabited sites. All these measures are summed up in the obligation on the part of the public authority to prevent, by all means, the stagnation of water upon the surface and within the upper layers of the soil, and to this end, the first step is to procure a detailed survey of the site to locate stagnant collections of water and the breeding-places of *Anopheles*, and to secure the best plans for preventive measures. Ordinary measures of surface conservancy, the removal of waste-matters and of excessive wild vegetation must of course receive attention.

Following the precepts and example of Major Ross in West Africa, special efforts may be directed to the conservancy of domestic premises, by "mosquito brigades," where the circumstances permit of this.

In hospitals the segregation of the sick and the protection of other patients by the use of mosquito nets is called for; while in some epidemics of the malignant types of fever ("Kala Azar", etc.) larger measures of segregation may have a more extended application. Public institutions, barracks, European dwellings should be located at a safe distance from native huts, servants' quarters, bazaars, etc. The prevention of overcrowding in the latter is a measure of importance.

The sphere of the prophylactic use of quinine at the instance of public authorities in this country has its limitations. Its value in jails and similar institutions is not now in doubt. Government has been at pains to put the drug at the disposal of the people in the form of five-grain packets, for each of which one pice (one farthing) is charged at the local post-offices. The demand has not been at all commensurate with, though to some extent proportionate to, the prevalence of fever; if the cost were not a bar to its more extended use, there is still a prejudice, steadily decreasing no doubt, against the use of European medicines, and they are generally only resorted to when native "simples" fail. It would be hopeless to expect the majority to take quinine as a preventive, even if pressed freely upon them. There is no sufficiently marked and prolonged season of absence of malarial infections in this country, as a general rule, when a fair prospect would offer itself of extirpating the parasite in the blood of its secondary host. The conditions are altogether different to those presented in comparatively small well-defined areas of infection, where the seasonal incidence is definite and restricted, as in Italy and some tropical islands.

It is, at any rate, a paramount inducement to marshal our forces and attack this particular evil that every step taken will improve the general health conditions of the people: general measures of drainage, and for the prevention of overcrowding on the site, as well as in the dwelling—more space, more light, more air, and a purer soil—are emphatically the cardinal desiderata which sanitarians have always striven for, and our efforts should now be reinforced and inspired by the hope of more immediate results in the diminution of the chief

causes of sickness and mortality. In attacking malarial disease we shall, at the same time, undermine the causes of tubercular disease, of lung diseases generally and of bowel-complaints. The time has certainly arrived when it is incumbent on every local sanitary authority to utilize and develop its resources to this end.

* * * * *

162. Another direction in which considerable activity has been displayed in India during the past year, is in connexion with the question of sewage disposal. In this report for 1898, the present methods and the main general conditions of the problem were set forth, and it was hoped that the experiments then referred to would soon have advanced to a position from which interesting and important indications could be derived, though final and definite conclusions could scarcely be anticipated. It is, however, impossible in the space at disposal to give a detailed account of the results of the experiments carried out in different parts of the country, but these prove conclusively that we have in the "biological" methods an important addition to our sanitary and economic resources. It is scarcely necessary to affirm that the terms of the problem vary in important ways from those that present themselves in Eng'land, and similarly they vary as regards the circumstances of the different communities to be served in this country. It has always been a cardinal principle of the sanitary authorities in India that, given the proper conditions, no method of disposal, quâ disposal, could vie with that known as the dry earth and "trenching system," often called the Indian system. But however theoretically perfect, the difficulties in the way of its adequate realization are, for the great majority of communities in this country, so great if not insuperable, that we are bound to reconsider the whole question. That the assertion that the difficulties are often insuperable is not a mere *petitio principii*, that it rests on solid evidence, will be seen from facts recorded in the report referred to (that for 1898, page 272 *et seq*), and in a paper on the subject contributed to the last number of the "Scientific Memoirs by Medical Officers of the Army of India;" and this first question acquires special importance from the fact that Professor Ramsay of London, a member of the Royal Commission on sewage disposal, took occasion during his recent visit to India to deprecate publicly any departure from our present methods.

He says, "there can be no doubt that the most advantageous method of disposing of sewage is not to mix it with water, but to return it at once to the soil." He points to the absence of water-supply house-connexions in Bombay, and from the smaller quantity of water to be removed, he infers "that a convenient and profitable dry system is easily possible," owing to the accessibility and abundance of land and to the presence in India of the caste of sweepers. But he is careful to add, "there may be difficulties which I do not know of; * * * all I wish to convey is that the disposal of solid sewage is much more profitable than that of diluted sewage, if it can be managed." To this it must be answered that there *are* difficulties (many of which have been set forth in the publications referred to above), and that beyond this, the dictum that the dry system is "more profitable" must be demurred to. What we have to secure is the rapid and complete decomposition and resolution into the original component mineral and gaseous compounds, of dangerous excreta, without danger to the community previous to, and during, this process, while at the same time we have to utilize these products of decomposition to the fullest advantage. The circumstances under which the dry system has to be carried out in this country, do not fulfil these obligations.

Moreover considerations derived from experience in England certainly do not apply at all generally in India, under the entirely different climatic and agricultural conditions. The fairly regular and equably distributed rainfall in the former, provides the agriculturist with all the water he needs for the single or, at most, the double crop he obtains in the year from one piece of land.

Additional water requires sub-soil drains, while in India irrigation is, almost everywhere at one or other period of the year, absolutely necessary, and owing to the heat and dryness of the atmosphere the water only penetrates a few inches below the surface. The application of dry sewage to dry land and its reduction by irrigation water is a slow and irregular process, even if the means employed of getting the sewage from the houses to the land were devoid of danger. A matured effluent prepared for direct assimilation by vegetable life is a great advance as regards both safety and economy where the land is cropped so frequently; not only is final resolution more rapidly attained, and thereby danger avoided, but the outturn realized in produce is far higher, and the cost of carriage to the ground is less.

Crude night soil must be carefully and laboriously applied, and is for long not in a condition to benefit the land, which must meantime be kept out of cultivation, at any rate as regards most Indian crops; the effluent on the contrary is immediately available and is equably distributed by methods with which the cultivator is familiar.

It has to be noted, first, that we have to find water for the soil, and often at considerable expense of time, labour and money; and that, secondly, there is always a certain amount of foul sullage water to be dealt with in every community even under the driest system, and the problem of the disposal of this is not touched on Professor Ramsay's plan. The fact that the ordinary dilution of excreta in England ranges from 15 or 20 to 40 gallons per head, does not imply that this quantity is required for the fermentation and partial resolution of the sewage under artificial biological conditions; successful results have been obtained in India with a dilution of 5 gallons and even 3 gallons per head. While manure must be accounted necessary for increasing the value of the crop, water is absolutely essential, and it resolves itself into the best time and method of its application, and there can be little doubt that it is best when containing in solution the readily assimilable manurial elements, and less valuable when poured over raw excreta under the influence of a burning sun. Agriculturists in this country are averse from using crude sewage, and demonstration of the value of *poudrette* has failed in most places to banish their prejudices, while the arrangements for the removal and application of excreta to the land are a constant source of danger and of economic loss owing to the ignorance and unreliability of the low-caste staff on which these essential operations depend. The cheapness of labour in this country is a consideration that is apt to carry too much weight; the number of "sweepers" is by no means equal to the demand in the larger centres, and they often control the situation in defiance of all disciplinary efforts, and they exhibit little sense of duty in their degrading task.

Finally, there are two considerations that have an important bearing on the question; in England the crux of the problem is to produce an effluent that can safely be diverted to a stream; there is always, under any process, an effluent to dispose of. In India, on the contrary, we need a manurial effluent that need not attain the arbitrary chemical standard of purity requisite in England as the land is its ultimate destination, where it disappears and is finally purified and disposed of

to great advantage, the fluid being a cardinal necessity for cultivation ; there is no ultimate effluent, for all is disposed of by crops or by the soil or by evaporation. And, secondly, the one conclusive fact which the Indian experiments have demonstrated, is the extraordinary manurial value of a biological effluent as compared with crude night soil, while, moreover, its application can be adjusted to the actual needs of the land under treatment, and so with a full economical realization of its value.

This is a matter of such importance that no attempt will be made in this place to present a detailed résumé of the evidence while the full and authenticated records are available in the "Notes on Sewage Disposal"* by Mr. James, M. Inst. C.E., and in the report by the Deputy Director of Agriculture, Bombay, on the cropping experiments at Manjri† in connexion with the Poona scheme. It may merely be stated that the actual income derived from the crops raised on about 3½ acres of land irrigated with effluent and attached to the Matunga Asylum, in the former case, has risen during the last two years to Rs. 4,170 and Rs. 5,700 respectively, giving a net profit on capital outlay (for construction of apparatus and preparation of land, but excluding cost or rent of land) of 21·9 and 26·07 per cent. respectively, results which have enabled the Asylum to increase its accommodation and to undertake the entire responsibility of maintaining fifty inmates without a call on the public revenues. At Manjri the financial results are equally remarkable, the profit on one crop, sugar-cane, raised on land irrigated by "biological" effluents, being authoritatively stated to be at the rate of from Rs. 659 to Rs. 788 per acre, while that from the same crop on land treated with farm-yard manure with castor cake and *poudrette* was only Rs. 302 and Rs. 484 per acre respectively. As compared with fresh "night-soil," it is said that the results were better from the use of the "biological" effluent.

It is obvious that the financial aspect of drainage and sewerage schemes assumes an altogether different complexion under these circumstances, and the fact has to be noted that in any case there is always the very serious problem of the adequate removal and disposal of enormous quantities of the foulest sullage water, which under present arrangements, for the most part, finds its way into house basements and into the soil on which they are built. This is indeed a problem that claims the urgent attention of all sanitary authorities and is scarcely secondary to that of the adequate removal of excreta.

In this connexion a new departure having very important sanitary and economic significance is to be found in the utilisation of ordinary town drainage (house-sullage) for the irrigation and manuring of land for cultivation which has been carried out at Meerut on the Demonstration Farm at that place. This sullage was simply diverted from the outfall drains outside the town, on to land under ordinary crops, and the cultivators were quick to realize its manifest advantages. The cultivators pay a small fee for the "lifts" which have been set up to raise the effluent to the level of the land for irrigation. The fee was at first Rs. 2 for each lift, of which there are 45 in work, and the sum accruing to the Municipality amounts to Rs. 2,701 per annum, the whole of which is clear profit. It has recently been found possible to raise the fee to Rs. 6 and Rs. 12 per lift without restricting the application of the drainage. Three crops are derived annually from the land, *vis.*, maize, potatoes and tobacco in rotation, without any other dressing than that afforded by the sullage; this is a most exhausting series, and yet the

* "Times of India" Press, 1901.

† Bombay Government Central Press, 1901.

manurial constituents of this sillage enable it to be maintained. The gross value of all three crops is reported by an agricultural authority to amount to "not less than Rs. 400 and probably more than Rs. 500 per acre." This land formerly received heavy dressings of *poudrette*, but the sillage is far more economical, and the rents have risen all round, in some cases, to double their former assessments, and they now range from Rs. 50 to Rs. 100 per acre.

It only remains to report that the sewage, including the excreta, of certain wards in some of the large towns in Bengal is already being satisfactorily dealt with on the so-called "biological system"; the matter has also advanced beyond the experimental stage in certain institutions, notably in the Matunga Asylum, Bombay, and in the Presidency Jail, Calcutta, reports on which have been published, while some of the results of the Poona experiments have been referred to. Beyond this, experimental installations are under trial in several cantonments, where the scope for their greatest utility is perhaps most undeniable, and in several municipal towns. We have now arrived at a stage when a careful critical and scientific examination of the results attained is necessary, for the conditions met with in this country will doubtless enable us to throw light on many of the problems that still confront the chemist and the bacteriologist in Europe, and it is from all points of view very desirable that Government should now institute an expert enquiry into the Indian results, and their possibilities of application in practice.

163. As noted in last year's Report this institution was opened for the active

The Pasteur Institute of India.

discharge of its responsibilities on August 9th, 1900, and the Committee have recently presented their first annual report. During the twelve months the total number of patients treated was 321, of which 146 were Europeans and 175 were natives of India, and it may be said that the benefits of the treatment have appealed with remarkable results to all classes of the population. There were 96 patients from the European army, 25 from the Native army, 50 from among European civilians and 150 from natives in civil life. As to the results, not a single death has occurred among the 146 European patients and there were only three fatalities only among the natives, particulars of which are given in an Appendix to the report.

Beyond the special anti-rabic inoculations, the Institute staff performed a considerable amount of bacteriological work, largely in connexion with the clinical diagnosis of enteric, Malta, cerebro-spinal and malarial fevers, cholera and tubercle; and beyond this, a considerable amount of pathological research and of ordinary chemical analysis. A large number of officers received instruction in the essentials of bacteriological work. One other important side of its enterprise that is likely to develop largely in the future is the production of protective sera; as a commencement, one thousand doses of anti-typhoid vaccine were prepared and issued.

Altogether, Major D. Semple, R.A.M.C., the able and enthusiastic Director, is to be congratulated on the very successful first year's work which on many sides holds out prospects of great development; and that the benefits of this institution should be extended is the desire of the Government of India, who have recently placed an officer at the disposal of the Committee to act as Assistant to the Director.

164. The policy of Government in consolidating and extending the work of bacteriological research is also elsewhere developing practical results. The Central Research Laboratory has now been sanctioned, and work will, for the present, be commenced at Bombay under the direction of M. Haffkine, C.I.E., who has hitherto conducted the work of the Bombay Plague Research Laboratory. M. Haffkine will be assisted by a staff of officers selected for their approved knowledge of, and achievements in, bacteriological and chemical research, and it is under consideration to transfer the laboratory to some suitable hill site in order to obviate the exhausting conditions of work in the climate of the plains. The work already accomplished in the Bombay Laboratory has not been, by any means, confined to the manufacture of the plague prophylactic, and a note of some of the more important subjects to which research has been devoted during the past year, is given in a subsequent paragraph.

It remains to be said that the proposals of the Government of India contemplate the establishment of a Laboratory on similar, but somewhat less elaborate, lines in some central station of each Province, which will work to some extent in touch with the central institution, but be specially devoted to the elucidation of the problems of preventive medicine which press for solution within its own immediate environment. There is already an institution in Bombay in the present Plague Research Laboratory; the North-West Provinces has a small laboratory in Agra under the control of Mr. Hankin, which only needs development and affiliation with the local school of medicine; the Pasteur Institute is situated at Kasauli in the Punjab, and this will doubtless be supplemented, when circumstances permit, by a bacteriological department in association with the Medical College at Lahore, the capital; the Madras Government has recently submitted proposals for the establishment of a Bacteriological Institute, to be combined with a central vaccine depôt, in association with the chair of Hygiene at the Medical College. The Bengal Government has still to move in this matter, the present urgent needs of that large province being served by the small laboratory which is under the control of the Sanitary Commissioner with the Government of India, and which is associated with the researches of Dr. Cunningham, F. R. S., I. M. S., (retired). Lastly, mention must be made of the laboratory at Muktesar, under the charge of Dr. Lingard, which is devoted to research in veterinary medicine. All these institutions, together with the newly established command laboratories specially provided for work in the army, are the growth of the last few years, and although they have already more than justified their existence, we can only be said to be now entering on the campaign with ordered and disciplined forces; and herein lies the promise for the future of an even more remarkable advance in the control of preventible disease than it has been possible to record for the past in the opening sentences of this section. For it is hoped that we shall not only possess active centres of research, but that one of their chief functions will doubtless be the diffusion of a scientific knowledge of Hygiene, in connexion, for instance, with the training of the executive sanitary staff which must be largely extended in future; and beyond this, each provincial institution should be the scientific laboratory of the sanitary and medical organizations within its sphere.

165. The work of the Bacteriological Department will form the subject of a brief review in this Report, year by year, but in order to render all important advances immediately available

to workers all over India (and to some extent in Europe) it has been decided to modify the issue of the "Scientific Memoirs by medical officers of the Army of India," which was originated in 1884 and of which twelve volumes have been published. The proposed issue will be made in a different *format*, each paper being published separately as soon as possible after the work to which it relates is concluded, so that the delay necessitated by a periodic issue will be obviated, and papers on the same or cognate subjects may be subsequently bound up together. It may be added that these "Memoirs" will not be confined to the record of the work done in the bacteriological laboratories, but will include reports of the more notable results of the labours of officers in all departments under the administrative control of the Director-General and Sanitary Commissioner.

The first issues include a paper by Captain Lamb, I. M. S., and Dr. Hanna on the "Standardization of Calmette's Antivenene;" one by Dr. Hanna on "Researches on leprosy"; three by Captain Lamb, I. M. S., on the "Etiology and Pathology of Scurvy," on "The poison of Russell's viper," and on "The effects of Anti-cholera inoculation"; and one by Captain Liston, I. M. S., on "The Structural Anatomy of Trypanosomum Evansi"; all the above are records of work carried out in the Plague Research Laboratory, Bombay. An early number will contain the Report by Captain James, I. M. S., on Investigations into the causation of malarial fevers, pursued in collaboration with the Royal Society's Commissioners, to which allusion has been made in the remarks on this subject.

* * * * *

166. A very brief note will this year suffice to record the arrangements by which the pilgrim traffic between India and Mecca was conducted, for no material change has been made in them, and from the point of view of international public health, they were as usual attended by complete success.

Red Sea Pilgrim Traffic.

Owing to the prevalence of plague, pious Musalmans were again warned to defer the sacred privilege to happier times, but for those who felt bound to go, all ports in India were closed to embarkation save only Chittagong, and this was only open after the intending pilgrims had been kept under observation by the Sanitary authorities, and after disinfection of their effects. Three ships in all left this port carrying altogether 1,630 pilgrims for the Haj of 1900, and these were in the first place disembarked at the quarantine station in the island of Camaran, for detention and observation prior to their entry into Arabia and the holy places *viâ* the port of Jeddah. It is reported that about 200 more Indian pilgrims arrived at Jeddah by a roundabout route after proceeding to northern Red Sea ports and re-embarking thence, so that the total number of Hajjis credited to this country was 1,821, which is about equal to the number concerned in the pilgrimage of the previous year. Including these, there were altogether 11,155 pilgrims received at Camaran during the season extending from September 1899 to March 1900, a number which is about 3,000 less than that accounted for in the previous season. Only seven deaths occurred in the Lazaret, the principal causes of sickness being small-pox, rheumatism, chest diseases and "ordinary fevers." Plague was reported at Jeddah, and cases occurred there between the 26th April and the 6th July, with a total of 82 fatalities, but it is said by the local authorities to have been introduced by coasting smugglers, or more probably overland from Assyr, where the disease is endemic; it is certain that no Indian pilgrims were attacked by the disease during the sojourn in Arabia, but it is reported that

one case of plague was landed at Aden from a pilgrim ship on the return voyage to India. No case of plague was reported from Mecca itself. There was a remarkable absence of cholera all along the route.

The Indian pilgrims returned at different dates from the end of April 1900 to late in the year as accommodation offered; some 1,807 are thus accounted for, and they proceeded to Bombay, Calcutta and Karachi, where they arrived without the occurrence of any notable sickness beyond the single case of plague which was landed at Aden, and of which particulars are wanting. The arrangements for the reception of the pilgrims in India were elaborate and carefully carried out; in Bombay, the passengers from the ship on which the plague case occurred were kept under observation for 10 days, and the baggage and effects of all pilgrims were disinfected before they were allowed to proceed to their destinations, those living up-country not being allowed to enter the city, but were sent from the ship to the railway and conveyed home at Government expense. At Calcutta, small-pox having broken out on the home-ward voyage, the returned pilgrims were vaccinated, and after disinfection of their effects, were despatched by rail under escort to their destinations.

The above report was written, and refers to a period, prior to my assumption of the office of Sanitary Commissioner with the Government of India; the proofs were passed by the late Surgeon-General Harvey.

BENJAMIN FRANKLIN,

Surgeon-General, I.M.S.,

Sanitary Commissioner with the Government of India.

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APPENDICES

TO THE

Annual Report of the Sanitary Commissioner with the
Government of India

FOR

1900.

Table I.—Highest, lowest and mean temperature in shade

Station.	January.				February.				March.				April.				May.				June.							
	Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.	Variation.
Calcutta (Allpore)	86.3	50.8	69.0	+3.8	89.7	55.2	74.1	+4.1	101.7	60.5	81.9	+2.7	103.6	69.0	85.6	+0.6	99.4	69.7	85.3	-0.1	99.3	70.2	85.6	+1.1	99.3	70.2	85.6	+1.1
Narayanganj*	85.1	50.7	68.4	+1.8	85.6	57.3	71.9	+1.9	92.6	59.3	70.9	+0.7	97.6	68.2	83.8	+0.1	94.6	68.7	83.1	-0.1	95.6	71.2	83.1	-0.6	95.6	71.2	83.1	-0.6
Chittagong	86.1	49.1	69.5	+3.4	88.7	55.3	72.3	+3.1	93.4	60.3	78.4	+1.6	96.7	68.6	82.3	+1.8	94.7	69.2	81.5	+0.5	93.9	71.3	80.7	+0.2	93.9	71.3	80.7	+0.2
Sibsagar*	74.3	45.4	61.0	+1.1	78.3	48.9	63.3	+0.4	85.3	52.9	68.7	-1.0	90.2	63.0	73.4	-1.2	93.2	67.0	73.6	-0.3	92.2	70.0	82.9	-0.3	92.2	70.0	82.9	-0.3
Sitchar*	85.4	49.5	67.1	+2.4	89.5	53.4	70.0	+2.6	89.5	58.4	75.0	?	92.5	62.4	78.4	+0.2	96.6	68.3	80.8	+0.8	99.6	70.3	83.7	+1.3	99.6	70.3	83.7	+1.3
Cuttack*	90.4	59.1	75.9	+3.6	97.4	64.2	81.5	+3.9	106.4	67.2	86.7	+2.0	107.9	75.2	90.2	+0.1	109.0	73.2	90.5	+0.1	105.4	75.2	89.6	+1.5	105.4	75.2	89.6	+1.5
Hazariabagh	80.2	46.9	62.0	+1.1	86.2	47.1	67.0	+1.4	98.0	56.7	78.8	+3.4	107.0	66.4	83.2	+1.0	106.1	68.1	85.0	-0.6	105.3	69.0	83.0	+1.1	105.3	69.0	83.0	+1.1
Patna*	78.0	44.4	62.4	+1.4	83.0	47.4	66.9	+1.6	99.0	55.4	78.6	+1.2	104.0	69.2	87.6	+0.6	107.0	68.2	88.0	-0.6	104.5	72.2	87.5	-0.9	104.5	72.2	87.5	-0.9
Darjeeling	53.4	31.0	39.8	+0.5	57.2	32.6	41.7	+1.0	67.5	35.3	49.7	+1.5	73.2	42.6	55.4	+1.5	68.0	45.0	56.4	+0.1	72.0	?	?	?	72.0	?	?	?
Allahabad	82.7	39.1	60.8	+0.2	85.2	46.2	66.2	+0.9	101.5	50.7	78.8	+1.0	111.1	67.4	87.4	-0.3	113.1	70.9	92.2	-0.2	112.4	73.3	93.9	+0.3	112.4	73.3	93.9	+0.3
Lucknow*	84.8	40.1	60.9	+0.8	85.3	46.2	66.4	+1.0	102.3	53.2	78.9	+2.9	110.3	63.8	86.1	-0.6	112.3	67.3	90.9	?	112.3	73.3	92.8	?	112.3	73.3	92.8	?
Meerut	78.7	38.2	57.1	+0.9	84.7	39.0	62.7	+1.0	98.4	50.3	75.1	+1.8	104.7	59.0	80.9	-1.6	110.8	70.3	90.1	+1.6	110.2	74.5	92.3	+1.7	110.2	74.5	92.3	+1.7
Delhi*	78.2	42.2	59.2	-1.3	82.7	43.2	64.9	+1.6	98.7	57.1	79.0	+3.9	104.7	62.6	83.1	-3.8	110.7	72.1	93.0	+1.2	111.2	73.1	94.9	?	111.2	73.1	94.9	?
Agra*	83.0	44.4	61.5	+0.5	87.0	45.9	67.2	+2.2	101.0	56.4	80.8	+3.6	108.0	63.9	85.8	-2.4	111.0	73.9	93.5	-0.2	112.5	73.4	96.6	+1.8	112.5	73.4	96.6	+1.8
Jhansi*	85.2	47.7	63.6	+0.3	91.2	51.2	70.6	+3.3	103.8	61.1	84.2	+4.9	112.4	68.6	89.7	-0.2	111.3	77.1	95.9	+1.0	112.9	78.1	98.8	+5.3	112.9	78.1	98.8	+5.3
Ajmer*	81.4	33.9	58.1	-1.5	86.9	39.9	66.3	+3.4	99.4	51.8	79.6	+5.3	107.9	63.7	85.2	+0.7	108.4	70.6	92.2	+1.8	114.4	82.0	95.6	+5.5	114.4	82.0	95.6	+5.5
Saugor*	88.3	41.6	65.2	+1.2	89.3	51.1	70.8	+3.4	98.8	59.1	79.6	+3.0	107.9	67.1	87.1	+0.7	108.5	71.1	92.3	+1.2	109.0	72.6	93.1	+5.3	109.0	72.6	93.1	+5.3
Jubbulpore*	85.9	44.4	66.4	+3.6	91.4	49.4	69.8	+3.0	101.9	53.9	79.3	+2.1	110.0	66.7	87.8	+1.6	110.5	73.1	94.9	+1.3	109.0	73.6	93.8	+6.4	109.0	73.6	93.8	+6.4
Meerut*	75.8	34.0	54.2	-2.1	85.3	38.5	62.4	+2.9	101.4	52.4	76.6	+4.2	108.4	59.4	80.4	-2.3	114.5	62.0	92.8	+2.5	117.4	82.6	99.7	+5.2	117.4	82.6	99.7	+5.2
Lahore	71.8	35.2	52.6	+0.6	81.4	38.2	58.9	+2.2	97.9	48.3	73.1	+5.3	104.9	56.2	78.3	-1.3	109.8	67.3	89.3	+1.9	115.6	76.9	93.6	+4.4	115.6	76.9	93.6	+4.4
Peshawar	70.2	30.9	48.0	-1.5	75.1	35.9	53.8	+1.3	92.0	43.9	66.6	+3.6	99.0	49.0	69.1	-4.0	106.0	61.0	82.0	-1.4	115.5	67.9	90.0	+1.0	115.5	67.9	90.0	+1.0
Ranikhet	61.7	30.0	43.8	-2.2	61.4	31.1	46.7	-0.4	75.0	44.0	59.9	+3.4	79.2	49.3	60.8	-4.1	86.0	51.0	67.6	-0.6	84.9	52.4	71.1	+0.6	84.9	52.4	71.1	+0.6
Chakrata	59.3	26.6	38.1	-3.5	59.3	26.6	41.0	-1.3	73.2	37.3	53.7	+2.5	72.2	34.8	54.6	-5.1	82.2	46.7	62.9	-1.9	78.2	49.2	66.3	-0.8	78.2	49.2	66.3	-0.8
Indore*	No t record				94.3	48.1	69.3	?	99.3	53.1	73.9	+2.3	108.8	62.1	86.5	+1.9	107.3	69.1	90.2	+1.3	103.8	70.6	90.8	+5.4	103.8	70.6	90.8	+5.4
Deesa	88.9	41.0	66.1	-1.5	94.6	51.1	72.7	+2.2	105.9	53.2	82.9	+2.2	113.1	67.4	90.1	+2.1	110.3	72.0	90.3	-0.4	117.9	77.8	93.4	+3.6	117.9	77.8	93.4	+3.6
Kurrachee	82.0	40.2	62.6	-2.4	90.4	45.2	69.4	+1.2	102.4	55.2	77.8	+2.3	105.3	63.6	82.7	+3.0	103.4	75.4	84.8	+0.8	112.5	81.2	89.0	+2.2	112.5	81.2	89.0	+2.2
Bombay	87.0	61.0	73.9	-0.3	83.6	64.3	74.4	-0.7	91.7	67.8	76.9	+0.1	90.9	74.6	82.2	-0.4	91.5	78.0	84.9	+0.2	93.4	75.0	83.5	+2.3	93.4	75.0	83.5	+2.3
Belgaum	87.1	49.9	71.3	+1.4	94.3	56.0	74.5	+1.8	95.1	63.0	77.9	-0.8	99.9	61.9	79.7	+0.5	101.8	64.0	79.0	+1.3	99.2	64.8	74.3	+1.7	99.2	64.8	74.3	+1.7
Nagpur	95.1	52.4	74.2	+6.0	99.3	59.4	77.2	+3.5	105.6	62.1	85.0	+2.7	113.6	72.1	92.8	+2.3	114.2	74.9	96.5	+1.0	112.5	73.4	90.8	+4.8	112.5	73.4	90.8	+4.8
Bellary	95.2	55.1	77.2	+4.0	101.0	64.2	83.8	+4.1	105.0	61.7	87.7	+1.1	105.6	69.8	89.9	+0.7	107.8	70.9	90.3	+1.7	106.1	74.0	84.6	+1.7	106.1	74.0	84.6	+1.7
Bangalore	87.3	57.0	71.3	+3.7	92.6	58.9	75.4	+3.5	96.1	60.6	79.6	+2.7	98.0	66.5	81.9	+1.8	100.1	63.3	82.7	+4.1	95.3	65.2	76.1	+1.9	95.3	65.2	76.1	+1.9
Madras	87.0	62.2	75.9	+0.4	87.7	60.2	77.9	+0.8	93.9	66.9	81.5	+0.7	95.7	74.3	83.8	-0.9	107.5	73.3	87.4	0	109.8	75.3	89.3	+2.0	109.8	75.3	89.3	+2.0
Rangoon	95.9	59.5	76.0	+2.0	97.9	61.3	78.9	+2.5	102.3	66.8	82.2	+1.7	105.0	74.6	87.0	+2.3	97.8	70.6	82.1	-0.4	89.9	74.9	79.4	0	89.9	74.9	79.4	0
Akyab	89.7	?	?	?	89.9	?	?	?	94.6	?	?	?	98.4	?	?	?	99.0	?	?	?	96.6	?	?	?	96.6	?	?	?

*The mean temperature for these stations

and its variation from the average of each month in thirty-four stations of India during 1900.

JULY.				AUGUST.			SEPTEMBER.				OCTOBER.				NOVEMBER.				DECEMBER.				STATION.	
Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.	Variation.	Highest.	Lowest.	Mean.		Variation.
97°0	75°2	84°3	+1°2	93°9	76°4	83°7	+1°2	94°4	72°0	82°2	-0°3	92°4	69°0	81°0	+1°0	88°9	57°1	72°3	+0°9	83°3	54°8	68°3	+3°0	Calcutta(Ailpore).
91°1	75°7	83°2	-0°6	94°1	77°2	84°5	+1°3	92°1	74°7	83°2	-0°5	92°1	69°2	81°8	+0°3	89°1	57°3	74°8	-0°1	83°1	51°3	68°5	+0°8	Narayanganj.*
91°3	73°6	80°3	+0°3	91°9	75°9	81°4	+1°7	92°8	73°1	81°1	+0°5	91°5	63°9	79°6	+0°6	89°3	56°0	74°5	+0°5	86°7	51°2	69°6	+2°2	Chittagong.
92°7	77°0	83°2	-1°5	95°7	78°0	84°3	+0°3	93°2	72°0	82°6	0	92°7	61°4	77°8	-0°2	83°3	55°4	69°7	+0°6	78°3	48°9	62°8	+1°7	Sibsagar.*
98°1	75°3	83°4	-0°2	100°0	73°2	86°0	+3°0	99°6	72°3	84°1	+1°1	97°6	63°4	81°6	+1°0	94°8	57°4	75°6	+1°2	86°5	50°4	69°4	+2°0	Silchar.*
101°4	77°2	80°1	+1°9	93°4	76°2	83°8	-0°2	94°9	74°2	83°5	-0°4	93°4	68°7	82°4	+0°2	90°4	61°7	76°0	+0°5	87°9	59°1	74°0	+3°8	Cuttack.
97°2	73°3	79°7	+1°6	87°6	71°6	77°6	+0°6	89°4	68°3	75°7	-1°3	84°2	60°1	72°8	-0°7	Not recorded.				77°4	47°2	62°2	+1°7	Hazaribagh.
95°0	74°2	84°8	-0°3	95°0	76°2	84°9	+0°3	94°9	72°2	82°2	-2°5	90°5	65°3	79°1	-1°3	86°6	54°4	71°8	+1°1	80°5	45°4	64°7	+2°1	Patna.*
69°1	50°1	61°5	+0°4	72°2	56°4	62°1	+1°3	79°8	50°5	59°1	+0°4	67°6	47°3	55°2	+0°8	62°3	38°8	48°9	+1°5	57°0	?	?	?	Darjeeling.
111°8	75°8	87°2	+2°5	97°1	76°6	83°7	+0°3	94°9	70°3	81°4	-1°8	91°6	58°4	76°4	-2°2	88°6	50°4	69°3	+0°3	82°7	45°0	62°7	+2°0	Allahabad.
106°8	73°3	86°7	+1°1	98°3	79°3	85°0	+1°0	94°3	67°3	82°8	-1°5	92°3	56°2	77°2	-1°1	90°3	45°2	70°6	+3°3	85°3	45°2	63°0	+2°5	Lucknow.*
108°7	74°3	89°3	+0°8	93°8	75°3	84°3	+0°3	91°6	65°8	80°1	-2°7	92°4	55°8	73°6	-2°0	87°5	44°9	66°7	+1°9	80°0	42°2	58°0	+0°8	Merrot.
109°2	77°0	89°5	+2°3	97°7	74°6	85°9	+0°5	91°2	70°1	81°0	-3°7	92°2	62°6	77°9	-2°1	87°7	48°6	71°8	+2°6	79°7	46°6	60°7	-0°7	Delhi.*
112°5	77°9	91°2	+4°6	98°5	75°9	86°8	+2°3	94°0	70°9	83°5	-0°8	97°0	60°6	79°7	-0°7	91°0	53°4	73°6	+4°1	84°0	44°9	63°5	+1°4	Agra.*
113°9	76°6	89°6	+5°1	93°2	74°1	82°8	+0°2	90°2	72°1	81°0	-2°1	94°7	62°1	79°6	-0°9	91°2	59°1	75°4	+5°0	85°7	47°2	66°6	+2°2	Jhansi.*
108°9	75°1	88°6	+4°8	93°9	73°6	82°4	+1°4	89°9	63°2	80°1	-1°6	93°4	54°7	75°6	-1°7	92°4	49°8	71°0	+4°8	83°9	41°9	62°6	+2°2	Ajmer.*
103°9	71°1	82°4	+3°2	88°4	68°1	77°0	-0°1	87°4	67°1	77°0	-1°5	90°4	60°1	75°4	-0°6	86°4	55°1	72°2	+3°8	85°9	48°1	61°6	+4°2	Sauger.*
105°0	70°1	82°5	+2°4	88°9	71°6	79°4	+0°1	89°4	69°1	78°8	-1°1	89°9	54°9	73°3	-2°1	86°4	49°9	63°1	+1°5	86°4	49°4	67°2	+6°7	Jubbulpore.*
114°5	82°1	97°3	+4°2	110°4	74°0	93°5	+2°4	107°4	70°5	90°9	+2°4	99°4	57°9	79°1	-0°8	95°6	48°9	71°9	+4°1	79°3	40°5	58°7	+0°1	Meerut.*
114°6	74°1	91°8	+3°5	102°8	74°3	87°7	+1°1	98°4	66°8	82°6	-1°3	92°5	57°3	74°6	+0°1	88°6	45°2	67°0	+4°6	78°8	39°4	54°0	+0°8	Lahore.
118°0	72°4	92°0	+2°4	107°0	72°1	88°7	+1°5	104°0	58°0	83°4	+1°4	99°0	52°6	70°4	-0°5	87°1	38°7	61°7	+3°1	73°2	32°5	51°1	+0°2	Peshawar.
83°0	60°1	69°0	+0°8	78°9	61°0	67°6	+0°8	75°0	55°0	64°4	-1°1	72°2	49°9	59°8	-0°9	68°0	43°5	55°2	+1°2	62°2	33°3	46°9	-2°4	Ranikhet.
76°2	55°7	64°1	-0°8	72°7	57°7	63°5	+0°1	71°7	50°7	60°4	-1°3	70°7	42°7	55°8	-1°0	68°7	40°6	52°5	+2°1	62°8	31°1	41°8	-2°7	Chakrata.
100°8	76°1	82°2	+4°1	86°8	69°1	76°9	-0°1	86°3	64°1	76°5	-1°0	90°8	55°6	73°8	-1°7	89°3	53°6	71°5	+3°7	87°8	48°1	69°2	+5°6	Indore.*
106°9	75°2	89°6	+3°8	94°5	73°8	82°9	+0°4	95°5	69°0	82°0	+0°1	100°3	61°3	81°0	+0°3	99°3	54°8	77°4	+3°4	91°6	49°6	69°2	+1°1	Deesa.
97°4	80°4	88°9	+2°9	95°8	74°2	85°4	+3°2	101°5	74°2	84°5	+2°9	100°8	65°4	81°2	+1°6	100°0	59°3	76°5	+2°4	88°8	51°9	67°2	+0°2	Kurrachee.
89°2	74°2	82°7	+1°8	85°9	75°0	80°3	+0°4	87°4	73°2	80°7	+1°0	91°9	72°5	81°3	+0°2	92°3	72°3	80°0	+0°9	90°1	66°2	77°6	+2°6	Bombay.
82°7	65°6	71°4	+1°3	79°3	64°8	70°2	+0°7	80°3	64°7	71°2	+0°9	82°6	61°7	74°6	+2°2	87°2	58°8	72°4	+2°6	87°2	57°1	72°6	+3°2	Belgaum.
104°1	73°1	81°4	+1°9	92°0	71°1	80°5	+0°3	93°1	71°4	80°0	-0°3	93°6	59°7	78°4	-0°4	90°1	57°4	73°9	+1°2	90°4	59°1	72°2	+5°5	Nagpur.
98°2	68°0	81°2	+0°7	96°2	72°0	81°3	+0°5	94°6	71°2	80°7	+0°6	97°0	64°8	79°7	+0°9	93°9	60°1	77°1	+1°9	92°8	60°1	75°6	+3°2	Belary.
86°3	65°1	73°7	+1°4	88°8	64°1	74°1	+1°8	85°8	63°2	73°3	+1°0	86°0	59°8	71°1	+1°1	84°6	55°6	70°9	+1°1	84°0	56°0	69°7	+2°2	Bangalore.
102°1	74°5	85°2	+0°1	102°5	76°7	88°9	+2°9	99°1	72°2	83°7	-0°1	98°2	68°1	81°4	+0°2	88°1	66°2	77°9	-0°2	86°9	65°0	77°2	+1°2	Madras.
91°5	72°4	78°8	+0°5	90°6	73°2	79°0	+0°5	91°4	72°8	79°7	+1°0	90°2	72°9	80°4	+0°5	89°7	64°2	77°0	-0°9	92°9	62°7	79°1	+0°7	Rangoon.
89°9	69°5	78°2	-1°7	89°7	71°6	78°8	-1°4	92°7	70°2	79°9	-1°5	91°0	65°2	80°0	-1°2	89°9	60°7	75°5	-1°4	87°1	55°6	72°1	-0°1	Akyab.

is the mean of the maximum and minimum temperatures.

TABLE II.—Monthly and annual RAINFALL and its variation from the average in thirty-four stations of India during 1900.

STATIONS.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.		JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.		TOTAL.		
	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.	Actual.	Variation.
Calcutta (Alipore)	0	+0.60	0.75	+0.63	0.12	+1.45	2.75	+1.01	4.17	+3.45	10.15	+0.59	8.68	+1.78	16.38	+3.33	45.55	+36.22	0.82	+3.57	0	+0.66	0.05	+0.19	80.12	+25.64	
Narayanganj	0.01	+0.23	2.66	+1.40	2.20	+0.41	2.40	+0.27	3.39	+4.89	9.57	+3.49	11.39	+1.89	12.00	+0.32	6.03	+0.88	0.46	+3.96	0	+1.69	0	+0.25	51.38	+20.32	
Chittagong	0	+0.49	0.77	+0.04	0.36	+2.16	2.00	+1.35	0.51	+3.97	27.44	+4.75	18.37	+4.33	9.28	+0.48	4.19	+0.72	1.51	+4.73	0	+1.53	0	+0.77	71.33	+37.72	
Sibsagar	1.10	+0.37	0.89	+1.07	4.73	+3.34	12.47	+11.24	10.13	+6.12	18.79	+3.69	20.45	+1.35	12.91	+6.75	5.87	+2.48	0.59	+6.06	1.70	+0.72	+0.39	89.45	+6.64		
Sibchar	0.59	+0.13	1.45	+0.84	12.08	+3.37	25.58	+11.24	10.13	+6.12	18.79	+3.69	20.45	+1.35	12.91	+6.75	5.87	+2.48	0.59	+6.06	1.70	+0.72	+0.39	89.45	+6.64		
Cattack	0	+0.32	0.02	+0.61	0.81	+0.00	1.46	+0.31	3.13	+1.28	3.96	+7.57	8.22	+4.00	21.79	+9.33	21.68	+10.01	8.72	+3.08	0	+1.31	0.13	+0.39	108.07	+17.10	
Hazaribagh	3.43	+2.87	0.55	+0.27	0	+0.75	1.99	+1.58	1.66	+0.66	8.45	+0.82	5.96	+8.60	15.72	+2.01	12.62	+3.96	3.45	+0.84	0	+0.29	1.06	+0.25	69.10	+5.08	
Patna	3.50	+2.85	0.24	+0.20	0	+0.38	0	+0.26	1.98	+0.01	7.90	+0.56	14.59	+2.94	10.82	+0.48	8.59	+1.10	1.01	+2.24	0	+0.17	0.24	+0.84	54.43	+2.95	
Darjeeling	0.90	+0.23	0.44	+0.51	1.91	+0.20	3.40	+0.01	0.17	+0.22	0.14	+0.45	9.14	+3.19	12.31	+1.21	6.71	+0.66	0.74	+1.00	0	+0.20	0.34	+0.12	108.42	+13.27	
Altabad	4.06	+4.11	0.02	+0.16	0	+0.37	0.17	+0.15	0.52	+0.58	2.44	+2.93	8.08	+3.17	8.75	+3.05	6.65	+4.38	0	+0.81	0	+0.05	1.25	+0.90	33.44	+5.36	
Lucknow	2.51	+1.41	0.02	+0.88	0.05	+0.07	1.12	+0.83	0.17	+0.52	1.96	+1.38	12.75	+3.21	10.20	+0.19	10.86	+11.12	0	+0.42	0	+0.08	1.00	+0.87	43.80	+11.00	
Meerut	0.39	+0.88	0.05	+0.61	0.55	+0.01	1.04	+0.88	0.41	+0.37	1.96	+1.38	12.75	+3.21	10.20	+0.19	10.86	+11.12	0	+0.42	0	+0.08	1.00	+0.87	43.80	+11.00	
Delhi	0.84	+0.40	0	+0.21	0.01	+0.30	0.62	+0.48	0.49	+0.11	1.12	+1.42	4.34	+4.51	4.71	+1.14	10.38	+15.15	0.14	+0.65	0	+0.05	1.27	+1.08	22.15	+6.97	
Agra	0.96	+0.03	0	+0.21	0.01	+0.30	0.62	+0.48	0.49	+0.11	1.12	+1.42	4.34	+4.51	4.71	+1.14	10.38	+15.15	0.14	+0.65	0	+0.05	1.27	+1.08	22.15	+6.97	
Jhansi	1.00	+0.41	0	+0.33	0	+0.17	0.70	+0.64	0.11	+0.04	0.39	+4.50	7.65	+4.95	19.41	+6.91	7.91	+2.78	0	+0.47	0	+0.12	1.50	+1.37	38.49	+1.14	
Ajmer	0.12	+0.40	0	+0.30	0	+0.20	0.10	+0.11	0.38	+0.11	0.38	+2.28	3.98	+3.31	12.12	+4.49	7.37	+4.34	0.09	+0.22	0.40	+0.21	0.75	+0.60	25.04	+3.46	
Saugor	0.52	+0.18	0	+0.30	0	+0.20	0.10	+0.11	0.38	+0.11	0.38	+2.28	3.98	+3.31	12.12	+4.49	7.37	+4.34	0.09	+0.22	0.40	+0.21	0.75	+0.60	25.04	+3.46	
Jubbulpore	2.31	+1.55	0	+0.47	0	+0.51	0.61	+0.43	0.10	+0.01	0.70	+0.46	0	+2.94	1.59	+0.01	0	+0.42	0	+0.00	0	+0.10	0.60	+0.40	3.83	+3.73	
Mooltan	0.21	+0.27	0.37	+0.01	0.10	+0.28	0.38	+0.08	0.46	+0.02	0.73	+0.22	0.14	+0.53	5.97	+0.16	7.13	+4.94	0.17	+0.09	0	+0.10	0.34	+0.55	11.51	+2.01	
Lahore	0.45	+0.61	0.32	+0.78	0.19	+0.54	0.38	+0.08	0.46	+0.02	0.73	+0.22	0.14	+0.53	5.97	+0.16	7.13	+4.94	0.17	+0.09	0	+0.10	0.34	+0.55	11.51	+2.01	
Peshawar	1.57	+0.20	1.37	+0.39	0.90	+0.80	1.99	+0.15	2.36	+1.61	0.97	+0.23	0.19	+0.50	1.34	+1.96	0.71	+0.07	0.05	+0.05	0	+0.06	0.69	+0.48	8.90	+8.08	
Rashtak	3.88	+0.94	2.33	+0.37	0.74	+1.50	3.77	+2.65	1.68	+1.03	4.59	+0.25	9.46	+3.82	10.26	+3.65	6.45	+1.57	0.13	+1.35	0	+0.33	2.08	+1.55	45.46	+8.98	
Chakrata	9.29	+5.76	4.35	+0.54	1.43	+0.96	3.79	+2.31	2.78	+0.13	4.21	+2.70	21.75	+2.33	17.53	+1.05	12.56	+2.04	0.02	+0.82	0	+0.59	5.55	+4.39	83.23	+15.47	
Indore	0	+0.18	0	+0.18	0	+0.02	0.10	+0.04	0.20	+0.53	1.92	+1.38	13.98	+6.15	8.49	+0.01	8.49	+0.01	0	+1.45	0	+0.45	0	+0.21	34.28	+0.63	
Deena	0	+0.17	0	+0.10	0	+0.05	0.35	+0.34	0.05	+0.20	0	+0.52	3.96	+7.03	19.93	+12.33	4.07	+0.16	0	+0.35	0	+0.10	0.01	+0.05	28.97	+3.24	
Kurrachee	0	+0.72	0	+0.31	0	+0.23	0	+0.33	0	+0.20	0	+0.52	3.96	+7.03	19.93	+12.33	4.07	+0.16	0	+0.35	0	+0.10	0.01	+0.05	28.97	+3.24	
Bombay	0	+0.13	0	+0.01	0	+0.03	0	+0.01	0	+0.04	17.39	+1.98	20.00	+3.37	1.57	+4.02	0.02	+0.32	0	+2.47	0	+0.03	0.30	+0.14	1.99	+5.93	
Belgaum	0	+0.66	0	+0.02	0	+0.35	1.65	+0.07	1.38	+1.24	11.32	+4.73	21.86	+6.43	23.32	+12.34	7.98	+3.83	0	+2.47	0	+0.03	0.30	+0.14	1.99	+5.93	
Nagpur	0	+0.55	0.48	+0.21	0	+0.01	0.12	+0.22	0.14	+0.66	3.09	+0.05	14.32	+0.41	20.64	+10.39	11.23	+1.70	2.17	+2.95	0	+0.21	0	+0.13	62.74	+14.60	
Bellary	0	+0.13	0	+0.04	0.20	+0.02	2.27	+1.69	2.63	+0.93	1.97	+0.78	3.41	+1.43	8.81	+1.77	4.49	+0.40	2.72	+1.57	0.03	+0.30	0	+0.14	40.62	+1.70	
Bangalore	0.03	+0.16	0	+0.11	0	+0.54	1.59	+0.44	0.84	+0.82	2.97	+0.48	4.30	+0.29	2.62	+3.18	8.34	+3.62	5.87	+1.58	0.32	+0.37	0.54	+0.01	31.42	+4.44	
Madras	0.33	+0.56	0	+0.29	0.30	+0.39	3.09	+2.47	0	+0.82	1.88	+1.90	1.81	+2.00	2.62	+3.05	6.03	+1.34	0.08	+1.92	3.10	+0.11	2.45	+2.81	28.03	+20.02	
Rangoon	0.12	+0.05	0	+0.34	0	+0.28	0.16	+1.07	1.35	+3.93	18.71	+1.20	23.83	+2.15	23.99	+5.50	14.41	+1.63	7.01	+0.97	1.52	+0.00	0	+0.00	102.80	+7.53	
Akyab	0	+0.03	0	+0.11	0	+0.42	0.65	+0.43	1.98	+10.32	48.38	+4.39	45.51	+6.03	38.84	+2.42	25.55	+3.51	4.17	+6.37	0.27	+2.97	0	+0.88	165.35	+21.73	

A.—Commands,	Years.	Average strength,*	RATIO PER MILLE OF STRENGTH.											
			Admissions.	Constantly sick.	Deaths.	Invaliding.	DEATHS FROM							
							Cholera.	Small-pox.	Enteric fever.	Heat-stroke.	Tubercle of the lungs.	Pneumonia.	Dysentery.	Abscess of the liver.
Bengal Command	1805-1800	20,573	1,264	93	17'5	35	1'17	'04	7'36	'93	'71	'41	1'08	1'01
	1800	21,278	1,191	81	13'82	36	...	...	5'50	'75	'89	'47	1'08	1'46
	1900	18,956	1,075	70	13'40	33	'05	...	3'84	'74	'74	'25	1'00	1'05
Punjab Command	1805-1800	17,700	1,207	77	18'00	28	'39	'07	8'63	1'13	'37	1'08	'82	'99
	1800	13,050	1,085	63	14'82	24	'60	'00	6'84	'55	'59	1'10	'39	1'11
	1900	16,562	1,085	65	12'02	17	1'15	...	4'35	'78	'54	'72	'60	'97
Madras Command	1805-1800	12,311	1,204	92	11'58	41	'52	'03	3'80	'43	'41	'10	'75	1'20
	1800	12,916	1,152	82	10'10	39	...	...	3'03	'23	'30	'16	'93	1'48
	1900	9,984	1,208	82	10'53	45	2'10	...	4'71	'70	'30	'30	1'00	1'50
Bombay Command	1805-1800	15,140	1,328	82	13'13	39	'08	'08	6'70	'41	'58	'46	'61	1'24
	1800	15,462	1,073	67	11'05	29	...	...	4'06	'32	'31	'78	'30	'97
	1900	15,151	1,211	75	17'08	33	1'99	'20	0'71	'40	'60	'27	'06	1'79
India	1805-1800	65,974	1,339	85	17'08	33	'73	'05	7'13	'79	'83	'59	1'10	1'36
	1800	67,517	1,149	73	12'75	31	'04	'01	5'14	'50	'56	'65	'65	1'46
	1900	60,553	1,143	71	14'02	33	1'45	'05	4'77	'66	'28	'40	'86	1'57
	1801-1900	68,124	1,309	87	16'21	39	1'06	'05	6'46	1'78	'55	'60	'87	1'24

* The quinquennial and decennial ratios are, of course, worked on the total strength of the lastrum and decade respectively.

B.—Groups.	Years.	Average strength.†	RATIO PER MILLE OF STRENGTH.												
			Admissions.	Constantly sick.	ADMISSIONS FROM										
					Influenza.	Cholera.	Small-pox.	Enteric fever.	Intermittent fever.	Remittent fever.	Simple continued fever.	Pneumonia.	Dysentery.	Veneral diseases.	
Group I.—Penna Coast and Bay Islands.	1801-1800	1,260	1,217	63	35'4	'1	'2	8'4	148'0	'54	86'5	'11	56'2	466'2	
	1800	1,205	1,182	73	37'3	...	1'7	5'3	187'4	0'6	73'8	'3'3	1'9	401'2	
	1900	1,047	1,173	79	14'3	...	...	0'6	207'3	...	18'1	'10	4'0	439'8
" II.—Barma Island	1801-1800	2,572	1,516	68	6'9	'4	'1	4'7	357'7	24'7	48'6	1'8	31'9	481'2	
	1800	2,042	1,322	78	15'0	...	...	4'1	381'1	11'0	38'1	'20	30'4	398'0
	1900	1,723	1,072	102	...	...	...	2'3	242'1	10'8	2'3	'3'5	22'1	309'9
" IV.—Bengal and Orissa	1801-1800	2,263	1,501	80	5'0	'7	...	17'1	475'1	30'8	10'8	'2'2	63'0	447'1	
	1800	2,103	1,531	86	...	...	...	8'2	655'1	45'2	53'7	'3'3	90'3	275'3
	1900	2,153	1,358	75	50'6	1'4	...	0'5	402'2	60'7	27'9	10'5	57'1	261'0	
" V.—Gangetic Plain and Chutla Nagpur.	1801-1800	6,093	1,424	100	0'0	6'1	'6	30'2	232'2	9'1	47'4	'2'1	31'5	539'5	
	1800	6,079	1,138	86	3'9	...	...	22'1	101'7	4'3	43'2	'2'0	20'9	287'7
	1900	5,748	1,087	70	4'9	1'1	...	'2	19'0	248'4	8'0	65'8	'3'1	20'7	287'6
" VI.—Upper Sub-Himalaya	1801-1800	13,325	1,407	60	3'6	1'2	'5	27'0	438'7	10'7	32'3	5'6	22'9	428'7	
	1800	12,740	1,280	75	'5	'1	...	24'6	207'5	7'5	19'5	'7'2	22'2	305'0	
	1900	11,105	1,244	74	'8	2'8	...	17'8	442'2	8'0	12'3	4'9	23'1	252'9	
" VII.—North-West Frontier, Indus Valley, and North-Western Rajputana.	1801-1800	4,741	1,654	86	37	1'2	'4	19'5	602'0	46'7	30'4	'7'0	10'7	316'3	
	1800	4,78	1,115	59	2'1	...	...	14'9	295'9	29'2	71'1	9'0	10'0	234'5
	1900	4,628	1,173	66	...	'2	'2	14'7	379'9	21'4	10'2	8'0	14'0	240'3	
" VIII.—South-Eastern Rajputana, Central India, and Gojara.	1801-1800	6,330	1,614	90	5'5	1'7	'9	32'2	441'3	10'3	41'1	'2'5	22'4	504'4	
	1800	6,151	1,331	78	...	...	...	31'9	230'0	13'3	17'1	'2'4	21'0	281'5
	1900	6,003	1,397	89	1'0	3'5	1'7	25'2	384'5	10'0	12'7	4'0	34'3	443'9	
" IX.—Deccan	1801-1800	9,374	1,211	61	10'8	1'2	'6	21'5	247'5	8'0	31'8	'2'2	30'4	424'1	
	1800	9,930	1,130	78	36'1	...	'1	20'0	219'5	'7'6	28'4	4'0	27'4	281'3	
	1900	9,358	1,161	74	3'1	4'1	1'8	20'5	202'6	9'0	48'1	'1'6	37'0	275'0	
" X.—Western Coast	1801-1800	1,513	1,101	77	'8	'1	'2	7'3	149'6	'7'4	74'0	'1'7	16'7	426'8	
	1800	1,511	935	50	...	...	...	6'8	128'4	2'5	41'1	'3'5	10'9	311'4
	1900	1,491	781	53	7'4	'7	'3	3'4	124'1	'3'4	14'8	'1'3	20'2	261'0	
" XI.—Southern India	1801-1800	3,371	1,284	83	9'0	'4	'7	16'9	245'3	9'1	51'0	'2'5	32'2	457'7	
	1800	3,104	1,254	80	'3	...	...	20'4	274'9	5'0	60'1	'2'5	26'0	375'1
	1900	3,069	1,286	72	3'9	'5	...	5'3	277'4	15'3	21'2	'1'0	19'8	393'0	
" XII.—Hill Stations	1801-1800	8,289	1,155	70	0'8	'8	...	33'8	233'1	8'9	19'7	5'1	18'3	215'0	
	1800	8,515	845	55	15'4	...	...	25'5	103'0	8'5	17'2	'8'4	19'5	221'0
	1900	8,974	721	51	11'2	...	...	24'1	105'5	0'6	8'5	'3'2	12'2	230'9
" XIII.—Hill Convalescent Depôts and Sanitaria.	1801-1800	3,376	1,150	85	7'2	'9	'1	15'8	215'7	9'7	13'0	'3'7	25'8	351'3	
	1800	3,272	1,191	79	1'2	...	...	20'0	210'7	'7'9	12'2	'3'7	20'5	259'6
	1900	3,247	1,128	79	3'4	'9	'3	10'2	152'0	6'2	13'9	4'3	18'2	250'7	
India	1801-1800	68,124	1,309	87	0'8	'15	'4	24'3	216'1	14'6	35'4	'3'8	20'5	431'0	
	1800	67,607	1,149	73	10'0	'01	'3	20'9	255'2	9'2	24'0	'5'1	25'4	313'4	
	1900	60,553	1,143	72	3'9	'18	'6	18'0	308'5	22'7	24'4	'3'7	25'8	295'1	

† The decennial ratios are, of course, worked on the total strength of the decade.

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

Stations.	1900.		DECENNIAL 1891-1900.		Stations.	1900.		DECENNIAL 1891-1900.	
	Admission-rate per 1,000.	Death-rate per 1,000.	Admission-rate per 1,000.	Death-rate per 1,000.		Admission-rate per 1,000.	Death-rate per 1,000.	Admission-rate per 1,000.	Death-rate per 1,000.
Quetta ...	50.7	11.40	33.0	7.60	Meerut ...	12.7	7.49	34.8	10.45
Lucknow ...	30.9	7.35	40.0	10.09	Kamptee ...	12.5	3.84	11.7	3.85
Secunderabad ...	30.3	9.83	23.2	5.52	Chakrata ...	11.5	...	36.8	6.08
Rawalpindi ...	21.6	4.40	29.2	7.74	Belgaum ...	9.0	5.99	3.9	1.43
Mhow ...	20.3	3.47	30.9	7.52	Adon ...	5.4	4.52	4.9	2.10
Poona ...	19.7	7.35	18.9	5.71	Bareilly ...	5.3	.89	27.2	6.13
Peshawar ...	19.5	10.06	37.7	13.77	Colaba (Bombay) ...	3.4	2.58	4.6	1.80
Agra ...	15.7	4.13	46.3	12.37	Kurrachee ...	1.9	.97	7.4	1.77
Umballa ...	14.3	4.08	33.1	9.07	Fort William (Calcutta)	1.8	.91	5.5	1.65

Period.	D.—OFFICERS.				E.—WOMEN.				F.—CHILDREN.			
	Average strength.*	Admission-rate per 1,000.	Constantly sick-rate per 1,000.	Death-rate per 1,000.	Average strength.*	Admission-rate per 1,000.	Constantly sick-rate per 1,000.	Death-rate per 1,000.	Average strength.*	Admission-rate per 1,000.	Constantly sick-rate per 1,000.	Death-rate per 1,000.
1891-1900 ...	2,025	85.9	†30.1	15.94	3,130	79.6	35.5	16.13	5,659	57.3	26.1	44.86
1899 ...	1,908	76.8	29.5	11.53	3,035	69.2	31.1	14.55	5,500	57.1	27.2	41.09
1900 ...	1,780	81.9	20.6	11.80	2,908	72.8	26.4	17.54	5,326	63.0	27.4	46.87

* The decennial ratios are, of course, worked on the total strength of the decade.
† For two years only.

Appendix to Section III.—Native Troops.

G.—ENTERIC FEVER.	1891-1900.		1900.	
	Admission-rate per 1,000.	Death-rate per 1,000.	Admission-rate per 1,000.	Death-rate per 1,000.
European troops ...	24.2	6.46	16.0	4.77
Native troops ...	.3	.09	.4	.15
Gurkhas only ...	1.4	.38	3.1	1.08
Prisoners ...	.3	.12	.3	.14

H.—TUBERCLE OF THE LUNGS.	I.—VENEREAL.		
	Admission-rate per 1,000.	Death-rate per 1,000.	Admission-rate per 1,000.
Bengal and Punjab Commands ...	5.1	1.00	29.0
Gurkha Regiments ...	14.4	4.34	63.6

	J.—INFLUENZA.				K.—PNEUMONIA.			
	1891-1900.		1900.		1891-1900.		1900.	
	Admission-rate per 1,000.	Death-rate per 1,000.	Admission-rate per 1,000.	Death-rate per 1,000.	Admission-rate per 1,000.	Death-rate per 1,000.	Admission-rate per 1,000.	Death-rate per 1,000.
European troops ...	6.8	.03	3.9	.02	3.8	.60	3.7	.40
Native troops ...	8.1	.12	.9	.03	14.4	3.24	14.6	3.32
Prisoners ...	23.8	.38	16.9	.28	16.2	4.27	14.6	4.22

L.—Commands.	Years.	Average strength.*	RATIO PER MILLE OF STRENGTH.												Mortality including absent acahs.
			Admissions into hospital.	Constantly sick.	DEATHS FROM										
					Cholera.	Small-pox.	Enteric fever.	Remittent fever.	Tubercle of the lungs.	Pneumonia.	Dysentery.	Abscess of the liver.	All causes.		
Bengal Command	1805-1900	26,512	707	31	1'04	'04	'17	'55	1'10	2'07	'40	'04	0'65	14'05	
	1899	25,310	716	29	1'10	...	...	'50	'89	2'39	'40	'11	10'03	11'65
	1900	26,582	717	31	1'12	'45	1'13	1'05	1'99	'40	'04	10'40	16'77
Punjab Command	1805-1900	40,665	810	30	1'05	'04	'10	1'58	'05	2'46	'41	'04	13'63	18'31	
	1899	41,224	731	27	'50	'02	'07	'03	5'83	'20	'02	12'48	16'98		
	1900	42,111	756	28	4'28	...	'05	1'30	'97	4'30	'45	'05	14'72	19'10	
Madras Command	1805-1900	21,057	674	31	1'28	'03	'03	'59	'37	1'43	'35	'05	9'73	13'05	
	1899	21,255	672	30	'52	...	...	'82	'30	1'46	'17	'04	9'03	12'13
	1900	20,407	650	30	2'09	'05	'05	1'28	'49	1'91	'20	'05	12'69	15'07	
Bombay Command	1805-1900	26,091	837	20	'92	'05	'06	1'10	'41	3'13	'62	'11	11'27	14'10	
	1899	26,637	659	27	'68	'04	'08	'90	'53	4'31	'41	...	10'69	13'99	
	1900	24,908	937	35	3'49	'04	'12	2'13	'55	4'38	1'37	'08	18'71	22'90	
Hyderabad Contingent	1805-1900	6,129	516	19	1'16	'06	...	'70	'18	2'63	'21	'06	7'44	9'10	
	1899	6,250	439	18	...	...	...	'92	'15	3'51	'15	...	6'26	7'78
	1900	6,260	504	22	3'83	'32	...	'32	'31	4'15	'16	...	12'62	14'38	
India	1805-1900	127,221	751	30	1'03	'04	'09	1'14	'71	3'36	'51	'06	11'81	15'69	
	1899	128,129	705	28	'53	'02	'02	1'17	'08	3'86	'35	'04	10'73	14'50	
	1900	123,493	753	30	3'16	'03	'15	1'34	'78	3'32	'03	'05	14'04	18'57	
India	1891-1900	127,665	852	31	1'11	'03	'09	1'25	'61	3'24	'59	'06	12'22	16'61	

* The quinquennial ratios are, of course, worked on the total strength of the lustrum.

M.—Groups.	Years.	Average strength.†	RATIO PER MILLE OF STRENGTH.											
			Admissions.	Constantly sick.	ADMISSIONS FROM									
					Influenza.	Cholera.	Small-pox.	Enteric fever.	Intermittent fever.	Remittent fever.	Simple continued fever.	Pneumonia.	Dysentery.	Venereal diseases.
Group I.—Burma Coast and Bay Islands.	1801-1900	1,891	291	37	2'7	'1	'1	...	185'2	6'6	4'3	5'0	69'4	55'5
	1899	1,779	287	36	...	...	...	...	252'1	10'6	20'9	5'0	85'0	71'3
	1900	1,405	283	39	...	...	...	...	180'3	22'0	'7	2'8	60'5	84'6
" II.—Burma Inland	1801-1900	6,653	1,165	56	2'9	1'7	'1	'1	59'6	10'2	7'2	4'7	71'5	47'8
	1899	4,257	995	38	2'6	...	'2	...	487'0	10'1	2'3	2'6	33'4	40'4
	1900	4,123	1,035	34	...	...	'5	...	618'5	4'4	'2	2'2	43'4	30'5
" III.—Assam	1801-1900	2,003	1,209	51	9'2	3'0	'4	3'8	512'1	16'5	6'6	0'4	100'0	7'2
	1899	1,490	954	41	28'9	...	'1	...	291'9	20'1	1'5	8'7	53'3	46'6
	1900	1,468	714	38	...	'1	...	...	257'3	6'0	...	6'0	97'5	20'0
" IV.—Bengal and Orissa	1801-1900	2,025	1,120	41	4'7	'4	'3	'2	511'2	15'0	6'7	5'9	85'1	31'6
	1899	2,897	1,451	42	...	...	'7	...	1,077'8	12'2	'3	3'1	55'5	42'2
	1900	2,955	1,157	45	'4	2'3	1'1	1'1	621'1	7'0	...	5'1	102'1	42'1
" V.—Gangetic Plain and Chotia Nagpor.	1801-1900	6,163	665	20	2'8	1'6	'3	'3	215'1	12'5	2'6	7'6	42'3	33'7
	1899	6,461	545	20	'2	...	'5	...	159'3	17'0	9'2	12'5	30'7	28'7
	1900	5,658	716	31	6'9	2'5	'2	1'2	230'3	6'2	'4	10'6	42'6	28'6
" VI.—Upper Sub-Himalaya	1801-1900	15,166	732	20	2'0	1'0	'6	'2	280'8	17'0	3'1	15'0	20'8	31'7
	1899	15,555	654	24	'7	2'5	'2	'3	162'2	22'8	'8	15'1	22'1	31'8
	1900	15,326	676	26	'2	'9	'4	'5	309'1	13'3	'7	13'3	25'8	26'4
" VII.—North-Western Frontier, Indus Valley, and North-Western Rajputana.	1801-1900	15,120	1,102	36	8'9	2'3	'6	'2	507'5	22'2	10'3	20'4	57'5	22'5
	1899	16,299	830	32	17'6	'1	1'4	'3	278'3	32'6	2'5	32'3	45'9	19'3
	1900	15,891	928	32	...	15'6	'8	'1	354'3	21'9	'5	24'6	52'5	19'5
" VIII.—South-Eastern Rajputana, Central India, and Gujarat.	1801-1900	12,670	814	27	6'0	1'6	'7	'1	359'5	12'3	12'3	13'1	20'9	41'5
	1899	12,522	583	27	'3	...	'3	...	302'0	10'2	5'7	15'4	23'6	31'9
	1900	11,169	1,017	37	1'3	8'6	'7	'1	464'7	22'1	4'2	15'5	57'6	97'8
" IX.—Deccan	1801-1900	19,504	735	27	7'0	1'9	1'3	'1	292'6	11'2	11'6	9'3	31'3	43'0
	1899	19,410	618	22	0'5	'1	'1	'1	228'0	11'2	4'1	12'1	27'2	42'7
	1900	17,670	717	28	1'4	6'6	1'9	'1	250'0	10'5	11'3	9'6	40'6	61'6
" X.—Western Coast	1801-1900	3,051	714	29	2'2	'3	'5	'4	150'9	14'9	26'8	0'7	60'5	51'3
	1899	3,305	755	30	'6	...	'3	...	154'9	14'5	'3	13'9	77'7	59'0
	1900	2,425	702	32	2'1	1'6	'4	...	159'5	4'1	7'7	18'9	90'8	32'4
" XI.—Southern India	1801-1900	8,244	365	20	3'5	2'5	'6	'1	122'0	3'6	21'7	7'9	20'1	41'2
	1899	8,075	597	33	...	17'7	'4	'1	189'2	3'6	15'4	6'7	16'6	47'7
	1900	6,794	652	33	1'0	4'0	'1	'3	180'4	3'8	14'3	13'9	19'7	50'9
" XII.—Hill Stations	1801-1900	17,077	1,075	40	21'3	1'0	'3	'6	470'0	24'5	8'4	20'5	53'5	40'5
	1899	18,339	820	39	20'2	'1	'1	'3	322'5	22'9	'9	20'6	47'1	47'2
	1900	19,835	836	34	'7	3'0	'2	'7	310'1	22'1	'7	21'7	60'3	45'6
India	1801-1900	127,665	852	32	8'1	1'8	'5	'3	348'8	15'2	9'1	14'4	48'8	27'2
	1899	128,529	705	28	12'3	1'0	'4	'1	200'2	17'0	4'0	10'6	38'0	34'1
	1900	123,493	755	30	'9	5'2	'6	'4	320'8	14'0	3'5	14'6	50'4	42'5

† The decennial ratios are, of course, worked on the total strength of the decade.

N.—Administrations.	Years.	Average strength. †	RATIO PER MILLE OF STRENGTH.*												
			Admissions.	Constantly sick.	DEATHS FROM										All causes.
					Cholera.	Small-pox.	Remittent fever.	Tubercle of the lungs.	Pneumonia.	Other respiratory diseases.	Dysentery.	Diarrhoea.	Acemia and debility.		
Andamans ...	1895-1900	10,975	1,589	51	...	...	3.17	5.50	2.48	1.02	10.04	2.05	2.00	32.31
	1899	11,201	1,937	57	...	...	3.19	2.52	2.37	1.31	15.58	2.75	2.02	41.24
	1900	11,550	2,039	54	...	...	4.92	5.70	4.75	1.04	9.67	4.23	3.54	40.41
Barma ...	1895-1900	13,127	625	30	2.00	.74	.44	3.34	2.04	.41	4.77	.90	.45	20.54	
	1899	12,518	584	25	1.99	.40	.08	3.27	1.81	.68	4.62	.40	.56	18.73	
	1900	12,515	535	28	1.75	.75	.40	4.97	1.60	.24	3.91	.80	.58	21.17	
Assam ...	1895-1900	1,854	551	49	4.57	...	2.55	1.40	2.65	1.71	8.38	4.05	3.58	44.24	
	1899	1,312	952	45	12.91	...	4.54	1.51	3.02	3.02	6.05	4.51	1.51	55.18	
	1900	1,314	759	37	7.6	...	1.52	2.25	3.04	.75	6.85	.75	1.52	25.88	
Bengal ...	1895-1900	18,121	1,057	37	2.40	.93	.95	3.77	2.60	.91	7.95	1.57	.65	20.11	
	1899	18,118	1,004	25	.78	...	.66	4.42	2.58	.99	6.18	.99	.77	21.99
	1900	19,593	1,156	40	4.44	...	.82	5.05	4.59	1.22	9.44	2.50	1.22	29.61
North-Western Provinces and Oudh ...	1895-1900	32,128	883	45	.47	.97	.47	2.71	4.55	1.00	6.69	2.04	2.05	27.85	
	1899	29,205	792	37	.70	...	.41	2.90	4.44	.95	5.35	1.43	.65	22.25
	1900	31,053	794	26	.32	.93	.32	2.73	2.64	.55	4.47	1.29	.93	22.10	
Punjab ...	1895-1900	13,239	1,250	34	.20	.99	.65	2.64	4.81	.77	3.15	1.94	.33	19.79	
	1899	13,512	1,097	33	...	...	.44	2.95	4.51	1.18	2.52	.95	.71	18.72
	1900	15,550	1,120	37	.84	...	.65	3.73	5.21	.64	4.50	.84	.45	23.73
Bombay ...	1895-1900	8,259	773	29	3.77	.99	2.44	2.74	6.12	1.35	5.27	3.04	1.45	21.72	
	1899	8,081	614	28	.89	...	1.32	2.97	3.79	1.67	2.45	1.78	.89	24.72	
	1900	11,495	784	28	5.92	.35	3.31	3.65	6.70	1.30	5.22	4.52	2.87	45.80	
Berar and Secunderabad ...	1895-1900	1,650	677	19	1.93	...	.35	1.57	5.30	4.10	6.75	2.89	3.25	36.05
	1899	1,426	445	13	...	...	.70	1.40	1.40	.70	1.70	.70	2.10	13.32
	1900	1,677	943	26	6.75	...	...	2.39	11.42	6.23	20.76	9.85	4.08	79.92
Central Provinces ...	1895-1900	5,533	1,072	45	3.51	.75	1.22	4.12	5.70	1.40	30.49	9.78	5.02	24.23	
	1899	4,145	859	28	.94	...	.48	2.17	2.95	.48	4.10	1.69	1.69	24.59
	1900	5,725	916	29	7.68	.87	1.40	4.35	4.92	1.95	19.90	9.43	5.75	65.44	
Madras ...	1895-1900	8,270	625	27	5.20	.11	.74	3.55	2.37	.54	4.70	.95	.34	28.30	
	1899	8,105	502	22	.23	...	...	2.59	1.14	.68	1.69	...	.68	10.13
	1900	10,135	531	22	1.97	.10	.30	3.65	2.37	.30	3.85	.30	.59	24.67	
India †	1895-1900	114,293	981	38	1.68	.68	1.03	3.35	4.99	.94	7.04	2.10	1.67	29.97	
	1899	110,016	918	18	.75	.65	.82	3.55	3.34	.90	5.47	1.21	.95	23.87	
	1900	121,811	977	35	2.25	.11	1.21	3.95	4.22	.90	6.79	2.45	1.58	31.80	
	1891-1900	108,606	1,024	39	1.99	.68	1.20	2.98	4.37	1.99	6.81	2.18	1.78	30.20	

* Excluding subsidiary jails.

† Including Ajmere, Quetta, and Mercara.

C.—Groups.	Years.	Average strength. †	RATIO PER MILLE OF STRENGTH.*											
			Admissions.	Constantly sick.	ADMISSIONS FROM									Dysentery.
					Influenza.	Cholera.	Small-pox.	Etiotic fever.	Intermittent fever.	Remittent fever.	Simple continued fever.	Pneumonia.		
Group I.—Barma Coast and Bay Islands ...	1895-1900	19,571	1,257	44	9.6	1.5	.2	.7	52.3	12.5	27.0	5.8	97.7	
	1899	16,779	1,104	45	.7	1.3	.4	.9	23.0	15.4	15.2	5.9	133.3	
	1900	19,770	1,442	44	36.2	1.7	.2	.3	21.3	12.1	5.6	7.8	122.0	
" II.—Barma Inland ...	1895-1900	4,539	479	23	3.9	2.3	.4	.3	12.0	7.4	6.6	9.0	62.6	
	1899	4,452	444	19	9.6	3.3	.7	.2	12.0	8.1	4.6	9.0	47.4	
	1900	4,236	475	24	...	.5	.9	.5	13.9	3.2	3.9	6.7	60.5
" III.—Assam ...	1895-1900	1,243	933	49	4.9	7.3	...	...	32.8	11.4	1.1	8.1	18.6
	1899	1,250	878	47	6.3	20.3	...	...	25.3	8.5	.8	8.6	178.0
	1900	1,277	759	37	11.7	.5	...	...	14.9	6.3	.8	10.2	174.6
" IV.—Bengal and Orissa ...	1895-1900	11,200	1,092	39	38.8	2.5	.1	.2	26.7	11.0	92.0	18.6	298.7	
	1899	11,266	944	33	14.3	.5	...	...	20.2	10.3	65.2	14.6	228.1
	1900	11,791	1,232	42	47.7	5.0	.1	.1	24.6	5.7	120.3	15.3	361.0	
" V.—Gangetic Plain and Chota Nagpur ...	1895-1900	28,575	914	41	28.1	2.6	.3	.2	20.1	8.7	13.4	15.4	90.5	
	1899	26,123	888	38	30.7	.1	.3	.2	21.5	6.1	9.9	10.2	93.7	
	1900	28,244	804	35	9.4	4.1	.6	.2	22.7	4.1	17.0	14.3	90.5	
" VI.—Upper Sub-Himalaya ...	1895-1900	14,581	1,145	35	31.6	.6	.5	.1	51.9	4.8	6.5	45.9	76.8	
	1899	14,699	1,011	32	22.6	.1	...	...	40.7	3.3	3.5	21.8	60.6
	1900	16,139	1,136	38	22.8	2.1	...	...	50.9	3.7	3.8	17.7	95.0
" VII.—North-Western Frontier, Indus Valley, and North-Western Rajpootana ...	1895-1900	7,288	974	31	8.3	...	...	1.0	2	40.1	7.2	1.2	25.9
	1899	7,498	781	29	15.2	...	...	.1	...	25.9	2.3	.5	21.7
	1900	8,259	621	28	3.6	.1	1.0	...	27.4	10.9	1.2	10.6	72.6	
" VIII.—South-Eastern Rajpootana, Central India, and Gujarat ...	1895-1900	5,298	748	40	12.1	.5	.2	...	25.9	1.6	1.1	3.6	65.1	
	1899	5,016	600	35	4.8	...	...	.2	...	17.2	1.9	1.6	20.5
	1900	6,477	654	36	3.7	1.5	.2	...	25.7	1.4	...	24.3	87.2	
" IX.—Deccan ...	1895-1900	19,770	958	38	13.0	4.9	.2	.4	28.4	4.3	5.7	12.9	99.1	
	1899	19,072	750	28	12.3	2.9	.1	.7	22.7	4.9	4.9	12.1	59.0	
	1900	22,202	962	33	5.9	11.0	2.8	.2	21.0	3.7	2.2	15.5	99.4	
" X.—Western Coast ...	1895-1900	2,567	677	30	1.8	13.8	1.5	.2	13.4	37.0	18.7	7.7	75.9	
	1899	2,567	586	31	...	.4	...	...	19.2	15.3	1.2	8.1	56.4
	1900	3,160	792	26	...	20.3	4.1	...	17.2	21.7	22.0	8.2	129.1	
" XI.—Southern India ...	1895-1900	7,028	657	27	5.7	14.1	.5	.5	11.4	.8	6.5	8.3	64.2	
	1899	7,381	510	21	...	.4	...	...	8.1	.3	6.2	6.5	47.6
	1900	9,144	525	21	...	2.7	.5	.2	7.6	1.4	6.2	10.0	40.0	
" XII.—Hills ...	1895-1900	642	1,015	31	11.5	4.7	.3	.6	26.2	8.1	49.9	2.1	160.4	
	1899	662	668	32	35.3	...	...	...	26.6	6.0	18.1	2.7	116.3
	1900	724	867	32	5.5	13.2	...	...	27.9	8.5	9.9	19.3	85.4
Isolat ...	1895-1900	114,293	981	38	10.5	3.2	.8	.2	33.8	8.2	24.0	15.9	103.6	
	1899	110,016	918	35	14.7	.9	.2	.2	24.4	6.7	20.6	14.4	68.1	
	1900	121,811	977	35	10.9	4.1	1.0	.3	35.9	6.0	25.3	14.6	120.0	

* Excluding subsidiary jails.

† Including Aden.

‡ The quinquennial ratios are, of course, worked on the total strength of the last year.

P.—Causes of admission.	Years.	Years.												Total.	
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		
Influenza	1896	833	1,357	1,133	203	32	10	5	1	270	54	15	10	4,141	
	1897	40	31	86	162	85	8	37	5	20	274	187	14	987	
	1898	91	239	572	631	338	201	41	146	45	6	30	10	2,343	
	1899	60	230	450	363	280	23	17	13	31	48	49	48	1,622	
	1900	79	140	147	240	538	107	282	192	56	48	123	98	2,059	
Total ...	1896-1900	1,133	2,017	2,407	1,698	1,073	340	382	357	434	450	294	189	11,152	
Cholera	1896	2	3	14	42	22	47	68	37	4	5	4	5	253	
	1897	...	10	253	259	44	30	145	96	55	4	7	6	950	
	1898	...	3	7	2	2	5	4	1	...	...	...	...	23
	1899	...	8	5	15	24	68	62	138	143	43	4	18	3	101
	1900	...	8	5	15	24	68	62	138	143	43	4	18	3	505
Total ...	1896-1900	10	27	231	265	164	182	358	250	104	43	31	16	1,841	
Enteric Fever	1896	...	2	...	3	1	2	...	9	3	2	...	...	23
	1897	3	...	3	1	3	1	2	...	2	15	2	...	34	
	1898	1	1	3	3	1	1	...	2	1	6	3	...	20	
	1899	1	2	1	...	...	3	5	3	...	6	5	...	31
	1900	1	...	2	1	...	4	7	3	...	5	...	...	34
Total ...	1896-1900	6	5	9	8	5	11	14	17	12	31	10	3	131	
Intermittent Fever	1896	2,490	1,853	2,220	2,192	2,174	2,516	2,531	2,742	3,112	3,305	2,712	2,388	20,665	
	1897	1,073	1,813	2,000	2,377	2,706	3,104	3,606	3,707	5,950	7,004	5,998	4,033	44,110	
	1898	2,521	1,738	2,317	2,558	2,794	3,225	3,310	3,704	4,298	4,877	3,823	2,807	28,017	
	1899	2,435	2,051	2,033	2,040	2,228	2,510	4,172	4,184	3,194	3,178	3,014	2,320	27,770	
	1900	1,980	2,145	2,407	3,039	2,714	3,278	3,711	4,299	4,599	6,435	5,100	4,134	43,594	
Total ...	1896-1900	11,400	9,650	11,072	13,206	13,776	15,833	17,630	18,385	21,492	24,702	20,277	15,668	194,172	
Remittent Fever	1896	89	72	121	165	173	167	166	127	128	103	80	91	1,462	
	1897	130	121	68	97	70	64	38	107	81	60	48	34	1,083	
	1898	30	54	61	75	51	48	62	81	57	57	45	45	670	
	1899	37	27	37	33	81	114	91	87	77	70	41	39	734	
	1900	45	41	55	66	71	62	77	123	57	44	47	32	730	
Total ...	1896-1900	340	315	372	426	452	455	484	585	400	338	261	261	4,699	
Simple Continued Fever	1896	167	125	177	222	226	284	254	247	353	295	162	100	2,812	
	1897	173	187	205	185	210	215	217	221	251	257	281	288	2,809	
	1898	205	220	219	226	217	404	217	168	167	162	175	177	2,668	
	1899	195	124	111	107	100	120	180	205	171	255	384	300	2,263	
	1900	147	115	145	217	343	200	300	435	415	324	226	187	3,086	
Total ...	1896-1900	869	781	868	1,055	1,145	1,243	1,268	1,337	1,417	1,324	1,130	1,151	12,728	
Pneumonia	1896	353	257	235	118	139	129	127	107	118	129	160	223	2,105	
	1897	245	216	228	141	110	95	90	118	122	153	223	223	1,842	
	1898	200	150	125	149	120	121	88	70	77	105	182	165	1,716	
	1899	213	163	152	141	109	66	91	90	85	121	148	164	1,585	
	1900	221	204	217	145	140	110	110	92	94	105	144	178	1,775	
Total ...	1896-1900	1,293	990	1,067	624	618	561	512	449	492	602	797	986	9,051	
Dysentery	1896	574	451	600	662	614	854	1,271	1,370	1,051	975	863	769	10,044	
	1897	595	613	816	864	851	951	1,429	1,741	1,566	1,313	1,311	1,122	12,470	
	1898	740	520	375	615	739	802	1,055	1,295	1,100	927	984	914	10,208	
	1899	653	390	643	716	933	947	1,197	1,312	1,040	512	915	806	10,292	
	1900	639	613	969	942	1,122	1,105	1,546	1,958	1,700	1,353	1,457	1,210	14,612	
Total ...	1896-1900	3,181	2,772	3,622	3,322	4,299	4,751	6,600	7,709	6,299	5,720	5,550	4,781	50,227	

Q.—Causes of death.	DIED PER 1,000 OF AVERAGE STRENGTH.			RELATIVE LIABILITY IN PERCENTAGES.			PERCENTAGES IN DEATHS FROM ALL CAUSES.		
	European troops.	Native troops.	Prisoners.	European troops.	Native troops.	Prisoners.	European troops.	Native troops.	Prisoners.
Cholera	1.45	3.16	1.25	21	46	33	9.9	21.5	7.9
Fever*	5.63	3.24	2.30	55	22	23	38.5	10.9	7.0
Bowel-complaints ... ..	.91	.92	9.24	8	8	83	6.2	6.5	28.2
Spleen diseases ... ..	.01	.01	.04	99	14	57	.1	.1	.1
Anæmia and debility ... ..	.02	.12	1.58	1	12	87	.1	1.6	4.8
Respiratory diseases ... ..	.50	3.00	5.08	5	41	54	3.4	21.8	15.5
Tubercle of the lungs ... ..	.58	.78	3.98	11	15	75	4.0	5.5	12.1
All other causes	5.51	2.81	8.30	33	17	50	37.8	20.0	25.3
All causes	14.62	14.04	22.80	24	23	53	100.0	100.0	100.0

* Enteric, intermittent, remittent, and simple continued fever.

STATEMENT NO. I.—Birth and Death Statistics.

PROVINCE.	Total number of births registered.	Ratio of births per 1,000 of population.	Mean ratio of births per 1,000 during previous five years.	NUMBER OF DEATHS REGISTERED.			RATIO OF DEATHS PER 1,000 OF POPULATION.			HIGHEST DEATH-RATE.		LOWEST DEATH-RATE.		MEAN DEATH-RATE DURING PREVIOUS FIVE YEARS.			Number of deaths of males to every 100 deaths of females.		
				In municipalities and towns.	In districts excluding towns.	TOTAL.	In municipalities and towns.	In districts excluding towns.	TOTAL.	In municipalities and towns.	In districts excluding towns.	In municipalities and towns.	In districts excluding towns.	In municipalities and towns.	In districts excluding towns.	In municipalities and towns.		In districts excluding towns.	TOTAL.
Bengal	1899	3,057,178	42'06	35'53	114,593	2,102,630	3,218,243	33'10	31'11	32'21	62'18	50'01	12'7	19'03	33'56	31'01	31'09	113'	
	1900	2,740,582	38'68	37'66	151,015	2,454,791	2,603,726	43'46	36'25	36'63	101'44	51'94	8'47	21'17	33'00	31'27	31'26	113'	
Assam	1899	179,027	35'45	31'38	4,073	152,523	156,595	37'20	30'87	31'01	70'79	44'41	16'00	22'03	45'01	37'33	37'30	117'09	
	1900	184,427	34'96	30'62	3,961	157,670	161,631	38'62	30'48	30'64	60'94	53'16	14'52	20'57	45'00	35'25	35'44	112'04	
North-Western Provinces and Oudh.	1899	2,255,697	48'00	35'69	125,355	1,430,455	1,555,811	39'04	32'75	33'19	62'70	47'04	22'18	14'6	39'04	34'07	33'19	110'45	
	1900	1,822,169	40'24	37'37	136,339	1,293,800	1,460,139	41'13	30'31	31'13	64'21	45'40	20'67	22'08	39'16	32'22	32'70	111'21	
Punjab	1899	904,001	48'4	42'9	65,491	542,233	607,225	32'58	29'22	29'57	44'90	41'05	12'07	15'04	33'31	31'50	31'80	107'2	
	1900	843,970	41'1	43'8	109,674	870,537	980,211	54'55	46'98	47'69	161'59	93'12	16'00	20'77	33'65	30'14	30'50	105'2	
Central Provinces †	1899	440,895	47'35	31'14	27,812	220,078	266,939	34'11	27'53	28'00	61'59	45'06	15'92	21'09	46'23	43'11	43'38	118'51	
	1900	302,121	31'90	33'18	48,400	406,822	530,224	59'28	56'51	56'75	180'05	111'74	19'90	20'43	46'18	41'12	41'29	119'43	
Berar	1899	144,934	59'5	36'0	15,128	68,814	113,992	42'6	39'5	39'9	55'5	51'5	28'8	30'5	49'9	42'3	42'3	111'8	
	1900	89,308	31'2	30'4	21,041	204,681	236,022	87'2	82'1	82'7	251'7	168'2	46'2	70'1	43'1	41'8	41'0	115'3	
Madras	1899	1,045,535	31'2	28'6	73,032	601,163	675,094	29'1	19'4	20'9	53'2	39'1	7'4	13'3	29'3	29'6	21'5	103'4	
	1900	1,045,199	31'8	29'3	82,951	687,298	770,859	22'6	22'6	23'4	58'7	34'9	11'4	16'0	29'4	29'7	21'3	105'5	
Coorg	1899	4,127	25'59	23'16	553	4,202	4,245	35'61	27'24	28'00	49'47	31'64	21'64	20'97	39'87	31'56	31'56	120'61	
	1900	4,542	26'25	23'00	824	5,183	6,302	32'48	24'83	26'42	80'28	40'88	15'73	16'22	41'28	32'22	31'04	120'67	
Bombay	1899	685,248	36'42	34'41	147,701	524,554	672,259	64'09	31'72	35'72	228'77	46'07	10'25	11'79	41'45	31'04	31'31	112'00	
	1900	595,662	26'87	34'68	235,817	1,082,966	1,318,783	102'33	65'57	70'07	680'63	253'68	12'25	23'52	47'42	30'99	33'01	115'0	
Lower Burma	1899	165,229	37'04	29'07	19,073	101,798	121,771	34'45	26'22	27'30	39'09	32'98	15'44	16'37	30'63	23'47	24'00	129'	
	1900	171,123	38'37	32'86	19,487	103,227	122,714	32'70	26'71	27'51	48'82	33'63	16'95	18'62	31'10	24'25	25'14	128'	

* Excluding Europeans and Eurasians.
† Excluding Zamindari of the Chhattisgarh Division.

STATEMENT NO. II.—Deaths from all causes, according to months, in the different Provinces of India during the year 1900.

PROVINCE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	RATIO OF DEATHS PER 1,000 OF POPULATION.	
														1900.	1899.
Bengal	237,731	166,069	208,020	251,248	204,193	180,007	222,024	192,095	176,244	243,234	243,120	367,747	2,603,726	36'63	31'21
Assam	14,228	11,312	14,078	14,383	14,702	13,773	11,939	11,533	11,000	14,220	14,787	14,119	161,631	30'64	31'03
North-Western Provinces and Oudh.	108,201	87,274	95,554	105,477	122,620	124,847	109,112	124,121	132,799	152,371	147,115	126,548	1,460,139	31'13	32'19
Punjab	51,580	45,189	45,120	49,799	56,489	62,220	71,679	65,743	66,795	104,220	151,277	108,070	680,211	47'69	30'52
Central Provinces*	24,206	23,474	28,709	28,941	45,281	63,524	64,416	71,159	62,031	52,917	26,100	26,206	530,224	56'75	28'09
Berar	12,597	12,221	14,599	15,798	19,853	22,737	22,108	34,724	27,613	20,845	12,740	8,645	236,022	82'7	30'9
Madras	61,169	52,168	53,374	51,025	58,727	63,690	70,120	72,205	65,256	66,810	70,061	81,655	770,859	23'4	20'1
Coorg	385	300	379	410	476	602	798	622	599	520	526	597	6,302	36'42	28'00
Bombay	78,268	78,298	102,384	117,041	148,222	128,570	162,555	151,079	171,466	95,201	78,799	66,250	1,318,783	70'07	35'22
Burma	Lower	8,247	8,204	8,506	8,982	8,521	10,226	12,885	12,518	11,428	11,155	10,621	122,714	27'51	27'30
	Upper	4,127	3,450	4,120	4,690	4,167	4,321	4,685	4,613	4,574	4,492	4,688	5,250	53,496	21'80	21'03
Ajmer-Merwara	3,877	3,286	4,069	5,220	6,820	5,121	4,000	4,474	5,366	7,751	8,103	6,222	65,067	110'97	33'21
TOTAL	615,000	492,546	580,211	665,533	622,122	699,820	760,221	746,284	708,595	824,876	779,427	722,350	8,318,204	28'6	29'2

* Excluding Zamindari.

STATEMENT III.—Births.

PROVINCE.	Population under registration.	RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.
		Maximum for any one district.	Minimum for any one district.	Mean for the province.			
Bengal	71,069,617	49'10	15'80	38'68	105'	2'05	...
Assam	5,275,249	41'15	25'44	34'96	106'23	4'32	...
North-Western Provinces and Oudh	46,904,791	52'89	29'54	40'34	107'40	9'21	...
Punjab	20,553,982	77'7	21'7	41'1	111'0	...	6'6
Central Provinces*	9,501,401	43'74	25'56	31'90	105'64	...	24'85
Berar	2,852,825	34'2	20'9	31'3	106'1	...	51'4
Madras	33,005,618	46'1	26'5	31'8	104'6	8'4	...
Coorg	173,055	35'93	21'59	26'25	101'95	...	10'17
Bombay	18,820,346	36'24	10'07	26'87	108'24	...	43'20
Burma { Lower	4,461,027	48'17	17'43	38'37	107'	11'	...
{ Upper†	311,605	43'60	21'05	36'87	105'	Not given.	...
Ajmer-Merwara	542,358	15'88	14'33	14'67	123'79	...	105'30

* Excluding Zamindaries.

† For selected towns only.

STATEMENT IV.—Deaths.

PROVINCE.	Population under registration.	Area in square miles.	Average population per square mile.	RATIO OF DEATHS PER 1,000 OF POPULATION.			DEATH RATE PER 1,000.	
				Maximum for any one district.	Minimum for any one district.	Mean for the year.	Male.	Female.
Bengal	71,069,617	144,409	492	55'66	21'28	36'63	39'09	34'19
Assam	5,275,249	29,201	181	53'03	20'78	30'64	31'53	29'69
North-Western Provinces and Oudh	46,904,791	107,734	435	45'40	22'37	31'13	31'63	30'59
Punjab	20,553,982	110,463	186	96'4	25'4	47'7	45'5	50'2
Central Provinces*	9,501,401	71,582	133	110'82	20'63	56'75	61'75	51'75
Berar	2,852,825	16,068	177	110'8	67'2	82'7	86'1	79'3
Madras	33,005,618	128,727	270	46'8	16'4	23'4	24'2	22'5
Coorg	173,055	1,583	109	42'02	26'20	36'42	37'22	35'41
Bombay	18,820,346	124,130	151	281'06	25'42	70'07	72'53	67'43
Burma { Lower	4,461,027	72,588	61	42'39	19'59	27'51	29'20	25'61
{ Upper	2,454,288	23,485	104	32'91	13'90	21'80	22'88	20'82
Ajmer-Merwara	542,358	2,711	200	149'50	111'58	119'97	124'84	114'44

* Excluding Zamindaries.

STATEMENT V.—Deaths in Towns and Rural Circles compared.

PROVINCE.	NUMBER OF REGISTRATION CIRCLES.			POPULATION.			DEATHS FOR 1,000.		
	Rural.	Town.	Total.	Rural.	Town.	Total.	Rural.	Town.	Total.
Bengal	561	155	716	67,595,162	3,474,455	71,069,617	36'28	43'46	36'63
Assam	62	19	81	5,172,675	102,574	5,275,249	30'48	38'62	30'64
North-Western Provinces and Oudh	851	459	1,310	43,668,366	3,236,425	46,904,791	30'31	42'13	31'13
Punjab	455	150	605	18,551,934	2,010,390	20,553,982*	46'92	54'55	47'69
Central Provinces†	234	73	307	8,684,984	816,417	9,501,401	56'51	59'28	56'75
Berar	67	38	105	2,496,823	356,002	2,852,825	82'1	87'2	82'7
Madras	180	94	274	30,445,650	2,559,968	33,005,618	22'6	32'6	23'4
Coorg	5	5	10	157,544	15,511	173,055	34'83	52'48	36'42
Bombay	220	63	283	16,515,973	2,304,373	18,820,346	65'57	102'33	70'07
Burma { Lower	194	34	228	3,864,836	596,191	4,461,027	26'71	32'70	27'51
{ Upper	105	13	118	2,142,683	311,605	2,454,288	20'10	32'83	21'80
Ajmer-Merwara	17	6	23	418,266	124,152	542,358	108'83	157'51	119'97

* Excluding Europeans and Eurasians.

† Excluding Zamindaries.

Appendix to Section V.—Vital Statistics—concluded.

STATEMENT No. VI.—Deaths according to age.

PROVINCE.	RATIO PER 1,000.																			
	Under 1 year.		1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.		20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Bengal	221'71	220'60	53'24	45'58	22'73	18'52	18'19	15'50	22'01	21'40	24'90	22'36	25'70	22'10	31'96	25'63	45'14	38'17	84'07	65'82
Assam	208'43	179'68	32'33	30'17	16'66	13'86	15'75	14'83	21'98	26'68	23'03	25'98	24'87	24'11	29'27	23'29	38'25	34'55	53'76	39'38
N.-W. Provinces and Oudh	286'06	267'00	47'93	47'07	12'66	10'50	8'67	8'20	11'47	16'49	14'91	16'75	18'11	16'00	25'48	22'58	41'51	32'78	59'81	42'59
Punjab	253'15	275'82	94'97	106'24	20'29	21'66	13'10	16'80	13'31	17'63	14'64	17'84	20'21	23'23	31'03	29'71	49'76	45'24	146'37	154'37
Central Provinces*	580'19	506'12	73'15	55'49	30'45	24'27	22'51	19'66	30'07	25'26	30'09	23'56	38'66	29'5	53'12	38'68	78'27	61'45	131'81	113'46
Berar	497'4	459'7	190'0	166'2	48'5	41'7	27'9	27'4	29'1	30'7	33'5	33'4	47'2	41'1	72'2	44'8	110'3	92'2	194'5	186'5
Madras	102'8	135'6	28'2	25'3	10'5	9'8	8'3	8'3	9'4	11'7	10'5	10'9	13'7	12'5	20'3	15'8	36'0	29'6	63'5	56'6
Coorg	344'79	264'37	39'81	35'04	13'11	12'79	13'19	12'99	14'68	18'35	26'53	27'33	30'63	36'95	42'75	35'63	61'03	53'03	79'75	70'29
Bombay	243'08	222'60	108'54	100'43	44'33	42'37	34'45	35'70	32'94	32'30	41'85	38'12	57'49	52'40	79'22	59'44	111'02	83'72	109'08	185'04
Burma { Lower	316'99	227'82	35'74	29'86	14'05	11'34	10'26	9'15	15'48	12'53	14'72	14'68	20'21	21'49	24'61	21'74	31'48	24'30	64'97	58'93
{ Upper	167'28	120'83	30'36	29'55	11'75	11'35	5'83	4'08	8'38	8'21	9'08	11'99	13'47	13'03	10'40	13'10	28'67	21'11	54'73	48'78
Ajmer-Merwara	373'79	341'59	264'91	237'33	80'46	66'23	53'36	57'54	66'54	68'88	67'82	62'89	88'49	73'74	133'29	100'97	216'85	183'35	235'32	207'02

* Excluding Zamindaries.

STATEMENT No. VII.—Deaths according to cause.

PROVINCE.	DEATHS PER 1,000 IN 1900.								Deaths per 1,000 in 1899.	Deaths per 1,000 in 1898.
	Plague.	Cholera.	Small-pox.	Fevers.	Dysentery and Diarrhœa.	Injuries.	All other causes.	All causes.		
Bengal	4'86	0'29	23'97	0'91	0'45	6'14	36'63	31'21	26'57
Assam	4'51	0'18	14'70	2'84	0'34	8'07	30'64	31'01	36'15
N.-W. Provinces and Oudh	1'81	0'03	23'58	0'65	0'54	4'51	31'13	33'19	27'38
Punjab	1'37	0'51	33'37	1'26	0'38	10'80	47'60	29'57	31'05
Central Provinces†	0'06	6'64	0'74	28'70	5'17	0'66	14'79	56'75	28'09	24'30
Berar	6'4	0'3	20'5	2'4	0'5	23'6	82'7	39'9	23'4
Madras	1'8	0'8	8'8	1'2	0'4	10'4	23'4	20'1	21'0
Coorg	1'81	27'97	1'19	0'48	4'96	36'42	28'00	31'44
Bombay	1'76	8'71	0'52	28'87	11'59	0'44	18'17	70'07	36'48	20'16
Burma { Lower	0'77	0'68	11'18	1'84	0'30	12'74	27'51	27'30	26'13
{ Upper	0'02	1'14	8'10	0'45	0'40	11'69	21'80	21'03	...
Ajmer-Merwara	8'93	4'81	81'56	15'90	0'53	8'24	119'97	33'21	22'13

† Excluding Zamindaries.

STATEMENT No. VIII.—Deaths from all causes according to months.

PROVINCE.	RATIO PER 1,000.												TOTAL.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Bengal	3'34	2'33	2'92	3'53	2'87	2'65	3'15	2'71	2'48	3'42	3'42	3'76	36'63
Assam	2'70	2'14	2'67	2'82	2'79	2'61	2'27	2'19	2'26	2'71	2'80	2'68	30'64
N.-W. Provinces & Oudh	2'31	1'86	2'03	2'31	2'61	2'88	2'33	2'65	2'85	3'25	3'14	2'91	31'13
Punjab	2'85	2'20	2'20	2'42	2'89	3'08	3'49	3'25	4'71	7'98	7'36	5'26	47'69
Central Provinces†	2'49	2'51	3'22	4'22	4'97	6'78	6'88	7'71	6'82	5'65	3'78	2'77	57'82
Berar	4'4	4'6	5'1	5'5	7'0	8'0	11'6	12'0	9'7	7'3	4'5	3'0	82'7
Madras	2'0	1'6	1'6	1'5	1'8	1'9	2'1	2'2	2'0	2'0	2'2	2'5	23'4
Coorg	2'22	1'73	2'10	2'37	2'75	4'00	4'61	3'58	3'46	3'18	3'04	3'28	36'42
Bombay	4'16	4'17	5'47	6'22	7'87	6'83	8'64	8'03	5'92	5'06	4'18	3'52	70'07
Burma { Lower	1'92	1'88	1'93	2'01	1'91	2'29	2'89	2'81	2'57	2'50	2'45	2'34	27'51
{ Upper	1'68	1'41	1'69	1'91	1'70	1'76	1'91	1'88	1'86	1'83	1'99	2'18	21'80
Ajmer-Merwara	7'15	6'06	7'50	9'64	12'59	9'44	7'41	8'25	10'27	14'29	14'94	12'43	119'97

† Including Zamindaries.

STATEMENT I.—Deaths from CHOLERA in the different Provinces in India from 1877 to 1900.

Year.	Bengal.*	Assam.	N.-W. P. and Ouch.	Punjab.	Central Provinces.	Berar.	Rajpootana.	Central India.	Bombay.	Hyder-abad.	Madras.	Mysore.	Coorg.	Lower Burma.	Upper Burma,†	Ajmer-Merwara.
1877	155,305	11,377	31,770	29	3,418	842	60	916	57,228	7,414	357,430	2,902	‡	7,276	...	11
1878	95,192	6,732	22,221	215	40,985	34,366	2,393	8,047	46,743	6,695	47,167	723	49	6,759	...	210
1879	130,363	17,415	35,892	26,135	27,575	223	918	2,734	6,937	6	13,296	14	...	1,828	...	120
1880	39,643	2,083	71,546	274	330	1	...	299	684	...	613	25	...	2,638	...	3
1881	79,180	5,010	25,865	5,207	9,140	3,404	197	581	16,694	1,721	9,446	25	3	5,239	...	16
1882	182,352	21,055	89,372	39	11,932	3,573	1,327	1,562	7,904	150	23,604	893	31	7,177	...	289
1883	90,439	14,908	18,160	190	16,235	27,897	797	1,740	37,954	1,947	36,284	124	...	2,185	...	87
1884	134,421	22,276	30,143	614	149	87	1,297	1,018	13,804	2,479	75,476	330	...	5,515	...	227
1885	173,767	7,753	63,457	1,936	21,868	3,683	1,615	4,624	37,287	1,287	58,109	2,677	...	7,685	...	100
1886	118,568	20,188	34,565	12	16,679	976	173	290	167	499	12,417	10	...	4,027	...	765
1887	172,578	7,941	200,628	8,804	12,576	14,396	2,612	8,868	25,711	2,831	28,359	832	3	2,649	...	384
1888	111,391	9,693	18,704	14,938	921	305	32	191	36,500	2,057	58,677	1,015	2	15,282	...	13
1889	171,103	18,288	48,494	2,898	52,588	10,925	6,923	3,344	32,431	1,128	76,020	1,590	9	3,240	...	55
1890	145,885	15,396	80,295	3,401	4,787	847	2,746	3,132	3,259	...	35,288	1,326	5	1,976	...	408
1891	229,575	23,882	169,013	10,107	21,312	7,958	2,946	13,474	17,850	3,102	98,773	1,204	7	2,400	...	532
1892	259,398	21,552	194,886	75,959	39,972	2,030	26,760	8,384	42,900	53	79,033	5,497	58	6,208	...	2,352
1893	126,976	21,849	12,154	639	557	1,188	314	127	18,853	165	32,209	680	9	2,393	...	3
1894	236,150	13,497	178,079	113	7,043	3,452	2	5,210	33,588	1,862	42,289	328	8	7,428	...	...
1895	177,087	18,962	51,562	549	15,506	11,919	1,049	6,043	8,890	467	21,172	2,334	...	5,150	...	289
1896	226,824	17,042	69,147	5,146	52,985	12,264	3,797	15,766	35,404	525	47,847	2,100	49	2,959	...	12
1897	196,247	33,240	44,208	622	57,131	10,122	1,495	13,202	57,109	1,939	143,445	4,948	106	8,538	...	19
1898	65,020	11,149	2,508	335	7	...	6	2	4,368	6	65,444	1,193	8	2,972	...	1
1899	107,678	8,380	8,142	1,816	761	541	498	...	8,579	...	29,082	123	...	4,942	2,050	1
1900	345,878	23,761	84,960	28,260	63,114	18,375	28,719	20,450	163,889	3,813	60,662	779	...	3,440	41	4,842

* Excluding Calcutta from 1877 to 1892.

† Statistics from 1877 to 1898 not available.

‡ Statistics not available.

§ Including 39 deaths in Cantonments.

|| Excluding Zamindaries.

STATEMENT II.—Deaths from CHOLERA registered in the different provinces, by months, during the year 1900.

PROVINCE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	RATIO OF DEATHS PER 1,000 OF POPULATION.	
														1900.	1899.
Bengal	14,092	12,742	29,173	56,393	35,395	44,560	45,472	25,768	11,526	14,846	27,078	28,833	345,878	4·86	1·51
Assam	1,501	1,333	3,878	4,340	3,026	2,453	1,083	456	684	1,316	1,876	1,815	23,761	4·51	1·66
N.-W. P. and Oudh.	47	15	119	2,081	8,799	14,846	8,584	10,229	8,967	10,223	9,195	11,855	84,960	1·81	0·17
Punjab	95	2	537	1,888	1,793	4,559	9,711	4,923	2,870	1,717	148	17	28,260	1·37	0·09
Central Provinces.*	162	40	1,252	7,358	11,811	20,158	13,148	7,893	1,197	112	3	...	63,114	6·64	0·01
Berar	267	711	347	1,044	2,928	4,023	6,452	2,498	100	5	...	...	18,375	6·4	0·2
Burma { Lower	210	416	519	635	346	226	357	265	131	62	29	204	3,440	0·77	1·11
Upper	24	3	10	2	...	...	...	...	1	1	...	...	41	0·02	0·84
Madras Presidency.	3,700	1,762	1,077	833	1,940	4,246	7,576	7,237	5,591	5,491	7,787	13,422	60,662	1·8	0·9
Bombay Presidency.	388	585	5,409	15,086	32,929	33,625	44,521	23,123	4,924	1,596	1,215	488	163,889	8·71	0·46
Ajmer-Merwara.	...	1	...	886	2,150	1,141	372	236	56	...	...	...	4,842	8·93	0·002
Coorg . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	20,486	17,650	42,121	90,526	101,117	129,837	137,276	82,628	36,047	35,369	47,331	56,634	757,222	3·70	0·80

* Excluding Zamindaries.

STATEMENT III.—Details of the distribution and occurrence of CHOLERA during the year 1900.

PROVINCE.	Mortality in 1900.	Mean mortality of previous 5 years.	Urban mortality.	Rural mortality.	Percentage of villages attacked.	Maximum mortality in any one district excluding towns.	Maximum mortality in any one town.	Month of maximum prevalence.
Bengal	4·86	2·17	5·06	4·85	14·8	23·97	30·42	April.
Assam	4·51	3·36	5·74	4·48	16·8	25·21	33·72	April.
N.-W. P. and Oudh	1·81	0·75	1·36	1·84	7·0	15·96	17·54	June.
Punjab	1·37	0·08	2·16	1·29	6·6	8·19	15·60	July.
Central Provinces†	6·64	2·65	7·05	6·60	21·3	21·66	37·73	June.
Berar	6·4	2·4	8·9	6·0	18·2	13·8	52·1	July.
Lower Burma	0·77	1·09	0·84	0·76	5·8	2·92	9·01	April.
Upper	0·02	...	0·01	0·02	0·2	0·32	0·32	January.
Madras	1·8	1·9	2·8	1·8	15·2	4·6	20·0	December.
Bombay	8·71	1·75	8·40	8·75	33·8	22·86	126·90	July.
Ajmer-Merwara	8·93	0·12	14·97	7·14	30·6	20·67	40·84	May.
Coorg . . . . .	...	0·19	...	...	...	...	...	...

† Excluding Zamindaries.

TABLE I.—Small-pox mortality.

PROVINCES, MONTHS, DISTRICTS, TOWNS, CHILDREN.	Bengal.	Assam.	North-Western Provinces and Oudh.	Punjab.	Central Provinces (a).	Bihar.	Lower Burma.	Upper Burma.	Madras Presidency.	Bombay Presidency.	Ajmer-Merwara.	Coorg.	Mysore.	Registration India.
I.—Provincial Deaths :—														
January	1,765	44	58	851	354	89	271	130	1,701	1,266	618	6	373	8,519
February	1,625	47	79	611	485	109	316	241	2,550	1,951	569	8	416	9,007
March	1,972	82	149	847	903	141	508	485	3,025	2,070	697	17	383	11,280
April	2,874	58	225	1,250	1,075	172	579	651	2,751	1,566	464	14	305	12,024
May	2,777	123	257	1,651	905	128	412	407	2,246	988	192	23	320	10,529
June	2,181	116	241	1,456	814	87	352	325	1,992	622	42	22	418	8,978
July	2,051	67	131	1,312	616	61	244	160	2,204	374	15	22	462	7,719
August	1,127	53	89	768	456	21	110	85	2,327	202	3	18	284	5,533
September	793	83	38	529	387	10	48	61	1,892	134	...	26	228	4,719
October	808	31	47	309	372	4	54	19	1,865	107	...	44	270	3,927
November	783	91	25	318	223	...	87	71	1,738	201	...	45	355	3,037
December	1,244	180	71	512	435	11	81	63	2,400	404	...	69	352	6,432
Total	20,629	975	1,110	10,425	7,005	830	3,014	2,789	27,692	9,385	2,610	314	4,285	91,855
II.—Provincial Death-Ratios :—														
Ratio per 1,000 of population, 1900.	0'29	0'18	0'03	0'51	0'74	0'29	0'58	1'14	0'84	0'52	4'81	1'81	0'88	0'42
Ratio per 1,000 of population, 1899.	0'18	0'31	0'04	0'25	0'11	0'11	1'32	0'50	0'51	0'10	1'77	0'16	0'62	0'34
Difference	+11	-13	-01	+26	+63	+18	-74	+64	+33	+42	+3'04	+1'65	+26	+18
Mean ratio per 1,000 during 1895-99.	0'20	0'31	0'58	0'77	0'42	0'20	0'71	*	0'45	0'12	2'25	0'15	0'90	0'43
Difference	+109	-63	-55	-25	+31	+99	-93	*	+39	+40	+2'56	+1'66	-92	-91
III.—District mortality :—														
Number of districts	45	8	48	31	20	6	17	12	21	23	17	5	8	201
Highest district ratio	3'73	0'80	0'39	2'09	3'53	1'02	8'69	3'92	3'64	1'17	16'8	3'16	2'02	16'85
Increase or decrease in that district.	+1'20	-2'29	+1'26	+1'48	+2'47	+72	+7'87	+2'62	+2'71	+62	+15'25	+2'79	+56	+16'25
Name of that district	Cuttack.	Darrang	Aligarh.	Gurgaon.	Sambalpur.	Wan.	Taroy.	Pakokko.	Godavari.	Thana.	Ajmer Rural dist.	Nanjanaipatna.	Hassan.	Ajmer Rural dist.
Lowest district ratio	0'001	0'02	0'01	0'01	0'02	0'03	0'01	0'01	0'12	0'003	0'47	0'44	0'28	0'001
Percentage of districts above rural mortality.	22	25	15	35	25	33	24	25	29	22	47	40	38	38
Percentage of districts with increased mortality.	62	50	25	68	50	83	25	58	62	87	82	100	75	61
Number of districts without mortality.	...	...	10	1	1	...	...	1	...	...	...	...	...	15
Provincial rural mortality	0'28	0'18	0'03	0'40	0'67	0'28	0'70	1'18	0'88	0'31	4'68	1'50	0'89	0'38
Provincial percentage of districts above the India rural mortality.	13	12	2	39	45	33	47	58	86	22	100	190	88	...
IV.—Urban mortality :—														
Number of towns	155	19	99	150	73	28	24	13	94	63	6	5	21	770
Highest town ratio	4'17	7'65	1'45	18'02	9'23	4'12	11'27	10'11	6'89	12'13	7'58	3'60	3'89	8'03
Increase or decrease in that town.	+4'12	+7'65	+1'40	+17'90	+0'60	+3'54	+3'08	+10'06	+0'41	+12'13	+4'31	+3'60	-6'54	+17'90
Name of that town	Vishnupur	Sanamganj	Hathras.	Kamalia.	Ramtek.	Digras.	Myaungmya.	Pakokko.	Dowlshwenam.	Nandurbar.	Ajmer.	Virajendrapet.	Nanjanaipatna.	Kamalia.
Lowest town ratio	0'03	0'15	0'01	0'02	0'08	0'03	0'03	0'04	0'02	0'03	1'70	0'65	0'15	0'01
Percentage of towns above urban mortality.	14	11	16	22	27	21	21	31	29	27	50	40	58	20
Percentage of towns with increased mortality.	49	32	25	54	62	32	21	31	40	70	100	80	35	46
Number of towns without mortality.	71	11	69	59	27	26	26	7	20	18	...	1	2	328
Provincial urban mortality	7'75	1'44	0'68	1'50	1'45	0'40	0'55	0'85	0'77	2'05	5'25	1'87	0'81	0'89
Provincial percentage of towns above the India urban mortality.	11	11	2	28	24	18	18	31	13	35	100	60	38	...
V.—Infantile mortality :—														
Children under 1 year	4,151	290	629	2,728	1,803	173	476	241	8,249	2,853	688	Not given.	1,642	23,033
Children, 1-10 years	9,550	427	622	6,457	2,418	209	1,470	1,218	7,269	4,072	1,752	..	2,325†	38,189
Percentage of children in total small-pox mortality.	66'45	71'56	90'14	68'11	60'26	98'07	61'56	59'97	59'04	70'07	92'49	..	69'79	67'48

(a) Excluding Zamindaries.
 * Not available.
 † Under twelve years.

TABLE II.—Fever mortality.

PROVINCES, MONTHS, DISTRICTS, TOWNS.	Bengal.	Assam.	North-Western Provinces and Oudh.	Punjab.	Central Provinces. (a).	Bihar.	Lower Burma.	Upper Burma.	Madras Presidency.	Bombay Presidency.	Ajmer-Merwara.	Coorg.	Mysore.	Registration India.
I.—Provincial Deaths—														
January . . .	173,341	7,121	83,747	37,613	12,547	5,667	3,646	1,839	22,181	37,030	2,480	314	2,285	339,099
February . . .	114,743	5,512	69,872	28,175	19,045	4,836	3,495	1,265	19,126	37,558	1,953	242	2,673	294,494
March . . .	131,923	5,743	75,173	27,225	14,345	5,891	3,637	1,553	20,991	39,260	2,286	283	3,379	332,385
April . . .	146,797	5,983	84,431	29,770	17,690	5,728	3,546	1,735	20,049	49,999	2,552	331	2,730	361,791
May . . .	137,253	6,910	94,210	37,157	17,799	6,920	3,354	1,399	22,474	53,995	2,923	379	3,709	377,234
June . . .	107,328	6,755	99,974	39,694	24,473	7,163	4,051	1,417	24,289	45,394	2,757	533	2,605	365,085
July . . .	130,241	6,370	79,123	49,191	28,204	9,085	5,129	1,535	25,695	51,650	2,416	639	3,249	385,539
August . . .	122,583	6,337	85,625	39,669	31,499	10,450	5,123	1,496	26,974	55,633	2,739	491	3,144	393,161
September . . .	122,815	6,377	95,669	66,351	35,581	9,825	4,511	1,595	24,800	51,245	4,096	440	3,172	427,487
October . . .	174,281	6,937	114,528	129,179	35,100	9,258	4,413	1,617	25,885	59,923	6,623	416	3,264	562,126
November . . .	167,749	6,993	114,210	125,410	24,910	5,954	4,615	2,024	26,625	47,328	7,323	373	3,991	536,425
December . . .	184,971	6,579	102,328	87,319	17,641	4,039	4,487	2,554	29,180	49,060	6,108	498	3,524	488,488
Total . . .	1,703,804	77,557	1,106,930	658,895	272,683	84,017	49,888	19,875	288,511	543,319	44,296	4,840	38,920	4,919,591
II.—Provincial Death-Ratios:—														
Ratio per 1,000 of population 1900.	22'97	14'70	23'58	33'37	28'79	29'45	11'18	8'10	8'74	23'87	81'56	27'97	8'04	22'32
Ratio per 1,000 of population 1899.	22'61	18'04	26'55	18'57	19'17	17'50	11'47	7'91	7'32	22'14	25'42	23'10	7'47	18'09
Difference . . .	+1'36	-3'34	-2'97	+14'80	+12'53	+11'95	-1'29	+1'19	+1'42	+1'73	+5'14	+4'87	+1'57	+4'23
Mean ratio per 1,000 during 1895-99.	22'79	20'13	25'89	19'54	25'28	19'38	11'58	*	8'93	18'96	19'52	27'13	8'82	20'02
Difference . . .	+1'18	-5'43	-2'31	+15'83	+3'42	+10'07	-1'20	*	+1'71	+4'91	+6'04	+4'84	-1'78	+1'30
III.—District mortality:—														
Number of districts . . .	45	8	48	51	20	6	17	12	21	23	17	5	8	261
Highest district ratio . . .	49'53	28'29	38'15	72'29	79'95	49'71	21'75	12'09	30'20	237'71	223'63	35'17	13'43	213'69
Increase or decrease in that district . . .	+2'99	-2'15	+2'74	+51'03	+18'19	+22'37	+4'31	+2'01	+12'79	+137'08	+130'01	+9'41	+4'79	+159'61
Name of that district . . .	Dinaipur	Goalpara	Bolanshahr.	Hissar	Nimar	Wun	Akyab	Melktila	Nilgris	Panchmahals.	Goella	Mercara	Kadar	Goella.
Lowest district ratio . . .	8'94	9'99	12'49	7'09	15'19	21'28	5'76	3'12	3'27	4'05	48'79	20'57	5'58	3'12
Percentage of districts above rural mortality . . .	47	50	44	26	40	33	47	67	48	30	59	60	50	49
Percentage of districts with increased mortality . . .	69	...	15	97	95	100	24	59	90	56	100	100	75	66
Number of districts without mortality . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Provincial rural mortality . . .	24'17	14'66	23'14	33'84	29'42	29'26	11'63	8'04	8'87	29'63	86'47	25'72	8'16	22'41
Provincial percentage of districts above the India rural mortality . . .	62	58	52	71	60	83	...	...	5	39	100	80	...	...
IV.—Urban mortality:—														
Number of towns . . .	155	19	99	150	73	38	24	13	24	63	6	5	21	779
Highest town ratio . . .	65'91	36'47	55'72	124'30	54'20	79'08	23'88	12'53	21'46	291'28	137'18	32'10	29'01	291'38
Increase or decrease in that town . . .	+49'59	-5'59	+14'52	+116'72	+33'29	+33'88	+11'71	-5'59	+7'23	+265'25	+76'33	+1'24	-19'98	+255'25
Name of that town . . .	Barh	Golaghat	Ghazibad.	Zira ...	Khandwa	Veetmahl	Pegu ...	Pymanna	Hospet	Dohad...	Kekri ...	Kodlipet	Hassan	Dohad.
Lowest town ratio . . .	5'26	5'24	9'42	5'43	5'93	1'32	2'10	1'90	0'31	0'35	37'69	14'84	1'95	0'35
Percentage of towns above urban mortality . . .	54	37	38	20	47	30	41	28	22	22	50	80	48	42
Percentage of towns with increased mortality . . .	55	26	52	91	86	89	59	21	66	86	100	100	5	69
Number of towns without mortality . . .	...	...	...	...	...	...	...	...	2	...	...	...	...	2
Provincial urban mortality . . .	39'99	16'94	29'51	38'89	21'03	39'75	8'31	8'59	7'16	23'40	65'03	29'37	6'18	21'16
Provincial percentage of towns above the India urban mortality . . .	46	21	73	55	45	74	3	...	1	22	100	60	10	...

(a) Excluding Zamindari.
* Not available.

TABLE III.—Dysentery and Diarrhœa mortality.

PROVINCES, MONTHS, DISTRICTS, TOWNS.	Bengal.	Assam.	North-Western Provinces and Oudh.	Punjab.	Central Provinces (a)	Bihar.	Lower Burma.	Upper Burma.	Madras Presidency.	Bombay Presidency.	Ajmer-Merwara.	Coorg.	Mysore.	Registration India.
I.—Provincial Deaths:—														
January	4,314	1,301	1,810	1,109	1,380	2,812	565	57	2,285	20,546	389	8	534	27,090
February	3,670	857	1,457	744	1,391	2,094	495	40	2,194	12,911	460	5	407	27,425
March	4,687	946	1,802	952	2,023	3,654	448	53	2,459	18,726	695	4	462	26,911
April	5,208	1,153	2,368	1,451	2,596	3,603	586	35	2,447	21,212	878	7	492	42,226
May	4,770	1,348	2,246	1,698	2,670	4,144	679	89	2,250	24,301	1,079	20	447	47,341
June	4,088	1,478	2,331	1,441	3,047	5,157	797	166	2,739	19,961	745	23	400	44,737
July	5,667	1,306	2,563	1,514	6,832	9,301	1,277	164	4,013	20,251	818	25	622	64,443
August	5,649	1,441	3,129	2,148	8,363	11,413	1,193	177	4,291	31,439	1,028	27	723	71,511
September	5,383	1,222	2,268	3,283	8,312	9,794	823	118	3,692	22,463	1,014	28	640	66,862
October	6,790	1,370	3,166	4,814	5,486	5,686	477	84	3,211	12,006	724	14	665	45,733
November	6,653	1,258	2,672	4,053	3,152	3,104	435	80	2,197	7,733	444	24	504	33,409
December	7,683	1,226	2,520	2,606	1,800	1,898	461	81	2,589	5,994	344	11	452	16,066
Total	64,664	14,996	30,652	25,913	40,062	62,860	8,217	1,104	38,858	218,242	8,621	206	6,258	530,654
II.—Provincial Ratios:—														
Ratio per 1,000 of population, 1900.	0'91	2'84	0'65	1'26	5'16	21'39	1'84	0'45	1'18	11'59	15'90	1'19	1'09	2'41
Ratio per 1,000 of population, 1899.	0'58	2'74	0'53	0'65	1'25	7'10	1'81	0'75	0'93	3'97	2'14	0'64	1'41	1'14
Difference	+ '33	+ '10	+ '07	+ '61	+ 3'91	+ 15'29	+ '03	— '30	+ '25	+ 7'62	+ 13'76	+ '55	— '32	+ 1'27
Mean ratio per 1,000 during 1895-99.	0'64	3'13	0'82	0'73	3'26	7'15	1'84	*	0'90	3'07	1'12	1'76	1'28	1'24
Difference	+ '27	— '29	— '17	+ '53	+ 1'90	+ 15'24	'00	*	+ '28	+ 8'52	+ 14'78	— '59	+ '01	+ 1'17
III.—District mortality:—														
Number of districts	45	8	48	31	20	6	17	12	21	23	17	5	8	261
Highest district ratio	6'23	6'09	7'68	3'98	16'33	31'53	3'82	1'64	3'21	50'22	51'80	0'61	2'71	51'80
Increase or decrease in that district.	+ 2'98	— 1'46	— 1'21	+ 2'51	+ 11'63	+ 25'22	— 1'77	— '83	+ '29	+ 30'09	+ 47'18	+ 0'45	— '33	+ 47'18
Name of that district	Darjeeling	Lakhimpur.	Garhwal	Simla	Sambalpur.	Basim	Thabon	Meiktila	Chingleput.	Panchmahals.	Dewair	Nanjara-patna	Shimoga	Dewair.
Lowest district ratio	0'03	0'35	0'01	0'08	0'88	8'87	0'50	0'09	0'18	0'04	0'56	0'30	0'55	0'01
Percentage of districts above rural mortality.	24	59	31	35	35	67	47	42	38	39	29	40	38	39
Percentage of districts with increased mortality.	87	62	40	84	100	100	41	25	62	91	100	60	75	71
Number of districts without mortality.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Provincial rural mortality	'75	2'80	0'52	0'94	4'95	22'25	1'65	0'46	0'92	10'86	9'19	0'50	1'16	2'09
Provincial percentage of districts above the India rural mortality.	13	62	8	16	70	100	29	...	5	74	76	...	13	...
IV.—Urban mortality:—														
Number of towns	155	19	99	150	73	38	34	13	94	63	6	5	21	770
Highest town ratio	20'32	13'38	11'79	21'99	49'52	123'44	7'65	1'97	10'66	197'66	126'90	18'88	6'94	297'66
Increase or decrease in that town.	+ 7'95	— 10'34	+ 11'18	+ 17'91	+ 38'89	+ 106'92	+ 4'80	— 6'08	+ 3'25	+ 295'47	+ 126'76	+ 12'36	— 1'74	+ 295'47
Name of that town	Garulia	North Lakhimpur.	Balika	Hansi	Arvi	Pusad	Kyaukpyo	Yamethin	Tuticorin	Dohad	Kekri	Virajandrapet.	Davangere	Dohad.
Lowest town ratio	0'08	1'53	0'05	0'17	0'25	2'06	0'17	0'10	0'05	0'24	1'99	0'58	0'09	0'05
Percentage of towns above urban mortality.	21	47	32	29	34	33	29	46	28	25	33	20	14	23
Percentage of towns with increased mortality.	53	42	48	75	93	97	55	8	61	78	100	80	5	65
Number of town without mortality.	8	...	8	2	1	...	1	3	8	2	...	1	2	37
Provincial urban mortality	4'00	5'14	2'42	4'16	7'39	23'38	3'09	0'36	4'20	16'88	38'48	8'19	3'24	6'34
Provincial percentage of towns above the India urban mortality.	7	32	9	19	45	82	3	...	15	62	83	20	5	...

(a) Excluding Zamindaries.

* Information not available.

TABLE IV.—Plague deaths.

Province or State.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	
													1900.	1899.
Bengal	2,045	5,313	12,050	6,245	1,432	522	330	344	293	793	2,254	5,277	38,412	2,254
Assam . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North-Western Provinces and Oudh.	16	23	72	16	...	...	...	...	1	...	...	1	135	7
Punjab	44	77	148	125	77	4	...	...	...	...	49	48	572	255
Punjab,—Native States, (Patiala.)	...	...	18	1	...	...	...	...	...	...	...	...	19	...
Central Provinces	205	211	117	41	21	...	1	...	1	2	...	...	500	584
Berar	1	...	...	...	...	...	...	...	...	...	...	1	2	2
Burma	1	...	1	...	...	1	...	...	...	...	...	...	3	2
Madras Presidency	250	155	82	11	11	9	3	22	21	29	29	32	664	1,658
Bombay	2,693	2,559	4,631	4,491	1,877	521	352	824	2,651	5,745	2,544	1,606	33,156	56,596
Bombay Native States	554	245	85	1,581	484	46	7	65	294	374	324	243	5,172	19,427
Baluchistan . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	2	...
Ajmer-Merwara	1	1	...	...	...	...	...	...	...	...	...	...	2	1
Rajputana	3	4	1	2	...	...	...	...	...	...	...	...	10	23
Central India . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Coorg . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bysace	592	337	280	65	29	30	124	822	2,146	3,462	2,382	2,205	12,375	20,810
Hyderabad State	280	202	129	31	33	4	8	4	2	10	30	21	652	6,278
TOTAL	7,689	10,716	19,220	12,611	3,264	1,127	835	2,072	6,411	10,025	8,621	9,434	92,807	120,009
Calcutta City	262	799	3,226	1,935	684	266	208	251	124	85	22	95	8,278	2,681
Bombay	1,718	2,491	3,125	2,267	1,141	421	168	270	327	380	283	464	12,285	15,874
Madras . . . . .	...	...	...	...	...	...	...	...	...	3	1	...	4	...

* The dates of the deaths are not given.

STATEMENT NO. I.—Total Primary and Revaccinations, successful cases among the children, cost of the Special Vaccination Department, etc., during the official year 1900-01.

PROVINCE.	NUMBER OF PERSONS VACCINATED BY THE SPECIAL AND DISPENSARY STAFFS COMBINED.		PERCENTAGE OF SUCCESSFUL CASES TO TOTAL OPERATIONS.		NUMBER OF CHILDREN SUCCESSFULLY VACCINATED BY THE SPECIAL AND DISPENSARY STAFFS COMBINED.		Average number of operations performed by each vaccinator of the Special Staff.	Total cost of the Special Department.	Average cost of each successful case vaccinated by the Special Department.
	Primary.	Revaccinations.	Primary.	Revaccinations.	Under one year.	1 to 6 years.			
Bengal	2,227,942	118,369	97·8	59·2	589,376	1,404,838	951	1,88,115	0 1 4
Assam	251,219	20,247	96·0	80·0	53,146	131,457	1,005	22,833	0 1 8
North-Western Provinces and Oudh	1,486,349	63,660	95·2	82·3	831,483	510,483	1,708	1,37,479	0 1 6
Punjab	627,754	154,742	94·4	63·0	462,392	118,918	2,590	1,01,539	0 2 4
Central Provinces	385,493	69,904	96·8	83·8	218,824	115,483	1,563	49,417	0 1 10½
Berar	74,707	33,081	96·6	20·9	54,551	14,180	2,449	18,617	0 3 9
Madras	1,181,375	76,508	89·2	69·7	350,763	539,188	1,473	2,60,277	0 3 10
Coorg	10,070	1,979	93·2	74·7	847	4,756	1,264	2,836	0 4 4
Bombay	587,146	73,855	90·8	56·9	405,823	112,653	1,548	2,91,188	0 8 2
Burma	392,305	27,606	91·2	49·9	109,009	174,863	2,160	78,854	0 3 5
Ajmer-Merwara	10,660	21	99·2	61·9	7,286	2,594	763	2,316	0 3 6
TOTAL	7,235,020	639,372	94·5	64·4	3,083,500	3,129,413	1,377	11,53,462	0 2 7

STATEMENT NO. II.—Vaccination operations performed by the Special and Dispensary Establishments separately, deaths from small-pox, etc., during the official year 1900-01.

Province.	Population.	NUMBER OF PERSONS VACCINATED (PRIMARY AND REVACCINATIONS COMBINED).			Ratio of successful vaccinations per 1,000 of population.	Percentage of annual estimated births at 40 per 1,000 of population successfully vaccinated.	DEATHS FROM SMALL-POX.*	
		By Special Department.	By Dispensary Staff.	Total.			Number.	Ratio per 1,000 of population.
Bengal	71,050,302	2,201,891	144,420	2,346,311	31·6	20·7	20,620	0·29
Assam	6,122,201	253,562	17,904	271,466	43·0	21·7	975	0·18
North-Western Provinces and Oudh	47,146,033	1,549,233	176	1,549,409	31·1	44·1	1,410	0·03
Punjab	20,750,040	782,045	451	782,496	33·3	55·7	10,425	0·51
Central Provinces	12,944,805	437,596	17,801	455,397	33·4	42·3	8,021	0·76
Berar	2,897,040	107,788	.....	107,788	27·3	47·1	830	0·3
Madras	35,651,577	1,245,719	12,164	1,257,883	31·0	24·6	27,692	0·8
Coorg	173,055	11,380	669	12,049	62·8	12·2	314	1·81
Bombay	22,197,220	658,686	2,315	661,001	25·9	45·7	9,885	0·52
Burma	8,146,855	410,461	9,450	419,911	45·6	33·5	5,803	0·84
Ajmer-Merwara	542,358	10,681	.....	10,681	19·5	33·6	2,610	4·81
TOTAL	227,621,486	7,669,042	205,350	7,874,392	31·8	33·9	88,585	0·41

* For the calendar year 1900.

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 Troops in India, during the official year ending 31st March 1901.

	EUROPEAN ARMY.										NATIVE ARMY.																	
	Officers.		Officers' wives.		Officers' children.		Warrant and Non-Commissioned Officers and Men.		Women.		Children.		Total.		European Officers.		European Officers' Wives.		European Officers' Children.		Native Commissioned, Non-Commissioned Officers and Men.		Women.		Children.		Total.	
	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.	Primary.	Successful.
Bengal	6	6	..	..	..	..	2	2	238	233	396	241	..	1	1	15	12	1,591	1,120	132	197	1,195	1,084	2,934	2,333	
Punjab	1	1	3	3	..	..	..	..	236	198	240	202	1	..	..	5	5	2,237	1,842	59	58	1,031	925	3,333	2,831	
Madras	3	3	20	13	..	..	..	..	146	100	169	116	..	..	..	9	8	1,122	652	32	24	1,108	896	2,271	1,580	
Bombay	3	3	1	1	..	..	..	..	197	142	201	146	..	..	..	4	4	1,051	675	61	59	828	720	1,944	1,438	
Hyderabad Contingent	1	1	..	..	..	536	396	..	..	662	553	1,199	950	
INDIA	13	13	24	17	2	2	2	2	877	673	916	705	1	2	33	29	6,537	4,694	284	248	4,824	4,178	11,681	9,152		

ANNUAL RETURNS

OF THE

EUROPEAN ARMY OF INDIA

OF THE

NATIVE ARMY AND OF THE JAIL
POPULATION

FOR THE YEAR

1900.

COMPILED AND SYSTEMATICALLY ARRANGED FROM THE ORIGINAL DOCUMENTS

BY

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STATISTICAL OFFICER TO THE GOVERNMENT OF INDIA IN THE SANITARY AND MEDICAL DEPARTMENTS.

ANNALS OF THE

EUROPEAN ARMY OF THE

ROYAL ARMY OF THE

ROYAL ARMY OF THE

ROYAL ARMY OF THE

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* Omitted for the present by order of Government.
 † Omitted because there were no cases.

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NOTE.—Owing to the system of weekly returns at present in force for the army, the months mentioned in Tables X, XI, XVIIIc, XVIIIId, XX, XXI, XXIII, XXIV, XXIX, and XXXI—XXXVIII for troops are not calendar months, but 4-5 week periods.

For 1900 the months are divided as follows:—

January—from 1st January to 2nd February.

February—from 3rd February to 2nd March.

March—from 3rd March to 30th March.

April—from 31st March to 27th April.

May—from 28th April to 1st June.

June—from 2nd June to 29th June.

July—from 30th June to 3rd August.

August—from 4th August to 31st August.

September—from 1st September to 28th September.

October—from 29th September to 2nd November.

November—from 3rd November to 30th November.

December—from 1st December to 31st December.

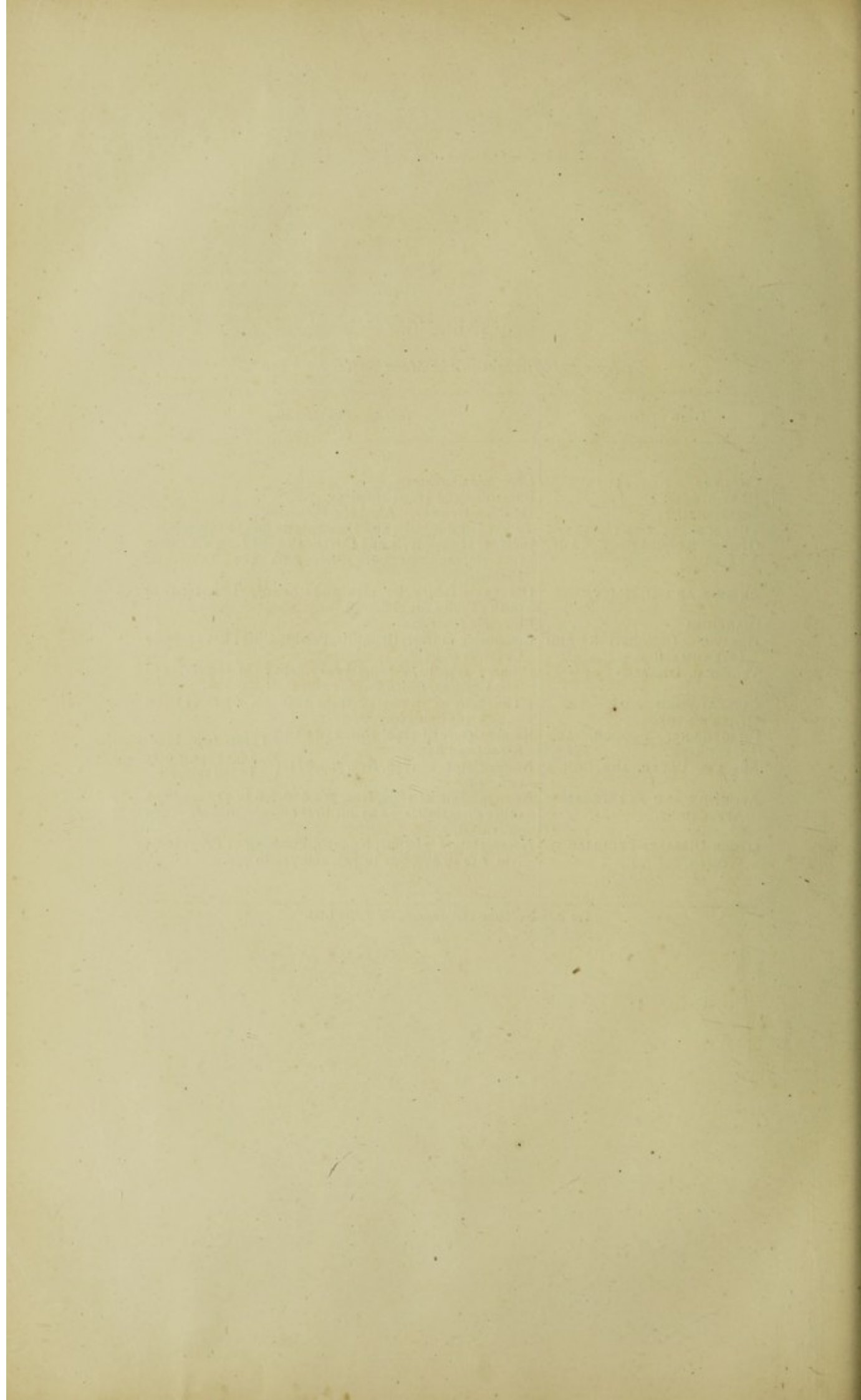
In the jail tables, on the other hand, the months mentioned are calendar months, the returns being monthly returns.

TABLE G.

*Grouping of Diseases in the Main Tables for 1900.**

HEAD OF DISEASE.	Includes or includes also
CHOLERA	Choleraic diarrhœa.
HEAT-STROKE	Sunstroke and Heat-Apoplexy.
ALCOHOLISM	Delirium tremens. Alcoholic Poisoning.
TUBERCLE OF THE LUNGS	Tubercular Phthisis, and Hæmoptysis due to tubercle.
OTHER RESPIRATORY DISEASES.	Includes Hæmoptysis and Cirrhosis of the lung not due to tubercle, and excludes Pneumonia and Tubercular Phthisis.
ANÆMIA AND DEBILITY	Old age (Tables for men and women). Immaturity at birth (Tables for children).
DIARRHŒA	Epidemic Diarrhœa.
HEPATIC CONGESTION AND INFLAMMATION.	Congestion of liver, Hepatitis, Perihepatitis; but excludes Cirrhosis of liver.
VENEREAL DISEASES	Primary syphilis, Secondary syphilis; Gonorrhœa, and Soft Chancre, which include also their sequelæ.
GUINEA-WORM AND	} The entozoa numbered from 1 to 56, 67 to 81: also
OTHER ENTOZOA . . . . .		Nos. 105 and 106.
PHAGEDÆNA, SLOUGH, AND GANGRENE.	Nomenclature of 1896, Nos. 25 <i>a</i> and } These two head-
ABSCESS, ULCER, AND BOIL	<i>b</i> , 800, and 847. } ings appear only
ABORTION AND PUERPERAL AFFECTIONS.	Nomenclature of 1896, Nos. 799, 843, } in jail tables.
OTHER DISEASES PECULIAR TO WOMEN.	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.



I.—EUROPEAN TROOPS, 1900.
A. MEN.

TABLE D.

STATIONS by COMMANDS.

STATIONS.	Height above sea level 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. †
BENGAL :—			PUNJAB :—contd.			MADRAS :—contd.		
Fort William (Calcutta)	17	S. G.	Ferozepore	645	S. G.	Secunderabad	1,732	S. G.
Fort Fulta	18	"	Amritsar	736	"	Belgam	2,473	"
Fort Chingrikhal . . . . .	...	...	Meean Meer	706	"	Cannanore	47	"
Dum-Dum . . . . .	...	...	Fort Lahore	706	"	Calicut	27	M. D.
Barrackpore	24	S. G.	Sialkot	829	"	Mallapuram	500	M. O.
Dinapore . . . . .	...	...	Rawalpindi	1,707	"	Bellary	1,483	S. G.
Benares	256	S. G.	Campbellpur	1,200	M. O.	Bangalore	3,021	"
Allahabad	298	"	Attock	891	S. G.	Pallavaram	74	"
Fort Allahabad	298	"	Nowshera	1,100	M. O.	St. Thomas' Mount	250	"
Fyzabad	336	"	Peshawar	1,165	S. G.	Madras	15	"
Sitapur	449	"	Mooltan	402	"	‡ Ramandrug	3,150	"
Lucknow	400	"	‡ Solon	5,166	"	‡ Wellington	6,160	"
Cawnpore	417	"	‡ Dagshai	5,982	"	Poonamallee Depôt	50	M. O.
Fatehgarh	444	I. B.	‡ Subathu	4,124	"			
Shahjahanpur	597	S. G.	‡ Jutogh	6,371	"	BOMBAY :—		
Bareilly	560	"	‡ Khyragully	8,746	"	Hyderabad	134	I. B.
Roorkee	884	"	‡ Baragully	6,000	M. O.	Kurrachee	28	S. G.
Meerut	739	"	‡ Kuldunnah	7,049	S. G.	Deesa	468	"
Delhi	715	"	‡ Kalabagh	7,036	I. B.	Ahmedabad	170	"
Muttra	576	"	‡ Camp Gharial	5,112	S. G.	Neemuch	1,613	"
Agra	554	"	‡ " Thobba	7,133	I. B.	Nasirabad	1,461	"
Jhansi	860	"	‡ " Upper Topa	7,000	M. O.	Indore	1,806	"
Nowgong	770	I. B.	‡ " Lower Topa	7,320	I. B.	Mhow	1,903	"
Saugor	1,753	S. G.	‡ Khanspur	7,500	M. O.	Kamptee	941	"
Jubbulpore	1,306	"	‡ Cherat	4,520	S. G.	Sitabaldi	1,236	"
‡ Rasikhet	5,983	"	Kasauli Convalescent Depôt	5,071	"	Satara	2,183	"
‡ Chaubattia	6,042	"	Dalhousie " "	6,732	"	Poona	1,999	"
‡ Chakrata	6,885	"	Murree " "	7,098	"	Kirkee	1,837	"
‡ Lebong	6,000	I. B.				Ahmednagar	2,125	"
Darjeeling Convalescent Depôt.	7,168	S. G.	MADRAS :—			Colaba (Bombay)	20	"
Naini Tal	6,400	"	Port Blair	85	S. G.	Quetta	5,511	"
Landour	7,362	"	Rangoon	14	"	Taragarh Sanitarium	2,855	"
Pachmarhi Sanitarium	3,481	"	Thayetmyo	145	"	Mount Abu "	3,960	"
			Meiktila	298	"	Purandhur "	4,564	"
PUNJAB :—			Fort Dufferin (Mandalay)	249	"	Khandalla "	2,000	M. O.
Umballa	902	S. G.	Shwebo	600	M. O.	Deolali Depôt	1,829	S. G.
Jullunder	900	"	Bhamo	351	S. G.	Adeo	26	"

* 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 Quarter-Master-General's Department; 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.

	RATIOS PER 1,000 OF THE AVERAGE STRENGTH.				
	Bengal Command.	Punjab Command.	Madras Command.	Bombay Command.	India.*
I.—STRENGTH	18,956	16,362	9,984	15,051	60,553
II.—† CONSTANTLY-SICK-RATE OF EACH MONTH—					
January	84.6	63.1	89.0	62.5	74.5
February	80.1	56.4	80.5	64.7	69.9
March	65.4	49.8	71.6	67.1	62.5
April	66.6	50.9	64.0	65.3	61.5
May	65.1	62.0	64.6	63.4	63.7
June	65.4	62.7	75.1	64.0	66.1
July	65.7	67.5	80.7	69.7	69.7
August	66.5	66.5	86.8	75.9	71.6
September	65.5	70.8	92.5	90.2	78.7
October	67.8	76.9	90.1	95.4	81.9
November	70.9	82.0	90.5	91.9	83.3
December	70.9	72.0	89.3	89.0	78.4
/ OF THE YEAR	69.9	64.9	82.0	74.7	71.7
III.—ADMISSION-RATE OF THE YEAR—					
Influenza	8.4	1.5	4.5	.5	3.9
Cholera	1.1	1.4	2.5	2.5	1.8
Small-pox . . . . .	.2	.2	.5	1.6	.6
Enteric Fever	12.8	15.5	11.7	23.5	16.0
Intermittent Fever	269.0	336.2	321.0	319.4	308.5
Remittent Fever	16.9	13.2	10.5	8.1	12.7
Simple Continued Fever	33.9	10.6	22.9	28.6	24.4
Tubercle of the lungs	3.3	2.7	2.8	4.7	3.4
Pneumonia	3.7	5.0	1.8	3.7	3.7
Other Respiratory Diseases	17.9	21.9	23.7	23.4	21.3
Dysentery	25.7	17.8	32.3	30.4	25.8
Diarrhœa	17.5	17.4	3.2	30.7	18.4
Hepatic Abscess	2.6	1.7	3.1	3.1	2.6
" Congestion and Inflammation	16.2	14.0	24.5	15.0	16.7
Venereal Diseases	299.9	235.8	354.4	327.0	298.1
ALL CAUSES	1,074.6	1,085.1	1,268.1	1,210.8	1,143.2
V.—DEATH-RATE OF THE YEAR—					
Cholera . . . . .	.95	1.15	2.10	1.99	1.45
Small-pox . . . . .	...	...	...	.20	.65
Enteric Fever	3.64	4.35	4.71	6.71	4.77
Intermittent Fever . . . . .	.37	.97	1.10	.40	.66
Remittent Fever . . . . .	.16	.24	.20	.07	.17
Simple Continued Fever . . . . .	.05	...	...	.07	.03
Heat-stroke . . . . .	.74	.78	.70	.40	.66
Circulatory Diseases . . . . .	.42	.30	1.20	.53	.54
Tubercle of the lungs . . . . .	.74	.54	.30	.60	.58
Pneumonia . . . . .	.26	.72	.30	.27	.40
Other Respiratory Diseases . . . . .	.05	.06	.20	.13	.10
Dysentery	1.00	.60	1.00	.86	.86
Diarrhœa . . . . .	.04	.66	...	.07	.05
Hepatic Abscess	1.95	.97	1.50	1.79	1.57
ALL CAUSES	13.49	12.62	16.53	17.08	14.62
VI.—PERCENTAGE IN 100 ADMISSIONS—					
Influenza . . . . .	.78	.14	.36	.04	.34
Cholera . . . . .	.10	.13	.20	.21	.15
Small-pox . . . . .	.02	.02	.04	.13	.05
Enteric Fever	1.19	1.42	.92	1.94	1.40
Intermittent Fever	25.03	30.98	25.31	26.38	26.98
Remittent Fever	1.58	1.21	.83	.67	1.11
Simple Continued Fever	3.16	.98	1.81	2.37	2.14
Tubercle of the lungs . . . . .	.30	.25	.22	.38	.30
Pneumonia . . . . .	.35	.46	.14	.31	.33
Other Respiratory Diseases	1.66	2.01	1.87	1.93	1.86
Dysentery	2.39	1.64	2.54	2.51	2.25
Diarrhœa	1.62	1.60	.25	2.54	1.61
Hepatic Abscess . . . . .	.25	.16	.24	.26	.23
" Congestion and Inflammation	1.51	1.29	1.94	1.24	1.46
Venereal Diseases	27.90	21.74	27.94	27.00	26.07
VII.—PERCENTAGE IN 100 DEATHS—					
Cholera	7.1	9.1	12.7	11.7	9.0
Small-pox . . . . .	...	...	...	1.2	.3
Enteric Fever	27.2	34.4	28.5	30.3	32.7
Intermittent Fever	2.8	7.7	6.7	2.3	4.5
Remittent Fever	1.2	1.9	1.2	.4	1.1
Simple Continued Fever . . . . .	.4	...	...	.4	.2
Heat-stroke	5.5	6.2	4.2	2.3	4.5
Circulatory Diseases	3.1	2.4	7.3	3.1	3.7
Tubercle of the lungs	5.5	4.3	1.8	3.5	4.0
Pneumonia	2.0	5.7	1.8	1.6	2.7
Other Respiratory Diseases . . . . .	.4	.5	1.2	.8	.7
Dysentery	7.5	4.8	6.1	5.1	5.9
Diarrhœa . . . . .	.4	.5	...	.4	.3
Hepatic Abscess	14.6	7.7	9.1	10.5	10.7

* For complete detail of diseases, see Table LIII.

† Worked on the aggregates.

EUROPEAN TROOPS, 1900.

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.

	RATIOS PER 1,000 OF THE AVERAGE STRENGTH.												
	I	II	IV	V	VI	VII	VIII	IX	X	XI	XIIa	XIIb	India.*
	Burma Coast and Bay Islands.	Burma Inland.	Bengal and Orissa.	Gangetic Plain and Chutia Nagpur.	Upper Sub-Himalaya.	N.-W. Frontier, India, and N.-W. Rajputana.	S.-E. Rajputana, Central India, and Gujarat.	Deccan.	Western Coast.	South-ern India.	Hill Stations.	Conva-lescent Depôts, and Sanita-ria.	
I.—STRENGTH	1,047	1,723	2,133	5,748	11,105	4,628	6,003	9,358	1,491	2,069	8,874	3,247	60,533
II.—†CONSTANTLY-SICK-RATE OF EACH MONTH—													
January	85.7	94.8	92.9	90.5	79.2	58.6	76.8	80.1	50.9	90.5	60.0	69.1	74.5
February	89.7	94.8	86.8	74.4	67.0	72.9	77.5	72.3	53.7	78.8	54.9	63.7	69.9
March	66.4	88.3	70.1	66.1	54.7	40.0	76.7	61.1	53.6	79.1	50.7	79.9	62.5
April	51.7	63.6	68.4	65.8	60.3	48.3	83.7	59.2	52.7	65.3	49.6	70.8	61.5
May	65.6	58.9	59.2	66.9	73.7	58.0	81.3	59.0	48.9	59.1	41.5	73.9	63.7
June	84.7	75.0	61.7	71.4	64.9	65.4	77.2	64.4	48.1	60.6	49.5	82.2	66.1
July	88.4	83.9	73.6	66.5	72.2	72.3	79.8	69.1	49.1	69.9	52.6	84.0	69.7
August	100.7	95.7	82.5	57.2	73.0	69.8	82.4	75.9	52.6	66.5	54.5	82.7	71.6
September	101.5	107.9	79.6	67.4	86.5	74.3	103.3	85.7	59.1	72.6	55.1	80.9	78.7
October	75.4	153.0	68.9	68.4	101.8	72.6	117.4	88.3	55.0	71.7	51.8	73.1	81.9
November	70.7	156.9	74.0	65.4	84.5	76.9	110.2	87.2	53.7	77.7	75.1	93.7	83.3
December	64.6	133.3	84.3	80.8	78.0	80.4	111.7	88.2	52.5	61.3	65.4	72.9	78.4
OF THE YEAR	79.1	101.5	75.4	70.2	73.8	65.8	89.3	74.1	53.1	71.5	53.3	78.7	71.7
III.—ADMISSION-RATE OF THE YEAR—													
Influenza	14.3	...	50.6	4.9	.8	...	1.0	3.1	7.4	3.0	1.2	3.4	3.9
Cholera . . . . .	...	...	1.4	1.2	2.8	...	3.5	4.1	7	...	...	...	1.8
Small-pox . . . . .	...	...	...	...	...	...	1.7	1.8	1.3	...	...	...	...
Enteric Fever	8.6	2.3	6.5	19.0	12.8	14.7	25.2	20.5	5.4	5.3	24.1	10.2	16.0
Intermittent Fever	207.3	849.1	403.2	248.4	444.2	372.9	384.5	202.6	124.1	277.4	105.5	255.0	308.5
Remittent Fever . . . . .	...	16.8	95.7	8.0	8.6	21.4	10.0	9.6	3.4	15.5	6.6	6.2	12.7
Simple Continued Fever	18.1	2.3	27.9	65.8	12.3	16.2	18.7	48.1	14.8	22.2	8.5	13.9	24.4
Rheumatic Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Tubercle of the lungs	1.9	1.7	4.2	3.8	3.7	3.9	1.2	2.0	6.0	3.9	1.7	3.1	3.4
Pneumonia	1.0	3.5	6.5	3.1	4.9	8.0	4.0	1.6	1.3	1.0	3.2	4.3	3.7
Other Respiratory Diseases	31.5	26.1	28.3	16.5	23.5	29.0	22.3	16.9	18.8	22.2	14.2	31.1	21.3
Dysentery	43.0	22.1	57.1	20.7	23.1	14.0	34.3	37.0	26.2	19.8	12.2	18.2	25.8
Diarrhoea . . . . .	...	1.7	21.4	12.9	19.5	21.6	38.0	12.7	8.7	4.8	21.5	17.6	18.4
Hepatic { Abscess	8.6	1.7	4.6	3.3	1.5	1.1	2.3	2.0	5.4	3.4	1.9	2.8	2.6
{ Congestion and Inflammation	45.8	28.4	25.1	15.5	14.0	12.1	15.5	13.0	14.8	16.9	11.8	39.7	16.7
Veneral Diseases	429.8	309.9	281.0	287.6	252.9	240.3	443.9	375.0	261.6	392.0	230.9	250.7	298.1
ALL CAUSES	1,273.2	1,692.1	1,355.8	1,057.1	1,243.6	1,172.0	1,396.5	1,160.5	781.4	1,286.1	720.5	1,127.5	1,143.2
IV.—DEATH-RATE OF THE YEAR—													
Cholera . . . . .	...	...	1.39	.87	2.43	.22	2.67	3.53	...	.48	...	.62	1.45
Small-pox . . . . .	...	...	...	...	...	...	.33	.11	...	...	...	...	.05
Enteric Fever	3.82	1.16	4.18	4.00	3.60	6.05	7.83	6.95	4.02	2.90	4.96	2.46	4.77
Intermittent Fever	2.87	4.06	.93	...	1.26	.65	.67	.11	...	.48	...	.92	.66
Remittent Fever . . . . .	...	...	...	.17	...	.65	.33	.11	...	.48	...	.31	.17
Simple Continued Fever . . . . .	...	...	...	...	...	...	.17	.11	...	...	...	...	.03
Heat-stroke . . . . .	.56	.58	.46	.52	1.17	.65	.33	.32	1.34	.97	...	...	.66
Circulatory Diseases . . . . .	...	4.06	...	.52	.63	...	.50	.64	...	.97	.34	.31	.54
Tubercle of the lungs . . . . .	.96	...	.93	.35	.63	.65	.33	.32	2.01	.48	.23	1.54	.58
Pneumonia . . . . .	...	.58	.46	.17	.81	.65	.17	.32	...	...	.34	.31	.40
Other Respiratory Diseases . . . . .	...	...	...	...	...	...	...	.21	.67	...	...	.92	.10
Dysentery	1.91	...	4.18	.70	.90	.22	.67	.96	1.34	.48	.23	1.85	.86
Diarrhoea . . . . .	...	...	...	...	.18	...	...	...	...	...	.11	...	.05
Hepatic Abscess	4.78	1.74	4.18	2.09	1.68	.43	1.67	1.28	4.02	1.45	1.24	2.46	1.57
ALL CAUSES	22.92	15.67	19.97	12.87	15.40	12.53	20.82	16.99	14.76	11.60	8.45	14.78	14.62
V.—PERCENTAGE IN 100 ADMISSIONS—													
Influenza	1.13	...	3.73	.46	.07	...	.07	.27	.94	.30	.17	.30	.34
Cholera . . . . .	...	...	.10	.12	.22	.02	.25	.35	.09	.04	...	.08	.15
Small-pox . . . . .	...	...	...	.02	.02	.02	.12	.10	.17	...	...	.03	.05
Enteric Fever . . . . .	.68	.14	.48	1.79	1.03	1.25	1.80	1.77	.69	.41	3.32	.90	1.40
Intermittent Fever	16.28	50.78	29.74	23.50	35.72	31.80	27.53	17.46	15.88	21.57	14.52	22.62	26.98
Remittent Fever . . . . .	...	1.01	7.06	.76	.69	1.82	.72	.83	.43	1.20	.92	.55	1.11
Simple Continued Fever	1.43	.14	2.06	6.22	.99	1.38	1.34	4.14	1.59	1.73	1.16	1.23	2.14
Rheumatic Fever . . . . .	...	.03	.03	.02	.09	.13	.07	.06	...	.15	.17	.03	.08
Tubercle of the lungs . . . . .	.15	.10	.31	.30	.30	.33	.08	.17	.77	.30	.20	.27	.30
Pneumonia . . . . .	.08	.21	.48	.36	.39	.68	.29	.14	.17	.08	.43	.38	.33
Other Respiratory Diseases	2.48	1.56	2.09	1.56	1.89	2.47	1.60	1.45	2.40	1.73	1.95	2.76	1.86
Dysentery	3.38	1.32	4.21	1.96	1.85	1.20	2.46	3.19	3.35	1.54	1.68	1.61	2.25
Diarrhoea . . . . .	...	.10	1.58	1.22	1.56	1.84	2.72	1.10	1.12	.38	2.06	1.56	1.61
Hepatic { Abscess . . . . .	.68	.10	.34	.31	.12	.09	.17	.17	.69	.27	.26	.25	.23
{ Congestion and Inflammation	3.60	1.70	1.85	1.46	1.12	1.03	1.11	1.12	1.89	1.32	1.63	3.52	1.46
Veneral Diseases	33.76	18.54	20.73	27.21	26.33	20.49	31.79	32.31	33.48	30.48	31.78	22.23	26.07
VI.—PERCENTAGE IN 100 DEATHS—													
Cholera . . . . .	...	...	7.0	6.8	15.8	1.7	12.8	20.8	...	4.2	...	4.2	9.9
Small-pox . . . . .	...	...	...	...	...	...	1.6	.6	...	...	...	...	.3
Enteric Fever	16.7	7.4	20.9	31.1	23.4	48.3	37.6	40.9	27.3	25.0	38.7	16.7	32.7
Intermittent Fever	12.5	25.9	4.7	...	8.2	5.2	3.2	.6	...	4.2	...	6.2	4.5
Remittent Fever . . . . .	...	...	...	1.4	...	5.2	1.6	.6	...	4.2	...	2.1	1.1
Simple Continued Fever . . . . .	...	...	...	...	...	...	.8	.6	...	...	...	...	.2
Heat-stroke	4.2	3.7	2.3	4.1	7.6	5.2	6.4	1.9	9.1	8.3	...	...	4.5
Circulatory Diseases . . . . .	...	25.9	...	4.1	4.1	...	2.4	3.8	...	8.3	4.0	2.1	3.7
Tubercle of the lungs	4.2	...	4.7	2.7	4.1	5.2	1.6	1.9	13.6	4.2	2.7	10.4	4.0
Pneumonia . . . . .	...	3.7	2.3	1.4	5.3	5.2	.8	1.9	...	...	4.0	2.1	2.7
Other Respiratory Diseases . . . . .	...	...	...	...	...	...	...	1.3	4.5	...	...	6.2	.7
Dysentery	8.3	...	20.9	5.4	5.8	1.7	3.2	5.7	9.1	4.2	2.7	12.5	5.9
Diarrhoea . . . . .	...	...	...	...	1.2	...	...	...	...	...	1.3	...	.3
Hepatic Abscess	20.8	11.1	20.9	16.2	7.0	3.4	8.0	7.5	27.3	12.5	14.7	16.7	10.7

* For complete detail of diseases, see Table LIII.

† Worked on the aggregates.

TABLE III.

RATIOS of STATIONS, GROUPS, and COMMANDS.

For actuals, see Table IV.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.													2. DEATH-RATE.											
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancere.	Secondary Syphilis.	Gonorrhoea.	
Port Blair .	141	35'5 7'09	...	...	...	141'8 7'09	...	85'1	...	...	7'1	...	...	14'2	7'1	...	...	...	148'9	716'3 21'28	30'1	...	40'6	21'3	78'0
Rangoon .	906	11'0	...	...	9'9 4'42	217'4 2'21	...	7'7	...	3'3	14'3	2'2 1'10	1'1	34'2	48'6 2'21	...	9'9 5'52	53'0	473'5 1'10	1,359'8 23'18	86'7	45'3	164'5	117'0 1'10	146'8
GROUP I.— BURMA COAST AND BAY IS- LANDS.	1,047	14'3	...	...	8'6	207'3	...	18'1	...	2'9	13'4	1'9	1'0	31'5	43'0	...	8'6	45'8	429'8	1,273'2	† 79'1	39'2	149'0	104'1	137'5
		'96	...	...	3'82	2'87	...	...	...	'96	...	'96	...	1'91	...	...	4'78	...	'96	22'92	...	...	...	'96	...
Thayetmyo	198	...	...	...	5'1 5'05	85'9	...	10'1	...	...	15'2	...	5'1	60'6	5'1	...	5'1	10'1	399'0	964'6 10'10	59'4	156'6	10'1	121'2	111'1
Meiktila .	178	...	...	...	...	775'3 5'62	...	...	...	...	11'2	...	...	...	22'5	16'9	...	16'9	404'4 5'62	1,662'9 11'24	190'6	56'2	134'8	129'2 5'62	174'2
Fort Dufferin	718	...	...	...	2'8 1'39	1420'6 15'3	2'8	2'8	...	4'2 1'39	29'2 6'06	4'2	1'4 1'39	12'5	39'0	...	1'4 1'39	46'0 1'39	363'5 25'07	2,357'9	124'2	132'3	51'5	91'9	87'7
Shwebo .	409	...	...	...	...	347'2 2'44	44'0	...	2'4	2'4	19'6 2'44	...	9'8	36'7	12'2	...	2'4	14'7	158'9	992'7 9'78	65'2	51'3	...	53'8	53'8
Bhamo .	219	...	...	...	4'6	666'7	...	...	...	...	9'1	...	...	41'1	...	...	22'8	187'2	1,347'0 4'57	...	61'6	54'8	22'8	9'1	100'5
GROUP II.— BURMA IN- LAND.	1,723	...	...	...	2'3	849'1	16'8	2'3	...	'6	2'3	20'9	1'7	3'5	26'1	22'1	1'7	28'4	309'9	1,672'1	† 101'5	98'1	39'5	79'5	92'9
		...	...	...	1'16	4'06	...	...	...	'58	4'06	...	'58	...	...	...	1'74	'58	'58	15'67	...	...	...	'58	...
Fort William	1,104	...	'9	...	1'8 '91	265'4 167'6	54'3	...	...	1'8	4'5	7'2 '91	9'1	22'6	26'3	8'2	2'7 1'81	35'4	334'2	1,231'9 9'06	77'4	79'7	47'1	59'8	147'6
„ Fulta	8	125'0	125'0	...	1'2
„ Chingri- khal.	34	147'1	117'6	29'4	382'4	1'2	...	29'4
Dum-Dum .	702	45'6 1'43	1'4 1'43	...	11'4 8'55	525'6	18'5	...	...	1'4 1'43	5'7	8'8	5'7	17'1	62'7	22'8	2'8	18'5	196'6	1,239'3 22'79	63'3	19'9	43'6	28'5	102'6
Barrackpore	306	251'6 3'27	3'3 3'27	...	13'1 6'54	656'9	9'8	...	3'3	...	35'9	...	...	78'4	163'4 13'07	68'6	16'3	42'5	317'0	2,205'9 55'56	105'9	32'7	107'8	49'0	127'5
GROUP IV.— BENGAL AND ORISSA.	2,153	50'6	1'4	...	6'5	403'2	95'7	27'9	'5	1'4	9'3	4'2	6'5	28'3	57'1	21'4	4'0	25'1	281'0	1,355'8	† 75'4	52'0	54'8	46'9	127'3	
		...	1'39	...	4'18	'93	...	...	...	'46	...	'93	'46	...	4'18	...	4'18	...	...	19'97	...	...	...	...	...
B																										
Dinapore .	645	...	1'6	...	12'4 3'10	235'7	3'1	...	...	...	9'3	1'6	4'7	23'3	41'9	12'4	7'8	4'7	265'1	987'6 12'40	66'1	23'3	124'0	35'7	82'2
Benares .	381	...	7'9 5'25	...	23'6 2'62	425'2	...	18'4	...	18'4	2'6	5'2	...	5'2	18'4	21'0	...	2'6	362'2	1,307'1 13'12	68'1	13'1	52'5	42'0	254'6	
Allahabad .	818	...	2'4 2'44	...	20'8 6'11	216'4	8'6 1'22	77'0	...	4'9 2'44	18'3 1'22	8'6 1'22	2'4	12'2	22'0	17'1	1'2	20'8	255'5	931'5 18'34	67'9	17'1	90'5	52'6	95'4	
Fort Allah- abad.	188	...	...	...	45'1	26'6	133'0	...	...	5'3	10'6	5'3	10'6	5'3	16'0	31'9	5'3	42'6	207'4	1,335'1 10'64	69'3	10'6	90'4	47'9	58'5
Fyzabad .	267	...	3'7	...	7'5	202'2	...	...	...	7'5	11'2	...	...	30'0	30'0 3'75	...	...	18'7	329'6	1,048'7 3'75	80'8	30'0	59'9	71'2	168'5
Sitapur .	454	...	...	...	...	107'9	8'8	2'2	...	...	...	...	...	24'2	2'2	2'2	...	8'8	152'0	552'9 2'20	35'4	41'9	17'6	33'0	59'5
Lucknow .	2,040	13'2	...	...	30'9 7'35	238'2	11'8	86'3	'5	'5	14'7	2'3	4'9	12'3	23'0 '98	10'3	4'4	15'2	304'9	1,058'3 '49	76'9	36'8	74'0	38'2	155'9
Cawnpore .	744	1'3	...	1'3	13'4	228'5	4'0	141'1	...	2'7 1'34	9'4	4'0	...	17'5	6'7	17'5	2'7	12'1	325'3	1,259'4 6'72	70'8	76'6	12'1	80'6	155'9	
Fatehgarh .	212	...	...	...	438'7	4'7	4'7	...	...	...	42'5	14'2	4'7	47'2	14'2	14'2	4'7	51'9	353'8	1,419'8 9'43	90'9	99'1	14'2	51'9	188'7
GROUP V.— GANGETIC PLAIN AND CHUTIA NAGPUR.	5,748	4'9	1'2	2	19'0	248'4	8'0	65'8	'2	3'0	12'7	3'8	3'1	16'5	20'7	12'9	3'3	15'5	287'6	1,057'1	† 70'2	37'6	65'8	47'7	136'6	
		...	'87	...	4'06	...	'17	...	...	'52	'52	'35	'17	...	'70	...	2'09	...	'17	12'87	...	...	...	...	'17

* Derived from the aggregates.

† Worked on the aggregates.

TABLE III—continued.

RATIOS of STATIONS, GROUPS, and COMMANDS.

For actuals see Table IV.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.													2. DEATH-RATE.											
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancere.	Secondary Syphilis.	Gonorrhoea.	
A Shahjahanpur.	10	...	...	...	...	...	...	...	...	...	...	100'0	100'0	100'0	...	...	...	500'0	1,700'0	140'0	100'0	...	100'0	300'0	...	
Bareilly	1,122	...	...	...	5'3 8'9	163'1 13'4	8'0	...	9	22'3 8'9	4'5	4'5 8'9	27'6	35'7	18'7	9	22'3	292'3	995'5	69'9	36'5	24'1	76'6	155'1	...	
Roorkee	366	10'9	...	...	297'8	2'7	2'7	...	5'5	2'7	10'9	...	10'9	19'1	10'9	2'7	16'4	204'9	939'9	96'4	16'4	43'7	62'8	82'0	...	
Meerut	1,335	7	2'2 2'25	...	12'7 7'49	407'5 7'5	1'5	30'7	1'5	14'2	16'5	2'2	3'0	22'5	17'2	29'2	1'5	15'7	309'4	1,464'4	92'3	9'0	128'1	47'2	125'1	...
Delhi	313	3'2	19'2 19'17	3'2	28'8 9'58	168'5 3'19	...	...	...	6'4	9'6	...	...	16'0	38'3	16'0	9'6	274'8	2,485'6	95'3	41'5	57'5	70'3	105'4	...	
Umballa	1,471	7	1'4 1'36	...	14'3 4'08	412'6 6'8	4'8	2'0	...	2'7	5'4	5'4 6'8	9'5	23'1	43'5	24'5	4'1	15'6	176'1	1,147'5	61'2	32'0	34'7	37'4	72'1	...
B Jullundur	658	...	...	...	4'6	191'5	...	3'0	...	9'1	13'7	...	...	24'3	7'6	10'6	1'5	18'2	226'4	945'3	55'1	31'9	53'2	51'7	89'7	...
Ferozepore	896	...	...	...	7'8 6'70	148'5 8'93	...	14'5	...	4'5	23'4	1'1	5'6	33'5	41'3	25'7	...	12'3	181'9	2,233'3	112'2	43'5	29'0	36'8	72'5	...
Amritsar	191	...	...	5'2	5'2	507'9	57'6	...	...	5'2	...	...	...	10'5	20'9	20'9	...	5'2	109'9	979'1	35'0	10'5	10'5	...	89'0	...
Meean Meer	830	...	15'7 12'05	1'2	16'9	1048'2	10'8	69'9	2'4	24'1	15'7	8'4	4'8	43'4	16'9	57'8	2'4	24'1	303'6	2,180'7	101'5	73'5	56'6	55'4	118'1	...
Fort Lahore	103	...	68'0 58'25	...	...	767'0	19'4	38'8	...	...	...	...	...	9'7	48'5	48'5	...	9'7	320'4	1,679'6	84'5	87'4	38'8	68'0	126'2	...
Sialkot	660	...	...	...	...	245'5	7'6	...	...	3'0	3'0	1'5	21'2	7'6	9'1	...	10'6	190'9	942'4	58'8	19'7	28'8	74'2	68'2	...	
Rawalpindi	2,729	7	...	...	21'6 4'40	96'4	15'8	7	2'9	7	77 73	3'3 37	7'0	19'8	12'5	3'7	1'1	6'6	277'8	780'1	59'9	43'6	45'1	66'0	123'1	...
Campbellpur	257	...	...	...	11'7 3'89	38'9	...	...	...	...	7'8	3'9	7'8	15'6	31'1	3'9	27'2	365'8	933'9	55'6	42'8	38'9	136'2	147'9	...	
Attock	164	...	...	...	12'2	158'5	...	24'4	...	12'2	6'1	...	...	6'1	6'1	...	...	280'5	774'4	49'5	109'8	12'2	36'6	122'0	...	
GROUP VI.— UPPER SUB-HIMA- LAYA.	11,105	8	2'8	3	12'8	444'2	8'6	12'3	1'1	5'7	11'3	3'7	4'9	23'5	23'1	19'5	1'5	14'0	252'9	1,243'6	73'8	37'2	49'6	57'6	108'4	...
A Nowshera	755	...	...	...	21'2 6'62	291'4	17'2	57'0	2'6	14'6	13'2	4'0	2'6	26'5	14'6	15'9	...	2'6	302'0	1,149'7	71'4	14'6	55'6	51'7	180'1	...
Peshawar	1,491	...	7	7	19'5 10'06	291'1	53'7	17'4	2'7	2'0	8'7	2'7	4'7	12'7	12'1	8'7	7	4'7	238'1	1,057'7	64'9	22'8	53'7	46'3	115'4	...
Mooltan	908	...	...	...	23'1 7'71	481'3	5'5	...	...	12'1	31'9	2'2	6'6	35'2	12'1	39'6	2'2	28'6	256'6	1,422'9	77'5	17'6	45'2	43'0	150'9	...
C Hyderabad.	441	...	...	...	...	417'2	...	...	2'3	2'3	13'6	13'6	6'8	36'2	2'3	49'9	...	29'5	147'4	1,251'7	58'9	18'1	18'1	63'5	47'6	...
Kurrachee	1,034	...	...	...	1'0 97	436'2	1'0	5'8	...	8'7	2'9	18'4	24'2	23'2	16'4	1'9	7'7	225'4	1,100'6	55'7	30'0	31'9	63'8	97'7	...	
GROUP VII.— N.-W. FRONTIER, INDUS VAL- LEY, AND N.-W. RAJ- PUTANA.	4,628	...	2	2	14'7	372'9	21'4	16'2	1'5	5'6	14'5	3'9	8'0	29'0	14'0	21'6	1'1	12'1	240'3	1,172'6	65'8	21'6	44'1	52'1	122'5	...
A Deesa	185	...	...	...	16'2	978'4	5'4	32'4	...	...	21'6	5'4	...	16'2	10'8	16'2	...	...	605'4	1,983'8	100'3	32'4	194'6	64'9	313'5	...
Ahmedabad	203	...	4'9 4'92	...	4'9	246'3	29'6	...	...	4'9	4'9	...	...	69'0	24'6	14'8	...	9'85	551'7	1,206'9	65'1	44'3	206'9	73'0	226'6	...
B Necmuch	297	...	6'7 6'73	6'7	33'7 13'47	663'3	6'7	...	...	...	23'6	...	...	20'2	53'9	84'2	3'4	13'5	676'8	2,043'8	111'2	50'5	218'9	90'9	316'5	...
Nasirabad	781	...	16'2 6'40	1'3	71'7 1'28	681'2	24'3	17'9	...	16'2	10'2	1'3	7'7	42'3	52'3	64'0	1'3	19'2	403'0	1,869'4	90'6	74'3	137'0	56'3	225'4	...
Muttra	77	77'9	...	13'0	13'0	298'7	...	31'9	...	...	51'9	...	...	26'0	39'0	51'9	...	...	402'6	1,412'6	75'2	168'8	26'0	51'9	155'8	...
Agra	1,212	...	8	8	15'7 4'13	197'2	1'7	42'0	...	5'8	13'2	...	4'1	13'2	19'0	3'3	...	6'6	434'8	990'9	85'8	69'3	113'9	40'4	211'2	...

* Derived from the aggregates.

† Worked on the aggregates.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.														2. DEATH-RATE.										
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancere.	Secondary Syphilis.	Gonorrhoea.	
Jhansi	994	...	...	...	17'1	244'5	1'0	4'0	5'0	6'0	6'0	2'0	7'0	15'1	37'2	10'1	1'0	15'1	417'5	1,080'5	87'6	34'2	179'1	38'2	166'0
Nowgong	395	...	...	...	10'1	206'5	5'0	5'0	...	27'6	...	...	...	10'1	10'1	17'6	...	5'0	294'0	942'2	64'6	15'1	158'3	32'7	87'9
Indore	128	...	...	15'6	7'8	359'4	...	101'6	...	...	23'4	...	...	...	31'2	30'1	...	15'6	507'8	1,484'4	80'1	46'9	164'1	109'4	187'5
Mhow	1,727	...	5'2	1'7	20'3	303'2	15'6	9'8	6	6	29'0	17'7	3'5	31'8	35'9	66'6	4'6	27'2	405'3	1,594'7	94'5	33'6	106'0	77'0	188'8	
GROUP VIII.— SOUTH-EAST RAJ- PUTANA, CENTRAL INDIA, AND GUJARAT.	6,003	1'0	3'3	1'7	25'2	384'5	10'0	18'7	1'0	5'7	16'5	1'2	4'0	22'3	34'3	38'0	2'3	15'5	443'9	1,396'5	†	48'1	139'1	58'1	198'6	
		...	2'6	'7	'33	7'8	'67	'33	'17	...	1'33	'50	'33	'17	...	'67	...	1'67	'17	'33	20'82	'33	...
A																										
Saugor	307	3'3	...	...	3'3	394'1	39'1	42'3	3'3	...	9'8	6'5	...	29'3	39'1	9'8	9'8	32'6	377'9	1,335'5	69'7	26'1	94'5	74'0	182'4
Jubbulpore	772	11'7	1'3	...	11'7	500'0	33'7	10'4	1'3	1'3	3'9	2'6	1'3	33'7	35'0	5'2	2'6	24'6	445'6	1,536'3	92'6	19'4	172'3	72'5	181'3	
Kamptee	1,042	...	...	9'6	12'5	266'8	3'8	211'1	...	2'9	1'0	...	1'0	16'3	24'0	19'2	...	5'8	327'3	1,348'4	88'6	29'8	96'0	49'9	151'6
Sitabaldi	69	...	...	...	...	202'9	...	14'5	...	14'5	...	...	...	29'0	...	...	...	...	144'9	666'7	8'0	14'5	...	...	130'4
B																										
Secun- derabad.	2,542	...	9'4	1'2	30'3	133'8	8'3	40'1	4	2'0	9'0	2'4	2'0	14'2	45'2	5'5	2'0	11'4	369'4	1,124'3	68'9	36'2	103'9	55'1	174'3	
		...	7'87	...	9'83	...	...	...	...	7'9	7'9	'39	'39	'39	1'57	...	7'9	...	7'9	25'18	...	...	...	7'9	...
Belgam	1,002	13'0	...	...	9'0	217'6	18'0	7'0	...	17'0	3'0	2'0	20'0	38'9	3'0	1'0	15'0	394'2	1,236'5	80'4	20'0	111'8	108'8	153'7	
		...	...	...	5'99	...	1'00	...	...	1'00	...	...	...	1'00	...	...	...	...	...	10'95	...	...	...	...	...
Satara	175	...	...	...	11'4	154'3	...	...	...	17'1	...	...	...	...	5'7	5'7	...	11'4	554'3	1,131'4	77'8	62'9	114'3	45'7	331'4
		...	...	...	5'71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5'71	...	...	...	...	...
Poona	2,178	2'8	4'1	1'4	19'7	117'1	5	44'5	...	4'6	9	2'3	16'1	34'9	23'9	3'2	14'2	381'5	961'0	68'9	75'8	30'0	67'0	188'7		
		...	4'13	...	7'35	'46	...	...	...	'92	...	...	...	'92	...	2'30	...	...	...	17'45	...	...	...	...
Kirkee	677	...	...	1'5	23'6	276'2	7'4	...	...	3'0	1'5	1'5	5'9	36'9	14'8	1'5	7'4	277'7	1,035'5	58'9	28'1	70'9	36'9	141'8	
		...	...	...	2'95	...	...	...	...	...	...	...	...	1'48	...	1'48	...	...	...	7'39	...	...	...	...
Ahmednagar	594	...	6'7	...	37'0	117'8	5'1	3'4	5'1	1'7	5'1	5'1	...	15'2	43'8	20'2	...	8'4	417'5	1,218'9	82'2	33'7	85'9	101'0	197'0	
		...	5'05	...	8'42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13'47	...	...	...	...	...
GROUP IX.— DECCAN.	9,358	3'1	4'1	1'8	20'5	202'6	9'6	48'1	6	1'2	7'0	2'0	1'6	16'9	37'0	12'7	2'0	13'0	375'0	1,160'5	†	40'8	92'5	66'1	175'5	
		...	3'53	'11	6'05	'11	'11	'11	'11	'32	'64	'32	'32	'21	'96	...	1'28	...	'21	16'99	...	...	...	'21	...
Colaba	1,164	1'7	9	1'7	3'4	148'6	4'3	9	...	1'7	2'6	6'9	1'7	18'9	26'6	11'2	4'3	18'0	268'9	807'6	56'5	49'0	66'2	47'3	166'5	
		...	...	...	2'58	...	...	...	...	'80	...	2'58	...	'80	'80	...	3'44	...	...	...	12'89	...	...	...	...
Dannore	94	...	...	...	...	31'9	...	63'8	...	...	10'6	...	...	42'6	31'9	...	...	...	28'2	776'6	53'9	42'6	21'3	74'5	148'9
		
Calicut	88	...	...	...	34'1	...	...	170'5	...	...	11'4	...	...	11'4	56'8	...	34'1	11'4	284'1	772'7	50'0	...	68'2	68'2	147'7
		...	...	...	22'73	...	...	...	...	...	...	...	...	...	...	...	22'73	...	...	...	45'45	...	...	...	...
Mallapuram	145	62'1	...	...	6'9	62'1	...	...	...	13'8	6'9	6'9	...	6'9	...	...	...	...	172'4	579'3	26'5	13'8	6'9	34'5	117'2
		...	...	...	6'90	...	...	...	...	6'90	...	...	...	6'90	...	...	...	...	...	20'69	...	...	...	...	...
GROUP X.— WESTERN COAST.	1,491	7'4	7	1'3	5'4	124'1	3'4	14'8	...	2'7	4'0	6'0	1'3	18'8	26'2	8'7	5'4	14'8	261'6	781'4	†	42'3	57'7	49'0	112'7	
		...	...	...	4'02	...	...	...	...	1'34	...	2'01	...	'67	1'34	...	4'02	...	...	...	14'76	...	...	...	...
A																										
Bellary	498	...	...	...	4'0	594'4	8'0	2'0	...	2'0	4'0	2'0	...	24'1	30'1	...	2'0	16'1	343'4	1,494'0	80'4	24'1	88'4	82'3	148'6
		...	...	...	2'01	2'01	2'01	...	...	2'01	2'01	2'01	...	...	...	...	2'01	...	...	...	16'06	...	...	...	...
Bangalore	687	11'6	...	...	7'3	167'4	11'6	34'9	4'4	...	11'6	2'9	1'5	5'8	29'1	8'7	2'9	17'5	429'4	1,202'3	90'4	135'4	4'4	132'5	157'2
		...	...	...	1'46	...	...	...	...	...	...	...	...	...	1'46	...	...	...	...	...	5'82	...	...	...	...
Pallavaram	81	...	...	...	...	98'8	...	37'0	...	...	...	...	...	24'7	37'0	...	12'3	12'3	567'9	1,395'1	60'4	111'1	222'2	86'4	148'1
		...	...	...	12'35	...	...	...	...	...	...	...	...	...	...	...	12'35	...	...	...	24'70	...	...	...	...
St. Thomas' Mount.	291	...	...	...	...	185'6	6'9	37'8	3'4	3'4	10'3	17'2	3'4	48'1	6'9	10'3	6'9	37'8	216'5	1,123'7	76'2	41'2	51'5	48'1	73'6
		...	...	...	...	...	...	...	...	3'44	3'44	...	...	...	...	...	...	...	...	...	20'62	...	...	...	...
Madras	512	...	2'0	...	7'8	197'3	35'2	13'7	...	...	3'9	...	...	27'3	2'0	2'0	2'0	5'9	460'9	1,271'5	36'8	43'0	201'2	85'9	130'9
		...	1'95	...	5'86	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7'81	...	...	...	...
GROUP XI.— SOUTHERN INDIA.	2,069	3'9	'5	...	5'3	277'4	15'5	22'2	1'9	1'0	7'2	3'9	1'0	22'2	19'8	4'8	3'4	16'9	392'0	1,260'1	†	71'5	88'4	95'2	136'8	
		...	4'8	...	2'90	'48	'48	...	...	'97	'97	'48	...	...	'48	...	1'45	...	...	...	11'60	...	...	...	...

* Derived from the aggregates.

† Worked on the aggregates.

EUROPEAN TROOPS, 1900.

TABLE III—continued.

RATIOS of STATIONS, GROUPS, and COMMANDS.

For actuals see Table IV.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.														2. DEATH-RATE.									
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhœa.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhœa.
Ranikhet	949	12'6 2'11	13'7	...	41'1	2'1	...	2'1	1'1	1'1	3'2	24'2	81'1	3'2 4'21	16'9	258'2 1'05	669'1 7'38	52'1	106'4	...	73'8 1'05	78'0
Chaubuttia.	281	...	...	...	7'1	99'6	...	...	...	...	...	...	14'2	7'1	21'4	3'6 3'56	24'9	149'5	512'5 3'56	39'6	17'8	46'3	39'1	46'3
Chakrata.	1,126	11'5	25'8	4'4	15'1	4'4	...	4'4	2'7	4'4	9'8	1'8	5'3 1'78	2'7	6'2	213'1	603'9 1'78	46'9	24'0	99'3	28'4	61'3
Lebong	279	...	...	...	43'0	...	10'8	...	...	21'5	10'8	7'2	25'1	7'2	...	3'6	...	218'6	681'0 7'17	35'9	57'3	14'3	107'5	39'4
Solon	141	7'1	...	...	7'1	21'3	14'2	7'1	...	...	...	...	7'1	35'5	...	7'1 7'09	14'2	262'4	680'9 21'28	41'9	7'1	70'9	56'7	127'7
Dagshai	561	...	...	...	10'7 3'57	51'7	12'5	16'0	...	...	...	3'6	19'6	25'0	12'5	3'6 1'78	16'0	151'5	586'5 5'35	43'0	51'7	...	19'6	80'2
Subatha	421	23'8	...	...	35'6 9'50	434'7	11'9	...	...	14'3	4'8	9'5 4'75	52'3	35'6 2'38	7'1	4'8 2'38	28'5	244'7	1,330'7 21'38	72'6	85'5	...	73'6	85'5
Jutogh	235	...	...	...	21'0	54'6	8'4	...	4'2	...	...	...	16'8	8'4	12'6	4'2	33'6	197'5	722'7	43'8	12'6	21'0	71'4	92'4
Khyragully.	71	...	...	...	14'1	...	...	28'2	...	14'1	...	14'1	28'2	...	...	...	42'3	281'7	704'2	51'8	...	...	140'8	140'8
Baragully	45	...	...	...	66'7	...	...	...	...	44'4	...	22'2	...	...	...	...	...	200'0	800'0	39'6	44'4	...	111'1	44'4
Kuldunnah.	455	...	...	...	2'2	19'8	6'6	...	...	8'8	...	4'4	6'6	24'2	...	...	4'4	226'4	461'5	32'1	13'2	81'3	35'2	96'7
Kalabagh	51	...	...	...	58'8	19'6	...	...	...	19'6	...	...	...	...	19'6	...	...	274'5	980'4	42'4	...	78'4	39'2	156'9
Camp Gharial	406	...	...	...	29'6 7'39	91'1	9'9	...	...	4'9	4'9	2'5	...	7'4	12'3	...	7'4	288'2	709'4 7'39	40'3	64'0	44'3	54'2	125'6
Camp Thobba	439	...	...	...	11'4 2'28	168'6	11'4	...	...	9'1	...	2'3	...	...	25'1	2'3	4'6	277'9	902'1 2'28	49'3	102'5	4'6	75'2	95'7
Camp Upper Topa.	175	...	...	...	22'9 5'71	57'1	...	...	...	17'1	...	5'7	5'7	11'4	...	...	28'6	234'3	525'7 11'43	37'0	28'6	40'0	40'0	125'7
Camp Lower Topa.	59	...	...	...	16'9 16'95	169'5	...	...	...	16'9	...	...	...	16'9	...	...	33'9	355'9	806'3 16'95	72'5	67'8	67'8	118'6	101'7
Khanspur	254	...	...	...	11'8 3'94	51'2	23'6	...	...	...	...	...	7'9	3'9	...	...	...	267'7	673'2 3'94	45'8	27'6	63'0	78'7	98'4
Cherat	362	...	...	...	13'8	414'4	8'3	11'0	...	13'8	...	5'5	11'0	49'7	...	2'8	...	151'9	1,190'6	79'2	27'6	16'6	71'8	35'9
Quetta	2,543	...	...	...	50'7 11'40	123'9	6'3	8'4	4'4	4'3	4'4	2'8	20'1	8'3	21'2	8'9	7'9	242'6	727'5 15'73	65'4	60'6	45'6	41'7	94'8
Ramandrug	15	...	...	...	55'6	...	...	...	...	...	...	...	...	...	...	...	...	111'1	555'6	22'8	...	...	111'1	...
GROUP XIIa—HILL STATIONS	8,874	1'2	24'1 4'96	105'5	6'6	8'5	1'2	1'1	5'9 34	1'7 23	3'2 34	14'2	12'2 23	21'5 11	1'9 1'24	11'8	230'9 11	726'5 8'45	† 53'3	53'8	39'9	52'5 11	84'7
Darjeeling	333	...	...	...	3'0	162'2 3'00	...	...	...	3'0	12'0 3'00	3'0	6'0	24'0 3'00	9'0	...	24'0	177'2	621'6 24'02	49'9	36'0	15'0	81'1 3'00	45'0
Naini Tal	138	...	...	...	59'7	...	43'5	...	...	...	...	7'2	7'2	...	...	7'2	7'2	166'7	760'9 7'25	58'1	21'7	...	87'0	58'0
Landour	209	...	...	...	4'8	397'1	...	14'4	...	9'6	4'8	9'6	23'9	4'8	33'3	4'8	23'9	320'6	1,550'2 14'35	96'8	47'8	110'0	95'7	67'0
Kasaoli	381	28'9	...	...	15'7 7'87	572'2	2'6 5'25	2'6	...	52'5	2'6	13'1	94'5	31'5	39'4	2'6	49'9	246'7	2,097'1 31'50	133'8	55'1	2'6	128'6	60'4
Dalbousie	865	...	...	...	17'3 3'47	119'1	...	6'9	...	46'2	1'2 1'16	3'5	15'0	9'2	16'2	3'5	31'2	197'7	753'8 9'25	51'3	45'1	15'0	74'0 1'16	63'6
Murree	96	...	...	...	10'4	10'4	31'2	...	...	10'4	...	...	...	...	...	10'4	...	250'0	604'2 10'42	248'5	20'8	41'7	145'8	41'7
Taragarh	47	...	...	...	85'1	744'7	85'1	63'8	...	...	...	...	21'3	127'7	212'8	42'5	21'3	446'8	2,404'3 106'38	157'0	170'2	170'2	...	106'4
Mount Abu	95	21'1 10'53	...	...	21'1 21'05	336'8	42'1	21'1	...	21'1	...	...	21'1	73'7	42'1	...	31'6	557'9	1,536'8 42'11	72'6	21'1	105'3	157'9	273'7
Pachmarhi	103	...	...	...	76'2	19'0	9'5	...	...	...	...	...	...	9'5	...	57'1	257'1	670'2	...	33'2	28'6	57'1	28'6	142'9

* Derived from the aggregates.

† Worked on the aggregates.

STATIONS, GROUPS, AND COMMANDS.	Average annual strength.	1. ADMISSION-RATE.										2. DEATH-RATE.						3. CONSTANTLY-SICK-RATE.								
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhoea.	
Purandhar .	109	...	9'2	...	...	247'7	9'2	...	...	...	73'4	18'3	...	45'9	18'3	9'2	...	73'4	357'8	1,203'6	68'4	...	9'2	302'8	45'9
Khandalla .	30	...	9'17	...	...	100'0	33'3	...	...	...	200'0	33'3	...	33'3	66'7	33'3	...	...	366'7	1,066'7	86'0	66'7	100'0	100'0	100'0
Wellington .	838	...	...	1'2	3'6	306'7	4'8	27'4	1'2	...	10'7	...	2'4	41'8	15'5	1'2	...	60'9	268'5	1,176'6	75'8	22'7	38'2	120'5	87'1
GROUP XII &— Hill Con- valescent Depôts, and Sanitaria.	3,247	3'4	9'62	3	10'2	255'0	6'2	13'9	3	...	27'4	3'1	4'3	31'1	18'2	17'6	2'8	39'7	250'7	1,127'5	†	37'3	32'6	105'0	75'8	
Troops marching, Bengal.	728	...	...	...	5'5	105'8	1'4	2'7	1'4	...	2'7	1'4	5'5	9'6	24'7	13'7	1'4	6'9	281'6	620'9	5'5	22'0	123'6	39'8	96'2
Troops marching, Punjab.	429	...	...	...	...	107'2	2'3	...	2'3	...	7'0	...	4'7	9'3	9'3	7'0	...	4'7	135'2	438'2	1'2	23'3	28'0	16'3	67'6
Troops marching, Madras.	257	...	...	...	...	101'2	...	7'8	...	3'9	...	...	3'9	42'8	...	...	3'9	151'8	607'0	8'0	31'1	35'0	15'6	70'0	
Troops marching, Bombay.	20	...	...	...	50'0	...	...	...	...	...	...	...	...	50'0	...	...	...	50'0	150'0	1'0	...	...	...	50'0	
Deolali Depôt	406	...	2'5	...	9'9	608'4	2'5	2'5	2'5	...	103'9	88'7	14'8	36'9	56'7	32'0	24'6	27'1	509'9	2,029'6	120'9	39'4	36'9	293'1	140'4	
Poonamallee Depôt.	161	...	...	6'2	...	602'5	6'2	31'1	...	...	111'8	31'1	...	80'7	74'5	6'2	18'6	87'0	409'9	1,937'9	48'5	49'7	12'4	329'2	18'6
EXTRA INDIA Aden .	1,106	...	...	...	5'4	745'0	19'0	41'6	9	4'5	9'0	1'8	...	25'3	42'5	26'2	4'5	18'1	66'0	1,507'2	68'5	7'2	8'1	24'4	26'2
India	60,553	3'9	1'8	6	16'0	308'5	12'7	24'4	9	2'9	12'2	3'4	3'7	21'3	25'8	18'4	2'6	16'7	298'1	1,143'2	†	42'9	66'8	62'5	125'9	
BENGAL	18,936	8'4	1'1	2	12'8	269'0	16'9	33'9	1'0	3'6	10'2	3'3	3'7	17'9	25'7	17'5	2'6	16'2	299'9	1,074'6	†	39'8	80'4	52'1	127'5	
PUNJAB	16,562	1'5	1'4	2	15'5	336'2	13'2	10'6	1'2	3'9	13'2	2'7	5'0	21'9	17'8	17'4	1'7	14'0	235'8	1,085'1	†	39'1	37'5	56'8	102'5	
MADRAS	9,984	4'5	2'5	5	11'7	321'0	10'5	22'9	7	1'7	13'5	2'8	1'8	23'7	32'3	3'2	3'1	24'5	354'4	1,268'1	†	51'2	83'6	87'1	132'4	
BOMBAY	15,051	5	2'5	1'6	23'5	319'4	8'1	28'6	5	1'6	12'6	4'7	3'7	23'4	30'4	30'7	3'1	15'0	327'0	1,210'8	†	45'5	70'6	65'6	145'2	
China Ex- pedition- ary Force.)	550	3'6	45'5	147'3	34'5	5'5	...	7'3	14'5	1'8	...	5'5	85'5	114'5	101'8	3'6	23'6	107'3	1,216'4	111'7	16'4	25'5	23'6	41'8
Lucknow	2,040	4	...	...	5'2	7'0	9	2'5	...	...	1'4	8	7	1'4	2'3	4	6	1'5	32'2	76'9	76'9	4'2	9'7	4'0	14'3
Rawalpindi	2,720	1	...	...	4'7	4'7	8	2	4	2	1'2	7	7	1'1	1'2	1	...	4	21'0	59'9	56'9	4'5	2'5	5'6	8'1
Secunderabad	2,542	2	...	...	1'2	4'9	4	1'8	1	1	1'0	5	2	7	2'4	2	2	7	29'3	68'9	68'9	2'6	9'1	4'6	12'0
Peona	2,178	1	...	...	1	2'8	4'7	2'5	...	...	4	2	3	6	2'5	1'1	3	9	31'7	68'9	68'9	7'6	2'8	8'1	13'2
Quetta	2,543	...	...	...	6'0	4'0	9	1	1	1	6	1	3	1'1	5	7	1	5	33'6	65'4	65'4	10'7	6'0	7'8	9'1

* Derived from the aggregates. † Worked on the aggregates.
‡ 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.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSIONS.													2. DEATHS.													3. CONSTANTLY SICK.												
		Infuenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Veneral Diseases.	All Causes.	Primary Syphilis.	Soft Chancere.	Secondary Syphilis.	Gonorrhoea.	Tenia.	Other Entozoa.														
Fort Blair . . .	141	5	1	...	...	20	...	12	...	1	...	...	...	1	...	...	...	...	21	101	...	7	3	11	...	...												
Rangoon . . .	966	10	...	...	9	197	...	7	...	3	13	1	1	31	44	...	5	48	439	1,238	41	149	106	133	1	3												
GROUP I.—BURMA COAST AND BAY ISLANDS.	1,047*	15	...	...	9	217	...	19	...	3	14	2	1	33	45	...	9	45	450	1,333	41	150	109	144	1	3												
Thayctmyo . . .	198	...	...	...	1	17	...	2	...	3	...	1	12	1	...	1	2	70	191	31	2	24	22	...	...													
Meiktila . . .	178	...	...	...	...	150	...	...	...	2	...	...	...	4	3	...	3	80	296	10	34	23	31	...	...													
Fort Dufferin . . .	718	...	...	...	2	1,020	11	2	...	3	21	3	1	9	28	...	1	33	251	1,693	95	37	60	63	1	...											
Shwebo . . .	409	...	...	...	...	142	18	...	1	1	8	...	4	15	5	...	1	6	65	400	21	...	22	22	4	...										
Bhamo . . .	219	...	...	...	1	140	...	...	...	2	...	...	9	...	...	...	5	41	295	12	5	2	21	1	...				
GROUP II.—BURMA ISLANDS.	1,723*	...	...	...	4	1,463	29	4	1	4	30	3	6	45	30	3	3	40	534	2,831	169	68	137	160	6	...											
Fort William . . .	1,104	...	1	...	2	203	185	60	...	2	5	7	10	25	20	9	3	20	269	1,260	88	52	60	153	1	...														
Fort Falta . . .	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...								
Fort Chingrikhal . . .	34	...	...	...	...	5	4	...	...	...	...	...	...	...	...	...	...	...	1	12	...	1	...	...	...	...										
Dum-Dum . . .	703	32	1	...	5	359	13	...	...	1	4	2	4	12	44	15	2	13	138	870	14	32	20	72	...	...												
Barrackpore . . .	305	77	1	...	4	201	3	...	1	...	11	...	24	50	21	5	13	90	675	10	33	15	39	1	...															
GROUP IV.—BENGAL AND OISSA.	2,153*	109	2	...	14	860	205	60	1	3	20	9	14	61	121	45	10	54	605	2,915	112	118	101	274	2	...														
B. Dinsapore . . .	645	...	1	...	8	452	2	...	...	6	1	2	15	27	8	5	3	171	637	15	80	23	53	...	...													
Becarea . . .	381	...	...	...	9	162	...	7	...	7	1	2	...	2	7	2	...	1	138	468	5	20	16	97	...	1											
Allahabad . . .	818	...	...	...	17	177	7	63	...	4	15	7	2	10	18	14	1	27	209	760	14	74	43	78	3	...											
Fort Allahabad . . .	188	...	...	...	85	5	25	...	...	1	2	1	2	1	3	6	1	8	39	254	2	17	5	11	2	...									
Fyzabad . . .	267	...	...	...	2	54	...	...	...	3	3	...	8	8	...	...	5	88	280	8	10	10	45	1	...							
Sitapur . . .	454	...	...	...	49	4	1	...	...	...	...	...	11	1	1	...	4	69	251	19	8	15	27	...	...													
Lucknow . . .	2,040	27	...	...	63	436	24	170	1	1	20	5	10	25	47	21	9	31	621	2,150	75	151	78	318	6	...												
Cawnpore . . .	744	...	...	...	10	170	3	105	...	8	7	3	...	13	5	13	3	9	241	927	57	9	60	110	2	...											
Fatehgarh . . .	212	...	...	...	93	1	1	...	...	9	3	1	10	3	3	1	11	73	301	21	3	11	40	2	...										
GROUP V.—GANGETIC PLAIN AND CHITRA NAAGER.	5,745*	20	7	1	109	1,428	46	378	1	17	73	22	18	95	119	74	10	86	1,652	6,076	210	378	274	755	16	2														

* Derived from the aggregates.

TABLE IV—continued.

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

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSIONS.										2. DEATHS.					3. CONSTANTLY SICK.									
		Influenza.	Cholera.	Small-pox.	Etiotic Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Rheumatic Fever.	Heart-stroke.	Cerebratory Diseases.	Tubercle of the lung.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Veneral Diseases.	All Causes.	Primary Syphilis.	Soft Chancere.	Secondary Syphilis.	Gonorrhoea.	Taenia.	Other Entozoa.
Deesa A	185	...	...	...	3	181	1	0	...	...	4	1	...	3	...	...	...	112	367	...	6	36	12	...	58	...
Ahmedabad	203	...	...	...	...	...	...	...	...	...	...	...	...	...	14	5	3	...	112	245	9	41	15	46	...	...
Neemuch B	297	...	...	2	10	507	2	...	...	...	7	...	...	6	16	35	1	4	301	607	15	65	27	94	...	...
Nasirabad	284	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	385	1,450	58	107	44	176	5	...
Nutra	77	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31	110	...	...	...	...	...	...
Agra	1,212	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	527	1,801	84	138	49	256	3	...
Jhansi	994	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	415	1,074	34	178	38	165	...	...
Nowgong	398	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	117	375	...	...	...	...	...	...
Indore	118	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	65	199	6	34	14	24	...	...
Mhow	1,727	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	700	2,754	58	183	133	346	8	...
Group VIII—S.-E. RAJPUTANA, CENTRAL INDIA, AND GUJARAT.	5,022*	6	21	10	151	2,308	60	112	6	34	99	7	24	134	206	228	14	93	2,065	8,383	289	835	349	1,891	17	3
Sanger A	207	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	116	410	...	...	...	...	...	...
Jabalpore	772	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	344	1,186	...	...	...	...	...	...
Kamptee	1,041	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	341	1,405	...	...	...	...	...	...
Sitabaldi	69	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	46	...	...	...	...	...	...
Secunderabad B	2,541	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	930	2,858	...	...	...	...	...	...
Belgam	1,002	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	395	1,239	...	...	...	...	...	...
Satara	175	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	97	198	...	...	...	...	...	...
Poona	2,176	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	831	2,693	...	...	...	...	...	...
Kirkee	677	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	201	701	...	...	...	...	...	...
Ahmednagar	504	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	118	388	...	...	...	...	...	...
Group IX.—DECCAN	9,238*	29	36	17	193	1,890	90	450	6	12	63	19	15	158	240	119	19	122	3,509	10,850	381	866	619	1,642	27	...
Colaba	1,164	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	313	940	...	...	...	...	...	...
Cannore	94	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27	73	...	...	...	...	...	...
Calicut	88	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	35	68	...	...	...	...	...	...
Mallapuram	145	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25	84	...	...	...	...	...	...
Group X.—WESTERN COAST.	1,491*	11	1	2	8	185	5	22	...	...	4	6	9	2	39	13	8	22	390	1,165	...	...	...	...	...	...

* Derived from the aggregates.

EUROPEAN TROOPS, 1900.

TABLE IV—continued.

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

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSIONS.										2. DEATHS.										3. CONSTANTLY SICK.									
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Veneral Diseases.	All Causes.	Primary Syphilis.	Soft Chancere.	Secondary Syphilis.	Gonorrhoea.	Tenia.	Other Entozoa.					
Qetta . . .	3,543	...	...	...	230	313	15	2	1	2	11	1	1	51	21	54	3	24	617	1,850	154	115	100	241	1	...		
Ramaedrug . . .	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	10	...	...	...	...	...	...
GROUP XIIa.—HILL STATIONS.	8,974	11	...	...	214	936	59	75	11	1	52	13	25	126	108	191	17	105	2,049	6,447	477	354	466	752	12	...			
Darjeeling . . .	333	...	...	...	1	54	...	...	...	...	1	4	1	2	8	3	...	8	59	207	12	5	27	15	...	...			
Naini Tal . . .	136	...	...	...	7	...	6	...	...	...	...	1	1	...	...	...	1	1	23	105	3	...	12	8	...	...			
Landour . . .	209	...	...	...	1	83	...	3	...	...	2	1	2	5	1	7	1	5	67	324	10	23	20	14	3	...
Katauli . . .	381	11	...	...	6	218	1	1	...	...	30	1	5	35	12	15	1	10	94	799	21	1	49	23	3	...	
Daihoosie . . .	865	...	...	...	15	101	...	6	...	...	40	1	3	13	8	14	3	27	171	652	39	13	64	55	4	...
Murree . . .	96	...	...	...	1	1	2	...	...	...	1	...	...	...	...	...	1	...	24	58	2	4	14	4	...	...			
Taragarh . . .	47	...	...	...	4	25	4	3	...	...	...	...	...	1	6	10	2	1	21	113	8	8	...	5	...	...			
Mount Abu . . .	95	...	...	...	2	37	4	2	...	...	3	...	...	2	7	4	...	3	53	145	2	10	15	20	...	...			
Fachmarhi . . .	105	...	...	...	8	2	1	...	...	...	...	...	...	...	...	...	...	...	77	71	3	6	3	15	...	...			
Puraudhar . . .	109	...	...	...	27	1	...	...	...	8	2	...	...	3	1	...	...	8	39	141	...	1	23	5	...	...			
Khandala . . .	30	...	...	...	3	1	...	...	...	6	1	...	...	1	1	...	...	11	59	2	3	3	3	2	...	...			
Wellington . . .	825	1	3	257	4	22	1	...	9	...	3	35	13	1	...	51	225	95	19	31	101	73	7	...				
GROUP XIII.—HILL CONVALESCENT DEPOTS, AND SAMITARIA.	3,247	11	3	1	31	827	20	45	1	...	89	10	14	101	59	57	6	129	814	3,661	121	100	341	245	17	...					
Troops marching, Bengal.	725	...	...	...	4	77	1	2	1	...	3	1	4	7	18	10	1	5	205	457	16	90	20	70	1	...		
Troops marching, Punjab.	439	...	...	...	46	1	...	1	...	3	...	3	4	4	3	...	3	58	188	10	12	7	30	...	...				
Troops marching, Madras.	257	...	...	...	20	...	2	...	1	...	...	...	1	11	...	...	1	39	150	8	9	4	18	...	...				
Troops marching, Bombay.	20	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	1	3	...	...	...	...	1	...	...			
Deolali Depot . . .	466	...	...	...	4	247	1	1	1	...	43	25	6	15	23	13	10	11	207	824	16	15	119	57	1	...		
Poonamalce Depot . . .	151	...	...	...	1	97	1	3	...	18	5	...	13	11	1	3	14	68	312	8	2	53	3	...	...				

* Derived from the aggregates.

STATION AND COMMAND.	Average annual strength.	1. ADMISSIONS.																			2. DEATHS.																			3. CONSTANTLY SICK.																		
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Rheumatic Fever.	Heat-stroke.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Veneral Diseases.	All Causes.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhoea.	Tania.	Other Diseases.																																
EXTRA INDIA.	1,106	...	...	...	0	824	21	46	1	3	10	2	...	20	47	20	5	20	72	1,667	...	0	27	20	8	...																													
Aden	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...						
INDIA.	60,553	2	...	5	133	378	36	46	12	2	88	58	45	62	110	23	15	53	1,643	4,121	267	306	426	584	7	1																																
		237	807	36	970	18,679	766	1,470	54	174	735	205	227	1,290	1,261	1,313	136	1,010	18,049	69,225	2,597	4,044	3,786	7,624	168	11																																
		1	88	3	289	40	10	2	1	40	33	35	24	6	52	3	95	3	14	885	13	1																															
		10'07	1'79	3'53	140'70	663'36	47'37	66'08	6'37	7'70	74'39	38'71	22'21	72'80	108'00	38'97	15'54	68'07	1,630'33	4,342'21	262'77	347'29	399'06	621'21	5'19	38	...																															
15'51	6'11	35'79	51'94	12'96	22'57	16'53	44'41	16'18	35'74	68'91	35'71	30'68	25'25	12'78	36'30	24'60	32'97	22'90	36'93	31'36	38'47	29'74	11'28	10'29	...																																	
BENGAL	18,950	159	21	4	243	5,099	321	643	19	69	194	68	71	339	487	331	50	307	5,684	20,270	754	1,524	987	2,410	37	3																																
PUNJAB	16,562	25	23	3	265	5,568	218	276	20	64	219	45	82	352	295	288	28	231	3,906	17,071	647	621	941	1,507	54	3																																
MADRAS	9,984	45	25	5	117	3,205	105	229	7	17	135	28	18	237	321	32	21	245	3,538	12,664	511	835	870	1,322	37	3																																
BOMBAY	15,051	8	38	24	354	4,807	122	431	8	24	190	70	56	352	457	462	47	226	4,921	18,223	685	1,062	988	2,186	40	2																																
CHINA EXPEDITIONARY FORCE.	530	2	...	...	25	81	19	3	...	4	8	1	3	47	61	55	3	13	59	660	9	14	13	23	1	...																														

GROUPS.	1. STRENGTH.												TOTAL.
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	
GROUP I.—BURMA COAST AND BAY ISLANDS.	1,299	1,103	1,062	1,038	1,038	1,014	1,007	996	999	989	988	1,027	12,560
	111'32	98'93	70'51	56'80	68'12	85'93	89'00	100'26	101'37	74'35	69'90	66'36	933'05
" II.—BURMA INLAND	2,062	1,850	1,378	1,280	1,674	1,803	1,806	1,806	1,770	1,740	1,791	1,720	20,680
	195'32	175'47	121'74	81'44	98'55	135'20	151'56	172'78	191'00	266'19	281'03	229'29	2,699'77
" IV.—BENGAL AND ORISSA	2,382	2,400	2,259	2,223	2,131	2,128	2,101	2,020	1,983	2,007	2,150	1,966	25,840
	221'19	216'18	158'25	152'03	126'16	131'30	154'64	166'65	157'77	138'38	159'01	165'77	1,947'33
" V.—GANGETIC PLAIN AND CHUTIA NAGPUR.	6,397	6,990	5,802	5,388	5,208	5,182	5,393	5,714	5,696	5,805	6,404	4,997	68,976
	579'09	519'75	383'38	354'42	348'38	370'00	358'76	326'90	383'76	396'83	418'57	404'00	4,843'84
" VI.—UPPER SUB-HIMALAYA.	15,385	16,228	14,971	11,048	7,900	7,573	7,484	7,877	7,872	8,432	14,021	14,470	133,261
	1,218'18	1,087'22	818'61	665'77	582'51	491'60	540'35	574'91	680'63	858'01	1,184'78	1,129'25	9,831'82
" VII.—N.-W. FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA.	5,777	4,823	5,686	5,245	3,854	3,724	3,636	3,628	3,664	4,095	5,448	5,959	55,539
	333'61	351'38	261'55	253'10	223'42	243'61	262'95	253'32	272'27	297'10	419'14	478'86	3,655'31
" VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT.	6,652	6,570	6,232	6,073	5,957	5,844	5,919	5,849	5,848	5,829	5,931	5,328	72,032
	511'03	509'40	477'92	508'53	484'36	451'16	472'31	481'80	604'07	684'57	653'69	595'04	6,433'97
" IX.—DECCAN	9,501	9,420	9,659	9,448	9,261	9,331	9,395	9,233	9,298	9,419	9,420	8,905	112,220
	761'48	681'23	590'38	559'32	546'11	601'14	649'29	700'84	796'64	832'10	821'70	785'65	8,325'83

Note.—Constantly sick + 355 = total annual loss.
 * Derived from the aggregates.
 † Remaining + admitted = total treated; remaining + admitted + died out of hospital = total cases.
 ‡ Details not available.

EUROPEAN TROOPS, 1900.

TABLE IV—concluded.

GROUPS AND COMMANDS.	1. STRENGTH.						2. CONSTANTLY SICK.						TOTAL.
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	
GROUP X.—WESTERN COAST	1,586 80'74	1,567 84'21	1,582 84'80	1,516 79'83	1,482 72'43	1,462 70'33	1,420 69'74	1,455 86'75	1,406 88'47	1,465 80'53	1,436 77'07	1,421 74'64	17,888 949'56
" XI.—SOUTHERN INDIA	2,347 212'41	2,284 180'00	2,077 162'19	1,905 124'70	1,873 110'77	1,873 113'39	1,951 136'44	1,974 131'31	2,034 147'70	2,158 154'66	2,158 167'67	2,303 135'03	24,837 1,776'47
" XIIIa.—HILL STATIONS	3,106 186'48	3,111 170'85	5,867 297'33	9,265 459'87	13,495 653'88	13,997 693'37	13,851 728'27	13,105 713'57	12,860 708'35	10,776 558'51	4,001 300'39	3,050 199'52	106,484 5,670'43
" XIIIb.—HILL CONVALESCENT DEPÔTS, AND SANI- TARIA.	655 45'23	686 43'89	1,962 156'69	4,043 286'39	5,238 386'96	5,254 432'02	5,104 428'82	4,994 413'22	4,048 400'38	3,785 276'55	1,367 128'03	922 67'19	38,961 3,065'37
INDIA	62,320 4,644'96	62,514 4,371'74	61,882 3,869'50	61,070 3,758'54	60,988 3,886'71	61,077 4,034'34	60,694 4,228'64	60,184 4,308'56	60,038 4,722'27	59,191 4,845'86	58,349 4,862'62	58,330 4,572'72	726,637 52,106'46
BENGAL	20,643 1,745'43	19,753 1,582'78	19,270 1,260'45	19,220 1,280'57	18,675 1,235'83	18,832 1,231'70	18,851 1,238'83	18,714 1,225'31	18,665 1,293'33	18,632 1,263'54	18,604 1,318'53	17,317 1,227'84	227,476 15,904'14
PUNJAB	15,629 985'78	16,842 949'97	17,029 847'84	16,826 856'43	17,090 1,059'36	17,051 1,069'16	16,859 1,137'12	16,786 1,116'02	16,775 1,187'63	15,885 1,221'91	15,511 1,272'34	16,476 1,186'94	198,750 12,890'50
MADRAS	10,776 959'05	10,227 823'46	9,947 712'04	10,015 640'78	9,984 645'00	9,984 760'18	10,036 809'93	9,811 851'90	9,791 905'84	9,685 930'79	9,687 934'86	9,860 851'26	119,803 9,825'09
BOMBAY	15,272 954'70	15,692 1,015'53	15,636 1,049'17	15,009 980'76	14,939 946'52	15,210 973'30	14,957 1,042'76	14,873 1,115'33	14,807 1,335'47	14,989 1,429'62	14,547 1,336'89	14,677 1,306'68	180,608 13,486'73

TABLE V.

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

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

BENGAL COMMAND.

Barrackpore.—The amount of sickness has on the whole been less than for several years. A severe epidemic of influenza which was imported from Calcutta, prevailed during August, September, and October. The cause of the dysentery is unexplained. It occurred at the extremes of the year, June and July, and January and December; and it is difficult to find any condition common to these periods. Ague is attributed to the excessive dampness after the rains, and the decrease in this disease was probably due to the introduction of a better system of drainage. The new drainage system worked well, and it might be extended with advantage.

The District Principal Medical Officer.—An incinerator should be provided before the rains for the disposal of the filth: trenching is almost impossible during the rains. The whole of the station should be drained: at present only a small portion of it is drained, and the remaining portion remains damp and water-logged. As far as possible, the irrigation in the neighbourhood of the cantonments should be stopped, and the surplus water from the rice cultivation should not be allowed to flow into the cantonment drains. Both these conditions increase the prevailing dampness, which is the great insanitary factor in Barrackpore.

Roorkee.—With the exception of ague, which prevailed during August, September, October, and November, owing, in some measure, to the heavy and late rains, there was no disease exceptionally prevalent as compared with the previous years. The water is derived from wells by processes which make it liable to contamination. The Senior Medical Officer of the cantonment reports:—Owing to the absence of any permeable stratum between the surface and the stratum whence the water is derived, the wells to the east of the Bengal Sapper lines and bazaar are really surface wells. The flow of the sub-soil water is from the west and south-west to the east and north-east, respectively, and this water in flowing from the western side of the cantonments to the eastern side must pass under the lines of the Sappers and Miners and the bazaar of that corps which lie midway between the wells, situated in the east and west of the Sapper lines and bazaar. From a careful study of the local conditions, I feel assured that the water becomes contaminated in its passage through the polluted subsoil of the Sapper lines and bazaar.

Meerut.—No unusual sickness prevailed among the troops this year. There was a decrease in all febrile diseases, and a considerable diminution in the number of venereal cases since last year. The Meerut pipe water-supply, so far as the bacteriological results go, appears to be the best in the North-Western Provinces. The water is tested, as regards the number of microbes present, once a week and, as regards the presence of the enteric bacillus, once a month.

Delhi.—The year compared most unfavourably with last year. Malarial fever, which was chiefly prevalent during August, September, October, and November, was probably due to the heavy rains and the consequent increase in the mosquito breeding-grounds. No cause can be assigned for the appearance of cholera in June and September. The enteric fever was contracted in the station. The water can easily be contaminated during transit from the stand cocks to the barrack rooms and cook houses.

Jubbulpore.—There has been no unusual sickness as compared with other years. Ague and venereal disease prevailed throughout the year. Malarial fever is endemic in this locality.

PUNJAB COMMAND.

Ferozepore.—The number of admissions for ague was about three times that in the previous year. The disease was prevalent from September to the end of December, and was due to very abnormally heavy rains and flood. The water which is drawn from wells, is abundant and of good quality. It was liable to contamination, owing to the method of drawing it; but the danger has been obviated by the provision of pumps.

The District Principal Medical Officer.—The unusually severe outbreak of malarial fever, which practically rendered the whole of the European troops unfit for duty after the rains, appears to have been due to the very heavy flood, which occurred during the rains. No special measure appears to be called for, as the occurrence was a very unusual one, Ferozepore, as a rule, being a healthy station.

Meean Meer.—Cholera, which prevailed among the troops in the cantonment during September, was probably, in the first instance, imported from outside. This disease was the chief cause of mortality. Malarial fever, which was very prevalent from the middle of October to the end of December, was due to climatic causes.

The District Principal Medical Officer.—I cannot concur in the opinion that the water from the Meean Meer water-works is not contaminated and is of good quality. The source, namely, the irrigation canal, is exposed to pollution from the riparian villages; above the intake the water-works, just outside the cantonments, the commissariat cattle and elephants are bathed; and the natives defecate in the canal bed when it is dry: I have seen all this myself. On the occasion of my last inspection, I found that the water was being passed through the filter beds so rapidly that it was full of suspended matter and living active animalcula. A wrong system was also in force, under the authority of the medical officer in charge, of scraping the surface of the filter beds every fortnight. This has been discontinued by my advice. But in my opinion the whole subject of the filtration of the drinking water of the present Meean Meer water-works should receive the immediate attention of the Punjab Command Sanitary Officer.

General Officer Commanding the District.—The Principal Medical Officer is doubtless right in his remarks about the pipe water-supply; but at the same time, I consider that the British troops quartered at Meean Meer have cause to thank the existing pipe water-supply for their comparative immunity from cholera during the two epidemics of 1899 and 1900. A glance at the cholera statistics of 1858 and 1872 will bear out what I say.

The Lieutenant-General Commanding the Forces.—The source of water-supply of the present water-works being of doubtful purity, and the water-works themselves not efficient, it would not be advisable to extend the supply of pipe water to the lines of the native regiments until a connexion has been made with the Lahore water works, this being the scheme for which the allotment of funds is awaited and urgently needed. For the European troops the pipe-water is always boiled and pinked before use.

Fort Lahore.—The prevalence of ague, as compared with other years, is ascribed to the unusually heavy rainfall. The outbreak of cholera was directly due to the men having gone into the adjacent city.

The Lieutenant-General Commanding the Forces.—The pipe-water supply was installed during the year.

Kasauli.—Malarial fever was due to importation from the plains. A pipe water-supply is absolutely necessary. The system of *pakhals* and *mussacks* has been condemned by Major Davies, who points out that in 20 drops of water from the spring there were only 10 germs, whereas the same quantity of water from the same spring, brought in a *pakhal*, contained no less than 1,000 germs.

The General Officer Commanding the District.—The water-works question is being considered by the Government of India.

The Lieutenant-General Commanding the Forces.—Metal buckets in place of leather *pakhals*, though approved by the Government of India, have not yet been provided.

MADRAS COMMAND.

Rangoon.—There was a marked increase in liver complaints and dysentery, which is ascribed to beer-drinking and bad water. The drainage of the *sadar* bazaar is very defective. The marshy ground in the vicinity of the Royal Artillery barracks should be drained. The water-supply is suspicious and in quantity deficient, and is obtained from tanks, lakes, and shallow wells, which last are freely open to contamination, owing to their being in most parts uncovered. *Mussacks* are still largely used. The following recommendations are made for remedying the above defects:—(1) That the drainage of the cantonment be connected with that of Rangoon town, more particularly of the *sadar* bazaar, where the Shone system is in force. (2) That the marshy ground in the vicinity of the Royal Artillery barracks be either drained or filled in. (3) That a complete reorganization of the water-supply system be carried out, probably by the boring of artesian wells. (4) That as Rangoon town has a special Health Officer, and under him a complete organization, the sanitary duties of the cantonment be placed under him. This would ensure continuity of supervision, expert management, early detection of zymotic disease, more efficient registration and notification, and improvement generally.

The District Principal Medical Officer.—I approve of the suggestions Nos. 1, 3, and 4 of the Cantonment Committee; but with regard to suggestion No. 2, the effective drainage of the ground near the Royal Artillery barracks is hardly possible, unless prohibitive sums of money are expended. Certain improvements have already been effected in the surface drainage and in the disposal of sullage water. The cantonment authority, while fully recognizing the necessity for various sanitary improvements, is crippled from want of funds to carry them out.

TABLE V—continued.

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

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

Fort Dufferin.—The drainage, as well as the locality, is bad. An epidemic of ague of a severe type, occurred amongst the troops this year. The British Infantry regiment—the 2nd Durham Light Infantry—were rendered completely unfit for active service by the disease. In fact, scarcely enough healthy men could be found to perform the ordinary duties: 300 men had to be sent to Shwebo and Meiktila for change,—the majority of these being convalescents. Only about four men per company escaped. The regiment was finally ordered to Wellington. Beri-beri of a mild type appeared amongst the men of No. 9 Mountain Battery, Royal Garrison Artillery; and the battery was moved into camp. During the rainy season, small marshes and pools of stagnant water may be seen through the entire fort, specially in the vicinity of the Bengal Infantry barracks and of the station hospital. The cantonment is practically built within a marsh. The water-supply is sufficient in quantity, but bad in quality, as liable to every possible contamination.

The General Officer Commanding Burma District.—A culvert for the more efficient drainage of the site of the British barracks is now under construction, and orders have been given for the cleansing of the water channels near these barracks, which are choked with weeds, and have apparently been neglected for some time past. In addition to the above, plans and estimates for the surface drainage were submitted. The scheme for the provision of a new water-supply for the town and the cantonment of Mandalay is still under the consideration of the Local Government.

The Lieutenant-General Commanding the Forces.—The question of the removal of the British Infantry and of the station hospital from Fort Dufferin on account of its unhealthiness, has been the subject of special correspondence.

Poonamallee.—Cholera, which was prevalent from the last week of August to the end of September, was imported from Madras and the surrounding villages.

The General Officer Commanding the District.—This is a well-kept and healthy cantonment. The barracks and the hospital are most satisfactory.

BOMBAY COMMAND.

Neemuch.—The rainfall during the year has been heavy. The increase in dysentery and in diseases of the digestive system was due to a large extent, to chills and wearing damp clothes. Cholera, smallpox, and venereal disease were imported by the large number of famine-stricken people who overran the bazaar and the cantonment in search of food. The drinking water in the bazaar was very scarce, and of an inferior quality; and the wells were liable to contamination and undoubtedly were contaminated by the starving immigrants. The question of water-supply for the bazaar is under the consideration of the higher authorities.

Nasirabad.—The very large increase in malarial fever was probably due to an average rainfall after two years' drought. This disease prevailed when the ground began to dry up after the rains. The increase in venereal disease was owing to the intercourse of the men with the women brought into the neighbourhood by the prevailing famine. Nearly all of these women appear to have been diseased. The causes of the enteric fever and of the outbreak of cholera are uncertain. Six of the eight cholera cases occurred among venereal patients in the hospital. An extraordinary plague of flies invaded the hospital at the time of the outbreak, and may have been the cause.

The District Principal Medical Officer.—The bazaar conservancy should be put on a proper footing, and the filth trenching should be done in such a manner as to make it impossible for flies to breed in the filth after it has been buried.

The General Officer Commanding the District.—The initial cost for conservancy in the bazaar on the improved system has been sanctioned by the Local Government.

Mhow.—The lateness of the rains this year caused the average amount of rain that fell to be spread over a much shorter period, and therefore made August and September wetter than usual. The number of mosquitoes was very small, as compared with other stations. A small epidemic of cholera broke out, and it appeared to be due to importation. The following suggestions are made for remedying certain existing defects:—(1) A general filtration of the water at Baircha. (2) The covering in of the water tank at the European Infantry barracks, etc.

The General Officer Commanding the District.—It has now been decided that as long as the Baircha tank and the service reservoir are adequately protected, there is no need for filtration. The covering in of the tank at the European Infantry barracks was provided for in the preliminary budget for 1901-02.

Taragarh.—Most of the men had suffered severely from ague at Nasirabad prior to their being sent up here, and were much debilitated on arrival, but improved rapidly. The drinking water is inferior in quality, but is potable after boiling and treatment with permanganate of potash and alum. It is brought up from Ajmer in *pakhals* on mules. The latrines of the village are very unsatisfactory, being imperfectly constructed. Therefore the surrounding ground becomes saturated, and is likely to give rise to disease.

Deolali.—Fever was prevalent during the monsoon months, and lung affections during the cold season. The water-supply of camp and bazaar is derived from open wells, subject to contamination from leather buckets, *mussocks*, *pakhals*, etc.

The District Principal Medical Officer.—The existing sanitary conditions of the station are extremely good. Some of the wells have been covered in, but no ill effects have been due to the water-supply.

TABLE VI.

INFLUENZA by months, stations, groups, and commands.

TABLE VII.

CHOLERA by months, stations, groups, and commands.

STATIONS* AND GROUPS.	ADMISSIONS FROM INFLUENZA IN EACH MONTH.												ADMISSIONS FROM CHOLERA IN EACH MONTH.													
	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	5	5
Rangoon	2	2	1	1	4	10
GROUP I.—BURMA COAST AND BAY ISLANDS	2	5	...	2	1	1	4	15
Fort William	
Dum-Dum	23	9	...	...	...	...	...	...	32	...	1	...	...	...	...	...	...	...	...	...	1	
Barrackpore	32	32	13	...	...	...	77	...	...	1	...	...	...	...	...	...	...	...	1	
GROUP IV.—BENGAL AND ORISSA	23	9	32	32	13	...	...	109	...	1	1	1	...	...	...	...	...	...	...	...	3	
B	
Dinapore	1	...	...	...	...	...	1	
Benares	1	2	...	...	...	...	...	...	3	
Allahabad	2	
Fyzabad	1	...	...	...	...	1	
Lucknow	17	8	1	27	...	...	...	...	...	...	...	...	...	...	...	...	...
Cawnpore	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR	1	1	...	...	...	...	...	17	8	1	28	...	...	...	...	1	2	1	3	...	...	...	...	7	
A	
Roorkee	5	1	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...
Meerut	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	2	...	...	...	...	3	
Delhi	1	...	1	...	...	...	...	3	...	...	3	...	...	...	...	6	
Umballa	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	...	...	2	
B	
Meean Meer	1	11	1	...	...	13	
Fort Lahore	7	...	...	...	...	7	
Rawalpindi	1	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP VI.—UPPER SUB-HIMALAYA	1	1	...	...	5	1	...	...	...	1	...	9	...	...	...	...	3	...	2	23	2	1	...	...	31
A	
Peshawar	1	...	...	...	1	
GROUP VII.—NORTH-WESTERN FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA	1	...	...	...	1	
A	
Ahmedabad	1	...	...	...	...	...	...	...	1	
B	
Neemuch	2	...	...	...	...	...	...	...	2	
Nasirabad	8	...	...	...	...	8	
Muttra	6	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Agra	1	...	...	...	...	1	
Mhow	9	...	...	...	...	9	
GROUP VIII.—SOUTH-EAST RAJPUTANA, CENTRAL INDIA AND GUJARAT	6	...	...	...	...	...	...	...	6	...	...	...	2	1	...	18	...	...	...	...	...	21	
A	
Saugor	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Jubbulpore	8	1	...	...	...	...	...	...	...	...	9	...	...	...	...	...	...	...	1	...	...	...	...	1	
B	
Secunderabad	6	18	...	...	...	...	24	
Belgam	2	6	2	3	...	...	...	...	...	...	...	13	...	...	...	...	...	...	...	...	...	...	...	...	...
Poona	1	1	3	1	...	...	6	...	...	...	...	...	...	8	1	...	...	...	...	9	
Ahmednagar	1	...	...	2	1	...	...	...	4	
GROUP IX.—DECCAN	2	6	10	5	...	1	1	3	1	...	...	29	...	...	...	1	...	14	21	2	...	...	...	...	38

* Stations where neither Influenza nor Cholera occurred are not shown in these tables. For the annual ratios, see Table III.

TABLE VI—concluded.

INFLUENZA by months, stations, groups, and commands.

TABLE VII—concluded.

CHOLERA by months, stations, groups, and commands.

STATIONS AND GROUPS.	ADMISSIONS FROM INFLUENZA IN EACH MONTH.												ADMISSIONS FROM CHOLERA IN EACH MONTH.													
	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.
Colaba	1	1	...	...	...	2	...	...	...	...	...	...	1	...	...	...	...	...	1
Mallapuram	8	1	...	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP X—WESTERN COAST	8	1	...	1	...	...	...	11	...	...	...	...	...	...	1	...	...	...	...	...	1
A
Bangalore	8	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...	...	1	...	...	...	...	1
Madras
GROUP XI—SOUTHERN INDIA	8	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...	...	1	...	...	...	...	1
Solon	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Subathu	8	2	...	...	...	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP XIIa.—HILL STATIONS	8	3	...	...	...	...	...	...	...	11	...	...	...	...	...	...	...	...	...	...	...	...	...
Kasauli	1	9	1	...	...	...	...	...	...	11	...	...	...	...	...	...	...	...	...	...	...	...	...
Mount Abu	2	...	...	...	...	...	...	...	...	...	2
Parandhur	1	...	...	...	...	...	...	...	...	1
GROUP XIIb.—HILL CONVALESCENT DEPÔTS, AND SANITARIA	1	9	1	...	...	...	...	...	...	11	...	...	...	2	1	...	...	...	...	...	...	...	3
Deolali Depôt	1	...	...	...	...	1
INDIA	5	8	19	20	22	33	13	33	36	33	10	5	237	...	1	1	3	5	6	15	47	26	2	1	...	107
BENGAL	...	1	9	8	4	24	9	32	32	30	9	1	159	...	1	1	1	1	5	1	5	6	...	...	...	21
PUNJAB	...	1	1	...	9	13	1	...	...	...	...	...	25	...	...	...	...	...	...	...	1	19	2	1	...	23
MADRAS	...	4	6	10	3	5	8	3	...	1	1	4	45	...	...	...	...	...	...	6	19	...	...	...	...	25
BOMBAY	1	1	4	2	...	...	8	...	...	2	4	1	8	22	1	...	...	...	...	38

TABLE VIII.

ENTERIC FEVER by months, stations, groups, and commands.

TABLE IX.

SIMPLE CONTINUED FEVER by months, stations, groups, and commands.

STATIONS* AND GROUPS.	ADMISSIONS FROM ENTERIC FEVER IN EACH MONTH.											ADMISSIONS FROM SIMPLE CONTINUED FEVER IN EACH MONTH.															
	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 . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12
Rangoon . . . . .	...	...	...	...	1	2	4	1	...	...	1	...	9	5	2	...	...	...	...	...	...	...	...	...	...	...	7
GROUP I.—BURMA COAST AND BAY ISLANDS	...	...	...	...	1	2	4	1	...	...	1	...	9	5	5	1	...	8	...	...	...	...	...	...	...	...	19
Thayetmyo . . . . .	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	2
Fort Dufferin . . . . .	...	...	...	...	...	...	...	...	1	1	...	...	2	1	...	...	...	...	...	1	...	...	...	...	...	...	2
Bhamo . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP II.—BURMA INLAND	...	...	...	...	1	...	...	1	1	1	...	...	4	1	...	...	...	...	3	...	...	...	...	...	...	...	4
Fort William . . . . .	...	...	...	1	...	...	...	...	...	1	...	...	2	...	...	6	13	6	25	10	...	...	...	...	...	...	60
Dum-Dum . . . . .	...	...	...	...	1	4	2	...	1	...	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barrackpore . . . . .	...	1	...	1	...	...	1	...	...	1	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP IV.—BENGAL AND ORISSA	...	1	...	2	1	4	3	...	1	1	1	...	14	...	...	6	13	6	25	10	...	...	...	...	...	...	60
B	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dinapore . . . . .	...	...	...	...	...	...	2	...	3	...	2	1	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Benares . . . . .	...	1	1	...	3	...	...	1	...	1	2	...	9	...	1	1	1	...	2	2	...	...	...	...	...	...	7
Allahabad	2	1	3	5	4	...	...	...	1	...	...	1	17	1	1	1	3	11	19	18	5	1	3	...	...	...	63
Fort Allahabad . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	4	8	6	2	...	3	...	...	...	...	25
Fyzabad . . . . .	...	1	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sitapur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Lucknow	12	2	5	16	7	4	1	2	4	2	4	4	63	6	5	7	5	8	9	17	9	15	50	38	7	176	
Cawnpore . . . . .	...	1	...	2	...	...	...	...	1	...	...	6	10	...	...	4	6	9	45	34	5	2	...	...	...	...	105
Fatehgarh . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR	14	6	9	23	14	4	3	3	9	2	7	15	109	7	6	13	18	33	81	77	23	18	56	39	7	375	
A	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bareilly	2	1	1	...	...	1	...	...	...	...	...	1	6	2	...	...	...	2	...	...	1	1	...	2	1	9	
Roorkee . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Meerut	2	...	4	3	2	...	2	1	2	...	...	1	17	2	...	6	11	7	4	1	...	7	2	...	1	41	
Delhi . . . . .	...	1	...	1	2	1	...	3	1	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Umballa	6	1	3	2	...	...	...	1	1	...	1	6	21	...	...	1	1	...	...	...	...	...	...	...	...	3	
B	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jullundur . . . . .	...	...	2	...	...	...	...	...	...	...	1	...	3	...	2	...	...	...	...	...	...	...	...	...	...	...	2
Ferozapore	2	...	...	2	...	...	...	1	...	1	...	1	7	1	...	2	1	2	7	...	...	...	...	...	...	...	13
Amritsar . . . . .	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meean Meer	4	4	...	...	1	...	...	1	2	...	...	2	14	...	...	1	...	5	17	23	9	2	...	1	...	58	
Fort Lahore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...	...	4
Rawalpindi	7	1	...	7	5	12	8	7	2	7	1	2	59	1	1	...	...	...	...	...	...	...	...	...	...	...	2
Campbellpur . . . . .	...	...	...	...	2	...	...	...	...	...	1	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Attock . . . . .	...	...	...	...	1	...	1	...	...	...	...	...	2	...	...	...	1	...	...	...	...	...	2	1	...	...	4
GROUP VI.—UPPER SUB-HIMALAYA	23	8	10	15	12	16	10	15	8	8	4	13	142	6	3	6	16	12	11	26	25	19	6	3	4	137	
A	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nowshera	1	...	...	...	6	6	...	1	...	...	...	2	16	1	...	...	5	2	6	17	9	2	1	...	...	...	43
Peshawar	2	1	1	2	4	5	4	...	5	...	4	1	29	...	...	...	9	7	7	3	...	...	...	...	...	...	26
Mooltan . . . . .	...	1	2	6	5	4	...	2	1	...	...	...	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...
C	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kurrachee . . . . .	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	1	3	...	2	...	...	6
GROUP VII.—NORTH-WESTERN FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA	3	2	3	8	17	15	4	3	6	...	4	3	68	1	...	...	...	14	9	13	21	12	2	3	...	75	
A	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deesa . . . . .	...	...	...	...	...	...	...	3	...	...	...	...	3	...	...	...	...	2	4	...	...	...	...	...	...	...	6
Ahmedabad . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Stations where neither Enteric Fever nor Simple Continued Fever occurred are not shown in these tables. For the annual ratios, see Table III.

TABLE VIII—concluded.

ENTERIC FEVER by months, stations, groups, and commands.

TABLE IX—concluded.

SIMPLE CONTINUED FEVER by months, stations, groups, and commands.

STATIONS AND GROUPS.	ADMISSIONS FROM ENTERIC FEVER IN EACH MONTH.												TOTAL.	ADMISSIONS FROM SIMPLE CONTINUED FEVER IN EACH MONTH.												TOTAL.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
B																										
Neemuch . . . . .	...	2	2	1	...	...	...	1	2	2	...	10	...	...	...	...	...	...	...	...	...	...	...	...
Nasirabad	6	3	5	14	2	...	1	2	14	7	1	58	2	...	...	2	2	4	3	...	1	...	...	14	
Muttra . . . . .	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	1	...	...	...	4	
Agra	1	...	...	1	2	...	...	...	3	5	6	19	...	...	5	8	3	...	2	3	5	11	4	53	
Jhansi	6	...	...	2	1	...	...	1	...	4	2	17	1	...	...	...	3	...	...	3	5	...	...	4	
Nowgong . . . . .	...	...	1	2	1	2	...	...	1	1	...	8	...	...	1	1	...	...	...	...	...	...	...	3	
Indore . . . . .	...	...	...	...	...	...	...	...	1	...	...	1	1	1	...	...	...	...	1	5	3	3	1	13	
Mbow	5	1	3	...	1	2	3	6	11	1	...	35	2	2	8	...	1	2	...	...	...	...	...	17	
GROUP VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT	18	6	11	20	7	4	4	11	36	17	11	6	151	8	3	14	12	6	13	14	4	13	7	13	5	112
A																										
Saugor . . . . .	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	9	4	...	...	...	...	13	
Jubbulpore	3	...	1	1	3	...	...	...	1	...	...	9	...	...	...	...	...	...	6	2	...	...	...	8	
Kamptee . . . . .	...	3	2	...	1	...	...	3	2	1	...	13	1	1	4	5	14	22	13	25	39	67	27	2	220
Sitabaldi . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
B																										
Secunderabad	4	4	...	3	2	11	20	19	9	3	2	77	1	5	6	...	5	16	15	13	6	26	4	5	102
Belgam . . . . .	...	...	1	...	...	...	1	1	3	3	...	9	...	...	...	...	4	3	...	...	...	...	...	...	7
Satara . . . . .	...	...	1	...	...	...	...	...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Poona	1	1	2	...	1	1	3	7	20	6	1	43	...	...	3	10	3	1	8	11	18	31	9	13	97
Kirkee	1	1	...	...	...	1	1	2	4	5	1	16	...	...	...	...	...	...	...	...	...	...	...	...	...
Ahmednagar	4	1	1	1	...	4	2	3	4	2	22	2
GROUP IX.—DECCAN	5	9	15	2	10	5	16	37	52	27	9	5	192	2	7	13	15	26	42	45	59	65	116	40	20	450
Colaba	1	...	1	1	1	4	1	1
Cannanore	2	2	2	6
Calcut	1	2	3	1	1	1	7	5	15
Mallapuram	1	1
GROUP X.—WESTERN COAST . . . . .	...	1	1	2	...	...	2	1	1	...	...	8	1	1	...	2	4	7	5	...	...	...	3	...	22
A																										
Bellary	1	...	1	2	1	1
Bangalore	1	1	1	...	1	...	...	1	...	...	...	5	...	...	1	3	6	1	3	1	2	5	1	1	24
Pallavaram . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...	3
St. Thomas' Mount . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	7	1	...	1	...	1	...	...	...	11
Madras . . . . .	...	...	1	...	...	1	1	...	1	...	...	4	...	1	5	1	...	...	...	...	...	...	...	...	7
GROUP XI.—SOUTHERN INDIA	1	1	2	...	1	1	1	1	2	...	1	11	1	1	7	11	7	1	6	2	2	6	1	1	46	
Ranikhet . . . . .	...	...	1	...	...	2	3	6	...	...	...	12	...	...	5	3	2	10	5	6	4	3	1	...	39
Chaubuttia . . . . .	...	1	...	1	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Chakrata . . . . .	...	4	2	1	1	2	1	1	1	...	...	13	...	...	1	1	2	4	3	3	3	...	...	...	17
Leboag . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Solon . . . . .	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	3
Dagshai . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Sobathu . . . . .	...	...	3	...	...	3	...	...	...	...	...	6	...	...	...	1	3	3	...	...	1	1	...	...	9
Jutoph . . . . .	...	...	4	9	1	...	...	1	...	...	...	15	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuldunah . . . . .	...	...	5	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...
Camp Gharial . . . . .	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
" Thobba . . . . .	...	...	...	8	1	2	1	...	...	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...
" Upper Topa . . . . .	...	...	...	1	4	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...
" Lower Topa . . . . .	...	...	...	...	...	...	3	1	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...
Khanspur . . . . .	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Cherat . . . . .	...	...	...	2	1	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Quetta	6	...	...	4	...	1	1	16	30	28	45	2	129	...	...	...	3	...	...	...	1	...	...	...	4
GROUP XII.—HILL STATIONS	6	...	6	15	31	7	11	27	35	29	45	2	214	6	5	10	17	10	10	12	4	1	...	75
Darjeeling . . . . .	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Naini Tal . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	1	1	...	...	...	...	...	6
Landour . . . . .	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	1	1	...	...	...	...	...	3
Kasauli . . . . .	...	1	2	...	2	1	...	...	...	...	...	6	...	...	...	...	...	1	...	...	...	...	...	...	1
Dalhousie . . . . .	...	...	...	5	7	1	...	1	1	...	...	15	...	...	...	2	2	1	...	1	...	...	...	...	6
Murree . . . . .	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Taragarh . . . . .	...	...	...	3	...	...	1	...	...	...	...	4	...	...	...	...	1	...	1	...	1	...	1	...	3
Mount Abu . . . . .	...	...	...	...	...	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	1	1	...	...	2
Pachmarhi . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Wellington . . . . .	...	...	1	...	...	...	...	2	...	...	...	3	...	3	2	2	4	3	7	...	2	...	...	...	23
GROUP XIII.—HILL CONVALESCENT DEPÔTS, AND SANITARIA . . . . .	...	1	12	7	5	2	1	5	...	...	...	33	...	4	6	6	8	5	9	2	4	1	...	45	

STATIONS AND COMMANDS.	ADMISSIONS FROM ENTERIC FEVER IN EACH MONTH.												ADMISSIONS FROM SIMPLE CONTINUED FEVER IN EACH MONTH.													
	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.
Troops marching, { Bengal . . . . .	...	...	1	...	...	...	...	...	...	...	...	3	4	...	...	...	...	...	...	...	...	...	...	...	2	3
{ Madras . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2
{ Bombay . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Deolali Depôt	2	...	...	...	1	1	...	...	...	...	...	...	4	...	1	...	...	...	...	...	...	...	...	...	...	5
Poonamallee „ . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	5	...	...	...	1	...	...	...	...	5
EXTRA INDIA.																										
Adca . . . . .	...	1	...	...	...	...	...	1	3	...	...	1	6	4	3	8	13	10	2	1	1	3	...	1	...	46
INDIA	72	35	59	99	102	64	61	102	159	85	84	48	970	37	30	79	112	145	216	215	155	146	201	104	39	1,479
BENGAL	28	9	23	38	29	16	13	15	20	11	18	23	243	14	6	38	59	57	131	115	47	42	66	53	15	643
PUNJAB	22	8	9	39	59	36	18	19	16	8	8	14	256	3	3	...	7	25	20	39	44	24	7	2	2	176
MADRAS	1	5	8	2	6	5	19	24	27	13	5	2	117	16	12	18	16	32	31	32	23	8	34	7	6	229
BOMBAY	21	13	19	20	8	7	11	44	96	53	53	9	354	10	9	23	30	31	34	29	41	72	94	42	16	431

STATIONS AND GROUPS.	ADMISSIONS FROM INTERMITTENT FEVER IN EACH MONTH.												ADMISSIONS FROM REMITTENT FEVER IN EACH MONTH.													
	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																										
Deesa	1	1	...	...	1	1	4	8	6	44	61	54	181	...	...	...	...	...	...	1	...	...	...	...	1	
Ahmedabad . . . . .	...	1	...	3	4	4	3	4	10	13	4	50	...	...	...	2	...	...	...	...	1	1	...	2	6	
B																										
Neemuch	4	6	4	6	2	3	3	16	20	68	29	27	197	1	...	...	...	...	...	...	1	...	...	...	2	
Nasirabad . . . . .	...	7	11	5	10	20	17	11	60	235	98	58	532	7	...	3	3	3	2	...	...	...	1	...	19	
Muttra . . . . .	...	...	...	...	5	3	1	1	3	3	4	3	23	...	...	...	...	...	...	...	...	...	...	...	...
Agra	5	2	6	30	25	10	19	22	22	51	31	16	239	...	...	...	...	1	...	...	...	...	1	...	2	
Jhansi	10	6	5	8	5	12	17	15	32	77	39	17	243	...	...	...	...	...	...	...	1	...	...	...	1	
Nowgong	3	1	2	2	6	6	5	7	33	28	21	4	118	1	...	...	...	...	...	...	...	1	...	...	2	
Indore	2	...	...	...	1	...	1	1	4	16	15	6	46	...	...	...	...	...	...	...	...	...	...	...	...
Mhow	37	12	22	24	19	18	21	19	45	187	145	130	679	1	7	2	2	...	2	...	5	3	1	1	3	27
GROUP VIII.—S.-E. RAJPUTANA, CENTRAL INDIA, AND GUJARAT	62	36	50	78	78	77	91	104	244	722	447	319	2,308	10	7	5	7	4	4	1	6	5	3	3	5	60
A																										
Saugor	9	4	5	7	6	11	9	11	23	22	9	5	121	...	...	...	...	2	...	1	4	2	2	1	...	12
Jubbulpore	13	10	16	9	18	18	37	32	62	76	58	47	386	1	4	2	3	6	1	...	3	2	2	...	2	26
Kamptee	6	4	6	19	18	4	9	5	20	77	59	51	278	...	1	...	...	1	...	...	1	1	...	...	...	4
Sitabaldi . . . . .	...	...	...	1	...	2	2	...	2	4	3	...	14	...	...	...	...	...	...	...	...	...	...	...	...	...
B																										
Secunderabad	12	10	4	10	14	4	25	51	50	86	38	36	340	...	...	...	...	...	...	...	5	15	1	...	21	
Belgam	19	9	12	17	19	20	20	8	12	29	45	218	...	...	...	...	2	3	2	4	1	5	...	1	18	
Satara	1	1	...	4	...	2	2	2	6	9	...	...	27	...	...	...	...	...	...	...	...	...	...	...	...
Poona	24	19	21	18	22	13	21	29	18	22	25	23	255	...	...	...	1	...	...	...	...	...	...	...	...	1
Kirkee	6	4	9	10	3	14	24	32	29	21	20	15	187	...	...	...	1	1	...	...	2	...	...	1	...	5
Ahmednagar	6	1	5	3	9	9	3	4	3	10	12	5	70	...	...	1	2	...	...	...	...	...	...	...	...	3
GROUP IX.—DECCAN	96	62	78	94	113	95	152	164	217	336	262	227	1,896	1	5	3	7	12	4	3	14	11	24	3	3	90
A																										
Colaba	17	13	10	19	19	6	20	13	8	18	23	7	173	...	...	...	...	2	...	...	1	1	...	...	1	5
Cannanore . . . . .	...	...	...	...	2	...	...	...	...	1	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Mallapuram	3	...	...	...	3	1	1	...	1	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP X.—WESTERN COAST	20	13	10	19	24	7	21	13	9	19	23	7	185	...	...	...	...	2	...	...	1	1	...	...	1	5
A																										
Bellary	63	36	19	8	11	2	17	15	25	48	44	8	296	...	...	...	1	...	...	1	2	...	...	...	...	4
Bangalore	1	5	2	5	26	25	19	4	6	15	5	2	115	...	...	...	...	2	1	2	...	1	...	1	1	8
Pallavaram . . . . .	...	2	...	...	...	...	...	2	1	...	2	1	8	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Thomas' Mount . . . . .	...	1	3	10	9	6	6	5	1	5	6	2	54	...	...	1	...	1	...	...	...	...	...	...	...	2
Madras	6	6	10	13	16	7	5	6	11	11	4	6	101	...	4	8	5	...	...	...	4	...	...	...	...	18
GROUP XI.—SOUTH-ERN INDIA	70	54	34	36	62	40	47	32	44	79	61	19	574	...	4	9	6	3	1	3	2	2	...	1	1	32
A																										
Raalkhet . . . . .	...	...	1	2	2	2	2	1	2	1	...	...	13	...	...	...	...	...	...	...	...	...	...	...	...	...
Chaubuttia . . . . .	...	...	3	5	4	5	2	7	1	1	...	...	28	...	...	...	...	...	...	...	...	...	...	...	...	...
Chakrata	1	...	3	4	3	3	1	3	10	...	...	...	29	...	...	1	...	...	...	1	1	2	...	...	...	5
Lebong . . . . .	...	...	...	1	3	1	4	2	...	1	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...
Solon . . . . .	...	...	...	...	...	...	...	1	2	...	...	...	3	...	...	...	1	...	...	...	1	...	...	...	...	2
Dagshai . . . . .	...	...	2	2	5	7	4	1	7	1	...	...	29	...	...	...	1	2	...	1	3	...	...	...	...	7
Subathu . . . . .	...	...	19	15	11	14	22	54	47	1	...	...	183	...	...	...	1	...	...	2	2	...	...	...	...	5
Jutogh . . . . .	...	...	8	...	1	3	1	...	...	...	...	...	13	...	...	...	...	...	...	2	1	...	...	...	...	2
Khyragully . . . . .	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Baragully . . . . .	...	...	...	1	2	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuldunnah . . . . .	...	...	...	1	...	2	4	2	...	...	...	...	9	...	...	...	1	...	2	...	...	...	...	...	...	3
Kalabagh . . . . .	...	...	...	2	1	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Camp Gharial . . . . .	...	...	...	9	11	5	4	6	2	...	...	...	37	...	...	...	1	1	2	...	...	...	...	...	...	4
Thobba . . . . .	...	...	1	19	10	21	11	6	6	...	...	...	74	...	...	...	2	1	2	...	...	...	...	...	...	5
Upper Topa . . . . .	...	...	...	2	3	2	2	1	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...
Lower Topa . . . . .	...	...	...	2	2	4	1	1	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...
Khanspur . . . . .	...	...	...	3	...	6	3	1	...	...	...	...	13	...	...	...	1	1	2	1	1	...	...	...	...	6
Cherat . . . . .	...	...	...	10	37	39	22	25	17	...	...	...	150	...	...	...	...	1	...	...	2	...	...	...	...	3
Quetta	4	2	6	4	15	23	37	39	78	87	14	6	315	...	1	1	...	...	6	2	2	4	...	...	...	10
Ramandrug . . . . .	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP XIIa.—HILL STATIONS	5	2	13	47	93	118	149	124	181	182	16	6	936	...	1	2	4	7	6	12	8	10	9	...	...	59

TABLE X—concluded.

INTERMITTENT FEVER by months, stations, groups, and commands.

TABLE XI—concluded.

REMITTENT FEVER by months, stations, groups, and commands.

STATIONS, GROUPS, AND COMMANDS.	ADMISSIONS FROM INTERMITTENT FEVER IN EACH MONTH.												TOTAL.	ADMISSIONS FROM REMITTENT FEVER IN EACH MONTH.												TOTAL.	
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		
Darjeeling . . . . .	...	...	6	13	7	3	10	6	2	5	1	1	54	...	...	...	...	...	...	...	...	...	...	...	...	...
Naini Tal . . . . .	...	...	...	...	4	...	2	...	1	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...
Landour . . . . .	...	...	10	10	20	9	16	8	3	3	4	...	83	...	...	...	...	...	...	...	...	...	...	...	...	...
Kasauli . . . . .	...	...	10	30	57	32	27	23	19	20	...	...	218	...	...	...	...	...	...	...	...	...	...	...	...	...
Dalhousie	1	...	...	2	9	11	16	12	22	20	...	1	103	...	...	...	...	...	...	...	...	...	...	...	...	...
Murree . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Taragarh . . . . .	...	...	...	...	1	2	2	...	8	20	...	...	35	...	...	...	...	1	2	...	...	...	...	...	...	...
Mount Abu . . . . .	...	...	...	...	...	2	...	1	2	17	10	2	32	...	...	...	...	...	...	...	...	...	...	...	...	...
Pachmarhi . . . . .	...	...	...	...	...	2	1	...	4	...	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...
Purandhar	2	...	2	4	3	4	...	1	2	2	2	5	27	...	...	...	...	...	...	...	...	...	...	...	...	...
Khandalla . . . . .	...	...	1	2	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Wellington	2	...	13	37	57	45	38	15	16	15	3	16	257	...	...	2	1	1	...	...	...	...	...	...	...	...
GROUP XIII.— HILL CONVALESCENT DEPÔTS, AND SANITARIA	5	...	41	97	160	108	112	67	70	103	40	25	828	1	...	1	3	2	1	1	2	2	5	2	...	20	
Troops marching, Bengal	14	3	5	...	...	3	...	...	...	1	18	33	77	...	...	...	...	...	...	...	...	...	...	...	...	1
Troops marching, Punjab	6	...	1	1	5	6	27	46	...	1	1
Troops marching, Madras	5	3	1	1	1	...	...	...	...	...	...	15	26	...	...	...	...	...	...	...	...	...	...	...	...	...
Deolali Depôt	11	7	16	4	3	6	7	9	6	39	43	96	247	...	...	...	...	...	...	...	...	...	...	...	...	1
Poonamallee Depôt	2	13	20	4	12	3	8	3	4	6	10	12	97	...	...	...	...	...	...	...	...	...	...	...	...	1
EXTRA INDIA. Aden	68	58	93	94	157	130	68	26	38	27	21	42	824	1	...	4	3	3	5	4	1	...	...	...	...	21
INDIA	781	537	641	769	1,053	969	1,359	1,251	1,046	3,841	3,034	2,498	18,679	19	23	37	50	45	53	133	106	76	125	49	51	766	
BENGAL	255	163	193	253	284	276	521	404	612	977	748	413	5,090	5	5	10	18	17	16	88	51	32	37	20	22	321	
PUNJAB	132	76	110	148	245	254	349	354	600	1,364	1,087	849	5,568	3	3	3	8	11	23	26	35	21	56	17	12	318	
MADRAS	195	144	116	137	213	162	230	285	347	552	449	408	3,205	1	6	12	9	6	5	5	7	14	23	7	10	105	
BOMBAY	199	154	222	231	311	277	253	218	357	948	759	828	4,807	10	9	12	15	11	9	13	13	9	9	5	7	122	

TABLE XII.

PNEUMONIA by months, stations, groups, and commands.

TABLE XIII.

DYSENTERY by months, stations, groups, and commands.

STATIONS *AND GROUPS.	ADMISSIONS FROM PNEUMONIA IN EACH MONTH.												ADMISSIONS FROM DYSENTERY IN EACH MONTH.														
	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	...	...	...	...	...	...	...	...	...	...	...	...	1
Rangoon	1	...	...	...	...	...	...	...	...	...	...	...	1	5	1	...	1	3	10	11	3	1	1	2	5	44
GROUP I.—BURMA COAST AND BAY ISLANDS	1	...	...	...	...	...	...	...	...	...	...	...	1	5	1	...	1	3	10	11	3	1	1	2	5	45
Thayetmyo . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	1
Meiktila . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	1	...	...	4
Fort Dufferin . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	1	2	...	2	...	1	5	3	3	4	4	2	2	28
Shwebo . . . . .	...	...	...	...	...	...	...	...	...	2	...	...	2	...	...	...	1	1	1	...	1	...	...	...	1	5
GROUP II.—BURMA INLAND . . . . .	...	1	...	...	...	...	...	...	...	2	...	3	6	3	...	3	...	2	6	5	3	6	5	2	3	38
Fort William	5	4	...	...	...	...	...	...	...	1	...	...	10	9	...	1	...	1	3	...	3	2	1	9	29	
Dum-Dum . . . . .	...	2	...	...	...	...	...	...	...	1	...	1	4	1	...	2	3	6	2	9	2	8	5	1	5	44
Barrackpore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	6	2	2	2	1	8	7	5	6	...	4	7	50
GROUP IV.—BENGAL AND ORISSA	5	6	...	...	...	...	...	...	...	2	...	1	14	16	2	4	6	7	11	19	7	17	7	6	21	123
B																											
Dinapore . . . . .	...	...	...	...	...	...	2	1	...	...	...	...	3	...	2	1	5	4	...	2	4	2	3	3	1	27
Benares . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	1	1	1	1	...	...	7
Allahabad . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	2	3	1	3	1	...	1	...	...	2	2	1	4	15
Fort Allahabad . . . . .	...	...	...	...	...	2	...	...	...	...	...	...	2	...	...	...	...	2	...	...	...	...	...	1	...	3
Fyzabad . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	2	...	...	...	...	...	...	1	1	8
Sitapur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Lucknow	4	1	1	...	...	1	2	...	...	...	...	1	10	5	3	4	6	4	3	5	4	1	1	7	4	47
Cawnpore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	2	...	...	...	5
Fatehgarh . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	1	2	1	...	...	...	...	...	...	...	...	...	...	3
GROUP V.—GANGETIC PLAIN, AND CHITIA NAAGPUR	4	1	2	...	...	2	4	2	1	1	...	1	18	13	8	10	14	9	6	8	9	8	9	13	12	119
A																											
Shahjahanpur	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	1
Bareilly	2	...	1	...	1	...	...	...	...	1	...	...	5	12	3	2	2	1	...	2	1	2	1	7	7	40
Roorkee . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	1	...	...	2	...	7
Meerut . . . . .	...	1	...	...	...	1	...	...	1	1	...	...	4	3	2	4	1	...	2	3	1	2	1	2	2	23
Delhi . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	1	3	1	4	...	...	...	12
Umballa	4	2	3	2	...	...	...	1	...	...	2	...	14	8	7	4	1	4	1	2	3	7	8	10	3	64
B																											
Jullundur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	2	5
Ferozepore	1	2	...	1	...	...	...	...	...	...	...	1	5	3	1	2	...	2	2	1	...	3	3	10	10	37
Amritsar . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	...	4
Moran Meer	1	1	1	...	...	...	...	...	...	...	...	1	4	...	2	1	...	1	1	...	...	2	...	1	6	14
Fort Lahore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	5
Sialkot . . . . .	...	...	...	...	...	1	...	...	...	...	...	...	1	2	...	...	...	1	...	...	...	1	...	...	...	5
Rawalpindi	3	4	1	2	...	1	2	2	...	2	2	...	19	4	...	3	1	3	5	1	...	3	5	6	3	34	
Campbellpur	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	...	...	...	...	...	4
Attock . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
GROUP VI.—UPPER SUB-HIMALAYA	13	9	6	6	...	2	4	2	1	1	4	6	54	33	15	17	8	18	14	11	9	22	27	45	36	256	
A																											
Nowshera . . . . .	...	1	1	...	...	...	...	...	...	...	...	...	2	2	...	1	...	1	1	1	1	1	2	1	...	11
Peshawar	3	...	1	1	...	...	...	...	...	...	...	2	7	1	1	...	1	...	1	4	1	2	2	3	...	18
Mooltan	3	2	...	...	...	...	...	...	...	1	...	...	6	...	...	6	1	...	...	...	1	...	...	...	2	11
C																											
Hyderabad . . . . .	...	1	...	1	...	...	...	1	...	...	...	...	3	...	...	...	...	...	...	...	...	1	...	...	...	1
Kurrachee	9	9	...	1	...	...	...	...	...	...	...	...	19	...	...	1	3	...	...	...	1	5	...	1	13	24
GROUP VII.—N.-W. FRONTIER, INDUS VALLEY, AND N.-W. RAJPUTANA	15	13	2	3	...	...	...	1	...	1	...	2	37	3	1	3	4	7	3	5	3	10	4	5	17	65
A																											
Deesa . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	2
Ahmedabad . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2	2	3	3	...	...	2	14
B																											
Neemuch . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	5	2	...	...	4	2	2	...	...	16
Nasirabad	1	2	1	...	2	...	...	...	...	...	...	...	6	2	1	2	4	2	1	3	4	7	4	10	1	41
Mettra . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	3
Agra	1	1	1	...	...	1	1	...	...	...	...	...	5	3	1	1	2	2	...	...	4	2	4	1	3	23
Jhansi	1	2	1	3	...	...	...	...	...	...	...	...	7	6	7	2	5	2	...	...	3	5	1	1	5	37
Nowgong . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	4
Indore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	4
Mhow	3	1	...	...	...	...	...	...	...	...	...	2	6	2	1	1	2									

TABLE XII—concluded.

PNEUMONIA by months, stations, groups, and commands.

TABLE XIII—concluded.

DYSENTERY by months, stations, groups, and commands.

STATIONS, GROUPS, AND COMMANDS.	ADMISSIONS FROM PNEUMONIA IN EACH MONTH.												ADMISSIONS FROM DYSENTERY IN EACH MONTH.													
	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																										
Saugor	1	1	1	1	12
Jubbulpore	1	...	1	1	27
Kamptee . . . . .	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	25
B																										
Secunderabad	1	...	...	...	1	...	1	1	1	...	...	5	4	4	4	4	6	9	22	35	20	4	2	1	115
Belgam	1	...	...	...	...	...	...	...	1	...	...	2	...	6	7	1	8	3	2	3	1	4	4	1	39
Satara . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
Poona	2	...	3	...	...	...	...	...	...	...	...	5	...	...	...	6	2	4	11	23	11	8	7	3	76
Kirkee . . . . .	...	...	...	1	...	...	...	...	...	...	...	1	...	3	2	...	1	2	...	4	7	3	3	...	25
Ahmednagar . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	2	...	2	14	2	1	...	26
GROUP IX.—DECCAN	4	...	4	1	1	...	1	1	2	...	...	15	16	16	16	18	25	26	43	92	49	30	19	6	346
Colaba	1	...	...	1	...	...	...	...	...	...	...	2	6	3	2	1	2	1	1	10	3	1	...	1	31
Cannanore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	3
Calicut . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2	1	...	5
GROUP X.—WESTERN COAST	1	...	...	1	...	...	...	...	...	...	...	2	6	3	3	1	5	1	1	10	4	3	1	1	39
A																										
Bellary . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	5	2	...	...	2	1	...	2	...	...	2	15
Bangalore . . . . .	...	...	...	...	1	...	...	...	...	...	...	1	4	...	4	...	...	...	4	1	4	...	2	1	20
Pallavaram . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	3
St. Thomas' Mount	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...	...	...	2
Madras . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
GROUP XI.—SOUTHERN INDIA	1	...	...	...	1	...	...	...	...	...	...	2	5	5	6	...	1	2	7	2	7	...	2	4	41
Ranikhet . . . . .	...	...	1	...	...	...	...	...	...	...	...	1	2	...	6	3	5	1	3	1	...	...	...	2	23
Chaubuttia . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2
Chakrata . . . . .	...	...	1	...	3	...	1	...	...	...	...	5	...	...	...	...	...	...	1	...	1	...	...	...	2
Lebong . . . . .	...	...	...	...	1	...	...	...	...	...	1	2	...	...	...	...	...	1	1	...	...	...	...	...	2
Solon . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	1	1	...	...	...	...	5
Dagshai . . . . .	...	...	...	1	1	...	...	...	...	...	...	2	...	1	...	3	3	...	3	2	...	...	1	1	14
Subathu . . . . .	...	...	...	1	1	...	2	...	...	...	...	4	...	...	...	3	2	...	4	2	1	3	...	...	15
Jutogh . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	2
Khyragully . . . . .	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Baragully . . . . .	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuldunnah . . . . .	...	...	...	...	...	...	...	2	...	...	...	2	...	...	...	1	1	2	2	3	1	1	...	...	11
Camp Gharial . . . . .	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	1	...	...	3
Thobba . . . . .	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Upper Topa . . . . .	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	2	...	...	...	...	...	...	...	...
Lower " . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Khanspur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Cherat . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	1	...	...	4
Quetta	1	...	2	...	1	2	1	7	1	1	1	1	1	5	7	3	1	21
GROUP XII a.—HILL STATIONS	...	1	2	3	8	4	...	4	...	2	2	2	28	3	1	6	13	19	7	20	10	8	13	4	4	108
Darjeeling . . . . .	...	...	...	...	1	...	...	...	...	...	...	1	...	...	1	1	1	2	...	...	1	2	...	...	8
Nami Tal . . . . .	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Landour . . . . .	...	...	1	...	1	...	...	...	...	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	1
Kasauli . . . . .	...	...	1	1	...	2	1	...	...	...	...	5	...	...	...	1	1	2	4	3	1	2	...	...	12
Dalhousie . . . . .	...	...	...	2	...	1	...	...	...	...	...	3	...	...	...	2	1	...	...	1	2	2	...	...	8
Taragarh . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	2	1	...	...	...	6
Mount Abu . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	1	3	...	...	7
Purandhur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Khandalla . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
Wellington	1	...	...	...	1	...	...	...	...	...	...	2	1	1	...	...	1	4	3	...	1	...	1	1	13
GROUP XII b.—HILL CONVALESCENT DEPÔTS, AND SANITARIA	1	...	2	3	4	3	1	...	...	...	...	14	1	1	1	6	6	8	8	8	8	8	1	3	59
Troops marching, (Bengal	3	1	...	4	3	1	3	11	18
(Punjab . . . . .	...	2	...	...	...	...	...	...	...	...	...	2	...	1	...	...	1	...	...	...	...	1	...	...	4
(Madras	2	4	1	2	1	1	11
(Bombay . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Deolali Depôt . . . . .	...	...	4	...	...	1	...	...	1	...	...	6	...	9	4	...	...	3	1	2	...	2	...	...	23
Poonamaltee Depôt . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	1	2	...	3	1	...	...	12
EXTRA INDIA.																										
Aden . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	4	1	...	...	2	9	11	5	8	2	4	47
INDIA	51	41	36	20	16	13	11	10	4	10	9	16	227	127	82	86	92	113	103	163	208	169	142	125	151	1,561
BENGAL	17	10	8	4	7	4	6	3	1	4	3	4	71	63	26	35	36	35	32	41	35	42	39	37	66	437
PUNJAB	16	14	8	10	4	7	4	5	1	3	2	8	82	30	13	13	19	35	18	27	17	26	34	30	34	205
MADRAS	5	1	3	...	1	1	2	2	...	3	18	21	21	23	5	26	34	52	40	40	17	16	18	322
BOMBAY	13	16	10	6	2	2	...	1	...	1	4	1	50	23	22	15	20	17	19	43	110	61	53	33	33	457

TABLE XV.

A.—STRENGTH, ADMISSIONS from ALL CAUSES, ADMISSIONS from ENTERIC FEVER, of the Army of India in 1900, in relation to AGE and LENGTH of RESIDENCE in INDIA.

	BY AGE.						BY LENGTH OF RESIDENCE.						
	Under 20.	20 and less than 25.	25 and less than 30.	30 and less than 35.	35 and less than 40.	40 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.	10 years and upwards.
Strength	1,369	25,689	25,235	5,480	1,500	511	2,892	9,679	10,360	9,486	8,830	15,851	2,686
Per cent. of total	2	43	42	9	3	1	5	16	17	16	15	27	4
1895-99	3	52	35	7	2	1	18	18	17	16	12	15	3
Admissions from all causes	1,500	34,681	28,494	3,484	636	290	3,840	13,939	13,544	10,749	8,290	17,343	1,380
Admissions from Enteric Fever	26	594	304	33	7	1	88	274	212	112	107	165	7
All causes per 1,000	1095.7	1,350.0	1,129.1	635.8	424.0	567.5	1,327.8	1,440.1	1,307.3	1,133.1	938.8	1,094.1	513.8
Enteric Fever per 1,000	19.0	23.1	12.0	6.0	4.7	2.0	30.4	28.3	20.5	11.8	12.1	10.4	2.6
Liability to Enteric Fever	28.44	34.58	17.96	8.98	7.04	2.99	26.18	24.38	17.66	10.16	10.42	8.96	2.24
Enteric Fever per cent. of all causes	1.73	1.71	1.07	.95	1.10	.34	2.29	1.97	1.57	1.04	1.29	.95	.51

NOTE.—Marching returns and returns wherein the classification by age and service was omitted have been excluded. Details of age and service of men admitted for enteric fever on the march are not available.

B.—CHANGE of PERSONNEL, YOUTHFULNESS, RECENT ARRIVAL, and MARRIAGE, in relation to VENEREAL DISEASE and ENTERIC FEVER.

YEAR.	ARRIVED IN INDIA.*		YEAR.	PER CENT. OF STRENGTH.			Strength.	RATIO PER 1,000.			RATIO PER CENT. OF TOTAL ADMISSION.	
	Men.	Women.		Age.	Length of residence.	Married. †		Admissions.			Venereal Diseases.	Enteric Fever.
								All causes.				
								Under 25 years.	Under 5 years.	Enteric Fever.		
1870-71	8,805	826	1870	...	...	...	54,578	1,645.4	191.2	3.1	11.62	.19
1871-72	9,134	920	1871	40	...	11.19	56,806	1,440.6	196.8	3.6	13.58	.25
1872-73	8,271	809	1872	39	...	11.32	58,870	1,497.0	179.0	3.8	11.96	.25
1873-74	8,680	816	1873	39	...	11.26	58,769	1,328.1	166.7	3.6	12.55	.27
1874-75	7,840	673	1874	38	...	11.10	59,308	1,357.7	192.7	4.1	14.20	.30
1875-76	7,568	752	1875	36	...	10.80	58,409	1,337.8	205.1	2.8	15.33	.21
1876-77	8,170	591	1876	33	...	10.37	57,858	1,361.5	189.9	4.6	13.95	.34
1877-78	9,113	482	1877	33	56	9.70	57,260	1,257.3	208.5	4.1	16.59	.32
1878-79	13,113	575	1878	35	60	7.59	56,475	1,651.3	271.3	8.5	16.43	.51
1879-80	13,342	612	1879	39	61	6.63	59,082	1,871.2	234.8	8.0	12.55	.43
1880-81	13,165	664	1880	41	65	6.36	59,717	1,754.2	249.7	7.9	14.23	.45
1881-82	9,895	349	1881	43	70	5.94	58,728	1,604.6	260.5	5.6	16.23	.35
1882-83	9,748	325	1882	41	72	5.43	57,269	1,444.9	265.2	6.2	18.35	.43
1883-84	12,525	433	1883	41	75	5.20	55,325	1,335.7	270.3	7.7	20.23	.58
1884-85	11,822	303	1884	45	75	5.05	54,996	1,513.4	293.9	11.7	19.42	.77
1885-86	17,766	508	1885	48	73	4.23	56,967	1,532.7	342.7	11.2	22.36	.73
1886-87	11,645	374	1886	52	75	3.90	61,015	1,513.9	389.5	18.1	25.73	1.20
1887-88	11,729	459	1887	52	73	3.84	63,515	1,369.7	361.2	12.7	26.37	.93
1888-89	12,407	506	1888	50	76	3.65	68,887	1,381.7	370.6	13.6	26.82	.99
1889-90	12,270	532	1889	49	78	3.60	69,266	1,498.0	481.5	22.9	32.14	1.53
1890-91	14,046	542	1890	50	80	3.70	67,823	1,520.2	503.5	18.5	33.12	1.22
1891-92	15,456	529	1891	51	79	3.36	67,030	1,379.1	400.7	20.4	29.06	1.48
1892-93	15,894	540	1892	51	80	3.29	68,137	1,517.3	409.9	22.1	27.01	1.46
1893-94	15,090	482	1893	53	79	3.20	70,091	1,414.9	466.0	20.0	32.94	1.41
1894-95	15,957	517	1894	54	81	...	71,082	1,508.0	511.4	20.9	33.91	1.38
1895-96	14,346	654	1895	55	83	...	71,031	1,461.8	522.3	26.3	35.73	1.80
1896-97	14,805	545	1896	56	82	...	70,484	1,386.7	511.6	25.5	36.89	1.84
1897-98	16,227	543	1897	55	84	...	68,395	1,556.9	485.7	32.4	31.20	2.08
1898-99	16,911	648	1898	54	81	...	67,741	1,436.9	362.9	36.9	25.26	2.57
1899-1900	3,369	168	1899	53	78	...	67,697	1,148.7	313.4	20.6	27.28	1.79
1900-1901	5,058	185	1900	45	69	...	60,553	1,143.2	298.1	16.0	26.07	1.40

* In ordinary years the departures plus the deaths nearly balance the arrivals.

† Return abolished.

‡ On the 1st May of each year.

TABLE XVI.

RELATION of MORTALITY to AGE and LENGTH of RESIDENCE in INDIA.

CAUSES OF DEATH.	A.—AGE.										B.—LENGTH OF RESIDENCE IN INDIA.															
	(a) DIED PER 1,000.					(b) LIABILITY IN PERCENTAGES.					(g) DIED PER 1,000.					(h) LIABILITY IN PERCENTAGES.										
	Under 20.	20 and less than 25.	25 and less than 30.	30 and less than 35.	35 and less than 40.	40 and upwards.	Under 20.	20 and less than 25.	25 and less than 30.	30 and less than 35.	35 and less than 40.	40 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.	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.	10 and upwards.
Enteric Fever . . .	2'02	6'85	3'65	2'01	3'33	...	16	37	19	11	18	...	2'95	9'20	6'08	3'27	3'17	3'15	1'49	23	27	18	10	9	4	4
Cholera . . .	2'92	1'28	1'76	'01	1'33	1'96	29	13	17	9	13	19	2'07	2'07	1'16	1'48	1'36	1'39	'74	20	20	11	14	13	14	7
Dysentery . . .	'73	'86	'75	'91	1'33	1'96	11	13	12	14	20	30	'69	'83	'87	'74	'68	1'01	1'12	12	14	15	12	11	17	19
Intermittent and Remittent Fevers . . .	'73	'93	'87	'18	...	...	27	34	32	7	...	...	'69	1'03	'97	'42	'45	1'14	...	15	22	21	9	10	24	...
Alcoholism . . .	...	'08	'04	'18	...	...	...	27	13	60	...	...	...	...	'19	'11	...	'06	...	...	...	53	31	17	...	...
Tubercle of the lungs . . .	...	'47	'48	'91	1'33	...	...	15	15	29	42	...	1'04	'31	'29	'63	'45	'50	1'49	22	7	6	13	10	11	32
Nervous Diseases . . .	'73	'41	'22	'55	...	1'96	18	11	7	24	...	50	...	'32	'58	'21	'34	'32	'74	...	19	21	8	13	12	27
Circulatory Diseases . . .	...	'16	'83	1'09	...	3'91	...	3	14	18	...	65	...	'21	'19	'42	'57	1'07	1'12	...	6	5	12	16	30	31
Pneumonia . . .	...	'35	'41	'73	...	...	...	24	27	49	...	...	1'38	'21	'10	'53	'45	'38	'37	40	6	3	15	13	11	11
Other Respiratory Diseases . . .	...	'04	'20	...	...	...	...	17	83	...	...	...	'35	'21	...	...	'11	'13	...	44	26	...	...	14	16	...
Abscess of the liver . . .	...	1'28	2'10	1'46	...	...	...	26	43	30	...	...	1'04	1'96	1'45	1'27	1'47	2'02	...	11	21	16	14	16	22	...
Urinary Diseases . . .	...	'68	'68	'36	'67	...	...	7	7	30	56	...	'35	'21	...	...	'19	'37	31	19	...	...	...	...	17	33
All Diseases . . .	9'50	14'01	12'56	10'77	9'33	13'70	14	20	18	15	13	20	16'94	18'29	13'32	9'49	9'07	12'87	8'94	19	20	15	11	11	14	10
Heat-stroke . . .	...	'54	'55	'91	3'33	3'91	...	6	6	10	36	42	1'04	'62	'77	'63	'23	'76	1'12	20	12	13	12	4	15	22
Suicide . . .	...	'27	'20	'18	...	...	...	42	31	28	...	...	'35	'10	'39	'32	'11	'19	...	24	7	27	22	8	13	...
Other injuries . . .	...	'51	1'07	'55	1'33	...	...	15	31	16	35	...	'35	'62	'58	'63	'79	1'01	1'12	7	12	11	12	15	20	22
All Causes . . .	9'50	15'34	14'38	12'41	14'00	17'61	11	18	17	15	17	21	18'67	19'63	15'06	11'07	11'10	14'83	11'17	18	19	15	11	11	15	11
	(c) NUMBER OF DEATHS.					(d) COMPOSITION OF 100 DEATHS AT EACH AGE.					(i) NUMBER OF DEATHS.					(j) COMPOSITION OF 100 DEATHS IN EACH PERIOD OF RESIDENCE.										
Enteric Fever . . .	4	176	92	11	5	...	31	45	25	16	24	...	23	89	63	31	28	50	4	43	47	40	20	29	21	13
Cholera . . .	4	33	43	5	2	1	31	8	12	7	10	11	6	20	12	14	12	22	2	11	11	8	13	12	9	7
Dysentery . . .	1	22	20	5	2	1	8	6	6	7	10	11	2	8	9	7	6	16	3	4	4	6	7	6	7	10
Intermittent and Remittent Fevers . . .	1	24	22	1	...	...	8	6	6	1	...	...	2	10	10	4	4	18	...	4	5	7	4	4	8	...
Alcoholism . . .	...	2	1	1	...	...	...	1	1	1	...	...	...	...	2	1	...	1	...	...	...	1	1	...	...	...
Tubercle of the lungs . . .	...	12	12	5	2	...	...	3	3	7	10	...	3	3	3	6	4	8	4	6	2	2	6	4	3	13
Nervous Diseases . . .	1	11	7	3	...	...	8	3	3	4	...	11	...	5	6	2	3	5	2	...	3	4	2	3	2	7
Circulatory Diseases . . .	...	4	21	6	...	2	...	1	6	9	...	22	...	2	2	4	5	17	3	...	1	1	4	5	7	10
Pneumonia . . .	...	5	10	4	...	...	...	2	3	6	...	...	4	2	1	5	4	6	1	7	1	1	5	4	3	3
Other Respiratory Diseases . . .	...	1	5	...	...	...	...	...	1	...	...	...	1	2	...	...	1	2	...	2	1	...	...	1	1	...
Abscess of the liver . . .	...	33	53	8	...	...	...	8	15	12	...	...	3	19	15	12	13	32	...	6	10	10	11	13	14	...
Urinary Diseases . . .	...	2	2	2	1	...	...	1	1	3	5	...	1	2	...	...	...	3	1	2	1	...	...	...	1	3
All Diseases . . .	13	360	317	59	14	7	...	...	...	...	...	...	49	177	135	90	88	204	24	...	...	...	...	...	...	...
Heat-stroke . . .	...	14	14	5	5	2	...	4	4	7	24	22	3	6	8	6	2	12	3	6	3	5	6	2	5	10
Suicide . . .	...	7	5	1	...	...	...	2	1	1	...	...	1	1	4	3	1	3	...	2	1	3	3	1	1	...
Other injuries . . .	...	13	27	3	2	...	...	3	7	4	10	...	1	6	6	6	7	16	3	2	3	4	6	7	7	10
All Causes . . .	13	394	363	68	21	9	100	100	100	100	100	100	54	190	150	105	98	235	30	100	100	100	100	100	100	100
	(e) NUMBER OF DEATHS.					(f) PERCENTAGE AT EACH AGE TO TOTAL NUMBER.					(k) NUMBER OF DEATHS.					(l) PERCENTAGE IN EACH PERIOD OF RESIDENCE TO TOTAL NUMBER.										
Enteric Fever . . .	4	176	92	11	5	...	1	61	32	4	2	...	23	89	63	31	28	50	4	8	31	22	11	10	17	1
Cholera . . .	4	33	43	5	2	1	5	37	49	6	2	1	6	20	12	14	12	22	2	7	23	14	16	14	25	2
Abscess of the liver . . .	...	33	53	8	...	...	...	35	50	9	...	...	3	19	15	12	13	32	...	3	20	16	13	14	34	...
Suicide . . .	...	7	5	1	...	...	...	54	38	8	...	...	1	1	4	3	1	3	...	8	8	31	23	8	23	...
All Causes . . .	13	394	363	68	21	9	1	45	42	8	2	1	54	190	150	105	98	235	30	6	22	18	12	11	27	3

NOTE.—Marching returns and returns wherein the classification by age and service was omitted have been excluded.

TABLE XVII.

RELATION of INVALIDING to AGE and LENGTH of RESIDENCE in INDIA.

CAUSES OF INVALIDING.	A.—AGE.										B.—LENGTH OF RESIDENCE IN INDIA.															
	(a) INVALIDED PER 1,000.					(b) LIABILITY IN PERCENTAGES.					(g) INVALIDED PER 1,000.					(h) LIABILITY IN PERCENTAGES.										
	Under 20.	20 and less than 25.	25 and less than 30.	30 and less than 35.	35 and less than 40.	40 and upwards.	Under 20.	20 and less than 25.	25 and less than 30.	30 and less than 35.	35 and less than 40.	40 and upwards.	Under 1	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.	10 and upwards.	Under 1	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.	10 and upwards.
Dysentery . . .	'73	1'52	'94	'55	...	20	41	25	15	...	...	2'42	2'07	1'16	'53	'79	'88	'37	29	25	14	6	10	11	5	
Intermittent and Remittent Fevers	2'92	4'36	2'22	2'01	3'33	3'91	16	23	12	11	18	21	12'16	3'82	2'12	2'74	2'94	2'02	4'47	40	13	7	9	10	7	15
Veneral Diseases	...	7'05	7'05	3'10	1'33	...	...	38	35	17	7	...	6'57	6'41	7'05	6'54	6'12	6'62	1'12	16	16	17	16	15	16	3
Debility . . .	7'30	3'46	2'58	4'56	1'33	15'66	16	8	6	10	25	35	5'88	4'05	2'70	2'95	1'81	3'72	7'82	20	16	9	10	6	13	20
Rheumatism . . .	...	1'17	1'19	1'46	'67	3'91	...	14	14	17	8	47	1'73	1'55	'87	1'37	'68	1'14	1'86	19	17	9	15	7	12	20
Tubercle of the lungs . . .	...	1'44	1'70	1'46	2'67	...	...	20	23	20	37	...	2'07	1'45	1'35	1'05	2'15	1'70	'74	20	14	13	10	20	16	7
Mental Diseases . . .	...	1'40	1'27	1'28	1'33	...	...	27	24	24	25	...	4'50	1'90	'87	'84	'79	1'26	'37	42	19	8	8	7	12	3
Epilepsy . . .	...	'74	'52	'18	...	...	...	51	30	12	...	...	'69	'83	'19	'74	'79	'38	'37	17	24	5	19	20	10	9
Other Nervous Diseases . . .	...	'35	'63	'55	1'33	1'96	...	7	13	11	28	41	'69	'72	'29	'11	'45	'63	1'49	16	16	7	3	10	14	34
Eye, ear, and nose Diseases . . .	4'38	2'96	1'19	'18	'67	...	47	32	13	2	7	...	6'22	3'41	1'93	1'69	'91	1'14	'37	40	22	12	11	6	7	2
Palpitation . . .	1'46	3'11	'87	'18	'67	...	23	49	14	3	11	...	4'50	3'93	2'32	1'16	'91	'69	'37	32	28	17	8	7	5	3
Valvular disease of the heart . . .	1'46	1'71	1'39	1'46	1'33	...	20	23	20	20	18	...	4'84	1'96	1'16	'84	1'47	1'45	'74	39	16	9	7	12	12	6
Other Circulatory Diseases . . .	...	'58	'95	'36	...	...	31	50	19	...	...	...	1'38	'31	'58	'42	'79	'95	'74	27	6	11	8	15	18	14
Respiratory Diseases . . .	...	'90	'67	'55	1'33	3'91	...	12	9	7	18	53	1'73	1'14	'97	'32	'57	'82	...	31	21	17	6	10	15	...
Hepatitis and Abscess of the liver . . .	...	1'05	1'11	1'09	3'33	3'91	...	10	11	10	32	37	2'77	1'86	'77	'42	'45	1'32	1'86	29	20	8	4	5	14	20
Locomotive Diseases . . .	...	1'32	'67	'36	...	...	...	86	29	15	...	...	1'73	1'86	'87	'63	'79	'44	'37	26	28	13	9	12	7	6
Injuries . . .	'73	2'18	1'35	'73	'67	1'96	10	29	18	10	9	26	1'73	3'20	1'16	1'27	'79	1'77	'74	16	30	11	12	7	17	7
All Causes . . .	20'45	39'47	30'47	21'90	34'00	48'92	10	20	16	11	17	25	66'04	47'53	29'83	27'09	26'05	30'66	27'55	26	19	12	11	10	12	11
	(c) NUMBER INVALIDED.					(d) COMPOSITION OF 100 INVALIDINGS AT EACH AGE.					(i) NUMBER INVALIDED.					(j) COMPOSITION OF 100 INVALIDINGS IN EACH PERIOD OF RESIDENCE.										
Dysentery . . .	1	39	23	3	...	4	4	3	2	...	...	7	20	12	5	7	14	1	4	4	4	2	3	3	1	
Intermittent and Remittent Fevers	4	112	56	11	5	2	14	11	7	9	10	8	35	37	22	26	26	32	12	18	8	7	10	11	7	16
Veneral Diseases	...	181	178	17	2	...	...	18	23	14	4	...	19	62	73	62	54	105	3	10	13	24	24	23	22	4
Debility . . .	10	89	65	25	17	8	36	9	8	21	33	32	17	45	22	28	16	59	21	9	10	9	11	7	12	28
Rheumatism . . .	...	30	30	8	1	2	...	3	4	7	2	8	5	15	9	13	6	18	5	3	3	3	5	3	4	7
Tubercle of the lungs . . .	...	37	43	8	4	...	...	4	6	7	8	...	6	14	14	10	19	27	2	3	3	5	4	8	6	3
Mental Diseases . . .	...	36	32	7	2	...	...	4	4	6	4	...	13	19	9	8	7	20	1	7	4	3	3	3	4	1
Epilepsy . . .	...	19	13	1	...	...	...	2	2	1	...	...	2	8	2	7	7	6	1	1	2	1	3	3	1	1
Other Nervous Diseases . . .	...	9	16	3	2	1	...	1	2	2	4	4	2	7	3	1	4	16	4	1	2	1	...	2	2	5
Eye, ear, and nose Diseases . . .	6	76	30	1	1	...	21	7	4	1	2	...	18	33	20	16	8	18	1	9	7	6	6	3	4	1
Palpitation . . .	2	80	22	1	1	...	7	8	3	1	2	...	13	28	24	11	8	11	1	7	8	8	4	3	2	1
Valvular disease of the heart . . .	2	44	35	8	2	...	7	4	5	7	4	...	14	19	12	8	13	23	2	7	4	4	3	6	5	3
Other Circulatory Diseases . . .	...	15	24	2	...	...	...	1	3	2	...	...	4	3	6	4	7	15	2	2	1	2	2	3	3	3
Respiratory Diseases . . .	...	23	17	3	2	2	...	2	2	2	4	8	5	11	10	3	5	13	...	3	2	3	1	2	3	...
Hepatitis and Abscess of the liver . . .	...	27	28	6	5	2	...	3	4	5	10	8	8	18	8	4	4	21	5	4	4	3	2	2	4	7
Locomotive Diseases . . .	...	34	17	2	...	...	...	3	2	2	...	...	5	18	9	6	7	7	1	3	4	3	2	3	1	1
Injuries . . .	1	56	34	4	1	1	4	6	4	3	2	4	5	31	12	12	7	28	2	3	7	4	5	3	6	3
All Causes . . .	28	1,014	769	120	51	25	100	100	100	100	100	100	191	460	309	257	230	486	74	100	100	100	100	100	100	100
	(e) NUMBER INVALIDED.					(f) PERCENTAGE AT EACH AGE TO TOTAL NUMBER.					(k) NUMBER INVALIDED.					(l) PERCENTAGE IN EACH PERIOD OF RESIDENCE TO TOTAL NUMBER.										
Intermittent and Remittent Fevers	4	112	56	11	5	2	2	50	29	6	3	1	35	37	22	26	26	32	12	18	19	12	14	14	17	6
Veneral Diseases	...	181	178	17	2	...	...	48	47	4	1	...	19	62	73	62	54	105	3	5	10	19	16	14	28	8
Debility . . .	10	89	65	25	17	8	5	42	30	12	8	4	17	45	28	28	16	59	21	8	21	13	13	7	28	10
All Causes . . .	28	1,014	769	120	51	25	1	51	38	6	3	1	191	460	309	257	230	486	74	10	23	15	13	11	24	4

NOTE.—Marching returns and returns wherein the classification by age and service was omitted have been excluded.

TABLE XVIII.

STATISTICS OF OFFICERS.

A.—SICKNESS and MORTALITY among OFFICERS of the BRITISH ARMY in 1900. (From the medical returns of the army.)

	RATIOS PER 1,000 OF STRENGTH.						ACTUALS.					
	Bengal.	Punjab.	Madras.	Bombay.	India.	Field.	Bengal.	Punjab.	Madras.	Bombay.	India.	Field.
STRENGTH . . . . .	...	...	...	...	...	...	571	455	303	451	1,780	57
CONSTANTLY SICK	31'0	29'9	34'5	28'1	30'6	31'9	17'70	13'59	10'46	12'69	54'44	1'82
INVALIDS	80'6	68'1	66'0	95'3	78'7	...	46	31	20	43	140	...
CASES REMAINING FROM 1899 . . . . .	...	...	...	...	...	...	11	11	5	10	37	...
ADMISSIONS	854'6	720'9	891'1	800'4	812'9	561'4	488	328	270	361	1,447	32
Influenza	28'0	13'2	9'9	2'2	14'6	17'5	16	6	3	1	26	1
Cholera . . . . .	...	...	...	6'7	1'7	...	...	...	...	3	3	...
Small-pox	1'8	4'4	3'3	4'4	3'4	...	1	2	1	2	6	...
Enteric Fever	22'8	24'2	23'1	17'7	21'9	17'5	13	11	7	8	39	1
Intermittent Fever	275'0	213'2	184'8	241'7	235'4	35'1	157	97	56	109	419	2
Remittent Fever	19'3	22'0	30'6	39'9	28'7	17'5	11	10	12	18	51	1
Simple Continued Fever	50'8	19'8	82'5	77'6	55'1	17'5	29	9	25	35	98	1
Tubercle of the lungs . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia	1'8	2'2	...	2'2	1'7	...	1	1	...	1	3	...
Other Respiratory Diseases	15'8	15'4	16'5	11'1	14'6	140'4	9	7	5	5	26	8
Dysentery	29'8	30'8	33'0	13'3	26'4	87'7	17	14	10	6	47	5
Diarrhoea	33'3	39'6	6'6	35'5	30'9	52'6	19	18	2	16	55	3
Hepatic Abscess . . . . .	...	2'2	...	2'2	1'1	...	...	1	...	1	2	...
„ Congestion and Inflammation	19'3	13'2	36'3	46'6	27'5	...	11	6	11	21	49	...
Venerable Diseases	7'0	...	29'7	8'9	9'6	...	4	...	9	4	17	...
DEATHS	7'01	8'79	13'20	10'96	11'80	...	4	4	4	9	21	...
Cholera . . . . .	...	...	...	6'65	1'69	...	...	...	...	3	3	...
Small-pox . . . . .	...	...	...	2'22	'56	...	...	...	...	1	1	...
Enteric Fever	1'75	6'59	9'90	2'22	4'49	...	1	3	3	1	8	...
Intermittent Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Remittent Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Simple Continued Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Heat-stroke . . . . .	...	...	...	2'22	'56	...	...	...	...	1	1	...
Circulatory Diseases . . . . .	...	...	3'30	2'22	1'12	...	...	...	1	1	2	...
Tubercle of the lungs . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Other Respiratory Diseases . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea . . . . .	...	...	...	...	...	...	...	...	...	...	...	...
Hepatic Abscess . . . . .	...	2'20	...	2'22	1'12	...	...	1	...	1	2	...
DEATHS OUT OF HOSPITAL . . . . .	...	...	...	...	...	...	...	...	...	...	...	...

B.—CAUSES of DEATH among OFFICERS of the BRITISH and INDIAN ARMIES in 1900. (From non-medical sources.)

ARMIES.	Strength in India, whether on leave or not, on the 1st of July.		IN INDIA.													Deaths in England and other countries.		GRAND TOTAL.	Ratio per 1,000.		
	Strength in Europe or beyond sea on 1st July, 1900, whether on furlough or sick leave.		Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Heat-stroke.	Circulatory Diseases.*	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	TOTAL.			Deaths at sea.	
BRITISH	2,744	510	3	1	9	1	2	1	...	2	26*	46	...	66	20'28
INDIAN	2,504	624	9	...	3	1	...	...	...	3	...	2	...	...	3	30	11	1	42	13'38

* Including 5 deaths not shown in medical returns.

C.—CHOLERA by months, stations, groups, and commands.

STATION,* GROUP, AND COMMANDS.	Average annual strength.	NUMBER OF ADMISSIONS FROM CHOLERA IN EACH MONTH.												Total admissions.	Admission-rate per 1,000 of strength.	Total deaths.	Death-rate per 1,000 of strength.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.				
B																	
Poona	67	...	...	...	...	...	3	...	...	...	...	...	...	3	44.8	3	44.78
GROUP IX.—DECCAN	274	...	...	...	...	...	3	...	...	...	...	...	...	3	10.9	3	10.95
INDIA	1,780	...	...	...	...	...	3	...	...	...	...	...	...	3	1.7	3	1.69
BENGAL	571	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
PUNJAB	455	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
MADRAS	303	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
BOMBAY	451	...	...	...	...	...	3	...	...	...	...	...	...	3	6.7	3	6.65

D.—ENTERIC FEVER by months, stations, groups, and commands.

STATIONS† AND GROUPS.	Average annual strength.	NUMBER OF ADMISSIONS FROM ENTERIC FEVER IN EACH MONTH.												Total admissions.	Admission-rate per 1,000 of strength.	Total deaths.	Death-rate per 1,000 of strength.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.				
Rangoon	31	...	...	...	2	...	...	...	...	...	1	...	...	3	96.8	1	32.26
GROUP I.—BURMA COAST AND BAY ISLANDS	33	...	...	...	2	...	...	...	...	...	1	...	...	3	90.9	1	30.30
Shwebo	13	...	...	1	...	...	...	...	...	...	...	...	...	1	76.9	1	76.92
GROUP II.—BURMA INLAND	45	...	...	1	...	...	...	...	...	...	...	...	...	1	22.2	1	22.22
Fort William	42	...	...	...	1	...	1	...	...	...	...	...	...	2	47.6	...	...
GROUP IV.—BENGAL AND ORISSA	80	...	...	...	1	...	1	...	...	...	...	...	...	2	25.0	...	...
B																	
Allahabad	25	...	...	1	...	...	...	...	...	...	...	...	...	1	40.0	...	...
Lucknow	60	...	...	1	2	...	1	...	...	...	...	...	...	4	66.7	...	...
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR	162	...	...	2	2	...	1	...	...	...	...	...	...	5	30.9	...	...
A																	
Umballa	43	...	...	1	...	...	...	...	...	...	...	...	...	1	23.3	1	23.26
B																	
Meean Meer	28	...	...	...	...	...	...	...	...	...	1	1	...	2	71.4	1	35.71
Rawalpindi	86	...	...	...	...	...	...	...	1	...	2	...	...	3	37.5	...	...
GROUP VI.—UPPER SUB-HIMALAYA	332	...	...	1	...	...	...	...	1	...	3	1	...	6	18.1	2	6.02
A																	
Nowshera	15	...	1	...	...	...	...	...	...	...	...	...	...	1	66.7	...	...
GROUP VII.—NORTH-WESTERN FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA	113	...	1	...	...	...	...	...	...	...	...	...	...	1	8.8	...	...
B																	
Nasirabad	16	...	1	...	...	...	...	...	...	...	1	...	...	2	125.0	...	...
Agra	26	...	...	...	...	...	...	...	...	...	1	...	...	1	38.5	1	38.46
Jhansi	23	...	...	...	...	...	...	...	...	...	1	1	...	2	87.0	...	...
Mhow	49	...	...	...	...	1	...	...	...	...	...	...	...	1	20.4	1	20.41
GROUP VIII.—SOUTH-EAST RAJPUTANA, CENTRAL INDIA, AND GUJARAT	148	...	1	...	...	...	1	...	...	1	2	1	...	6	40.5	2	13.51

* Stations where Cholera did not occur are not shown in this table.
 † Stations where Enteric Fever did not occur are not shown in this table.

EUROPEAN TROOPS, 1900.

TABLE XVIII—continued.

STATISTICS OF OFFICERS.

D.—ENTERIC FEVER by months, stations, groups, and commands—concluded.

STATIONS, GROUPS, AND COMMANDS.	Average annual strength.	NUMBER OF ADMISSIONS FROM ENTERIC FEVER IN EACH MONTH.												Total admissions.	Admission-rate per 1,000 of strength.	Total deaths.	Death-rate per 1,000 of strength.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.				
B																	
Secunderabad	76	...	1	1	13'2
Poona	67	...	...	...	...	...	1	...	...	...	1	...	2	29'9	...	...
Kirkee	29	...	1	1	...	...	...	...	...	...	...	...	2	69'0	...	...
GROUP IX.—DECCAN	274	...	2	1	...	...	1	...	...	...	1	...	5	18'2	...	...
A																	
Bangalore	17	...	...	...	...	...	...	1	...	...	...	...	1	58'8	...	...
GROUP XI.—Southern India	60	...	...	...	...	...	...	1	...	...	...	...	1	16'7	...	...
Ranikhet	32	...	...	...	...	1	...	...	...	...	...	...	1	31'2	...	...
Jutogh	7	...	...	...	1	...	...	...	...	...	...	...	1	142'0	...	...
Quetta	66	...	...	...	...	...	...	...	...	...	...	1	1	15'2	...	...
GROUP XII a.—Hill Stations	235	...	...	...	1	1	...	...	...	...	...	1	3	12'8	...	...
Landour	5	...	...	...	...	...	...	1	...	...	...	...	1	200'0	...	...
Kasauli	17	...	...	...	1	...	...	...	1	1	...	...	3	176'5	1	58'82
Wellington	38	...	...	...	...	...	...	...	1	...	...	...	1	26'3	1	26'32
GROUP XII b.—Hill Convalescent Depôts, and Sanitaria.	132	...	...	...	1	...	...	1	2	1	...	...	5	37'0	2	15'15
Troops marching, Bengal	23	...	...	...	...	...	...	...	...	...	...	1	1	43'5	...	...
INDIA	1,780	...	4	5	7	1	2	2	2	3	3	6	4	39	21'0	8	4'49
BENGAL	571	...	...	2	3	1	1	1	...	1	1	2	13	22'8	1	1'75
PUNJAB	455	...	1	1	2	...	...	...	2	1	3	1	11	24'2	3	6'59
MADRAS	303	...	1	1	2	...	...	1	1	1	...	...	7	23'1	3	9'90
BOMBAY	451	...	2	1	...	...	1	1	...	...	2	1	8	17'7	1	2'22

TABLE III

POPULATION

Year	Population	Male	Female
1900	1,000,000	500,000	500,000
1901	1,010,000	505,000	505,000
1902	1,020,000	510,000	510,000
1903	1,030,000	515,000	515,000
1904	1,040,000	520,000	520,000
1905	1,050,000	525,000	525,000
1906	1,060,000	530,000	530,000
1907	1,070,000	535,000	535,000
1908	1,080,000	540,000	540,000
1909	1,090,000	545,000	545,000
1910	1,100,000	550,000	550,000

B. WOMEN.

Year	Population	Male	Female
1900	1,000,000	500,000	500,000
1901	1,010,000	505,000	505,000
1902	1,020,000	510,000	510,000
1903	1,030,000	515,000	515,000
1904	1,040,000	520,000	520,000
1905	1,050,000	525,000	525,000
1906	1,060,000	530,000	530,000
1907	1,070,000	535,000	535,000
1908	1,080,000	540,000	540,000
1909	1,090,000	545,000	545,000
1910	1,100,000	550,000	550,000

WOMEN, 1900.

TABLE XIX.

RATIOS AND ACTUALS OF COMMANDS.

	Bengal Command.		Punjab Command.		Madras Command.		Bombay Command.		India.*		
Strength	914		735		550		709		2,908		
	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Remaining from 1899.
Constantly sick	27'9	25'50	43'0	31'60	36'1	19'84	41'0	29'05	36'4	105'99	
ADMISSIONS —											
Influenza	6'6	6	1'4	1	10'9	6	1'4	1	4'8	14	...
Cholera	1'1	1	...	...	1'8	1	4'2	3	1'7	5	...
Small-pox	3'3	3	2'7	2	5'5	3	9'0	7	5'2	15	4
Enteric Fever	3'3	3	13'6	10	5'5	3	8'5	6	7'6	22	2
Intermittent Fever	137'9	126	198'6	146	118'2	65	126'9	90	146'8	427	16
Remittent Fever	7'7	7	10'9	8	14'5	8	9'9	7	10'3	30	...
Simple Continued Fever	29'5	27	2'7	2	14'5	8	7'1	5	14'4	42	...
Tubercle of the lungs . . . . .	...	...	4'1	3	9'1	5	4'2	3	3'8	11	1
Pneumonia	1'1	1	2'7	2	...	...	...	...	1'0	3	...
Other Respiratory Diseases	8'8	8	17'7	13	27'3	15	21'2	15	17'5	51	4
Dysentery	12'0	11	16'3	12	14'5	8	25'4	18	16'9	49	4
Diarrhoea	13'1	12	9'5	7	5'5	3	29'6	21	14'8	43	1
Anæmia and Debility	260'4	238	379'0	279	256'4	141	337'1	239	308'5	897	35
Abortion and Puerperal Affections	48'1	44	34'0	25	25'5	14	57'8	41	42'6	124	3
Other diseases peculiar to women	54'7	50	51'7	38	49'1	27	70'5	50	56'7	165	4
ALL CAUSES	706'8	646	933'3	686	703'6	387	863'2	612	732'8	2,331	90
DEATHS —											
Cholera	1'09	1	...	...	1'82	1	4'23	3	1'72	5	...
Small-pox . . . . .	...	...	...	...	...	...	4'23	3	1'03	3	...
Enteric Fever . . . . .	...	...	2'72	2	3'64	2	4'23	3	2'41	7	...
Intermittent Fever	3'28	3	...	...	...	...	...	...	1'03	3	...
Remittent Fever . . . . .	...	...	4'08	3	1'82	1	...	...	1'38	4	...
Simple Continued Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...
Tubercle of the lungs . . . . .	...	...	...	...	1'82	1	1'41	1	'69	2	...
Pneumonia . . . . .	...	...	1'36	1	...	...	...	...	'34	1	...
Other Respiratory Diseases . . . . .	...	...	1'36	1	1'82	1	...	...	'69	2	...
Dysentery . . . . .	...	...	1'36	1	1'82	1	4'23	3	1'72	5	...
Diarrhoea	1'09	1	...	...	...	...	1'41	1	'69	2	...
Hepatic Abscess . . . . .	...	...	...	...	...	...	...	...	...	...	...
Childbirth and Abortion	1'09	1	...	...	1'82	1	2'82	2	1'38	4	...
ALL CAUSES	9'85	9	16'33	12	14'55	8	31'03	22	17'54	51	...
PERCENTAGE IN 100 ADMISSIONS:—											
Influenza	'93		'15		1'55		'16		'60		
Cholera	'15		...		'26		'49		'21		
Small-pox	'46		'29		'78		1'14		'64		
Enteric Fever	'46		1'46		'78		'98		'94		
Intermittent Fever	19'50		21'28		16'80		14'71		18'32		
Remittent Fever	1'08		1'17		2'07		1'14		1'29		
Simple Continued Fever	4'18		'29		2'07		'82		1'80		
Tubercle of the lungs . . . . .	...		'44		1'29		'49		'47		
Pneumonia	'15		'29		...		...		'13		
Other Respiratory Diseases	1'24		1'90		3'88		2'45		2'19		
Dysentery	1'70		1'75		2'07		2'94		2'10		
Diarrhoea	1'86		1'02		'78		3'43		1'84		
Anæmia and Debility	36'84		40'67		36'43		39'05		38'48		
Abortion and Puerperal Affections	6'81		3'64		3'62		6'70		5'32		
Other diseases peculiar to women	7'74		5'54		6'98		8'17		7'08		
PERCENTAGE IN 100 DEATHS—											
Cholera	11'1		...		12'5		13'6		9'8		
Small-pox . . . . .	...		...		...		13'6		5'9		
Enteric Fever . . . . .	...		16'7		25'0		13'6		13'7		
Intermittent Fever	33'3		...		...		...		5'9		
Remittent Fever . . . . .	...		25'0		12'5		...		7'8		
Simple Continued Fever . . . . .	...		...		...		...		...
Tubercle of the lungs . . . . .	...		...		12'5		4'5		3'9		
Pneumonia . . . . .	...		8'3		...		...		2'0		
Other Respiratory Diseases . . . . .	...		8'3		12'5		...		3'9		
Dysentery . . . . .	...		8'3		12'5		13'6		9'8		
Diarrhoea	11'1		...		...		4'5		3'9		
Hepatic Abscess . . . . .	...		...		...		...		...
Childbirth and Abortion	11'1		...		12'5		9'1		7'8		

* For complete detail of diseases see Table LIII.

TABLE XX.

CHOLERA by months, stations, groups, and commands.

STATIONS*, GROUPS, AND COMMANDS.	Average annual strength.	NUMBER OF ADMISSIONS FROM CHOLERA IN EACH MONTH.												Total ad- missions.	Admission-rate per 1,000 of strength.	Total deaths.	Death- rate per 1,000 of strength.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.				
B																	
Allahabad	42	...	...	...	...	...	...	...	1	...	...	...	...	1	23'8	1	23'81
GROUP V.—GANGETIC PLAIN AND CHUTIA NAUPUR	283	...	...	...	...	...	...	...	1	...	...	...	...	1	3'5	1	3'53
B																	
Mhow	87	...	...	...	...	...	...	...	2	...	...	...	...	2	23'0	2	22'99
GROUP VIII.—SOUTH-EAST RAJPUTANA, CENTRAL INDIA, AND GUJARAT	227	...	...	...	...	...	...	...	2	...	...	...	...	2	8'8	2	8'81
B																	
Secunderabad	151	...	...	...	...	...	...	...	1	...	...	...	...	1	6'6	1	6'62
Kirkee	67	...	...	...	...	...	...	...	1	...	...	...	...	1	14'9	1	14'93
GROUP IX.—DECCAN	436	...	...	...	...	...	...	1	1	...	...	...	...	2	4'6	2	4'59
INDIA	2,908	...	...	...	...	...	...	1	4	...	...	...	...	5	1'7	5	1'72
BENGAL	914	...	...	...	...	...	...	...	1	...	...	...	...	1	1'1	1	1'09
PUNJAB	735	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
MADRAS	550	...	...	...	...	...	...	...	1	...	...	...	...	1	1'8	1	1'82
BOMBAY	709	...	...	...	...	...	...	1	2	...	...	...	...	3	4'2	3	4'23

* Stations where Cholera did not occur are not shown in this table.

TABLE XXI.

ENTERIC FEVER by months, stations, groups, and commands.

STATIONS,* GROUPS, AND COMMANDS.	Average annual strength.	NUMBER OF ADMISSIONS FROM ENTERIC FEVER IN EACH MONTH.												Total ad- missions.	Admission-rate per 1,000 of strength.	Total deaths.	Death- rate per 1,000 of strength.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.				
Rangoon	63	...	...	...	...	...	1	...	...	...	...	...	...	1	15.9	...	...
GROUP I.—BURMA COAST AND BAY ISLANDS	66	...	...	...	...	...	1	...	...	...	...	...	...	1	15.2	...	...
A																	
Meerut	90	...	1	...	...	...	...	...	...	...	...	...	...	1	11.1	...	...
B																	
Jullunder	29	...	...	...	...	...	...	1	...	...	...	...	...	1	34.5	1	34.48
Ferozepore	49	...	...	...	...	1	...	...	...	...	...	...	...	1	20.4	...	...
Sialkot	51	...	...	1	...	...	...	...	...	...	...	...	...	1	19.6	...	...
Rawalpindi	122	...	...	...	1	...	...	...	...	...	...	...	...	1	8.2	...	...
GROUP VI.—UPPER SUB-HIMA- LAYA	549	...	1	1	1	1	...	1	...	...	...	...	...	5	9.1	1	1.82
B																	
Mhow	87	...	...	...	...	...	...	...	1	...	...	...	...	1	11.5	1	11.49
GROUP VIII.—S.-E. RAJPUTANA, CENTRAL INDIA, AND GUJARAT	227	...	...	...	...	...	...	...	1	...	...	...	...	1	4.4	1	4.41
B																	
Secunderabad	151	...	...	...	...	...	...	...	2	...	...	...	...	2	13.2	2	13.25
Poona	75	...	...	...	...	...	...	...	1	...	...	...	...	1	13.3	...	...
Kirkee	67	...	...	...	...	...	...	...	1	1	...	...	...	2	29.9	2	29.85
GROUP IX.—DECCAN	436	...	...	...	...	...	...	...	4	1	...	...	...	5	11.5	4	9.17
Ranikhet	59	...	...	...	1	...	...	1	...	...	...	...	...	2	33.9	...	...
Camp Thobba	20	...	...	...	...	2	...	...	...	...	...	...	...	2	100.0	...	...
„ Lower Topa	8	...	...	...	...	1	...	...	...	...	...	...	...	1	125.0	...	...
Cherat	16	...	...	...	...	...	...	1	...	...	...	...	...	1	62.5	1	62.50
Quetta	89	...	...	...	...	...	...	...	1	...	...	...	1	2	22.5	...	...
GROUP XIII.—HILL STATIONS	376	...	...	...	1	2	1	2	...	1	...	...	1	8	21.3	1	2.66
Murree	40	...	...	...	...	1	1	...	...	...	...	...	...	2	50.0	...	...
GROUP XIIIb.—HILL CON- VALESCENT DEPÔTS, AND SANITARIA	233	...	...	...	...	1	1	...	...	...	...	...	...	2	8.6	...	...
INDIA	2,908	...	1	1	2	4	2	3	1	6	1	...	1	22	7.6	7	2.41
BENGAL	914	...	1	...	1	...	...	1	...	...	...	...	...	3	3.3	...	...
PUNJAB	735	...	...	1	1	4	2	1	1	...	...	...	...	10	13.6	2	2.72
MADRAS	550	...	...	...	...	...	...	1	...	2	...	...	...	3	5.5	2	3.64
BOMBAY	709	...	...	...	...	...	...	...	4	1	...	...	1	6	8.5	3	4.23

* Stations where Enteric Fever did not occur are not shown in this table.

C. CHILDREN.

TABLE XXII.

RATIOS AND ACTUALS OF COMMANDS.

	Bengal Command.		Punjab Command.		Madras Command.		Bombay Command.		India.*		
	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Ratios.	Actuals.	Remaining from 1899.
Strength	1,596		1,342		1,044		1,304		5,376		
Constantly sick	21'7	34'70	29'0	38'93	35'5	37'03	34'2	47'65	29'4	158'31	
ADMISSIONS—											
Influenza	1'3	2	...	...	14'4	15	2'2	3	3'7	20	...
Cholera . . . . .	...	...	...	...	...	...	...	...	...	...	...
Small-pox . . . . .	...	...	7	1	1'9	2	2'9	4	1'3	7	...
Measles	50'1	80	87'2	117	34'5	36	51'6	72	56'7	305	5
Whooping Cough	2'5	4	...	...	1'9	2	2'9	4	1'9	10	5
Enteric Fever	5'0	8	3'7	5	4'8	5	5'0	7	4'7	25	1
Intermittent Fever	108'4	173	147'5	198	167'6	175	150'6	210	140'6	750	26
Remittent Fever	3'8	6	12'7	17	14'4	15	12'9	18	10'4	56	1
Simple Continued Fever	19'4	31	6'7	9	40'2	42	11'5	16	18'2	98	2
Tubercular Diseases	2'5	4	3'7	5	1'0	1	5'0	7	3'2	17	4
Respiratory Diseases	50'1	80	100'6	135	95'8	100	82'5	115	80'0	430	27
Dysentery	18'8	30	14'2	19	27'8	29	23'7	33	20'6	111	1
Diarrhœa	27'6	44	67'1	90	23'9	25	74'6	104	48'9	263	1
Eye Diseases	53'9	86	9'7	13	48'9	51	31'6	44	36'1	194	6
ALL CAUSES	488'7	780	687'0	922	756'7	790	676'5	943	639'0	3,435	121
DEATHS—											
Cholera . . . . .	...	...	...	...	...	...	...	...	...	...	Deaths out of hospital.
Small-pox . . . . .	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup . . . . .	...	...	2'24	3	1'92	2	...	...	...	...	...
Enteric Fever	63	1	75	1	1'92	2	...	...	...	...	...
Intermittent Fever	1'88	3	3'73	5	96	1	1'43	2	2'05	11	...
Remittent Fever . . . . .	...	...	1'49	2	96	1	3'59	5	1'49	8	...
Simple Continued Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...
Tubercular Diseases	63	1	1'49	2	...	...	2'87	4	1'30	7	...
Convulsions	1'25	2	75	1	5'75	6	5'02	7	2'98	16	1
Respiratory Diseases	6'27	10	6'71	9	2'87	3	2'87	4	4'84	26	...
Teething	3'76	6	3'73	5	1'92	2	5'02	7	3'72	20	...
Dysentery	3'76	6	1'49	2	...	...	3'59	5	2'42	13	...
Diarrhœa	5'64	9	6'71	9	2'87	3	15'06	21	7'81	42	1
Anæmia, Debility, and Immaturity	5'64	9	5'22	7	2'87	3	8'61	12	5'77	31	1
ALL CAUSES	38'85	62	52'16	70	34'48	36	60'26	84	46'87	232	5
PERCENTAGE IN 100 ADMISSIONS—											
Influenza	26	...	...	...	1'90	...	32	...	58	...	...
Cholera . . . . .	...	...	...	...	...	...	...	...	...	...	...
Small-pox . . . . .	...	...	...	...	25	...	42	...	20	...	...
Measles	10'26	...	12'09	...	4'56	...	7'64	...	8'88	...	...
Whooping Cough	51	...	...	...	25	...	42	...	29	...	...
Enteric Fever	1'03	...	54	...	63	...	74	...	73	...	...
Intermittent Fever	22'18	...	21'48	...	22'15	...	22'27	...	22'01	...	...
Remittent Fever	77	...	1'84	...	1'90	...	1'91	...	1'63	...	...
Simple Continued Fever	3'97	...	98	...	5'32	...	1'70	...	2'85	...	...
Tubercular Diseases	51	...	54	...	13	...	74	...	49	...	...
Respiratory Diseases	10'26	...	14'64	...	12'66	...	12'20	...	12'52	...	...
Dysentery	3'85	...	2'00	...	3'67	...	3'59	...	3'23	...	...
Diarrhœa	5'64	...	9'76	...	3'16	...	11'03	...	7'66	...	...
Eye Diseases	11'03	...	1'41	...	6'46	...	4'67	...	5'65	...	...
PERCENTAGE IN 100 DEATHS—											
Cholera . . . . .	...	...	...	...	...	...	...	...	...	...	...
Small-pox . . . . .	...	...	...	...	2'8	...	1'2	...	8	...	...
Diphtheria and Croup . . . . .	...	...	4'3	...	5'6	...	...	...	2'0	...	...
Enteric Fever	1'6	...	1'4	...	5'6	...	...	...	1'6	...	...
Intermittent Fever	4'8	...	7'1	...	2'8	...	2'4	...	4'4	...	...
Remittent Fever . . . . .	...	...	2'9	...	2'8	...	6'0	...	3'2	...	...
Simple Continued Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...
Tubercular Diseases	1'6	...	2'9	...	...	...	4'8	...	2'8	...	...
Convulsions	3'2	...	1'4	...	10'7	...	8'3	...	6'3	...	...
Respiratory Diseases	16'1	...	12'9	...	8'3	...	4'8	...	10'3	...	...
Teething	9'7	...	7'1	...	5'6	...	8'3	...	7'9	...	...
Dysentery	9'7	...	2'9	...	...	...	6'0	...	5'2	...	...
Diarrhœa	14'5	...	12'9	...	8'3	...	23'0	...	16'7	...	...
Anæmia, Debility, and Immaturity	14'5	...	10'0	...	8'3	...	14'3	...	12'3	...	...

* For complete detail of diseases see Table LIII.

TABLE XXIV.

ENTERIC FEVER by months, stations, groups, and commands.

STATIONS,* GROUPS, AND COMMANDS.	Average annual strength.	NUMBER OF ADMISSIONS FROM ENTERIC FEVER IN EACH MONTH.												Total admissions.	Admission-rate per 1,000 of strength.	Total deaths.	Death-rate per 1,000 of strength.
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.				
Dum-Dum	93	...	...	...	...	...	1	...	...	...	...	...	...	1	10.8	...	...
GROUP IV.—BENGAL AND ORISSA.	248	...	...	...	...	...	1	...	...	...	...	...	...	1	4.0	...	...
B																	
Benares	26	...	...	1	...	...	...	...	...	...	...	...	...	1	38.5	...	...
Allahabad	82	1	...	...	...	...	...	...	...	...	...	...	...	1	12.2	...	...
Lucknow	151	...	...	...	1	...	1	...	...	...	...	...	...	2	13.2	...	...
Cawnpore	71	...	...	...	...	...	...	...	...	...	...	...	1	1	14.1	...	...
GROUP V.—GANGETIC PLAIN AND CHUTIA NAAGPUR.	507	1	...	1	1	...	1	...	...	...	...	...	...	5	9.9	...	...
A																	
Delhi	12	...	...	1	...	...	...	...	...	...	...	...	...	1	83.3	1	83.33
B																	
Rawalpindi	238	...	...	...	...	1	...	...	...	...	...	...	...	1	4.2	1	4.20
GROUP VI.—UPPER SUB-HIMALAYA.	655	...	...	1	...	1	...	...	...	...	...	...	...	2	3.1	2	3.05
B																	
Nasirabad	37	...	...	...	...	...	...	...	1	...	...	...	...	1	27.0	...	...
Agra	74	...	...	...	...	...	...	...	...	...	...	...	1	1	13.5	...	...
Mhow	165	...	...	...	...	...	...	...	1	...	...	...	...	1	6.1	...	...
GROUP VIII.—SOUTH-EAST RAJPUTANA, CENTRAL INDIA, AND GUJARAT.	417	...	...	...	...	...	...	...	2	...	...	...	1	3	7.2	...	...
B																	
Secunderabad	264	...	...	...	...	1	...	2	1	...	...	...	...	4	15.2	2	7.58
Poona	183	...	...	...	...	...	...	1	...	...	...	...	...	1	5.5	...	...
Kirkee	127	...	...	...	...	1	...	2	...	...	...	...	...	3	23.6	...	...
GROUP IX.—DECCAN	850	...	...	...	...	1	1	2	3	1	...	...	...	8	9.4	2	2.35
A																	
Bangalore	129	...	1	...	...	...	...	...	...	...	...	...	...	1	7.8	...	...
GROUP XI.—SOUTHERN INDIA.	350	...	1	...	...	...	...	...	...	...	...	...	...	1	2.9	...	...
Solon	2	...	...	...	...	...	1	...	...	...	...	...	...	1	500.0	...	...
Khanspur	29	...	...	...	...	1	...	...	...	...	...	...	...	1	34.5	...	...
GROUP XIII.—HILL STATIONS.	750	...	...	...	...	1	...	1	...	...	...	...	...	2	2.7	...	...
Kasauli	82	...	...	...	...	...	1	...	...	...	...	...	...	1	12.2	...	...
Murree	82	...	...	...	...	1	...	...	...	...	...	...	...	1	12.2	...	...
GROUP XIII.—HILL CONVALESCENT DEPÔTS, AND SANITARIA.	419	...	...	...	...	1	...	1	...	...	...	...	...	2	4.8	...	...
Deolali Depôt	77	...	...	...	...	...	...	...	...	1	...	...	...	1	13.0	...	...
INDIA	5,376	1	1	2	1	4	3	4	3	3	1	...	2	25	4.7	4	7.4
BENGAL	1,596	1	...	2	1	...	2	...	...	...	...	...	2	8	5.0	1	6.3
PUNJAB	1,342	...	...	...	...	3	...	2	...	...	...	...	...	5	3.7	1	7.5
MADRAS	1,044	...	1	...	...	...	1	...	2	1	...	...	...	5	4.8	2	1.92
BOMBAY	1,394	...	...	...	...	1	...	2	1	2	1	...	...	7	5.0	...	...

* Stations where Enteric Fever did not occur are not shown in this table.

TABLE XXV.

DEATHS OF CHILDREN BY AGES AND CAUSES.

AGE AT DEATH.	Cholera.	Smallpox.	Diphtheria and Croup.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercular Diseases.	Convulsions.	Respiratory Diseases.	Teething.	Dysentery.	Diarrhea.	Anæmia, Debility, and Immaturity at birth.	All Causes.	Strength on 1st July 1900.	Deaths per 1,000 of strength (a).	Liability.
Under 6 months	1	...	...	2	1	...	...	7	9	1**	1	12	25||	84	344	244.19	41.87
Between 6 and 12 months	1	...	2	1	...	2	4	5	14†	6	18	4‡	73	453	161.15	27.63
.. 12 and 18	1*	...	3	...	...	2	5	5	5**	4	9	...	40	402	99.50	17.06
.. 18 and 24	2	...	...	...	...	2	...	...	2	...	9	386	23.32	4.00
.. 2 years and 5 years	2	...	...	4	...	2	...	4	...	1	...	...	24	1,549	15.49	2.66
.. 5 .. and 10	1	1	1	1	...	...	...	1	...	1	1	2	14	1,361	8.97	1.56
.. 10 .. and 15	3	...	1	...	1	...	...	...	...	...	...	6	570	10.53	1.81
.. 15 .. and upwards	1	...	...	1	...	...	...	...	...	...	...	...	2	100	20.00	3.43	
TOTAL	2	5	4	11	8	...	7	16	26	20	13	42	31	252	5,365	46.97	100

* Croup.

† Two with diarrhœa, three with convulsions, two with diarrhœa and convulsions, and one with meningitis.

‡ One immaturity at birth.

|| Seventeen immaturity at birth.

** One with convulsions.

(a) On the supposition that the strength on 1st July represents the average annual strength.

II.—NATIVE TROOPS, 1900.

NATIVE TROOPS, 1900.

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.

	RATIO PER 1,000 OF THE AVERAGE STRENGTH.					
	Bengal Command.	Punjab Command.	Madras Command.	Bombay Command.	Hyderabad Contingent.	Army of India.* †
I.—AVERAGE ANNUAL STRENGTH	26,589	42,311	20,407	24,908	6,260	123,463
II.—CONSTANTLY-SICK-RATE OF EACH MONTH—						
January	29'0	24'8	27'9	26'7	16'6	26'4
February	27'1	23'0	30'8	26'0	21'5	26'1
March	24'5	16'3	29'9	24'5	18'8	23'8
April	26'5	19'1	27'1	25'4	18'0	24'3
May	26'6	21'3	26'3	31'1	18'9	25'6
June	24'6	24'2	25'3	29'3	19'1	25'6
July	26'9	26'3	27'8	35'4	24'7	28'7
August	31'9	29'2	29'2	40'3	28'6	32'1
September	35'4	33'5	32'0	43'1	29'5	35'7
October	37'8	40'9	33'0	48'4	29'9	39'5
November	40'9	37'8	34'4	49'2	23'6	39'3
December	35'5	35'0	33'4	45'5	20'1	36'0
OF THE YEAR	30'5	27'7	29'7	34'9	22'2	30'0
III.—ADMISSION-RATE OF THE YEAR—						
Influenza	1'8	'1	1'2	1'1	1'6	'9
Cholera	1'7	7'8	4'6	5'2	6'5	5'2
Small-pox	'3	'5	1'2	'7	'8	'6
Enteric Fever	1'3	'3	'1	'2	...	'4
Intermittent Fever	294'6	340'3	248'9	397'3	189'9	220'8
Remittent Fever	10'8	19'6	8'5	13'3	13'2	14'0
Simple Continued Fever	'5	'4	9'2	5'1	10'2	3'5
Tubercle of the lungs	5'5	4'8	2'0	2'6	'6	3'7
Pneumonia	11'1	20'0	8'9	16'5	8'3	14'6
Other Respiratory Diseases	21'4	25'1	23'2	28'8	8'6	24'0
Dysentery	42'5	54'2	28'2	67'4	49'3	50'4
Diarrhoea	8'1	10'2	2'1	26'3	3'8	11'4
Hepatic { Abscess	...	'1	'1	'1	...	'1
{ Congestion and Inflammation	1'1	'9	1'0	2'6	1'8	1'3
Scurvy	1'1	2'4	'4	7'9	0'6	3'2
Veneral Diseases	38'8	22'8	48'9	69'7	60'7	42'5
ALL CAUSES	716'5	795'7	690'4	956'8	561'0	784'6
IV.—DEATH-RATE OF THE YEAR—						
Cholera	1'32	4'28	3'09	3'49	3'83	3'16
Small-pox	...	...	'05	'04	'32	'03
Enteric Fever	'45	'05	'05	'12	...	'15
Intermittent Fever	'79	'43	1'03	'92	'04	'73
Remittent Fever	1'13	1'30	1'18	2'13	'32	1'34
Simple Continued Fever	...	'02	'10	...	...	'02
Circulatory Diseases	'15	'07	'39	'52	...	'24
Tubercle of the lungs	1'05	'07	'49	'56	'32	'78
Pneumonia	1'99	4'30	1'91	4'38	4'15	3'32
Other Respiratory Diseases	'34	'65	'29	1'00	'64	'58
Dysentery	'49	'45	'39	1'37	'16	'63
Diarrhoea	'26	'31	'05	'60	...	'29
Hepatic Abscess	'04	'05	'05	'08	...	'05
Anæmia and Debility	'26	'12	'29	'24	...	'22
ALL CAUSES	10'46	14'72	12'69	18'71	12'62	14'04
V.—PERCENTAGE IN 100 ADMISSIONS—						
Influenza	'25	'01	'18	'11	'28	'12
Cholera	'24	'98	'66	'55	1'17	'66
Small-pox	'04	'07	'18	'07	'14	'08
Enteric Fever	'18	'04	'02	'02	...	'06
Intermittent Fever	41'12	42'77	36'06	41'52	33'86	40'88
Remittent Fever	1'50	2'47	1'23	1'39	2'36	1'78
Simple Continued Fever	'07	'05	1'33	'53	1'82	'45
Tubercle of the lungs	'77	'60	'28	'27	'11	'47
Pneumonia	1'55	2'52	1'20	1'73	1'48	1'97
Other Respiratory Diseases	2'99	3'16	3'36	3'01	1'54	3'06
Dysentery	5'93	6'81	4'09	7'05	8'77	6'42
Diarrhoea	1'13	1'29	'31	2'80	'68	1'45
Hepatic { Abscess	'01	'01	'02	'01	...	'01
{ Congestion and Inflammation	'16	'11	'15	'27	'31	'17
Scurvy	'16	'31	'06	'82	1'71	'41
Veneral Diseases	5'41	2'86	7'08	7'28	10'82	5'41
VI.—PERCENTAGE IN 100 DEATHS—						
Cholera	12'6	29'1	24'3	18'7	30'4	22'5
Small-pox	...	...	'4	'2	2'5	'2
Enteric Fever	4'3	'3	'4	'6	...	1'0
Intermittent Fever	7'6	2'9	8'1	4'9	5'1	5'2
Remittent Fever	10'8	8'8	9'3	11'4	2'5	9'5
Simple Continued Fever	...	'2	'8	...	...	'2
Circulatory Diseases	1'4	'5	3'1	2'8	...	1'7
Tubercle of the lungs	10'1	6'0	3'9	3'0	2'5	5'5
Pneumonia	19'1	29'2	15'1	23'4	32'9	23'7
Other Respiratory Diseases	3'2	4'5	2'3	5'4	5'1	4'2
Dysentery	4'7	3'0	3'1	7'3	1'3	4'5
Diarrhoea	2'5	2'1	'4	3'2	...	2'1
Hepatic Abscess	'4	'3	'4	'4	...	'3
Anæmia and Debility	2'5	'8	2'3	1'3	...	1'6

* For complete detail of diseases—see Table LIII.

† Excluding China Expeditionary Force, and including troops in Extra India not in the Indian Command.

NATIVE TROOPS, 1900.

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.

		RATIO PER 1,000 OF THE AVERAGE STRENGTH.												
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
		Burma Coast and Bay Islands.	Burma Inland.	Assam.	Bengal and Orissa.	Gangetic Plain and Chutia Nagpur.	Upper Sub-Himalaya.	N.-W. Frontier, Indus Valley, and N.-W. Rajputana.	S.-E. Rajputana, Central India, and Gujarat.	Decan.	Western Coast.	South India.	Hill Stations.	Army of India.*†
I.—AVERAGE ANNUAL STRENGTH		1,406	4,123	1,498	2,565	5,658	15,326	15,861	11,169	17,670	2,435	6,764	19,885	123,463
II.—CONSTANTLY-SICK-RATE OF EACH MONTH—														
January		50.4	32.7	38.5	48.6	23.4	22.3	32.2	22.5	23.1	30.5	31.7	32.1	26.4
February		50.0	29.2	41.4	40.2	24.4	20.1	32.2	24.0	24.6	40.3	35.9	30.5	26.1
March		47.0	25.1	36.8	33.3	28.8	16.3	22.2	24.8	32.2	30.3	38.7	24.9	23.8
April		41.0	26.6	34.0	35.5	31.7	17.4	20.4	31.3	22.0	31.5	34.0	26.5	24.3
May		48.5	22.8	32.5	35.5	28.7	19.9	22.3	32.4	22.8	24.9	32.1	28.9	25.6
June		47.2	26.6	36.0	31.6	24.9	17.9	26.1	30.7	22.3	24.7	27.5	31.1	25.6
July		41.5	29.6	33.4	43.1	27.9	20.7	29.2	33.4	29.1	28.3	30.7	36.1	28.7
August		32.4	28.0	39.9	50.0	31.4	24.8	29.5	41.3	31.4	30.5	34.4	43.9	32.1
September		27.4	36.3	28.0	43.0	38.8	34.2	34.5	46.6	36.5	34.8	34.6	43.1	35.7
October		21.8	48.5	38.3	54.2	37.6	51.4	43.4	55.5	38.3	33.4	33.3	43.3	39.5
November		25.9	51.7	52.2	66.0	40.8	42.6	46.6	59.0	36.1	26.8	34.7	40.4	39.3
December		34.4	46.9	45.1	39.2	38.2	33.5	42.8	51.1	33.9	32.3	29.7	35.5	36.0
	OF THE YEAR	30.8	33.6	38.1	44.8	31.0	25.8	32.0	37.5	28.2	31.6	33.0	34.3	30.0
III.—ADMISSION-RATE OF THE YEAR—														
Influenza		...	...	...	4	6.9	2	...	1.3	1.4	2.1	1.0	7	9
Cholera		...	...	7	2.3	2.5	9	15.6	8.6	6.6	1.6	4.0	3.0	5.2
Small-pox		...	5	...	1.1	2	4	8	7	1.9	4	1	2	6
Enteric Fever		...	...	...	1.1	1.2	5	1	1	1	...	3	7	4
Intermittent Fever		186.3	618.5	250.3	651.1	230.3	309.1	384.3	464.7	250.0	156.5	186.4	310.1	320.8
Remittent Fever		22.0	4.4	6.0	7.0	6.2	13.3	21.9	22.1	10.5	4.1	3.8	22.1	14.0
Simple Continued Fever		7	2	...	...	4	7	5	4.2	11.5	3.7	14.3	7	3.5
Tubercle of the lungs		...	2.4	3.3	5.1	4.0	5.4	3.4	3.7	1.3	2.5	2.2	7.6	3.7
Pneumonia		2.8	2.2	6.0	5.1	10.6	13.3	24.6	15.5	9.6	18.9	13.9	21.7	14.6
Other Respiratory Diseases		20.6	40.3	39.4	25.0	34.3	14.0	33.0	17.5	16.6	31.2	17.9	32.1	24.0
Dysentery		66.5	43.4	97.5	102.1	42.6	35.8	52.5	57.6	40.6	90.8	19.7	60.3	50.4
Diarrhoea		7	3.6	9.3	13.3	11.0	6.4	12.2	22.5	6.8	52.6	2.7	14.7	11.4
Hepatic Abscess		7	...	...	...	...	...	1	1	1	...	1	2	1
Hepatic Congestion and Inflammation		...	5	1.3	1.1	1.1	7	8	1.6	3.7	1.2	2.2	1.3	1.3
Scurvy		1.4	2	7	3.9	1.8	9	3.6	7.3	4.4	1.6	1	3.4	3.2
Veneral Diseases		84.6	30.6	26.0	42.1	28.6	26.4	10.5	97.8	68.6	32.4	50.9	45.0	42.5
	ALL CAUSES	785.2	1,037.6	714.3	1,157.1	716.3	676.0	927.9	1,017.3	717.0	701.8	651.8	836.2	784.6
IV.—DEATH-RATE OF THE YEAR—														
Cholera		...	...	67	2.34	1.77	65	8.39	4.75	4.30	1.23	2.81	1.46	3.16
Small-pox		...	...	...	...	...	...	...	99	17	...	...	...	93
Enteric Fever		...	...	...	53	26	...	...	99	96	...	...	...	15
Intermittent Fever		...	...	...	53	52	19	167	40	205	133	75	73	73
Remittent Fever		4.98	4.9	1.34	3.51	3.88	1.04	1.70	3.22	6.8	4.1	1.18	1.76	1.34
Simple Continued Fever		2.13	97	2.34	88	1.04	1.06	...	...	...	30	...	...	62
Circulatory Diseases		...	...	...	...	...	...	...	...	...	...	...	...	...
Tubercle of the lungs		1.42	...	...	...	1.8	7	1.8	1.8	4.0	4.1	4.4	3.0	2.4
Pneumonia		...	40	67	39	...	1.17	57	81	17	82	74	21	78
Other Respiratory Diseases		71	24	...	...	1.59	2.35	6.43	5.10	3.11	5.34	3.25	3.82	3.32
Dysentery		...	40	1.34	7.8	5.5	5.2	8.8	4.5	4.5	82	30	1.11	5.8
Diarrhoea		71	75	...	1.17	1.8	3.3	5.7	1.25	4.0	2.87	1.5	7.0	6.3
Hepatic Abscess		...	...	...	7.8	3.5	3.3	3.2	4.5	96	37.0	1.5	2.5	2.9
Hepatic Congestion and Inflammation		...	...	...	...	...	...	66	99	96	...	...	1.5	9.5
Anaemia and Debility		...	24	1.34	...	...	1.3	96	99	17	82	30	4.0	2.2
	ALL CAUSES	14.22	4.12	7.34	14.42	7.78	8.55	21.37	21.04	13.75	25.05	14.04	15.39	14.04
V.—PERCENTAGE IN 100 ADMISSIONS—														
Influenza		...	...	...	0.3	0.6	0.3	...	1.2	2.0	2.9	1.6	0.8	1.2
Cholera		...	...	0.9	2.0	3.5	1.4	1.68	8.4	9.2	2.3	6.1	3.6	6.6
Small-pox		...	...	...	1.0	2.0	0.6	0.9	0.7	2.7	0.6	0.2	0.2	0.3
Enteric Fever		...	0.5	...	1.0	1.7	0.7	0.1	0.1	0.2	...	0.5	0.8	0.6
Intermittent Fever		...	...	...	...	...	...	...	...	...	...	...	...	...
Remittent Fever		23.73	59.61	35.05	56.27	32.15	45.72	41.41	45.68	34.87	22.29	28.60	37.08	40.88
Simple Continued Fever		2.81	4.2	8.4	6.1	8.0	1.97	2.36	2.17	1.46	5.9	5.9	2.64	1.78
Tubercle of the lungs		0.9	0.2	...	...	0.5	1.1	0.5	4.1	1.61	5.3	2.20	0.8	4.5
Pneumonia		...	2.3	4.7	4.4	6.4	7.9	3.7	3.6	1.8	3.5	3.4	9.1	4.7
Other Respiratory Diseases		3.6	2.1	8.4	4.4	1.48	1.97	2.65	1.52	1.33	2.69	2.13	2.59	1.87
Dysentery		2.63	3.88	5.31	2.16	4.79	2.08	3.56	1.72	2.31	4.45	2.74	3.54	3.06
Diarrhoea		7.70	4.18	13.64	8.83	5.95	5.29	5.66	5.66	12.93	3.02	7.21	6.42	6.42
Hepatic Abscess		0.9	3.5	1.31	1.15	1.53	9.5	1.31	2.21	9.5	7.49	4.1	1.76	1.45
Hepatic Congestion and Inflammation		0.9	...	...	...	...	...	0.1	0.1	0.1	...	0.2	0.2	0.1
Scurvy		...	0.5	1.9	1.0	1.5	1.1	0.8	1.6	2.3	5.3	1.8	2.6	1.7
Veneral Diseases		1.8	0.2	0.9	3.4	3.5	1.4	3.9	7.2	6.2	2.3	6.2	4.1	4.1
	ALL CAUSES	10.78	2.95	3.64	3.64	4.00	3.91	2.10	9.61	9.57	4.62	7.80	5.45	5.44
VI.—PERCENTAGE IN 100 DEATHS—														
Cholera		...	...	9.1	16.2	22.7	7.6	39.2	22.6	31.3	4.9	20.0	9.5	22.5
Small-pox		...	...	...	...	...	...	...	4	1.2	...	...	...	1.0
Enteric Fever		...	...	...	...	6.8	3.1	...	4	4	...	...	...	2
Intermittent Fever		35.0	11.8	18.2	24.3	6.8	6.1	0	5.1	2.9	8.2	9.5	4.9	5.2
Remittent Fever		15.0	23.5	...	16.2	11.4	12.2	5.0	15.3	4.9	1.6	8.4	11.4	9.5
Simple Continued Fever		...	...	...	...	...	...	3	...	...	...	2.1	...	2
Circulatory Diseases		10.0	...	...	...	2.3	8	...	9	2.9	1.6	3.2	2.0	1.7
Tubercle of the lungs		...	11.8	9.1	2.7	...	13.7	2.7	3.8	1.2	3.3	5.3	14.4	5.5
Pneumonia		5.0	5.0	...	...	20.5	22.5	30.1	24.3	22.6	21.3	23.2	24.8	23.7
Other Respiratory Diseases		...	11.8	18.2	5.4	6.8	6.1	4.1	2.1	3.3	5.3	2.1	7.2	4.2
Dysentery		...	5.0	17.6	8.1	2.3	3.8	2.7	6.0	2.0	11.5	1.1	4.6	4.5
Diarrhoea		...	...	...	5.4	4.5	3.8	1.5	2.1	4	14.8	1.1	1.6	3.1
Hepatic Abscess		...	...	...	...	...	...	3	4	4	...	...	1.0	3
Hepatic Congestion and Inflammation		...	...	...	...	...	...	3	4	4	...	...	1.0	3
Anaemia and Debility		...	5.9	18.2	...	...	1.5	3	4	1.9	3.3	2.1	2.6	1.6

* Including Group Extra India. For complete detail of diseases—see Table LIII.

† Excluding China Expeditionary Force, and including troops in Extra India not in the Indian Command.

TABLE XXVIII.

RATIOS of STATIONS, GROUPS, and COMMANDS.

For actuals see Table XXIX.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.													2. DEATH-RATE.												
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancere.	Secondary Syphilis.	Gonorrhœa.		
Port Blair . . .	286 {	...	...	...	...	216.8 10.49	7.0 3.50	...	3.5	...	...	17.5	14.0	...	3.5	...	...	21.0	14.0	650.3 24.48	35.0	3.5	3.5	7.0	...	
Rangoon . . .	1,120 {	...	...	...	...	178.6 3.57	25.0 1.79	...	8.0 1.79	...	...	3.6 8.0	21.4 8.9	72.3 8.9	9	...	...	1.8	63.4	102.7	819.6 11.61	40.2	14.3	29.5	18.7	40.2
GROUP I.—BURMA COAST AND BAY ISLANDS.	1,406 {	...	...	...	...	186.3 4.98	22.0 2.13	7	7.1	1.42	...	2.8 7.1	20.6	60.5 7.1	7	7	...	1.4	54.8	84.6	785.2 14.22	38.8	12.1	24.2	16.4	32.0
Thayetmyo . . .	309 {	...	...	...	...	226.5	3.2	...	3.2	6.5	...	16.2	9.7	...	...	...	...	3.2	16.2	744.3	29.1	6.5	6.5	...	3.2	
Loikaw . . .	82 {	...	...	...	...	792.7	12.2	...	...	...	...	24.4	36.6	...	...	...	...	...	...	1,341.5	24.4	...	...	...	...
Keng Tung . . .	201 {	...	...	...	...	806.0 4.98	19.9 9.95	...	...	...	5.0 4.98	19.9	34.8	5.0	...	...	...	...	10.0	1,179.1 19.90	29.9	...	...	...	10.0	
Port Stedman . . .	477 {	...	...	4.2	...	779.9	...	...	8.4	...	2.1	58.7	18.9	6.3	...	...	...	21.0	46.1	1,245.3	41.9	4.2	2.1	23.1	16.8	
Thamakan . . .	26 {	...	...	...	...	...	38.5	...	...	...	...	38.5	...	...	...	...	...	...	...	269.2	...	...	...	...	...
Meiktila . . .	510 {	...	...	...	...	43.1	2.0	...	2.0	5.9	3.9	37.3	21.6	2.0	2.0	...	...	15.7	13.7	200.2 1.96	15.7	2.0	...	7.8	3.9	
Fort Dufferin . . .	1,377 {	...	...	...	...	708.8	5.1 1.45	...	2.2	3.6 1.45	1.4	37.8 7.3	32.7	6.5	...	...	...	14.5 7.3	36.3	1,081.3 4.36	34.9	7.3	2.9	16.0	10.2	
Bhamo . . .	860 {	...	...	...	...	698.8	1.2	...	...	...	3.5	43.0 1.16	96.5 1.16	...	...	...	...	1.2	7.0	37.2	1,218.6 3.49	30.5	9.3	4.7	9.3	14.0
Mytikyina . . .	278 {	...	...	...	...	1,014.4 3.60	7.2	3.6	...	...	...	64.7 7.19	64.7	3.6	...	...	...	3.6	7.2	28.8	1,492.8 10.79	39.6	3.6	3.6	21.6	...
GROUP II.—BURMA INLAND	4,123 {	5	...	618.5 4.49	4.4 1.97	2	2.2	2.4 1.49	2.2 1.24	40.3 4.49	43.4 4.49	3.6 7.3	5	2	11.4 24	30.6	1,037.6 4.12	33.6	5.8	2.9	12.4	9.5
Manipur . . .	721 {	...	...	...	...	215.0 2.77	2.8	...	2.8	4.2 1.39	11.1	30.5 2.77	79.1	13.9	...	...	...	1.4	18.0 1.39	33.3	672.7 8.32	48.5	1.4	9.7	12.5	9.7
Sadiya . . .	67 {	...	...	...	...	388.1	74.6	...	...	...	...	29.9	...	...	...	...	...	...	44.8	14.9	850.7	20.9	...	...	14.9	...
Dibrugarh . . .	297 {	...	...	...	...	508.4	3.4	...	...	...	3.4	43.8	202.0	13.5	...	...	...	3.4	43.8	16.8	1,010.1 10.10	40.4	3.4	...	6.7	6.7
Silchar . . .	412 {	...	2.4 2.43	...	...	104.4	2.4	...	...	...	4.9	53.4	70.4	...	...	...	...	2.4	34.0	21.8	553.4 4.85	21.8	4.9	...	7.3	9.7
GROUP III.—ASSAM	1,498 {	...	7 6.7	250.3 1.34	6.0	...	1.3	3.3 6.7	6.0	39.4 1.34	97.5	9.3	1.3	7	28.7 1.34	26.0	714.3 7.34	38.1	2.7	4.7	10.0	8.7
Fort William . . .	730 {	...	4.1 4.11	1.4	...	728.8 4.11	6.8 4.11	...	4.1	5.5 1.37	5.5	37.0 1.37	158.9 1.37	15.1	1.4	2.7	39.7	41.1	1,289.0 17.81	46.6	12.3	5.5	13.7	9.6
Alipore . . .	653 {	...	4.6 4.59	1,274.1 9.19	3.1 3.06	...	3.1	4.6	4.6	33.7 1.53	128.6 1.53	13.8	3.1	12.3	30.6	15.3	1,026.5 22.97	61.3	3.1	...	7.7	4.6
Ballygunge . . .	39 {	...	...	25.6	...	25.6	...	...	...	...	...	76.9	76.9	...	...	...	...	...	25.6	...	564.1	25.6	...	...	...	...
Dam-Dam . . .	101 {	9.9	...	...	...	59.4	...	...	...	...	...	9.9	19.8	...	...	...	...	...	9.9	158.4	9.9	9.9	...	...	...	...
Barrackpore . . .	467 {	...	...	2.1 6.4	...	353.3 2.14	4.3	...	...	...	6.4	6.4	49.3 2.14	4.3	...	...	...	...	19.3	53.5	693.8 12.85	40.7	23.6	...	25.7	4.3

TABLE XXVIII—continued.

RATIOS of STATIONS, GROUPS, and COMMANDS.

For actuals see Table XXIX.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.														2. DEATH-RATE.										
		Influenza.	Cholera.	Small-pox.	Euteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarthra.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhœa.	
Buxa	274	...	...	...	...	412'4	29'2	...	...	10'9	18'2	18'2	105'8	43'8	...	...	...	3'0	36'5	985'4	40'1	7'3	...	25'5	3'6
Cuttack	302	...	...	...	...	72'8	...	...	6'6	...	...	13'2	16'0	...	...	...	66'2	100'0	453'6	33'1	49'7	...	36'4	19'9	
GROUP IV.— BENGAL AND ORISSA	2,565	4	2'3	1'1	1'1	651'1	7'0	...	2'7	5'1	5'1	25'0	102'1	13'3	...	1'1	3'9	31'2	42'1	1,157'1	44'8	15'6	1'6	17'5	7'4	
A. Doranda	451	86'5	...	...	...	379'2	...	...	...	13'3	11'1	79'8	130'8	8'9	...	...	2'2	22'2	37'7	1,334'8	46'6	8'9	6'7	6'7	15'5
B. Dinapore	502	...	6'0	...	...	201'2	...	...	...	...	6'0	27'9	21'9	15'9	...	...	2'0	4'0	21'9	504'0	25'9	...	...	13'9	8'0
Benares	724	...	2'8	...	9'7	346'7	...	1'4	2'8	5'5	6'9	30'4	67'7	13'8	...	...	2'8	23'5	29'9	896'4	37'3	6'9	1'4	8'3	12'4
Allahabad	1,024	...	...	...	...	204'1	13'7	1'0	2'9	...	4'9	28'3	41'0	14'6	...	...	2'0	6'8	31'3	682'6	25'4	8'8	2'0	15'6	4'9
Fyzabad	853	...	...	...	...	151'2	4'7	...	...	3'5	1'2	32'8	24'6	5'9	...	3'5	1'2	27'0	36'3	717'5	38'7	7'0	9'4	9'4	10'6
Lucknow	1,046	...	...	...	...	230'4	2'9	...	1'0	8'6	21'0	50'7	16'3	12'4	...	1'9	2'9	11'5	35'4	668'3	31'5	3'8	6'7	12'4	12'4
Cawnpore	983	...	9'2	1'0	...	155'6	14'2	...	1'0	4'1	19'3	12'2	38'7	6'1	...	...	1'0	10'2	12'2	465'9	20'3	...	1'0	5'1	6'1
Fatehgarh	76	...	...	...	...	631'6	...	...	26'3	...	...	...	52'6	13'2	...	...	...	39'5	13'2	1,065'8	26'3	13'2	...	...	...
GROUP V.—GAN- GETIC PLAIN AND CHUTIA NAGPUR.	5,658	6'9	2'5	...	1'2	230'3	6'2	...	4	1'6	4'6	10'6	34'3	42'6	11'0	...	1'1	1'8	14'8	28'6	716'3	31'0	5'1	3'9	10'3	9'4
A. Bareilly	968	3'1	1'0	...	1'0	151'9	13'4	...	...	13'4	2'1	9'3	27'9	4'1	...	...	...	8'3	24'8	478'3	30'0	10'3	...	2'1	12'4
Roorkee	539	...	1'9	...	...	369'2	1'9	...	...	9'3	9'3	16'7	18'6	7'4	...	...	...	9'3	20'4	695'7	22'3	3'7	1'9	3'7	11'1
Dehra Dun	1,442	...	...	7	3'5	151'9	6'2	4'2	1'4	16'6	10'4	9'7	3'5	2'8	...	4'2	7	7'6	53'4	590'8	33'3	18'0	6'9	9'0	19'4
Meerut	1,164	...	...	...	...	104'8	10'3	...	...	6'9	12'0	6'9	22'3	1'7	...	...	...	10'3	30'1	428'7	23'2	12'0	3'4	6'9	7'7
Delhi	791	...	1'3	...	...	916'6	3'8	...	1'3	...	6'3	29'1	60'7	5'1	...	...	1'3	3'8	34'1	1,247'8	40'5	17'7	1'3	11'4	3'8
Umballa	1,241	...	...	...	...	180'5	16'1	...	8	4'0	9'7	10'3	35'5	14'5	...	...	2'4	9'7	16'1	619'7	23'4	6'4	1'6	1'6	6'4
B. Ludhiana	31	...	...	...	...	193'5	...	...	...	64'5	96'8	...	...	...	...	...	...	32'3	32'3	580'6	32'3	...	...	...	32'3
Jullundur	747	...	...	1'3	...	44'2	2'7	1'3	2'7	9'4	5'4	17'4	...	1'34	...	...	1'3	2'7	9'4	211'5	13'4	2'7	1'3	2'7	2'7
Ferozepore	1,833	...	2'7	...	5	831'4	2'2	5	1'1	3'3	20'2	33'8	55'6	8'2	...	5	...	22'4	14'2	1,262'4	35'5	2'2	5	7'6	3'8	
Meean Meer	1,538	...	3'3	...	...	528'6	18'9	1'3	7	1'3	28'6	12'4	86'5	9'1	...	7	2'6	34'5	40'3	1,068'3	31'2	10'4	3'3	18'2	8'5
Amritsar	130	...	...	...	...	723'1	23'1	...	...	15'4	61'5	184'6	...	...	...	...	...	7'7	...	1,361'5	30'8	...	...	...	...
Sialkot	1,438	...	7	1'4	...	174'5	9'0	7	...	1'4	15'3	11'8	28'5	2'1	...	...	2'8	17'4	24'3	504'9	19'5	4'2	6'3	2'8	11'1
Jhelum	1,258	...	...	...	...	54'8	6'4	...	8	5'6	13'5	4'0	19'1	4'0	...	...	...	5'6	17'5	258'3	11'9	1'6	4'0	4'0	7'9
Rawalpindi	2,141	...	...	9	...	139'2	40'6	5	1'4	3'7	8'9	9'8	22'0	11'2	...	...	...	6'1	27'1	473'1	22'0	6'1	3'3	3'3	4'5
Attock	65	...	...	...	...	200'0	...	...	...	15'4	...	61'5	15'4	...	15'4	...	...	...	...	630'8	30'8	...	...	...	...
GROUP VI.— UPPER SUB- HIMALAYA.	15,326	2	9	4	5	309'1	13'3	7	8	5'4	13'3	14'0	35'8	6'4	...	7	9	12'7	26'4	676'0	25'8	7'6	3'0	6'3	9'5	

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.														2. DEATH-RATE.										
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scarvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancæ.	Secondary Syphilis.	Gonorrhœa.	
A.																										
Mardan . . .	1,023	...	2'9	...	...	100'7	12'7	...	2'0	2'0	21'5	29'3	24'4	9'8	...	1'0	2'9	2'9	30'3	422'3	19'6	2'0	1'0	7'8	19'6
Nowshera . . .	802	...	1'2	2'5	...	73'6	29'9	...	...	2'5	7'5	5'0	22'4	1'2	...	...	...	7'5	12'5	314'2	16'2	1'2	1'2	5'0	5'0
Peshawar . . .	2,431	...	4'9	1'6	...	453'3	18'5	...	8	2'1	27'6	34'6	43'2	12'3	...	1'6	2'1	7'4	13'2	955'2	30'4	4'5	2'1	2'1	4'5	
Fert Jamrud . . .	136	...	...	...	...	294'1	29'4	...	...	...	...	14'7	58'8	22'1	...	...	7'4	14'7	...	580'9	7'4	...	...	...	...
Kohat . . .	3,047	...	6'9	1'3	...	312'8	38'1	2'0	2'0	6'6	41'4	47'6	30'1	10'5	...	3	6'2	27'6	14'8	989'5	35'4	3'6	3'0	3'0	5'3	
Usterzi . . .	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	200'0	...	...	...	...	...
Bahadur Khel . . .	63	...	...	...	...	428'6	111'1	...	...	...	15'9	31'7	158'7	...	...	...	15'9	...	...	968'3	31'7	...	...	...	...
Thal . . .	60	...	16'7	...	...	1,016'7	33'3	...	...	...	...	33'3	50'0	16'7	...	...	16'7	...	...	1,616'7	50'0	...	...	...	...
Latammar . . .	40	...	...	...	...	102'0	...	...	...	...	20'4	81'6	...	...	...	...	...	...	40'8	285'7	...	...	...	...	40'8
Edwardesabad . . .	1,919	...	3'1	1'0	...	385'1	25'5	...	5	3'6	41'7	37'0	42'7	8'9	...	5	6'3	24'5	16'7	987'0	38'0	2'1	3	1'6	12'5	
Jani Khel . . .	51	...	...	...	...	568'6	19'6	...	...	...	...	58'8	58'8	30'2	...	...	19'6	...	19'6	1,000'0	19'6	...	...	...	19'6
Dera Ismail Khan . . .	7,729	...	...	6	...	624'1	22'0	...	4'0	13'9	22'0	44'0	17'9	...	6	40	21'4	15'0	1,240'0	39'3	1'7	6'9	2'3	4'0	
Tank, Jatta, and Draband . . .	230	...	17'4	...	...	717'4	21'7	...	4'3	26'1	21'7	247'8	43'5	...	...	...	26'1	13'0	1,532'2	47'8	...	...	...	13'0	
Fort Zam . . .	128	...	...	...	...	546'9	...	...	...	15'6	23'4	101'6	70'3	...	...	...	31'2	31'2	1,101'6	23'4	7'8	...	...	23'4	
Mangreta . . .	38	...	...	25'3	...	236'8	26'3	...	...	...	26'3	52'6	...	...	...	...	...	...	500'0	26'3	...	...	...	...
Dera Ghazi Khan . . .	426	...	...	...	1,037'6	11'7	...	...	...	4'7	23'5	84'5	21'1	...	...	...	23'5	56'3	1,568'1	42'3	18'8	...	21'1	16'4	
Mooltan . . .	1,084	...	...	...	233'4	6'5	...	...	5'3	10'1	18'5	22'1	1'8	...	1'8	10'1	16'6	626'4	25'8	4'6	9	2'8	8'3	...	
Sadda . . .	19	...	...	...	157'9	105'3	...	...	...	...	105'3	52'6	...	...	...	...	...	...	789'5	...	...	...	...	...
Bikaner . . .	40	...	...	...	25'0	...	...	...	...	...	...	...	...	...	...	...	...	...	125'0	...	...	...	...	...
B.																										
Idak . . .	291	...	13'7	...	...	185'6	10'3	...	6'9	...	3'4	30'9	72'2	27'5	...	...	3'4	...	673'3	17'2	...	...	...	...
Khajuri . . .	40	...	...	...	250'0	...	...	...	...	...	...	25'0	...	...	...	...	...	...	350'0	...	...	...	...	...
Saidgi . . .	163	...	...	...	963'6	18'2	12'1	...	12'1	12'1	60'6	115'2	18'2	...	...	...	...	12'1	1,781'8	36'4	12'1	...	...	...
Jandola . . .	186	...	5'4	...	...	768'8	32'3	...	...	16'1	64'5	403'2	26'9	...	...	10'8	69'9	16'1	2,107'5	43'0	...	...	5'4	10'8	
Khajuri Kach . . .	243	...	...	...	913'6	28'8	...	...	...	4'1	41'2	341'6	20'6	...	4'1	4'1	32'9	4'1	1,691'4	37'0	4'1	...	...	...
Sibi . . .	168	...	...	...	339'3	29'8	...	...	...	59'5	23'8	83'3	11'9	6'0	...	...	17'9	65'5	1,017'9	47'6	...	...	29'8	35'7	
C.																										
Jacobabad . . .	460	...	...	...	143'5	6'5	...	...	...	8'7	41'3	32'6	10'9	...	...	4'3	10'9	13'0	637'0	30'4	...	...	4'3	8'7	
Hyderabad . . .	424	...	2'4	...	...	158'0	...	...	4'7	2'4	23'6	25'9	37'7	10'5	...	7'1	...	16'5	37'7	660'4	25'9	2'4	11'8	16'5	7'1
Karrachee . . .	605	...	1'7	...	...	292'6	3'3	...	...	1'7	18'2	38'0	26'4	1'7	1'7	...	1'7	14'9	69'4	695'9	33'1	18'2	3'3	6'6	41'3
GROUP VII.—N.-W. FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA.	15,551	...	15'6	8	1	384'3	21'0	5	9	3'4	24'6	33'0	52'3	12'2	1	3	3'6	17'3	19'3	997'9	32'0	3'8	2'3	4'8	9'3	

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.													2. DEATH-RATE.												
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSIS.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancere.	Secondary Syphilis.	Gonorrhœa.		
Indore	237	...	...	...	...	168.8	46.4	33.8	...	...	12.7	42.2	105.5	12.7	...	...	4.2	...	139.2	759.5	33.8	54.9	12.7	29.5	42.2
Mhow	764	...	9.2	...	...	315.4	10.5	...	...	1.3	11.8	19.6	32.4	9.2	...	1.3	6.5	3.9	108.6	858.6	39.3	28.8	43.2	10.5	26.2
GROUP VIII.— SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT	11,169	1.3	8.6	7	1	464.7	22.1	4.2	4	3.7	15.5	17.5	57.6	22.5	1	1.6	7.3	14.1	97.8	1,017.3	37.5	18.2	24.8	17.3	37.5		
A																											
Asirgarh	40	...	25.0	...	...	600.0	...	150.0	...	...	...	25.0	...	...	...	...	...	25.0	25.0	1,175.0	25.0	...	25.0	...	...
Saugor	991	...	1.0	...	...	888.0	28.3	3.0	...	1.0	11.1	6.1	27.2	5.0	...	1.0	2.0	3.0	61.6	1,319.9	39.4	11.1	28.3	16.1	6.1
Sutna	30	...	...	...	...	300.0	...	...	...	...	...	...	33.3	...	...	...	...	33.3	...	900.0	33.3	...	...	...	...
Jubbulpore	751	1.3	...	1.3	...	416.8	...	...	...	1.3	9.3	28.0	47.9	2.7	...	...	...	10.7	75.9	861.5	34.6	6.7	14.6	24.0	30.6
Sambalpur	347	...	...	5.8	...	233.4	...	...	...	...	3.8	28.8	34.6	8.6	...	...	...	5.8	172.9	789.6	46.1	60.5	...	31.7	80.7
Raipur	591	...	8.0	...	...	301.4	2.0	55.9	2.0	6.0	4.0	27.9	24.0	6.0	...	...	...	69.9	145.7	892.2	51.9	33.9	31.9	20.0	59.9
Kamptee	623	...	3.2	3.2	...	670.9	4.8	...	1.6	6.4	27.3	6.4	16.1	8.0	...	...	...	3.2	24.1	1,027.3	19.3	1.6	...	9.6	12.8
Sitabaldi	81	...	...	...	...	86.4	...	24.7	...	...	...	37.0	24.7	24.7	...	...	...	24.7	37.0	333.3	12.3	12.3	12.3	...	12.3
B.																											
Ellichpur	801	...	2.5	1.2	...	184.8	7.5	68.7	2.5	...	7.5	3.7	58.7	2.5	...	...	2.5	6.2	63.7	586.8	15.0	22.5	...	17.5	23.7
Hingoli	1,173	...	9.4	2.6	...	228.5	3.4	3.4	...	2.6	9.4	13.6	69.9	3.4	2.6	20.5	1.7	168.3	732.3	29.0	55.4	...	13.6	39.2	
Jalna	708	...	8.5	1.4	...	146.9	24.0	9.9	5.6	31.1	4.2	2.8	2.8	...	29.7	385.6	14.1	4.2	11.3	5.6	8.5	
Aurangabad	1,208	4.1	6.6	158.9	7.5	9.1	7.5	67.1	4.1	23.2	...	93.5	602.6	31.5	29.8	3.3	19.0	41.4	
Malegaon	34	...	117.6	...	...	264.7	29.4	...	...	...	29.4	88.2	...	...	...	...	...	...	...	823.5	29.4	...	...	...	...
Ahmednagar	358	...	2.6	92.8	5.2	...	5.2	...	5.2	10.3	40.0	12.9	2.6	2.6	5.2	56.7	458.8	20.6	18.0	2.6	12.9	23.2	
Mominabad	388	...	30.9	371.1	38.7	...	2.6	...	5.2	5.2	54.1	5.2	2.6	2.6	108.2	904.6	38.7	15.5	18.0	2.6	72.2	
Bolarum	1,162	4.3	1.7	278.8	21.5	4.3	9	9	11.2	11.2	43.9	11.2	9	2.6	2.6	15.5	595.5	16.4	1.7	9	2.6	10.3	
Secunderabad	2,952	3.0	19.6	164.6	6.4	16.9	6.4	1.7	8.1	9.8	25.1	1.0	3	2.0	1.7	25.1	48.1	615.5	25.7	8.8	3.7	12.5	23.0
Raichur	576	5.2	12.2	...	6.9	...	3.5	12.2	6.9	13.9	13.9	197.9	17.4	3.5	...	8.7	1.7	
Belgam	1,354	1.5	64.3	17.7	22.9	6.6	...	10.3	42.8	17.7	2.2	1.5	...	19.2	114.5	674.3	34.0	37.7	14.8	17.7	44.3	
Satara	135	...	7.4	7.4	...	111.1	7.4	7.4	14.8	7.4	7.4	...	81.5	570.4	37.0	7.4	7.4	14.8	51.9	
Poona	2,280	9	4	9	4	166.2	8.8	8.8	1.8	2.2	13.2	23.7	53.9	20.2	2.2	3.1	10.1	81.6	777.2	32.0	11.4	21.5	16.2	32.5	
Kirkoe	979	1.0	2.0	327.9	4.1	...	2.0	...	5.1	29.6	65.4	11.2	1.0	2.0	7.2	40.9	914.2	28.6	4.1	3.1	10.2	23.5	
Sirur	168	...	...	...	...	113.1	...	...	...	...	11.9	11.9	23.8	35.7	...	...	...	6.0	35.7	511.9	23.8	6.0	6.0	6.0	17.9
GROUP IX.— DECCAN.	17,670	1.4	6.6	1.9	1	250.0	10.5	11.5	2.7	1.3	9.6	16.6	40.6	6.8	1	1.6	4.4	11.7	68.6	717.0	28.2	17.2	9.2	13.8	28.4		

TABLE XXVIII—continued.

RATIOS of STATIONS, GROUPS, and COMMANDS.

For actuals see Table XXIX.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.										2. DEATH-RATE.													
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the Lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Genorrhœa.
Thana	29	103'4	34'5	34'5	103'4	34'5	...	34'5	448'3	34'5
Bombay	1,234	4'1	2'4	1'62	257'7	3'2	4'1	1'6	4'1	26'7	48'6	150'7	101'3	...	6'5	3'2	30'0	26'7	940'0	40'5	7'3	4'1	9'7	5'7	
Cannanore	718	...	...	1'4	48'7	2'8	1'4	2'8	...	16'7	15'3	26'3	1'4	...	...	...	9'7	29'2	466'6	26'5	8'4	...	19'5	1'4
Trichoor	55	...	...	...	36'4	...	...	...	...	18'2	54'5	18'2	...	...	...	...	18'2	18'2	418'2	18'2	18'2	...	...	...
Quilon	342	...	...	...	64'3	11'7	5'8	5'8	2'9	...	2'9	26'3	...	...	...	...	...	70'2	459'1	17'5	8'8	...	5'8	55'6
Trivandrum	57	...	17'5	...	17'5	...	...	...	...	...	35'1	17'5	...	...	...	...	17'5	...	368'4	...	...	...	...	...
GROUP X.— WESTERN COAST.	2,435	2'1	1'6	1'4	156'5	4'1	3'7	2'5	2'5	18'9	31'2	90'8	52'6	...	3'7	1'6	18'9	32'4	701'8	31'6	7'8	2'1	11'5	11'8	
A.																									
Bellary	819	...	2'4	...	523'8	11'0	...	2'4	2'4	14'7	15'9	31'7	2'4	...	...	...	12'2	50'1	1,111'1	50'1	1'2	3'7	8'5	36'6
Bangalore	3,387	2'1	...	...	145'6	4'4	7'1	4'4	1'2	19'8	23'0	16'5	3'0	3'0	1'5	...	21'6	29'8	580'7	30'1	8'3	9'0	8'3	12'4
B.																									
Trichinopoly	800	...	7'3	...	70'0	1'2	1'2	...	1'2	2'5	1'2	16'2	3'8	...	...	1'2	8'8	61'2	322'8	13'8	8'8	5'0	18'5	28'8
Pallavaram	75	...	...	...	146'7	...	...	13'3	13'3	...	26'7	13'3	...	...	...	...	80'0	53'3	493'3	106'7	13'3	...	40'0	...
St. Thomas' Mount	510	...	25'5	...	186'3	...	7'8	3'9	2'0	3'9	15'7	31'4	2'0	...	2'0	...	5'9	66'7	711'5	33'3	11'8	5'9	17'6	31'4	
Madras	604	...	5'8	1'4	87'9	...	27'4	...	8'6	10'1	14'4	21'6	2'9	...	2'9	...	14'4	87'9	540'3	34'6	10'1	17'3	23'1	37'5	
C.																									
Vizianagram	449	...	4'5	...	256'1	...	100'1	6'7	...	8'9	13'4	13'4	...	...	...	...	8'9	115'8	1,055'7	42'3	55'7	...	26'7	33'4
Berhampur	28	...	...	...	35'7	35'7	...	...	...	...	107'1	...	...	...	...	...	...	71'4	857'1	35'7	71'4	...	...	...
GROUP XI.— SOUTHERN INDIA.	6,764	1'0	4'0	1'1	186'4	3'8	14'3	3'4	2'2	13'9	17'9	19'7	2'7	1'1	1'2	1'1	16'7	50'9	651'8	33'0	11'4	3'7	13'3	22'5	
Maymyo	752	8'0	1'33	...	345'7	58'5	...	12'0	29'3	62'5	46'5	...	...	...	2'7	...	21'3	69'1	936'2	39'9	12'0	6'6	38'6	12'0
Bampon	58	...	...	...	603'4	...	...	...	...	...	...	...	...	...	...	...	86'2	...	1,275'9	34'5	...	...	...	...
Teungyi	40	...	...	...	25'0	25'0	...	...	...	...	...	...	...	...	...	...	...	...	175'0	25'0	...	...	...	...
Kalanaga	25	...	...	...	40'0	...	...	...	...	...	...	80'0	...	...	...	...	40'0	...	240'0	...	...	...	...	...
Kohima	526	...	1'9	1'9	216'7	9'5	...	5'7	9'5	20'9	9'5	53'2	1'9	...	1'9	...	11'4	62'7	688'2	38'0	3'8	9'5	17'1	32'3	
Shillong	622	4'8	...	1'6	257'2	3'2	...	1'0	32'2	14'5	19'3	43'4	3'2	1'6	6'4	...	19'3	82'0	863'3	46'6	4'8	20'9	14'5	41'8	
Gantak	180	...	...	...	216'7	11'1	...	...	...	...	16'7	33'3	50'0	...	...	...	11'1	27'8	766'7	22'2	5'0	...	11'1	11'1
Darjeeling	114	...	...	...	78'9	...	...	...	...	8'8	52'6	87'7	...	...	...	...	8'8	26'3	578'9	26'3	...	...	8'8	17'5
Almera	716	...	...	...	95'0	50'3	1'4	1'4	4'2	26'5	32'1	12'6	...	...	...	...	1'4	69'8	558'7	34'9	18'2	1'4	34'9	15'4
Ranikhet	46	...	...	...	21'7	...	...	...	...	...	21'7	21'7	...	...	...	...	...	43'5	173'9	21'7	...	...	21'7	21'7

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.														2. DEATH-RATE.											
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhœa.		
Naini Tal	127 {	...	...	...	...	212'6	15'7	15'7	...	...	55'1	55'1	23'6	31'5	...	...	...	23'6	15'7	68'5'0 } 15'75 }	31'5	7'9	...	...	7'9
Lansdowne	2,084 {	95'5	18'2	1'44	...	5	2'9	13'9	14'9	11'0	6'2	...	1'4	1'0	5'8	20'3	348'4 } 9'60 }	18'2	14'9	1'0	8'2	5'3	
Simla	118 {	8'5	...	...	...	76'3	...	...	...	...	...	16'9	50'8	25'4	...	...	...	8'5	152'5	516'9 }	33'9	76'3	8'5	25'4	42'4
Jutogh	133 {	...	...	...	...	166'7	37'9	7'6	...	...	...	15'2	98'5	...	...	7'6	...	15'2	30'3	651'5 }	30'3	22'7	...	...	7'6
Dharmasala	1,388 {	1'4	...	...	...	95'8	21'6	1'44	...	7	18'7	34'6	18'7	4'3	2'9	7	5'0	7'9	111'7	453'2 } 10'81 }	31'0	23'1	14'4	35'3	38'9
Bakloh	1,207 {	...	...	...	...	173'2	25'7	...	3'3	29'8	9'1	5'0	17'4	3'3	'8	3'3	2'5	9'9	36'5	599'5 } 10'77 }	29'0	4'1	8'3	9'1	14'9
Murree	29 {	...	...	...	...	69'0	103'4	...	...	...	...	34'5	69'0	34'5	...	...	...	...	200'8	724'1 }	34'5	172'4	...	...	34'5
Khyragully	84 {	...	...	...	...	83'3	...	...	...	...	...	11'9	...	11'9	...	...	...	...	11'9	297'6 }	11'9	...	11'9	...	...
Baragully	57 {	...	...	...	...	157'9	...	...	...	...	17'5	...	17'5	...	...	...	...	...	17'5	491'2 }	17'5	...	...	...	17'5
Kalabagh	56 {	...	...	...	...	142'9	...	...	...	...	17'9	17'9	35'7	...	...	...	...	17'9	17'9	696'4 }	17'9	...	...	17'9	...
Gilgit	170 {	...	...	...	...	64'7	5'89	...	...	...	...	...	29'4	...	5'9	5'89	...	11'8	17'5	194'1 } 17'65 }	11'8	5'9	...	5'9	5'9
Chitral	217 {	...	...	...	...	49'1	...	...	...	...	4'6	...	9'2	4'6	...	...	...	...	...	92'2 }	4'6	...	...	...	...
Kila Drosh	844 {	109'0	84'1	3'55	...	1'2	13'0	11'8	78'2	16'6	...	1'2	1'2	5'9	11'8	489'3 } 8'29 }	13'0	2'4	1'2	5'9	2'4	1'18	
Abbotabad	1,998 {	...	5'0	...	4'5	209'2	19'0	1'00	2'00	...	1'0	14'0	32'5	32'5	65'6	4'5	...	2'0	10'0	77'6	970'5 } 22'02 }	57'6	15'5	11'5	20'0	30'5	
Cherat	61 {	...	...	...	...	229'5	16'4	...	...	...	...	16'4	16'4	...	...	...	...	...	...	360'7 }	...	...	...	...	...
Miran Shah	658 {	...	15'2	556'2	6'1	1'52	...	1'5	6'1	48'6	18'2	47'1	13'7	...	3'0	10'6	12'7	13'7	992'4 } 31'91 }	28'9	3'0	1'5	9'1	...	
Boya	208 {	...	4'8	...	...	605'8	14'4	...	...	...	4'8	4'8	52'9	105'8	9'6	...	...	4'8	14'4	1,168'3 } 19'23 }	28'8	4'8	...	4'8	4'8
Datta Khel	898 {	722'7	23'4	1'11	3'34	...	1'1	1'1	32'3	42'3	46'8	21'2	...	1'1	1'1	13'4	3'3	1,191'5 } 13'36 }	30'1	1'1	1'1	1'1	...
Haidari Kach	48 {	...	...	...	...	1,625'0	...	...	...	...	...	...	41'7	416'7	125'0	...	...	20'8	...	2,645'8 } 20'83 }	41'7	...	...	...	...
Sarwekai	254 {	...	...	...	...	456'7	3'9	...	...	3'9	19'7	31'5	263'8	11'8	...	...	3'9	3'9	...	1,303'1 } 11'81 }	27'6	...	...	...	...
Wana	742 {	1'3	21'6	1,316'7	28'3	1'35	5'39	...	1'3	4'0	10'8	91'6	188'7	41'8	...	1'3	16'2	8'1	2,199'5 } 37'74 }	55'3	1'3	6'7	
Mir Ali Khel	144 {	...	27'8	...	6'9	298'6	41'7	104'2	159'7	145'8	13'0	...	41'7	6'9	1,104'2 } 34'72 }	27'8	6'9	
Fort Sandeman	736 {	...	4'1	...	1'4	373'6	28'5	1'36	4'08	12'2	21'7	89'7	93'8	21'7	...	8'2	35'3	25'8	25'8	1,108'7 } 33'97 }	47'6	2'7	5'4	4'1	13'6		
Mesa Khel	28 {	...	...	...	...	1,071'4	142'9	...	...	...	...	...	142'9	535'7	35'7	...	...	...	...	2,178'6 }	35'7	...	...	...	...
Khan Mohamed Kut.)	67 {	...	14'9	...	...	2000'0	44'8	...	...	...	44'8	59'7	119'4	179'1	...	...	14'9	14'9	29'9	2,850'7 } 29'85 }	59'7	...	...	...	29'9
Murgha	79 {	...	...	...	...	620'3	...	...	12'7	...	12'7	...	101'3	...	...	...	...	25'3	...	911'4 }	25'3	...	...	...	...

TABLE XXVIII—continued.

RATIOS of STATIONS, GROUPS, and COMMANDS.

For actuals see Table XXIX.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSION-RATE.													2. DEATH-RATE.												
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancere.	Secondary Syphilis.	Gonorrhœa.		
Loralai	815	...	13'5 8'59	1'2	...	234'4 1'23	147 2'45	...	...	4'9 2'45	9'8 1'23	23'3	89'6 3'68	29'4	...	3'7	2'5	28'2	14'7	726'4 20'86	27'0	1'2	...	3'7	9'8
Gumbaz	56	...	17'9 17'86	...	...	160'7	...	...	...	...	...	...	17'9	...	...	...	...	17'9	...	267'9 17'86	17'9	...	...	...	...
Quetta	2,011	...	...	...	...	386'4 1'99	13'4 1'99	1'5	1'5	1'5	26'4 5'97	32'3 99	87'0 99	20'4	...	1'0	3'0	14'9	54'2	1,020'4 14'92	37'3	9'0	4'0	10'9	30'3
Peshin	346	...	...	...	...	618'5	17'3	11'6	...	5'8	23'1 11'56	78'0	101'2 31'8	...	...	2'9	...	34'7	57'8	1,430'6 11'56	52'0	5'8	2'9	17'3	31'8
Shelabagh	177	...	...	...	...	237'3	11'3	...	...	...	11'3 5'65	...	5'6	33'9	152'5	45'2	...	5'6	...	101'7 5'65	36'5	...	16'9	50'8	33'9
Spinwana	41	...	...	...	...	122'0	...	...	...	...	...	24'4	...	48'8	...	...	...	...	48'8	...	317'1	24'4	...	...	...
Chaman	742	...	...	1'3	...	295'1	6'7 1'35	...	5'4	...	25'6 5'39	52'6 1'35	49'9	32'3	...	2'7	17'5	33'7	49'9	1,024'3 10'78	40'4	1'3	12'1	14'8	21'6
Mount Abu	95	...	10'5	...	...	73'7	...	10'5	...	...	21'1	10'5	31'6	...	...	...	...	10'5	52'0	357'9 10'53	10'5	10'5	10'5	...	31'6
Ootacamund	90	...	11'1	...	...	22'2	...	11'1	11'1	...	...	55'6	11'1	...	...	...	...	...	55'6	453'3	11'1	...	11'1	...	44'4
GROUP XII.— HILL STA- TIONS.	10,885	7 '05	3'0 1'46	2 '10	7 '10	310'1 75	22'1 1'76	7 '00	1'8 '30	7'6 2'21	21'7 3'32	32'1 1'11	60'3 7'0	14'7 '25	2 '15	2'2 '05	3'4 '00	13'8 '40	45'6 '15	836'2 15'39	34'3	8'9 '00	5'6 '10	13'4 '00	177 '05		
Marching Bengal. in }	2,162	...	2'8 2'31	5 2'78	7'4	135'5	4'2	...	1'9 46	2'3	15'3 1'39	17'1	45'8 1'39	10'6	...	9	5	10'2	19'4	436'6 12'03	12'5	5'1	5	2'3	11'6		
Marching Punjab. in }	3,406	...	5'0 3'82	6	...	96'3	8'8	...	3	6	11'2 29	7'0	28'8 29	2'6	...	3	3	5'0	7'0	272'5 6'17	5'0	2'3	6	1'5	2'6		
Marching Madras. in }	1,697	...	4'1 2'36	...	...	44'8	2'4	1'2	6	...	1'8	1'8	7'7	6	...	6	...	3'5	4'7	122'6 2'36	3'5	2'4	...	1'8	6
Marching Bombay. in }	2,269	...	2'2 6'17	...	...	156'9 44	1'8 3'09	1'3	4	...	9'3 2'20	9'3	41'4 1'76	11'5	...	9	4'4	5'3	11'0	341'1 18'51	7'9	2'6	1'3	1'3	5'7
Hyderabad Con- tingent march- ing.	244	...	...	...	...	24'6	...	...	...	...	...	...	...	...	...	...	...	...	...	102'5	4'1	...	...	...	...
Mishmi Field Force	75	426'7	13'3	373'3	26'7	1,133'3	26'7	...	13'3	13'3	...	
Malakand Force.	3,198	...	...	9	...	411'8 63	7'8	...	9	1'9	13'8 3'75	32'8	111'3	12'8	3	1'3	4'7	8'1	10'6	848'0 6'25	26'6	2'8	6	3'1	4'1
Kohat-Kurram Force.	1,951	...	10'8 7'18	5	...	228'1 1'03	22'0 1'03	5	5	4'6	17'4 4'10	31'8 51	29'2	9'7	...	1'0	1'5	18'5	11'3	669'9 15'38	23'1	1'3	5	2'6	6'7		
EXTRA INDIA. Indian Marine Ship Lawrence.	10	...	...	...	...	300'0	100'0	...	...	...	...	...	900'0	100'0	...	...	...	...	...	1,600'0	...	...	...	...	...
Chabbar	49	...	...	...	...	2,000'0	20'4	...	...	...	...	...	183'7	...	...	...	...	20'4	...	2,489'8	40'8	...	...	...	...
Jask	42	23'8	...	...	23'8 23'81	547'6	190'5	...	47'6	...	47'6	142'9	261'9	...	...	23'8	166'7	...	23'8	1,904'8 23'81	47'6	...	...	...	23'8
Muscat	21	238'1	...	...	...	1,128'6	47'6	...	...	...	...	95'2	95'2	...	...	47'6	...	47'6	47'6	2,619'0 47'62	47'6	...	...	...	47'6
Bushire	55	...	...	...	...	17'9	...	...	...	35'7	...	...	...	17'9	...	...	...	...	...	89'3	...	...	...	...	...
Bagdad	26	...	...	...	...	115'4	...	...	...	...	38'5	...	38'5	76'9 38'46	...	...	...	...	...	346'2 76'92	38'5	...	...	...	...
Aden	811	...	...	...	...	1,076'4	7'4 2'47	2'5	1'2	4'9 2'47	14'8 1'23	43'2 8'63	32'1 1'23	39'5	...	7'4	39'5	13'6	54'3 1'23	1,784'2 22'19	56'7	7'4	4'9	32'1	9'9

STATIONS AND COMMANDS.	Average annual strength.	1. ADMISSION-RATE.														2. DEATH-RATE.													
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Vesereal Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhoea.				
Khormaksar	82	...	...	...	...	1,219'5	24'4	61'0	...	...	...	24'4	12'2	...	...	...	36'6	24'4	1,597'6	24'4	...	...	12'2	12'2
Sheikh Othman	32	...	...	...	...	562'5	31'2	...	...	...	...	31'2	93'8	62'5	...	...	...	31'2	875'0	...	...	...	31'2	...
Perim	31	...	...	...	...	225'8	...	...	...	...	32'3	64'5	...	...	...	...	32'3	64'5	516'1	32'3	...	...	...	64'5
Zaila	10	...	...	...	...	...	...	...	...	...	32'26	...	...	...	...	...	...	...	...	...	...	...	...	...
Bulhar	5	...	...	...	...	1,200'0	...	...	...	...	200'0	...	...	...	...	...	...	...	1,600'0	...	...	...	...	...
Berbera	15	...	...	...	...	335'3	...	...	...	...	...	...	66'7	...	...	...	...	66'7	466'7	...	...	...	...	66'7
Mauritius	1,507	...	...	...	...	627'7	...	...	7'7	7'7	4'0	11'9	45'8	4'0	...	...	12'6	19'2	949'6	35'2	7	1'3	14'6	2'7
Colombo	485	...	...	...	...	101'0	37'1	...	2'1	...	4'1	41'2	136'1	2'1	...	...	37'1	68'0	715'5	47'4	22'7	12'4	8'2	24'7
Trincomalee.	164	...	...	...	...	91'3	...	...	...	...	18'3	61'0	103'7	6'1	...	...	16'4	85'4	1,243'9	67'1	30'5	...	30'5	24'4
Kandy	44	...	...	...	...	386'4	...	...	...	...	90'9	113'6	204'5	45'5	...	...	22'7	90'9	1,636'4	45'5	...	...	22'7	68'2
Singapore	713	...	...	...	...	204'8	1'4	39'3	8'4	2'8	4'2	47'7	64'5	14'0	...	2'8	56'1	72'9	820'5	28'1	32'3	...	27'4	18'2	
INDIA	123,463	9'03	5'23	6'03	4'15	320'8	14'0	3'5	1'6	3'7	14'6	24'0	50'4	11'4	1'3	1'3	3'2	14'9	42'5	784'6	30'0	9'4	6'2	10'4	16'5				
INDIA	120,551	9'03	5'23	6'03	4'15	318'8	14'1	3'4	1'6	3'8	14'8	23'9	49'9	11'5	1'4	1'4	3'3	14'4	42'4	781'7	29'0	9'3	6'3	10'2	16'6				
BENGAL	26,589	1'8	1'7	3	1'3	294'6	10'8	5	1'3	5'5	11'1	21'4	42'5	8'1	...	1'1	1'1	15'3	38'8	716'5	30'5	9'3	5'5	11'1	12'9				
PUNJAB	42,311	1	7'8	5	3	340'3	19'6	4	9	4'8	20'0	25'1	54'2	10'2	1	9	2'4	13'6	22'8	795'7	27'7	5'0	2'9	5'8	9'0				
MADRAS	20,407	1'2	4'6	1'2	1	248'9	8'5	9'2	3'7	2'0	8'9	23'2	28'2	2'1	1	1'0	4	18'3	48'9	690'4	29'7	10'7	5'3	13'4	19'5				
BOMBAY	24,908	1'1	5'2	4'7	2	397'3	13'3	5'1	1'6	2'6	16'3	28'8	67'4	26'8	1	2'6	7'9	14'4	69'7	956'8	34'0	12'5	14'4	14'1	28'8				
HYDERABAD CONTINGENT.	6,260	1'6	6'5	8	...	189'9	13'2	10'2	1'4	6	8'3	8'6	49'3	3'8	...	1'8	9'6	3'1	60'7	561'0	22'2	21'1	3'2	10'5	25'9				
China Expeditionary Force.	5,947	3	2	117'9	9'6	1'3	8	3'4	36'8	100'2	115'5	15'8	...	1'3	1'2	16'3	32'6	645'9	26'6	9'1	3'4	8'1	12'1				

* Excluding China Expeditionary Force, and including troops in Extra India not in the Indian Command.
† Excluding also troops in Extra India not in the Indian Command.
‡ As far as returns have been received.

NATIVE TROOPS, 1900.

TABLE XXIX.

ACTUALS of STATIONS, GROUPS, and COMMANDS, on which the ratios in Tables XXVI—XXVIII have been calculated.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSIONS.											2. DEATHS.															
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases	Tubercle of the lungs	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancres.	Secondary Syphilis.	Gonorrhœa.	Dracunculæ Medicinæ.	Other Entozoa.	
Port Blair	286 {	...	...	...	62	2	...	1	...	...	5	4	...	1	...	...	6	4	186	7	10	1	1	2	...	...	...
Rangoon	1,120 {	...	...	...	200	29	1	9	...	4	24	81	1	...	...	2	71	115	918	13	45	16	33	21	45	1	...
GROUP I.—BURMA COAST AND BAY ISLANDS.	1,406 {	...	...	...	262	31	1	16	...	4	29	85	1	1	1	...	2	77	1,104	20	55	17	34	23	45	1	...
Thayetmyo	309 {	...	...	...	70	1	...	1	2	...	5	3	...	...	...	...	1	5	230	...	9	2	2	...	1	...	...
Loikaw	82 {	...	...	...	65	1	...	...	...	...	2	3	...	...	...	...	...	...	110	...	2	...	...	...	...	...	...
Keng Tung	201 {	...	...	...	162	4	...	...	1	4	7	1	...	...	...	...	2	237	4	6	...	...	...	2	...	...	...
Fort Stedman	477 {	...	2	...	372	...	...	4	...	1	28	9	3	...	...	...	10	22	594	...	20	2	1	11	8	...	...
Thamakan	26 {	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	7	...	...	...	...	...	...	...	...
Meiktila	510 {	...	...	...	22	1	...	1	3	2	19	11	1	...	1	...	8	7	148	1	8	1	...	4	2	...	...
Fort Dufferin	1,377 {	...	...	...	976	7	...	3	5	2	52	45	9	...	...	...	20	50	1,489	6	48	10	4	22	14	...	...
Bhamo	860 {	...	...	...	601	1	...	...	...	3	37	83	...	...	...	1	6	32	1,048	3	34	8	4	8	12	...	...
Myitkyina	278 {	...	...	...	282	2	1	...	...	...	18	18	1	1	...	2	8	415	3	11	1	1	6	...	...	...
GROUP II.—BURMA INLAND	4,123 {	...	2	...	2,500	18	1	9	10	9	166	179	15	...	2	1	47	126	4,278	17	139	24	12	51	39	...	...
Manipur	721 {	...	...	...	155	2	...	2	3	8	22	57	10	...	...	1	13	24	485	6	35	1	7	9	7	...	...
Sadiya	67 {	...	...	...	26	5	...	...	...	...	2	...	...	...	...	...	3	1	57	...	2	...	...	1	...	...	...
Dibrugarh	297 {	...	...	...	151	1	...	...	1	13	60	4	...	1	...	13	5	300	3	12	1	...	2	2	2	...	...
Silchar	412 {	...	1	...	43	1	2	...	22	29	1	...	14	9	228	2	9	2	...	3	4	7
GROUP III.—ASSAM	1,498 {	...	1	...	375	9	...	2	5	9	59	146	14	...	2	1	43	39	1,070	11	57	4	7	15	13	9	1	
Fort William	730 {	...	3	1	532	5	...	3	4	4	27	116	11	...	1	2	29	30	941	13	34	9	4	10	7	...	1	
Alipore	653 {	...	3	...	833	2	...	2	3	3	22	84	9	...	2	8	20	10	1,258	15	40	2	...	5	3	1	...	
Ballygunge	30 {	...	...	...	...	1	...	...	...	...	3	3	...	...	...	...	1	...	22	...	1	...	...	...	...	...	...

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSIONS.												2. DEATHS.													
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhoea.	Dracunculus Medicinis.	Other Entozoa.
Dum-Dum	101	1	1	1	6	...	...	...	...	1	...	2	...	...	...	...	...	1	16	1	1	...	...	...	...	...
Barrackpore	467	...	1	3	165	2	...	3	...	3	33	2	...	...	...	...	9	25	324	19	11	...	12	2	...	
Buxa	274	...	...	...	113	8	...	3	5	5	29	12	...	...	...	...	1	10	270	11	2	...	7	1	8	
Cuttack	302	...	...	...	22	...	...	2	...	4	5	...	...	...	...	...	20	32	137	10	15	...	11	6	1	
GROUP IV.—BENGAL AND ORISSA.	2,565	1	6	3	1,670	18	...	7	13	13	64	262	34	...	3	10	80	108	2,965	115	40	4	45	19	10	1	
A																											
Doranda	451	39	...	...	171	...	...	6	5	36	59	4	...	...	1	10	17	602	21	4	3	3	7	10	...	
B																											
Dinapore	502	3	...	...	101	...	...	...	3	14	11	8	...	1	...	2	11	253	13	...	...	7	4	1	...	
Benares	724	2	...	7	251	...	1	2	4	22	49	10	...	...	2	17	21	649	27	5	1	6	9	27	...	
Allahabad	1,024	...	...	...	209	14	1	3	...	29	42	15	...	...	2	7	32	699	26	9	2	16	5	1	...	
Fyzabad	853	...	...	...	129	4	...	3	1	28	21	5	...	3	1	23	31	612	33	6	8	8	9	8	...	
Lucknow	1,046	...	...	...	241	3	...	1	9	53	17	13	...	2	3	12	37	699	33	4	7	13	13	4	...	
Cawnpore	983	9	1	...	153	14	...	1	4	19	12	38	...	...	1	10	12	458	20	...	1	5	6	1	...	
Fatehgarh	76	...	...	...	48	...	...	2	...	...	4	1	...	...	...	2	1	81	2	1	...	...	...	...	...
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR.	5,658	39	14	1	7	1,303	35	2	9	26	60	194	241	62	...	6	10	84	162	4,053	176	29	22	58	53	52	
A																											
Bareilly	968	3	1	...	147	13	...	...	13	2	9	27	4	...	...	...	8	24	463	26	10	...	2	12	6	...
Roorkee	539	1	...	...	199	1	...	...	5	5	9	10	4	...	...	...	5	11	375	12	2	1	2	6	1	...
Dehra Dun	1,442	...	1	5	219	9	6	2	24	15	14	3	4	...	6	1	11	77	852	48	26	10	13	28	1	...	
Meerut	1,164	...	...	...	122	12	...	...	8	14	8	26	2	...	1	...	12	35	499	27	14	4	8	9	22	...
Delhi	791	1	...	...	725	3	...	1	...	5	23	48	4	...	...	...	3	27	987	32	14	1	9	3	4	...
Umballa	1,241	...	...	...	224	20	...	1	5	12	13	44	18	...	...	3	12	20	769	29	8	2	2	8	4	1
B.																											
Ludhiana	31	...	...	...	6	...	...	...	...	2	3	...	...	...	...	...	1	1	18	1	...	...	...	...	1	...
Jalandur	747	...	1	...	33	2	...	1	2	7	4	13	...	...	...	1	2	7	158	10	2	1	2	2	2	...
Ferozepore	1,833	5	...	1	1,524	4	1	2	6	37	62	102	15	...	1	...	4	20	2,314	65	4	1	14	7	11	...	
Meean Meer	1,538	5	...	...	813	29	2	1	2	44	19	132	14	...	1	4	53	62	1,643	48	16	5	28	13	6	1
Amritsar	130	...	...	...	94	3	...	...	...	2	8	24	...	...	...	...	1	...	177	4	...	...	...	...	...

NATIVE TROOPS, 1900.

TABLE XXIX—continued.

ACTUALS of STATIONS, GROUPS, and COMMANDS, on which the ratios in Tables XXVI—XXVIII have been calculated.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSIONS.													2. DEATHS.													
		Influenza.	Cholera, Small-pox, Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess, Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhoea.	Dracunculus Medicinosis.	Other Entozoa.				
Sialkot	1,435	1	2	251	13	1	2	28	17	41	3	4	25	35	726	28	6	9	4	16	3	...	...			
Jhelum	1,253	...	69	8	...	1	7	17	5	24	5	1	7	23	325	15	2	5	5	10	4	...	...			
Rawalpindi	2,141	...	298	87	1	3	8	19	21	47	24	...	13	58	1,013	47	13	7	7	31	6	...	...			
Attock	65	...	13	...	...	...	...	1	...	4	1	1	...	...	41	2	...	...	...	...	...	...	...
GROUP VI.—UPPER SUB-HIMALAYA.	15,320	3	14	6	7	4	1,737	204	11	12	82	204	215	548	98	11	14	194	405	10,360	396	117	40	96	146	70	2	
A.		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mardan	1,023	3	1	103	13	2	2	22	30	25	10	1	3	3	432	20	2	1	8	20	...	...	...	...	...	...	...
Nowshera	802	1	2	59	24	...	2	6	4	18	1	...	6	10	252	13	1	1	4	4	...	...	...	...	...	...	...
Peshawar	2,431	12	4	1,102	45	2	5	67	84	105	30	4	5	18	2,322	74	11	5	5	11	2	...	...	...	...	...	...
Fort Jamrud	136	...	40	4	...	...	...	2	8	3	...	1	2	...	79	1	...	...	...	...	...	...	...	...	...	...	...
Kohat	3,047	213	4	953	116	6	20	126	145	110	32	1	19	84	3,015	111	11	9	9	16	23	...	...	...	...	...	...
Usterai	5	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Bahadur Khel	63	...	27	7	...	...	...	1	2	10	...	1	...	...	61	2	...	...	...	...	...	...	...	...	...	...	...	...
Thal	60	1	1	61	1	...	...	2	3	1	...	...	1	...	97	3	...	...	...	...	...	...	...	...	...	...	...	...
Latammar	49	...	5	...	...	...	...	1	4	...	...	...	...	2	14	...	...	...	...	2	...	...	...	...	...	...	...	...
Edwardesabad	1,919	6	2	739	49	1	7	80	71	82	17	1	12	47	1,894	73	4	1	3	24	9	...	...	...	...	...	...	...
Jani Khel	51	...	29	1	...	...	...	3	3	2	...	1	...	1	51	1	...	...	...	1	...	...	...	...	...	...	...	...
Dera Ismail Khan	1,729	1	1,079	38	...	7	24	38	76	31	1	7	37	96	2,144	68	3	12	4	7	5	1	...	...	...	...	...	...
Task, Jatta, and Draband	230	4	3	165	5	...	1	6	5	37	10	...	6	3	357	11	...	...	...	3	1	...	...	...	...	...	...	...
Fort Zam	128	...	70	...	...	...	2	3	13	9	...	4	4	141	3	1	...	...	...	3	...	...	...	...	...	...	...	...
Mangrota	35	...	1	9	1	...	...	1	2	...	...	...	...	...	19	1	...	...	...	...	...	...	...	...	...	...	...	...
Dera Ghazi Khan	420	...	442	5	...	...	2	10	36	9	...	...	10	24	668	18	8	9	7	1	...	...	...	...	...	...	...	...
Mooltan	1,084	...	253	7	...	6	11	20	24	2	...	2	11	18	679	28	5	1	3	9	1	...	...	...	...	...	...	...
Sadda	19	...	3	2	...	...	2	1	...	...	...	...	...	...	15	...	...	...	...	...	...	...	...	...	...	...	...	...
Bikaner	40	...	1	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	1	...	...	...	...	...	...	...
B.		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Idak	291	4	2	54	3	2	1	9	21	8	...	1	...	1	196	5	...	...	...	6	...	...	...	...	...	...	...	...
Khajuri	40	...	10	...	...	...	...	...	1	...	...	...	...	...	14	...	...	...	...	...	...	...	...	...	...	...	...	...
Saidgi	165	...	159	3	2	2	2	10	19	3	...	...	2	294	2	6	2	...	...	4	...	...	...	...	...	...	...	...
Jandola	186	1	1	143	6	...	3	12	75	5	...	2	13	3	392	8	...	...	1	2	...	...	...	...	...	...	...

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSIONS.														2. DEATHS.													
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhoea.	Dracunculus Medicinosis.	Other Entozoa.		
Khajuri Kach . . .	243	222	7	1	10	83	5	...	1	1	8	1	411	9	1		
Sibi . . .	168	...	...	...	57	5	...	...	...	10	4	14	2	1	...	...	3	11	171	8	...	...	5	6	...	...	
C.																													
Jacobabad . . .	460	...	...	...	66	3	...	...	...	4	19	15	5	...	...	2	5	6	293	14	...	...	2	4	1	...
Hyderabad . . .	424	...	1	...	67	...	...	2	1	10	11	16	7	...	3	...	7	16	286	11	1	5	7	3	3	...	
Kurrachee . . .	605	...	1	...	177	2	...	...	1	11	23	16	1	1	...	1	9	42	421	20	11	2	4	25	1	...	
GROUP VII.—N.-W. FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA.	15,861	...	247	13	1	6,095	148	8	15	54	390	524	833	193	2	12	57	275	309	14,718	568	61	37	64	147	57	2		
		...	133	3	27	1	2	9	102	14	9	5	1	1	1	1	1	339		1	
A.																													
Bhoj . . .	544	...	...	3	...	93	10	...	...	1	2	6	31	3	...	7	3	32	308	12	4	18	5	5	22	...
Rajkot . . .	232	12	...	...	264	2	...	...	...	1	2	8	3	...	2	4	1	21	416	13	7	5	3	6	...	...	
Deesa . . .	969	...	1	...	863	5	...	1	4	6	10	127	25	...	3	12	3	170	1,573	60	18	77	12	63	13	...			
Sadra . . .	76	...	1	...	56	13	...	...	...	2	1	7	3	...	2	1	1	5	100	2	2	...	1	2	...	...	
Ahmedabad . . .	409	...	1	1	173	3	...	...	4	7	21	19	10	...	4	3	23	86	473	18	19	21	25	21	12	...	
Baroda . . .	607	...	2	1	480	17	4	1	3	9	8	69	10	...	15	3	42	795	20	2	13	2	25	3	...	...	
B.																													
Barwani . . .	70	1	3		
Alirajpore . . .	37	1	...	...	5	4	...	...	...	8	...	...	...	...	...	...	...	...	33	1	...	...	...	...	3	...
Sirdarpore . . .	233	...	1	...	92	32	...	...	...	10	7	11	28	...	2	1	...	50	365	16	16	...	4	30	57	...
Jhabwa . . .	35	...	3	...	8	...	...	...	...	4	1	1	...	...	...	...	...	1	22	1	1	...	...	...	...	...
Kherwara . . .	270	...	30	...	170	1	30	...	7	13	17	28	38	...	4	15	24	482	22	1	3	3	17	30	...	...	
Kotra . . .	168	...	1	...	127	8	...	...	...	5	4	25	12	...	...	...	3	17	236	8	2	...	2	13	3	...
Udaipur . . .	63	...	...	...	46	1	...	...	...	1	...	...	5	...	...	...	...	5	64	1	3	...	...	2	...	...	
Erinpura . . .	527	...	7	2	372	10	3	1	6	19	15	45	13	1	...	9	...	78	702	20	9	34	14	21	9	...			
Neemuch . . .	390	...	1	...	402	6	2	...	...	3	14	24	26	...	1	...	3	68	624	23	14	11	9	34	14	...	
Deoli . . .	544	...	14	...	420	27	...	1	9	2	34	8	2	4	1	76	734	23	9	6	36	25	2	...	...		
Beawar . . .	48	...	...	...	8	...	...	...	...	3	1	...	...	...	...	...	...	...	17	1	...	...	...	...	1	...
Nasirabad . . .	736	...	9	...	169	17	...	2	4	21	40	27	...	...	9	9	79	589	30	15	16	11	37	15	...	...	
Ajmer . . .	487	...	4	...	178	8	...	...	...	9	3	12	2	...	...	5	1	40	335	9	16	...	12	12	8	...
Sambhar . . .	21	...	1	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...
Jaipur . . .	61	...	...	...	18	...	...	...	...	...	...	4	...	...	...	...	...	...	33	1	1	...	...	...	...	...

TABLE XXIX—continued.

ACTUALS of STATIONS, GROUPS, and COMMANDS, on which the ratios in Tables XXVI—XXVIII have been calculated.

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSIONS.														2. DEATHS.									
		Influenza.	Cholera, Small-pox, Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess, Hepatic Congestion and Inflammation, Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhoea.	Dracunculosis Medinensis.	Other Ectozoa.		
Agra	759	...	...	274	41	...	...	2	19	5	20	10	...	1	30	25	736	31	9	2	12	2	15	...	
Gwalior	27	...	...	20	1	...	...	...	...	1	1	...	...	...	...	1	26	1	...	...	1	...	...	...
Jhansi	625	...	...	92	4	...	...	2	12	3	16	2	...	1	4	49	274	15	6	17	8	18	...	...
Nowgong	236	...	...	142	2	...	...	1	4	5	6	7	...	...	9	46	403	18	4	7	5	30	4	...	
Goona	371	...	...	107	5	...	...	1	3	9	6	1	...	...	11	18	283	10	...	6	5	7	2	...	
Agar	296	...	...	67	10	...	...	1	...	1	17	3	...	...	9	17	234	8	2	5	2	8	...	...
Sehore	677	...	...	260	1	...	...	3	6	12	26	8	...	1	25	25	572	16	8	...	7	10	1	...	
Indore	237	...	...	40	11	8	...	...	3	10	25	3	...	1	...	33	180	8	13	3	7	10	...	...
Mhow	764	...	...	241	8	...	...	1	9	15	40	7	...	1	5	3	656	30	22	33	8	20	9	...	
GROUP VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT.	11,169	14,561	8,111	5,190	247	47	5	41	173	195	643	251	1	18	82	157	1,097	11,362	418	203	277	193	419	225	...
A.																									
Asirgarh	40	...	...	24	...	6	...	...	...	1	...	...	...	...	1	1	47	1	...	1	...	...	...	...	...
Saugor	991	...	...	880	28	3	...	1	11	6	27	5	...	1	2	3	61	1,308	39	11	28	16	6	9	...
Sutna	30	...	...	9	...	...	...	...	...	...	1	...	...	...	...	...	27	1	...	...	...	...	...	...	...
Jubbulpore	751	...	...	313	...	...	...	1	7	21	36	2	...	...	8	57	647	26	5	11	18	23	3	...	
Sambalpur	347	...	...	81	...	...	...	...	2	10	12	3	...	...	2	60	274	16	21	...	11	28	...	...
Raipur	501	...	...	151	1	28	1	3	2	14	12	3	...	...	35	73	447	26	17	16	10	30	...	...
Kamptec	623	...	...	415	3	...	1	4	17	4	10	5	...	...	2	15	640	12	1	...	6	8	...	...
Sitabaldi	81	...	...	7	...	2	...	...	...	3	2	2	...	...	2	3	27	1	1	1	...	1	...	...
B.																									
Ellichpur	801	...	...	145	6	35	2	...	6	3	47	2	...	...	2	5	51	470	12	18	...	14	19	2	...
Hingoli	1,173	...	...	268	4	4	...	3	11	16	82	4	...	3	24	2	127	859	34	65	...	16	46	3	...
Jalna	708	...	...	104	17	...	...	...	3	4	22	3	...	2	2	...	21	273	10	3	8	4	6	2	...
Aurangabad	1,208	...	...	192	9	...	1	...	11	9	81	...	...	5	28	...	113	728	35	36	4	23	56	4	1
Malegaon	34	...	...	9	1	...	...	...	1	3	...	...	...	...	...	...	28	1	...	...	...	...	...	1	...
Ahmednagar	388	...	...	36	2	...	2	...	2	4	19	5	...	1	1	2	22	178	8	7	1	5	9	4	...
Mominabad	388	...	...	144	15	...	1	...	2	2	21	2	...	...	1	1	42	351	15	6	7	1	26	4	...
Bolarum	1,162	...	...	324	25	5	1	1	13	13	51	13	...	1	3	3	18	692	19	2	1	3	12	...	...
Secunderabad	2,952	9,581	2,111	486	19	50	19	5	24	29	74	3	1	6	5	74	1,817	76	26	11	37	68	9	...	
Raichur	576	...	...	3	7	...	4	...	2	7	4	...	...	...	...	8	8	114	10	2	...	5	1	2	...

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSIONS.														2. DEATHS.									
		Influenza.	Cholera.	Small-pox. Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess, Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhoea.	Dacryoculus Medialis.	Other Entozoa.
Belgam	1,354	2	...	...	87	24	31	9	...	14	58	24	3	...	26	155	913	46	51	26	24	60	3	...
Satara	133	...	1	...	15	...	...	...	...	...	1	1	2	...	1	11	77	5	1	1	2	7	1	...
Poona	2,280	2	1	2	1	379	20	20	4	5	36	54	123	46	5	7	186	1,772	73	26	49	37	74	36	
Kirkee	979	1	2	...	321	4	...	2	...	5	29	64	11	...	1	2	40	895	28	4	3	10	23	33	
Sirur	168	...	...	...	19	...	...	...	...	2	2	4	6	...	1	...	6	86	4	1	1	1	3	14
GROUP IX.—DECCAN.	17,670	25	116	34	2	4,418	185	204	47	23	169	291	717	120	1	29	78	206	1,212	12,670	498	304	163	243	502
Thana	29	...	...	...	3	...	...	...	...	1	1	3	1	...	1	...	...	13	1	...	...	...	...	...
Bombay	1,234	5	3	...	318	4	5	2	5	33	60	186	125	...	8	4	37	1,160	50	9	5	12	7	14	
Cannanore	718	...	1	...	35	2	1	2	...	12	11	15	1	...	...	7	21	335	19	6	...	14	1	2
Trichoor	55	...	...	...	2	...	...	...	...	...	1	3	1	...	...	1	1	23	1	1	...	...	...	...
Quilon	342	...	...	...	22	4	2	2	1	...	1	9	...	...	...	24	157	6	3	...	2	19	...	...
Trivandrum	57	...	1	...	1	...	1	...	...	...	2	1	...	...	...	1	21	1	...	...	...	...	...	...
GROUP X.—WEST-ERN COAST.	2,435	5	4	1	351	10	9	6	6	46	76	221	128	...	9	4	46	75	1,709	77	19	5	28	27	
A.																									
Bellary	819	...	2	...	429	9	...	2	2	12	13	26	2	...	...	10	41	910	41	1	3	7	30	1
Bangalore	3,387	7	...	2	493	15	24	15	4	67	70	56	10	1	5	...	73	1,667	102	28	3	28	42	4	
B.																									
Trichinopoly	800	...	6	...	56	1	1	...	1	2	1	13	3	...	1	7	49	256	11	7	4	15	22	3	
Pallavaram	75	...	...	...	11	...	...	1	1	...	2	1	...	...	...	6	4	37	8	1	...	3	...	...
St. Thomas' Mount	510	...	13	...	95	...	4	2	1	2	8	16	1	...	1	3	34	363	17	6	3	9	10	...	
Madras	694	...	4	1	...	61	...	19	...	6	7	10	15	2	...	2	10	375	24	7	12	16	26	...	
C.																									
Vizianagram	449	...	2	...	115	...	40	3	...	4	6	6	...	...	...	4	52	474	19	25	...	12	15	1
Berhampur	28	...	...	...	1	1	...	...	...	...	3	...	...	...	...	...	2	24	1	2	...	...	...	...
GROUP XI.—SOUTH-ERN INDIA.	6,764	7	27	1	2	1,261	26	97	23	15	94	121	133	18	1	8	1	113	344	4,409	224	77	25	90	
Maymyo	752	6	...	...	260	44	...	9	22	47	35	...	...	2	...	16	52	704	30	9	5	29	9	...
Bampon	58	...	...	...	35	...	...	...	...	...	...	...	...	...	...	5	...	74	2	...	...	...	...	...
Toungyi	40	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	7	1	...	...	...	...	...

STATIONS AND GROUPS.	Average annual strength.	1. ADMISSIONS.														2. DEATHS.												
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anæmia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancre.	Secondary Syphilis.	Gonorrhœa.	Dracunculus Medinensis.	Other Entozoa.	
Miran Shah . . .	658 {	10	3	...	366	4	1	4	32	12	31	9	...	2	7	9	9	653	21	19	2	1	6	...	4	...		
Boya . . .	268 {	1	...	...	126	3	...	1	1	11	22	2	...	...	...	1	3	243	4	6	1	1	1	1	1	...
Datta Khel . . .	898 {	649	21	...	1	1	29	38	42	19	...	1	1	12	3	1,070	12	27	1	1	1	...	5	1	
Haidari Kach . . .	48 {	...	...	...	78	...	...	...	...	2	20	6	...	...	...	1	...	127	1	2	...	...	...	...	...	...
Sarwekai . . .	254 {	...	...	...	116	1	...	1	5	8	67	3	...	...	1	1	...	331	3	7	...	...	...	...	...	...
Wana . . .	742 {	116	7	...	977	21	...	1	3	8	68	140	31	...	1	12	6	1,632	28	41	...	...	1	5	5	...
Mir Ali Khel . . .	144 {	4	2	1	43	...	...	...	6	15	23	21	...	2	...	6	1	159	5	4	...	...	...	1	...	...
Fort Sandeman . . .	736 {	3	1	1	275	21	...	9	16	66	69	16	...	6	26	19	19	816	25	35	2	4	3	10	12	...		
Musa Khel . . .	28 {	...	...	...	30	4	...	...	...	4	15	1	...	...	...	...	...	61	...	2	...	...	...	...	1	...
Khan Mohamed Kot . . .	67 {	1	1	...	134	3	...	...	3	4	8	12	...	...	1	1	2	191	2	4	...	...	...	2	...	...
Murgha . . .	79 {	...	...	...	49	...	...	1	1	...	8	...	...	...	...	2	...	72	...	2	...	...	...	...	...	...
Loralai . . .	815 {	11	7	1	191	12	...	4	8	19	73	24	...	3	2	23	12	592	17	22	1	3	8	1	...	...
Gumbaz . . .	56 {	1	1	...	9	...	...	...	...	...	1	...	...	...	...	1	...	15	1	1	...	...	...	...	...	...
Quetta . . .	2,011 {	1	...	...	777	27	3	3	53	65	175	41	...	2	6	30	109	2,052	30	75	18	8	22	61	24	...
Peshin . . .	346 {	...	...	...	214	6	4	...	8	27	35	11	...	1	...	12	20	495	4	18	2	1	6	11	4	...
Shelahagh . . .	177 {	...	...	...	42	2	...	2	1	6	27	8	...	1	...	4	18	226	1	10	...	3	9	6	14	...
Spinwana . . .	41 {	...	...	...	5	...	...	...	1	...	2	...	...	...	...	2	...	13	...	1	...	...	...	...	...	...
Chaman . . .	742 {	...	1	...	219	5	...	4	19	39	37	24	...	2	13	25	37	760	8	30	1	9	11	16	3	...		
Mount Abu . . .	95 {	1	...	...	7	...	1	...	2	1	3	...	...	...	...	1	5	34	1	1	1	1	3	...	...	...
Ootacamund . . .	90 {	1	...	...	2	...	1	1	...	5	1	...	...	...	...	...	5	39	...	1	...	1	...	4	...	...
GROUP XII.—HILL STATIONS.	19,885 {	14	60	3	13	6,166	439	14	36	152	431	639	1,199	293	4	43	68	275	906	16,627	306	683	177	111	266	352	77	2
Marching in Bengal . . .	2,162 {	6	1	16	293	9	...	4	5	33	37	99	23	...	2	1	22	42	944	26	27	11	1	5	25	3	...	
Marching in Punjab . . .	3,406 {	17	2	...	328	30	...	1	2	38	24	68	9	...	1	1	17	24	928	21	17	8	2	5	9	3	...	

NATIVE TROOPS, 1900.

TABLE XXIX—continued.

ACTUALS of STATIONS, GROUPS, and COMMANDS, on which the ratios in Tables XXVI—XXVIII have been calculated.

STATIONS, AND COMMANDS.	Average annual strength.	1. ADMISSIONS.														2. DEATHS.										
		Influenza.	Cholera.	Small-pox, Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Circulatory Diseases.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Hepatic Congestion and Inflammation.	Scurvy.	Anemia and Debility.	Veneral Diseases.	ALL CAUSES.	CONSTANTLY SICK.	Primary Syphilis.	Soft Chancere.	Secondary Syphilis.	Gonorrhoea.	Dracunculus Melioidosis.	Other Entozoa.
Marching in Madras	1,697	7	4	1	70	4	2	1	3	3	13	1	1	1	1	6	8	208	6	4	3	1	1	1	1	1
Marching in Bombay	2,260	5	14	1	356	4	5	1	21	21	94	25	2	10	12	25	774	18	6	3	2	13	4	1	1	
Hyderabad Contingent marching.	244	1	1	6	1	1	1	1	1	1	1	1	1	1	1	1	25	1	1	1	1	1	1	1	1	
Mishmi Field Force	75	1	1	32	1	1	1	1	1	1	28	1	1	1	1	1	85	2	1	1	1	1	1	1	1	
Malakand Force	3,198	3	1	1,317	25	3	6	44	105	356	41	1	4	15	26	34	2,712	85	9	2	10	13	6	1	1	
Kohat-Kurram Force	1,951	21	14	1	445	43	1	1	9	34	62	57	10	2	3	36	1,307	45	3	1	5	13	21	1	1	
EXTRA INDIA.																										
Indian Marine Ship Lawrence.	10	1	1	3	1	1	1	1	1	1	9	1	1	1	1	1	16	1	1	1	1	1	1	1	1	
Chabbar	49	1	1	95	1	1	1	1	1	1	9	1	1	1	1	1	122	2	1	1	1	1	1	1	1	
Jask	42	1	1	23	8	1	1	2	2	6	11	1	1	1	1	1	80	1	1	1	1	1	1	1	1	
Muscat	21	5	1	30	1	1	1	1	1	2	2	1	1	1	1	1	55	1	1	1	1	1	1	1	1	
Bushire	56	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1	1	
Bagdad	26	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	9	1	1	1	1	1	1	1	1	
Aden	811	1	1	873	6	2	1	4	12	35	26	32	6	32	11	44	1,447	46	6	4	26	8	13	1	1	
Khormaksar	82	1	1	100	2	5	1	1	1	2	1	1	1	1	1	1	131	2	1	1	1	1	1	1	1	
Sheikh Othman	32	1	1	18	1	1	1	1	1	1	3	2	1	1	1	1	28	1	1	1	1	1	1	1	1	
Perim	31	1	1	7	1	1	1	1	1	2	1	1	1	1	1	1	16	1	1	1	1	1	1	1	1	
Zaila	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	
Bulbar	5	1	1	6	1	1	1	1	1	1	1	1	1	1	1	1	7	1	1	1	1	1	1	1	1	
Berbera	15	1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	7	1	1	1	1	1	1	1	1	
Mauritius	1,507	1	1	946	1	1	1	6	18	69	6	1	1	1	1	1	1,431	53	1	2	22	4	1	1	1	
Colombo	485	1	1	49	18	1	1	1	20	66	1	1	1	1	1	1	347	25	11	6	4	12	1	1	1	
Trincomalee	164	1	1	15	1	1	1	3	10	17	1	1	1	1	1	1	204	11	5	3	4	1	1	1	1	
Kandy	44	1	1	17	1	1	1	4	5	9	2	1	1	1	1	1	72	2	1	1	3	1	1	1	1	
Singapore	713	1	1	146	1	28	6	2	3	34	46	10	2	1	1	1	585	20	23	10	13	1	1	1	1	
INDIA	†	3	8	1	559	73	4	20	43	217	165	172	29	1	11	21	93	3,243	101	42	126	110	21	1	1	
	123,463	114,641	78,54	39,601	1,724	435	203	459	1,805	2,965	6,222	1,403	11	165	398	1,837	5,242	95,874	3,708	1,159	765	1,279	2,039	708	13	
		4,390	4,118	90	165	3	30	96	410	72	78	36	6	6	14	27	9	1,733	2	6	1	1	1	1	1	
		25	1	1	5	1	8	1	8	1	3	1	1	1	1	1	109	1	1	1	1	1	1	1	1	
INDIA	‡	3	8	1	554	73	4	20	42	217	164	168	29	1	11	21	93	3,221	101	42	125	110	21	1	1	
	120,551	114,641	78,54	38,428	1,705	407	195	456	1,790	2,878	6,015	1,383	11	163	398	1,732	5,110	94,234	3,600	1,119	757	1,231	2,003	706	13	
		4,390	4,118	87	164	3	28	95	409	72	75	36	6	6	14	24	9	1,704	2	6	1	1	1	1	1	
		25	1	1	5	1	7	1	8	1	3	1	1	1	1	1	107	1	1	1	1	1	1	1	1	
BENGAL	26,589	48	46	8	34	7,834	286	14	33	147	296	569	1,129	215	1	30	30	406	1,031	19,051	810	246	147	394	344	142
		35	12	21	30	21	30	4	28	53	9	13	7	1	3	1	7	2	278	1,173	212	123	247	382	135	7
		4	331	23	12	14,398	831	16	37	201	848	1,063	2,294	433	4	30	103	575	964	33,666	2	2	2	2	1	1
PUNJAB	42,311	181	2	18	55	1	3	41	182	24	19	13	2	1	1	1	5	623	1,173	212	123	247	382	135	7	
		25	93	25	3	5,080	173	187	70	40	182	473	576	43	3	21	9	373	997	14,680	605	218	108	273	326	24
MADRAS	20,407	1	63	1	21	24	2	8	10	39	6	8	1	1	1	1	6	250	605	218	108	273	326	24	2	
		27	130	17	5	9,895	332	126	40	64	412	718	1,680	668	3	65	190	359	1,736	23,812	871	311	358	350	717	388
BOMBAY	24,908	1	87	1	3	23	53	13	14	109	25	31	15	2	1	11	6	460	871	311	358	350	717	388	1	
		16	41	5	1,189	83	64	9	4	52	54	308	24	11	60	19	380	3,512	159	132	20	66	160	17	1	
HYDRABAD CONTINGENT.	6,260	2	24	2	4	2	1	2	20	4	1	1	1	1	1	1	79	159	132	20	66	160	17	1	1	
CHINA EXPEDITIONARY FORCE	§	2	1	1	701	57	8	5	20	219	596	687	94	1	8	7	97	194	3,841	158	54	20	48	72	16	
	5,047	1	1	1	9	61	1	5	20	37	14	4	3	1	1	1	3	110	158	54	20	48	72	16	1	

† Remaining + admitted = total treated. Remaining + admitted + died out of hospital = total cases.
 ‡ Excluding China Expeditionary Force, and including troops in Extra India not in the Indian Command.
 § Excluding also troops in Extra India not in the Indian Command.
 ¶ As far as returns have been received.

GROUPS AND COMMANDS.	1. AVERAGE STRENGTH.						2. CONSTANTLY SICK.						TOTAL.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
I.—BURMA COAST AND BAY ISLANDS.	1,420 72	1,420 71	1,426 67	1,367 56	1,362 66	1,334 63	1,375 57	1,387 43	1,389 38	1,471 32	1,426 37	1,482 51	16,868 655
II.—BURMA INLAND	4,654 132	4,730 138	3,783 95	4,143 110	4,217 96	3,793 101	3,985 118	4,212 118	3,750 136	3,955 192	4,258 220	3,991 187	49,471 1,663
III.—ASSAM	1,402 54	1,690 70	1,687 62	1,441 49	1,444 47	1,444 52	1,439 48	1,405 56	1,464 41	1,435 55	1,512 79	1,619 73	17,986 686
IV.—BENGAL AND ORISSA	3,273 159	2,936 118	3,213 107	2,592 92	2,588 92	2,466 78	2,135 92	2,058 103	2,001 86	2,179 118	2,605 172	2,738 162	30,784 1,379
V.—GANGETIC PLAIN AND CHUTIA NAGPUR.	6,123 143	6,632 162	6,360 189	5,875 186	5,780 166	5,777 144	5,200 145	4,835 152	4,876 189	6,294 233	5,607 229	4,423 169	67,892 2,107
VI.—UPPER SUB-HIMALAYA	18,082 404	19,769 397	18,698 305	16,220 283	15,051 299	14,998 269	13,525 280	12,809 318	12,043 412	12,120 623	14,029 636	15,674 525	183,918 4,751
VII.—NORTH-WESTERN FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA.	19,216 618	17,809 574	17,474 388	15,238 311	14,698 328	14,726 385	14,166 413	13,351 394	13,615 470	15,215 660	17,102 797	17,718 758	190,328 6,096
VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT.	12,636 284	12,399 298	11,713 290	10,900 341	10,388 337	10,496 322	10,724 358	10,167 420	10,580 493	11,229 623	11,454 676	11,354 580	134,030 5,022
IX.—DECCAN	21,359 497	21,775 535	20,673 479	17,888 393	17,445 397	17,531 391	16,416 478	15,220 508	15,247 556	16,173 619	16,083 581	16,030 544	212,040 5,998
X.—WESTERN COAST	2,065 117	2,881 116	2,905 88	2,536 80	2,493 62	2,589 64	2,541 72	2,296 70	1,837 64	1,884 63	2,124 57	2,167 70	29,218 923
XI.—SOUTHERN INDIA	7,475 237	6,684 240	6,570 254	6,735 229	6,980 224	7,099 195	6,394 196	6,447 222	6,559 227	6,735 224	6,661 231	6,830 203	81,169 2,682
XII.—HILL STATIONS	18,914 607	19,133 584	20,515 510	23,039 610	21,636 625	20,627 641	19,761 713	19,947 835	19,366 843	19,487 786	17,060 690	18,930 729	238,615 8,193
INDIA *	140,294 3,700	140,658 3,669	135,072 3,210	124,834 3,038	119,937 3,069	118,852 3,044	115,231 3,303	111,801 3,588	109,937 3,921	118,294 4,671	123,340 4,846	123,307 4,434	1,481,557 44,493
INDIA †	139,353 3,657	137,902 3,548	131,924 3,057	121,708 2,919	116,804 2,955	115,714 2,931	112,107 3,200	108,675 3,482	106,818 3,796	115,173 4,531	120,221 4,732	120,209 4,330	1,416,608 43,198
BENGAL	30,621 899	31,206 845	30,010 734	26,208 694	24,833 661	24,563 605	24,157 650	23,974 765	23,494 832	25,750 973	27,172 1,110	27,085 962	319,073 9,720
PUNJAB	47,924 1,190	48,334 1,110	45,614 879	42,643 814	40,595 867	40,351 977	38,883 1,023	37,092 1,083	36,552 1,226	41,400 1,694	43,946 1,660	44,403 1,552	597,737 14,075
MADRAS	24,009 670	22,367 689	21,293 646	20,837 565	20,603 541	20,222 512	19,444 540	19,631 573	18,268 584	18,987 626	19,472 669	19,748 660	244,831 7,265
BOMBAY	28,815 769	28,836 749	27,828 683	25,975 732	24,997 777	24,752 726	23,837 844	22,358 900	22,971 991	22,739 1,100	23,191 1,141	22,600 1,028	298,899 10,445
HYDERABAD CONTINGENT	7,268 121	6,974 150	7,179 135	6,045 109	5,777 109	5,826 111	5,785 143	5,620 161	5,533 163	6,297 188	6,440 152	6,373 128	75,117 1,670

* Including troops in Extra India not in the Indian Command.

† 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.

BENGAL COMMAND.

Fort William.—Malarial fever, which was the most prevalent disease in the cold months, was the result of chills in men already saturated with malarial poison. The dual water-supply and the faulty disposal of sewage are the chief defects: the first of which can be remedied only by a supply of pure water to all the floors of the barracks; and a septic tank is in course of construction to remedy the second. The latrines at Hastings should be connected with the main sewer. It is also wrong in principle to hand over the sanitation of Hastings to the Calcutta corporation, as all control is thereby lost.

The District Principal Medical Officer.—The fort is overcrowded with buildings, which impede the circulation of air. The only remedy is to reduce the number of buildings. The large number of malarial admissions might be due to mosquitoes, as well as to the other causes already enumerated. Mosquito-nets have been recommended.

The General Officer Commanding the District.—To use drinking water for washing, watering roads, etc., means a large additional outlay, which is not likely to be sanctioned. The pure water taps are all distinctly labelled, as are also the washing water ones. The fort is necessarily crowded with buildings, but even these are not sufficient for requirements, so I do not think they can well be reduced.

Alipore.—*The District Principal Medical Officer.*—The sanitation of the lines is satisfactory, except that there is a large tank, which should be filled up. The tank is in the infantry lines, and apparently serves no useful purpose. The latrines and urinals at present in use in the lines are of an old pattern, and cannot be kept clean. New movable latrines should be substituted. The sanitation of the married quarters in the infantry lines is unsatisfactory. The system of making over the conservancy to a contractor seems to be a bad one; and it should, I think, be carried out under station arrangements.

Fatehgarh.—There was no unusual sickness among the troops.

Agra.—The health of the troops has been good. Ague was prevalent during the autumn months, due mainly to the heavy rains during the monsoon, many parts of the country being flooded.

Gwalior.—No sanitary report.

Agar.—Ague was prevalent owing to the excessive rains succeeding an unprecedented drought. An outbreak of cholera also occurred, introduced by family refugees from the surrounding country.

Shillong.—Measles and mumps are unusual diseases in the station, and were introduced by infection from the surrounding villages. Exposure and climatic influences during the march from Manipur to Shillong through the 'Nambor Terai' are accountable for the dysentery cases. The whole conservancy and the sanitation of the station urgently require attention, as also a liberal provision of funds to meet the suggested improvements.

The District Principal Medical Officer.—The provision of a good and safe water-supply at Manipur is probably the most pressing sanitary need of this military district, and after that comes the improvement all round of the sanitary equipment of Shillong.

The General Officer Commanding the District.—Measures have been taken to improve the sanitation of the station.

PUNJAB COMMAND.

Ludhiana.—There has been no unusual sickness this year.

Ferozepore.—The troops suffered very severely from ague, all corps alike. See also Table V.

Attock.—*The General Officer Commanding the District.*—The question of an improved water-supply for the fort by means of pumping up from the river is under consideration.

Kohat.—The unusual sickness and mortality this year were due to an epidemic of cholera, which was imported from the Punjab, and then spread locally by the use of drinking water from streams which had become contaminated. Malarial fever seems to have been due to cold acting on men debilitated by exposure to a very severe hot season; and pneumonia to cold and chills acting on men predisposed by malarial fever.

The District Principal Medical Officer.—The following defects have been brought forward:—(1) Overcrowding in the central infantry lines; (2) the absence of bathing places for the troops, and of properly constructed *dhobi ghats*; (3) the superheating of the standards for the pipe water-supply during the hot weather. New lines are being erected to remedy defect No. 1; arrangements are being made and estimates and plans are being prepared to remedy defect No. 2; and as for defect No. 3, the standards will all be roofed over before the advent of the hot weather.

Bahadur Khel, Thal.—No sanitary report.

Edwardesabad.—The cases of cholera were a part of the general epidemic throughout India. There has been no marked difference in the incidence of any sickness on the various corps. Ague was due to the malarious nature of the district, and pneumonia to cold. The chief defects are the cultivation and irrigation of the land all round the cantonments, up to the very limits of the bungalows and the lines; and the absence of any sanitary arrangements in the surrounding villages, some of which are hardly more than a stone's throw away. The first is probably a predisposing cause of malaria and the second a possible source of the contamination of the water of the *nullahs*.

The District Principal Medical Officer.—As stated by the Senior Medical Officer, the two chief sanitary defects are the cultivation and irrigation of land close up to the cantonments, and the numerous small irrigation channels running through, or close to, the cantonments. These defects have been pointed out in previous reports.

The Lieutenant-General Commanding the Forces.—The proposals to take up a broad belt of land round the cantonments, and to evacuate villages are Utopian and quite impracticable.

Tank, Jatta, Draband, Jandola, Khajuri Kach.—No sanitary report.

Abbottabad.—The past year has been an unusually healthy one as regards malarial fever, which was due to climatic causes. Conjunctivitis occurred chiefly among men who contracted the disease from their families, and mumps among the recruits of the 42nd Gurkha Rifles, who had brought the disease with them, most of the rank and file having had the disease previously. Venereal disease was owing to infected women living in the neighbourhood beyond the sphere of the cantonment act, as at present constituted.

The Lieutenant-General Commanding the Forces.—The drainage of the *nullahs* to the south of the cantonments is under consideration, as also is the question of increasing the storage and the quantity of the water-supply. Local action is being taken about the proposed purchase of the catchment area of the water-supply.

Miran Shah, Boya, Haidari Kach, Wana.—No sanitary report.

MADRAS COMMAND.

Port Blair.—There have been 18 admissions for beri-beri in the native infantry hospital, against none in the previous year.

The District Principal Medical Officer.—The health of the men generally has improved; and very little of the illness which has occurred either in the British or in the native troops, is traceable to disease contracted primarily at the Andamans. The general sanitary conditions existing are excellent.

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.

Keng Tung.—This station is a paddy swamp surrounded by several hundreds of miles of high, jungle-covered mountains. The cantonment is in a *terai* between marshes and jungle. The soil is impervious and polluted with putrefied vegetable organic matter. It is imperfectly drained. The ground water-level is always high, and undergoes great fluctuations. The atmospheric variations are very great, and the relative humidity of the air is very high. The rainy season lasts over six months, and greatly interferes with the out-door exercise of the men.

The District Principal Medical Officer.—This station has been much healthier during 1900 than in the years immediately preceding. This has been due partly to the fact that the present regiment has not been stationed there long, and partly to the convoy duties having been lessened during the rains. As the question of handing over the station to the military police is now under consideration, it is not deemed necessary to make any recommendations for sanitary improvements involving considerable expenditure.

The General Officer Commanding the District.—If it is settled to retain troops at Keng Tung, it will be necessary, in my opinion, to select a new site for a cantonment.

Secunderabad.—No cause can be assigned for the epidemic of cholera, which broke out during the months of July, August, and September. The number of cases treated and recorded does not accurately represent the actual number of attacks, as there were also numbers of cases that were neither treated at the camp, nor reported to the authorities. The water in the Jeddimitla tank, which is the source of water-supply, was insufficient in quantity and bad in quality, owing to the abnormal drought last year.

The General Officer Commanding the District.—The milk-supply is not good, and therefore a dairy should be started.

The Lieutenant-General-Commanding the Forces.—Steps are being taken with reference to the several defects brought to notice.

Bellary.—There has been no unusual sickness during the year, as compared with other years, except in the case of the *depôt*, 9th Madras Infantry, which shows an excessive sick-rate. This is due to several reasons; when the regiment went to Ceylon, all its sick were left behind, and also a large number of men considered unfit to proceed, sent to hospital with a view to invaliding them; and a large number of men who were on sick leave joined the *depôt* during the year, and were admitted for purposes of invaliding. From these causes the number of sick has been greater in proportion to the strength of the corps. Malarial fever was prevalent during the autumn months. The drainage in the lines of the native troops is unsatisfactory, owing to the great number of cess-pits, which have to be emptied and kept clean. The native infantry barracks are old, broken down, and unfit for occupation. New blocks are, however, in course of construction; but these also have their defects, *vis.*, the system of private urinaries in the married quarters, defective ventilation, and defective roofing.

Vizianagram.—The epidemic of cholera was due to infection from the village, named Kanapaka, adjoining the cantonment bazaar. Kanapaka is believed to be the source of most of the infectious diseases in this station. The attention of the civil authorities has been drawn to the state of this village. Beri-beri is supposed to have been due to eating badly cooked locally grown rice, and to have been aggravated by housing in low damp huts. Efforts are being made to obtain good rice from elsewhere. New lines are in course of erection. The water-supply, examined by the Chemical Examiner on the 28th and 29th January 1901, is pronounced by him impure and suspicious.

BOMBAY COMMAND.

Sibi.—There has been an increase of sickness during the year. Pneumonia and ague prevailed in the months of January, February, October, November, and December; and ulcers during almost all the months of the year, especially from April to July. All this sickness was due either to cold, to malarial poison, or to impure water.

The District Principal Medical Officer.—Up to November the water-supply was taken from a source open to contamination, and even now that the water is being brought from a distance to the railway station for use, it cannot be considered to be free from danger. The health of the troops has sympathized with, and been influenced by, the general unhealthiness, which inevitably accompanies a year of drought. Considering the position and the climate of Sibi, it is not a locality in which a favourable state of health amongst the troops could ordinarily be expected.

The General Officer Commanding the District.—Even washing in the water of the place gives "Sibi boils." Until there is a good water-supply, Sibi must always be a bad station for troops: the detachment there always suffer. The hot weather is almost unendurable. Sibi is one of the hottest places in India.

The Lieutenant-General-Commanding the Forces.—No progress has yet been made in connexion with the bringing of water from the Nari river. The scheme is under consideration.

Deesa.—Malarial fever prevailed after the rains, due to an increased rainfall this year following a year of drought. The huts in the lines of the 2nd Bombay Lancers require to be rebuilt. They are badly ventilated, and in the rains the roofs sag and let the water through.

The Lieutenant-General-Commanding the Force.—The work in connexion with the rebuilding of the cavalry lines will be done as soon as money is available.

Alirajpore.—No sanitary report.

Sirdarpore.—The health of the troops has been bad. Malarial fever was due to abnormal climatic conditions and scarcity of good drinking water; guinea worm was chiefly owing to foul water; and diarrhoea to climatic causes, indifferent grain-foods, and bad drinking water. The excessive number of venereal cases was caused by intercourse with the large number of starving diseased women on relief works or in poor-houses. There has been only one danger, the water-supply. The inmates of the cantonment have hitherto been dependent for their water-supply chiefly on the river and on the wells. In years of deficient rainfall the latter rapidly dry up, and the water in the river falls to a low level. In 1900 the river was almost dry. The work of laying pipes, building collecting-cisterns, and thus bringing in an abundant and continuous supply of pure drinking water from the Bhopawar spring is almost accomplished.

Jhabwa.—No sanitary report.

Kherwara.—The cholera outbreak was apparently due to the deficient character of the water-supply. The two wells from which the regiment usually obtained its supply, ran dry; and therefore recourse had to be had to wells sunk in the old river bed. These became it is believed, polluted, and were closed during the outbreak. The land where the filth is deposited, should be situated at a greater distance from the station; and the land so manured should be placed under cultivation. Provision of means of ventilation in the sepoy's quarters in the newly built lines is required.

Kotra, Udaipur.—No sanitary report.

Erinpura.—Malarial affections were the most marked form of unusual sickness. In an ordinary season, the sickness and mortality from this cause are in this district exceedingly low. The heaviness of the monsoon, followed by clear weather and strong sunshine, appeared to account for the greater prevalence of malarial and dysenteric affections; guinea-worm was common in the dry season owing to the lack of good drinking water; eye affections were prevalent during hot winds; and respiratory affections were common in the cold weather. There were some exceedingly obstinate cases of scurvy, which could not be accounted for otherwise than by supposing them to be seasonal. The sanitary condition of the adjoining village of Sheoganj is exceedingly bad, the lanes and alleys of the village, as well as the *mullahs* leading to the river on which it is situated, being used as public latrines. It was notorious that during the monsoon cases of cholera occurred in the village at the same time that cases were occurring within the cantonments. But as the local authorities had no cases reported to them, it is certain that no precautions as to disinfection of stools, etc., or proper treatment of the sick, were taken.

The Lieutenant-General-Commanding the Forces.—Action is being taken to remove the insanitary condition of the village of Sheoganj.

Deoli.—Cholera was epidemic throughout the surrounding districts, from which, no doubt, the disease was introduced into the cantonment. The last four months of the year have been very unhealthy, and malaria has been universal in the cantonments and throughout Rajputana. The rainfall has been excessive, and malaria-spreading mosquitoes have been present in much greater numbers than usual. The dysentery cases have been, as a rule, mild; and probably due to seasonal influences and excessive rainfall. The prevalence of venereal disease is accounted for by the number of starving diseased women on relief works, or wandering in search of employment and infecting the men. Catarrhal conjunctivitis was produced by dust, glare, etc. Until the advent of the rains in the middle of July, water was very scarce.

Beawar.—No sanitary report.

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.

Sambhar.—No sanitary report.

Asirgarh.—No unusual sickness occurred during the year.

Kamptee.—There was no unusual sickness among the troops.

Malegaon.—No sanitary report.

Bombay.—Ague was due to climatic conditions; and dysentery and diarrhoea to exposure to cold, and probably to climate. The lines of the 2nd Bombay Grenadiers should be evacuated, as their surroundings are insanitary. There being a great deal of overcrowding in the married quarters of the 21st Bombay Infantry, sufficient accommodation should be provided.

Mir Ali Khel.—No sanitary report.

Fort Sandeman.—The year was an unhealthy one throughout Baluchistan, especially as regards the wide prevalence of malarial fever which was particularly severe among the men of the 23rd Bombay Rifles. The exact cause cannot properly be ascertained. Cultivation is very limited, especially at the outposts, which appear to have suffered most. Scurvy was probably due to the difficulty and costliness of obtaining vegetables during the hot months. Dysentery and diarrhoea occurred among malarial and scorbutic subjects. Pneumonia was due probably to the severe winter, and to the insufficient accommodation. Overcrowding exists among the native troops and followers of the native cavalry. The deficiency of space amounts to over 13,000 square feet. There is no accommodation for the followers, who have therefore to sleep with the *sowars*, or to make some other arrangement.

The General Officer Commanding the District.—There was less fever this year, possibly because I ordered all ponds to be drained or filled up, and mosquito larvæ destroyed.

Khan Mohamed Kot, Jask, Muscat, Bagdad.—No sanitary report.

Aden.—Vegetables are difficult to be procured.

The District Principal Medical Officer.—The means of disposal of refuse, sewage, etc., wants attention, and I should strongly urge the desirability of incineration.

The Lieutenant-General Commanding the Forces.—A scheme for removing the nightsoil to Shaikh Othman by light railway is still under consideration.

Perim.—No sanitary report.

HYDERABAD CONTINGENT.

Hingoli.—Cholera was due to infection from the surrounding villages. It was epidemic all over the district. The same may be said of small-pox. The heavy rainfall was probably the cause of malarial fever and bowel-complaints, and the latter disease was also attributable to the prevalence of famine. Venereal disease was due to the large number of women who took up prostitution to avoid starvation. Water is always scarce during the hot weather and was very much so this year.

The water of the cavalry tank is liable to contamination from the drainage of the bazaar and Ganesh Wadi.

The General Officer Commanding the District.—The infantry lines require to be rebuilt, if the regiment is to remain at Hingoli.

Jalna.—The prevalence of malarial fever was due to dampness, and to great variations in temperature between night and day, as well as to exposure. Cholera was owing to infection from the famine-works outside the cantonment, as also to the lowered vitality of the people owing to scarcity.

The District Principal Medical Officer.—The adjacent city of Khadeabad in the Noglai is in a very insanitary condition, and should therefore be brought under the sanitary jurisdiction of the cantonment authorities. The scheme for a better water-supply ought to be taken in hand.

Mominabad.—The prevalence of fever was chiefly due to climate, and was more frequent among those living near the tanks. Cholera broke out in a severe epidemic form on the 16th March, and lasted till the 2nd of August. The water-supply has been deficient for the past 4 years, owing to the small rainfall.

TABLE XXXI.

INFLUENZA by months, stations, groups, and commands.

TABLE XXXII.

CHOLERA by months, stations, groups, and commands.

STATIONS* AND GROUPS.	ADMISSIONS FROM INFLUENZA IN EACH MONTH.												ADMISSIONS FROM CHOLERA IN EACH MONTH.												
	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.
Silchar
GROUP III.—ASSAM
Fort William	2	...	...	...	...	...	...	...	1	...	...	...	...
Alipore	3	...	...	...	3
Dum-Dum	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP IV.—BENGAL AND ORISSA	1	...	...	...	...	1	2	...	...	...	...	...	...	...	1	3	...	...	6
Doranda	32	7	...	...	...	39	...	...	...	...	...	...	...	...	...	...	...	...	...
Dinapore	2	1	...	...	...	...	...	3
Benares	1	...	...	1	...	...	2
Cawnpore	7	...	1	1	...	...	...	...	9
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR	32	7	...	...	...	39	...	...	...	...	7	2	3	1	...	1	...	...	14
Bareilly	3	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	1	...	...	...	...	1
Roorkee	1	...	...	...	...	1
Delhi	1	...	...	...	...	1
Ferozepore	5	...	...	...	...	...	5
Mecan Meer	3	2	...	...	...	5
Sialkot	1	...	...	...	1
GROUP VI.—UPPER SUB-HIMALAYA	3	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	5	2	4	3	...	...	14
Mardan	2	1	...	...	...	3
Nowshera	1	...	...	...	1
Peshawar	4	8	...	...	...	12
Kohat	211	1	1	...	...	213
Thal	1	...	...	...	1
Edwardesabad	2	1	...	3	...	...	6
Tank, Jatta, & Draband	3	1	...	...	...	...	...	...	4
Idak	3	1	...	...	...	...	4
Jandola	1	...	...	...	1
Hyderabad	1	...	...	...	1
Kurrachee	1	...	...	...	...	1
GROUP VII.—NORTH-WESTERN FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA	2	10	222	6	7	...	...	...	247
Rajkot	10	2	...	...	...	...	...	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...
Deesa	1	...	...	...	...	1
Sadra	1	...	...	...	1
Ahmedabad	1	...	...	...	...	...	...	...	1
Baroda	2	...	...	...	...	...	...	2
Alirajpore	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Sirdarpore	1	...	...	...	1
Ibatwa	3	...	...	...	...	...	...	...	3
Kherwara	25	5	...	...	...	...	...	...	30
Erimpura	6	1	...	...	7
Neemuch	1
Deoli	1
Nasirabad	9	3	...	...	14
Njmer	1	8	...	...	9
Sambhar	2	2	...	...	4
Ihansi	1	...	...	1
Joona	1	...	...	...	...	...	...	...	...	2	...	...	...	2
Agar	2	...	...	...
Behore	2	3	4	1	...	10
Mhow	1	...	6	...	...	7
GROUP VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT	11	2	...	...	...	...	...	...	...	1	...	...	...	4	49	14	9	14	6	...	...	...	96

* Stations where neither Influenza nor Cholera occurred are not shown in these tables. For the annual ratios see Table XXVIII.

TABLE XXXI—continued.

INFLUENZA by months, stations, groups, and commands.

TABLE XXXII—continued.

CHOLERA by months, stations, groups, and commands.

STATIONS, GROUPS, AND COMMANDS.	ADMISSIONS FROM INFLUENZA IN EACH MONTH.												ADMISSIONS FROM CHOLERA IN EACH MONTH.													
	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																										
Asirgarh
Saugor
Jubbulpore	1	...	...	...	...	...	...	...	...	1	...	...	...	1	1	2	...	...	...	...	...	...	...
Raipur
Kamptee
B																										
Ellichpur
Hingoli
Jalna
Aurangabad	4	1	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...
Malegaon
Ahmednagar
Mominabad
Bolarum	1	...	2	2	...	...	...	...	...	...	...	5	...	...	...	10	1	...	...	...	...	...	...	...	12
Secunderabad	6	...	...	...	1	1	1	...	...	...	...	...	9	...	...	...	...	1	...	...	...	...	...	...	...	2
Belgam	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Satara
Poona	1	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Kirkee	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP IX.—DECCAN	6	5	1	3	3	1	1	1	2	...	...	2	25	...	...	15	10	1	13	53	21	3	...	...	...	116
Bombay	5	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	1	2	...	...	...	3
Trivandrum	1	...	1
GROUP X.—WESTERN COAST	...	5	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	1	2	...	...	1	4
A																										
Bellary	2	...	2
Bangalore	1	1	2	2	1	...	...	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...
B																										
Trichinopoly	2	...	1	1	...	...	...	...	...	...	...	6
St. Thomas' Mount	13	...	...	...	...	...	...	...	...	13
Madras	1	...	...	...	...	3	...	...	...	4
C																										
Vizianagram	2	...	...	2
GROUP XI.—SOUTHERN INDIA	...	1	1	2	2	1	...	...	...	...	...	...	7	...	2	...	15	1	...	...	3	...	4	...	2	27
Maymyo	6	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Kohima
Shillong
Simla	2	1	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Dharmasala	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Abbottabad
Miran Shah
Boya
Wana
Mir Ali Khel
Fort Sandeman
Khan Mohamed Kot
Loralai
Gumbaz
Quetta
Mount Abu
Ootacamund	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP XII.—HILL STATIONS	2	8	2	1	...	...	...	...	...	...	14	...	...	...	...	1	17	8	23	11	...	...	...	60
Marching, Bengal	1	5	...	...	...	...	...	...	...	...	...	6
" Punjab	17
" Madras	9	5	...	...	7
" Bombay	3	1	1	...	...	...	...	...	5
Kohat-Kurram Force	19	1	...	1	...	...	21
EXTRA INDIA.																										
Jask	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Muscat	1	3	1	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...
INDIA	6	13	21	16	7	3	34	8	2	...	1	3	114	2	3	20	29	67	57	321	74	43	15	8	2	641
BENGAL	6	2	...	...	33	7	...	...	...	...	48	2	1	5	2	7	5	11	5	6	2	...	...	46
PUNJAB	2	1	...	...	...	...	1	...	4	...	...	...	...	6	27	246	14	29	9	...	...	331
MADRAS	6	1	1	9	3	2	1	...	...	...	...	2	25	...	2	...	16	1	1	36	21	2	4	8	2	93
BOMBAY	7	13	3	...	...	...	1	2	...	...	1	27	...	...	2	6	53	15	15	33	6	...	...	...	130
HYDERABAD CONTINGENT	5	1	2	2	...	...	...	...	...	...	...	10	...	...	13	5	...	9	13	1	...	...	...	...	41

TABLE XXXIII.

ENTERIC FEVER by months, stations, groups, and commands.

TABLE XXXIV.

SIMPLE CONTINUED FEVER by months, stations, groups, and commands.

STATIONS* AND GROUPS.	ADMISSIONS FROM ENTERIC FEVER IN EACH MONTH.											ADMISSIONS FROM SIMPLE CONTINUED FEVER IN EACH MONTH.															
	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	...	...	...	...	...	...
GROUP I.—BURMA COAST AND BAY ISLANDS	1	...	...	...	...	...	...
Myitkyina	1	...	...	...	...	...	...	...	...	...
GROUP II.—BURMA INLAND	1	...	...	...	...	...	...	...	...	...
Barrackpore	2	1	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP IV.—BENGAL AND ORISSA	2	1	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
B																											
Benares	1	2	2	1	...	...	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	1	...	5	
Allahabad	7	...	...	...	...	1	...	...	...	...	...	...	...	1		
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR	1	2	2	1	...	...	...	...	...	...	7	...	...	...	...	1	...	...	...	...	...	1	...	2	
A																											
Bareilly	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Dehra Dun	1	1	...	1	1	1	...	...	...	...	5	...	...	...	1	...	3	2	...	...	...	...	...	6	
B																											
Ferozepore	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	1		
Meean Meer	2	...	...	...	...	...	...	2		
Sialkot	1	...	...	...	...	...	1		
Rawalpindi	1	...	...	...	...	...	1		
GROUP VI.—UPPER SUB-HIMALAYA	1	1	1	1	1	2	...	...	...	...	7	...	1	...	1	...	3	3	...	...	1	...	...	11	
A																											
Kohat	1	5	...	...	...	...	...	6		
Mangrota	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
B																											
Saidgi	2	...	...	...	...	...	...	2		
GROUP VII.—NORTH-WESTERN FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA	1	...	...	...	...	1	...	...	...	...	...	3	5	...	...	...	...	...	8		
A																											
Ahmedabad	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Baroda	2	...	1	...	...	...	...	1	...	...	...	...	...	4		
B																											
Kherwara	2	3	9	8	2	4	1	...	1	...	30		
Erinpura	1	1	...	1	...	...	...	...	...	...	3		
Neemuch	2	...	...	...	...	...	...	...	...	...	3		
Indore	1	1	...	...	1	2	1	1	1	...	...	8		
GROUP VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA AND GUJARAT	1	...	1	2	2	5	4	10	9	6	5	2	1	1	...	47		

* Stations where neither Enteric Fever nor Simple Continued Fever occurred are not shown in these tables. For the annual ratios see Table XXVIII.

TABLE XXXIII—continued.

ENTERIC FEVER by months, stations, groups, and commands.

TABLE XXXIV—continued.

SIMPLE CONTINUED FEVER by months, stations, groups, and commands.

STATIONS, GROUPS, AND COMMANDS.	ADMISSIONS FROM ENTERIC FEVER IN EACH MONTH.												ADMISSIONS FROM SIMPLE CONTINUED FEVER IN EACH MONTH.													
	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																										
Asirgarh . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	4	...	...	5
Saugor . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2	...	...	...	...	...	3
Raipur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	3	4	...	...	...	3	2	4	2	5	...	...	28
Sitabaldi . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	2
B																										
Ellichpur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	46	5	2	...	55
Hingoli . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	1	...	...	...	...	...	4
Bolarum . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	1	...	...	...	1	...	...	...	5
Secunderabad . . . . .	...	...	...	...	...	1	...	...	...	...	...	...	1	2	1	3	2	1	1	5	3	6	17	9	50	
Belgam . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	9	15	31	
Poona . . . . .	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	1	2	1	3	4	4	4	1	20	
GROUP IX.—DECCAN	...	...	...	...	...	2	...	...	...	...	...	...	2	8	7	4	5	8	12	13	11	10	68	32	26	204
Bombay	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	1	1	5	
Cannanore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Qailon . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
Trivandrum . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
GROUP X.—WESTERN COAST	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	2	...	1	...	...	...	1	1	1	9
A																										
Bangalore	1	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	2	4	2	1	2	9	2	2	...	24
B																										
Trichinopoly . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
St. Thomas' Mount . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	4
Madras . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	2	3	3	2	3	...	4	2	...	...	...	...	19
C																										
Vicnansagram . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	2	3	19	7	3	...	6	3	...	2	2	2	40
GROUP XI.—SOUTHERN INDIA	1	...	1	...	...	...	...	...	...	...	...	...	2	6	6	22	14	10	2	11	7	9	4	4	2	97
Kohima	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Almora . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Ranikhet . . . . .	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	2
Naini Tal . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Jutogh . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Dharmasala . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Abbettabad . . . . .	...	...	...	8	1	...	...	...	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...
Mir Ali Khel . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Fort Sandeman . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Quetta . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	3
Peshin . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	4
Mount Abu . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Ootacamund . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
GROUP XII.—HILL STATIONS	1	...	8	1	1	...	...	1	...	...	...	1	13	...	...	4	1	1	5	...	...	1	...	...	2	14
Marching, Bengal	7	4	5	...	...	...	...	...	...	...	...	...	16	...	...	...	...	...	...	...	...	...	...	...	...	...
" Madras . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
" Bombay . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...	...	3
Kohat-Kurram Force . . . . .	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1
EXTRA INDIA.																										
Jask . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Aden . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2
Khormaksar . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	1	...	...	...	1	...	...	...	5
Singapore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	15	12	...	28
INDIA	8	7	9	13	5	4	3	...	2	...	2	1	54	17	16	42	32	33	38	39	23	23	91	50	31	435
BENGAL	7	7	8	4	3	2	2	...	...	...	...	1	34	...	...	...	2	1	6	2	...	...	2	...	1	14
PUNJAB . . . . .	...	...	...	9	2	...	1	...	...	...	...	...	12	...	1	...	...	1	7	6	...	...	1	...	...	16
MADRAS	1	...	1	...	...	1	...	...	...	...	...	...	3	9	7	27	30	11	4	10	10	10	16	30	27	187
BOMBAY . . . . .	...	...	...	...	...	1	...	...	2	...	1	1	5	5	3	7	13	8	19	21	14	12	13	10	3	126
HYDERABAD CONTINGENT . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	1	2	1	...	1	1	...	47	5	2	64

TABLE XXXV.

INTERMITTENT FEVER by months, stations, groups, and commands.

TABLE XXXVI.

REMITTENT FEVER by months, stations, groups, and commands.

STATIONS* AND GROUPS.	ADMISSIONS FROM INTERMITTENT FEVER IN EACH MONTH.												TOTAL.	ADMISSIONS FROM REMITTENT FEVER IN EACH MONTH.												TOTAL.	
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		
Port Blair	9	9	3	8	10	7	9	1	1	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Rangoon	36	32	28	23	18	13	26	9	3	9	11	12	...	...	...	4	5	7	3	...	...	1	5	4	...	
GROUP I.—BURMA COAST AND BAY ISLANDS	45	41	11	31	28	20	35	10	4	11	13	13	262	...	...	...	3	5	7	3	1	...	2	5	5	31
Thayetmyo . . . . .	...	...	...	10	4	3	4	20	9	3	9	8	70	...	...	...	...	...	...	...	1	...	...	...	1	
Loikaw	5	2	1	2	3	2	2	...	4	20	21	3	65	...	...	...	1	...	...	...	...	...	...	...	1	
Keng Tung	12	1	5	5	3	16	22	20	17	13	24	24	162	...	...	...	...	...	...	...	...	3	1	...	4	
Fort Stedman	27	17	6	5	7	14	65	59	62	52	39	19	372	...	...	...	...	...	...	...	...	...	...	...	...
Thamakan . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meiktila	2	2	3	1	4	...	2	3	1	...	4	...	22	...	...	...	...	...	1	...	...	...	...	...	1	
Fort Dufferin	17	9	8	5	18	9	23	52	75	289	277	197	976	...	...	...	...	...	1	...	...	...	1	2	...	7
Bhamo	50	46	25	23	20	15	87	62	42	89	79	57	601	...	...	...	...	...	1	...	...	...	...	...	1	
Myitkyina . . . . .	...	...	...	6	17	19	16	24	35	75	63	27	282	...	...	...	...	...	...	...	...	1	...	...	...	2
GROUP II.—BURMA INLAND	119	77	48	57	76	78	221	240	245	538	516	335	2,550	...	2	...	...	1	3	2	1	1	5	3	...	18
Manipur	8	10	7	5	7	17	10	12	10	14	25	30	155	2	...	...	...	...	...	...	...	...	...	...	...	2
Sadiya	2	1	1	2	1	3	3	2	1	6	3	1	26	...	...	...	...	...	...	...	...	2	1	...	...	5
Dibrugarh	2	3	1	...	1	1	8	1	6	54	52	22	151	...	...	1	...	...	...	...	...	...	...	...	...	1
Silchar	3	2	2	...	2	2	6	3	10	11	1	1	43	...	...	...	...	...	...	...	...	...	...	...	...	1
GROUP III.—ASSAM	15	16	11	7	11	23	27	18	27	85	81	54	375	2	...	1	1	...	1	...	...	...	2	2	...	9
Fort William	71	49	22	20	13	16	35	49	33	57	92	84	532	...	...	...	...	...	...	...	...	...	...	...	...	5
Alipore	144	93	71	35	30	31	79	73	59	141	60	19	832	...	...	4	1	...	...	...	...	...	...	...	...	2
Ballygunge . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Dum-Dum . . . . .	...	...	...	1	1	...	...	...	...	2	1	1	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Barrackpore	2	16	11	14	10	9	7	29	20	30	14	3	165	1	1	...	...	...	...	...	...	...	...	...	...	2
Buxa	2	3	3	7	23	11	16	2	8	16	8	14	113	4	...	...	...	1	...	...	...	...	1	2	...	8
Cuttack . . . . .	...	...	7	9	1	...	1	1	1	...	1	1	22	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP IV.—BENGAL AND ORISSA	219	152	114	86*	78	67	138	154	118	246	176	122	1,670	5	1	5	2	...	1	...	...	...	1	1	2	18
A																											
Daraada	1	6	6	1	24	13	13	3	33	36	25	10	171
B																											
Dinapore	1	...	2	1	8	5	9	20	16	20	10	9	101
Benares	4	5	6	10	12	26	16	3	49	61	37	22	251	...	...	...	...	...	...	...	...	...	...	...	...	...
Allahabad	6	3	10	12	18	7	17	15	12	64	28	17	209	2	...	5	2	1	1	...	1	1	1	...	...	14
Fyzabad	2	7	9	6	8	14	7	7	24	28	11	6	120	...	1	2	...	...	...	1	...	...	...	...	...	4
Lucknow	10	9	10	13	17	9	11	3	35	69	36	19	241	1	...	...	2	...	...	...	...	...	...	...	...	3
Cawnpore	4	2	11	10	1	2	5	12	18	46	31	11	153	1	...	1	3	2	1	6	...	...	...	...	...	14
Fatehgarh . . . . .	...	...	2	12	8	1	1	5	6	12	1	...	48	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR	28	32	56	65	96	77	79	68	193	336	179	94	1,303	4	1	8	5	5	2	7	1	1	1	...	...	35
A																											
Bareilly	25	4	14	11	15	12	16	9	7	20	12	2	147	2	1	2	1	...	1	4	1	...	1	...	...	13
Roorkee	1	...	2	4	8	10	5	77	58	29	2	3	199	...	1	...	...	...	...	...	...	...	...	...	...	1
Debra Dun	6	3	4	4	17	13	28	15	40	48	22	19	219	...	...	1	...	...	...	...	...	...	...	...	...	9
Meerut	3	1	1	2	6	...	...	9	15	49	31	5	122	...	...	1	...	4	1	2	1	...	...	...	...	12
Delhi	9	2	7	38	41	12	11	14	142	261	144	44	725	...	...	1	1	...	...	...	...	...	...	...	...	3
Umballa	7	1	4	2	4	6	9	3	31	76	54	27	224	4	...	4	4	4	3	...	1	...	...	...	...	20
B																											
Ludhiana	1	...	...	1	...	...	...	1	...	...	2	1	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Jullundur	10	7	6	...	2	2	3	1	...	1	1	...	33	...	...	...	...	1	1	...	...	...	...	...	...	2
Ferozepore	23	6	22	26	30	20	29	45	301	659	255	108	1,524	1	...	1	...	1	...	...	1	...	...	...	...	4
Meeran Meer	13	4	12	28	27	23	15	31	72	240	148	200	813	1	...	2	15	7	2	...	...	1	1	...	29	
Amritsar	1	...	4	1	2	1	1	3	5	15	42	19	94	...	...	1	...	...	...	...	...	2	...	...	...	3
Sialkot	12	9	6	7	16	11	5	30	65	60	25	251	1	3	1	1	3	1	2	...	...	...	...	...	1	13
Jhelum	1	4	...	1	7	1	8	6	...	8	21	12	69	1	...	1	...	...	...	4	...	...	...	...	...	8
Rawalpindi	13	11	2	8	7	10	8	20	26	127	50	16	298	14	12	4	5	5	9	13	2	2	16	5	...	87	
Attock	1	1	1	...	1	...	...	...	4	1	3	1	13	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP VI.—UPPER SUB-HIMALAYA	126	53	85	133	183	121	138	259	731	1,509	847	482	4,737	24	17	16	14	35	23	27	6	4	24	9	5	201	

* Stations where neither Intermittent Fever nor Remittent Fever occurred are not shown in these tables. For the annual ratios see Table XXVIII.

TABLE XXXV—continued.

INTERMITTENT FEVER by months, stations, groups, and commands.

TABLE XXXVI—continued.

REMITTENT FEVER by months, stations, groups, and commands.

STATIONS AND GROUPS.	ADMISSIONS FROM INTERMITTENT FEVER IN EACH MONTH.												TOTAL.	ADMISSIONS FROM REMITTENT FEVER IN EACH MONTH.												TOTAL.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
A																										
Mardan	16	5	...	4	3	4	10	8	8	16	13	7	103	...	2	...	...	1	3	3	1	1	1	...
Nowshera . . . . .	...	1	...	...	4	13	3	7	13	10	5	3	59	3	5	3	2	2	1	...	5	5	...	...
Peshawar	50	13	6	21	39	34	71	47	107	432	218	85	1,102	4	4	3	3	9	10	5	3	4	5	2		
Fort Jamrud	1	5	1	1	2	2	3	...	1	12	10	4	40	...	...	...	...	1	1	...	...	...	...	...
Kohat	71	28	38	23	37	20	34	22	79	321	131	150	953	8	3	15	2	6	6	5	9	11	27	16		
Bahadur Khel	1	...	...	1	2	1	1	1	3	4	3	10	27	...	...	...	...	...	...	...	...	6	1	...
Thal . . . . .	...	...	...	...	1	6	8	14	11	17	4	31	...	...	...	...	...	...	...	...	...	1	1	...
Lattamar	1	2	...	...	...	...	...	...	1	...	...	1	5	...	...	...	...	...	...	...	...	...	...	...
Edwardesabad	108	48	21	12	40	38	34	34	60	131	120	93	739	2	2	...	...	6	8	4	4	4	6	9
Jani Khel . . . . .	...	...	...	...	...	1	...	3	7	1	2	15	29	...	...	...	...	...	...	...	...	...	...	1
Dera Ismail Khan	22	15	14	18	36	131	64	49	74	250	267	139	1,079	2	2	2	1	11	6	6	3	2	3	...		
Tank, Jatta, and Draband	6	2	5	8	14	24	10	3	12	33	22	26	165	1	...	...	...	...	...	...	...	...	1	...
Fort Zam	1	...	...	...	1	3	1	4	2	1	13	44	70	...	...	...	...	...	...	...	...	...	...	...
Mangrota . . . . .	...	...	...	...	...	...	2	...	...	3	2	2	9	...	...	...	...	...	1	...	...	...	...	1
Dera Ghazi Khan	11	11	4	1	4	2	11	7	18	156	111	166	442	1	1	...	...	...	2	...	...	...	1	...
Mooitan	10	9	10	15	24	30	3	4	22	33	48	45	253	2	2	1	1	1	2	...	...	...	...	...
Sadda	1	1	...	1	...	...	...	...	...	...	3	...	3	1	...	1	...	...	...	...	...	...	...	...
Bikaner . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...
B																										
Idak	3	...	...	1	...	8	2	7	10	13	8	2	54	...	...	...	...	2	...	...	...	...	1	...
Khajuri . . . . .	...	...	...	...	2	1	...	...	...	7	...	...	10	...	...	...	...	...	...	...	...	...	...	...
Saidgi . . . . .	...	...	1	...	4	5	3	5	9	51	37	44	153	...	...	...	...	...	1	1	...	1	...	...
Jandola	2	2	1	1	21	10	10	19	9	2	36	24	143	...	...	...	...	...	1	...	...	...	4	1
Khajuri Kach	3	1	...	4	6	1	1	23	91	45	47	222	...	...	...	...	3	1	1	...	1	...	1	...
Sibi	3	3	3	5	1	...	1	3	3	4	5	26	57	...	1	...	...	...	...	...	2	2	...	...
C																										
Jacobabad	4	1	5	4	4	1	7	5	5	3	19	8	66	1	...	1	...	...	...	1	...	...	...	3
Hyderabad	10	9	8	3	5	2	1	1	3	9	6	10	67	...	...	...	...	...	...	...	...	...	...	...
Kurrachee	4	13	2	2	9	5	14	8	16	34	43	27	177	...	1	1	...	...	...	...	...	...	...	...
GROUP VII.— NORTH-WESTERN FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA	328	168	109	121	246	357	301	246	499	1,611	1,189	920	6,095	23	17	24	9	41	39	28	23	30	38	29	27	348
A																										
Bhuj	7	25	3	5	3	7	9	5	2	13	8	6	93	1	...	1	...	4	1	...	2	...	1	...		
Rajkot	16	19	3	10	3	4	4	9	6	92	70	27	264	1	...	...	...	1	...	...	...	...	...	...
Deesa	10	27	12	12	7	3	12	8	24	106	281	295	863	...	...	...	1	1	2	...	...	...	...	1
Sadra	2	1	4	3	4	5	3	...	1	19	9	3	30	...	...	...	...	...	...	...	...	4	4	5
Ahmedabad	1	4	24	14	11	7	3	2	6	19	38	44	173	...	...	...	...	1	1	...	...	...	...	1
Baroda	13	9	5	10	9	5	8	10	22	200	112	71	480	3	2	2	1	...	...	1	1	3	3	...
B																										
Alirajpore . . . . .	...	...	...	...	1	...	...	...	...	...	...	2	5	...	...	...	...	1	2	1	...	...	...	...
Sirdarpore	2	2	1	...	4	3	3	2	8	29	17	21	92	...	...	...	...	...	...	...	6	5	3	18
Jhabua . . . . .	...	...	1	...	...	...	...	2	3	2	...	...	8	...	...	...	...	...	...	...	...	...	...	...
Kherwara . . . . .	...	...	...	1	...	...	...	4	24	73	42	26	170	...	...	...	...	...	...	...	...	...	1	...
Kotra	1	1	7	3	3	3	4	2	15	64	14	10	127	1	1	...	...	2	1	2	...	...	1	...
Udaipur . . . . .	...	2	...	2	...	1	17	3	13	3	5	...	46	1	...	...	...	...	...	...	...	...	...	...
Erinpura . . . . .	...	1	3	3	5	4	4	20	15	133	109	75	372	...	...	...	...	...	1	...	2	1	1	4
Neemuch	2	10	8	8	9	2	5	...	17	117	113	111	402	...	...	...	...	...	1	...	1	1	1	1
Deoli	2	1	1	3	1	2	2	2	71	219	95	22	420	...	2	1	1	1	1	...	...	7	12	27
Bewar . . . . .	...	...	...	...	...	...	...	...	4	2	1	1	8	...	...	...	...	...	...	...	...	...	...	...
Nasirabad	12	4	14	9	2	4	3	5	17	41	38	20	169	1	2	3	3	1	1	...	...	1	2	1
Ajmer	5	2	3	5	2	2	...	7	8	49	70	19	178	...	...	...	...	...	...	1	...	...	7	...
Sambhar . . . . .	...	...	...	...	...	...	...	1	...	...	...	2	3	...	...	...	...	...	...	...	...	...	...	...
Jaipur . . . . .	...	...	...	1	...	1	...	...	5	4	7	18	...	...	...	...	...	...	...	...	...	...	...	...
Agra	2	3	24	47	44	16	22	15	12	45	20	15	274	...	9	9	5	5	3	6	2	2	...	41		
Gwalior . . . . .	...	...	...	1	...	1	...	2	11	4	1	...	20	...	...	...	...	...	...	...	1	1	...	1
Jhansi	4	2	3	1	6	2	3	5	13	27	14	12	92	1	1	...	...	...	...	...	1	1	...	4
Nowgong	12	3	6	7	8	3	3	11	18	42	25	4	142	...	1	1	...	...	...	...	...	...	...	2
Goona . . . . .	...	...	1	...	3	4	...	4	11	65	13	6	167	...	...	...	...	1	...	...	...	...	1	2
Agar . . . . .	...	3	2	2	4	2	3	2	4	18	16	11	67	1	2	1	...	...	...	2	1	2	1	10
Shore	43	7	11	19	8	8	23	19	14	50	29	29	260	...	...	...	...	...	...	...	1	...	...	1
Indore	3	1	3	1	4	3	...	2	11	5	5	40	1	1	...	...	...	3	1	...	...	2	2	11
Mhow	7	1	3	11	20	15	14	5	12	53	36	64	241	...	...	...	4	...	...	2	1	1	...	8
GROUP VIII.— SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT	150	128	142	182	163	166	148	147	353	1,561	1,200	910	5,190	11	12	18	19	17	19	11	10	18	30	35	38	247
A																										
Asirgarh . . . . .	...	...	...	1	2	...	...	4	3	9	3	2	24	...	...	...	...	...	...	...	...	...	...	...
Saugor	27	13	8	16	5	6	14	8	52	187	308	236	880	1	1	...	...	1	1	2	3	9	6	2
Sutna . . . . .	...	...	...	...	1	...	...	...	6	...	2	...	9	...	...	...	...	...	...	...	...	...	...	...
Jubbulpore	12	3	7	2	3	...	14	39	58	113	39	24	313	...	...	...	...	...	...	...	...	...	...	...
Sambhapur	4	...	3	1	...	7	8	5	15	26	6	6	81	...	...	...	...	...	...	...	...	...	...	...
Rajpur	11	5	7	1	1	...	1	4	12	69	39	11	151	...	...	...	...	...	...	...	...	...	...	1
Kamptee	41	20	21	99	19	13	45	63	39	67	30	25	418	...	...	...	...	...	...	...	2	...	...	3
Sitabaldi . . . . .	...	...	1	...	...	...	3	...	...	...	...	3	7	...	...	...	...	...	...	...	...	...	...	...

STATIONS AND GROUPS.	ADMISSIONS FROM INTERMITTENT FEVER IN EACH MONTH.												ADMISSIONS FROM REMITTENT FEVER IN EACH MONTH.													
	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																										
Ellichpur	13	22	11	5	10	3	17	7	15	24	14	7	148	...	1	2	1	...	...	...	...	1	1	...	...	6
Hingoli	8	8	8	10	12	9	15	15	35	102	29	17	263	...	...	...	...	1	1	1	...	1	1	...	...	4
Jalna	6	12	1	2	2	...	9	11	10	30	11	4	104	1	...	1	...	2	...	1	2	6	2	2	...	17
Aurangabad	11	7	14	2	7	3	14	36	31	41	18	2	192	1	2	1	...	1	2	...	...	1	1	...	...	9
Malegaon . . . . .	...	...	3	3	3	...	...	...	...	...	...	...	9	...	...	1	...	...	...	...	...	...	...	...	1	
Ahmednagar	6	3	1	7	7	3	8	...	1	...	...	...	39	...	...	2	...	...	...	...	...	...	...	...	2	
Mominabad	12	6	1	4	1	5	5	13	13	47	19	18	144	...	...	2	...	...	...	1	4	3	3	2	...	15
Bolarum	52	85	50	21	4	3	6	8	10	43	10	26	324	11	6	5	...	1	...	...	...	...	1	1	...	25
Secunderabad	43	32	41	18	30	20	64	20	65	68	12	23	486	...	2	1	3	2	6	...	...	1	4	...	...	19
Raichur . . . . .	...	...	...	1	...	...	6	8	9	16	4	3	87	2	2	1	...	...	...	3	...	1	...	...	7	
Belgam	9	11	7	5	6	6	8	9	16	4	3	3	87	2	2	5	4	4	...	...	1	...	3	2	1	24
Satara . . . . .	...	2	...	...	...	...	2	1	...	3	4	3	15	...	...	...	...	...	...	...	1	...	3	2	1	24
Poona	16	21	29	18	33	9	33	31	49	57	40	43	379	3	1	1	1	...	...	1	3	6	3	...	1	20
Kirkee	30	14	23	15	38	61	54	15	12	15	24	20	321	1	1	2	...	...	...	...	...	...	...	...	...	4
Sirur	2	...	...	5	2	3	3	2	1	...	...	...	19	...	...	...	...	...	...	...	...	...	...	...	...	...
GROUP IX.—DECCAN	303	264	236	172	186	151	325	341	454	906	607	473	4,418	22	16	24	11	12	10	6	17	32	21	9	5	185
Thana	3	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Bombay	40	21	20	9	13	14	47	45	30	35	15	29	318	1	...	1	...	...	...	...	...	...	...	...	...	...
Cannanore	5	1	2	...	...	...	6	3	8	5	1	4	35	1	...	1	...	...	...	...	...	...	...	...	...	...
Trichoor . . . . .	...	...	...	...	1	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
Quilon	1	4	2	2	5	1	4	3	...	...	...	...	22	1	1	...	1	...	...	1	...	...	...	...	...
Trivandrum . . . . .	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
GROUP X.—WESTERN COAST	49	26	24	11	19	15	58	51	38	40	16	34	381	3	1	2	1	...	...	1	...	...	...	2	10	
A																										
Bellary	70	59	35	24	7	7	62	34	36	47	27	12	429	4	...	1	...	...	...	2	...	1	1	...	...	9
Bangalore	24	29	29	31	70	40	28	33	57	57	52	37	493	1	1	...	...	2	1	...	2	1	...	5	2	15
B																										
Trichinopoly	5	15	5	2	5	4	5	3	6	3	3	...	56	...	...	...	...	...	...	1	...	...	...	...	...	1
Pallavaram . . . . .	...	2	1	1	2	1	...	2	1	...	...	...	11	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Thomas' Mount . . . . .	...	1	1	7	10	10	12	8	8	17	10	11	95	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras	1	1	1	4	1	2	2	3	18	13	8	7	61	...	...	...	...	...	...	...	...	...	...	...	...	...
C																										
Vizianagram	5	4	14	12	18	6	8	6	16	11	9	6	115	...	...	...	...	...	...	...	...	...	...	...	...	...
Berhampur	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...
GROUP XI.—SOUTHERN INDIA	115	111	86	81	113	76	118	87	143	149	109	73	1,261	6	1	1	...	2	1	2	3	2	1	5	2	26
Maymyo	9	11	4	23	19	22	32	27	25	23	35	30	260	...	...	2	10	7	4	2	5	1	9	2	2	44
Bampon	1	4	...	4	1	3	2	1	1	9	5	4	35	...	...	...	...	...	...	...	...	1	...	...	...	1
Toungyi . . . . .	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Kalanaga . . . . .	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Kohima	5	11	6	7	9	2	13	16	7	11	12	15	114	...	1	1	3	...	...	...	...	...	...	...	...	5
Shillong . . . . .	...	2	12	23	20	23	24	4	14	12	4	22	160	...	...	...	1	1	...	...	...	...	...	...	...	2
Gantak	1	...	...	3	...	...	2	2	6	7	6	12	39	...	...	...	...	...	...	...	...	...	...	...	...	2
Darjeeling . . . . .	...	1	...	...	...	1	1	...	2	2	2	2	9	...	...	...	...	...	...	...	...	...	...	...	...	2
Almora	5	8	4	4	3	2	8	4	14	6	2	8	68	1	2	3	1	...	3	6	3	12	3	1	1	36
Naini Tal . . . . .	...	...	3	1	1	2	3	8	4	4	1	27	...	...	...	...	2	...	...	...	...	...	...	...	...	2
Lansdowne	9	8	10	16	10	14	26	21	20	18	15	32	199	2	3	1	5	7	3	1	2	3	10	...	1	38
Simla . . . . .	...	...	5	1	...	1	1	...	1	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...
Jutogh . . . . .	...	...	...	2	1	1	7	5	5	1	...	22	...	...	...	...	...	1	...	2	2	...	...	...	5	
Dharmasala	5	3	5	8	2	4	9	11	26	36	8	16	133	5	3	...	5	7	3	2	...	2	2	...	1	30
Bakloh	70	11	4	5	2	13	5	5	15	71	29	29	209	5	3	3	...	6	2	3	4	3	...	1	1	31
Murree . . . . .	...	...	...	...	...	...	1	...	1	...	...	2	...	...	...	...	2	...	...	1	...	...	...	...	3	
Khyragully . . . . .	...	...	...	1	1	...	3	1	...	1	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...
Baragully . . . . .	...	...	...	1	1	...	...	4	3	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...
Kalabagh . . . . .	...	...	...	3	1	1	1	1	1	1	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...
Gilgit . . . . .	...	...	2	...	...	1	1	1	3	2	...	1	11	...	...	...	...	...	...	...	...	...	...	...	...	...
Chitral . . . . .	...	...	...	3	...	...	4	2	1	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...
Kila Drosh	1	1	...	...	...	2	4	2	50	18	14	92	1	3	2	2	1	11	11	12	10	17	...	1	71	
Abbottabad	18	30	24	34	37	38	78	29	28	36	21	45	418	2	1	3	1	3	13	2	7	2	1	3	...	38
Cherat	1	...	...	...	...	...	1	2	8	2	...	14	...	...	...	...	...	...	...	...	...	...	...	...	1	
Miran Shah	18	1	1	4	17	4	41	47	52	129	20	23	366	...	...	...	...	...	...	3	...	...	1	...	...	4
Boya	10	7	2	...	2	2	3	11	34	39	8	8	126	...	...	...	1	...	1	1	...	...	...	...	...	3
Datta Khel	20	5	5	3	1	11	21	121	205	183	49	25	649	3	6	...	2	3	5	...	1	1	...	...	21	
Haidari Kach	2	...	...	...	3	4	1	34	19	9	5	1	78	...	...	...	...	...	...	...	...	...	...	...	...	...
Sarwekai	5	1	...	3	5	6	13	21	9	10	23	20	116	...	...	...	...	1	...	...	...	...	...	...	...	1
Wana	3	1	5	3	19	39	189	300	104	179	105	30	977	1	...	2	1	...	1	...	...	...	...	...	...	16
Mir Ali Khel . . . . .	...	...	...	2	2	15	5	5	3	7	1	3	43	...	...	...	...	...	...	...	...	...	...	...	...	21
Fort Sandeman	3	3	3	4	7	12	11	25	42	90	58	17	275	...	1	...	...	1	7	7	1	2	1	1	...	21
Musa Khel . . . . .	...	1	...	...	1	4	5	5	7	6	...	30	...	...	...	...	2	...	...	...	...	...	...	...	4	

TABLE XXXV—concluded.

INTERMITTENT FEVER by months, stations, groups, and commands.

TABLE XXXVI—concluded.

REMITTENT FEVER by months, stations, groups, and commands.

STATIONS, GROUPS, AND COMMANDS.	ADMISSIONS FROM INTERMITTENT FEVER IN EACH MONTH.												ADMISSIONS FROM REMITTENT FEVER IN EACH MONTH.														
	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.	
Khan Mohamed Kot	12	3	1	3	...	0	5	19	10	27	26	10	134	...	...	...	...	...	...	1	1	...	1	...	3	
Murgha	...	2	1	2	1	...	5	5	14	12	3	3	49	...	...	...	...	...	...	...	...	...	...	...	...
Loralai	1	13	5	5	10	8	12	27	54	40	12	4	191	...	...	...	3	2	...	1	1	1	2	2	12	
Gumbaz	...	...	...	...	1	...	...	...	3	1	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...
Quetta	27	16	30	47	50	40	30	55	95	188	103	96	777	2	4	...	4	5	1	3	1	1	2	27			
Peshin	1	2	5	8	3	...	14	4	32	88	46	8	214	...	...	...	...	...	...	1	...	...	...	...	6	
Shelabagh	...	...	...	...	...	8	13	11	9	...	...	1	42	...	...	...	1	...	...	1	...	...	...	...	2	
Spinwana	...	...	...	...	...	...	...	...	3	...	...	2	5	...	...	...	...	...	...	...	...	...	...	...	...
Chaman	6	...	4	12	13	4	18	42	50	33	24	13	219	...	...	...	...	...	...	...	1	...	4	...	5	
Mount Abu	...	...	...	...	1	...	...	...	...	...	5	...	7	...	...	...	...	...	...	...	...	...	...	...	...
Ootacamund	1	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
GROUP XII.—HILL STATIONS	174	145	138	233	246	297	605	875	932	1,349	667	505	6,166	22	27	17	37	50	53	51	43	46	48	18	27	439	
Marching, Bengal	56	54	10	4	2	...	...	19	4	43	65	36	293	3	...	...	...	...	...	...	...	1	3	2	9	
" Punjab	9	13	20	1	2	2	5	3	11	141	43	28	328	1	1	...	...	1	...	...	2	16	8	1	30	
" Madras	20	13	14	1	2	...	2	4	...	...	...	20	76	2	...	1	...	...	1	...	...	...	...	...	4	
" Bombay	7	5	32	11	6	23	29	37	91	90	23	2	356	...	...	...	1	...	...	3	...	...	...	...	4	
Hyderabad Contingent marching	...	...	...	...	...	...	...	...	...	...	...	6	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Mishmi Field Force	28	4	...	...	...	...	...	...	...	...	...	...	32	...	...	...	...	...	...	...	...	...	...	...	...	...
Malakand Force	28	18	12	19	42	22	38	113	225	588	150	62	1,317	1	...	3	2	3	4	7	1	1	3	...	25		
Kohat-Kurram Force	22	6	12	17	31	38	15	25	49	96	75	59	445	7	4	1	3	3	3	1	10	2	2	5	2	43	
EXTRA INDIA.																											
Indian Marine Ship	...	...	...	...	...	...	...	...	1	1	...	1	3	...	...	...	1	...	...	...	...	...	...	...	...	1
Lawrence	...	...	...	...	...	...	...	...	15	24	16	20	13	98	...	...	1	...	...	...	...	...	...	...	...	1
Chabbar	4	...	...	1	1	4	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Jask	3	...	2	1	6	1	4	...	...	1	1	4	23	...	2	...	1	3	2	...	...	...	...	...	...	8
Muscat	2	...	3	2	6	3	4	1	1	3	2	3	30	...	...	...	1	...	...	...	...	...	...	...	...	1
Bushire	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Bagdad	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Aden	7	14	15	12	33	20	57	23	11	15	22	24	873	...	...	...	...	...	...	1	2	2	...	1	6	
Khoemaksar	8	8	4	...	12	13	5	9	2	14	15	10	100	...	1	...	...	...	...	...	...	1	...	...	...	2
Sheikh Othman	2	2	...	7	2	...	2	2	1	...	...	...	18	...	...	1	...	...	...	...	...	...	...	...	...	1
Perim	...	...	1	...	...	...	2	2	2	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...
Bolhar	4	...	2	...	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Berbera	1	...	4	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...
Mauritius	141	219	144	101	93	62	34	24	28	35	25	49	946	...	...	...	...	...	...	...	...	...	...	...	...	...
Colombo	...	4	2	1	8	6	7	2	1	1	7	10	49	...	...	2	...	1	3	2	4	...	3	2	1	18
Trincomalee	...	1	1	1	1	4	1	1	1	1	1	2	15	...	...	...	...	...	...	...	...	...	...	...	...	...
Kandy	...	2	5	1	4	3	2	...	...	...	...	...	17	...	...	...	...	...	...	...	...	...	...	...	...	...
Singapore	...	2	23	17	10	1	15	7	11	14	37	9	146	...	...	...	...	...	...	...	1	...	...	...	...	1
INDIA	2,013	1,578	1,366	1,516	2,005	1,771	2,416	2,763	4,200	9,491	6,087	4,395	39,601	136	103	124	111	179	172	152	130	147	221	134	120	1,724	
BENGAL	482	328	312	374	399	299	492	538	872	1,728	1,233	808	7,834	22	15	34	20	27	18	27	20	30	36	13	15	286	
PUNJAB	541	282	245	285	492	611	794	1,079	1,737	4,337	2,310	1,679	14,399	79	51	48	36	98	103	81	62	58	120	53	51	831	
MADRAS	368	305	315	221	281	226	493	455	507	808	994	506	5,000	12	8	11	21	21	21	11	12	9	20	17	10	173	
BOMBAY	351	291	333	465	661	536	540	897	917	2,280	1,673	1,261	9,893	17	20	19	22	27	24	28	23	33	33	44	42	332	
HYDERABAD CON- TINGENT	102	140	85	51	36	23	68	90	126	287	101	80	1,185	15	9	10	3	5	3	3	9	11	9	5	1	83	

TABLE XXXVII.

PNEUMONIA by months, stations, groups, and commands.

TABLE XXXVIII.

DYSENTERY by months, stations, groups, and commands.

STATIONS* AND GROUPS.	ADMISSIONS FROM PNEUMONIA IN EACH MONTH.											ADMISSIONS FROM DYSENTERY IN EACH MONTH.														
	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
Rangoon	1	...	1	1	...	1	4	9	5	4	1	6	7	16	6	1	4	5	17	51
GROUP I.—BURMA COAST AND BAY ISLANDS	1	...	1	1	...	1	4	9	6	4	1	7	7	16	7	1	5	5	17	85
Thayetnyo	1	2	3
Loikaw	1	2	...	3
Keng Tung	1	1	1	2	7
Fort Stedman	1	1	1	...	1	1	3	4	...	9
Meiktla	2	2	...	4	1	...	2	2	1	...	4	...	11
Fort Dufferin	1	...	1	2	5	1	3	7	6	8	3	5	5	3	45
Bhamo	3	3	16	3	6	6	8	7	9	8	7	3	3	6	63
Myitkyin a	3	2	2	1	1	4	4	2	2	18
GROUP II.—BURMA INLAND . . . . .	...	3	1	1	...	...	...	...	...	1	3	9	22	5	12	13	17	16	21	12	17	14	17	13	179
Manipur	1	2	2	...	...	1	1	...	...	1	...	8	8	9	3	12	2	8	2	3	2	2	2	4	57
Dibrugarh . . . . .	...	...	...	1	...	...	...	...	...	...	...	1	2	15	19	...	1	...	2	3	...	14	3	1	60
Silchar . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	2	7	2	1	5	2	1	3	5	...	...	1	29
GROUP III.—ASSAM	1	2	2	...	1	1	1	...	...	1	...	9	12	31	24	13	8	10	5	9	7	16	5	6	146
Fort William	1	...	...	...	...	...	1	...	1	...	1	4	51	5	7	3	1	1	4	1	7	9	7	20	116
Alipore	1	...	1	1	...	...	...	...	...	...	...	3	1	1	5	3	3	5	9	8	3	21	14	11	84
Ballygunge . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...	...	...	...	...	...	...	3
Dum-Dum . . . . .	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	...	2
Barrackpore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	2	3	1	1	2	2	...	4	4	...	3	1	23
Buxa	1	...	1	...	...	...	1	1	...	1	...	5	3	2	1	3	10	2	3	...	2	1	...	2	29
Cuttack . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	1	2	5
GROUP IV.—BENGAL AND ORISSA	3	...	3	1	...	...	1	2	...	2	...	13	53	13	15	10	16	10	16	13	16	33	26	36	262
A.
Doranda . . . . .	...	1	...	...	1	...	1	1	...	...	...	5	1	3	4	3	9	7	22	4	5	...	...	1	59
B.
Dinapore	1	...	...	...	...	...	...	...	...	1	1	3	...	...	...	2	1	...	...	...	3	2	2	1	11
Benares . . . . .	...	1	...	...	1	...	...	...	...	2	...	5	1	1	2	5	1	1	2	3	3	23	4	3	49
Allahabad	2	...	2	...	...	...	1	...	...	...	...	5	3	1	...	3	2	2	3	2	6	8	6	6	42
Fyzabad	1	...	...	...	...	...	...	...	...	...	...	1	1	3	2	2	...	1	1	...	2	2	3	1	21
Lucknow	3	2	2	2	...	...	...	1	3	9	...	22	2	5	1	2	...	...	...	...	4	2	1	...	17
Cawnpore	1	...	5	5	4	...	1	1	...	1	...	19	1	1	1	5	...	...	...	1	2	6	5	7	38
Fatehgarh	1	...	2	1	4
GROUP V.—GANGETIC PLAIN AND CHUTIA NAGPUR	8	4	10	7	5	1	2	3	1	6	16	3	60	9	14	10	25	13	11	29	12	25	46	25	22	241
A.
Bareilly	1	...	...	...	...	1	...	...	...	...	...	2	2	...	1	2	3	1	...	3	1	4	5	5	27
Roorkee	1	...	1	2	1	5	1	3	1	1	1	...	1	1	1	10
Dehra Dun . . . . .	...	2	3	1	1	...	...	1	2	2	2	15	...	...	1	2	...	...	...	...	...	1	...	...	5
Meerut	2	4	1	...	3	1	...	...	...	3	...	14	...	...	...	3	1	...	1	7	5	5	4	...	26
Delhi	3	...	1	...	...	1	...	...	...	...	...	5	1	...	2	3	2	2	2	12	7	12	2	3	48
Umballa	7	...	1	1	...	...	...	...	1	1	1	12	1	1	4	6	3	1	3	1	1	10	3	10	44
B.
Ludhiana	1	1	...	2
Jullundur	1	2	1	1	...	1	1	...	7	2	5	1	13
Ferozepore	7	3	2	2	5	1	4	1	...	...	3	37	5	1	2	3	8	2	1	3	7	21	27	22	102
Meesan Meer	12	1	4	8	5	3	1	...	1	3	3	44	7	...	2	3	17	4	2	7	9	13	35	34	133	
Amritsar . . . . .	...	1	1	...	...	...	...	...	...	...	...	2	2	...	1	1	4	...	2	...	2	7	5	...	24
Sialkot	11	4	...	1	2	1	...	1	1	...	1	22	1	...	2	2	1	...	5	7	10	10	3	...	41	
Jhelum	7	4	1	1	...	1	1	...	1	...	1	17	2	...	...	5	...	4	1	1	1	1	6	2	24
Rawalpindi	6	2	1	3	...	...	...	...	2	1	4	19	6	2	1	6	6	5	1	2	1	1	7	9	47
Attock	1	1	1	1	1	4
GROUP VI.—UPPER SUB-HIMALAYA	57	24	17	18	18	12	6	3	3	13	13	20	204	31	7	14	35	55	17	16	36	45	88	109	95	548

* Stations where neither Pneumonia nor Dysentery occurred are not shown in these tables. For the annual ratios see Table XXVIII.

NATIVE TROOPS, 1900.

TABLE XXXVII—continued.

PNEUMONIA by months, stations, groups, and commands.

TABLE XXXVIII—continued.

DYSENTERY by months, stations, groups, and commands.

STATIONS AND GROUPS.	ADMISSIONS FROM PNEUMONIA IN EACH MONTH.												ADMISSIONS FROM DYSENTERY IN EACH MONTH.														
	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.																											
Mardan	10	3	1	1	1	1	3	2	22	2	...	2	2	1	...	6	3	3	2	2	1	25	
Nowshera	4	...	1	...	...	...	...	...	...	...	1	1	6	...	...	1	1	1	...	5	1	5	6	1	18
Peshawar	15	10	2	2	1	...	3	1	...	4	16	13	67	2	4	2	1	7	5	7	14	21	23	12	105		
Fort Jamrud . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	...	2	2	...	8
Kohat	46	33	12	4	6	2	2	1	3	5	3	11	120	12	3	3	11	3	8	10	13	15	12	11	9	110	
Bahadur Khel . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	3	3	10
Thal . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	3
Latammar . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Edwardesabad	27	30	7	1	...	3	3	4	2	3	80	6	2	3	3	2	3	6	5	1	16	21	14	82	
Jani Khel . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	3
Dera Ismail Khan	6	4	1	1	1	3	3	5	24	2	1	6	4	19	5	9	13	12	5	76	
Tank, Jatta, and Draband	4	2	6	3	1	4	1	8	10	2	3	5	6	7	7	57	
Fort Zam	2	1	2	1	...	13	
Mangrota	2	1	1	2	
Dera Ghazi Khan	2	2	3	1	2	1	2	2	5	8	12	36	
Mooltan	3	3	2	1	2	11	3	1	2	1	7	3	1	...	2	1	...	3	24	
Sadda	1	1	
B.																											
Idak	1	1	1	2	1	3	6	4	...	3	1	21	
Khajuri	1	1	
Saidgi	1	1	...	2	...	1	1	2	2	1	5	4	1	...	19	
Jandola	1	...	1	...	1	3	5	2	1	1	6	13	11	10	6	2	6	12	75	
Khajuri Kach	1	1	...	2	17	17	4	...	14	12	9	8	83	
Sibi	7	2	1	10	...	4	1	2	4	...	2	1	14	
C.																											
Jacobabad	1	1	2	4	3	1	1	1	4	1	2	2	15	
Hyderabad	5	1	...	3	...	...	...	...	...	...	1	10	...	1	3	2	2	1	1	1	...	1	2	2	16
Kurrachee	2	5	1	1	...	1	1	11	...	1	1	2	1	2	...	5	2	2	16	
GROUP VII.—N.-W. FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA	134	92	26	12	10	7	10	5	7	17	28	42	390	45	23	29	33	75	75	74	62	95	108	111	103	833	
A.																											
Bhuj	1	1	2	3	...	2	6	1	1	...	3	10	3	...	2	31	
Rajkot	1	1	1	1	...	1	3	1	1	8	
Deesa	2	...	...	...	...	...	...	1	2	...	1	6	15	9	10	11	6	2	2	19	19	10	7	17	127
Sadra . . . . .	...	...	1	...	...	...	...	...	...	1	...	...	2	1	...	1	...	...	...	2	1	...	...	2	7
Ahmedabad	1	...	...	...	...	...	1	1	...	1	3	7	...	...	...	...	...	1	3	9	1	3	...	2	19
Baroda	1	1	3	1	1	1	1	1	9	6	5	3	3	4	3	7	8	17	6	3	4	69	
B.																											
Barwani	1	1	
Alirajpore	1	1	1	1	4	4	8	
Siddarpore . . . . .	...	...	...	...	1	...	...	3	1	4	1	10	1	...	...	...	2	...	1	3	1	...	...	3	11
Jhabwa	1	3	4	...	1	1	
Kherwara . . . . .	...	2	2	2	...	...	...	2	2	3	...	13	...	3	1	6	4	1	1	2	2	3	2	3	28
Kotra . . . . .	...	...	...	...	...	1	1	...	...	...	3	5	7	...	4	3	1	2	3	1	2	1	1	...	25
Udaiper . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Erinpura	5	1	...	1	...	...	1	2	...	6	3	19	2	...	2	3	7	1	2	8	5	5	5	5	45
Neemuch . . . . .	...	...	1	...	...	...	...	...	1	1	3	7	3	...	2	2	2	2	2	2	1	2	3	...	24
Deoli	2	1	...	1	1	...	...	...	1	2	9	3	...	...	...	...	...	2	2	6	7	8	7	2	34
Beawar . . . . .	...	...	...	...	...	...	...	...	1	...	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Nasirabad	1	1	1	...	...	...	...	...	1	...	1	4	1	...	6	2	1	1	2	7	4	4	6	6	40
Ajmer	2	1	2	1	...	...	...	...	...	3	9	...	...	...	...	...	1	1	1	2	3	...	...	1	12
Jaipur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Agra	1	2	4	3	1	2	...	6	19	...	1	1	1	...	1	1	2	...	2	6	2	3	20	
Gwalior . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Jhansi	4	4	1	...	3	1	...	...	...	...	...	12	...	1	...	...	...	...	1	2	2	4	3	3	16
Nowgong . . . . .	...	1	1	...	2	1	...	...	...	...	...	5	...	...	...	...	...	...	...	...	1	1	2	1	7
Goona	1	1	1	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	1	1	1	3	6
Agar . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2	4	6	...	1	...	2	17
Sehore . . . . .	...	2	1	2	...	...	...	...	1	...	...	6	...	...	4	3	...	1	6	8	2	...	1	1	26
Indore . . . . .	...	1	1	...	...	...	1	...	...	...	...	3	2	1	...	1	...	...	3	8	6	3	...	1	25
Mhow	3	1	1	1	1	...	...	...	...	...	2	9	...	...	5	5	2	1	4	6	3	1	5	6	40
GROUP VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT																											
21	17	18	12	15	5	3	5	7	10	22	38	173	50	25	41	48	32	21	49	103	92	67	50	65	643		
A.																											
Saugor	4	2	...	2	1	1	1	...	...	...	...	...	11	7	6	1	6	2	1	1	...	3	...	...	27
Sutna	1	1	
Jubbulpore	1	1	1	1	2	...	1	7	2	2	4	3	1	2	4	5	4	3	3	3	36	
Sambalpar . . . . .	...	1	1	...	...	...	...	...	...	...	...	...	2	2	2	...	...	...	1	1	3	...	1	2	12
Raipur	1	1	...	...	...	...	...	...	...	...	...	...	2	1	4	2	1	...	2	...	1	...	1	...	12
Kamptee	5	2	2	...	2	1	...	1	...	1	1	2	17	...	...	...	...	...	2	2	...	2	...	1	10
Sitabaldi . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	2

STATIONS AND GROUPS.	ADMISSIONS FROM PNEUMONIA IN EACH MONTH.												ADMISSIONS FROM DYSENTERY IN EACH MONTH.													
	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.																										
Ellichpur	1	2	...	...	...	1	...	...	...	...	1	1	6	1	4	4	2	2	1	13	11	5	2	...	2	47
Hingoli	3	1	3	...	1	...	...	...	1	...	...	2	11	6	11	5	1	2	2	19	17	2	2	1	8	
Jalna	1	4	1	1	...	...	...	...	...	...	...	...	7	4	2	2	...	2	...	3	5	3	1	...	23	
Aurangabad	2	2	2	1	1	1	1	1	...	...	...	11	6	17	6	3	2	...	12	17	11	4	1	2	81	
Malegaon . . . . .	...	...	...	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Ahmednagar	1	...	...	...	...	...	...	1	...	...	...	...	2	1	4	2	1	1	2	6	2	...	...	...	19	
Mominabad	1	...	...	...	...	...	1	...	...	...	...	...	2	...	...	1	4	2	1	5	1	1	5	1	21	
Bolarum . . . . .	...	3	2	1	...	...	...	1	1	1	2	2	13	...	2	3	2	1	1	21	9	4	4	4	51	
Secunderabad	5	4	5	3	1	...	...	...	5	1	...	24	2	5	5	2	3	4	10	17	13	9	...	6	74	
Raichur . . . . .	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	1	...	4	
Belgam	3	3	...	...	2	...	...	...	2	1	2	14	...	2	...	...	...	4	2	5	2	1	2	2	24	
Satara . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	
Poona	13	5	2	2	2	1	...	1	1	...	1	2	30	17	14	12	4	13	7	21	4	16	7	4	4	123
Kirkee	1	...	...	...	1	...	1	...	...	...	...	2	5	5	4	2	1	2	3	11	20	10	1	2	64	
Sirur	2	...	...	...	...	...	...	...	...	...	...	2	2	1	...	...	...	...	1	...	...	...	...	...	4	
GROUP IX.—DECCAN	44	31	20	11	11	5	5	5	5	11	8	13	160	55	79	48	32	39	39	143	113	71	40	26	32	717
Thana	1	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	1	...	...	...	...	...	...	...	...	3
Bombay	6	4	2	...	4	1	5	1	1	1	5	3	33	18	40	16	9	13	4	19	25	11	7	16	8	186
Cannanore	...	1	5	...	...	...	3	1	1	1	...	...	12	1	1	2	...	1	2	4	1	2	1	2	2	19
Trichoor	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	1	...	...	...	...	...	...	3
Quilon	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	2	1	3	...	...	...	...	...	9
Trivandrum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
GROUP X.—WESTERN COAST	7	5	7	...	4	1	8	2	2	2	5	3	46	26	41	18	10	16	7	27	26	13	8	19	10	221
A.																										
Bellary . . . . .	...	2	3	2	3	...	...	...	...	1	1	...	12	1	2	...	1	1	4	4	4	4	1	3	1	26
Bangalore	7	6	18	9	7	4	7	4	1	1	2	1	67	2	1	2	...	4	2	13	12	4	6	7	3	56
B.																										
Trichinopoly	1	...	1	...	...	...	...	...	...	...	...	...	2	...	...	2	...	2	...	2	1	1	1	3	1	13
Pallavaram . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	1	1	3	2	...	1	2	2	16
St. Thomas' Mount . . . . .	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	3
Madras . . . . .	...	2	...	...	1	1	...	...	1	...	...	2	7	...	...	...	...	1	1	...	...	5	3	4	1	15
C.																										
Vizianagram	2	2	...	...	...	...	...	...	...	...	...	...	4	...	2	...	...	...	1	1	1	...	...	...	1	6
GROUP XI.—SOUTHERN INDIA	10	12	22	11	12	5	7	4	2	2	3	4	94	3	5	6	3	9	9	23	21	14	12	19	9	133
Maymyo	2	2	5	4	2	...	...	1	...	6	...	...	22	1	...	...	3	10	10	2	4	1	...	1	3	35
Kalanaga	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2
Kohima	2	...	1	1	2	1	3	...	...	1	...	...	11	2	1	1	1	5	5	10	1	...	...	...	2	28
Shillong	...	...	...	...	2	...	1	1	...	2	2	1	9	...	...	1	2	4	4	5	3	5	1	...	2	27
Gantak	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	3	...	...	6
Darjeeling	...	...	1	...	...	...	...	...	...	...	...	...	1	...	5	...	...	...	1	1	1	1	...	1	...	10
Almora	3	1	1	...	...	1	...	3	2	3	4	19	2	...	...	...	...	1	1	3	...	...	1	...	1	9
Ranikhet	...	...	2	1	3	...	...	...	...	1	...	...	7	...	...	2	1	...	...	...	...	...	...	...	...	3
Naini Tal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	4	4	...	3	...	1	...	23
Lansdowne	4	2	2	2	1	...	...	2	1	5	2	8	29	1	3	...	5	4	4	...	3	...	1	...	2	23
Simla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	2	1	2	...	1	...	...	...	6
Jutogh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	1	3	4	1	...	...	...	13
Dharmasala	14	6	7	3	8	3	2	1	1	...	1	2	48	...	...	2	2	3	4	2	3	1	1	2	1	6
Bakloh	3	1	...	...	...	...	...	1	...	1	4	1	11	...	...	2	2	3	4	2	3	1	1	2	1	21
Murree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	2
Khyragully	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1
Baragully	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1
Kalabagh	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	1	1	...	...	...	...	...	...	...	2
Gilgit	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	1	...	1	...	...	...	...	...	5
Chitral	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	2
Kila Drosh	3	...	...	...	1	1	...	...	3	1	2	11	...	...	3	...	...	...	3	8	16	13	15	6	2	66
Abbottabad	5	7	11	12	5	4	4	3	4	3	2	5	65	7	17	8	13	13	11	13	16	15	11	5	2	131
Cherat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Miran Shah	21	7	...	...	1	...	...	...	2	1	...	32	2	1	1	2	8	...	4	1	...	4	5	3	31	
Boya	1	...	...	...	...	...	...	...	...	...	...	...	...	3	1	2	1	...	2	1	1	4	3	4	...	22
Datta Khel	5	12	3	...	1	...	...	...	1	3	3	1	29	4	1	...	...	3	4	5	...	2	14	9	...	42
Haidari Kach	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	1	4	8	1	...	...	...	20
Sarwekai	...	...	...	...	...	...	...	...	...	5	5	5	5	5	1	2	2	8	14	8	15	6	2	...	4	67
Wana	1	1	...	...	...	...	...	1	2	3	8	6	16	6	1	2	2	4	5	12	30	41	19	10	8	140
Mir Ali Khel	2	1	...	...	1	...	...	...	1	1	...	...	6	...	...	...	...	2	1	6	4	2	3	2	3	23
Fort Sandeman	7	2	2	2	...	...	...	...	...	1	2	...	16	1	2	3	2	20	10	1	3	12	5	7	3	69
Musa Khel	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	3	3	4	1	1	15
Khan Mohamed Kot	1	...	...	...	...	...	...	...	...	1	1	...	3	...	...	...	...	...	...	1	...	2	3	...	2	8

TABLE XXXVII—concluded.

PNEUMONIA by months, stations, groups, and commands.

TABLE XXXVIII—concluded.

DYSENTERY by months, stations, groups, and commands.

STATIONS, GROUPS, AND COMMANDS.	ADMISSIONS FROM PNEUMONIA IN EACH MONTH.												ADMISSIONS FROM DYSENTERY IN EACH MONTH.													
	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 . . . . .	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	1	2	...	1	1	1	8
Loralai	1	3	...	1	...	...	...	...	...	...	...	...	5	3	...	3	...	4	3	15	19	12	4	3	73	
Gumbaz . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Quetta	8	2	2	5	4	2	1	...	...	9	9	8	53	2	2	1	13	4	6	19	21	16	56	24	11	175
Peshin . . . . .	...	1	1	...	3	...	...	...	...	...	1	...	8	2	...	4	5	1	...	1	8	9	4	3	35	
Shelabagh . . . . .	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	2	1	5	10	9	...	...	...	...	27	
Spinwana . . . . .	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	2
Chaman . . . . .	...	1	1	1	...	...	1	1	...	2	3	9	19	...	...	...	1	2	7	11	7	3	4	2	37	
Mount Abu . . . . .	...	1	...	...	...	...	...	1	...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	...	1	3
Ootacamund . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
GROUP XII.—HILL STATIONS	84	50	40	35	33	14	15	12	11	42	42	53	431	43	42	30	61	111	104	124	173	182	175	91	63	1,199
Marching, Bengal	13	5	6	1	1	...	...	1	1	1	2	2	33	37	22	5	...	...	...	9	7	3	6	9	99	
Punjab	5	14	...	1	...	1	...	1	...	1	9	6	38	3	2	12	3	1	...	1	6	2	24	20	24	68
Madras	3	...	...	...	...	...	...	...	...	...	...	...	3	4	4	2	...	...	...	1	...	...	...	...	2	13
Bombay	2	1	7	1	1	...	3	...	...	3	1	2	21	7	...	9	11	6	6	29	6	2	10	6	2	94
Mishmi Field Force . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	26	2	...	...	...	...	...	...	...	...	...	...	23
Malakand Force	4	3	2	2	...	1	2	1	2	2	2	23	44	7	1	5	9	25	35	45	30	53	74	48	24	396
Kohat-Kurram Force	11	5	3	...	3	1	...	1	2	3	...	5	34	2	4	...	2	9	10	5	10	5	3	3	2	57
EXTRA INDIA.																										
Indian Marine Ship <i>Lawrence</i> . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	5	...	3	9
Chabbar . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	2	2	...	...	...	9
Jask . . . . .	...	...	...	...	...	...	...	...	...	...	2	2	2	...	3	...	...	2	2	1	1	1	3	2	...	11
Muscat . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2
Bagdad . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Aden . . . . .	...	...	2	1	...	...	...	2	2	3	1	1	12	1	1	2	...	1	1	6	3	4	3	1	3	26
Khormaksar . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Sheikh Othman . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	3
Perim . . . . .	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Mauritius . . . . .	...	...	2	...	...	...	1	...	1	2	...	...	6	6	7	4	6	12	8	6	3	7	7	3	...	69
Colombo . . . . .	...	1	...	...	...	...	...	...	...	...	...	1	2	...	3	2	4	14	12	11	6	7	4	3	...	66
Trincomalee . . . . .	...	1	2	...	...	...	...	...	...	...	...	...	3	...	...	1	2	7	3	3	...	...	...	...	1	17
Kandy . . . . .	...	2	1	...	1	...	...	...	...	...	...	...	4	...	5	1	1	...	2	...	...	...	...	...	...	9
Singapore . . . . .	...	...	...	...	...	...	...	...	...	2	1	...	3	...	1	...	4	1	4	10	2	11	4	3	6	46
INDIA	407	272	192	114	117	54	64	48	45	122	149	224	1,808	456	335	301	324	463	415	665	674	680	760	599	550	6,222
BENGAL	51	31	44	20	29	12	11	9	7	29	24	29	295	136	103	72	76	67	58	91	90	93	147	89	107	1,129
PUNJAB	244	153	62	43	43	23	25	15	19	43	64	109	848	111	53	66	95	198	182	193	212	272	346	317	249	2,294
MADRAS	23	25	39	19	18	5	10	6	5	16	7	9	182	47	28	28	23	54	57	92	61	45	34	53	54	576
BOMBAY	51	42	33	29	25	11	15	16	11	30	49	70	412	113	105	102	104	112	78	183	231	220	191	123	118	1,680
HYDERABAD CONTINGENT	8	12	9	3	2	2	2	2	2	2	3	5	52	17	36	21	12	12	7	73	61	26	24	7	12	368

III.—PRISONERS, 1900.

TABLE K.

JAILS by ADMINISTRATIONS.

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.†
ANDAMANS :— Port Blair Convict Settlement	85	S. G.	BENGAL :— <i>contd.</i> Monghyr	148	S. G.	PUNJAB :— <i>contd.</i> Mooltan District	402	S. G.
BURMA :— Mergui	14	S. G.	Darbhanga	167	"	Dera Ismail Khan	571	"
Tavoy	60	"	Champaran (Motihari)	217	"	Dera Ghazi Khan	395	"
Moulmein	288	"	Muzaffarpur	179	"	Simla	7,230	"
Shwegyin	128	"	Patna (Bankipore)	177	"	Dharmasala	6,111	"
Toungoo	156	"	Arrah (Shahabad)	191	"	Abbottabad	4,152	"
Rangoon Central, Europeans } natives } Maubin	14	"	Chapra (Saran)	181	M. D.			
Bassein Central	40	S. G.	Buxar Central	204	S. G.	BALUCHISTAN :— Quetta	5,511	S. G.
Insein	34	"	Darjeeling	7,168	"	BOMBAY :— Shikarpur	194	S. G.
Henzada	44	"	N.-W. P. AND OUDH :— Korantadih	227	S. G.	Sind Gang	28	S. G.
Myanaung	74	"	Ghazipur	256	"	Hyderabad Central	134	I. B.
Sandoway	32	S. G.	Azamgarh	255	S. G.	Kurrachee	417	"
Kyaokpyu	32	S. G.	Kasia	292	"	Rajkot	170	"
Akyab	32	S. G.	Gorakhpur	336	"	Ahmedabad Central	842	"
Paungdi	145	S. G.	Basti	305	I. B.	Dhulia	1,951	I. B.
Prome	492	S. G.	Fyzabad	311	S. G.	Yerwada Central (Poona)	1,998	S. G.
Thayetmyo Central } Taungdwingyi } Magwe	492	"	Sultanpur	263	"	Bijapur	2,385	S. G.
Minbu	298	S. G.	Rai Bareilly	283	"	Deccan Gang	24	"
Yamethin	653	"	Partabgarh	298	"	Dharwar	20	"
Meiktila	298	"	Jaunpur	415	S. G.	Thana	110	M. D.
Pagan	243	S. G.	Benares Central } District } Mirzapur	373	"	Karwar	12	S. G.
Pakokku	249	"	Allahabad Central } District } Karwi	367	"	Aden	26	"
Myingyan Central } Mandalay } Monywa	249	"	Banda	417	S. G.	RAJPUTANA :— Ajmer	1,627	S. G.
Shwebo	600	M. O.	Fatehpur	412	"	ITERAR AND SECUNDERABAD :— Secunderabad	1,732	S. G.
Bhamo	351	S. G.	Hampur	400	"	Yotmahl	1,476	"
Katha	329	"	Orai (Jalaun)	378	"	Amraoti Central	1,194	"
Kindat	391	"	Cawnpore	444	I. B.	Ellichpur	1,218	"
ASSAM :— Cachar (Sillehar)	104	M. D.	Unao	412	"	Akola Central	920	"
Sibsagar	318	S. G.	Lucknow Central } District } Barabanki	550	"	Basim	1,842	"
Dibrugarh	342	"	Gonda	398	S. G.	Buldana	2,132	M. D.
Tezpur	292	"	Bahraich	471	"	CENTRAL PROVINCES :— Damoh	1,236	S. G.
Nowgong	208	"	Kheri	449	"	Saugor	1,753	"
Gauhati	134	I. B.	Hardoi	462	"	Jubbulpore Central	1,396	"
Dhubri	158	S. G.	Etawah	498	"	Narsinghpur	1,205	I. B.
Sylhet	257	M. D.	Mainpuri	511	"	Mandla	1,187	S. G.
Shillong	4,987	S. G.	Etah	550	"	Bilaspur	884	"
BENGAL :— Mymensingh	59	M. D.	Fatehgarh Central } District } Shahjahanpur	597	S. G.	Sambalpur	499	"
Dacca Central	20	"	Bareilly Central } District } Budaon	560	"	Rajpur Central	975	"
Tippera (Comilla)	36	"	Bulandshahr	544	"	Balaghat (Burha)	2,043	S. G.
Chittagong	87	"	Moradabad	610	"	Seoni	2,236	"
Noakhali	43	"	Bijnor	727	"	Chhindwara	1,030	"
Backergunge (Barisal)	13	"	Dehra Dun	655	"	Hoshangabad	1,042	I. B.
Khulna	33	M. D.	Saharapur	772	"	Nimar (Khandwa)	2,189	S. G.
Jessore	33	M. D.	Muzaffarnagar	2,229	"	Betul	1,025	"
Baraset	17	S. G.	Meerut	903	"	Nagpur Central	861	"
Presidency Central, Europeans } natives } Alipore	17	S. G.	Muzaffarnagar	790	"	Bhandara	935	"
Hooghly	21	I. B.	Meerut	730	"	Wardha	658	"
Burdwan	34	S. G.	Muttra	576	"	Chanda	406	"
Krishnagar (Nadia)	97	"	Agra Central } District } Lalitpur	554	"	Sironcha	406	"
Faridpur	32	M. D.	Almora	860	"	MADRAS :— Mangalore	42	S. G.
Pubna	46	M. D.	Pauri	5,494	S. G.	Cannanore Central	47	"
Murshidabad (Berhampore)	67	M. D.	PUNJAB :— Delhi	715	S. G.	Bellary	1,483	"
Rajshahi Central (Rampur Boalia)	70	"	Rohtak	712	"	Salem Central	919	"
Bogra	61	"	Hissar	689	I. B.	Coimbatore	1,348	M. D.
Malda	72	"	Karnal	809	S. G.	Palamcottah	129	S. G.
Dinajpur	123	"	Umballa	902	"	Madura	438	"
Rangpur	123	"	Ludhiana	806	"	Trichinopoly Central	274	"
Jalpaiguri	284	"	Hoshiarpur	1,058	"	Tanjore	193	"
Purneah	120	S. G.	Jullundur	960	"	Cuddalore	19	"
Naya Dumka	489	M. D.	Ferozepore	645	"	Vellore Central	698	"
Suri (Birbhum)	208	M. D.	Amritsar	756	"	Madras Civil	15	"
Bankura	149	"	Lahore Central } District } Female } Gurdaspur	706	"	Penitentiary Central	57	"
Midnapore Central	59	S. G.	Gujranwala	829	S. G.	Nellore	112	M. D.
Balasore	74	"	Sialkot	827	S. G.	Guntur	14	S. G.
Cuttack	17	"	Gujrat	1,797	"	Rajamundry Central	60	"
Puri	745	S. G.	Mung Rasul Central	1,165	"	Vizagapatam	60	"
Angul	2,128	S. G.	Jhelum	1,768	"	Russellkonda	60	"
Chaibassa (Singbhum)	1,997	S. G.	Rawalpindi	644	"	COORG :— Mercara	3,835	S. G.
Purulia (Manbhum)	375	M. D.	Feshawar	600	I. B.			
Ranchi (Lohardaga)	147	S. G.	Kohat	402	S. G.			
Palamau (Daltongunge)			Bannu					
Hazaribagh Central			Bannu					
Gaya			Shahpur					
Bhagalpur Central			Jhang					
			Montgomery Central					
			Mooltan Central					

* 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 barometer-cisterns in the stations in which the jails are situated.

† S. G. = Surveyor-General of India; I. B. = Intelligence Branch of the Quarter-Master-General's Department; M. D. = Meteorological Department; M. O. = Medical Officers in charge of Station Hospitals in their Sanitary Reports.

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.

	RATIO PER 1,000 OF THE AVERAGE STRENGTH.										
	Andamans.	Burma.	Assam.	Bengal.	N.-W. P. and Oudh.	Punjab.	Bombay.	Berar and Secunderabad.	Central Provinces.	Madras.	India.*
I.—AVERAGE ANNUAL STRENGTH	11,580	12,516	1,314	19,593	31,083	15,550	11,495	1,927	5,728	10,135	121,813
II.—CONSTANTLY SICK-RATE OF EACH MONTH—											
January	46.3	24.6	25.0	30.2	31.4	31.7	22.0	12.3	21.4	17.9	29.2
February	50.2	26.5	30.5	32.0	32.2	29.3	25.5	18.9	22.6	18.1	30.5
March	49.1	25.6	39.8	35.4	32.1	26.7	21.4	24.8	23.6	20.4	30.5
April	56.1	26.7	33.9	38.5	32.9	29.9	22.1	21.1	22.4	20.1	32.2
May	63.2	29.0	34.5	36.4	34.5	32.7	25.1	19.2	26.4	22.7	34.2
June	69.2	28.2	33.0	36.0	32.0	34.2	23.9	21.6	27.4	24.2	34.2
July	65.8	31.4	35.3	42.6	33.4	40.8	26.3	26.2	27.5	26.7	37.0
August	65.1	30.5	38.7	50.3	36.2	42.1	31.6	31.7	37.4	23.4	36.6
September	54.1	27.6	42.6	48.5	39.7	42.9	33.0	38.3	33.8	22.6	39.0
October	45.7	28.1	39.2	43.7	43.2	48.1	33.4	52.3	36.0	23.2	39.6
November	45.7	26.9	41.3	43.3	43.0	46.6	34.4	41.2	31.4	23.6	38.9
December	41.4	27.1	34.8	41.1	38.9	42.1	35.0	10.0	34.3	22.5	36.2
OF THE YEAR	54.3	28.0	36.5†	40.1	36.0	37.5	28.0	26.5	29.7	21.9	35.3
INCLUDING SUBSIDIARY JAILS AND LOCK-UPS	...	...	35.8†	39.0	...	33.1	25.0	...	...	22.3	34.4
III.—ADMISSION-RATE OF THE YEAR—											
Influenza	61.2	.6	14.5	28.9	21.0	...	2.8	35.8	.3	...	16.9
Cholera	...	2.8	.8	8.6	.5	2.2	11.1	9.3	11.2	3.7	4.1
Small-pox	...	.6	...	.2	.5	.6	4.9	.5	2.8	.4	1.0
Enteric Fever	...	.6	...	.2	.5	.3	.1	...	.3	1.3	.3
Intermittent Fever	1,167.4	121.9	272.5	262.8	251.4	562.3	257.8	323.9	353.0	73.5	357.9
Remittent Fever	16.8	4.7	6.1	5.1	3.3	3.3	13.7	...	7.3	.3	6.0
Simple Continued Fever	.1	10.1	.8	107.5	3.8	.3	8.4	7.3	1.7	58.9	25.3
Tubercle of the lungs	8.6	12.1	4.8	11.1	8.9	7.4	6.0	3.6	4.9	10.0	8.8
Pneumonia	10.4	5.0	9.9	15.6	15.5	18.4	20.5	27.0	14.3	9.8	14.6
Other Respiratory Diseases	72.2	14.6	25.9	34.1	23.6	45.3	22.9	25.9	18.2	41.9	33.0
Dysentery	147.8	80.6	171.2	301.2	58.2	95.9	87.3	68.5	123.8	56.3	120.0
Diarrhoea	49.0	39.0	54.0	101.5	37.5	58.3	44.5	107.9	87.8	6.1	57.1
Spleen Diseases	...	...	...	1.3	1.4	1.2	1.9	.5	2.1	.1	1.0
Scurvy	.5	1.0	...	1.4	.1	2.2	3.4	...	.5	.3	1.1
Anæmia and Debility	27.5	6.3	42.6	12.4	23.6	23.9	15.1	32.7	45.7	4.5	20.2
Abscess, Ulcer, and Boil	113.7	61.1	34.2	35.4	94.6	157.5	66.9	31.1	69.0	39.4	81.0
ALL CAUSES	2,038.8	553.5	769.4	1,156.1	763.9	1,230.5	784.3	942.9	925.6	521.5	976.9
INCLUDING SUBSIDIARY JAILS AND LOCK-UPS	...	...	816.7	1,148.3	...	1,086.8	777.6	...	...	668.5	976.6
IV.—DEATH-RATE OF THE YEAR—											
Cholera	...	1.76	.76	4.44	.32	.84	5.92	6.75	7.68	1.97	2.28
Small-pox	...	.16	...	...	.03	.06	.35	...	.87	.10	.11
Enteric Fever	...	.40	...	.05	.06	.13	.09	...	...	.39	.14
Intermittent Fever	.26	.04	4.57	2.14	.64	.84	.70	1.04	.17	.79	.94
Remittent Fever	4.92	.40	1.52	.82	.32	.26	3.31	...	1.40	.30	1.21
Simple Continued Fever	...	.08	...	...	...	...	...	...	...	...	.01
Tubercle of the lungs	5.70	4.87	2.28	5.05	2.73	3.73	3.65	2.59	4.36	3.65	3.95
Pneumonia	4.75	1.60	3.04	4.29	3.64	5.21	6.70	11.42	4.02	2.27	4.22
Other Respiratory Diseases	1.04	.24	.76	1.22	.55	.64	1.30	6.23	1.05	.20	.86
Dysentery	9.67	3.91	6.85	9.44	4.47	4.50	5.22	20.76	19.90	3.85	6.79
Diarrhoea	4.23	.80	.76	2.30	1.29	.84	4.52	9.86	9.43	.20	2.45
Hepatic Abscess	...	.16	...	.36	.03	.06	...	.52	.35	...	.11
Anæmia and Debility	3.54	.56	1.52	1.22	.93	.45	2.87	2.68	5.76	.59	1.58
Phagedæna, Slough, and Gangrene	.69	.08	...	.15	...	...	...	...	...	.10	.05
ALL CAUSES	40.41	21.17	25.88	39.61	22.10	23.73	40.80	79.92	68.44	24.67	32.80
INCLUDING SUBSIDIARY JAILS AND LOCK-UPS	...	...	22.84	40.41	...	20.84	56.77	...	...	25.33	34.27
V.—PERCENTAGE IN 100 ADMISSIONS—											
Influenza	3.00	.10	1.88	2.50	2.75	...	.35	3.80	.04	...	1.73
Cholera	...	.50	.10	.75	.07	.18	1.42	.99	1.21	.70	.42
Small-pox	...	.12	...	.02	.02	.05	.62	.06	.30	.09	.10
Enteric Fever	...	.10	...	.01	.02	.02	.01	...	.04	.25	.03
Intermittent Fever	57.26	21.95	35.41	22.74	32.91	45.70	32.86	34.56	38.14	14.10	36.63
Remittent Fever	.82	.85	.79	.44	.43	.27	1.74	...	.79	.08	.61
Simple Continued Fever	...	1.81	.10	9.30	.50	.02	1.08	.77	.19	11.30	2.59
Tubercle of the lungs	.42	2.17	.59	.96	1.17	.60	.78	.39	.53	1.91	.90
Pneumonia	.51	.91	1.29	1.38	2.03	1.49	2.62	2.86	1.55	1.87	1.49
Other Respiratory Diseases	3.54	2.63	3.36	2.95	3.09	3.68	2.92	2.75	1.96	8.04	3.38
Dysentery	7.25	14.51	22.26	26.06	7.62	7.80	11.12	7.26	13.37	10.80	12.28
Diarrhoea	2.40	7.02	7.02	8.78	4.91	7.18	5.68	11.45	9.49	1.17	5.85
Spleen Diseases	...	...	...	.11	.19	.10	.24	.06	.23	.02	.11
Scurvy	.03	.19	...	.12	.01	.18	.43	...	.06	.08	.11
Anæmia and Debility	1.35	1.14	5.54	1.07	3.35	1.04	1.92	3.47	4.94	.87	2.06
Abscess, Ulcer, and Boil	5.58	11.00	4.45	3.06	12.38	12.80	8.53	3.30	7.45	7.55	8.29
VI.—PERCENTAGE IN 100 DEATHS—											
Cholera	...	8.3	2.9	11.2	1.5	3.5	12.6	8.4	11.2	8.0	7.0
Small-pox	...	.8	...	...	.1	.3	.7	...	1.3	.4	.4
Enteric Fever	...	1.9	...	.1	.3	.5	.2	...	...	2.4	.4
Intermittent Fever	.6	3.0	17.6	5.4	2.9	3.5	1.5	1.3	.3	3.2	2.9
Remittent Fever	12.2	1.9	5.9	2.1	1.5	1.1	7.1	...	2.0	1.2	3.7
Simple Continued Fever	...	.4	...	...	...	...	...	...	...	...	...
Tubercle of the lungs	14.1	23.0	8.8	12.8	12.4	15.7	7.8	3.2	6.4	14.8	12.0
Pneumonia	11.8	7.5	11.8	10.8	16.4	22.0	14.3	14.3	5.9	9.2	12.9
Other Respiratory Diseases	2.6	1.1	2.9	3.1	2.5	2.7	2.8	7.8	1.5	.8	2.6
Dysentery	23.9	18.5	26.5	23.8	20.2	19.0	11.2	26.0	29.1	15.6	20.7
Diarrhoea	10.5	3.8	2.9	6.3	3.8	3.5	9.7	12.3	13.8	.8	7.5
Hepatic Abscess	...	.8	...	.9	.1	.3	...	.6	.5	...	.4
Anæmia and Debility	8.8	2.6	5.9	3.1	4.2	1.9	6.1	2.6	8.4	2.4	4.8
Phagedæna, Slough, and Gangrene	.2	.4	...	.4	...	...	...	...	...	.4	.2

* Including Ajmer, Quetta, Mercara. For complete detail of diseases see Table LIII.

† Including Subsidiary Jails. Lock-ups only.

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.

	RATIOS PER 1,000 OF THE AVERAGE STRENGTH.												
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
	Burma Coast and Bay Islands.	Burma Inland.	Assam.	Bengal and Orissa.	Gangetic Plain and Chatia Nagpur.	Upper Sub-Himalaya.	N.-W. Frontier, Indus Valley, and N.-W. Rajputana.	S.-E. Rajputana, Central India, and Gujarat.	Decan.	Western Coast.	Southern India.	Hills.	India.*
I.—AVERAGE ANNUAL STRENGTH	19,770	4,326	1,277	11,791	28,344	16,130	8,359	6,471	12,281	3,160	9,144	724	121,811
II.—CONSTANTLY SICK-RATE OF EACH MONTH—													
January	37.8	21.4	25.7	32.2	30.0	32.6	22.1	28.0	19.8	34.3	17.3	37.0	29.2
February	41.7	19.9	31.4	33.8	31.2	31.5	24.3	26.0	23.3	35.5	17.4	39.7	30.5
March	40.1	22.0	41.1	37.4	31.5	28.1	22.6	30.0	24.2	25.0	20.1	41.0	30.5
April	44.7	22.8	34.1	38.8	32.4	31.4	23.2	35.8	24.6	25.3	19.8	28.0	32.2
May	50.3	22.7	34.9	35.3	33.6	34.0	24.4	36.2	29.7	22.3	22.9	30.3	34.2
June	52.9	24.1	32.6	35.8	31.7	34.6	24.4	31.0	29.6	20.6	25.3	31.3	34.2
July	52.8	25.2	33.4	44.3	34.3	39.2	29.2	30.1	31.8	25.5	27.2	37.7	37.0
August	51.3	28.1	38.2	53.4	30.6	41.9	34.0	33.8	38.3	27.5	24.1	35.6	39.6
September	43.4	26.6	42.2	51.7	38.9	44.9	29.0	39.1	39.6	27.2	23.1	33.1	39.0
October	39.2	25.1	38.7	46.4	38.9	51.4	31.3	48.0	44.0	27.1	25.2	26.1	39.6
November	39.7	19.7	41.6	49.9	38.2	46.3	34.9	47.7	40.3	25.8	24.0	27.7	38.9
December	36.8	21.6	35.7	40.7	36.0	38.6	35.0	47.6	39.0	23.0	22.8	22.1	36.2
OF THE YEAR	44.3	24.0	30.8	42.5	34.7	38.0	28.1	36.0	32.7	25.6	22.1	31.8	35.3
III.—ADMISSION-RATE OF THE YEAR—													
Influenza	36.2	...	11.7	47.7	9.4	22.8	3.6	3.7	5.9	...	...	5.5	16.9
Cholera	1.7	.5	.8	.5	4.1	2.1	.1	1.5	11.6	20.3	2.7	15.2	4.1
Small-pox	.2	.9	...	.1	.6	.6	1.0	3.1	2.8	4.1	.5	...	1.0
Enteric Fever	.3	.5	...	.1	.2	.2	...	...	.2	...	1.4	...	.3
Intermittent Fever	731.3	135.9	274.9	242.6	222.7	520.9	370.4	245.7	371.0	171.2	73.6	227.9	357.9
Remittent Fever	12.1	3.2	6.3	5.7	4.1	3.7	10.9	1.4	3.7	23.7	.1	8.3	6.0
Simple Continued Fever	5.6	3.9	.8	139.3	17.0	3.5	1.2	...	2.2	32.0	62.7	93.9	25.3
Tubercle of the lungs	10.3	11.1	4.7	12.6	7.3	10.3	6.3	7.9	4.2	12.3	10.2	8.3	8.8
Pneumonia	7.8	6.7	10.2	15.3	14.3	17.7	19.6	34.3	15.5	8.2	10.0	19.3	14.6
Other Respiratory Diseases	47.0	20.8	23.5	31.1	28.2	42.8	28.8	18.2	20.6	24.1	43.7	41.4	33.0
Dysentery	123.0	66.8	174.6	361.0	90.5	95.0	72.6	87.2	99.4	129.1	49.0	88.4	120.0
Diarrhoea	45.1	37.8	47.8	96.1	55.9	68.7	74.3	37.6	73.9	48.1	4.8	67.7	57.1
Spleen Diseases	...	...	...	1.8	1.3	1.7	1.8	1.4	1.4	...	.1	...	1.0
Scurvy	1.0	...	...	2.0	.1	1.0	4.3	1.4	.7	2.8	.2	4.1	1.1
Anæmia and Debility	18.3	8.6	42.3	12.7	22.0	27.8	16.0	24.4	33.3	12.7	3.6	9.7	20.2
Abscess, Ulcer, and Boil	95.4	45.3	31.3	32.0	89.7	121.3	116.5	59.8	80.0	27.8	41.1	67.7	81.6
ALL CAUSES	1,441.9	475.3	758.8	1,232.0	804.5	1,156.5	930.7	654.1	961.9	701.6	524.6	867.4	976.9
IV.—DEATH-RATE OF THE YEAR—													
Cholera	1.06	.23	.78	2.46	2.29	.81	.12	.46	6.84	12.66	1.86	4.14	2.28
Small-pox	.05	.23	...	...	...	.06	...	.31	.57	.32	.11	...	.11
Enteric Fever	.15	.46	...	...	.11	...	...	...	.08	...	.66	...	.12
Intermittent Fever	.35	.92	4.70	2.46	.78	.74	.72	1.85	.41	.63	.77	2.76	.94
Remittent Fever	3.09	.23	1.57	1.19	.28	.25	1.91	1.08	.73	8.23	...	...	1.21
Simple Continued Fever	.05	...	...	...	...	...	...	...	...	...	...	...	.01
Tubercle of the lungs	5.51	4.16	2.35	4.92	3.07	2.97	3.71	4.64	3.42	5.70	3.83	2.76	3.95
Pneumonia	3.29	2.31	3.13	4.75	3.18	5.27	4.07	9.43	5.54	3.48	2.08	8.29	4.22
Other Respiratory Diseases	.66	.46	.78	1.36	.64	.68	.36	1.39	1.95	1.27	.22	2.76	.86
Dysentery	7.49	3.01	7.05	12.13	4.45	4.89	2.87	9.12	13.35	8.23	3.28	8.29	6.79
Diarrhoea	2.63	1.62	.78	1.95	1.83	1.12	.84	4.79	7.49	3.80	...	4.14	2.45
Hepatic Abscess	...	.46	...	.34	.11	.06	...	...	.24	...	...	1.38	.11
Anæmia and Debility	2.38	.23	1.57	1.36	1.06	.56	1.32	3.40	3.50	2.22	.44	...	1.58
Phagedæna, Slough, and Gangrene	.10	...	...	.25	...	...	...	...	...	...	.11	...	.05
ALL CAUSES	32.83	19.42	26.62	40.62	25.61	24.23	22.61	44.35	50.67	70.89	21.64	40.06	32.80
V.—PERCENTAGE IN 100 ADMISSIONS—													
Influenza	2.51	...	1.55	3.88	1.17	1.97	.39	.57	.62	...	...	.64	1.73
Cholera	.12	.10	.10	.45	.51	.18	.01	.24	1.20	2.89	.52	1.75	.42
Small-pox	.01	.19	...	.61	.07	.05	.10	.47	.29	.59	.10	...	.10
Enteric Fever	.02	.10	...	.01	.03	.02	...	...	.03	...	.27	...	.03
Intermittent Fever	50.72	28.60	36.22	19.69	27.63	45.04	39.79	37.56	38.57	24.40	14.03	26.27	36.63
Remittent Fever	.84	.68	.83	.46	.51	.32	1.17	.21	.38	3.38	.02	.96	.61
Simple Continued Fever	.39	.83	.10	11.39	.21	.30	.13	...	.23	4.36	11.94	10.83	2.59
Tubercle of the lungs	.71	2.33	.62	1.03	.91	.89	.68	1.20	.43	1.76	1.94	.99	.90
Pneumonia	.54	1.41	1.34	1.24	1.78	1.53	2.11	5.24	1.61	1.17	1.90	2.23	1.49
Other Respiratory Diseases	3.20	4.35	3.10	2.53	3.50	3.70	3.10	2.79	2.14	3.43	8.34	4.78	3.38
Dysentery	8.53	14.66	23.01	29.30	11.25	8.21	7.80	13.32	10.34	18.40	9.34	10.19	12.28
Diarrhoea	3.13	7.93	6.30	7.80	6.95	5.94	7.98	5.74	7.68	6.86	.92	7.80	5.85
Spleen Diseases	...	...	...	.14	.16	.14	.19	.21	.14	...	.02	...	.11
Scurvy	.07	...	...	.17	.01	.09	.46	.21	.07	.41	.04	.48	.11
Anæmia and Debility	1.27	1.80	3.57	1.03	2.74	2.41	1.72	3.73	3.46	1.80	.69	1.11	2.06
Abscess, Ulcer, and Boil	6.62	9.53	4.13	2.68	11.15	10.49	12.52	9.14	8.32	3.97	7.84	7.80	8.29
VI.—PERCENTAGE IN 100 DEATHS—													
Cholera	5.2	1.2	2.9	6.1	9.0	3.3	.5	1.0	12.1	17.9	8.2	10.3	7.0
Small-pox	.2	1.2	...	...	...	.3	...	.7	1.0	.4	.5	...	.4
Enteric Fever	.5	2.4	...	...	.4	.5	...	...	.1	...	2.9	...	.4
Intermittent Fever	1.1	4.8	17.6	6.1	3.0	3.1	3.2	4.2	7.9	3.4	6.9	2.9	
Remittent Fever	9.4	1.2	5.9	2.9	1.1	1.0	8.5	2.4	1.3	11.6	...	...	3.7
Simple Continued Fever	.2	...	...	...	...	...	...	...	...	...	...	...	...
Tubercle of the lungs	16.8	21.4	8.8	12.1	12.0	12.3	10.4	10.5	6.0	8.0	10.9	6.9	12.0
Pneumonia	10.0	11.9	11.8	11.7	12.4	21.7	20.6	21.3	9.8	4.9	9.2	20.7	12.9
Other Respiratory Diseases	2.0	2.4	2.9	3.3	2.5	2.8	1.6	3.1	3.4	1.8	1.0	6.9	2.6
Dysentery	22.8	15.3	20.5	29.9	17.4	20.2	12.7	20.6	23.0	11.6	14.5	20.7	20.7
Diarrhoea	8.0	8.3	2.9	4.8	7.2	4.6	3.7	10.8	13.2	5.4	...	10.3	7.5
Hepatic Abscess	...	.24	...	.8	.4	.3	...	...	.4	...	...	3.4	.4
Anæmia and Debility	7.2	1.2	5.9	3.3	4.1	2.3	5.8	7.7	6.2	3.1	1.9	...	4.8
Phagedæna, Slough, and Gangrene	.3	...	...	.6	...	...	...	...	...	...	.5	...	.2

*Including Aden. For complete detail of diseases, see Table LIII.

TABLE XLII.

RATIOS of FAILS, GROUPS, and ADMINISTRATIONS. For actuals see Table XLIII.

JAILS.	Average annual strength.	1. ADMISSION-RATE.										2. DEATH-RATE, PER 1,000 OF STRENGTH.										Average number constantly sick per 1,000 of strength.
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Slough, and Gangrene.	All Causes.		
Port Blair	11,580	61.2	...	...	...	1,167.4	16.8	...	8.6	10.4	72.2	147.8	49.0	...	...	27.5	113.7	...	2,038.8
Mergui.	29	...	...	...	...	...	4.92	...	5.70	4.75	1.04	9.67	4.23	...	...	3.54	...	...	40.41
Tavoy.	104	...	...	...	...	19.2	...	...	19.2	9.6	...	9.6	...	...	...	...	19.2	...	105.8
Moulmein	596	...	5.0	...	1.7	139.3	20.1	48.7	11.7	1.7	21.8	310.1	312.1	...	1.7	16.8	142.6	...	1,406.0			
Shwegyin	172	...	...	...	...	168.6	...	...	...	...	11.6	75.6	46.5	...	...	5.8	38.1	...	494.2
Toungoo	568	...	...	...	...	81.0	...	...	3.5	7.0	5.3	21.1	8.8	...	...	22.9	...	...	267.6
Rangoon Central, (Europeans).	13	...	...	...	...	153.8	...	...	...	...	...	...	...	...	...	...	...	...	615.4
Rangoon Central, (natives).	2,209	...	1.4	...	...	124.5	7.2	9.3	8.6	3.6	3.6	43.0	5.0	...	4.5	5.0	61.6	...	582.2	
Maubin	369	...	8.1	...	...	19.0	...	2.7	2.7	2.7	2.7	21.7	21.7	...	...	...	59.6	...	163.3
Bassén Central	1,180	...	19.5	1.7	...	43.2	...	44.1	10.2	2.5	10.2	63.6	19.5	...	...	...	53.9	...	483.9
Insein Central	1,894	...	...	5	1.1	175.8	8.4	...	30.1	7.4	23.8	73.9	12.7	...	5	5.8	72.9	...	650.4	
Henzada	471	...	...	...	...	118.9	...	...	2.1	4.2	6.4	...	31.8	...	...	...	95.5	...	367.3
Myanawng	86	...	...	...	...	58.1	11.6	...	...	11.6	...	69.8	34.9	...	...	...	220.9	...	616.3
Sandoway	71	...	14.1	...	...	14.1	...	...	...	...	28.2	42.3	...	...	...	...	84.5	...	436.6
Kyaukpyu	140	50.0	...	7.1	...	128.6	...	...	...	...	14.3	107.1	250.0	...	...	21.4	50.0	...	885.7
Akyab	288	...	...	...	...	104.2	...	...	6.9	...	6.9	149.3	20.8	...	3.3	20.8	66.0	...	750.0
GROUP I.—BURMA COAST AND BAY ISLANDS	19,770	36.2	1.7	...	...	731.3	12.1	5.6	10.3	7.8	47.0	123.0	45.1	...	1.0	18.3	95.4	...	1,441.9	
Paungdi	96	...	...	...	...	208.3	10.4	...	10.4	10.4	10.4	62.5	20.8	...	...	10.4	20.8	...	416.7
Prome	301	...	...	...	...	46.5	3.3	...	3.3	...	3.3	53.2	43.2	3.3	...	...	29.9	...	358.8
Thayetmyo Central	941	...	1.1	1.1	...	84.0	...	8.5	19.1	3.2	5.3	38.3	30.8	1.1	...	24.4	113.7	...	604.7			
Taungdwingyi	77	...	...	13.0	...	...	...	...	...	...	...	...	...	...	...	...	26.0	...	39.0
Magwe	170	...	...	...	...	11.8	...	...	...	...	...	11.8	...	...	...	...	11.8	...	52.9
Minbu	90	...	...	...	...	133.3	...	11.1	...	...	22.2	55.6	55.6	...	...	11.1	11.1	...	511.1
Yamethin	115	...	...	...	...	43.5	...	...	...	...	8.7	34.8	...	...	...	...	43.5	...	217.4
Meiktila	178	...	...	...	5.6	36.2	...	5.6	16.9	...	22.5	44.9	28.1	...	...	...	39.3	...	397.8
Pagan	80	...	...	...	...	50.0	...	...	...	...	...	37.5	12.5	...	...	...	37.5	...	212.5
Takokku	68	...	...	...	...	14.7	...	14.7	...	14.7	...	38.8	...	...	...	...	...	...	250.0
Ivinyan Central	904	...	1.1	...	1.1	91.8	12.2	...	10.0	6.6	22.1	33.2	22.1	...	...	10.0	14.4	...	283.7	
Tandalay Central	861	...	...	...	...	324.0	...	...	13.9	10.5	47.6	118.5	59.2	...	...	1.2	5.8	...	651.6
Ionywa	91	...	...	...	...	22.0	11.0	22.0	...	11.0	11.0	109.9	...	...	...	11.0	87.9	...	549.5
hwebo	156	...	...	...	...	166.7	...	25.6	12.8	25.6	19.2	19.2	57.7	...	...	...	83.3	...	544.9
hamo	77	...	...	...	...	350.7	...	...	26.0	29.0	39.0	727.3	207.8	...	...	13.0	168.8	...	1,831.2
atba	81	...	24.7	...	...	254.6	...	...	25.97	12.3	86.4	37.0	148.1	...	...	...	61.7	...	765.4
indat	40	...	12.35	...	...	123.0	...	...	...	12.35	12.35	12.35	...	...	...	...	25.0	...	49.38
GROUP II.—BURMA INLAND.	4,326	...	5	9	5	135.9	3.2	3.9	11.1	6.7	20.8	66.8	37.8	5	...	8.6	45.3	...	475.3			

* Worked on the aggregates.

PRISONERS, 1900.

TABLE XLII—continued.

RATIOS of FAILS, GROUPS, and ADMINISTRATIONS. For actuals see Table XLIII.

JAILS.	Average annual strength.	1. ADMISSION-RATE.										2. DEATH-RATE PER 1,000 OF STRENGTH.										Average number constantly sick per 1,000 of strength.
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhœa.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Slough, and Gangrene.	ALL CAUSES.		
Cachar	65	...	...	...	...	15.4	...	...	...	15.4	61.3	15.4	...	...	...	30.8	30.8	...	215.4	15.4
Sibsagar	70	...	...	...	...	428.6	...	14.3	14.3	14.3	142.9	28.6	...	...	...	42.9	42.9	...	842.9	28.6
Dibrugarh	103	...	...	...	...	145.6	9.7	...	19.4	9.7	233.0	68.0	...	...	...	19.4	77.7	...	767.0	29.1
Tezpur	236	55.1	...	...	...	262.7	4.2	...	8.5	16.9	33.9	173.7	50.8	...	...	...	42.4	...	728.8	33.9
Nowgong	45	44.4	22.2	...	...	644.4	66.7	...	22.2	44.4	177.8	...	...	...	...	155.6	200.0	...	1,977.8	66.7
Gauhati	238	...	...	...	...	159.7	...	...	12.6	21.0	226.9	33.6	...	...	...	8.4	8.4	...	579.8	37.8
Dhubri	22	...	...	...	...	318.2	...	...	...	...	136.4	500.0	...	...	...	45.5	45.5	...	1,363.6	45.5
Sylhet	408	...	...	...	...	339.4	6.0	...	2.0	6.0	22.1	158.6	40.2	...	...	74.3	10.0	...	779.1	40.2
GROUP III.—ASSAM.	1,277	11.7	.8	...	...	274.9	6.3	.8	4.7	10.2	23.5	174.6	47.8	...	...	42.3	31.3	...	758.8	36.8
Mymensingh	522	36.4	5.7	...	...	130.3	...	...	11.5	21.1	26.8	220.3	151.3	...	...	13.4	28.7	40.2	934.9	38.3
Dacca Central	1,147	...	9	...	...	196.2	20.9	70.6	5.2	27.0	23.5	586.7	82.8	...	...	...	18.3	55.8	1,370.3	48.8
Tippera	290	137.9	3.45	...	...	13.8	...	279.3	15.8	10.3	41.4	289.7	79.3	...	...	27.6	13.8	24.1	1,144.8	31.0
Chittagong	178	...	...	...	...	797.8	...	...	22.5	22.5	28.1	1,191.0	252.8	...	...	5.6	39.3	75.0	2,713.5	134.8
Noakhali	120	100.0	...	...	...	308.3	8.3	...	...	...	8.3	491.7	25.0	...	...	...	...	16.7	1,141.7	25.0
Backergunge	493	...	...	...	...	221.1	4.1	...	4.1	8.1	46.7	651.1	129.8	...	...	...	20.3	18.3	1,178.5	83.2
Khulna	35	...	...	...	...	485.7	...	85.7	...	...	28.6	285.7	142.9	...	...	...	...	28.6	1,285.7	28.6
Jessore	344	...	...	...	...	168.6	20.3	26.2	...	5.8	40.7	840.1	20.3	...	...	...	5.8	17.4	1,238.4	40.7
Baraset	79	...	...	...	...	594.9	25.3	...	12.7	...	38.0	1,177.2	139.2	...	...	...	...	25.3	2,303.8	50.6
Presidency, Central (Europeans)	40	...	25.0	...	25.0	350.0	...	...	...	...	...	200.0	150.0	...	...	...	...	75.0	1,350.0	50.0
Presidency, Central (Natives)	1,234	...	...	8	...	181.5	...	...	16.2	8.9	24.3	254.5	30.0	...	...	...	8	14.6	737.4	31.6
Alipore Central	1,821	...	19.2	...	...	56.6	1.6	789.1	15.9	9.3	22.0	270.7	56.6	...	6.6	5	3.3	30.8	1,664.5	42.8
Hooghly	375	18.7	26.7	...	...	608.0	2.7	...	16.0	37.3	64.0	832.0	589.3	...	...	...	16.0	21.3	2,421.3	61.3
Burdwan	218	...	...	...	...	362.4	4.6	18.3	...	13.8	64.2	486.2	211.0	...	...	...	4.6	41.3	1,568.8	55.0
Krishnagar	205	...	...	...	...	214.6	...	...	14.6	...	4.9	214.6	4.9	...	...	...	...	24.4	541.5	24.4
Faridpur	359	...	...	...	...	359.3	2.8	...	13.9	30.6	50.1	869.1	94.7	...	...	...	...	8.4	1,646.2	66.9
Pabna	204	29.4	24.5	...	...	455.9	9.8	...	...	4.9	29.4	240.2	68.6	...	...	...	...	14.7	1,098.0	49.0
Murshidabad	235	...	4.3	229.8	59.6	...	8.5	4.3	46.8	293.6	34.0	42.6	8.5	859.6	42.6	
Raishahi Central	722	663.4	5.3	...	...	314.4	...	...	4.2	12.5	8.3	36.0	159.3	27.7	...	...	...	2.8	1,597.0	37.4
Bogra	141	...	7.1	...	...	205.7	14.2	...	42.6	...	...	241.1	28.4	...	...	...	...	...	617.0	21.3
Malda	101	...	...	...	...	505.0	...	168.3	...	19.8	29.7	89.1	79.2	...	...	...	...	...	1,069.3	29.7
Dinaipur	205	...	14.6	...	...	609.8	9.8	...	4.9	...	...	68.3	209.8	53.7	...	...	...	...	1,156.1	29.3
Rangpur	242	...	...	...	...	417.4	...	...	16.5	4.1	12.4	376.0	260.3	...	...	...	...	...	1,628.1	62.0

JAILS.	Average annual strength.	1. ADMISSION-RATE.										2. DEATH-RATE PER 1,000 OF STRENGTH.										Average number constantly sick per 1,000 of strength.
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Slough, and Gangrene.	ALL CAUSES.		
Jaipauri	89	...	...	...	...	685.4 33.71	22.5 22.47	...	...	11.2	22.5	157.3 11.24	213.5 33.71	...	...	33.7	22.5	...	1,404.5 101.12	56.2
Purneah	164	...	...	...	...	475.6	...	12.2	6.1	...	24.4	91.5 6.10	73.2	...	...	12.2	42.7	...	829.3 6.10	24.4
Naya Dumka	98	...	...	...	...	224.5	20.4	...	10.2	...	...	61.2	20.4 10.20	10.2	...	20.4	10.2	...	449.0 51.02	20.4
Suri	272	...	3.7 3.68	...	...	136.0	...	18.4	11.0 3.68	58.8 3.68	40.4 3.68	268.4 7.35	11.0	...	...	3.7 3.68	...	...	643.4 29.41	36.8
Bankura	245	...	...	...	...	293.9	...	...	69.4 20.41	4.1	57.1	179.6 12.24	151.0	...	...	28.6	61.2	...	1,145.9 36.73	44.9
Midnapore Central	1,002	...	...	...	...	239.5	...	...	18.0 2.99	37.9 4.99	37.9 1.00	163.7 17.95	74.9 3.99	1.0	...	1.0	6.0	1.0	654.7 54.89	22.0
Balasore	107	...	...	...	...	168.2	9.3 9.35	...	18.7 18.69	...	9.3	130.8	84.1 9.35	...	...	...	46.7	...	794.4 46.73	18.7
Cuttack	297	...	3.4	...	...	370.4	...	...	16.8 3.37	3.4	20.2	165.0 10.10	188.6 6.73	...	20.2	6.7 3.37	175.1	...	1,111.1 30.30	33.7
Puri	112	...	...	...	...	25.7	...	...	...	8.9	...	35.7	...	...	...	...	8.9	...	166.4 8.93	8.9
Angul	95	...	...	...	...	105.3	...	...	...	10.3	...	189.5 31.58	126.3 10.53	10.5	10.5	21.1	105.3	10.5	789.5 52.03	52.6
GROUP IV.— BENGAL AND ORISSA.	11,791	47.7 08	5.6 2.46	1	1	242.6 2.46	5.7 1.19	139.3	12.6 4.92	15.3 4.75	31.1 1.36	361.0 12.13	95.1 1.95	3	1.8	2.0	12.7 1.35	33.0	1,232.0 40.62	42.5		
A.																						
Chaibassa	217	...	9.2 4.61	...	...	437.8 4.61	...	...	...	9.2	18.4	921.7 13.92	78.3	9.2	...	13.8	41.5	...	1,880.2 46.08	55.3
Purulia	104	...	...	5.2	...	211.3	...	...	10.3 5.15	140.5 5.15	46.4	30.9 5.15	...	...	...	...	...	...	505.2 15.46	15.5
Ranchi	359	...	8.4 8.36	2.8	...	144.8	...	64.1	11.1 8.36	89.1 33.43	33.4	64.1 2.79	27.9	...	8.4 2.79	2.8	2.8	11.1	657.4 66.85	23.3		
Palamau	146	...	267.1 130.99	...	...	245.6 6.83	...	...	...	20.5	...	500.0 34.25	431.5 27.49	...	13.7	...	6.8	20.5	1,643.8 232.88	54.8
Hazaribagh Central	1,070	1.9	...	9	...	177.6	21.5	116.8	14.0 11.21	30.8 3.74	24.3 9.3	228.0 8.41	93.1 5.61	...	...	1.9	46.7	...	900.0 31.78	31.8
B.																						
Gaya	488	...	...	...	...	358.6	...	...	2.0 2.03	12.3 6.15	12.3	227.5	125.0 8.20	...	2.03	...	2.0	20.5	930.3 20.64	20.5
Bhagalpur Central	1,725	...	3.5 2.32	...	1.2 3.8	63.8 1.74	...	...	5.8 4.64	12.8 1.16	32.5 1.16	173.9 1.74	49.3 1.16	...	...	...	13.9	...	538.6 26.67	25.5
Monghyr	266	...	3.8 3.76	...	...	353.4	...	...	11.3	...	11.3	300.8 3.76	203.0	...	...	11.3	26.3	...	1,180.5 30.08	33.8
Darbhanga	367	...	...	...	...	226.2	...	...	10.9 5.45	2.7	21.8	329.7 13.62	188.0 5.45	...	...	2.7 A.	73.6 2.72	59.9	1,250.7 43.60	54.5
Champaran	374	...	50.8 24.06	...	...	243.3	8.0 5.35	53.5	2.7	24.1	42.8	128.3 5.35	189.8 16.70	...	...	...	42.8 13.37	18.7	1,066.8 80.21	37.4
Muzaffarpur	387	5.2	31.0 20.67	...	...	142.1	12.9	36.2	18.1 5.17	2.6	10.3	183.5 5.17	103.4	...	...	...	13.3	12.9	814.0 38.76	38.3
Patna	333	...	3.0 3.00	...	...	261.3	...	...	...	3.0	60.1	147.1 3.00	231.2 3.00	...	...	...	3.0	57.1	1,042.0 21.02	42.0
Arrah	215	...	...	...	...	144.2	9.3	9.3	...	...	...	46.5	111.6	37.2	...	...	14.0	27.9	590.7	18.6
Chapra	306	...	65.4 35.95	...	...	317.0	...	...	9.8 9.80	16.3	45.8	294.1 13.07	166.7	...	...	...	6.5	71.9	1,277.8 81.70	45.8
Buxar Central	1,266	819.1	...	184.0	13.4 6.32	7.1 7.9	67.1 1.58	147.7 3.16	95.6 1.58	8	21.3 7.9	90.0 7.9	1,824.6 21.33	56.9	
Korantadih	38	...	...	...	...	289.5	...	...	...	...	...	52.6	...	...	...	...	52.6	52.6	842.1	26.3
Ghazipur	569	1.8	...	...	...	100.2	107.2	...	...	5.3	19.3	22.8 1.76	22.8 8.79	...	...	...	14.1	96.7	623.9 21.09	26.4
Azamgarh	349	...	...	...	...	171.9	...	...	22.9 2.87	20.1 2.87	77.4	71.6 25.79	80.2	...	...	...	51.6 2.87	128.9	1,131.8 37.25	51.6
Kasia	45	...	...	...	...	266.7	44.4	...	...	...	...	155.6	22.2	...	...	...	44.4	44.4	1,135.0 111.11	66.7
Gerakhpur	533	...	...	...	...	150.1	...	...	...	11.3	9.4	35.9 3.75	39.4	...	...	...	45.0	84.4	754.2 22.51	41.3
Basti	379	...	5.3 2.64	...	...	129.3	...	...	...	10.6	...	68.6 2.64	5.3	...	...	...	13.2	34.3	374.7 21.11	13.2
Fyzabad	624	20.8 1.60	...	...	...	237.2	1.6	1.60	...	3.2	28.8	41.7 6.41	52.9	...	...	...	101.0	145.8	1,238.8 17.03	54.5
Sultanpur	417	...	2.4	...	...	225.4	...	...	...	16.8	21.6	38.4 2.40	38.4	...	...	...	36.0	33.6	587.5 14.30	26.4
Rai Bareilly	754	...	...	...	...	171.1	...	...	6.6 3.95	...	...	14.6 1.33	5.3	...	...	...	2.7	132.6	569.0 14.59	39.1

PRISONERS, 1900.

TABLE XLII—continued.
RATIOS of FAILS, GROUPS, and ADMINISIRATIONS. For actuals see Table XLIII.

JAILS.	Average annual strength.	1. ADMISSION-RATE.										2. DEATH-RATE PER 1,000 OF STRENGTH.										Average number constantly sick per 1,000 of strength.
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Slough, and Gangrene.	ALL CAUSES.		
Partabgarh . . .	285	...	...	...	...	98.2	...	...	7.0	17.5	10.5	21.1	14.0	...	10.5	...	35.1	87.7	...	477.2	28.07	17.5
Jaunpur . . .	336	...	11.9	...	...	169.6	...	...	...	14.9	20.8	26.8	20.8	...	...	...	11.9	205.4	...	663.7	38.69	26.8
Benares Central } " District }	2,186 } 471 }	12.8 } 46 }	...	...	...	207.2	...	...	16.0 } 3.20 }	3.7 } 46 }	16.9 } 91 }	38.9 } 2.74 }	36.7 } 1.37 }	...	...	...	12.4 } 2.74 }	88.9 } ...	...	657.8 } 19.67 }	33.4	
Mirzapur . . .	225	...	17.8	4.4	...	222.2	4.4	4.4	...	22.2	66.7	66.7	40.0	...	4.4	...	4.4	142.2	...	933.3	40.00	40.0
Allahabad Central } " District }	2,100 } 732 }	...	5 } 48 }	...	...	72.4	...	...	7.6 } 3.81 }	3.3 } 1.43 }	17.6 } 48 }	21.9 } 1.43 }	11.4 } 48 }	...	...	...	14.8 } 95 }	101.4 } 48 }	...	388.6 } 16.19 }	31.4	
Karwi . . .	32	...	...	...	...	218.8	...	...	31.2	...	62.5	93.8	31.2	...	...	...	31.2	62.5	...	531.2	31.25	31.2
Banda . . .	291	3.4	...	3.4	...	690.7	...	...	...	55.0	41.2	92.8	96.2	...	...	...	20.6	161.5	...	1,529.2	48.11	58.4
Fatehpur . . .	327	...	...	...	...	526.3	3.1	...	...	24.5	9.2	88.7	42.8	...	...	...	9.2	177.4	...	1,461.8	55.05	48.9
Hamirpur . . .	192	...	...	...	...	511.7	...	...	...	31.2	26.0	20.8	26.0	5.2	...	...	15.6	161.5	...	1,250.0	20.83	41.7
Orai . . .	184	10.9	...	...	...	510.9	...	...	16.3	16.3	21.7	38.0	54.3	...	...	...	43.5	97.8	...	1,157.6	38.04	48.9
Cawnpore . . .	366	224.0	...	...	...	196.7	...	5.5	5.5	35.5	16.4	60.1	24.6	...	13.7	...	2.7	153.0	...	1,125.7	40.98	51.9
Unao . . .	310	...	...	...	...	161.3	...	3.2	6.5	16.1	22.6	25.8	6.5	...	12.9	...	6.5	58.1	...	467.7	16.13	22.6
Lucknow Central } " District }	1,786 } 611 }	...	...	3.9	...	94.6	...	...	3.4 } 2.24 }	3.9 } 1.08 }	10.6 } ...	23.5 } 2.24 }	18.5 } 56 }	...	...	...	1.1	95.7	...	383.5 } 11.20 }	22.4	
Barabanki . . .	445	...	2.2	...	...	22.5	...	89.9	...	13.5	15.7	22.5	38.2	...	...	...	15.7	157.3	...	644.9	8.99	18.0
Gonda . . .	572	...	...	5.2	...	131.1	15.7	...	1.7 } 1.75 }	24.5 } 1.75 }	21.0 } 1.75 }	55.9 } 3.50 }	8.7 } 3.50 }	...	...	...	31.5 } 3.50 }	52.4 } ...	...	535.0 } 31.47 }	43.7	
Bahraich . . .	436	...	...	...	...	454.1	...	...	6.9 } 2.29 }	16.1 } 2.29 }	32.1 } ...	73.4 } 6.88 }	73.4 } ...	...	...	...	43.6	153.7	...	1,197.2	18.35	55.0
Kheri . . .	357	...	...	...	...	145.4	8.9	...	3.0 } 2.97 }	17.8 } 8.90 }	5.9 } ...	32.6 } 2.97 }	29.7 } ...	...	...	...	11.9	255.2	...	801.2	17.80	38.6
Sitapur . . .	714	35.0	...	2.8	...	49.0	...	1.4	2.8	8.4	5.6	40.6	21.0	...	...	...	4.2	40.6	...	305.3	2.80	11.2
Hardoi . . .	425	...	...	...	...	291.8	...	21.2	2.4 } 2.35 }	7.1 } ...	7.1 } 2.35 }	42.4 } 4.71 }	21.2 } ...	...	2.4	...	9.4 } 4.71 }	98.8 } ...	...	712.9 } 23.53 }	25.9	
Etawah . . .	275	...	...	3.6	...	396.4	...	...	7.3 } 3.64 }	47.3 } ...	7.3 } ...	83.6 } 3.64 }	3.6 } 3.64 }	...	...	...	25.5	50.9	...	807.3	10.91	29.1
Mainpuri . . .	364	24.7	...	...	...	398.4	...	...	27.5 } 2.73 }	5.5 } 8.24 }	52.2 } ...	46.7 } 8.24 }	76.9 } 10.99 }	...	...	...	11.0	101.6	...	1,066.4	35.71	63.2
Etab . . .	322	...	...	...	...	543.5	...	...	28.0 } 9.32 }	21.7 } 0.21 }	87.0 } ...	87.0 } 3.11 }	96.3 } ...	...	...	...	48.5 } 3.11 }	245.3 } ...	...	1,987.6 } 34.16 }	80.7	
Fatehgarh Central } " District }	2,182 } 417 }	41.2 } 9.6 }	...	...	1.4 } 92 }	144.4 } ...	...	...	6.9 } 2.75 }	15.1 } 4.12 }	43.5 } 46 }	42.6 } 3.21 }	40.3 } ...	...	...	...	6.9	71.5	...	646.2 } 16.50 }	33.0	
GROUP V.— GANGETIC PLAIN AND CHUTIA NAGPUR.	28,344	9.4	4.1	6	2	222.7	4.1	17.0	7.3	14.3	28.2	90.5	55.9	1.1	1.3	1.1	22.0	89.7	...	804.5	25.61	34.7
A.																						
Shahjahanpur . . .	317	...	...	...	...	589.9	3.2	59.9	9.5	6.3	88.3	107.3	100.9	...	6.3	...	25.2	113.6	...	1,416.4	28.39	34.7
Bareilly Central } " District }	2,318 } 906 }	...	...	...	...	200.6	...	...	14.2 } 2.16 }	6.9 } 2.16 }	15.5 } 86 }	3.5 } 43 }	26.7 } 2.16 }	...	...	...	3.0	54.8	54.4	...	508.2 } 12.51 }	25.0
		300.2	...	...	...	866.4	1.1	1.1	39.7	24.3	22.1	18.7	80.6	...	...	...	1.1	...	...	1,755.0	45.25	45.6

JAILS.	Average annual strength.	1. ADMISSION-RATE.										2. DEATH-RATE PER 1,000 OF STRENGTH.										Average number constantly sick per 1,000 of strength.
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the Lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscesses.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, and Stomach, and Gangrene.	All Causes.		
Budaon.	390	...	...	...	...	264 ¹ / ₂ ⁵⁰	2 ⁶	...	2 ⁶	25 ⁶	23 ¹	48 ⁷	7 ⁷	...	...	7 ⁷	59 ⁰	...	625 ¹ / ₁₀ ²⁶	17 ⁹
Aligarh.	427	42 ² / ₄ ⁶⁸	...	...	...	452 ⁰	2 ³	...	2 ³	9 ⁴	11 ⁷	102 ⁰	77 ³	...	...	2 ³	44 ⁵	...	1,044 ⁵ / ₂₃ ⁴²	30 ⁴
Bulandshahr.	284	...	...	3 ⁵	...	126 ⁸ / ₃ ⁵²	7 ⁰	17 ⁶	3 ⁵	3 ⁵	24 ⁶	66 ⁹	31 ⁷	...	...	63 ⁴ / ₃ ⁵²	63 ⁴	...	619 ⁷ / ₂₄ ⁰⁵	42 ³
Moradabad.	412	...	...	...	...	291 ³	20 ¹	...	2 ⁴	24 ³	43 ⁷	133 ⁵	9 ⁷	...	...	41 ³ / ₂ ⁴³	21 ⁸	...	788 ⁸ / ₁₆ ⁹⁹	51 ⁰
Bijnor.	311	...	...	3 ²	...	215 ⁴ / ₃ ²²	...	...	6 ⁴	16 ¹	12 ⁹	83 ⁶ / ₀ ⁴³	22 ⁵	...	...	...	74 ⁰	...	755 ⁶ / ₁₆ ⁰⁸	32 ²
Dehra Dun.	87	...	...	...	...	298 ⁹	...	23 ⁰	...	...	...	23 ⁰	80 ³ / ₁₁ ⁴⁹	...	...	46 ⁰	46 ⁰	...	689 ⁷ / ₂₂ ⁹⁹	57 ⁵
Saharanpur.	332	18 ¹	...	...	...	247 ⁰	3 ⁰	...	...	51 ²	24 ¹	66 ³ / ₃ ⁰¹	24 ¹	...	...	3 ⁰	96 ⁴	...	696 ⁶ / ₂₇ ¹¹	33 ¹
Muzaffarnagar.	197	30 ⁵	...	...	...	304 ⁶	...	...	20 ³	5 ¹	45 ⁷	81 ²	66 ⁰	...	...	20 ³	106 ⁶	...	969 ³ / ₅ ⁰⁸	45 ⁷
Meerut.	646	102 ² / ₁ ⁵³	...	...	...	427 ²	...	43 ³	18 ⁶ / ₄ ⁶⁴	10 ⁸	7 ⁷	117 ⁶ / ₃ ¹⁰	51 ² / ₁ ³³	...	...	1 ⁵	41 ⁸	...	1,105 ³ / ₁₇ ⁰³	29 ⁴
Delhi.	615	...	...	...	1,074 ⁸	...	...	...	8 ¹	66 ⁷	30 ⁹	97 ⁶ / ₆ ⁵⁰	73 ² / ₁ ⁶³	...	...	22 ⁸ / ₁ ⁶³	190 ²	...	1,063 ⁴ / ₆₅ ⁰⁴	27 ⁶
Rohtak.	241	...	...	...	4 ¹	477 ²	4 ¹	...	4 ¹	33 ²	20 ⁷	116 ² / ₄ ¹⁵	20 ⁷	16 ⁶	...	...	107 ⁹	...	1,012 ⁴ / ₁₆ ⁶⁰	29 ⁰
Hissar.	237	...	4 ² / ₄ ²²	...	...	282 ⁷	...	...	4 ²	21 ¹	42 ²	...	67 ⁵	...	...	33 ⁸ / ₄ ²²	92 ⁸	...	759 ⁵ / ₂₁ ¹⁰	25 ³
Karnal.	142	...	...	...	...	380 ³	...	...	7 ⁰	77 ⁵ / ₁₄ ⁰⁸	42 ³	162 ⁰ / ₂₈ ¹⁷	70 ⁴	...	...	...	08 ⁶	...	1,035 ² / ₅₆ ³⁴	28 ²
Umballa.	782	...	...	...	...	841 ⁴ / ₁ ²⁸	...	...	5 ¹	26 ⁹	20 ⁵	245 ⁵ / ₇ ⁰⁷	144 ⁵	...	1 ³	10 ²	145 ⁸	...	1,652 ² / ₂₃ ⁰²	43 ⁵
B.																						
Ludhiana.	256	...	...	...	...	570 ³ / ₃ ⁹¹	50 ⁸	...	...	3 ⁹	62 ⁵ / ₃ ⁹¹	250 ⁰ / ₁₉ ⁵³	66 ⁴	...	...	3 ⁹	93 ⁸	...	1,238 ³ / ₂₉ ⁰⁶	23 ⁴
Hoshiarpur.	46	1,369 ⁶	65 ²	21 ⁷	87 ⁰	21 ⁷	130 ⁴	...	2,304 ³	43 ⁵	
Jullundur.	240	...	...	...	...	112 ⁴ / ₄ ⁰²	16 ¹ / ₄ ⁰²	...	8 ⁰	8 ⁰³	...	32 ¹	68 ³ / ₈ ⁰³	8 ⁰	...	...	32 ¹	...	405 ⁶ / ₄₉ ¹⁶	12 ⁰
Ferozepore.	462	...	...	...	...	73 ⁶ / ₈ ⁶⁶	...	...	2 ²	19 ⁵ / ₁₂ ⁹⁹	4 ³ / ₂ ¹⁶	45 ⁵ / ₆ ⁴⁹	13 ⁰ / ₆ ⁴⁹	...	...	15 ² / ₂ ¹⁶	17 ³ / ₂ ¹⁶	...	220 ⁸ / ₄₃ ²⁹	6 ⁵
Amritsar.	225	...	...	...	...	822 ²	...	...	17 ⁸ / ₈ ⁸⁴	26 ⁷ / ₄ ⁴⁴	22 ²	93 ³ / ₄ ⁴⁴	293 ³	...	...	57 ⁸	124 ⁴	...	1,706 ⁷ / ₂₆ ⁰⁷	48 ⁹
Lahore Central.	1,468	...	7 ⁶ / ₁ ⁶⁸	7	2 ⁰ / ₁ ³⁶	1,504 ¹	13 ⁶	...	15 ⁷ / ₇ ⁴⁹	4 ⁸ / ₂ ⁰⁴	158 ⁰ / ₂ ⁰⁴	153 ³ / ₅ ⁴⁵	115 ⁸ / ₆₈	...	6 ¹	17 ⁰	282 ⁰	...	2,679 ⁸ / ₂₈ ⁶¹	75 ⁶		
„ District.	541	...	...	3 ⁷	...	410 ⁴	...	...	7 ⁴ / ₁ ⁸⁵	12 ⁹ / ₁ ⁸³	18 ⁵	85 ⁰ / ₇ ³⁹	44 ⁴ / ₁ ⁸⁵	...	1 ⁸	1 ⁸	218 ¹	...	1,003 ⁷ / ₁₆ ⁶⁴	40 ⁷
„ Female.	178	...	5 ⁶ / ₅ ⁶²	5 ⁶	...	533 ⁷	...	...	11 ² / ₅ ⁶²	11 ² / ₅ ⁶²	39 ³	95 ⁵ / ₅ ⁰²	39 ³	...	...	5 ⁶	95 ⁵	...	1,168 ⁵ / ₃₃ ⁷¹	44 ⁹
Gurdaspur.	215	...	...	...	...	279 ¹	...	...	4 ⁷ / ₄ ⁶⁵	14 ⁰	18 ⁶ / ₄ ⁶⁵	88 ⁴	32 ⁶	...	...	4 ⁷	18 ⁶	...	562 ⁸ / ₉ ³⁰	14 ⁰
Gujranwala.	364	...	...	...	...	324 ²	...	...	...	11 ⁰	5 ⁵	54 ⁹	27 ⁵	...	...	38 ⁵	57 ⁷	...	640 ¹ / ₅ ⁴⁹	19 ²
Sialkot.	401	...	2 ⁵ / ₂ ⁴⁹	5 ⁰ / ₂ ⁴⁹	...	189 ⁵	2 ⁵	...	17 ⁵ / ₇ ⁴⁸	10 ⁰	20 ⁰	17 ⁴ / ₂ ⁴⁹	12 ⁵ / ₂ ⁴⁹	2 ⁵ / ₂ ⁴⁹	2 ⁵	...	29 ⁹	52 ⁴	...	571 ¹ / ₂₂ ⁴⁴	24 ⁹	
Gujrat.	136	36 ⁸	14 ⁷	44 ¹	36 ⁸	7 ⁴	...	14 ⁷	...	22 ¹	66 ²	...	455 ⁹	14 ⁷	
Mung Rasul Central.	1,863	...	16 ¹ / ₄ ³³	221 ¹	7 ⁰ / ₂ ⁶⁸	26 ⁸ / ₅ ⁹⁰	85 ⁹ / ₅ ⁴	69 ² / ₄ ²⁹	112 ²	1 ¹	74 ¹	226 ⁰	...	1,105 ² / ₂₆ ³⁰	49 ⁴	
Jhelum.	281	...	...	...	...	1,163 ⁷	3 ⁶	...	...	7 ¹	14 ²	103 ² / ₃ ⁵⁶	170 ⁸	...	...	...	138 ⁸	...	1,644 ¹ / ₇ ¹²	21 ⁴
Rawalpindi.	810	2 ⁵	...	582 ⁷ / ₁ ²³	...	1 ²	4 ⁹	9 ⁹	23 ⁵ / ₁ ²³	85 ² / ₃ ⁷⁰	77 ⁸ / ₂ ⁴⁷	...	12 ³	2 ⁵	23 ⁵	191 ⁴	...	1,348 ¹ / ₁₇ ²⁸	48 ¹	
GROUP VI.— UPPER SUB-HIMA- LAYA.	16,139	22 ⁸ / ₉₃	2 ¹ / ₈ ³¹	6 ⁰ / ₀₆	2 ² / ₁₂	520 ⁹ / ₇₄	3 ⁷ / ₂₃	3 ⁵	10 ³ / ₂ ⁹⁷	17 ⁷ / ₅ ²⁷	42 ⁸ / ₆₈	95 ⁰ / ₄ ⁸⁹	68 ⁷ / ₁ ¹²	1 ¹ / ₀₆	1 ⁷	1 ⁰	27 ⁸ / ₅₆	121 ³ / ₀₆	...	1,156 ⁵ / ₂₄ ²³	38 ⁰	

TABLE XLII—continued.

RATIOS of FAILS, GROUPS, and ADMINISTRATIONS.

For actuals see Table XLIII.

JAILS.	Average annual strength.	1. ADMISSION-RATE.										2. DEATH-RATE PER 1,000 OF STRENGTH.										Average number constantly sick per 1,000 of strength.
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhœa.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Slough, and Gangrene.	ALL CAUSES.		
Thana	953	...	65'1 39'87	5'2 1'05	...	325'3	46'2 14'69	...	13'6 6'30	11'5 4'20	34'6 2'10	152'2 19'94	76'6 7'35	...	7'3 5'25	13'6	40'9	...	951'7 107'03	40'9		
Bombay Common	419	...	...	14'3	...	226'7	40'6 4'77	207'6	16'7 9'53	...	14'3	114'6 2'39	105'0 4'77	...	...	19'1 9'55	11'9	...	1,188'5 126'49	19'1
Bombay House of Correction	353	...	2'8 5'67	...	...	68'0	8'5 2'83	...	31'2 14'16	11'3 2'83	14'2	136'0	22'7	...	...	11'3	19'8	...	441'9 36'83	17'0
Ratnagiri	224	...	...	...	...	35'7	17'9 17'86	...	...	...	17'9 8'93	133'9	8'9	...	...	4'5 4'46	...	...	370'5 44'04	22'3
Karwar	316	...	...	6'3	...	120'3 3'16	12'7 6'33	...	3'2 3'16	12'7 6'33	19'0	110'8	22'2 3'16	...	...	3'2	50'6	...	500'0 31'65	15'8
Mangalore	150	...	6'7	...	...	60'0	...	33'3	...	6'7	46'7	6'7	...	...	...	13'3	73'3	...	473'3	13'3
Cannanore Central	745	...	...	...	...	76'5 1'34	4'0 4'03	12'1	9'4 2'68	8'1 5'37	20'1	135'6 8'05	24'2 2'68	...	2'7	14'8	13'4 1'34	...	461'7 48'32	21'5
GROUP X.—WESTERN COAST.	2,160	...	20'3 12'66	4'1 '32	...	171'2 '63	23'7 8'23	32'0	12'3 5'70	8'2 3'48	24'1 1'27	120'1 8'23	48'1 3'80	...	2'8 1'58	12'7 2'22	27'8 '32	...	701'6 70'89	25'6		
A.																						
Bellary	402	...	...	...	...	204'0	...	19'9	5'0 2'49	12'4 2'49	14'9	74'6 2'49	...	...	...	...	30'0	...	559'7 22'39	27'4
Salem Central	537	...	3'7 1'86	1'9	...	57'7 1'86	...	...	5'6 3'72	...	14'9 1'86	33'5	...	...	...	...	22'3	...	271'9 16'70	11'2
Coimbatore Central	1,156	...	...	2'6 '87	...	29'4 '87	...	35'3	17'3 5'19	13'0 '87	61'4	20'8 3'46	24'2	...	...	11'2 '87	26'8	...	414'4 23'36	20'8
B.																						
Palamcottah	416	...	7'2 7'21	...	...	21'6	2'4	55'3	2'4 4'81	14'4 2'40	16'8	84'1 2'40	...	...	...	4'8	24'0	...	406'2 26'44	19'2
Madura	403	...	5'0 2'48	...	...	52'1	...	34'7	12'4 7'44	7'4 2'48	17'4	72'0 2'48	...	...	...	...	34'7	...	521'1 19'85	22'3
Trichinopoly Central	1,067	...	...	...	9 '94	79'7	...	122'8	8'4 3'73	14'1 1'87	69'4	18'7 6'36	7'5	...	...	2'8 1'87	101'2	...	740'4 30'93	25'3
Tanjore	355	...	...	...	...	31'0 2'84	...	19'7	5'6	...	...	33'8	...	...	...	...	8'5	...	281'7 33'80	14'1
Cuddalore	379	...	...	...	...	7'9	...	89'8	5'3 5'48	2'6 2'04	29'0	73'9 2'64	...	...	...	...	68'6	...	569'9 15'83	18'5
Vellore Central	1,317	25'8 '76	...	115'4	6'8 3'04	6'1 '76	25'8	24'3 '76	3'0	45'6	...	437'4 10'63	19'7	
Madras Civil	26	
Madras Penitentiary, Central.	1,694	...	2'7 1'83	9	...	88'7	...	125'2	20'1 6'40	8'2 '91	35'6	16'5 '91	...	...	9	...	57'6	9	694'7 20'11	21'9
Nellore	233	...	64'4 42'92	...	...	8'6	...	4'3	...	8'6 4'29	12'9	8'6 4'29	...	...	...	...	30'0	...	214'6 50'50	8'6
Guntur	45	...	...	...	...	44'4	...	44'4	...	...	44'4	22'2	...	...	...	...	44'4	...	444'4 22'22	9'18
C.																						
Rajamundry Central.	907	...	...	1'0	...	232'6	...	...	6'0 2'01	9'0 5'02	108'3	119'4 2'01	...	...	...	...	12'0	...	738'2 13'04	30'1
Vizagapatam	569	...	...	19'3 8'79	...	31'6 5'27	...	29'9	17'6 1'76	31'6 7'03	51'0	124'8 15'82	14'1	...	1'8	19'3 1'76	3'5	...	423'6 49'21	36'9
Berhampur	148	...	...	...	...	81'1	...	40'5	13'5 6'76	...	6'8	60'8 6'76	...	...	...	...	94'6	...	533'8 13'51	13'5
GROUP XI.—SOUTHERN INDIA.	9,144	...	2'7 1'86	5 '11	1'4 '66	73'6 '77	'1	62'7	10'2 3'83	10'0 2'08	43'7 '22	49'0 3'28	4'8	...	'1	'2	3'6 '44	41'1	'1	524'6 22'64	22'1	

* Worked on the aggregates.

JAILS.	Average annual strength.	1. ADMISSION-RATE.							2. DEATH-RATE PER 1,000 OF STRENGTH.											Average number constantly sick per 1,000 of strength.	
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Slough, and Gangrene.		ALL CAUSES.
Shillong	37	108'1	...	...	...	189'2	...	...	...	108'1	54'1	370'3	...	...	...	54'1	135'1	...	1,135'1	27'0	
Darjeeling	89	...	...	...	...	179'8	...	528'1	44'9	11'24	89'9	179'8	202'2	11'2	...	...	33'7	...	1,505'6	44'9	
Almora	99	...	...	...	...	181'8	...	...	...	20'2	...	10'1	20'2	...	...	...	...	...	323'2	40'4	
Pauri	14	...	...	...	...	1,500'0	...	...	...	71'4	...	71'4	285'7	...	...	...	...	...	2,642'9	71'4	
Simla	23	...	...	...	...	391'3	...	...	...	43'5	43'5	...	43'5	...	...	...	43'5	...	869'6	43'5	
Dharmala	76	...	...	...	...	236'8	...	...	...	26'3	39'3	52'6	39'3	...	...	...	197'4	...	736'8	26'3	
Abbottabad	98	...	...	...	...	224'5	...	...	...	30'6	51'0	30'6	10'20	10'20	...	10'2	30'6	61'2	663'3	30'6	
Quetta	82	...	...	...	...	292'7	36'6	134'1	...	12'2	97'6	109'8	...	...	24'4	12'2	134'1	...	1,210'6	24'4	
Mercara	110	...	...	...	...	218'2	27'3	...	9'1	34'5	...	45'5	72'7	...	...	9'1	54'5	...	627'3	27'3	
Russellkonda	96	114'6	31'25	...	...	62'5	...	104'2	10'4	10'4	31'3	218'8	...	...	...	...	20'8	...	760'4	20'8	
GROUP XII-HILLS.	724	5'5	15'2	...	...	227'9	8'3	93'9	8'3	19'3	41'4	88'4	67'7	1'4	...	4'1	9'7	67'7	867'4	31'8	
EXTRA INDIA-Aden	25	...	...	...	...	...	...	...	...	...	80'0	40'0	...	...	40'0	...	40'0	...	280'0	40'0	
INDIA	121,811	16'9	4'1	1'0	'3	357'9	6'0	25'3	8'8	14'6	33'0	120'0	57'1	'1	1'0	1'1	20'2	81'0	'1	976'9	35'3
ANDAMANS	11,580	61'2	...	...	...	1,167'4	16'8	'1	8'6	10'4	72'2	147'8	40'0	...	...	'5	27'5	113'7	'6	2,038'8	54'3
BURMA	12,516	'6	2'8	'6	'6	121'9	4'7	10'1	12'1	5'0	14'6	80'6	39'0	'2	...	1'0	6'3	61'1	'1	555'5	28'0
ASSAM	1,314	14'5	'8	...	...	272'5	6'1	'8	4'8	9'9	25'9	171'2	54'0	...	...	...	42'6	34'2	...	769'4	36'5
BENGAL	16,593	28'9	8'6	'2	'2	262'8	5'1	107'5	11'1	15'6	34'1	301'2	101'5	'4	1'3	1'4	12'4	35'4	'2	1,156'1	40'1
N.-W. PROVINCES AND OUDH.	31,083	21'0	'5	'5	'1	251'4	3'3	3'8	8'9	15'5	23'6	58'2	37'5	'1	1'4	'1	25'6	94'6	...	763'9	36'0
PUNJAB	15,550	...	2'2	'6	'3	562'3	3'3	'3	7'4	18'4	45'3	95'9	88'3	'1	1'2	2'2	23'9	157'5	'1	1,230'5	37'5
BOMBAY	11,495	2'8	11'1	4'9	'1	257'8	13'7	8'4	6'0	20'5	22'9	87'3	44'5	'1	1'9	3'4	15'1	66'9	'2	784'3	28'0
BERAR AND SIKHINDRABAD	1,027	35'8	9'3	'5	...	325'9	...	7'3	3'6	27'0	25'9	68'5	107'9	'5	'5	...	32'7	31'1	...	942'9	26'5
CENTRAL PROVINCES.	5,728	'3	11'2	2'8	'3	353'0	7'3	1'7	4'9	14'3	18'2	123'8	87'8	'3	2'1	'5	45'7	69'0	...	925'6	29'7
MADRAS	10,135	...	3'7	'4	'3	73'5	'3	58'9	10'0	9'8	41'9	56'3	6'1	...	'1	'3	4'5	39'4	'1	521'5	27'9
NON-BRITISH JAILS:—																					
Sadra	89	...	44'9	...	...	89'9	...	...	44'9	67'4	44'9	112'4	123'6	...	...	33'7	22'5	11'2	...	741'6	33'7
Kolhapur	400	...	10'0	...	...	202'5	2'5	62'5	17'5	110'0	85'0	135'0	85'0	...	...	192'5	52'5	40'0	...	1,123'5	27'5
Savantvadi	51	...	...	...	...	274'5	...	...	...	...	78'4	196'1	...	...	...	...	39'2	...	...	607'8	39'2

PRISONERS, 1900.

TABLE XLIII.

ACTUALS of FAILS, GROUPS, and ADMINISTRATIONS on which the ratios in Tables XL—XLII have been calculated.

JAILS.	Average annual strength.	1. ADMISSIONS.															2. DEATHS.										Average number constantly sick.
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Cont. nued Fever.	Tubercle of the lung.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, and Gangrene.	ALL CAUSES.	Tetanus.	Acaris lumbricoides.	Dracunculus Medicinalis.	strongylus decedentis.	Other Entozoa.		
Port Blair	11,530	709	...	...	13,519	194	1	100	121	836	1,712	567	...	...	6	319	1,317	7	23,600	1	...	2	1	...	620
Mergui	29	...	...	...	...	...	6	...	...	...	5	1	...	...	...	...	...	1	18	...	...	...	...	...	1
Tavoy	104	...	...	...	2	...	2	...	1	...	1	...	...	...	...	...	2	...	11	...	...	...	...	...	1
Moulmein	596	3	1	1	83	12	29	7	1	13	304	186	...	...	1	10	85	...	838	6	...	...	...	...	34
Shwegyin	172	...	...	...	29	...	...	...	...	2	13	8	...	...	...	1	10	...	85	...	...	...	...	...	6
Toongoo	568	...	...	...	46	...	2	4	3	12	5	...	...	...	...	...	13	...	152	9	...	...	...	...	6
Rangoon Central (Europeans)	13	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	...
Rangoon Central (natives)	2,209	3	1	1	275	16	21	19	8	8	95	11	...	...	10	11	136	1	1,286	...	...	...	...	...	76
Maubio	369	3	...	...	7	...	1	1	...	1	8	8	...	...	...	...	22	...	90	...	...	...	...	...	6
Bassein Central	1,180	23	2	1	51	...	52	12	3	19	75	23	...	...	...	...	66	...	571	...	...	...	...	...	46
Insein Central	1,894	...	1	2	333	16	...	57	14	45	140	24	...	...	1	11	138	...	1,232	...	1	...	...	...	46
Henzady	471	...	...	...	50	...	...	1	2	3	...	15	...	...	...	...	45	...	173	3	...	...	...	...	6
Myanaung	86	...	...	...	5	1	...	...	1	...	6	3	...	...	...	...	19	...	53	...	...	...	...	...	2
Sandoway	71	...	...	...	1	...	...	...	2	3	...	...	...	...	...	...	6	...	31	2	...	...	...	...	2
Kyaukpyu	140	7	1	...	18	...	...	...	2	15	35	...	...	...	...	3	7	...	124	...	...	...	...	...	7
Akyab	288	...	...	...	30	...	2	2	2	43	6	...	...	...	1	6	19	...	216	...	...	...	...	...	8
GROUP I.—BURMA COAST AND BAY ISLANDS.	19,770	716	33	4	5	14,457	239	110	203	155	929	2,432	892	...	19	361	1,886	8	28,506	7	1	2	1	...	876		
Faungdi	96	...	...	...	20	1	...	1	1	6	2	...	...	...	...	1	2	...	40	...	...	...	...	...	2
Prome	301	...	...	...	14	1	...	1	...	16	13	1	...	...	...	...	9	...	108	...	...	...	...	...	6
Thayetmyo Central.	941	1	1	...	79	...	8	18	3	5	36	29	1	...	...	23	107	...	569	...	...	...	...	...	20
Taungdwingyi	77	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	3	...	...	...	...	...	...
Magwe	170	...	...	...	2	...	...	...	...	2	...	...	...	...	...	...	2	...	9	...	...	...	...	...	...
Minbu	90	...	...	...	12	1	...	...	2	5	5	...	...	...	...	1	1	...	46	...	...	...	...	...	2
Yamethin	115	...	...	...	3	...	...	...	1	4	...	...	...	...	...	...	5	...	25	...	...	...	...	...	2
Meiktila	178	...	...	...	10	...	1	3	...	4	8	5	...	...	...	...	7	...	53	...	...	...	...	...	5
Pagan	80	...	...	...	4	...	...	...	...	3	1	...	...	...	...	...	3	...	17	...	...	...	...	...	1
Pakokku	68	...	...	...	1	...	1	...	1	4	...	...	...	...	...	...	...	...	17	...	...	...	...	...	2
Myingyan Central.	904	1	1	...	83	11	...	9	6	20	30	20	...	...	...	9	13	...	261	...	...	...	...	...	17
Mandalay Central.	861	...	...	...	279	...	12	9	41	102	51	...	...	...	...	1	5	...	561	...	...	...	...	...	31
Moonya	91	...	...	...	2	1	2	...	1	10	...	...	...	...	...	1	8	...	50	...	...	...	...	...	3
Shwebo	156	...	...	...	26	4	2	4	3	3	3	9	...	...	...	...	13	...	85	...	...	...	...	...	5
Bhamo	77	...	...	...	27	2	...	2	3	3	56	16	...	...	...	1	13	...	141	1	...	...	...	...	5
Katha	81	...	...	...	2	...	...	1	7	3	12	...	...	...	...	...	5	...	62	...	...	...	...	...	2
Kindat	40	...	...	...	5	...	...	...	1	1	...	...	...	...	...	...	1	...	9	...	...	...	...	...	...
GROUP II.—BURMA INLAND.	4,326	2	4	2	588	14	17	48	29	90	289	163	2	...	...	37	196	...	2,056	1	...	...	...	...	104

JAILS.	Average annual strength.	1. ADMISSIONS.														2. DEATHS.						Average number constantly sick.		
		Influenza.	Cholera.	Small-pox, Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhœa.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Stough, and Gangrene.	All Causes.	Tania.	Ascaris lumbricoides.		Dracunculus Medicinis.	Strongylus dio-denalis.	Other Entozoa.
Cachar	65	1	1	4	1	2	2	...	14	1
Sibsagar	70	...	...	...	30	...	1	1	1	1	10	2	...	...	3	3	...	59	...	...	...	...	2
Dibrugarh	103	...	...	...	15	1	...	2	1	2	24	7	...	...	2	8	...	79	...	...	...	...	3
Tezpur	236	13	...	...	62	1	...	2	4	8	41	12	...	...	...	10	...	172	...	...	...	...	8
Nowgong	45	2	1	...	20	3	...	...	1	2	8	...	...	...	7	9	...	80	1	...	7	...	3
Gauhati	238	38	2	3	5	54	8	2	2	...	138	1	...	9
Dhabri	22	...	...	...	7	...	...	...	...	3	11	...	...	...	1	1	...	30	...	...	...	...	1
Sylhet	498	...	...	...	169	3	...	1	3	11	79	20	...	...	37	5	...	388	...	...	...	...	20
GROUP III.—ASSAM.	1,277	15	1	...	351	8	1	6	13	30	223	61	...	...	54	40	...	969	1	...	8	...	47
Mymensingh	522	19	3	...	68	...	...	6	11	14	115	79	...	7	15	21	...	488	...	...	...	...	20
Dacca Central	1,140	...	1	...	225	24	81	6	31	27	673	95	...	...	21	64	...	1,572	...	...	...	...	56
Tippera	290	40	1	...	4	...	81	4	3	12	84	23	...	8	4	7	...	332	...	...	...	...	9
Chittagong	178	...	...	...	142	...	...	4	4	5	212	45	1	...	7	13	4	483	...	...	...	...	24
Noakhali	120	12	...	...	37	1	...	...	1	59	3	...	...	...	...	2	...	137	...	...	...	...	3
Backergunge	493	...	...	...	109	2	...	2	4	23	321	64	...	...	10	9	...	581	...	...	...	...	41
Khulna	35	...	...	...	17	...	...	...	...	1	10	5	...	...	...	1	...	45	...	...	...	...	1
Jessore	344	...	...	...	58	7	9	...	2	14	289	7	...	...	2	6	...	426	...	...	...	...	14
Baraset	79	...	...	...	47	2	...	1	...	3	93	11	...	...	...	2	...	182	...	...	...	...	4
Presidency, Central (Europeans)	40	...	1	1	14	...	...	...	...	8	6	...	...	...	3	...	...	54	1	...	...	...	2
Presidency, Central (natives)	1,234	...	1	...	224	...	...	20	11	30	314	37	...	...	1	18	...	910	2	...	...	...	39
Alipore Central	1,821	35	8	...	103	3	1,437	29	17	40	493	103	...	12	1	6	56	3,031	...	...	...	...	78
Hooghly	375	7	10	...	228	1	...	6	14	24	312	221	...	...	6	8	...	908	...	...	...	...	23
Burdwan	218	...	...	...	79	1	4	...	3	14	106	46	...	...	9	27	...	342	...	...	...	...	12
Krishnagar	205	...	...	...	44	...	...	3	...	1	44	1	...	...	5	2	...	111	...	...	...	...	5
Faridpur	359	...	...	...	129	1	...	5	11	18	312	34	...	...	3	17	...	591	...	...	...	...	24
Pabna	204	6	5	...	93	2	...	1	6	49	14	...	...	...	3	6	...	224	...	...	...	...	10
Murshidabad	235	...	1	...	54	14	...	2	1	11	69	8	...	...	10	2	...	202	2	2	...	2	10
Rajshahi Central	722	479	4	...	227	...	...	3	9	6	26	115	20	...	2	15	...	1,153	...	...	...	...	27
Pogra	141	...	1	...	29	2	...	6	...	...	34	4	...	...	...	...	...	87	...	...	...	...	3
Malda	101	...	...	...	51	...	17	...	2	3	9	8	...	...	3	4	...	168	...	...	...	...	3
Dinajpur	205	...	3	...	125	2	...	1	...	14	43	11	...	...	1	4	...	237	...	...	...	...	6

TABLE XLIII—continued.

ACTUALS of JAILS, GROUPS, and ADMINISTRATIONS on which the ratios in Tables XL—XLII have been calculated.

JAILS.	Average annual strength.	1. ADMISSIONS.										2. DEATHS.										Average number constantly sick				
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anaemia and Debility.	Abscess, Ulcer, and Boil.	Phagedaena, Sore, and Gangrene.	ALL CAUSES.	Typhoid.		Ascariis lumbricoides.	Dracunculias Medinensis.	Strongylus duodenalis.	Other Entozoa.
Rangpur	242	...	...	...	101	...	...	4	1	3	91	63	...	...	18	12	...	...	394	...	...	...	...	...	15
Jalpaiguri	89	...	...	...	61	3	...	...	1	3	14	19	...	...	3	2	...	...	125	...	...	...	...	...	5
Purneah	164	...	...	...	78	...	2	1	...	4	15	12	...	...	2	7	...	...	136	...	...	...	...	...	4
Naya Dumka	98	...	...	...	22	2	...	1	...	6	2	1	...	...	2	1	...	...	44	...	...	...	...	...	2
Suri	272	...	1	...	37	...	5	3	16	11	73	3	...	...	1	...	...	...	175	...	...	...	...	...	10
Bankura	245	...	...	...	72	...	17	1	14	44	37	...	...	...	7	15	...	...	281	...	...	...	...	...	11
Midnapore Central	1,002	...	...	...	240	...	12	38	38	164	75	1	...	...	1	6	1	...	656	...	...	...	...	...	22
Balasure	107	...	...	...	18	1	2	...	1	14	9	...	...	...	...	5	...	...	85	...	...	...	...	...	2
Cuttack	297	...	1	...	110	...	5	1	6	40	56	...	...	6	2	52	...	...	330	...	...	...	...	...	10
Puri	112	...	...	...	4	...	...	1	...	4	...	...	...	...	...	1	...	...	22	...	...	...	...	...	1
Angul	95	...	...	...	10	...	...	...	1	18	12	1	...	1	2	10	1	...	75	...	...	...	...	...	5
GROUP IV.— BENGAL AND ORISSA.	11,791	563	36	1	2,860	67	1,642	140	180	367	4,256	1,133	4	21	24	150	389	3	14,527	5	2	...	...	...	501
A.																										
Chaibassa	217	...	2	...	95	...	...	...	2	4	200	17	2	...	3	9	...	...	408	1	...	...	...	...	12
Perulia	194	...	...	1	41	...	...	...	2	29	9	6	...	...	...	...	...	...	98	...	...	...	...	...	3
Ranchi	359	...	3	1	52	...	23	4	32	12	23	10	...	3	1	1	4	...	236	1	...	...	...	...	8
Palamau	146	...	39	...	36	...	...	...	3	...	73	63	...	...	1	3	...	...	240	...	...	...	...	...	8
Hazaribagh Central	1,070	...	2	...	190	23	125	15	33	26	241	105	...	...	2	50	...	...	963	11	1	...	...	...	34
B.																										
Gaya	488	...	...	...	175	...	1	...	6	6	111	61	...	...	1	10	...	...	454	...	...	...	...	...	10
Bhagalpur Central	1,225	...	6	...	110	...	10	22	56	300	85	...	...	...	...	24	...	...	929	2	...	1	...	...	44
Monghyr	266	...	1	...	94	...	3	...	3	80	54	...	...	...	3	7	...	...	314	3	...	...	...	...	9
Darbhanga	367	...	...	...	83	...	4	1	8	121	69	...	...	1	27	22	...	...	459	4	...	1	...	...	20
Champaran	374	...	19	...	91	3	20	1	9	16	48	71	...	...	16	7	...	...	390	...	1	...	...	...	14
Muzaffarpur	387	...	2	12	...	55	5	14	7	1	4	71	40	...	6	5	...	...	315	1	17	...	3	...	15
Patna	353	...	1	...	87	...	...	...	1	20	40	77	...	...	1	19	...	...	347	...	...	...	...	...	14
Arrah	215	...	...	...	31	2	2	...	...	10	24	8	...	...	3	6	...	...	127	...	...	...	...	...	4
Chupra	306	...	20	...	97	...	3	5	14	90	51	...	...	...	2	22	...	...	391	3	6	...	5	...	14
Buxar Central	1,266	...	...	...	1,037	...	233	17	9	85	187	121	...	...	1	27	114	...	2,310	8	6	...	...	...	72
Korntadih	38	...	...	...	11	...	...	...	...	2	...	3	...	...	2	2	...	...	33	...	...	...	...	...	1
Ghaziपुर	569	...	1	...	57	61	...	3	11	13	13	...	...	...	8	55	...	...	355	...	...	...	...	...	15
Azangarh	349	...	...	...	60	...	8	7	27	25	28	...	...	...	18	45	...	...	395	...	...	...	...	...	18
Kasia	45	...	...	...	12	2	...	1	...	7	1	...	...	...	2	2	...	...	52	...	1	...	...	...	3
Gorakhpur	533	...	...	...	80	...	6	5	19	21	21	...	...	...	24	45	...	...	402	3	...	...	...	...	22
Basti	379	...	2	...	49	...	4	...	4	26	2	...	...	...	5	13	...	...	142	...	...	...	...	...	5
Fyzabad	624	...	13	...	148	1	2	18	26	64	33	...	...	...	63	91	...	...	773	3	9	...	...	...	34
Sultanpur	417	...	1	...	94	...	7	9	16	16	16	...	...	...	15	14	...	...	245	...	1	...	...	...	11

JAILS.	Average annual strength.	1. ADMISSIONS.														2. DEATHS.										Average number constantly sick.
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anaemia and Debility.	Abscess, Ulcer, and Boil.	Phagedaena, Stomach, and Gangrene.	ALL CAUSES.	Tania.	Ascaris lumbricoides.	Dracunculus Medicinis.	Strongylus duodenalis.	Other Entozoa.	
Rai Bareilly	754	...	...	...	129	...	...	5	...	11	1	4	...	...	2	100	...	...	429	11	5	...	...	...	28
Partabgarh	285	...	...	...	28	...	...	3	5	3	6	4	...	3	10	25	...	...	136	8	...	...	...	...	5
Jaunpur	336	...	4	...	57	...	...	5	7	9	10	...	...	...	4	69	...	...	223	13	...	...	...	...	9
Benares Central	2,186	28	1	...	453	...	...	35	8	37	85	124	...	...	27	194	...	...	1,438	43	2	2	...	1	73
" District	471	...	...	...	131	4	...	10	3	12	45	14	...	...	11	71	...	...	401	16	2	2	...	...	19
Mirzapur	225	...	4	1	50	1	1	...	5	15	15	9	...	1	1	32	...	...	210	9	1	...	...	...	9
Allahabad Central	2,100	...	1	...	152	...	...	16	7	37	46	24	...	...	31	213	...	...	816	34	2	...	...	...	66
" District	732	7	...	...	209	1	...	9	10	35	51	81	...	...	43	163	...	...	945	22	2	3	...	...	28
Karwi	32	...	...	...	7	...	...	1	...	2	3	1	...	...	1	2	...	...	17	1	...	...	...	...	1
Banda	291	1	1	...	201	...	...	16	12	27	28	...	...	...	6	47	...	...	445	14	1	...	...	...	17
Fatehpur	327	...	...	...	195	1	...	8	3	29	14	...	...	...	3	58	...	...	478	18	...	...	...	...	16
Hamirpur	192	...	...	...	104	1	...	6	5	4	5	1	...	...	3	31	...	...	240	4	...	...	...	...	8
Orai	184	2	...	...	94	...	...	3	3	4	7	10	...	...	8	18	...	...	213	7	...	...	...	...	9
Cawnpore	360	82	3	...	72	...	2	2	13	6	22	9	...	5	1	56	...	...	412	15	1	...	...	...	19
Unao	310	...	...	...	50	...	1	2	5	7	8	2	...	4	2	18	...	...	145	5	...	...	...	...	7
Lucknow Central	1,786	...	7	...	169	...	...	6	7	19	42	33	...	...	2	171	...	...	685	20	...	1	...	...	40
" District	611	...	...	...	102	...	...	1	5	14	22	10	...	...	2	69	...	...	353	6	...	...	...	...	11
Barabanki	445	...	1	...	10	...	40	...	6	7	10	17	...	...	7	70	...	...	287	4	1	...	...	...	8
Gonda	572	...	3	...	75	9	...	1	14	12	32	5	...	...	18	30	...	...	306	18	...	...	...	...	25
Bahraich	436	...	...	...	108	...	...	3	7	14	32	32	...	...	19	67	...	...	522	8	...	...	...	...	24
Kheri	337	...	...	...	49	3	...	1	6	2	11	10	...	...	4	86	...	...	270	6	...	...	...	...	13
Sitapur	714	25	2	...	35	...	1	2	6	4	29	15	...	...	3	29	...	...	218	2	1	...	...	...	8
Hardoi	425	...	...	...	124	...	9	1	3	3	18	9	...	1	4	42	...	...	303	10	...	...	...	...	11
Etawah	275	...	...	1	109	...	...	2	12	2	23	1	...	1	7	14	...	...	222	3	...	...	...	...	8
Mainpuri	364	9	1	...	145	...	10	2	19	17	28	18	...	16	4	37	...	...	386	13	...	...	...	...	23
Etah	322	...	...	...	175	...	...	9	7	28	28	31	...	...	156	79	...	...	640	11	...	...	...	...	26
Fatehgarh Central	2,182	90	...	3	315	...	...	15	33	95	93	88	...	...	15	156	...	...	1,410	36	4	...	...	...	72
" District	417	4	...	...	88	...	...	4	13	13	38	21	...	...	...	27	...	...	266	10	...	...	...	...	10
GROUP V.— GANGETIC PLAIN AND CHUTTA NAGPUR.	28,344	266	116	17	6,311	116	481	207	405	799	2,565	1,584	3	36	3	624	2,543	...	22,802	61	47	6	10	1	983	
A Shahjahanpur.	317	...	...	...	187	1	19	3	2	28	34	32	...	2	...	8	36	...	449	9	1	1	...	...	11
Bareilly Central	2,318	...	...	...	465	...	...	33	16	36	8	62	...	7	...	127	126	...	1,178	29	...	...	...	1	58
" District	906	272	12	...	785	1	1	36	22	20	170	73	...	1	...	34	...	...	1,590	41	...	...	...	...	44

TABLE XLIII—continued.

ACTUALS of JAILS, GROUPS, and ADMINISTRATIONS on which the ratios in Tables XL—XLII have been calculated.

JAILS.	Average annual strength.	1. ADMISSIONS.										2. DEATHS.										Average number constantly sick.		
		Influenza.	Cholera. Small-pox. Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Cont. used Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhea.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer and Boil.	Phagedæna, Slough, and Gangrene.	ALL CAUSES.	Tetania.	Ascari lumbricoides.	Dracunculus Medicinis.		Strongylus duodenalis.	Other Entozoa.
Budaon . . .	390	...	...	103	1	...	1	10	9	19	3	...	...	3	23	...	243	...	...	...	...	...	...	7
Aligarh . . .	427	18	...	103	1	...	1	4	5	82	33	...	...	1	19	...	446	...	...	1	...	...	13	
Bulandshahr . . .	284	...	1	56	2	5	1	1	7	19	9	...	...	18	18	...	176	...	...	...	...	...	12	
Moradabad . . .	412	...	...	120	12	...	1	10	18	55	4	...	...	17	9	...	325	1	...	...	...	...	21	
Bijnor . . .	311	...	1	67	...	...	2	5	4	26	7	...	...	...	23	...	235	...	...	...	...	...	10	
Dehra Dun . . .	87	...	...	26	...	2	...	...	2	7	...	...	...	4	4	...	60	...	...	...	...	...	5	
Saharanpur . . .	332	6	...	82	1	...	1	17	8	22	8	...	...	1	32	...	218	1	...	...	...	...	11	
Muzaffarnagar . . .	197	6	...	60	...	...	4	1	9	16	13	...	...	4	21	...	191	...	...	...	...	...	9	
Meerut . . .	646	66	...	276	...	28	12	7	5	76	33	...	...	1	27	...	714	1	...	1	...	...	19	
Delhi . . .	615	...	...	661	...	...	5	41	19	60	45	...	...	14	117	...	1,023	1	...	...	...	...	17	
Rohtak . . .	241	...	1	115	1	...	1	8	5	25	5	...	...	4	26	...	244	...	...	12	...	...	7	
Hissar . . .	237	...	1	67	...	...	1	5	10	...	16	...	...	8	22	...	180	...	...	9	...	...	6	
Karnal . . .	142	...	...	54	...	...	1	11	6	23	10	...	...	...	14	...	147	...	...	4	...	...	4	
Umballa . . .	782	...	...	658	...	...	4	21	16	192	113	...	...	1	8	114	1,292	...	...	16	...	...	34	
B																								
Ludhiana . . .	236	...	...	146	13	...	...	1	16	64	17	...	...	1	24	...	317	...	...	...	...	...	...	6
Hoshiarpur . . .	46	...	...	63	...	...	...	...	3	1	4	...	...	1	6	...	106	...	...	...	...	...	...	2
Jullundur . . .	249	...	...	28	4	...	2	...	8	17	2	...	...	...	8	...	101	...	...	...	...	...	...	3
Ferozepore . . .	462	...	...	34	...	...	1	9	2	21	6	...	...	7	8	...	102	...	...	...	...	...	...	3
Amritsar . . .	225	...	...	185	...	...	4	6	5	21	65	...	...	13	28	...	384	...	...	...	...	...	...	11
Lahore Central . . .	1,408	...	1	3	2,208	20	...	23	7	232	167	...	...	9	25	414	3,934	...	...	...	...	...	...	111
„ District . . .	541	...	2	222	...	...	4	7	10	46	24	...	...	1	118	...	543	...	...	1	...	...	...	22
„ Female . . .	178	...	1	95	...	...	2	2	7	17	7	...	...	1	17	...	208	...	...	...	...	...	...	8
Gurdaspur . . .	215	...	...	60	...	...	1	3	4	19	7	...	...	1	4	...	121	...	...	...	...	...	...	3
Gujranwala . . .	364	...	...	118	...	...	...	4	2	20	10	...	...	14	21	...	233	...	...	...	...	...	...	7
Sialkot . . .	401	...	1	76	1	...	3	4	8	15	5	...	...	1	21	...	229	...	...	...	...	...	...	10
Gujrat . . .	136	...	...	5	...	...	...	2	6	5	1	...	...	2	9	...	62	...	...	...	...	...	...	2
Mung Rasul Central . . .	1,863	...	30	412	...	...	13	50	160	129	209	...	...	2	138	421	2,059	...	...	24	...	...	...	92
Jhelum . . .	281	...	...	327	1	...	...	2	4	29	48	...	...	...	39	...	462	...	...	1	...	...	...	6
Rawalpindi . . .	810	...	2	472	...	...	1	4	8	19	63	...	...	10	19	55	1,092	...	...	12	...	...	...	39
GROUP VI.— UPPER SUB-HIMALAYA.	16,139	368	34	10	4	8,406	59	56	167	286	691	1,533	1,109	16	449	1,058	18,664	5	1	81	...	...	...	613

JAILS.	Average annual strength.	1. ADMISSIONS.														2. DEATHS.														Average number constantly sick.
		Influenza.	Cholera. Small-pox. Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever. Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhoea.	Hepatic Abscess.	Spleen Diseases.	Scurvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedæna, Stomach, and Gangrene.	All Causes.	Fæmia.	Ascaris lumbricoides.	Dracunculus Medicinæ.	Strongylus diodesalis.	Other Entozoa.								
Thana	953	...	62 58	5 1	310	44	13	11	33	145	73	...	7	13	39	...	907	...	29	...	...	...	...	39		
Bombay Common	419	...	...	6	95	17	87	7	...	6	48	44	...	8	5	...	498	...	5	...	...	...	...	8
Bombay House of Correction	353	...	1 2	...	24	3	11	4	5	48	8	...	4	7	...	156	13	...	2	...	...	...	...	6		
Ratnagiri	224	...	...	...	8	4	...	...	4	30	2	...	1	...	...	83	10	...	1	...	...	...	...	5
Karwar	316	...	...	2	38	4	1	4	6	35	7	...	1	16	...	158	10	...	1	...	...	...	...	5
Mangalore	150	...	1	...	9	...	5	1	7	1	...	...	2	11	...	71	10	...	...	...	...	...	...	2
Cannanore Central	745	...	...	...	57	3	9	7	6	15	101	18	...	2	11	10	344	...	...	...	...	...	...	16
GROUP X.—WESTERN COAST.	3,160	...	64 40	13 1	541	75	101	26	76	408	152	...	9	40	88	2,217	...	10	38	...	...	...	...	81		
A.																														
Bellary	402	...	...	...	82	8	2	5	6	30	...	...	...	12	...	225	9	...	22	...	...	...	...	11
Salem Central	537	...	2 1	...	31	...	3	...	8	18	...	...	...	12	...	146	9	...	10	...	...	...	...	6
Coimbatore Central	1,156	...	3 1	...	34	41	20	15	71	24	38	...	13	31	...	479	27	...	26	...	...	...	...	24		
B.																														
Palamcottah	416	...	3 3	...	9	1	23	6	7	35	...	...	2	10	...	169	11	...	6	...	...	...	...	8
Madura	403	...	2 1	...	21	14	5	3	7	39	...	...	...	14	...	210	8	...	5	...	...	...	...	9
Trichinopoly Central	1,067	...	...	1	85	131	9	15	74	20	8	...	3	108	...	790	33	...	17	...	...	...	...	27
Tanjore	355	...	...	...	11	7	2	...	...	12	...	...	...	3	...	100	12	3	...	...	...	...	...	5
Cuddalore	379	...	...	...	3	34	2	1	11	28	...	...	...	26	...	216	6	...	7	...	...	...	...	7
Veilore Central	1,317	...	...	...	34	152	9	8	34	32	...	1	4	60	...	576	14	...	21	...	...	...	...	26
Madras Civil	26					
Madras Penitentiary, Central	1,094	...	3 2	1	97	137	22	9	39	18	...	1	...	63	1	760	22	1	5	...	1	...	...	24				
Nellore	233	...	15 10	...	2	1	...	2	3	2	...	...	...	7	...	50	12	1	3	...	...	...	...	2
Guntur	45	...	...	...	2	2	...	...	2	1	...	...	...	2	...	20	1	...	1	...	...	...	...	...	
C.																														
Rajamundry Central	997	...	...	1	232	...	...	6	9	108	119	...	...	12	...	736	13	2	3	18	5	...	...	30
Vizagapatam	569	11	18	17	10	18	29	71	8	...	1	11	2	241	28	21					
Berhampur	146	12	6	2	...	1	9	14	...	79	2	...	1	2					
GROUP XI.—SOUTHERN INDIA.	9,144	...	25 17	5 1	673	1	573	93	91	400	448	44	1	2	33	4,797	207	2	8	142	5	1	...	202						

TABLE XLIII—continued.

ACTUALS of FAILS, GROUPS, and ADMINISTRATIONS on which the ratios in Tables XL—XLII have been calculated.

JAILS.	Average annual strength.	1. ADMISSIONS.											2. DEATHS.											Average number constantly sick.		
		Influenza.	Cholera.	Small-pox.	Enteric Fever.	Intermittent Fever.	Remittent Fever.	Simple Continued Fever.	Tubercle of the lungs.	Pneumonia.	Other Respiratory Diseases.	Dysentery.	Diarrhœa.	Hepatic Abscess.	Spleen Diseases.	Scorvy.	Anæmia and Debility.	Abscess, Ulcer, and Boil.	Phagedœna, Slough, and Gangrene.	ALL CAUSES.	Tænia.	Ascaris lumbricoides.	Dracunculus Medicinalis.		Strongylus dentalis.	Other Entozoa.
Shillong	37	4	...	...	7	...	...	...	...	4	2	10	...	...	...	5	...	...	42	...	...	...	...	...	1
Darjeeling	89	...	...	...	16	...	47	4	...	8	16	18	1	...	...	3	...	...	134	4	...	...	...	...	4
Almora	99	...	...	...	18	...	...	...	2	...	1	2	...	...	...	...	...	...	32	...	...	...	...	...	4
Pauri	14	...	...	...	21	...	...	...	1	...	1	4	...	...	...	...	...	...	37	...	1	...	...	...	1
Simla	23	...	...	...	9	...	...	...	1	...	1	...	...	...	...	1	...	...	20	...	...	...	...	...	1
Dharmasala	76	...	...	...	18	...	...	...	2	3	4	3	...	...	...	15	...	...	56	1	...	...	...	...	2
Abbottabad	98	...	...	...	22	...	...	...	3	5	3	...	1	3	6	...	...	...	65	3	...	...	...	...	3
Quetta	82	...	...	...	24	3	11	...	1	8	9	...	...	2	1	11	...	...	100	2	...	...	...	...	2
Mercara	110	...	...	...	24	3	...	1	6	...	5	8	...	...	1	6	...	...	69	6	2	...	...	...	3
Russellkonda	96	...	11	...	6	...	10	1	1	3	21	...	...	...	...	2	...	...	73	2	...	...	...	...	2
GROUP XII.—HILLS.	724	4	11	...	165	6	68	6	14	30	64	49	1	...	3	7	49	...	628	4	5	1	...	...	23
EXTRA INDIA.—Aden	35	...	...	...	...	...	...	...	...	2	1	...	...	1	...	1	...	...	7	...	...	...	...	...	1
INDIA† (a)	121,811	11	2	...	605	31	25	140	102	206	311	104	...	6	7	138	361	3	3,052	...	1	5	...	...	4,300
		2,059	505	116	34	43,594	730	3,086	1,073	1,775	4,024	14,012	6,059	16	126	130	2,456	9,870	15	118,999	100	78	613	53	5	
		34	278	14	17	114	148	1	481	514	105	827	298	14	5	10	192	10	3,995	...	1	...	14	...	...
		...	2	...	...	2	...	2	6	2	...	1	...	...	...	...	...	...	101	...	...	...	...	...	...
ANDAMANS	11,580	709	...	...	13,519	194	1	100	121	836	1,712	567	...	6	319	1,317	7	23,609	1	...	2	1	...	...	629
BURMA	12,516	7	35	8	7,526	59	126	151	63	183	1,009	488	2	...	13	70	765	1	6,953	7	1	...	...	...	351
ASSAM	1,314	19	1	...	358	8	1	6	13	34	225	71	...	...	...	56	45	...	1,011	...	1	...	8	...	48
BENGAL	19,593	567	169	4	5,150	100	2,106	218	306	668	5,002	1,989	7	26	27	243	694	3	22,651	43	33	...	10	2	786	
N.-W. PROVINCES AND OUDH	31,083	654	17	17	4,781	103	119	277	481	733	1,810	1,165	2	45	2	795	2,940	...	23,744	31	17	19	...	...	1,118
PUNJAB	15,550	...	34	9	4,744	51	4	115	286	705	1,492	1,373	1	19	34	371	2,449	1	19,134	5	1	161	...	...	583
BOMBAY	11,495	32	128	56	1,963	157	97	69	236	263	1,003	512	1	22	39	173	769	2	9,016	6	2	253	...	...	382
BERAR AND SECUNDERABAD	1,927	69	18	1	628	...	14	7	52	50	132	268	1	1	...	63	60	...	1,817	...	...	11	29	...	51
CENTRAL PROVINCES	5,728	2	64	16	2,022	42	10	28	82	104	709	503	2	12	3	262	395	...	5,202	5	1	17	...	...	170
MADRAS	10,135	...	37	5	13,745	4	597	101	99	425	571	62	...	1	4	46	399	1	5,285	2	20	142	5	1	122	
NON-BRITISH JAILS:—																										
Sadra	89	...	4	...	8	...	...	4	6	4	10	11	...	...	3	2	1	...	66	...	...	...	...	...	3
Kolhapur	400	...	4	...	81	1	25	7	44	34	54	34	...	...	77	21	16	...	449	...	...	8	...	...	37
Savantvadi	51	...	...	...	14	...	...	...	...	4	10	...	...	...	...	2	...	...	31	...	...	...	...	...	2

* Remaining + admitted = total treated; Remaining + admitted + died out of hospital = total cases. † Including Ajmer, Quetta, and Mercara.
 (a) Including the subsidiary jails, the total figures are:— Average strength, 129,422; Average constantly sick, 4,448; Number of deaths, 4,435; Number of admissions, 126,399.

GEOGRAPHICAL GROUPS.	1. AVERAGE STRENGTH.						2. CONSTANTLY SICK.						Average for the year.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
GROUP I.—BURMA COAST AND BAY ISLANDS.	19,818	19,735	19,707	19,679	19,739	19,903	19,894	19,877	19,780	19,784	19,686	19,654	19,770
	749	823	790	880	902	1,052	1,051	1,010	898	775	782	724	875
GROUP II.—BURMA INLAND . . .	4,484	4,425	4,352	4,385	4,355	4,312	4,353	4,302	4,247	4,139	4,220	4,204	4,225
	95	88	95	100	99	105	110	121	113	104	83	92	104
GROUP III.—ASSAM	1,166	1,212	1,240	1,280	1,290	1,321	1,379	1,334	1,377	1,293	1,225	1,232	1,277
	30	38	51	44	45	43	45	51	55	50	51	44	47
GROUP IV.—BENGAL AND ORISSA . . .	11,195	11,048	11,247	11,431	11,627	11,869	12,024	12,212	12,285	12,095	12,225	12,152	11,791
	351	373	421	444	410	425	533	652	625	551	620	557	501
GROUP V.—GANGETIC PLAIN AND CHUTIA NAAGPUR.	25,741	27,165	27,537	27,697	27,953	28,274	28,555	29,235	29,734	29,555	29,022	28,573	28,344
	802	848	858	895	938	894	980	1,074	1,157	1,150	1,168	1,028	983
GROUP VI.—UPPER SUB-HIMALAYA . . .	15,691	15,919	16,178	16,298	16,212	16,274	16,544	16,624	16,538	16,250	15,795	15,595	15,139
	512	501	455	511	551	553	649	695	744	835	727	594	513
GROUP VII.—N.-W. FRONTIER, INDUS VALLEY, AND N.-W. RAJPUTANA.	7,599	7,752	7,937	8,024	8,048	8,249	8,535	8,651	8,925	9,052	8,735	8,628	8,359
	168	188	179	185	195	204	249	294	259	284	305	302	255
GROUP VIII.—S.-E. RAJPUTANA, CENTRAL INDIA, AND GUJARAT.	6,054	6,389	6,673	6,810	6,597	6,545	6,765	6,884	6,784	6,411	6,041	5,741	6,471
	179	165	200	244	239	203	292	233	265	308	288	273	223
GROUP IX.—DECCAN	19,731	11,032	11,240	11,692	12,033	12,648	12,170	12,550	12,507	12,071	12,652	11,870	12,251
	212	257	274	288	357	375	419	522	535	575	510	453	401
GROUP X.—WESTERN COAST	2,594	2,575	2,754	2,913	3,047	3,299	3,455	3,284	3,425	3,471	3,452	3,291	3,159
	89	95	69	65	68	68	88	93	93	94	89	78	81
GROUP XI.—SOUTHERN INDIA	8,419	8,451	8,265	8,180	8,501	8,630	8,912	9,577	9,895	10,064	10,142	10,211	9,144
	145	147	158	158	195	220	243	231	229	232	243	233	202
GROUP XII.—HILLS	295	295	659	715	760	765	770	787	785	765	739	724	724
	22	23	27	20	23	24	29	28	25	20	21	15	23
INDIA*	115,121	115,424	118,027	119,245	120,254	122,212	124,262	125,577	127,203	125,949	123,902	121,859	121,811
	3,357	3,548	3,599	3,845	4,114	4,175	4,599	5,014	4,970	4,990	4,818	4,415	4,300

ADMINISTRATIONS.	1. AVERAGE STRENGTH.						2. CONSTANTLY SICK.						Average for the year.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ANDAMANS	11,415	11,405	11,464	11,474	11,480	11,545	11,608	11,629	11,651	11,722	11,750	11,797	11,589
	528	572	553	644	725	799	764	757	630	535	538	488	629
BURMA	12,287	12,757	12,665	12,591	12,625	12,710	12,649	12,550	12,375	12,201	12,145	12,121	12,515
	317	335	323	335	365	358	327	353	341	343	327	318	251
ASSAM	1,201	1,245	1,253	1,228	1,235	1,265	1,418	1,369	1,350	1,227	1,255	1,265	1,214
	30	38	51	45	46	45	50	53	55	52	52	44	48
BENGAL	18,354	18,812	19,152	19,442	19,597	19,653	19,852	20,078	20,129	19,855	19,932	19,982	19,592
	551	602	679	749	714	797	817	1,009	975	859	863	818	786
N.-W. P. AND OUDH	29,605	29,857	29,250	29,268	29,517	29,632	29,250	29,172	29,715	29,474	29,622	29,960	31,082
	920	951	975	998	1,052	990	1,047	1,165	1,298	1,402	1,250	1,205	1,118
PUNJAB	14,589	14,997	15,272	15,440	15,419	15,545	15,882	16,105	16,160	16,120	15,574	15,451	15,559
	452	439	407	451	504	531	648	698	693	775	726	651	583
BOMBAY	19,437	19,577	19,800	19,218	19,498	19,644	19,150	19,295	19,218	19,112	19,587	19,622	19,495
	230	270	231	248	289	285	310	358	407	495	399	382	322
BIHAR AND SOUNDERABAD	1,645	1,605	1,892	1,895	1,925	1,992	2,020	1,958	1,995	1,912	1,941	1,829	1,927
	24	25	47	40	37	43	53	62	73	100	80	25	51
CENTRAL PROVINCES	4,499	4,785	5,040	5,265	5,457	5,859	6,254	6,656	6,645	6,142	6,074	5,682	5,728
	95	108	119	118	144	151	175	230	225	228	191	155	170
MADRAS	9,242	9,279	9,208	9,272	9,408	9,704	10,076	10,708	10,697	11,075	11,197	11,225	10,135
	165	158	188	188	215	225	259	251	245	257	254	253	222
INDIA†	115,121	115,424	118,027	119,245	120,254	122,212	124,262	125,577	127,203	125,949	123,902	121,859	121,811
	3,357	3,548	3,599	3,845	4,114	4,175	4,599	5,014	4,970	4,990	4,818	4,415	4,300

* Including Aden.

† Including Ajmer, Quetta, and Mercara.

TABLE XLIV.

ABSTRACT of the SANITARY SHEETS of the most UNHEALTHY JAILS. SANITARY DEFECTS, IMPROVEMENTS, SUGGESTIONS, etc.

The ratios of sickness and mortality will be found in Table XLII.

ANDAMANS.

Port Blair.*—Fever caused more than half of the total number of admissions, but the rate was less than in 1899. The increase in the admissions from malarial fever commenced with the rains, when strong south-west winds also prevailed, and declined with the diminution of rain. A large percentage were secondary attacks, due to exposure to the weather and hard work under a tropical sun. Quinine and cinchonidine were issued during the rains. An epidemic of influenza broke out twice during the year. Chronic dysentery is the chief cause of anemia. Some cases of acute diarrhoea were due to drinking unboiled unfiltered water obtained at the roadside.

BURMA.

Shwebo.—The surface drains are not properly levelled, hence hard labour is used to assist in flushing them. The well water is unusable on account of the presence of saline matters in it. Drinking water is obtained daily from the civil hospital well. This water was pronounced unfit for drinking purposes by the Chemical Examiner in October 1900, since which time the water is boiled before use. The well was afterwards cleaned and disinfected and a sample of water, which was then sent for re-examination on December 1900, was passed as of fair quality. The general health of the prisoners has been bad during the year on account of transfers received in bad or poor health from Katha and Bhamo, and the general unhealthiness of the year produced by the excessive rainfall.

Bhamo.—Overcrowding lasted only for a few days in January. The water-supply was uniformly good; but since November 1900 free ammonia was noticed to be present in the water in excessive quantity,—0·24 part per million—, probably due to extrinsic causes. A fresh sample has been sent for analysis. The sickness and mortality were due to indifferent or bad health of the prisoners before admission to jail, from previous attacks of malarial fever, and from privations in food and clothing.

ASSAM.

Nowgong.—The many who had previously suffered from malarial attacks were susceptible to climatic influences, exposure at work, chills, etc. Influenza was due to infection. Bowel complaints were, in some instances, owing to intestinal parasites which are extensively prevalent in this place, and, in others, to constitutional weakness and predisposition. Anchylostomiasis was due to infection before admission to jail. English vegetables from the jail garden were desiccated and stored for issue during the rains, when these are not procurable. Daily administration of quinine, iron, and dilute sulphuric acid to every prisoner was begun on the 1st August, and ended on the 30th November.

BENGAL.

Mymensing.—The sickness and mortality were due to the overcrowding which lasted throughout the year, and to the large number of temporary buildings that were indispensably required within the jail enclosures, as well as to the unusually damp and dirty nature of these buildings. The surroundings of the jail are also marshy, especially towards the south-east. The introduction of the filter-water which was laid on both for drinking and bathing purposes since April last, had a marked effect on "fever" cases. The dual supply which, existed previously, is not allowed now. Animal food was issued to the general body of prisoners in October and November, to the special gang twice a week, and to the convalescents three times a week, throughout the year. Prophylactics were issued all the year round, but could not counteract the effects of overcrowding. Three work-sheds, used in the day, were occupied also during the night, throughout the year. There are too many *kacha* buildings within the jail enclosure. Unless overcrowding be removed, the sickness and mortality will remain high.

Dacca Central.—Overcrowding lasted during the whole year, in all the wards, except the female, the under-trial, and the hospital wards. Workshops and temporary sheds were used at night. Ventilation of the ground floors, particularly of the old barrack, is defective. The site is low-lying, and its proximity to the town interferes with good drainage. Sanitary defects in the surroundings are too numerous to mention. Although cholera was excessively prevalent in the town and district, only one case occurred in the jail. The district and its neighbourhood, which populate the jail, are low-lying, swampy, and malarious, inhabited by a population of low vitality and poor physique, so that more sickness and mortality must be anticipated than would be likely to occur in more favoured localities and with a more robust population. Dysentery—the principal cause of sickness—, was unusually prevalent. The people, admitted into the jail, have been an exceptionally sickly lot, and the population is not now such as is found in an ordinary central jail, being made up, as it is, of sickly prisoners received from other districts to relieve overcrowding, as well as of district admissions. The increase in chest affections in the jail may have partly resulted from the overcrowding. The chief improvement has been the remeasurement of the jail early in the year. It was found that the capacity had been overestimated. The reduction of the population to the proper capacity as fixed by the new measurement, could not be carried out; but further transfers from other jails have been discontinued for some months. Prophylactics have been used in the jail for some years, and the figures tend to show that the issue of quinine exercises a marked influence in reducing admissions from fever.

Chittagong.—There was crowding in Ward No. XI, the under-trial ward, during November. Certain wards and cells are not well ventilated. The water is good, but the method of supply is very cumbersome, wasteful of time and labour, and affording opportunities for contamination. Bowel complaints were the chief source of disease, due to indifferent food, bad cooking, and want of method. Much of the sickness was owing to the above defects. The rice was poor in quality, badly stored, weevil-eaten, and brought far too soon into use after purchase. As the jail garden was a failure, there was a want of variety in the food, and a scarcity of antiscorbutics. In most part of the year, milk was very scarce or not available for the sick and infirm.

Backergunge (Barisal).—No overcrowding in the sleeping wards: the excess number was accommodated in the workshops to avoid overcrowding. The drainage is not quite satisfactory. The water-supply is obtained from the tanks and is very bad: this is the cause of most of the sickness and mortality. A scheme for bringing water from the middle of the river in a boat, and pumping it directly into the jail filter has been submitted. The sickness and mortality were mainly due, directly or indirectly, to the prevalence of dysentery, which was caused by the bad water-supply.

Hooghly.—The ventilation in the wards is defective. The main drain on the north-west is in a very bad condition. This is to be improved and made *rukka* in the spring, the jail and municipality sharing the cost. The surroundings of the jail are not satisfactory, owing to a main drain of the town flowing through the jail grounds, and to the presence of a small, insanitary, and crowded *busti* on the north-west. The sickness and mortality were due to climatic causes, and to the consequent bad state of health of the prisoners at the time of their admission to jail. Another cause is that this jail being too large for the requirements of the district, large batches of prisoners from other jails are transferred to it, and these prisoners certainly do not do well here.

Burdwan.—Ventilation is defective in the wards. The surroundings of the jail are unsatisfactory, especially on the north and north-west outside the enclosure, where the ground remains water-logged for months in the year. The district and town have been unhealthy this year, and especially so since the September flood, which was followed by severe outbreaks of fever and dysentery everywhere. The sickness was chiefly due to climatic and telluric conditions.

Faridpur.—There was overcrowding for a few days. The district being low-lying and damp, a large number of prisoners admitted into the jail, were either in bad or in indifferent health. Fever and dysentery prevailed very badly in the interior, and prisoners came predisposed to them.

Pabna.—There was overcrowding for half the year. Malarial fever was prevalent, due to the district being a malarious one, in consequence of insufficient drainage and the silting up of the Itchamutty river. The men who suffered from dysentery had, prior to admission to jail had attacks of dysentery and fever. Pneumonia was caused by exposure to cold after heat. Cholera, which was raging in the town in April, broke out also in the jail, owing to the river from which water used to be supplied to the jail, having got contaminated.

Murshidabad.—There was, as usual, overcrowding at times in the under-trial ward, but this was relieved by the transfer of the excess number to a convict ward. There is no direct means of water-supply inside the jail. Half the total number of deaths were from chest diseases, at first contracted outside and afterwards aggravated by confinement. The case of cholera had nothing to do with the state of the jail.

Dinajpur.—The workshop, used during the day, was occupied also at night for over three months; but only to the extent of about one-half the number its capacity allowed. Water was boiled before use, but towards the end of the year boiling was replaced by the use of a Pasteur filter. Malarial fever and dysentery were owing to the malarious climate of the country.

* A convict settlement, not a jail.

TABLE XLIV—*continued.*

ABSTRACT of the SANITARY SHEETS of the most UNHEALTHY JAILS. SANITARY DEFECTS, IMPROVEMENTS, SUGGESTIONS, etc.

The ratios of sickness and mortality will be found in Table XLII.

Rangpur.—Overcrowding lasted for a few days, due to large admissions from sub-jails. It was relieved by immediate transfer of prisoners to other jails. Drinking water was filtered and boiled before use. The surroundings of the jail are more or less jungly. As the climate of this district is extremely malarious, almost all the inhabitants suffer from the sequelæ of malarial fever, and are predisposed to the attacks of dysentery and diarrhœa. During the latter third of the year, malarial fever raged throughout the district. A large percentage of the prisoners were admitted to the jail in bad or indifferent health.

Jalpaiguri.—The civil wards remained overcrowded only for a few days in August, but the *hajut* ward throughout the year. The excess prisoners had to be put in one of the dormitories. The ventilation of the female ward is bad, the yard being always damp and chilly. The sickness has been chiefly due to malarial infection prior to admission. The majority of the prisoners are of poor physique, and the percentage of enlargement of the spleen among them is very high. Pasteur filter water is at present in use. The well was disinfected monthly with potassium permanganate.

Bankura.—The under-trial ward was overcrowded, and the excess number accommodated in one of the convict wards set apart for the purpose. The drain on the west of the jail is defective, and one on the south side is required. The drinking water is, as usual, obtained from the river when the wells in the jail dry up in the hottest months of the year, and water for other purposes was obtained from a public tank in front of the jail.

Angul.—Overcrowding lasted for about seven months. A small part of the workshed and half of the verandah had to be used for its relief. The sickness and mortality were due to the admission of a number of prisoners in a very bad state of health. A boiler for the drinking water has been fitted up.

Chaibassa.—There was overcrowding throughout the year in all the wards, especially in the female ward. A temporary ward and a workshed had to be erected to accommodate the excess prisoners. The health of the jail was bad, as a large percentage of prisoners were admitted in indifferent or bad health, owing, in a great measure, to the scarcity prevailing in the district. The excessive overcrowding was, no doubt, the cause of a large number of admissions for dysentery. In a few cases the disease may have been self-acquired, as by eating the raw food stuff when husking *dāl* and rice. Mumps was also prevalent, brought into the jail by convicts from Bandgaon, where the disease was very common. Most of the prisoners from this place suffered in the jail, for some time, from malarial fever also. Pasteur filter water is at present in use.

Ranchi.—There was overcrowding during the whole year. Pneumonia became epidemic, owing apparently to the overcrowding; for the disease began to disappear when the excess prisoners were located in tents. Mumps and chicken-pox were introduced from the town, where these diseases were prevalent at the time. Malarial fever was due to admissions from malarious tracts in the district; dysentery to exposure and chill, when, on account of the excessive overcrowding, the prisoners were accommodated in tents.

Palamau.—There was overcrowding in all the wards for nearly ten months: therefore the verandah, where the oil-mills are fixed, had to be occupied at night. Cholera, dysentery, fever, and diarrhœa, which were prevalent outside, were common in the jail also. The largest number of deaths was due to cholera, introduced by new prisoners from the infected area. During this time diarrhœa occurred in the jail almost in an epidemic form. During the rains seasonal fever occurred to a great extent. Scarcity and insufficient food were the chief predisposing causes of the prevailing diseases.

Darbhanga.—The capacity of the jail was remeasured and reduced from 402 to 355. The female ward and the segregation ward were overcrowded. The outside drainage is defective. A considerable improvement was made in the diet by drying and storing vegetables in the cold weather for use during the hot weather and rains. The sickness and mortality were largely due to causes outside, and to the fact that a large proportion of admissions to jail was of old, worn-out, and broken down men. A severe epidemic of cholera and a mild one of small-pox broke out in the district and town; and there also occurred plague cases amongst the district population. But, fortunately, none of these diseases occurred among the prisoners, a fact which, in the case of cholera, is attributable to the water-supply being good and under control. Quinine was issued as a prophylactic from 1st July to 27th September.

Motihari.—Overcrowding lasted over all the wards about the whole year, and was relieved by using workshops, verandahs, and tents. The year was a very unhealthy one; and the general health of the prisoners was invariably very poor on admission to jail. A very severe epidemic of cholera prevailed throughout the district, which gave rise to an outbreak of the disease in the jail also.

Chupra.—There was overcrowding throughout the year. The buildings are old with low plinths, so that the prisoners have to sleep very close to the ground. The jail enclosure is surrounded on three sides by the bazaar. The country round becomes water-logged during the rains, and thus tends to the development of malarial fever. As the year has been a very unhealthy one, most of the sickness and mortality might be due to the prisoners having been admitted in indifferent health. Cholera appeared in the jail in July, and was probably introduced by a prisoner working outside. The system of water-supply is very complicated; and in spite of every care, there is no doubt that the water becomes contaminated at some point. Plague has raged with varying severity in the town, and, even close round the jail, was, almost throughout the year, causing a large number of attacks and deaths.

Darjeeling.—The under-trial ward was overcrowded for some months, and the excess number had to be accommodated in the convict wards. The hill-men are generally very dirty, and it is very difficult to keep them clean. The sickness was due to climatic causes, and to the bad or indifferent health of a large number of prisoners before admission to jail. The municipal water-supply is insufficient and intermittent. A shed for segregating cholera and small-pox patients is badly wanted.

NORTH-WESTERN PROVINCES AND OUDH.

Azamgarh.—There was slight overcrowding in the female ward for nearly eight months. Malarial poisoning was the cause of ague and probably, to a large extent, also of anæmia. Pneumonia and bronchitis were probably due to changes of temperature. Diarrhœa and dysentery may have been caused by unsuitable diet in the case of prisoners subject to these affections. Previous attacks of malarial fever and changes of temperature were the predisposing causes of these diseases. The contagion of mumps which was present in the jail in 1899, remained for a part of 1900 also. Ringworm had invariably been contracted outside before admission to jail. Debility was chiefly due to old age and malarial poisoning. Abscess, ulcer, and boil were usually due to local infections. One cholera-germ destructor for burning the stools of dysentery patients has been purchased.

Kasia.—Overcrowding lasted almost throughout the year. The sickness and mortality were due to the bad state of health of the prisoners when admitted to jail. The diseases in the cases that died in the jail hospital, had actually been contracted by the men outside before admission. There is no separate hospital accommodation in the jail, as a consequence of which the diarrhœa and dysentery patients have to be confined in the same barrack with healthy prisoners.

Benares District.—There was overcrowding for only three days. Malarial fever and dysentery were probably climatic.

Mirzapur.—Overcrowding lasted only for a few days. The capacity of the jail has been recalculated and reduced from 352 to 200. The sickness was due to the site of the jail being bad and the surroundings insanitary. The malarial fever was most probably owing to the prisoners admitted to jail with the disease. A Larymore boiler has been erected, and the drinking water is now boiled before use.

Allahabad District.—There was overcrowding for nearly a month and-a-half; and a factory and some tents had to be temporarily used for sleeping accommodation. The sickness among the prisoners has been greater than in the preceding year. This was undoubtedly due to the exceedingly feeble health of the prisoners before admission, owing to severe scarcity, and consequently to insufficient food. Dysentery and diarrhœa were mostly owing to bad or under feeding outside; malarial fever to the unusual dampness of the season, particularly towards the end of the rains; anæmia and debility, in most cases, to the bad state of health of the prisoners when admitted. Abscess and boil were probably contracted outside, as the population at large suffered in general at the time from these diseases, owing to the excessive heat of the weather. Phthisis is attributable to the exceedingly bad state of health of the prisoners, most of whom were admitted with the disease. Cerebro-spinal fever became epidemic in December, having originated in the jail: the prompt segregation of the patients stopped the spread of the epidemic. The presence of a large village near the jail, is a source of danger at the time of the prevalence of epidemics.

Banda.—There was overcrowding in August, September, and October. The drainage within the jail walls is not good. The drinking water is boiled before use. Malarial fever is attributable to the usual causes. No particular cause can be given for diarrhœa, dysentery, and pneumonia. Heat-stroke, sun-stroke, and heat-apoplexy were due to strong westerly winds, having occurred chiefly in the buildings which were exposed on the west side. This danger has now been obviated by partially closing the openings, and by the use of screens to keep off the wind.

Fatehpur.—The 'non-habitual' site is overcrowded. Steps will be taken to remedy this defect, by removing the central parts of the two

TABLE XLIV—continued.

ABSTRACT of the SANITARY SHEETS of the most UNHEALTHY JAILS. SANITARY DEFECTS, IMPROVEMENTS, SUGGESTIONS, etc.

The ratios of sickness and mortality will be found in Table XLII.

blocks, and by providing iron gratings at the ends of the buildings. The construction of a large drain outside the jail to improve the surface drainage has been sanctioned. The estimates for improved ventilation and water-supply are under consideration. The sickness and mortality were possibly due to the overcrowding above referred to, and to the bad water-supply. The Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, made the following remarks at his inspection:—"The general sanitary condition of the jail is unsatisfactory. There is no provision against the pollution and contamination of the water-supply which is drawn from a polluted sub-soil, saturated with the filth of the latrines. These latrines, by reason of their very close proximity to the well cylinder and to the mill-house, are quite a danger to the general health of the jail." The increased mortality was especially due to the outbreak of cerebro-spinal fever, to which although no definite cause can be assigned, still the very unhealthy nature of the too old structure of the jail premises (constructed in 1829) may have contributed. The seven drinking water cisterns have been very well conserved and provided with brass taps; another cistern and a small bathing platform were constructed in the factory outside the jail; the floors of all the barracks and factories were dug up and replaced with fresh earth; all the plaster and the mud-work were scraped off the walls and roofs of the jail buildings, and then the walls and the roofs were thoroughly disinfected and lime-washed; and the hospital was provided with *pucca* flooring. The sinking of a large well in the central enclosure away from the latrines, and the provision of a suitable pumping apparatus, are recommended.

Orai.—There was slight overcrowding in May, June, July, August, and October. Almost all the barracks for the male prisoners, as well as the *hawalat* ward were overcrowded to a certain extent for five months. Of the seven total deaths, the first three were purely accidental; another was due to phthisis, having occurred in a person admitted with the disease; and the last three were owing to malarial fever and its sequelæ, nearly the whole of the district being malarious.

Cawnpore.—Overcrowding lasted for nearly four months. Tents had to be used for the accommodation of the surplus population. The sickness and mortality in the jail were due to outside causes. Malarial fever was prevalent owing to the decidedly unhealthy condition of the city, consequent upon very bad drainage and poor conservancy. Influenza was rife everywhere, and all kinds of grain were very dear. The water-reservoirs were roofed and provided with taps to prevent contamination of the water-supply.

Gonda.—There was crowding in the 'habitual' barracks in February, and in the 'non-habitual' barracks in March and August. A considerable proportion of the prisoners were admitted to jail in indifferent or bad health. The sickness and mortality cannot be attributed to any unfavourable influences in the jail. Pneumonia was, no doubt, due to chill. The Burwar prisoners, who were generally admitted in bad or indifferent health in consequence of their careless mode of life, were liable to bowel affections from very slight causes. The water-cisterns in the barrack yards have been properly roofed and provided with taps; and a closed tank with taps has been added to the Larmore boiler in the hospital enclosure. There was insufficiency of vegetable-supply during the hot weather.

Mainpuri.—There was overcrowding in nine barracks during May, June, July, September, and December. The sickness and mortality in the jail were, almost in all cases, due to the bad or indifferent state of health of the prisoners prior to admission.

Etah.—Overcrowding lasted almost throughout the year in the barrack for the female prisoners, as well as in four other barracks. The excess prisoners had to sleep in the factory for over two months. The surrounding drainage outside the jail is defective. The health of the prisoners was not worse than that of the free population; the admissions into hospital were principally due to the sickly condition of the prisoners when brought to jail; and the majority of the prisoners benefited in health after admission to jail.

Bareilly District.—All the barracks were overcrowded for four months in the year. During the rains, certain barracks had to be used as factories in the day time, and also occupied at night. There are three tanks in front of the jail which probably serve as breeding grounds for mosquitoes. There was more sickness in the jail this year, owing entirely to the bad state of health of the prisoners previous to admission to jail in consequence of the famine prices of food grains. Dysentery was due partly to infection by flies, and partly to the disease having been frequently introduced by persons who had had previous attacks; influenza to its own specific germs and the carriage of infection by flies; pneumonia to the germs of influenza and to the *pneumococcus*; ague to *Plasmodium malaria*; this disease, in most cases, having been contracted in the 'Terai', Pilibhit, and the northern parts of the Bareilly District; tubercle of the lungs to the tubercle bacillus acquired outside; diarrhoea to chills; and abscess to the action of the pyogenic organisms on constitutions weakened by malaria.

Dehra Dun.—The sickness in the jail was, as usual, principally due to malaria.

Jhansi.—There was slight overcrowding in all the wards at the beginning of the year. Tents and some of the workshops had to be temporarily used as barracks. The ventilation is defective, owing to the great height of the main walls; and sanction has been obtained to lower their height. The high sick and death rates were, to a large extent, due to the transfer of most of the healthy prisoners to other jails, and to the keeping of only the old, weak, and sick prisoners in this jail. Besides, the sickness was partly due to the very bad state of health of an unusually large number of prisoners prior to admission, consequent upon the presence of famine in the district; and partly to the occurrence of cases of cerebro-spinal meningitis, cholera, and heat-stroke. In the case of cholera, the disease was contracted outside before admission to jail.

Lalitpur.—Malarial fever was prevalent, owing to the malarious climate of the country, as well as to the existence of a sort of predisposition of the prisoners to this disease through repeated previous attacks prior to admission; cholera to the prevailing epidemic in the town close by; respiratory affections to the sudden variations of temperature very common in this district; and venereal disease to infection previous to admission. Eye diseases were directly attributable to the prevalence of dust-storms in summer. Debility and sun-stroke occurred in prisoners of constitution extremely debilitated at the time of admission to jail.

Puri.—Although this jail is situated in a very healthy place, some cases of malarial fever occurred from the action of the sudden change to a cold climate on men who had the malarial poison in them.

PUNJAB.

Delhi.—There was overcrowding, particularly in the female wards, for five months. Two large tents, as well as the old lunatic asylum buildings, were temporarily required to accommodate the excess population. The health of the prisoners was bad, owing to previous starvation. Malaria prevailed, owing to the excessive rainfall, and a large proportion of convicts were admitted suffering from anaemia and enlarged spleen. Many deaths were due to pneumonia, dysentery, and diarrhoea. These diseases occurred largely as complications of malarial fever, but, doubtless, infection played a part. The water, which is drawn from a well, is not very good. A scheme for the supply of municipal water is at present in hand.

Karnal.—Overcrowding lasted in the female ward for nearly two months. The short term prisoners had to sleep in the old paper factory. The barrack for the female prisoners is badly ventilated, and the yard is too small. The presence of famine in certain parts of the district and the prevalence of a very severe epidemic of malarial fever in several adjoining districts as well as in this, caused much sickness and mortality.

Lahore Central.—Tents were used to relieve overcrowding, which was very slight. Ague was more prevalent than in the preceding year, due probably to favourable conditions existing for the development of the malarial parasite. The reduced vitality of the prisoners, through repeated attacks of malarial fever, was a predisposing cause of the occurrence of dysentery and diarrhoea. The absence of pneumonia is attributable to better ventilation having been insisted on. The following measures were adopted to prevent ague, which was decidedly the only cause of the anæmic condition of the prisoners: the issue of quinine and iron; close attention to food and clothing; the increase of the hospital accommodation and staff.

Lahore Female.—Ague was, as usual, the chief cause of sickness, and can only be attributed to the general malarial influences prevalent. Dysentery generally had a close connexion with malaria.

BOMBAY.

Sind Gang.—There was slight overcrowding for a few days in July, and the excess prisoners had to sleep in the open yard. The prevalence of malarial fever, especially in the rains, appears to have been due to the surrounding country being flat and sandy, and irrigated by canals.

Dhulia.—There was much overcrowding in all the wards to the extent of four times, and sometimes even more than five times, the number allowed by their respective capacities. Three workshops and four temporary sheds had to be used for the surplus population. Sickness was due to the climate and to the changes in the weather; as also to the presence of famine, and consequently to the emaciated condition of the prisoners at the time of admission to jail; to the excessive overcrowding; and to the scarcity of water.

TABLE XLIV—concluded.

ABSTRACT of the SANITARY SHEETS of the most UNHEALTHY JAILS. SANITARY DEFECTS, IMPROVEMENTS, SUGGESTIONS, etc.

The ratios of sickness and mortality will be found in Table XLII.

Yerrowda Central.—There was general overcrowding, to relieve which five worksheds used during the day had to be occupied also at night. Malarial infection in the jail was probably increased, through mosquitoes, from malarious patients from Kanara. Many of the cases of dysentery occurred in men who had suffered from the disease outside. In the case returned as enteric fever the diagnosis is doubtful. Ten of the men who died were ill or in bad health on admission to jail. Five cases of plague occurred, and the first four may have got the infection from a bale of wool.

Thana.—Overcrowding lasted throughout the year, and this may have had an unfavourable influence on the general health of the prisoners. Two barracks used as workshops during the day, were also occupied at night. The presence of a large marshy tract of land, which is passed over by the tidal wave from the Thana creek, leaving a very large amount of organic residue to rot and decompose, has always a very bad effect upon the health of the prisoners.

Bombay Common.—The prison, as well as its neighbourhood, was overcrowded during the whole year. Unfortunately the inmates of the jail suffered much from relapsing fever. There was also plague, due to infection from the crowded vicinity, where the disease was very prevalent. All the manure has been removed from the jail, and the gardening stopped.

BERAR AND SECUNDERABAD.

Yeotmahl.—Overcrowding lasted for over five months and-a-half. Two barracks, the under-trial ward, certain worksheds, and even a wing of the jail hospital, had to be used to accommodate the excess prisoners. The prevalence of famine in the district had undermined the health of the convicts before admission to jail; consequently, several prisoners had, on admission, to be sent at once to the hospital.

Amraoti Central.—There was overcrowding for seven months. The extraordinarily high sick and death-rates were due to an epidemic of influenza during the early part of the year, complicated with a peculiarly fatal form of pneumonia; to a small outbreak of cholera; to the prevalence of famine in the province affecting the health of the newly-admitted prisoners; and to the exceptional unhealthiness in the rains. The European population suffered, to a remarkable extent, from liver and bowel complaints. Jaundice appeared to be epidemic in the jail as well as in the district. Acute types of diarrhoea and dysentery also prevailed. The use of old *jowari* grain is believed to have told severely upon the health of the convicts. The substitution of wheat for *jowari* brought about great beneficial results.

Akola Central.—Overcrowding lasted during the whole year. The excess population had to sleep in the worksheds. Scurvy cannot be ascribed to the want of vegetable-supply, as there has been sufficient issue of potatoes, onions, and other vegetables to the prisoners throughout the year. The importance of the occurrence of tubercular disease in the jail is minimized by its prevalence in the local police. It is not known how cholera gained access to the jail, but it may safely be said that the water-supply played no part. Dysentery prevailed in the wet and changeable months, and some of the cases of diarrhoea were cases of "famine diarrhoea."

Basim.—There was overcrowding nearly the whole year. Tents and two worksheds had to be used for sleeping accommodation. All the cases of fever showed more or less previous malarial vitiation, predisposing the patients to subsequent attacks. Cases of dysentery and diarrhoea occurred, especially in the rains, which were not amenable to drugs or dieting.

CENTRAL PROVINCES.

Saugor.—Overcrowding lasted for about four months, and was relieved by placing the excess prisoners in the worksheds at night. The sickness was chiefly due to climatic causes, and also to privation before admission to jail in consequence of the prevalence of famine in the district. No cause can be assigned for the occurrence of cerebro-spinal fever in the jail.

Sambalpur.—There was overcrowding in all the wards, more or less, throughout the year. The worksheds, as well as tents, had to be used at night. The sickness and mortality are attributed to the special unhealthiness of the year, as well as to privation consequent upon the presence of famine. The epidemics of small-pox, chicken-pox, and cholera, were, all of them, probably imported from outside.

Raipur Central.—Overcrowding lasted for over nine months. The excess population had to sleep in tents. Malaria was prevalent, through privation, due to the prevailing famine. Cerebro-spinal fever accounted for most of the fatal cases in the jail.

Balaghat.—There was overcrowding in all the wards for eleven months. The sickness was chiefly due to the indifferent or bad health of the prisoners on admission, which predisposed them to attacks of dysentery and diarrhoea.

Seoni.—The sickness and mortality were almost entirely confined to the recent admissions. Many prisoners were admitted in a very bad state of health, suffering from dysentery or diarrhoea, through unwholesome food, owing to the prevalence of famine. Cholera was due solely to the bad milk-supply. Tubercle of the lungs was mostly in men who had suffered from the disease outside.

Chhindwara.—Overcrowding lasted for three months. The excess prisoners slept in the worksheds. The ventilation in only one barrack requires to be improved. The sickness was mainly owing to chills and exposure during the rains. Malaria caused a few admissions, but diarrhoea was the chief cause of mortality.

Hoshangabad.—Overcrowding lasted for eight months, during which time the factory shed had to be occupied also at night. Malaria was due to climatic influences. Bowel complaints occurred in famine-stricken convicts.

Nimar.—There was overcrowding for nearly six months. One workshop had to be used at night. Malarial fever prevailed, through infection, before admission to jail. Some mild attacks of diarrhoea and dysentery were produced by chills during the rains.

Betul.—Overcrowding lasted during the whole year. The high mortality was due to the excessive sickness consequent upon the prevalence of famine. The majority of the deaths were owing to dysentery, and mostly in prisoners who had had to be sent directly to the hospital on admission to jail.

Bhandara.—Overcrowding lasted for over six months, and was relieved by using the worksheds for sleeping accommodation. The sickness and mortality can only be attributed to the general unhealthiness of the season on account of the scarcity of food-articles and water in the district, as also to exposure during the rains.

Wardha.—There was overcrowding in the prison for about two months, and in the under-trial ward for eight months. Another ward and a workshop had to be used to accommodate the extra population. The fever was due to malaria, and prevailed in spite of the daily prophylactic issue of quinine. The bowel complaints were probably owing to the weak state of health of the prisoners and to chill. Nearly all the patients who died were admitted to jail in bad or indifferent health. The drinking water is boiled before use. The iron drums in which the water is kept after boiling and cooling, have been provided with taps and locks to prevent contamination.

RAJPUTANA.

Ajmer Central.—The jail was overcrowded in all the wards throughout the year, to the extent of twice the number allowed by its capacity. Four wards used during the day and some tents, had to be used at night. Most of the fatal cases were in prisoners who were admitted to jail in a very weakly state of health in consequence of the great scarcity of food-grains during the year.

MADRAS.

Cannanore Central.—The sickness and mortality were due to climatic effects. Many prisoners, on admission to jail, presented symptoms of intestinal worms, while many others suffered from various kinds of skin affections.

Vizagapatam.—Overcrowding lasted all the year round. The sickness and mortality were owing to the semi-starvation of the majority of the prisoners before admission to jail, due to the scarcity prevalent in the hill tracts. In fact many lives were saved by confinement in jail. Enteric fever was contracted prior to admission.

Russellkonda.—Cholera was imported from an infected area outside. Dysentery was due to the bad drinking water in consequence of the well in the jail compound having got out of order; and to the unusually heavy south-west monsoon. A subsequent change of water brought about beneficial results.

JAILS AND ADMINISTRATIONS.	ADMISSIONS FROM INFLUENZA IN EACH MONTH.												ADMISSIONS FROM CHOLERA IN EACH MONTH.													
	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.
C																										
Sind Gang	6	16	5	3	...	...	...	...	...	...	...	30	...	...	...	...	...	...	...	...	...	...	...	...	...
Hyderabad Central	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
GROUP VII.—N.-W. FRONTIER, INDUS VALLEY, AND N.-W. RAJPUTANA	6	16	5	3	...	...	...	...	...	...	...	30	...	...	...	...	...	...	...	...	...	...	...	...	1
A																										
Rajkot	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Ahmedabad Central	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
B																										
Ajmer	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Jhansi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Lalitpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
GROUP VIII.—S. E. RAJPUTANA, CENTRAL INDIA, AND GUJARAT	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
A																										
Saugor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Sambalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
Raipur Central	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Seoni	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
Chhindwara	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Hoshangabad	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Nimar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
Nagpur Central	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27
Bhandara	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wardha	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Chasda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
B																										
Amraoti Central	...	27	27	7	4	...	...	...	...	...	...	65	...	...	...	...	...	...	...	...	...	...	...	...	11
Alola Central	...	4	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	7
Dhulia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	56
Yerowda Central	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Deccan Gang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
GROUP IX.—DECCAN	4	27	29	7	4	...	...	...	...	...	...	73	...	...	...	...	...	...	...	...	...	...	...	...	142
Thana	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	62
Bombay House of Correction	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Mangalore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
GROUP X.—WESTERN COAST	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	64
A																										
Salem Central	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
B																										
Palamcottah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Madura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Madras Penitentiary, Central	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Nellore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15
GROUP XI.—SOUTHERN INDIA	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25
Shillong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kussellkonda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
GROUP XII.—HILLS	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
INDIA*	79	140	147	149	538	107	182	192	56	48	123	98	2,059	8	8	16	24	68	62	138	113	43	4	18	3	505
ANDAMANS
BURMA	35
ASSAM	1
BENGAL	169
N.-W. PROVINCES AND OUDH	69	97	81	85	73	35	30	4	5	22	61	83	654	17
PUNJAB	34
BOMBAY	6	16	5	3	128
BEKAR AND SECUNDERABAD	4	27	27	7	4	18
CENTRAL PROVINCES	64
MADRAS	37
Non-British Jails —
Sadra	4
Kolhapur	4

* Including Ajmer.

JAILS, GROUPS, AND ADMINISTRATIONS.	ADMISSIONS FROM ENTERIC FEVER IN EACH MONTH.											ADMISSIONS FROM SIMPLE CONTINUED FEVER IN EACH MONTH.														
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTZ L.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
A																										
Kohat
Dera Ghazi Khan
C																										
Hyderabad Central
Kutrachee
GROUP VII.—N.-W. FRONTIER, INDUS VALLEY, AND N.-W. RAJPUTANA
A																										
Seoni
Nagpur Central
Bhandara
B																										
Amraoti Central
Akola Central
Buldana
Yerronda Central
GROUP IX.—DECCAN
Bombay Common
Mangalore
Cannanore Central
GROUP X.—WESTERN COAST
A																										
Bellary
Coimbatore Central
B																										
Palamcottah
Madura
Trichinopoly Central
Tanjore
Cuddalore
Vellore Central
Madras Penitentiary, Central
Nellore
Guntur
C																										
Rajamundry Central
Vizagapatam
Berhampur
GROUP XI.—SOUTHERN INDIA
Darjeeling
Quetta
Russellkonda
GROUP XII.—HILLS
INDIA*	1	2	1	...	4	7	3	6	5	5	...	34	147	115	145	217	343	300	300	435	445	324	228	187	3,086	
ANDAMANS
BURMA
ASSAM
BENGAL
NORTH-WESTERN PROVINCES AND OUDH
PUNJAB
BOMBAY
BERAR AND SECUNDERABAD
CENTRAL PROVINCES
MADRAS
NON-BRITISH JAILS—KOLBAPUR

* Including Quetta.

TABLE XLIX—continued.

INTERMITTENT FEVER by months, jails, groups, and administrations.

TABLE L—continued.

REMITTENT FEVER by months, jails, groups, and administrations.

JAILS AND GROUPS	ADMISSIONS FROM INTERMITTENT FEVER IN EACH MONTH.												TOTAL.	ADMISSIONS FROM REMITTENT FEVER IN EACH MONTH.												TOTAL.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
A																										
Peshawar	9	4	11	11	10	10	14	20	14	41	43	14	201	...	...	...	...	...	...	...	...	...	...	...	...	...
Kohat	6	3	5	6	3	3	5	11	8	11	2	3	66	...	...	...	...	...	...	...	...	...	...	...	...	...
Bannu	1	...	1	...	...	1	5	7	9	...	5	3	32	...	...	...	...	...	...	...	...	...	...	...	...	...
Shahpur	2	1	1	4	5	6	9	7	11	6	4	63	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhang	2	0	2	8	10	10	17	5	6	14	15	21	119	...	...	...	...	...	...	...	...	...	...	...	...	...
Montgomery Central	24	26	51	50	73	68	64	60	129	160	324	216	1,263	...	...	...	...	...	...	...	...	...	...	...	...	...
Mooltan Central	14	14	9	16	16	27	27	27	20	60	85	73	381	...	...	...	...	...	...	...	...	...	...	...	...	...
" District	6	30	16	12	19	14	35	20	10	24	23	40	258	...	...	...	...	...	...	...	...	...	...	...	...	...
Dera Ismail Khan . .	3	1	3	8	11	4	5	10	11	6	13	6	81	...	...	...	...	...	...	...	...	...	...	...	...	...
Dera Ghazi Khan . .	6	...	5	7	3	5	12	9	5	66	69	38	225	1	...	1	...	...	...	...	...	...	...	...	...	2
C																										
Shikarpur	3	1	9	1	1	1	6	12	13	38	15	3	103	...	...	...	...	...	...	...	...	...	...	...	...	...
Skod Gang . . . . .	...	1	1	...	...	...	1	35	...	11	40	8	97	...	...	...	...	...	...	...	...	...	...	...	...	63
Hyderabad Central	...	1	...	1	2	9	11	11	12	32	35	3	145	1	1	...	8	...	2	4	48	3	2	1	...	16
Kurrachee	4	9	6	2	3	4	2	8	8	9	4	3	62	...	...	...	...	...	...	...	...	...	...	...	...	1
GROUP VII.—N.-W. FRONTIER, INDUS VALLEY, AND N.-W. RAJPUTANA	80	100	120	126	155	162	208	251	252	492	677	472	3,096	2	1	1	9	5	6	6	48	5	4	3	1	91
A																										
Rajkot	2	2	1	7	9	5	1	3	4	9	6	5	54	1	...	...	...	...	...	...	...	...	...	...	...	2
Ahmedabad Central	8	19	9	10	14	7	9	7	2	17	7	12	121	...	...	...	...	...	...	...	...	...	...	...	...	...
B																										
Ajmer	8	11	2	9	8	2	2	8	13	6	5	76	...	1	...	2	...	1	1	1	...	...	...	...	6	
Muttra	4	1	2	3	1	2	1	...	1	...	1	16	...	...	...	...	...	...	...	...	...	...	...	...	...
Agra Central	45	41	90	68	61	46	61	95	122	164	92	71	956	...	...	...	...	...	...	...	...	...	...	...	...	...
" District	2	7	12	20	36	11	12	15	25	48	20	15	233	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhansi	4	3	4	7	2	3	7	13	13	23	5	5	89	...	...	...	...	...	...	...	...	...	...	...	...	...
Lalitpur	3	...	...	3	4	9	6	12	3	9	3	3	55	...	...	...	...	...	...	...	...	...	...	...	...	1
GROUP VIII.—S.-E. RAJPUTANA, CENTRAL INDIA, AND GUJARAT	76	84	120	127	135	85	99	147	178	283	139	117	1,590	1	1	1	2	...	2	1	1	...	...	...	9	
A																										
Damoh . . . . .	...	4	...	...	1	...	...	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Saugor	4	5	3	2	3	4	...	15	21	40	9	7	114	...	...	...	...	...	...	...	...	...	...	...	...	...
Jubbulpore Central	13	15	28	15	8	8	29	34	27	71	58	31	337	...	...	...	...	...	...	...	...	...	...	...	...	...
Narsinghpur	2	6	11	2	4	1	2	5	...	8	...	1	42	...	1	...	...	...	...	...	...	...	...	...	...	4
Mandla	2	1	2	1	1	...	2	3	3	5	1	...	21	...	...	...	...	...	...	...	...	...	...	...	...
Bilaspur	1	5	5	1	...	...	...	1	1	4	...	...	18	...	...	...	...	...	...	...	...	...	...	...	...
Sambalpur . . . . .	...	4	3	3	1	...	3	1	4	4	6	1	30	...	...	...	...	...	...	...	...	...	...	...	...	...
Raipur Central . . .	25	11	13	15	16	5	21	26	117	154	130	79	613	7	1	3	2	4	6	...	2	1	1	3	...	30
Balaghat	5	1	6	1	4	1	2	5	4	5	8	4	46	...	...	...	...	...	...	...	...	...	...	...	...	...
Seoni	2	1	2	...	1	1	1	3	1	2	...	1	14	...	...	...	...	...	...	...	...	...	...	...	...
Chhindwara	1	...	...	...	1	1	1	2	1	...	...	...	17	...	...	...	...	...	...	...	...	...	...	...	...
Hoshangabad	1	3	3	1	6	3	4	7	9	59	26	10	131	...	...	...	...	...	...	...	...	...	...	...	...
Nimar . . . . .	...	...	1	5	...	1	6	5	10	24	20	5	77	...	1	...	...	...	...	...	...	...	...	...	...
Betul	1	1	2	4	7	...	7	11	3	7	...	...	43	...	1	...	...	...	...	...	...	...	...	...	...
Nagpur Central . . .	12	14	8	12	16	6	34	22	59	104	34	123	444	...	...	...	...	...	...	...	...	...	...	...	...
Bhandara . . . . .	...	...	...	...	...	...	...	5	1	9	2	2	19	...	...	...	...	...	...	...	...	...	...	...	...
Wardha	1	...	1	...	1	2	2	7	11	13	2	1	41	...	1	...	...	...	...	...	...	...	...	...	...
Chanda . . . . .	...	...	...	...	...	1	...	...	...	1	3	1	6	...	...	...	...	...	...	...	...	...	...	...	...
Sironcha . . . . .	...	1	...	...	...	...	1	4	1	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...
B																										
Secunderabad . . . .	...	...	...	...	...	3	3	2	3	...	3	1	15	...	...	...	...	...	...	...	...	...	...	...	...	...
Yeotmahl	2	2	1	1	...	1	...	2	1	3	2	...	15	...	...	...	...	...	...	...	...	...	...	...	...
Amraoti Central . . .	6	2	23	15	25	8	12	14	21	142	33	22	323	...	...	...	...	...	...	...	...	...	...	...	...
Ellichpur	2	1	1	3	3	...	1	...	2	3	3	1	20	...	...	...	...	...	...	...	...	...	...	...	...
Akola Central	10	6	4	1	1	3	3	13	29	44	92	16	222	...	...	...	...	...	...	...	...	...	...	...	...
Basim	5	2	2	1	1	1	1	2	4	3	6	1	29	...	...	...	...	...	...	...	...	...	...	...	...
Buldana	1	...	...	...	...	...	...	1	...	1	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...
Dhulia	11	6	15	12	4	3	12	14	14	39	41	20	101	...	...	...	...	...	...	...	...	...	...	...	...
Yerrowda Central . .	19	7	8	7	19	9	34	72	151	205	344	611	1,486	2	...	...	...	...	...	...	...	...	...	...	3	
Bijapur	7	4	10	2	...	2	2	3	1	4	7	10	52	...	...	...	...	...	...	...	...	...	...	...	...
Deccan Gang	5	5	11	15	9	3	9	31	16	23	8	6	141	...	...	...	...	...	...	...	...	...	...	...	...
Dharwar	3	4	4	2	7	3	2	6	3	...	2	...	36	...	...	...	...	...	...	...	...	...	...	...	...
GROUP IX.—DECCAN . .	142	107	167	121	138	70	195	324	519	978	841	954	4,536	9	5	3	2	4	6	1	3	3	3	3	45	
A																										
Thana	22	23	13	12	13	20	6	22	18	37	71	51	310	1	4	3	1	3	3	3	11	3	1	9	2	44
Bombay Common . . .	13	13	11	12	6	...	...	11	5	6	13	5	95	2	9	6	...	...	...	...	...	...	...	...	...	17
" House of Correction	...	3	...	2	2	...	4	...	5	3	2	3	24	...	...	3	...	...	...	...	...	...	...	...	...	3
Ratnagiri	1	1	...	...	1	...	1	1	...	2	1	...	8	...	...	1	...	1	1	...	...	...	...	...	...	4
Karwar	2	7	2	2	4	3	7	3	3	1	2	2	38	...	...	...	...	...	...	...	...	...	...	...	...	4
Mangalore . . . . .	...	...	...	1	...	4	2	1	...	...	1	...	9	...	...	...	...	...	...	...	...	...	...	...	...
Cannanore Central . .	1	1	3	7	6	8	5	4	8	7	3	4	57	...	...	...	1	1	...	...	...	...	...	...	...	3
GROUP X.—WESTERN COAST . .	39	48	29	36	32	35	25	42	39	56	93	67	541	3	13	9	5	4	4	4	12	4	2	10	5	75

JAILS, GROUPS, AND ADMINISTRATIONS.	ADMISSIONS FROM INTERMITTENT FEVER IN EACH MONTH.													ADMISSIONS FROM REMITTENT FEVER IN EACH MONTH.												
	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																										
Bellary . . . . .	...	4	1	...	6	9	13	3	8	16	10	12	82	...	...	...	...	...	...	...	...	...	...	...	...	...
Salem Central . . . . .	...	...	3	1	4	1	5	5	3	3	4	4	31	...	...	...	...	...	...	...	...	...	...	...	...	...
Coimbatore Central	1	...	1	2	2	3	3	3	3	4	4	8	34	...	...	...	...	...	...	...	...	...	...	...	...	...
B																										
Palamcottah	1	2	1	...	...	...	...	...	...	3	2	9	1	...	...	...	...	...	...	...	...	...	...	...	1	
Madura . . . . .	...	3	1	...	1	...	1	1	1	...	4	9	21	...	...	...	...	...	...	...	...	...	...	...	...	...
Trichinopoly Central	3	3	1	7	2	4	4	...	7	20	12	23	85	...	...	...	...	...	...	...	...	...	...	...	...	...
Tanjore	1	2	...	...	1	2	...	3	...	2	...	11	...	...	...	...	...	...	...	...	...	...	...	...	...
Cuddalore . . . . .	...	...	...	...	...	...	1	...	...	...	...	2	3	...	...	...	...	...	...	...	...	...	...	...	...
Vellore Central . . . . .	...	3	...	...	...	4	11	3	4	4	1	4	34	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras Penitentiary, Central	3	2	1	3	3	3	9	26	12	20	9	6	97	...	...	...	...	...	...	...	...	...	...	...	...	...
Nellore . . . . .	...	...	...	...	...	...	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Guntur . . . . .	...	2	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
C																										
Rajamundry Central	18	10	7	33	10	19	16	7	17	14	35	46	232	...	...	...	...	...	...	...	...	...	...	...	...	...
Vizagapatam	2	1	...	1	...	3	5	...	2	2	2	...	18	...	...	...	...	...	...	...	...	...	...	...	...
Berhampur	1	1	...	...	...	1	1	2	...	1	1	4	12	...	...	...	...	...	...	...	...	...	...	...	...
GROUP XI.—SOUTHERN INDIA	30	31	16	47	29	50	67	53	58	87	85	120	673	1	...	...	...	...	...	...	...	...	...	...	1	
Shillong . . . . .	...	...	1	...	...	...	3	1	2	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...
Darjeeling	7	7	1	...	1	...	...	...	...	...	...	16	...	...	...	...	...	...	...	...	...	...	...	...	...
Almora . . . . .	...	2	...	1	2	4	1	2	2	2	...	18	...	...	...	...	...	...	...	...	...	...	...	...	...
Pauri	1	3	2	...	1	...	4	...	2	1	2	...	21	...	...	...	...	...	...	...	...	...	...	...	...
Simla	1	...	...	1	...	1	1	1	1	...	3	...	9	...	...	...	...	...	...	...	...	...	...	...	...
Dharmasala . . . . .	...	...	...	1	3	3	1	1	3	3	2	1	18	...	...	...	...	...	...	...	...	...	...	...	...
Abbottabad	1	...	...	...	1	4	2	5	2	3	...	4	22	...	...	...	...	...	...	...	...	...	...	...	...
Quetta	1	...	1	...	...	3	2	1	2	9	2	3	24	...	...	3	...	...	...	...	...	...	...	...	3	
Mercara	1	3	1	2	2	3	3	1	5	1	...	2	24	...	...	...	...	...	2	1	...	...	...	...	3	
Russellkonda . . . . .	...	...	...	1	1	...	1	...	...	...	1	2	6	...	...	...	...	...	...	...	...	...	...	...	...
GROUP XII.—HILLS	12	15	6	6	11	18	18	12	24	19	12	12	165	...	...	3	...	...	2	1	...	...	...	...	6	
INDIA*	1,980	2,145	2,407	3,039	3,714	3,378	3,711	4,089	4,599	6,238	5,160	4,134	43,594	45	41	55	66	71	62	77	133	57	44	47	32	730
ANDAMANS	721	924	970	1,392	1,006	1,767	1,723	1,515	1,002	907	851	741	13,519	11	10	11	24	13	14	19	24	22	9	15	22	194
BURMA	126	99	101	61	97	133	147	145	151	177	163	126	1,526	4	2	7	3	6	7	10	8	5	6	1	29	
ASSAM	18	51	48	26	28	30	45	28	24	22	23	15	358	1	...	...	3	...	...	1	...	...	1	2	...	8
BENGAL	250	255	331	390	304	377	571	566	545	570	540	451	5,150	4	6	12	6	15	10	16	10	4	9	8	...	100
N.-W. P. AND OUDH	401	373	453	488	580	470	484	693	931	1,438	906	598	7,815	8	3	12	10	20	12	12	14	1	16	1	...	103
PUNJAB	226	210	262	445	460	412	410	643	1,276	1,864	1,542	988	8,744	2	...	1	3	5	3	7	11	13	...	4	2	31
BOMBAY	100	106	100	87	94	69	107	239	255	436	398	772	2,963	7	14	9	13	4	8	9	60	9	6	13	5	157
BERAR AND SECUNDERABAD	26	13	31	21	30	16	20	34	60	196	140	41	628	...	...	...	...	...	...	...	...	...	...	...	...	...
CENTRAL PROVINCES	71	68	88	62	69	34	116	164	274	511	299	266	2,022	7	5	3	2	4	6	1	3	3	2	3	3	42
MADRAS	31	32	19	56	36	62	75	58	66	94	90	126	745	1	...	...	...	1	1	...	...	...	...	1	...	4
NON-BRITISH JAILS—																										
Sadra	1	...	2	...	1	...	...	...	1	...	3	...	8	...	...	...	...	...	...	...	...	...	...	...	...
Kolhapur . . . . .	...	...	...	...	2	...	...	2	3	29	36	9	81	...	1	...	...	...	...	...	...	...	...	...	1	
Savantvadi . . . . .	...	...	...	...	...	4	...	6	...	1	3	...	14	...	...	...	...	...	...	...	...	...	...	...	...

* Including Ajmer, Quetta, and Mercara.

TABLE LI.

PNEUMONIA by months, jails, groups, and administrations.

TABLE LII.

DYSENTERY by months, jails, groups, and administrations.

JAILS AND GROUPS.*	ADMISSIONS FROM PNEUMONIA IN EACH MONTH.												ADMISSIONS FROM DYSENTERY IN EACH MONTH.													
	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	6	9	3	15	19	12	9	7	7	11	12	11	121	95	88	121	148	191	231	177	128	123	121	163	126	1,712
Mergui . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
Tavoy . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	
Moulmein Central . . . . .	...	...	...	...	...	...	...	...	...	1	...	...	1	41	36	26	12	33	41	36	24	7	16	20	12	304
Shwegyin . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	1	...	...	...	...	2	2	...	1	...	13
Toungoo	1	1	...	...	...	1	...	...	...	...	...	...	4	...	...	...	1	...	...	5	4	1	...	...	1	12
Rangoon Central (natives)	1	...	1	1	1	...	1	...	1	1	1	...	8	2	5	...	6	14	7	14	10	1	15	13	8	95
Maubin . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	1	...	...	...	8
Bassein Central . . . . .	...	2	...	...	...	...	...	1	...	...	...	...	3	2	2	10	4	9	9	5	12	2	6	5	9	75
Insein "	2	...	3	1	2	4	...	...	1	...	1	...	14	8	4	3	13	4	17	57	14	2	7	4	7	140
Henzada	2	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Myanaung . . . . .	...	...	1	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	2	6
Sandoway . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	3
Kyankpyu . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	3	3	1	4	1	...	...	15
Akyab . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	5	4	3	5	4	11	3	...	5	2	...	...	43
GROUP I.—BURMA COAST AND BAY ISLANDS	12	13	8	17	22	17	10	8	9	13	14	12	155	55	144	167	199	258	321	305	198	148	170	208	166	2,412
Paungdi	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	3	...	...	...	...	...	...	6
Prone . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	4	1	1	2	3	...	1	1	1	...	16
Thayetmyo Central . . . . .	...	...	2	...	...	...	...	...	...	...	...	1	3	1	1	6	3	6	6	...	8	1	2	...	1	36
Magwe . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	2
Minbu . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	1
Yamethin . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	5
Meiktila . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	4
Pagan . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	1	2	1	...	2	8
Pakokku . . . . .	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	3
Myingyan Central	1	...	1	1	...	1	...	...	...	...	...	2	6	3	1	3	...	3	2	4	3	4	4	1	2	30
Mandalay " . . . . .	...	2	...	1	2	...	1	1	2	...	...	...	9	7	3	7	1	5	9	8	24	11	10	9	8	102
Monyma . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	2	...	...	3	1	1	1	...	10
Shwebo	1	...	1	...	...	...	...	...	1	1	...	...	4	...	...	...	...	...	...	...	1	...	...	...	2	3
Bhamo	1	...	...	...	...	...	1	...	1	...	...	...	3	5	9	6	5	6	4	1	6	5	4	3	2	56
Katha . . . . .	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	1	1	...	...	3
Kindat . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
GROUP II.—BURMA INLAND	4	7	2	1	3	...	2	1	4	1	4	29	22	16	23	13	22	27	28	51	29	24	16	18	259	
Cachar . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	1	...	...	4
Sibsagar . . . . .	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	3	...	3	1	10
Dibrugarh . . . . .	...	...	1	...	...	...	...	...	...	...	...	...	1	2	...	5	11	4	...	...	...	1	...	1	...	24
Tezpur . . . . .	...	...	1	...	1	...	1	1	...	...	...	...	4	...	3	1	8	12	1	...	3	2	4	3	4	41
Nowgong . . . . .	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	2	2	1	...	1	...	1	...	...	...	8
Gauhati	1	...	...	...	1	...	...	...	...	1	...	...	3	1	5	7	8	2	2	5	5	2	7	5	5	54
Dhubri . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	3
Sylhet	1	1	1	...	...	...	...	...	...	...	...	...	3	6	2	3	4	3	7	3	8	23	11	2	5	79
GROUP III.—ASSAM	2	1	3	1	2	...	1	1	...	1	...	13	10	9	19	26	23	22	10	18	33	24	14	15	223	
Mymensingh	1	2	1	1	1	...	1	2	1	...	1	11	8	12	9	10	5	9	6	9	15	12	11	9	115	
Dacca Central	3	5	7	4	...	6	3	2	...	1	31	41	25	56	77	38	42	69	64	70	47	97	47	8	673	
Tippera . . . . .	...	...	1	...	...	1	...	1	...	...	3	3	4	10	2	3	15	24	6	2	1	8	6	...	84	
Chittagong . . . . .	...	...	1	...	1	1	...	...	1	...	4	6	7	64	29	15	13	11	11	9	14	21	12	212		
Noakhali . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	2	6	1	3	2	1	5	3	14	9	9	4	59	
Backergunge . . . . .	...	...	2	...	1	...	...	...	...	1	...	4	18	25	26	25	22	19	45	35	31	20	34	23	321	
Khulna . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	3	1	1	2	...	...	10	
Jessore	1	...	...	...	...	...	...	...	...	...	1	2	22	11	33	27	28	16	26	31	35	25	30	5	289	
Baraset . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	3	7	7	2	4	2	6	20	7	5	20	10	93	
Presidency, Central, Europeans . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	2	1	...	8
Presidency, Central, natives	2	2	1	...	...	1	...	...	...	...	3	11	29	11	10	1	...	1	13	31	20	38	102	58	314	
Alipore Central . . . . .	...	1	1	...	2	...	2	2	1	4	4	17	28	21	23	20	23	26	40	69	67	64	65	47	493	
Hooghly	1	2	1	1	2	...	3	3	1	...	14	20	13	34	13	29	21	20	30	20	13	43	50	312		
Burdwan . . . . .	...	...	1	...	...	1	1	...	...	...	3	...	...	4	11	9	14	15	6	6	6	20	17	106		
Krishnagar . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...
Faridpur	4	...	1	1	1	1	...	1	...	2	...	11	8	19	31	19	14	24	23	43	33	13	51	34	312	
Pabna . . . . .	...	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	8	11	9	9	5	4	2	49	
Mershidabad . . . . .	...	...	...	...	...	...	...	...	...	1	...	1	1	1	9	11	6	6	3	11	6	5	5	4	2	69
Rajshahi Central	1	...	...	1	1	...	2	...	...	1	...	6	1	14	10	5	3	5	30	38	6	2	...	1	115	
Bogra . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	5	1	5	1	2	...	...	6	3	5	2	4	34	
Malda . . . . .	...	...	...	...	...	...	...	...	...	1	1	2	...	...	2	1	2	...	1	...	...	2	...	1	9	
Dinajpur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	1	1	2	5	5	9	5	5	7	43	
Rangpur	1	...	...	...	...	...	...	...	...	...	...	1	5	6	4	12	...	3	2	8	6	12	19	14	91	
Jalpaiguri . . . . .	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	1	3	5	...	1	4	...	...	14	
Purneah . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	1	3	5	...	1	...	...	15	
Naya Dumka . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	3	...	2	...	...	6	
Suri	2	3	2	1	1	...	2	...	2	...	...	16	10	9	9	7	5	3	2	10	2	6	4	6	73	
Bankura	1	...	...	...	...	...	...	...	...	...	...	1	...	3	4	11	7	3	6	3	2	2	1	2	44	
Midnapore																										

JAILS.	ADMISSIONS FROM PNEUMONIA IN EACH MONTH.												ADMISSIONS FROM DYSENTERY IN EACH MONTH.													
	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																										
Chaibassa . . .	1	...	...	1	...	...	...	...	...	...	...	2	2	25	33	25	24	12	8	17	11	16	21	6	200
Purulia . . .	...	...	1	...	...	...	...	...	1	...	...	2	...	...	...	...	1	4	2	...	...	...	...	1	9
Ranchi . . .	3	5	17	3	2	2	...	...	...	...	...	32	...	...	3	1	1	1	7	6	2	...	2	23	
Palamau . . .	1	...	...	1	...	...	...	...	...	1	...	5	1	...	3	17	8	13	10	7	...	1	...	73	
Hazaribagh Central	4	5	3	7	2	1	2	3	3	...	2	33	3	12	13	16	28	27	30	35	40	19	13	8	244	
B																										
Gaya . . .	...	2	2	1	...	...	...	1	...	...	...	6	6	3	12	5	12	18	11	17	10	10	4	7	111
Bhagalpur Central	...	...	...	...	1	7	7	4	2	...	...	22	17	4	18	13	10	5	36	67	60	30	14	17	300
Monghyr . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	4	8	6	4	11	11	5	8	8	80
Darbhanga . . .	...	...	...	...	...	1	...	...	...	...	...	1	1	2	5	3	6	7	8	19	16	27	13	7	121
Champaran . . .	...	...	1	...	2	1	1	1	1	...	...	9	2	6	3	3	2	1	1	6	6	13	4	2	48
Muzaffarpur . . .	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2	2	2	4	2	14	20	0	2	71
Patna . . .	...	...	...	1	...	...	...	...	...	...	...	1	7	3	4	2	2	4	4	13	5	5	2	2	49
Arrah . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	2	2	2	2	5	4	1	24
Chapra . . .	...	...	...	2	...	...	...	1	2	...	...	5	2	3	9	5	5	8	2	20	2	8	6	8	90
Buxar Central . . .	...	3	1	...	...	2	...	...	1	...	1	9	4	7	14	13	21	7	31	48	15	7	6	14	187
Ghazipur . . .	1	...	...	...	...	...	...	...	1	...	...	3	1	...	...	...	...	...	2	3	2	2	...	1	13
Azamgarh . . .	2	1	1	...	...	...	2	...	...	...	...	7	2	2	2	2	3	2	2	1	1	4	...	3	25
Kasia . . .	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	1	...	4	...	...	7
Gorakhpur . . .	...	...	1	...	1	1	...	1	1	...	...	6	1	...	2	4	2	2	2	2	2	4	...	1	19
Basti . . .	...	...	...	1	1	...	...	...	2	...	...	4	3	...	2	2	1	1	...	...	5	2	5	5	26
Fyzabad . . .	5	3	...	5	1	...	...	2	1	...	...	18	4	2	1	5	4	1	3	4	9	8	15	8	64
Sultanpur . . .	...	...	1	...	1	1	...	1	...	...	...	3	7	1	1	2	1	5	...	...	1	...	2	2	16
Rai Bareilly . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Partabgarh . . .	1	...	2	...	...	...	...	...	...	...	2	5	...	...	1	...	3	...	...	...	1	1	...	...	6
Jaunpur . . .	...	1	2	...	...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	2	3	2	...	...	9
Benares Central . . .	1	4	1	...	...	...	...	1	...	...	1	8	4	2	4	1	5	5	9	17	12	4	11	11	85
" District . . .	...	...	1	1	...	...	...	1	...	...	...	3	1	3	4	3	1	2	4	3	8	4	9	4	40
Mirzapur . . .	...	...	1	1	...	...	...	1	...	...	...	5	...	...	1	1	1	...	...	9	...	1	1	1	15
Allahabad Central . . .	1	1	1	...	...	...	2	...	2	...	...	7	3	1	...	1	...	...	8	14	4	10	3	4	46
" District . . .	2	1	3	...	1	...	...	2	...	...	...	10	...	...	1	1	3	1	3	15	12	2	6	6	51
Karwi . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	3
Banda . . .	1	4	3	3	1	...	...	1	...	2	1	16	1	...	...	2	...	...	...	3	4	7	6	4	27
Fatehpur . . .	...	...	...	1	1	...	...	1	1	...	...	4	8	1	...	2	1	1	1	...	11	3	3	6	29
Hamirpur . . .	1	1	...	...	...	1	1	1	1	...	...	6	...	...	1	...	...	...	...	2	...	...	1	...	4
Orai . . .	...	...	...	1	...	...	...	...	...	...	2	3	1	...	...	...	...	1	1	1	...	1	2	7	
Cawnpore . . .	...	...	...	3	2	4	1	1	2	...	...	13	2	2	...	...	2	...	...	4	5	1	1	5	22
Unao . . .	1	...	1	...	2	...	...	...	1	...	...	5	...	...	3	...	...	...	1	...	...	1	1	2	8
Lucknow Central . . .	1	1	1	...	1	1	2	1	...	...	...	7	...	2	4	1	1	4	2	6	3	4	3	12	42
" District . . .	...	...	2	2	1	...	...	...	...	...	...	5	...	...	1	2	1	...	...	6	5	1	2	4	22
Barabanki . . .	1	2	...	...	...	...	1	...	2	...	...	6	1	1	1	1	...	1	...	1	3	...	1	1	10
Gonda . . .	4	1	3	2	1	...	...	1	1	...	...	14	2	5	5	...	5	2	1	2	1	2	5	2	32
Bhraisic . . .	1	1	...	1	1	...	...	...	2	...	...	7	7	1	4	2	2	1	2	2	4	1	1	5	32
Kheri . . .	2	1	2	...	...	...	...	...	1	...	...	6	1	...	...	2	...	1	1	2	2	1	...	1	11
Sitapur . . .	...	2	2	...	...	1	1	...	...	...	...	6	1	...	...	2	4	3	4	4	4	6	1	...	29
Hardoi . . .	...	1	1	1	...	...	...	...	...	...	...	3	1	...	1	...	...	...	...	4	5	...	3	4	18
Etawah . . .	1	1	...	1	1	1	1	1	...	3	3	13	1	2	1	2	2	...	...	4	4	...	5	3	23
Mainpuri . . .	3	...	2	3	10	...	...	...	...	...	1	19	...	1	4	...	...	...	1	2	6	2	2	10	28
Etah . . .	5	...	...	...	...	...	1	1	...	...	...	7	...	1	3	2	3	2	3	2	7	5	2	2	28
Fatehgarh Central . . .	2	1	2	1	3	2	5	2	3	4	6	2	33	2	12	25	17	13	24	93
" District . . .	2	2	...	...	...	...	1	...	2	3	1	13	...	...	...	1	...	...	1	7	11	9	3	6	38
GROUP V.—GANGOTIC PLAIN AND CHUTIA NAGPUR . . .	46	41	58	37	41	26	30	24	27	21	22	32	405	85	99	168	164	182	142	236	412	420	229	205	223	2,365
A																										
Shahjahanpur . . .	...	...	...	1	...	...	...	...	...	...	...	1	2	2	3	4	3	4	2	4	5	2	1	2	34
Bareilly Central . . .	1	2	1	3	2	4	...	1	1	...	1	...	16	2	8	11	8	8	6	15	30	23	21	6	17	170
" District . . .	4	5	5	1	2	1	1	3	...	22	7	1	10	13	...	89
Budaon . . .	3	...	1	3	1	2	...	...	...	...	...	10	...	1	1	...	4	3	3	1	2	4	...	...	19
Aligarh . . .	...	3	...	...	...	...	...	1	...	...	...	4	...	...	1	1	1	6	21	18	15	8	11	82	
Bulandshahr . . .	...	...	...	...	...	...	1	...	...	...	...	1	...	1	1	...	2	3	...	5	2	3	2	...	19
Moradabad . . .	2	...	...	...	3	4	...	1	...	...	...	10	3	...	1	2	2	1	7	18	11	6	1	3	55
Bijnor . . .	1	1	...	...	1	...	...	...	...	2	...	5	...	...	2	4	4	...	2	1	1	7	3	2	26
Dehra Dun . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	2
Saharanpur . . .	2	...	1	3	2	1	...	1	1	6	17	1	1	...	3	2	1	1	5	3	1	3	1	22
Muzaffarnagar . . .	...	1	...	...	...	...	...	...	...	...	...	1	1	1	...	2	...	...	4	1	4	1	3	2	16
Meerut . . .	2	1	1	...	...	...	1	...	1	...	...	7	5	1	5	2	7	2	3	20	11	11	7	2	76
Delhi . . .	6	...	1	3	2	2	1	1	1	3	9	12	41	2	1	3	2	...	1	1	7	20	11	11	60	
Rohtak . . .	...	4	2	1	...	1	...	...	...	...	...	8	...	...	2	2	5	4	1	3	4	5	...	2	28
Hissar . . .	3	2	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...
Karnal . . .	...	1	2	...	1	...	1	...	1	2	3	11	...	3	...	4	...	1	...	1	6	3	4	1	23
Umballa . . .	6	7	2	...	1	...	1	1	1	...	1	21	3	4	14	24	46	19	14	11	5	16	24	12	192	
B																										
Ludhiana . . .	...	...	1	...	...	...	...	...	...	...	...	1	2	...	...	3	1	...	1	3	5	46	2	1	64
Hoshiarpur . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	8	...	3	1	17
Jullundur																										

TABLE LI--continued.

PNEUMONIA by months, jails, groups, and administrations.

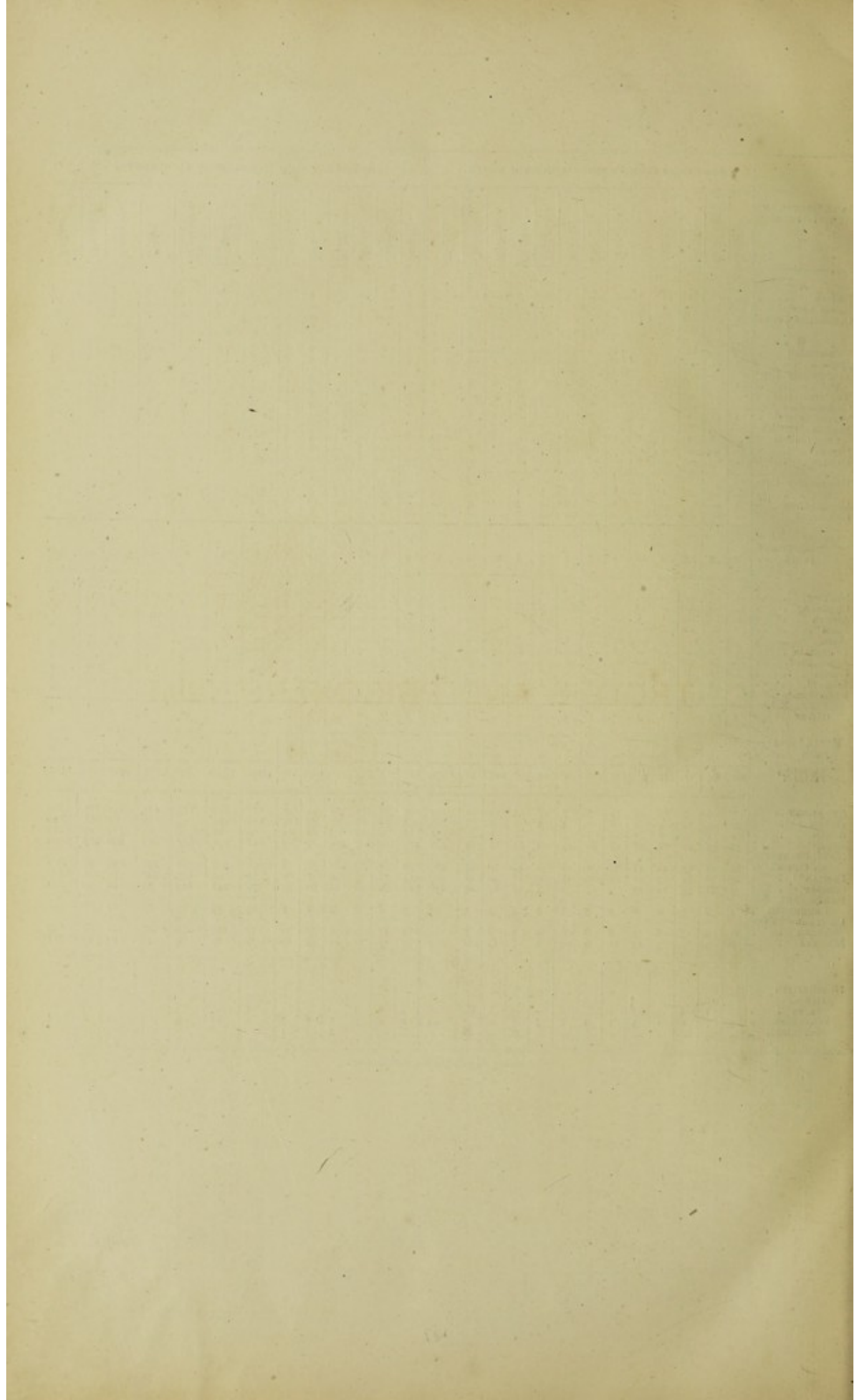
TABLE LII--continued.

DYSENTERY by months, jails, groups, and administrations.

JAILS.	ADMISSIONS FROM PNEUMONIA IN EACH MONTH.												ADMISSIONS FROM DYSENTERY IN EACH MONTH.													
	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																										
Peshawar	4	1	1	6	1	3	1	2	2	2	2	3	...	1	3	1	3
Kohat	2	2	1	5	1	1	1	1	...	4
Banna	2	1	2	3	1	1	1	...	12
Shahpur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	3
Jhang . . . . .	...	1	...	...	...	...	...	...	...	1	3	2	9	...	...	1	2	4	1	4	...	5	12	4	5
Montgomery Central	3	...	5	1	1	2	2	8	...	1	5	1	27	2	3	11	26	47	11	4	19	21	40	30	243	
Mooltan Central	2	1	2	1	...	...	...	1	2	1	...	...	12	4	2	2	15	4	1	1	8	10	8	5	74
" District . . . . .	...	1	2	...	1	2	...	...	2	1	8	...	17	1	...	3	...	2	1	1	1	3	5	4	28
Dera Ismail Khan	2	4	...	...	...	...	...	...	1	...	...	...	7	...	1	3	3	10	1	1	4	3	5	2	35
Dera Ghazi Khan . . . . .	...	2	...	...	...	1	...	...	1	...	...	5	9	1	2	6	1	1	...	...	2	1	4	3	21
C																										
Shikarpur	4	9	11	8	3	...	...	...	...	...	3	6	44	...	2	1	1	2	...	3	5	6	9	7	40
Sind Gang	2	...	1	...	...	...	...	...	1	2	5	...	11	1	...	2	...	...	...	...	...	...	...	2	5
Hyderabad Central	1	3	3	1	...	...	...	...	2	3	1	...	14	1	...	1	2	...	8	...	5	7	9	12	56
Karachee	1	...	...	...	...	...	...	1	...	1	...	...	3	4	1	2	2	2	3	6	2	3	...	2	27
GROUP VII.—N. W. FRONTIER, INDUS VALLEY, AND NORTH-WESTERN RAJPUTANA	19	23	24	12	7	5	4	9	5	9	18	20	164	15	16	33	58	76	28	26	49	62	97	70	77	
A																										
Rajkot . . . . .	...	...	2	...	...	...	...	...	1	...	...	...	3	...	...	1	...	...	...	...	2	2	...	1	6
Ahmedabad Central	13	15	11	8	4	5	7	1	...	7	8	7	86	7	7	12	3	16	8	14	62	38	7	5	2	
B																										
Ajmer	6	8	5	3	3	3	...	...	...	1	1	29	2	1	5	5	3	...	1	3	4	6	2	1	33
Muttra	1	...	3	1	...	1	2	...	2	...	1	4	15	...	2	...	...	...	...	1	3	1	1	1	9
Agra Central	6	8	17	6	5	5	5	2	3	4	1	7	69	7	9	4	8	4	3	7	40	54	57	19	8	
" District . . . . .	...	1	...	1	...	...	...	...	...	2	2	5	5	1	...	4	3	3	4	1	14	12	14	9	3
Jhansi	3	...	1	...	...	2	...	...	3	1	3	1	14	1	...	2	2	1	1	3	9	9	8	4	3
Lalitpur	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	2	...	...	...	4
GROUP VIII.—SOUTH-EASTERN RAJPUTANA, CENTRAL INDIA, AND GUJARAT	30	32	37	20	13	16	14	5	8	13	14	22	222	18	18	31	21	27	16	26	131	124	93	40	19	
A																										
Damoh	1	1	2	1	2	4	13
Saugor	1	1	...	2	1	...	...	...	...	1	1	7	...	2	1	1	3	3	2	10	10	7	3	3	...
Jubbulpore Central	6	7	8	2	...	3	2	1	4	5	2	40	1	...	4	4	3	7	40	34	13	10	11	18	145	
Narsinghpur . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	1	...	2	2	3	3	...	1	1	2	2	1	16
Mandla	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	1	2	1	4	...	1	...	...	11
Bilaspur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	4	...	...	...	16
Sambalpur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	1	4	9	3	3	2	2	1	1
Raipur Central	1	1	...	1	1	2	2	...	...	...	2	10	...	...	4	7	7	4	5	10	5	...	...	1	4
Balaghat . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	3	5	3	5	...	1	4	8	6	4	2	48
Seoni . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	5	6	5	1	1	...	1	19
Chhindwara . . . . .	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	2	...	1	4	...	...	...	...	8
Hoshangabad	1	...	2	...	1	...	...	...	...	...	...	...	4	...	...	...	1	1	1	2	7	10	10	2	34
Nimar . . . . .	...	...	...	1	1	...	1	...	...	...	...	...	3	1	...	...	...	3	2	14	4	7	5	2	39
Betul . . . . .	...	2	1	...	...	...	...	...	...	...	...	...	3	...	...	1	6	6	3	19	4	5	1	1	70
Nagpur Central . . . . .	...	...	...	...	...	1	...	...	...	...	2	4	4	3	2	1	2	5	4	15	3	1	3	8	51
Bhandara . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	5	7	1	1	...	18
Wardha	1	...	...	...	...	...	...	...	1	...	...	...	2	...	1	...	...	4	1	3	3	2	...	...	14
Chanda . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	2
Sironcha . . . . .	...	...	...	...	...	...	2	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	...	...	1
B																										
Secunderabad . . . . .	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	1	...	1	...	...	...	2
Yectmahl . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	2	4	...	1	...	9
Amraoti Central	6	4	4	1	...	1	2	1	1	2	...	22	3	2	7	3	1	3	3	12	6	5	4	1	50	
Ellichpur . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Akola Central	1	2	1	2	5	1	4	1	3	1	1	3	25	5	...	1	1	...	1	5	9	10	3	7	5	
Basin . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	9	4	1	3	1	...	19
Buldana . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	5
Dhulia	1	...	2	2	2	...	...	2	...	1	2	12	3	4	12	9	19	34	43	61	34	5	3	1	228
Yerowda Central	6	4	...	1	...	...	1	...	...	...	2	14	1	1	1	1	1	1	10	14	12	4	4	1	51
Bijapur	3	1	1	...	...	...	...	...	...	...	...	5	...	1	...	...	1	...	1	...	3	...	1	...	7
Deccan Gang . . . . .	...	...	1	...	...	...	...	...	...	...	...	1	...	1	2	2	...	5	6	23	16	8	7	2	74
Dharwar	6	5	3	5	3	...	2	...	...	...	...	24	1	1	3	2	...	2	4	4	1	...	...	...	20
GROUP IX.—DECCAN	22	28	28	18	17	7	13	14	9	8	12	14	190	28	22	49	52	65	98	237	305	156	82	65	62	
Thana																										
Bombay Common	3	1	1	...	...	...	...	1	2	1	1	1	11	4	4	2	2	2	12	43	43	16	4	6	7
" House of Correction . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	4	5	5	4	3	4	11	1	1	6	4	48
Ratanigiri . . . . .	...	...	1	...	1	...	...	...	2	...	...	...	4	1	3	2	2	4	1	12	8	...	1	2	48
Karwar	1	2	...	...	...	...	...	1	...	...	...	...	4	5	4	4	1	2	...	8	3	3	5	...	30
Mangalore . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	3	4	3	6	3	4	1	2	35
Cannanore Central	1	...	...	1	...	1	1	1	1	...	1	...	6	5	2	3	4	12	6	34	4	9	13	5	4
GROUP X.—WESTERN COAST	5	3	2	1	1	1	1	2	3	4	2	1	26	15	21	16	14	27	27	104	79	40	27	19	19	

JAILS, GROUPS, AND ADMINISTRATIONS.	ADMISSIONS FROM PNEUMONIA IN EACH MONTH.											ADMISSIONS FROM DYSENTERY IN EACH MONTH.														
	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																										
Bellary . . . . .	...	...	1	...	1	...	...	1	...	2	...	...	5	...	...	3	...	4	3	3	4	6	2	1	...	30
Salem Central . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	4	4	...	1	1	18
Coimbatore Central	1	1	...	...	1	1	4	...	2	1	...	4	15	...	...	1	1	4	2	...	2	2	3	6	3	24
B																										
Palamcottah	2	...	...	...	1	1	...	2	...	...	...	6	1	2	...	...	2	4	1	2	...	...	14	9	35	
Madura	1	...	...	...	...	1	...	...	...	1	...	3	1	...	...	1	4	6	8	...	2	1	2	4	29	
Trichinopoly Central	1	...	1	...	2	1	...	...	...	1	6	3	15	...	...	...	...	...	2	1	2	3	2	7	3	20
Tanjore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	4	6	...	...	...	1	12	
Cuddalore . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	5	...	3	2	6	2	28
Vellore Central	1	...	1	...	...	1	2	1	...	...	1	1	8	1	...	...	2	...	2	3	4	7	2	3	3	32
Madras Penitentiary, Central . . . . .	...	2	1	2	1	1	...	...	...	...	1	1	9	2	...	...	1	...	3	...	4	2	1	...	5	18
Nellore . . . . .	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	1	...	...	...	...	...	...	...	1	...	2
Guntur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
C																										
Rajamundry Central . . . . .	...	...	...	1	4	1	...	...	1	1	1	...	9	...	3	1	7	5	17	18	28	13	14	7	6	119
Vizagapatam	1	...	1	...	2	4	...	3	...	3	1	3	18	...	...	...	...	10	20	4	10	9	8	6	4	71
Berhampur . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	3	2	...	...	...	9
GROUP XI.—SOUTHERN INDIA	7	3	5	3	12	11	7	7	3	8	12	13	91	9	8	7	16	34	71	50	63	53	42	55	40	448
Shillong . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2
Darjeeling . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	3	...	3	3	...	...	1	2	2	1	16
Almora . . . . .	...	...	...	1	1	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	1	1
Paori	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1
Simla . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Dharmasala . . . . .	...	1	...	...	...	1	...	...	...	...	...	...	2	...	...	...	2	...	...	...	1	...	...	1	4	4
Abbottabad . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	2	...	5
Quetta . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	1	3	...	2	...	1	9
Mercara . . . . .	...	2	...	...	...	...	2	1	1	...	...	...	6	1	...	...	...	...	2	1	...	1	...	...	...	5
Russellkonda . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	1	1	3	2	3	6	2	...	...	...	21
GROUP XII.—HILLS	1	4	...	1	1	1	2	2	1	...	...	1	14	4	2	4	3	7	9	5	11	6	5	5	3	64
EXTRA INDIA:—ADES	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	2
INDIA*	221	204	217	145	140	119	116	92	94	105	144	178	1,775	659	613	969	942	1,122	1,105	1,548	1,988	1,636	1,363	1,457	1,210	14,612
ANDAMANS	6	9	3	15	19	12	9	7	7	11	12	11	121	95	88	121	148	191	231	177	128	123	121	163	126	1,712
BIHAR	10	4	12	4	4	8	1	3	3	6	3	5	63	82	72	69	55	89	119	156	121	54	73	61	58	1,009
ASSAM	2	1	3	1	2	...	1	1	1	...	1	...	13	10	9	19	26	23	24	10	18	33	24	14	15	225
BENGAL	32	33	47	28	20	17	24	23	26	14	18	24	306	279	298	507	421	382	369	628	791	637	463	660	467	5,902
N.-W. PROVINCES AND OUDH	64	47	65	40	44	32	35	18	30	27	32	47	481	70	50	83	80	97	56	101	502	334	251	195	191	1,810
PUNJAB	46	38	22	13	11	23	16	15	10	16	34	42	286	53	32	75	114	187	86	54	92	143	247	199	210	1,492
BOMBAY	35	41	37	24	15	9	7	5	5	15	19	24	236	29	38	48	32	61	83	176	247	145	57	48	39	1,003
BRAR AND S.-CUNDERABAD	1	8	7	6	6	2	5	3	5	3	3	3	52	9	2	8	5	2	5	23	29	19	12	12	6	132
CENTRAL PROVINCES	11	9	13	6	3	2	8	8	2	5	8	7	82	13	11	23	35	37	50	133	181	79	52	43	52	709
MADRAS	8	3	6	3	13	11	8	8	4	8	13	14	99	15	12	11	21	49	80	87	73	64	55	60	44	571
NON-BRITISH JAILS—																										
Sadra . . . . .	...	1	1	3	...	1	...	...	...	...	...	...	6	3	1	1	...	...	...	4	...	1	...	...	...	10
Kolhapur	5	7	2	1	3	1	2	2	13	5	...	3	44	2	3	3	2	6	7	2	21	3	2	1	2	54
Savantvadi . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	2	1	...	...	1	1	...	...	10

* Including Ajmer, Quetta, and Mercara.



IV.—TROOPS AND PRISONERS, 1900.

TABLE LIII.

DETAIL of DISEASES.

DISEASES.	EUROPEAN ARMY OF INDIA.												NATIVE ARMY OF INDIA.			JAIL POPULATION OF INDIA.	
	MEN, 60,553.				WOMEN, 2,908.		CHILDREN, 5,376.		Present Enrolled 123,463 146,727			121,811.					
	Admissions.	Constantly sick.	Deaths.	Invalids.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Invalids.	Admissions.	Deaths.				
Small-pox	36	3'53	3	...	15	3	7	2	77	4	...	116	14				
Cow-pox	1	'02	...	...	...	...	2	...	24	...	...	63	1
Chicken-pox	11	'60	...	...	...	...	91	...	249	1	...	433	...
Measles	24	1'21	...	...	3	...	305	8	252	3	...	72	...		
Rubella	5	'28	...	...	...	...	5	1	4	...	...	5	...
Scarlet fever	8	1'30	...	...	...	...	4	...	...	...	...	...	...
Plague	6	1'14	1	...	...	...	...	...	55	29	...	30	23
Relapsing fever	...	...	...	...	...	...	...	...	4	...	...	118	24
Dengue	8	'32	...	...	...	...	...	...	...	...	...	...	...
Influenza	237	10'07	1	...	14	...	20	1	114	4	...	2,059	34				
Whooping cough	...	...	...	...	...	...	10	...	...	...	...	...	...
Mumps	8	'33	...	...	2	...	19	...	1,130	1	...	1,998	1		
Diphtheria	3	'55	...	1	1	...	7	4	1	1	...	...	...	
Cerebro-spinal fever	...	...	...	...	...	...	...	...	3	2	...	99	79
Simple continued fever	1,479	66'98	2	4	42	...	98	...	436	3	...	3,086	1				
Enteric fever	970	140'70	259	36	22	7	25	4	55	18	1	34	17				
Mediterranean fever	...	'14	...	...	...	...	...	...	7	...	...	1	...
Cholera	107	1'79	88	...	5	5	...	...	632	388	...	484	270		
Choleraic diarrhoea	...	...	...	...	...	...	...	...	2	2	...	21	8
Epidemic diarrhoea	4	'04	...	...	...	...	6	5	4	...	...	75	10
Dysentery	1,561	108'00	52	67	49	5	111	13	6,298	78	9	14,612	827				
Beri-beri	26	'19	3	...	...	...	...	...	146	21	9	13	2
Intermittent fever	18,679	663'30	40	176	427	3	756	11	39,451	90	57	43,594	114				
Remittent fever	760	47'37	10	14	30	4	36	8	1,741	165	1	730	148				
Phagedæna	1	'08	...	...	...	...	...	...	1	...	...	...	...
Sloughing phagedæna	4	'35	...	...	...	...	...	...	...	...	...	1	...
Erysipelas	35	2'36	...	...	2	...	4	3	29	4	...	122	14		
Pyæmia	3	'24	2	1	...	...	...	...	7	3	...	7	5
Septicæmia	1	'06	1	...	...	...	...	...	4	4	...	3	3
puerperal	...	...	...	...	4	1	...	...	...	...	...	3	3
Tetanus	1	'01	1	...	...	...	...	...	7	3	...	14	9
Tubercle, not defined	...	...	...	...	...	...	...	...	...	...	...	3	3
Tubercle, general	1	'04	1	...	...	...	...	...	...	...	...	3	2
of meninges	...	...	...	...	...	...	...	...	2	1	...	1	1
of the brain	...	...	...	...	...	...	...	...	1	1	...	1	1
of the brain and its membranes	...	...	...	...	...	...	...	...	3	2	1	1	1
of the larynx	1	'22	...	...	...	...	4	3	...	...	...	...	...
of the lungs	205	38'71	35	94	11	2	1	...	456	94	70	1,029	541				
of the lungs, larynx, and intestines	...	...	...	...	...	...	...	...	1	1	...	1	1
of the lungs and intestines	...	...	...	...	...	...	...	...	1	...	...	38	25
of the lungs, intestines, and peritonæum	...	...	...	...	...	...	...	...	1	1	...	1	1
of the lungs and peritonæum	...	...	...	...	...	...	...	...	1	1	...	1	1
of the lungs and glands*	...	...	...	...	...	...	...	...	...	...	...	1	1
of the intestines	1	'07	...	...	...	...	4	...	3	3	...	58	40
of abdomen and peritonæum	...	...	...	...	...	...	...	...	...	...	...	1	1
of the peritonæum	...	...	...	...	...	...	...	...	1	...	...	7	4
of the spleen	1	'06	1	...	...	...	1	...	2	3	...	...	...	
of lymphatic glands	3	'07	...	5	...	...	...	...	31	1	6	31	6
of kidney	1	'01	1	...	...	...	1	1	...	...	...	...	...
of spermatic cord	...	...	...	...	...	...	...	...	1	...	...	...	...
of the testicles	5	'79	...	1	...	...	...	...	1	...	...	...	...
of bones	1	'06	...	1	...	...	...	...	1	...	2	...	...		
of joints	5	1'15	1	1	...	...	2	...	1	...	...	1	1
of the spine	...	'01	...	...	...	...	...	...	4	1	...	...	...	
of the skin	1	'07	...	...	...	...	...	...	...	...	...	...	...
Leprosy	...	'08	...	1	...	...	...	...	29	...	21	132	19
Yaws	...	...	...	...	...	...	...	...	...	...	...	2	...
Syphilis, primary	2,597	262'77	...	1	...	...	...	...	1,158	2	4	529	1
secondary	3,786	309'06	13	343	3	...	...	...	1,279	6	114	1,236	25	
inherited	...	...	...	1	...	...	2	1	...	...	...	...	...
Gonorrhœa	7,624	621'21	1	35	...	...	...	...	2,047	1	11	466	2
Hydrophobia	3	'05	4	...	...	...	...	...	...	...	...	4	4
Anthrax	...	...	...	...	...	...	...	...	...	...	...	3	1
Actinomycosis	...	...	...	...	...	...	...	...	2	...	...	...	...
Bothriocephalus latos	...	...	...	...	...	...	...	...	...	...	...	...	...
liguloides	...	...	...	...	...	...	...	...	...	...	...	12	...
Tænia solium	157	4'83	...	1	4	...	15	...	10	...	...	77	...		
mediocanellata	11	'36	...	...	3	...	3	...	...	...	...	5	...
elliptica	...	...	...	...	...	...	...	...	...	...	...	1	...
Echinococcus hominis	...	...	...	...	...	...	...	...	...	...	...	...	...
Ascaris lumbricoides	3	'08	...	...	...	...	5	...	4	1	...	1	...
Trichocephalus dispar	...	...	...	...	...	...	...	...	1	...	...	78	1
Guinea-worm	2	'01	...	...	...	...	...	...	696	...	3	613	...
Filaria sanguinis hominis	...	...	...	...	...	...	...	...	...	...	...	1	...
Strongylus duodenalis	...	...	...	...	...	...	...	...	...	...	...	...	...
Thread-worm	4	'09	...	...	...	...	2	...	...	...	...	53	14
Musca vomitoria	2	'10	...	...	...	...	...	...	...	...	...	4	...
domestica	...	'03	...	...	...	...	...	...	...	...	...	...	...
Pediculus capitis	...	...	...	...	...	...	...	...	...	...	...	...	...
vestimenti	1	'01	...	...	...	...	1	...	...	...	...	...	...
Phthirus inguinalis	5	'11	...	...	...	...	...	...	...	...	...	4	...
Pulex irritans	...	...	...	...	...	...	...	...	1	...	...	...	...
Culex anxifer	...	...	...	...	...	...	...	...	...	...	...	...	...
Scabies	85	5'30	...	...	1	...	2	...	1,091	...	...	609	...
Ixodes ricinus	...	...	...	...	...	...	...	...	...	...	...	...	...
Galeodes araneoides	...	...	...	...	...	...	...	...	...	...	...	...	...
Leptothrix buccalis	...	...	...	...	...	...	...	...	1	...	...	...	...
Actinomyces	...	...	...	...	...	...	...	...	1	...	...	...	...
Mycetoma	...	...	...	...	...	...	...	...	1	...	...	...	...
Tinea favosa	1	'02	...	...	...	...	...	...	1	...	...	1	...
Ringworm	242	9'38	...	...	...	...	3	...	3	...	...	36	...
Tinea versicolor	28	'94	...	...	...	...	...	...	285	...	1	238	...
Oidium albicans	...	...	...	...	...	...	...	...	...	...	...	1	...
Surfeit	...	...	...	...	...	...	1	...	...	...	...	4	...
Scarvy	4	'17	...	...	...	...	...	...	2	...	...	6	...
Alcoholism	210	7'78	2	1	3	...	...	...	407	14	11	130	10	
Delirium tremens	12	'36	...	...	...	...	...	...	7	1	...	...	...	
Rheumatic fever	54	6'57	1	6	2	...	...	...	...	...	...	...	...
Rheumatism	1,207	87'10	...	65	25	...	4	...	45	3	...	22	1				
									2,093	8	157	1,272	7				

* Axillary, cervical, mesenteric.

DISEASES.	EUROPEAN ARMY OF INDIA.								NATIVE ARMY OF INDIA.			JAIL POPULATION OF INDIA.	
	MEN.				WOMEN.		CHILDREN.		Admissions.	Deaths.	Invalids.	Admissions.	Deaths.
	Admissions.	Constantly sick.	Deaths.	Invalids.	Admissions.	Deaths.	Admissions.	Deaths.					
Gout	8	'62	...	1	...	...	...	11	...	...	1	...
Osteoarthritis	3	'25	...	1	...	...	...	6	...	...	3	...
Cyst	19	'60	...	...	4	...	1	20	1	...	9	...
New growth, non-malignant, not defined	2	'03	...	...	...	...	...	38	...	1	34	...
Pterygium	2	'03	...	...	...	...	...	9	...	...	7	...
Lipoma	6	'46	...	2	...	...	...	3	...	...	10	...
Fibroma	20	'53	...	...	...	...	...	7	...	1	12	...
Chondroma	2	'14	...	...	...	...	...	...	...	...	...	...
Osteoma	5	'56	...	1	...	...	...	3	...	...	...	...
Myxoma	5	'18	...	...	...	...	...	...	...	...	...	...
Mucous polypus	...	...	...	...	...	...	...	...	...	...	2	...
Myoma	1	'02	...	...	...	...	...	...	...	...	...	...
Ecchondrosis	...	...	...	...	...	...	...	...	...	...	...	...
Angioma	...	'38	...	1	...	...	...	1	...	...	...	...
Papilloma	11	'63	...	...	...	...	...	1	...	...	...	...
Warts	193	11'36	...	...	...	...	...	3	...	...	10	...
Condyloma	...	...	...	...	...	...	...	...	...	...	13	...
Adenoma	1	'03	...	...	1	...	...	...	...	1	...	...
New growth, malignant, not defined	...	...	...	...	...	...	...	2	...	...	8	3
Sarcoma	2	'23	1	...	2	...	...	1	...	1	3	2
Carcinoma	...	...	...	...	...	...	...	...	...	...	9	8
Glandular carcinoma	...	...	...	...	1	1	...	...	...	...	...	...
Scirrhous	1	'05	1	...	...	...	...	...	...	...	...	...
Epithelioma	1	'05	...	...	...	...	...	...	...	...	5	2
Rickets	1	'06	...	...	...	...	...	...	...	...	...	...
Anemia	108	8'85	1	20	23	...	7	375	8	10	912	94	
Idiopathic anemia	...	...	...	...	...	...	2	...	...	...	4	3
Purpura	3	'42	1	...	...	...	...	5	...	...	...	...
Leucocythæmia	...	...	...	...	...	...	...	1	...	...	1	...
Hodgkin's disease	1	'02	...	...	...	...	1	3	...	...	2	...
Hæmophilia	...	...	...	...	...	...	...	...	...	...	1	...
Diabetes mellitus	11	2'34	...	7	...	1	1	14	2	3	9	3	
" insipidus	1	'22	...	...	...	...	...	...	...	...	6	3
Immaturity at birth	...	...	...	...	...	17	18	...	...	...	...	...
Congenital malformation, not defined	...	...	...	...	...	...	...	1	...	...	1	...
Single harelip	1	'07	...	...	...	...	...	...	...	...	1	...
Malformation of face	1	'07	...	...	...	...	...	...	...	...	...	...
" of head and heart	...	...	...	...	...	1	1	...	...	...	...	...
Hypospadiac fissure of the urethra	1	'05	...	...	...	...	...	...	...	...	...	...
Spina bifida	...	...	...	...	...	1	1	...	...	...	...	...
Congenital phimosis	9	'84	...	...	...	9	...	...	...	...	...	...
" malformation of testicle	1	'08	...	...	...	...	...	...	...	...	...	...
Debility	1,482	108'13	...	216	874	1	276	1,470	19	384	1,451	84	
Old age	...	...	...	...	...	...	...	1	...	1	93	14
Neuritis	3	'20	...	...	...	...	...	11	...	1	2	...
Multiple neuritis	7	'40	...	2	...	...	2	34	2	...	3	...
Degeneration of the nerves	...	...	...	...	...	...	...	1	...	1	...	...
Pachymeningitis	1	'85	1	...	...	...	...	...	...	...	...	...
Leptomeningitis	...	...	...	...	...	...	...	2	1	...	...	...
Myelitis	1	'10	2	...	...	...	...	5	1	...	...	...
Anterior poliomyelitis	1	'31	1	1	...	...	2	...	...	...	1	1
Progressive muscular atrophy	1	'11	...	...	...	...	...	6	...	2	1	...
Primary lateral sclerosis	1	'24	...	1	...	...	...	...	...	...	2	...
Posterior sclerosis	7	'18	...	5	...	...	...	5	...	4	5	1
Postero-lateral sclerosis	4	'20	...	1	...	...	...	...	...	...	1	...
Disseminated	2	'25	...	1	...	...	...	2	...	...	...	...
Cerebral meningitis	5	'22	4	...	...	6	3	5	5	...	12	12
Pachymeningitis	3	'04	3	...	...	1	1	...	...	...	2	2
Leptomeningitis	2	'16	2	1	...	...	...	...	...	...	1	1
Hæmorrhage into the membranes of the brain	...	...	...	...	...	...	...	1	...	...	2	2
Encephalitis	...	...	...	...	...	...	...	1	...	...	2	2
Abscess of the brain	3	'05	3	...	...	...	...	1	...	1	2	2
Sclerosis	...	...	...	...	...	...	...	...	...	...	...	...
Softening	1	'02	1	...	...	...	...	...	...	...	1	1
Sanguineous apoplexy	2	'14	1	1	...	...	...	3	3	...	11	11
Hyperæmia of the brain	5	'34	2	...	...	...	...	2	...	...	4	3
Anæmia	1	'24	...	2	...	1	...	...	...	...	...	...
Bulbar paralysis	...	...	...	...	...	...	...	...	...	...	1	...
Apoplexy	3	'01	3	...	...	...	...	3	3	...	17	13
Paralysis	...	...	...	...	...	...	...	8	...	1	5	...
Paraplegia	4	'61	...	2	...	...	...	9	...	1	18	1
Hemiplegia	11	2'31	...	4	...	...	...	13	1	6	25	3
Monoplegia	...	...	...	...	...	...	...	3	...	...	...	...
Local paralysis	13	'52	...	1	...	...	...	24	...	1	28	...
Incomplete paralysis	4	'91	...	1	...	...	...	4	...	...	3	...
Paralysis from ague	1	'27	...	...	...	...	...	...	...	...	...	...
Bedsores	...	...	...	...	...	...	...	1	...	...	...	...
Tremor	...	...	...	...	...	...	...	1	...	...	1	...
Paralysis agitans	...	...	...	...	...	...	...	1	...	...	5	...
Chorea	3	'33	...	...	...	...	2	...	...	...	2	...
Spasm	...	...	...	...	...	...	...	1	...	...	...	...
" tonic	4	'30	...	...	...	...	...	...	...	...	...	...
Wry-neck	...	...	...	...	1	...	1	8	...	...	1	...
Facial spasm	...	...	...	...	...	...	...	1	...	...	4	...
Occupation-neurosis	2	'31	...	...	...	...	...	...	...	...	...	...
Infantile convulsions	...	...	...	...	...	24	16	...	...	...	...	...
Puerperal	...	...	...	2	2	...	...	...	...	...	1	1
Epilepsy	81	7'30	1	33	2	4	...	59	1	19	175	11	
Laryngismus stridulus	...	...	...	...	...	5	...	...	...	...	...	...
Vertigo	8	'67	...	...	...	...	...	2	...	2	9	...
Headache	11	'79	...	1	...	...	...	40	...	1	5	...
Megrim	2	'11	...	...	...	...	...	...	...	...	60	...
Hyperæsthesia	...	...	...	...	...	...	...	1	...	...	...	...
Anæsthesia	1	'01	...	...	...	...	...	3	...	1	1	...
Neuralgia	198	9'16	...	1	18	...	...	370	...	14	158	...
Facial hemiatrophy	...	...	...	...	...	...	...	...	...	...	2	...
Hysteria	7	'60	...	2	8	...	...	6	...	1	7	...
Somnambulism	2	'06	...	1	...	...	...	...	...	...	...	...
Aphasia	...	...	...	...	...	...	...	2	...	...	...	...

TABLE LIII—continued.

DETAIL of DISEASES.

DISEASES.	EUROPEAN ARMY OF INDIA.								NATIVE ARMY OF INDIA.			JAIL POPULATION OF INDIA.	
	MEN.				WOMEN.		CHILDREN.		Admissions.	Deaths.	Invalids.	Admissions.	Deaths.
	Admissions.	Constantly sick.	Deaths.	Invalids.	Admissions.	Deaths.	Admissions.	Deaths.					
Stammering	1	'04	...	1	...	...	...	...	...	...	...	...	...
Hiccough . . . . .	...	...	...	...	...	...	...	2	...	...	...	1	...
Nervous weakness	6	'83	...	2	...	...	...	1	...	...	...	1	...
Idiocy . . . . .	...	'12	...	1	...	...	...	...	...	1	...	...	...
Mania	19	4'94	...	15	...	...	...	26	1	4	57	3	...
" puerperal . . . . .	...	...	...	...	1	...	...	...	...	...	...	...	...
Melancholia	46	13'38	...	33	...	...	...	13	...	6	11	...	...
Dementia	22	5'86	...	18	...	...	...	6	...	4	11	2	...
Mental stupor . . . . .	...	...	...	...	...	...	...	...	...	1	...	...	...
General paralysis of the insane	2	'15	...	1	...	...	...	...	...	...	...	...	...
Delusional insanity	11	3'38	...	9	...	...	...	3	...	1	4	...	...
Conjunctivitis	453	22'56	...	2	29	...	192	2,413	...	4	2,016	...	...
Granular conjunctivitis	10	'60	...	2	...	...	...	66	...	8	98	...	...
Echymosis . . . . .	...	...	...	...	...	...	...	2	...	...	2	...	...
Chronic hyperæmia	1	'09	...	1	...	...	...	...	...	...	...	...	...
Keratitis	17	2'00	...	2	...	...	...	57	...	2	38	...	...
Ulcerative keratitis	22	2'51	...	2	...	...	2	187	...	7	227	1	...
Degeneration of the cornea . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	...
Opacity	1	'12	...	...	...	...	...	9	...	6	11	...	...
Acquired deformities of the cornea . . . . .	...	...	...	...	...	...	...	...	...	1	...	...	...
Staphyloma . . . . .	...	...	...	...	...	...	...	...	...	...	3	...	...
Fistula of the cornea . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...
Scleritis	1	'03	...	...	...	...	...	3	...	...	2	...	...
Staphyloma of the sclerotic . . . . .	...	...	...	...	...	...	...	...	...	...	2	...	...
Iritis	30	3'56	...	4	4	...	...	54	...	3	32	...	...
Synechia . . . . .	...	...	...	...	...	...	...	2	...	1	...	...	...
Choroiditis	1	'09	...	...	...	...	...	1	...	...	...	...	...
Glaucoma	1	'05	...	1	...	...	...	4	...	2	2	...	...
Hypopyon . . . . .	...	...	...	...	...	...	...	...	...	...	2	...	...
Optic neuritis	4	'58	...	3	...	...	...	4	...	1	...	...	...
Congestion of optic disc	2	'37	...	...	...	...	...	2	...	...	...	...	...
Atrophy and degeneration of optic nerve	5	'56	...	2	...	...	...	4	...	2	...	...	...
Retinitis	2	'92	...	4	...	...	...	6	...	1	...	...	...
Degeneration and atrophy of retina	1	'04	...	...	...	...	...	...	...	...	...	...	...
Lenticular cataract	1	'46	...	...	...	...	...	4	...	4	39	...	...
Opacities	1	'14	...	...	...	...	...	...	...	...	...	...	...
Panophthalmitis . . . . .	...	...	...	...	...	...	...	2	...	...	3	...	...
Shrunken eyeball . . . . .	...	...	...	...	...	...	...	1	...	1	...	...	...
Amblyopia and amaurosis	5	'80	...	1	...	...	...	15	...	7	1	...	...
Functional sight-blindness	5	'40	...	...	...	...	...	8	...	4	13	...	...
Sympathetic irritation . . . . .	...	'08	...	1	...	...	...	...	...	...	...	...	...
Ametropia . . . . .	...	...	...	...	...	...	...	5	...	1	...	...	...
Myopia	12	'72	...	4	...	...	...	3	...	3	...	...	...
Hypermetropia	12	'76	...	4	...	...	...	1	...	...	...	...	...
Astigmatism	7	'89	...	7	...	...	...	...	...	...	...	...	...
Presbyopia	1	'06	...	...	...	...	...	...	...	...	...	...	...
Asthenopia . . . . .	...	...	...	...	...	...	...	1	...	2	...	...	...
Squint	2	'30	...	...	...	...	...	2	...	...	1	...	...
Nystagmus	1	'13	...	1	...	...	...	...	...	...	...	...	...
Inflammation of lacrymal gland . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	...
Abscess . . . . .	...	...	...	...	...	...	...	...	...	...	2	...	...
Stricture and obliteration of puncta and canaliculi . . . . .	...	...	...	...	...	...	...	3	...	...	...	...	...
Chronic dacryo-cystitis	2	'09	...	...	...	...	...	...	...	...	...	...	...
Abscess of lacrymal sac	3	'19	...	1	...	...	...	1	...	...	3	...	...
Fistula of . . . . .	...	...	...	...	...	...	...	...	...	...	2	...	...
Obstruction of nasal duct	2	'10	...	...	...	...	...	...	...	...	1	...	...
Blepharitis marginalis	26	2'22	...	3	1	...	...	1	...	...	2	...	...
Stye	14	'33	...	...	...	...	...	61	...	...	23	...	...
Abscess of the eyelids	2	'06	...	...	...	...	...	4	...	...	...	...	...
Echymosis	2	'05	...	...	...	...	...	1	...	...	...	...	...
Trichiasis . . . . .	...	...	...	...	...	...	...	...	...	...	7	...	...
Entropion . . . . .	...	...	...	...	...	...	...	...	...	...	10	...	...
Blepharophimosis . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...
Edema of the eyelids	1	'03	...	...	...	...	...	7	...	...	...	...	...
Ptoxis . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	...
Necrosis of the orbital bones . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...
Inflammation of the external ear	529	28'28	...	4	5	...	9	303	...	1	368	...	...
Abscess	14	'56	...	...	...	...	...	6	...	...	4	...	...
Hæmatoma of the auricle . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...
Accumulation in external meatus of wax and epidermis	3	'04	...	...	...	...	...	4	...	...	...	...	...
Inflammation of the middle ear	60	4'53	...	7	...	...	1	61	...	2	40	...	...
" " suppurative	21	1'63	...	7	3	...	...	...	...	...	7	...	...
Ulceration of the membrana tympani	1	'16	...	...	...	...	...	...	...	...	2	...	...
Perforation	102	8'80	...	39	...	...	...	6	...	1	5	...	...
Deafness	22	1'64	...	12	1	...	...	17	...	9	17	...	...
Rhinitis	12	'66	...	...	...	...	...	9	...	...	3	...	...
Coryza	4	'07	...	...	...	...	2	6	...	...	55	...	...
Ozena	2	'13	...	...	1	...	...	...	...	...	26	...	1
Abscess of the nose . . . . .	...	...	...	...	...	...	...	1	...	...	...	...	...
Necrosis and caries of bones of nose . . . . .	...	...	...	...	...	...	...	1	...	...	1	...	...
Diseases of the septum	1	'02	...	...	...	...	...	1	...	...	...	...	...
Epistaxis	9	'28	...	...	...	...	...	9	...	...	42	...	...
Inflammation of the accessory sinuses	1	'02	...	...	...	...	...	1	...	...	...	...	...
Empyema	2	'20	...	...	...	...	...	...	...	...	...	...	...
Inflammation of the naso-pharynx . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...
Hypertrophy of the pharyngeal tonsil . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...
Pericarditis . . . . .	...	'10	...	...	...	...	...	8	2	...	16	10	...
Hydropericardium . . . . .	...	...	...	...	...	...	...	...	...	...	2	2	...
Endocarditis	2	'03	2	...	...	...	...	1	1	...	3	3	...
Valvular disease of the heart	159	19'86	14	93	10	3	...	67	9	19	104	37	...
Abscess of the muscular substance of the heart . . . . .	...	...	...	...	...	...	...	...	...	...	1	1	...
Fatty degeneration of the muscular substance of the heart	2	'05	3	...	1	1	...	3	2	...	17	16	...
Hypertrophy of the heart	5	'35	...	2	...	...	...	1	...	...	4	3	...
Dilatation of the heart	4	'42	1	1	...	...	...	11	2	...	5	5	...
Rupture of the heart . . . . .	...	...	1	...	...	...	...	...	1	...	1	1	...

DISEASES.	EUROPEAN ARMY OF INDIA.											NATIVE ARMY OF INDIA.			JAIL POPULATION OF INDIA.	
	MEN.				WOMEN.		CHILDREN.		Admissions.	Deaths.	Invalids.	Admissions.	Deaths.			
	Admissions.	Constantly sick.	Deaths.	Invalids.	Admissions.	Deaths.	Admissions.	Deaths.								
Thrombus	...	...	...	...	...	...	...	1	1	...	11	12
Embolus	1	'01	1	...	...	...	...	...	...	...	2	1
Angina pectoris	...	...	...	...	...	...	...	1	1	...	1	...
Syncope	1	'01	...	...	1	1	...	4	7	...	8	11		
Disordered action of the heart	407	41'74	...	107	1	...	3	46	...	9	24	1				
Hypertrophy of arteries	...	...	...	...	...	...	...	...	...	...	4	...
Endarteritis obliterans	...	...	...	...	...	...	...	1	...	1	1	...
Dilatation of arteries	...	...	...	...	...	...	...	3	...	...	...	...
Aneurysm of arteries	13	1'31	8	2	...	...	...	8	2	...	5	4	
" by anastomosis	...	...	...	...	...	...	...	1	...	...	...	...
Traumatic aneurysm	...	...	...	...	...	...	...	...	...	...	1	1
Rupture of artery	...	...	2	...	...	...	...	...	...	...	1	2
Thrombosis	1	'01	...	...	...	...	...	1	...	...	3	2
Embolism	1	'13	...	...	1	...	...	1	...	...	3	3
Raynaud's disease	...	...	...	...	...	...	...	1	1	...	...	...	
Phlebitis	22	2'03	...	7	2	...	...	12	...	...	6	1
Obstruction of veins	...	...	...	...	...	...	...	2	...	1	2	1
Thrombosis of	20	1'77	1	7	1	1	...	2	1	1	2	1				
Phlegmasia dolens	5	'12	...	...	3	...	...	1	...	...	1	1
Varix	93	6'20	...	22	3	...	...	26	...	25	5	...		
Arterio-venous aneurysm	...	...	...	...	...	...	...	...	...	1	...	...		
Nævus	...	...	...	...	...	...	...	1	...	...	...	...
Capillary nævus	2	'15	...	...	...	...	...	...	...	...	...	...
Croup	...	...	...	...	...	3	1	...	...	...	...	...
Laryngitis	40	2'07	1	2	...	7	3	113	3	1	11	...				
Edema of the glottis	...	...	...	...	...	...	...	...	...	...	4	2
Aphonia	1	'27	...	1	...	...	...	...	...	...	...	...
Tracheitis	...	...	...	...	...	...	...	2	...	...	...	...
Bronchitis	1,101	59'20	2	13	45	392	13	2,334	33	35	2,796	36				
Dilatation of bronchi	...	...	...	...	...	...	...	...	...	...	3	2
Contraction of	1	'14	...	...	...	...	...	...	...	...	...	...
Spasmodic asthma	26	1'93	...	3	1	...	2	179	1	21	824	12				
Congestion of the lungs	1	'04	...	...	...	...	...	7	...	...	14	8
Hæmoptysis	9	'65	...	1	...	...	...	12	...	...	33	...
Pulmonary apoplexy	...	...	...	...	...	...	...	...	...	...	1	...
Edema of the lungs	...	...	...	...	...	...	...	...	...	...	1	...
Pneumonia	227	22'21	24	9	3	1	26	10	1,808	410	5	1,775	514			
Broncho-pneumonia	14	1'03	1	1	...	...	...	57	16	1	51	7	
Abscess of lung	...	...	...	...	...	...	...	...	...	...	1	...
Gangrene of lung	...	...	...	...	...	...	...	...	...	...	8	8
Cirrhosis of the lungs	2	'14	...	2	...	...	...	1	...	...	2	1
Phthisis	6	'43	...	7	...	1	...	25	6	2	33	8				
Emphysema	6	'64	...	3	...	...	...	8	...	...	4	1
Pleurisy	77	5'75	1	4	4	...	...	228	11	2	332	16		
Empyema	4	'54	...	2	1	1	...	3	2	...	6	4				
Pneumothorax	...	...	...	...	...	...	...	1	...	...	...	...
Adhesions, including thickening and calcification	2	'06	...	...	...	...	...	1	...	1	...	...		
Inflammation of the lips	...	...	...	...	...	...	...	...	...	...	1	...
Ulceration of the lips	...	...	...	...	...	...	...	1	...	...	2	...
Fissure	...	...	...	...	...	...	...	2	...	...	...	...
Stomatitis	7	'29	...	...	...	...	...	...	...	...	43	...
Ulceration of the mouth	6	'36	...	...	...	...	1	57	1	...	57	...
Gangrene	1	'10	...	...	1	1	...	14	...	...	15	7
Disorders of dentition	1	'01	...	...	...	...	...	1	1	...	...	...	
" " with meningitis	...	...	...	...	...	99	10	...	...	...	...	...
" " with convulsions	...	...	...	...	...	1	1	...	...	...	...	...
" " with diarrhoea	...	...	...	...	...	6	5	...	...	...	...	...
" " with convulsions	...	...	...	...	...	4	2	...	...	...	...	...
and diarrhoea	...	...	...	...	...	2	2	...	...	...	...	...
Inflammation of the dental pulp	...	...	...	...	...	...	...	1	...	...	2	...
Caries of dentine	54	2'66	...	14	...	...	...	20	...	...	19	...
Inflammation of the dental periosteum	23	2'25	...	1	1	...	...	4	...	...	2	...
Gum-boil	182	5'29	...	...	2	...	5	153	...	...	277	...
Inflammation of the gums and periosteum	2	'11	...	...	1	...	4	7	...	...	20	...
Suppuration of the periosteum, gums, and alveoli	2	'03	...	...	...	...	...	6	...	...	1	...
Ulceration of the gums and periosteum	3	'17	...	...	...	...	...	2	...	...	109	...
Caries of alveoli	2	'08	...	...	...	...	...	3	...	...	7	...
Necrosis of	5	1'78	...	2	...	...	...	2	...	...	4	1
Malposition of teeth	1	'01	...	1	...	...	...	1	...	...	...	...
Toothache	...	...	...	...	...	...	...	2	...	...	3	...
Glossitis	3	'14	...	...	...	...	...	3	...	...	...	...
Abscess of the tongue	...	...	...	...	...	...	...	1	...	...	...	...
Ulceration	...	...	...	...	...	...	...	9	...	...	12	...
Sore throat	730	25'67	...	...	20	...	32	1	144	1	124	...		
Ulceration of the palate and fauces	5	'26	...	...	...	...	13	3	...	...	2	...
Follicular tonsillitis	574	18'59	...	...	25	...	41	1	245	...	64	2		
Quinsy	...	...	...	...	...	...	...	2	...	...	30	1
Hypertrophy of the tonsils	6	'28	...	...	...	...	1	...	...	...	...	...
Elongated uvula	1	'03	...	...	...	...	...	1	...	...	2	...
Inflammation of the salivary glands	3	'07	...	...	...	...	...	17	...	...	18	...
Salivation	...	...	...	...	...	...	...	1	...	...	3	...
Inflammation of the pharynx	...	...	...	...	...	...	...	45	...	...	11	1
Post-pharyngeal abscess	1	'06	...	...	...	...	...	1	...	...	...	...
Ulceration of the pharynx	...	...	...	...	...	...	...	1	...	...	...	...
Gastritis	56	3'37	1	4	10	...	5	1	43	3	42	3				
Ulceration of the stomach	4	'34	2	...	...	...	...	...	1	...	9	4
" " perforating	...	...	...	...	2	...	...	...	1	1	1	...
Gastric fistula	...	...	...	...	...	...	...	...	...	...	1	...
Hæmatemesis	3	'16	1	...	...	...	...	3	1	1	12	1
Melæna	1	'01	...	...	...	...	...	...	...	...	3	...
Dilatation of the stomach	3	'52	...	...	...	...	...	1	...	...	1	...
Stricture of the pylorus	...	...	...	...	...	...	...	...	...	...	1	...
Indigestion	536	20'19	...	3	57	...	13	...	234	1	938	1				
Pyrosis	4	'14	...	...	...	...	...	...	...	...	...	...
Vomiting	...	...	...	...	2	...	...	...	...	...	...	...
Gastralgia	2	'05	...	...	...	...	...	2	...	...	...	...
Heartburn	1	'04	...	...	...	...	...	...	...	...	...	...
Excessive appetite	...	...	...	...	...	...	...	...	...	...	4	...

EUROPEAN ARMY OF INDIA.

DISEASES.	EUROPEAN ARMY OF INDIA.								NATIVE ARMY OF INDIA.			JAIL POPULATION OF INDIA.	
	MEN.				WOMEN.		CHILDREN.		Admissions.	Deaths.	Invalids.	Admissions.	Deaths.
	Admissions.	Constantly sick.	Deaths.	Invalids.	Admissions.	Deaths.	Admissions.	Deaths.					
Paraphimosis	7	'19	...	...	...	...	...	13	...	...	10	...
Balanitis	98	3'54	...	...	...	...	1	5	...	...	5	...
Abscess of the penis	2	'07	...	...	...	...	...	...	...	...	1	...
Ulcer	108	7'97	...	...	...	...	...	95	...	...	24	...
Edema . . . . .	...	...	...	...	...	...	...	2	...	...	...	...
Soft chancre	4,042	347'29	...	...	...	...	...	762	...	...	107	...
Inflammation of the scrotum . . . . .	...	...	...	...	...	...	...	1	...	...	2	...
Abscess	6	'36	...	...	...	...	...	2	...	...	15	...
Sloughing	1	'11	...	...	...	...	...	1	...	...	3	...
Edema . . . . .	...	...	...	...	...	...	...	1	...	...	...	...
Soft chancre . . . . .	...	...	...	...	...	...	...	1	...	...	...	...
Pruritus . . . . .	...	...	...	...	...	...	...	1	...	...	1	...
Inflammation of the spermatic cord	6	'34	...	...	...	...	...	1	...	...	3	...
Hydrocele . . . . .	...	...	...	...	...	...	...	4	...	...	24	...
Hæmatocele . . . . .	...	...	...	...	...	...	...	1	...	...	1	...
Varicocele	22	1'15	...	...	...	...	...	2	...	1	2	...
Hæmatocele of the tunica vaginalis	1	'17	...	...	...	...	...	...	...	...	6	...
Hydrocele	30	2'80	...	2	...	...	2	49	...	3	166	1
Inflammation of the testicle . . . . .	...	...	...	...	...	...	...	...	...	...	120	...
Orchitis	412	26'08	...	3	...	...	...	279	...	2	55	...
Epididymitis	51	1'58	...	1	...	...	...	11	...	...	6	...
Abscess of the testicle	4	'65	...	1	...	...	...	1	...	...	1	...
Protrusion of tubuli	1	'12	...	...	...	...	...	...	...	...	...	...
Atrophy of	2	'04	...	...	...	...	...	...	...	...	...	...
Inflammation of the ovary . . . . .	...	...	...	10	...	1	...	...	...	...	...	...
Inflammation of Fallopian tube . . . . .	...	...	...	2	...	...	...	...	...	...	1	...
Parametritis . . . . .	...	...	...	3	...	...	...	...	...	...	2	...
Metritis . . . . .	...	...	...	25	...	...	...	...	...	...	1	...
Ulcer of the uterus . . . . .	...	...	...	9	...	...	...	...	...	...	1	...
Subinvolution of the uterus . . . . .	...	...	...	2	...	...	...	...	...	...	...	...
Abrasion . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Displacements and distortions of the uterus . . . . .	...	...	...	3	...	...	...	...	...	...	2	...
Retroversion of the uterus . . . . .	...	...	...	5	...	...	...	...	...	...	...	...
Retroflexion . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Prolapsus . . . . .	...	...	...	3	...	...	...	...	...	...	2	...
Utero-vesical fistula . . . . .	...	...	...	1	...	...	...	...	...	...	1	...
Laceration and rupture of the cervix . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Inflammation of the vagina . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Inflammation of the vulva . . . . .	...	...	...	...	...	3	...	...	...	...	...	...
Ulcer . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Amenorrhœa . . . . .	...	...	...	3	...	...	...	...	...	...	1	...
Scanty menstruation . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Dysmenorrhœa . . . . .	...	...	...	5	...	...	...	...	...	...	3	...
Menorrhagia . . . . .	...	...	...	23	...	...	...	...	...	...	5	...
Metrorrhagia . . . . .	...	...	...	25	...	...	...	...	...	...	8	...
Leucorrhœa . . . . .	...	...	...	3	...	...	...	...	...	...	...	...
Neuralgia of the uterus . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Cramp and spurious labour pains . . . . .	...	...	...	14	...	...	...	...	...	...	...	...
Menstruation . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Hæmorrhage from the uterus (699) . . . . .	...	...	...	9	...	...	...	...	...	...	...	...
Abortion . . . . .	...	...	...	93	...	...	...	...	...	...	14	...
Missed labour . . . . .	...	...	...	...	...	...	...	...	...	...	1	...
Mechanical obstacle to the expulsion of the fœtus . . . . .	...	...	...	1	...	...	...	...	...	...	2	...
Hæmorrhage, unavoidable, from placenta prævia . . . . .	...	...	...	...	...	...	...	...	...	...	1	1
Hæmorrhage, accidental, from detachment of placenta . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Rupture of the perineum . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Retention of the placenta . . . . .	...	...	...	2	...	...	...	...	...	...	1	...
Still-birth . . . . .	...	...	...	3	...	...	...	...	...	...	...	...
Asphyxia of infant . . . . .	...	...	...	...	...	2	2	...	...	...	...	...
Metritis . . . . .	...	...	...	3	...	...	...	...	...	...	...	...
Sudden death after delivery . . . . .	...	...	...	1	1	...	...	...	...	...	...	...
Inflammation of the nipple and areola . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Sore nipples . . . . .	...	...	...	1	...	...	...	...	...	...	...	...
Abscess of the areola . . . . .	...	...	...	3	...	...	...	...	...	...	...	...
Mastitis . . . . .	...	...	...	2	...	...	...	...	...	...	...	...
" puerperal . . . . .	...	...	...	5	...	...	...	...	...	...	...	...
Suppuration of mammary gland . . . . .	...	...	...	4	...	...	...	...	...	...	...	...
" " puerperal . . . . .	...	...	...	7	...	...	...	...	...	...	1	...
Sinus . . . . .	...	...	...	...	...	...	...	...	...	...	3	...
Inflammation of the male breast	3	'19	...	...	...	...	...	...	...	...	...	...
Ostitis	3	'61	...	2	...	...	...	15	...	2	5	...
Septic osteo-myelitis . . . . .	...	...	...	...	...	...	...	...	...	...	1	1
Periostitis	24	2'18	...	1	...	1	...	60	...	3	12	...	
" circumscribed	9	'92	...	...	...	...	...	2	...	...	...	...
Chronic abscess of bones	1	'02	...	...	...	...	...	1	...	...	...	...
Caries of bones	5	1'08	...	1	...	...	...	12	...	3	12	1
Necrosis of	4	'12	...	1	...	...	...	11	1	2	38	1
Un-united fracture or false joint	1	'41	...	...	...	...	...	1	...	...	...	...
Inflammation of joints, not defined . . . . .	...	...	...	...	...	...	...	1	1	...	...	...
Synovitis	356	22'35	...	19	...	1	...	430	...	11	172	4	
Ankylosis	13	1'39	...	5	...	...	...	5	...	3	3	...
Dislocation of articular cartilage	21	1'48	...	3	...	...	...	1	...	...	...	...
Loose body	1	'03	...	...	...	...	...	...	...	...	...	...
Relaxation of ligaments	30	'48	...	2	...	...	...	...	...	...	...	...
Dislocation of joints . . . . .	...	...	...	...	...	...	...	...	...	...	3	...
Inflammation of the spine	2	'37	...	1	...	...	...	1	...	...	...	...
Caries . . . . .	...	...	...	...	...	...	...	1	1	...	...	...
Psoas, lumbar, post-pharyngeal, abscesses . . . . .	...	'26	...	...	...	...	...	2	...	...	...	...
Posterior curvature of the spine	1	'20	...	1	...	...	...	1	...	...	...	...
Angular . . . . .	...	...	...	...	...	...	...	...	...	...	2	...
Lateral	1	'02	...	1	...	...	...	1	...	3	...	...
Inflammation of muscles	2	'19	...	1	...	...	...	3	...	...	2	...
Suppuration . . . . .	...	'03	...	...	...	...	...	1	...	...	...	...
Atrophy of muscles	2	'24	...	1	...	...	...	3	...	1	...	...
Contracture . . . . .	...	...	...	...	...	...	...	1	...	...	...	...
Idiopathic muscular atrophy . . . . .	...	...	...	...	...	...	...	3	...	6	...	...

TABLE LIII—continued.

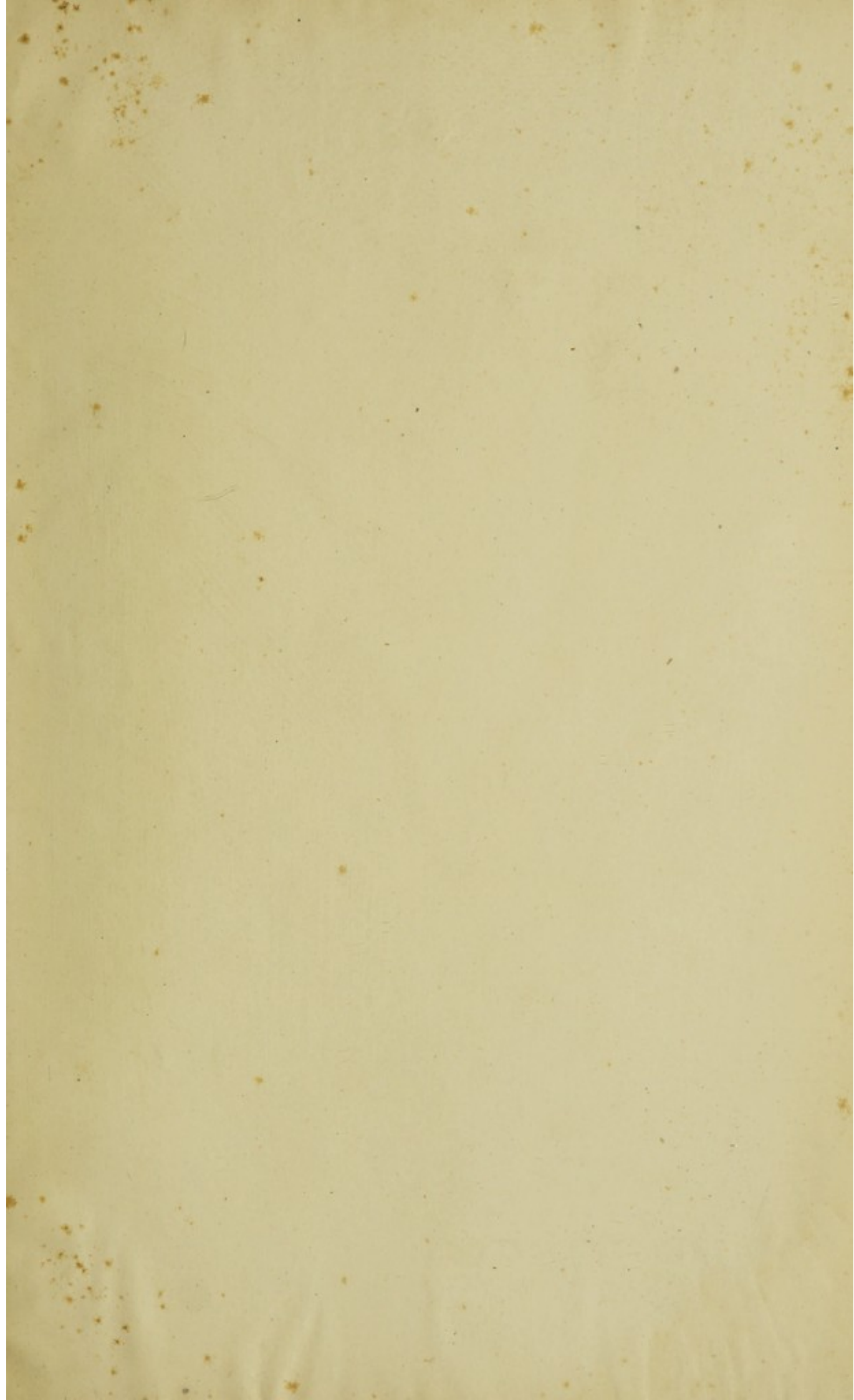
DETAIL of DISEASES.

DISEASES.	EUROPEAN ARMY OF INDIA.								NATIVE ARMY OF INDIA.			JAIL POPULATION OF INDIA.	
	MEN.				WOMEN.		CHILDREN.		Admissions.	Deaths.	Invalids.	Admissions.	Deaths.
	Admissions.	Constantly sick.	Deaths.	Invalids.	Admissions.	Deaths.	Admissions.	Deaths.					
Myalgia	96	4'07	...	1	4	...	1	...	362	...	19	128	...
Inflammation of fasciæ	1	'10	...	...	...	...	...	...	...	...	...	...	...
Contracture	1	'22	...	...	...	...	...	...	2	...	1	1	...
Gangrene of tendons . . . . .	...	...	...	...	...	...	...	...	...	...	...	1	...
Adhesion	2	'10	...	...	...	...	...	...	1	...	...	...	...
Contraction	11	'03	...	2	...	...	...	...	6	...	1	...	...
Tenosynovitis . . . . .	...	...	...	...	...	...	...	...	7	...	...	1	...
Thecal abscess	1	'06	...	...	...	...	...	...	1	...	...	9	...
Ganglion	5	'17	...	...	...	...	...	...	11	...	...	2	...
Inflammation of bursa	24	1'23	...	1	1	...	...	...	23	...	...	1	...
Abscess . . . . .	...	...	...	...	...	...	...	...	1	...	...	1	...
Bunion	15	'74	...	4	...	...	...	...	2	...	...	...	...
Bursal cyst	3	'21	...	...	...	...	...	...	2	...	...	...	...
Club-hand . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
Club-foot	2	'11	...	3	...	...	...	...	1	...	...	...	...
Flat-foot	11	'65	...	5	...	...	...	...	6	...	3	...	...
Deformities of the great toe	3	'07	...	...	...	...	...	...	...	...	1	...	...
Hammer toe	22	2'63	...	...	...	...	...	...	...	...	...	...	...
Inflammation of the connective tissue	480	23'41	2	1	4	...	7	...	431	4	3	455	7
Abscess	713	49'31	...	5	9	...	15	...	1,574	4	4	4,208	9
Gangrene . . . . .	...	...	...	...	...	...	...	...	2	...	...	12	4
Edema	3	'23	...	...	1	...	...	...	33	...	...	20	3
Elephantiasis . . . . .	...	...	...	...	...	...	...	...	...	...	...	9	...
Emphysema	1	'01	...	...	...	...	...	...	...	...	...	...	...
Undue formation of fat	1	'02	...	1	...	...	...	...	3	...	...	...	...
Erythema	9	'26	...	...	...	...	...	...	7	...	...	5	...
Roseola	2	'30	...	...	...	...	...	...	3	...	...	...	...
Pityriasis rosea	1	'03	...	...	...	...	...	...	...	...	...	...	...
Urticaria	21	'36	...	...	3	...	9	...	61	...	...	122	...
Prickly heat	25	'62	...	...	...	...	...	...	8	...	...	15	...
Eczema	322	17'62	...	1	2	...	20	...	474	...	1	328	...
Impetigo	26	1'22	...	...	...	...	...	...	39	...	...	21	...
Pityriasis rubra	1	'04	...	...	...	...	...	...	2	...	...	1	...
Prurigo	1	'01	...	...	...	...	...	...	14	...	...	5	...
Lichen	2	'14	...	...	...	...	...	...	3	...	...	6	...
Psoriasis	37	2'65	...	...	...	...	...	...	17	...	...	31	...
Miliaria	2	'05	...	...	...	...	...	...	2	...	...	...	...
Herpes	34	1'22	...	...	1	...	1	...	77	...	...	50	...
Zona	17	'67	...	...	...	...	...	...	77	...	...	49	...
Pemphigus	42	1'18	...	...	1	...	2	...	7	...	...	10	1
Dermatitis herpetiformis	1	'01	...	...	...	...	...	...	1	...	...	5	...
Acne	5	'33	...	...	...	...	...	...	11	...	...	6	...
Sycosis	12	'52	...	...	...	...	...	...	6	...	...	1	...
Seborrhea . . . . .	...	...	...	...	...	...	...	...	...	...	...	1	...
Scleroderma . . . . .	...	...	...	...	...	...	...	...	1	...	...	2	...
Leucoderma . . . . .	...	...	...	...	...	...	...	...	2	...	...	2	...
Chloasma	1	'04	...	...	...	...	...	...	...	...	...	...	...
Alopecia	2	'14	...	...	...	...	...	...	...	...	...	...	...
Area	1	'07	...	...	...	...	...	...	...	...	...	...	...
Chilblain . . . . .	...	...	...	...	...	...	...	...	1	...	...	1	...
Ulcer	526	31'33	...	2	13	...	5	...	3,159	...	7	3,522	1
Cicatrices	1	'10	...	...	...	...	...	...	1	...	...	2	...
Boil	1,131	45'44	...	1	7	...	24	...	2,860	...	...	2,149	2
Carbuncle	9	'79	1	...	...	...	...	...	40	...	...	208	2
Gangrene . . . . .	...	...	...	...	...	...	...	...	1	...	...	2	2
Whitlow	195	7'88	...	...	1	...	1	...	460	1	...	526	...
Onychia	196	9'44	...	...	...	...	1	...	18	...	...	23	...
Keratosis pilaris . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
Tylosis . . . . .	...	...	...	...	...	...	...	...	3	...	...	...	...
Corn	24	'84	...	...	...	...	...	...	10	...	...	4	...
Cheloid	1	'12	...	...	...	...	...	...	...	...	...	1	...
Wen	35	1'69	...	...	...	...	...	...	5	...	...	18	...
Hyperidrosis	2	'07	...	...	...	...	...	...	2	...	...	...	...
Bromidrosis	4	'23	...	...	...	...	...	...	...	...	...	...	...
Lupus	11	2'68	...	2	...	...	...	...	1	...	...	3	...
Delhi boil	7	'75	...	2	...	...	...	...	11	...	...	1	...
Mycosis fungoides . . . . .	...	...	...	...	...	...	...	...	...	...	...	1	...
ACCIDENTAL :—													
Heat-stroke	95	4'65	7	2	1	1	2	1	8	4	...	114	21
Sun-stroke	12	'60	1	1	...	...	2	...	17	5	...	61	22
Heat-apoplexy	67	2'45	32	1	...	...	...	...	7	6	...	53	30
Effects of cold . . . . .	...	...	...	...	...	...	...	...	1	1	...	...	...
Effects of chemical irritants and corrosives	3	'11	1	...	...	...	...	...	...	...	...	...	...
Lightning stroke . . . . .	...	...	...	...	...	...	...	...	4	1	...	...	...
Multiple injury	12	1'16	5	1	...	...	...	...	2	2	...	50	1
Suffocation from submersion	1	'01	11	...	...	...	...	...	1	11	...	1	3
Suffocation from plugging of air-passages with foreign substances . . . . .	...	...	1	...	...	...	...	...	...	...	...	2	3
Starvation . . . . .	...	...	...	...	...	...	...	...	2	1	...	32	...
Exhaustion . . . . .	...	...	...	...	...	...	...	...	2	...	...	...	...
Shock . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	2
Burns and scalds (general and local)	55	2'09	...	...	...	...	16	1	290	...	1	272	2
Frost-bite . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
Abrasions	543	16'62	...	1	1	...	2	...	1,560	...	...	49	...
Brush-burn	1	'01	...	...	...	...	...	...	...	...	...	...	...
Contusions	1,315	53'68	...	4	6	...	10	...	2,510	1	5	1,184	3
Wounds	1,434	64'49	...	12	8	...	24	...	2,649	...	7	3,871	8
" gunshot	44	4'87	...	9	...	...	...	...	57	4	10	19	3
" with loss of substance due to explosion	1	'31	...	1	...	...	...	...	...	...	...	...	...
Strains and sprains	1,595	73'74	...	6	9	...	5	...	1,272	...	8	260	...
Dislocations	50	4'10	...	1	...	...	2	...	85	...	6	33	...
Rupture of muscles, tendons, and ligaments	3	'19	...	1	...	...	...	...	7	...	...	1	...
Fracture of the vault of the skull	2	'41	1	1	...	...	...	...	4	2	...	4	2
" of the base of the skull	5	'54	7	...	...	...	...	...	5	4	...	2	2

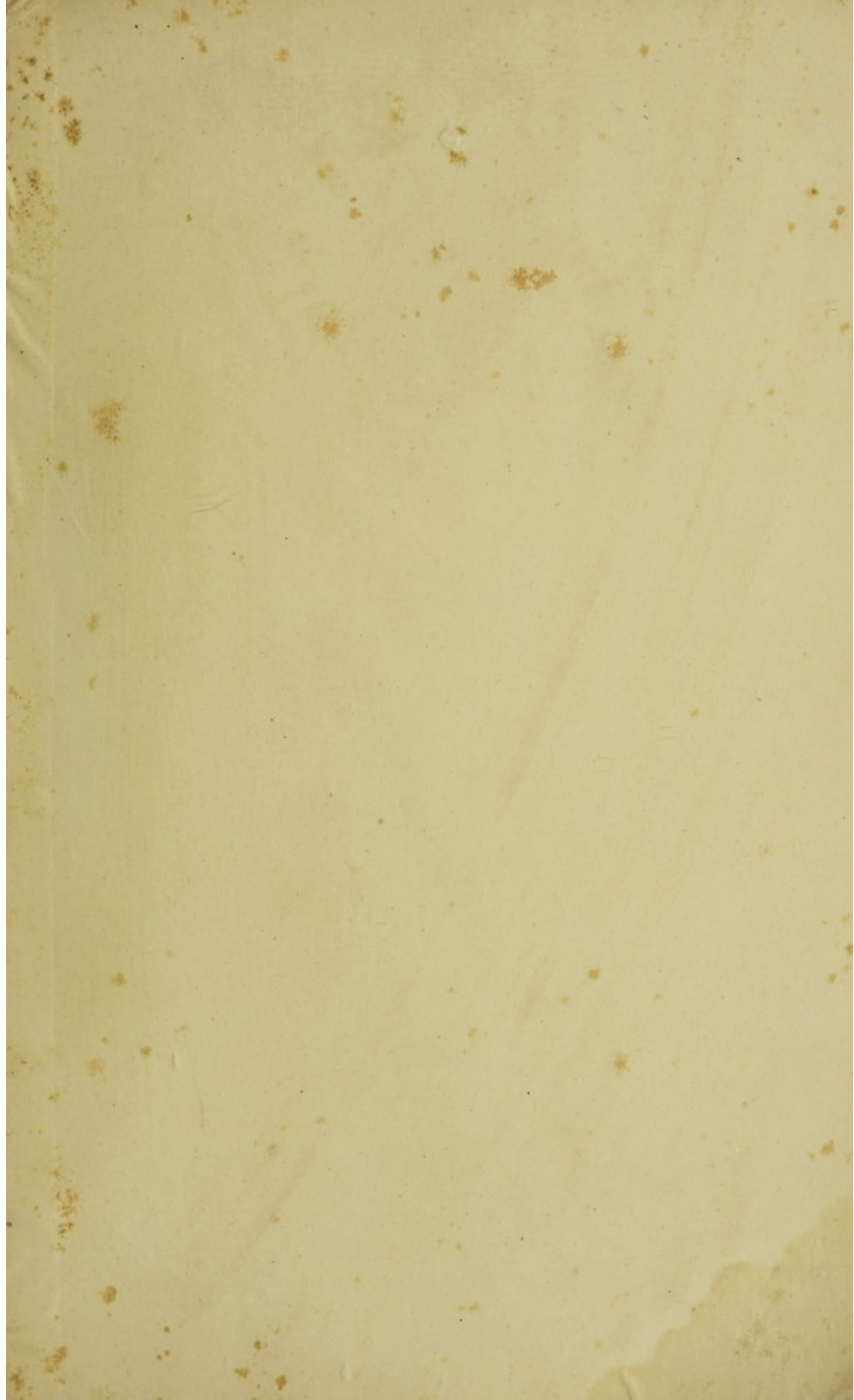
DISEASES.	EUROPEAN ARMY OF INDIA.								NATIVE ARMY OF INDIA.			JAIL POPULATION OF INDIA.	
	MEN.				WOMEN.		CHILDREN.		Admissions.	Deaths.	Invalids.	Admissions.	Deaths.
	Admissions.	Constantly sick.	Deaths.	Invalids.	Admissions.	Deaths.	Admissions.	Deaths.					
ACCIDENTAL—contd.													
Fracture of other bones	273	33'32	...	20	3	...	16	...	305	1	20	463	12
Foreign bodies in tissues and organs	8	'30	...	...	...	...	...	...	16	...	...	18	...
Effects of irritants and corrosives . . .	1	'07	...	...	...	...	...	...	5	...	...	3	...
" mechanical injury . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
Fracture of the spine	1	'01	1	...	...	...	...	...	...	...	...	...	...
Compression of nerves . . . . .	...	'10	...	...	...	...	...	...	...	...	...	...	...
Wound of skull with wound of the brain	...	...	...	...	...	...	...	...	...	...	...	...	...
Concussion of the brain	24	1'14	...	1	...	...	1	...	40	1	2	5	2
Contusion of the brain . . . . .	...	'01	...	...	...	...	...	...	1	...	...	2	1
Compression of the brain	1	'01	...	...	...	...	...	...	1	1	...	2	1
Chemical injuries of eye	2	'04	...	...	...	...	...	...	...	...	...	...	...
Sub-conjunctival hæmorrhage . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
Contusion of the eyeball . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
Wound of eyeball (sclerotic) . . . . .	...	...	...	...	...	...	...	...	2	...	...	...	...
Wound of the eyeball with injury to iris . . . . .	...	...	...	...	...	...	...	...	2	...	...	...	...
Loss of right eye . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...
Foreign body in food-passages	3	'15	...	...	...	...	1	...	...	...	...	...	...
Rupture of lung without wound or fracture	...	...	...	...	...	...	...	...	1	...	...	...	...
Fracture of the spine with displacement	...	...	...	...	...	...	...	...	1	1	...	...	...
Simple fracture of the spine (cervical) with compression of cord	1	'12	1	...	...	...	...	...	...	...	...	...	...
Concussion of the spinal cord	3	'40	1	2	...	...	...	...	...	...	...	2	1
Contusion of abdomen with rupture of viscera	1	'06	1	...	...	...	...	...	...	...	...	...	...
Rupture of the spleen with contusion of abdominal parietes	...	...	...	...	...	...	...	...	1	1	...	...	...
Rupture of viscera . . . . .	...	...	...	...	...	...	...	...	2	1	...	1	1
" of spleen	1	'04	1	...	...	...	...	...	...	...	...	...	...
" of urethra . . . . .	...	'01	1	...	...	...	...	...	...	...	...	...	...
Foreign bodies in the alimentary canal . . . . .	...	...	...	...	...	...	1	...	...	...	...	...	...
Separation of epiphyses . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Internal derangement of joints	3	'39	...	1	...	...	...	...	...	...	...	...	...
Dislocation of fibula and foot, with fracture	1	'03	...	...	...	...	...	...	...	...	...	...	...
Killed by a tiger . . . . .	...	...	...	...	...	...	...	...	...	1	...	...	...
Killed by the fall of a turret . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1
Not defined . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	1
POISON :—													
" arsenic . . . . .	...	...	...	...	...	...	...	...	3	2	...	2	1
" copper	1	'02	...	...	...	...	...	...	10	...	...	...	...
" lead	1	'01	1	...	...	...	...	...	...	...	...	...	...
" mercury	1	'05	...	...	...	...	...	...	8	1	...	2	1
" alkaline salts . . . . .	...	...	...	...	...	...	...	...	...	...	...	2	2
" iodine . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
" alcohol	1	...	2	...	...	...	...	...	...	...	...	2	...
" capsicum . . . . .	...	...	...	...	...	...	...	...	...	...	...	2	...
" castor-oil seeds . . . . .	...	...	...	...	...	...	...	...	2	...	...	...	...
" croton oil . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
" Indian hemp . . . . .	...	...	...	...	...	...	...	...	...	...	...	4	...
" bhanga . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
" lathyrus . . . . .	...	...	...	...	...	...	...	...	...	...	...	1	...
" opium . . . . .	...	...	...	...	...	...	1	1	1	...	...	13	2
" poisonous fungi	2	'03	1	...	...	...	...	...	1	...	...	1	...
" squill . . . . .	...	...	...	...	...	...	...	...	...	...	...	1	...
" thorn apple . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
" decayed and poisonous food	4	'05	...	...	...	...	...	...	...	...	...	...	...
" ptomaines	11	'22	4	...	...	...	...	...	...	...	...	...	...
" chloroform vapour	1	...	1	...	...	...	...	...	...	...	...	...	...
" vegetable, not defined . . . . .	...	...	...	...	...	...	3	2	1	1	...	...	...
POISONED WOUNDS :—													
Poisoned wound, not defined . . . . .	...	...	...	...	...	...	...	...	3	...	...	...	...
" " by snakes	1	'01	...	...	...	...	...	...	12	1	...	14	1
" " scorpions . . . . .	...	...	...	...	...	...	...	...	10	...	...	28	...
" " centipedes . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
" " lizard . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
" " leech . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...
" " stinging insects	2	'08	...	...	...	...	...	...	3	...	...	...	...
" " fish	1	'05	...	...	...	...	...	...	1	...	1	3	...
" " dog	69	2'08	...	32	...	...	1	...	5	...	...	...	...
" " jackal . . . . .	...	'01	...	...	...	...	...	...	...	...	...	...	...
" " leopard	1	'05	...	...	...	...	...	...	...	...	...	...	...
" " monkey	1	'03	...	...	...	...	...	...	...	...	...	...	...
" " bite of man	1	'20	...	...	...	...	...	...	...	...	...	...	...
" " irritation caused by wrist band buckle	1	'05	...	...	...	...	...	...	...	...	...	...	...
" " septic matters	1	'07	...	...	...	...	...	...	8	...	...	1	...
" " vegetable substances	3	'11	...	...	...	...	...	...	...	...	...	...	...
" " subcutaneous injection (plague inoculation) . . . . .	...	...	...	...	...	...	...	...	1	...	...	...	...

DISEASES.	TROOPS ON FIELD SERVICE.				DISEASES.	TROOPS ON FIELD SERVICE.			
	EUROPEAN TROOPS.		NATIVE TROOPS.			EUROPEAN TROOPS.		NATIVE TROOPS.	
	Admissions.	Deaths.	Admissions.	Deaths.		Admissions.	Deaths.	Admissions.	Deaths.
Granular conjunctivitis . . . . .	...	...	1	...	Epididymitis . . . . .	...	...	1	...
Keratitis . . . . .	...	...	2	...	Periostitis . . . . .	...	...	4	...
Ulcerative keratitis . . . . .	...	...	11	...	Synovitis	7	...	24	...
Iritis . . . . .	...	...	3	...	Caries . . . . .	...	...	1	...
Lenticular cataract . . . . .	...	...	2	...	Necrosis . . . . .	...	...	1	...
Abscess of the eyelids	1	...	...	...	Atrophy of muscles . . . . .	...	...	2	...
Inflammation of the external meatus	6	...	13	...	Myalgia	1	...	3	...
Abscess of the external meatus . . . . .	...	...	1	...	Inflammation of tendons . . . . .	...	...	1	...
Hæmatoma of the auricle . . . . .	...	...	1	...	Bursitis . . . . .	...	...	1	...
Inflammation of the middle ear . . . . .	...	...	2	...	Inflammation of the connective tissue	3	...	18	...
Deafness	1	...	...	...	Abscess of the connective tissue	16	...	79	...
Pericarditis . . . . .	...	...	2	...	Gangrene of the connective tissue . . . . .	...	...	1	...
Valvular disease of the heart	4	...	2	...	Urticaria . . . . .	...	...	5	...
Disordered action of the heart . . . . .	...	...	1	...	Eczema	3	...	9	...
Thrombosis . . . . .	...	...	1	...	Impetigo . . . . .	...	...	1	...
Varix	4	...	1	...	Herpes . . . . .	...	...	7	...
Laryngitis . . . . .	...	...	26	...	Ulcer	7	...	126	...
Bronchitis	40	...	602	11	Boil	19	...	53	...
Spasmodic asthma	1	...	12	1	Carbuncle . . . . .	...	...	1	...
Hæmoptysis	1	...	1	...	Whitlow	2	...	14	...
Pneumonia	3	...	227	35	Onychia	1	...	...	...
Broncho-pneumonia . . . . .	...	...	2	1					
Phthisis . . . . .	...	...	2	...	Accidental :—				
Pleurisy	5	...	32	3	Heat-stroke	1	...	1	...
Stomatitis . . . . .	...	...	2	...	Sun-stroke	3	1	38	1
Caries of dentine	1	...	...	...	Multiple injury	1	...	...	...
Gum-boil . . . . .	...	...	6	...	Suffocation from submersion . . . . .	...	1	...	2
Sorethroat	7	...	9	...	Burns and scalds (general and local)	13	7	44	21
Tonsillitis	5	...	10	...	Exhaustion . . . . .	...	...	1	...
Inflammation of the pharynx . . . . .	...	...	1	...	Contusions	15	...	57	...
Indigestion	5	...	32	...	Strains and sprains	14	...	25	...
Vomiting . . . . .	...	...	4	...	Wounds	15	...	61	...
Inflammation of the intestines . . . . .	...	...	1	...	Gunshot wounds	13	2	27	3
Enteritis . . . . .	...	...	4	...	Foreign body in the connective tissue . . . . .	...	...	1	...
Typhlitis	1	...	2	...	Chilblain . . . . .	...	...	13	...
Sprue	1	...	...	...	Frost-bite . . . . .	...	...	9	...
Hernia	2	...	3	...	Abrasions	6	...	24	...
Constipation	1	...	3	...	Fractures . . . . .	...	...	11	1
Colic	5	...	13	...	Fracture of the base of the skull	1	...	...	1
Diarrhoea	56	...	116	4	Dislocations . . . . .	...	...	2	1
Fissure of the anus . . . . .	...	...	1	...	Concussion of the brain . . . . .	...	...	1	1
Fistula in ano	1	...	5	...	Poison, alcohol	1	1	...	1
Piles	6	...	13	...	" opium . . . . .	...	...	1	1
Hepatitis	10	1	4	...	Poisoned wounds by stinging insects . . . . .	...	...	2	...
Abscess of the liver	2	1	...	...			
Congestion of the liver	3	...	3	...	In action—				
Jaundice	11	...	30	1	Gunshot wound . . . . .	...	1	42	6
Splenitis . . . . .	...	...	4	...	No appreciable disease	1	...	1	...
Inflammation of lymph glands	7	...	17	...	Not yet diagnosed	12	...	5	...
Suppuration	2	...	1	...					
Acute nephritis . . . . .	...	...	2	1					
Calculus in ureter . . . . .	...	...	1	...					
Chyluria . . . . .	...	...	1	...					
Inflammation of the bladder . . . . .	...	...	2	...					
Incontinence of urine	1	...	...	...		
Stricture of the urethra	2	...	2	...					
Phimosis . . . . .	...	...	1	...					
Balanitis . . . . .	...	...	1	...					
Ulcer of the penis	1	...	7	...					
Soft chancre of the penis	14	...	51	...					
Orchitis	4	...	10	...					
					GRAND TOTAL	669	28	4,564	128

STATION		DATE		TIME		WIND		TEMPERATURE		HUMIDITY		PRESSURE		SEA		SKY		REMARKS		
No.	Name	Day	Month	Hour	Minute	Dir.	Force	Air	Sea	Rel.	Bar.	Ther.	Wind	State	Height	Direction	Amount	Direction	Amount	
1																				
2																				
3																				
4																				
5																				
6																				
7																				
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ANNUAL REPORT
OF THE
SANITARY COMMISSIONER WITH THE
GOVERNMENT OF INDIA,

1900,

WITH

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



CALCUTTA:
OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA.
1901.