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REPORT

ON THE

SANITARY ADMINISTRATION OF THE PUNJAB

AND

PROCEEDINGS OF THE SANITARY BOARD

FOR THE YEAR 1903.

BY

LIEUT.-COLONEL C. J. BAMBER, I.M.S., D.P.H., CAMB.,

FELLOW OF THE ROYAL STATISFICAL SOCIETY,

Sanitary Commissioner, Punjab,

AND

THE REPORT ON SANITARY WORKS

FOR 1903.

BY

C. E. V. GOUMENT, ESQUIRE, A.M.I.C.E.,

Sanitary Engineer, Punjab.

Price Re. 1-0-0 or 1s. 6d.

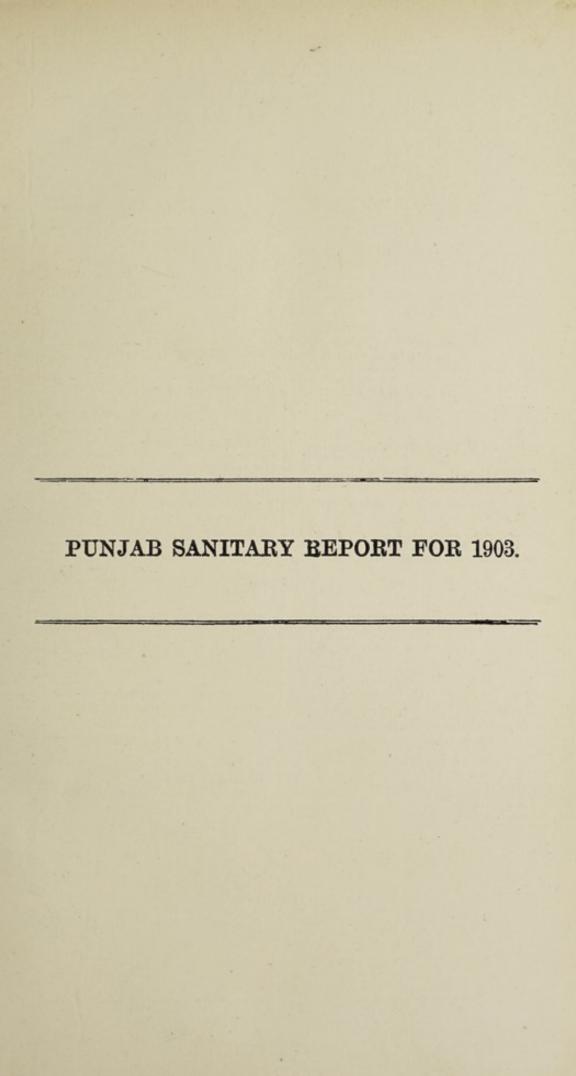


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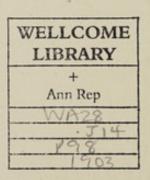


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No Remarks.

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No Remarks.

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No Remarks.

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Proceedings of the Hea'ble the Lieutenant-Governor of the Penjab in the Home (Medical and Sanitary) Department, No. 711 S., dated 30th June 1904.

READ-

The Report of the Sanitary Administration of the Punjab and the Preceedings of the Sanitary Board for the year 1903, by Lieutenant-Colonel C. J. Bamber, I.M.S., Sanitary Commissioner, Punjab, and the Report on Sanitary Works for 1903, by Mr. C. E. V. Goument, A.M. I.C.E., Sanitary Engineer, Punjab.

REMARKS .- The death-rate of the Province exhibits a rise from 44'1 in 1902 to 49 per mille during the year under report, the total mortality registered being 985,476 as against 886,973 in the previous year. For this rise fevers and plague are mainly responsible, the former accounting for 1.8 and the latter for 1.7 per mille of the increased incidence. The birth-rate, on the other hand, has remained comparatively steady with an incidence of 42'9 per mille compared with 43'8 in 1902. The Sanitary Commissioner attributes the remarkable steadiness in the birth-rate to the prevalence of normal prices and the absence of excessive autumnal sickness in the preceding year, and puts forward the suggestion that plague is to some extent responsible for the fact that the birth-rate of the year does not show a marked rise over the figure for 1902. The Lieutenant-Governor agrees in thinking that both explanations are in the main fairly correct, but with regard to the latter theory he would point out that, although the apparent exceptions in the case of Jhang, Siálkot and certain of the districts in the Lahore and Jullundur Divisions, which were particularly affected with plague, are capable of explanation, the fact that the fall in the birth-rate in some districts, which did not suffer severely from plague, is markedly greater than that in districts in which severe epidemics occurred, militates to a considerable extent against the absolute correctness of the theory. A concrete instance of this may be found in a comparison of the Gujránwála and Gujrát Districts. Thus, while the increase of plague in Gujránwála was three times greater than in Gujrát, the fall in the birthrate was twenty three times greater in the latter district than in the former. While therefore it is clear that generally speaking a decrease in population due to plague must have a marked effect in reducing the Provincial birth-rate, there would appear to be local causes at work, which form striking exceptions to the theory, and might suitably be made the subject of special examination. It is satisfactory to observe that the birth-rate of the Punjab in spite of fever and plague is still the third highest in India, and is only exceeded by the birth-rates in the United and Central Provinces, but this note of satisfaction largely disappears in face of the malancholy fact that the Province again exhibits for the third year in succession the highest death-rate in India. Excluding plague, which is credited with 10 2 of the total death-rate of 49 per mille, the rate is still some 20 per mille above the quinquennial average and 10 to 11 per mille higher than that of healthy years.

2. Turning to the local incidence of the birth and death rates in rural and urban areas it is worthy of note that in the Municipal towns of the Province these rates display remarkable variations from the Provincial standard. Thus the birth-rate in the 42 large towns in the Province is 39 per 1 000 only, forming an aggregate of 4 per mille below that of rural circles Similarly the death-rate of Municipal towns generally is 52.89, an excess of 4.31 per mille above the rural ratio. In view of the fact that the incidence of plague in towns is reported to be considerably less than in rural areas, these figures seem to merit careful examination and, althou h the Lieutenant-Governor thinks that both the comparative unhealthiness of town life and possibly defective registration may perhaps be the underlying causes of these variations, he wishes that there was satisfactory evidence available to show that both in rural and urban areas the suggestive figures for fevers and respiratory diseases are not due to the reporting of plague deaths under other names. Among other features in the vital statistics of the Province, which claim attention, are the disparity between the male and female birth and death rates, and the variation in the death-rate among the two main classes of the community, Muhammadan and Hindu. With regard to the former,

it would appear that while the male birth-rate exceeds the female by 2'1 per mille, this excess is entirely discounted by a female death-rate of 53'6 as compared with 45'1 per thousand among males. By comparing the death-rates of the different age groups for 1903 with the figures for the same groups in the year 1901, during which there was comparatively little plague in the Province, the Sanitary Commissioner concludes that the abnormal increase in the female over the male death-rate in 1902 and 1903 was due entirely to plague, while the fact that the excess is most noticeable in the age periods from 10 to 40 years and comparatively small in the groups below 5 and above 60 confirms the general belief among Medical Officers that plague is a disease of the best years of life The excess of female infant mortality over male is very marked in the Jullundur District, and points to the conclusion that plague and disease are not the only factors at work in producing this result. The only other districts in the Province which come under similar suspicion, but in a much lesser degree, are Amritsar and Ludhiana.

The disparity between the death-rate of Muhammadans and Hindús, and its variation in different districts, is noticeable. The total death-rate among Muhammadans, which is generally the lower, increased in the year under review by 7:48 and was in consequence greater than the Hindu ratio, which increased by 1:63 only. Excluding the districts which suffered from plague, the death-rates of the two classes are found to have risen in a practically identical degree, and the inference is drawn that the increase in the total rate in the case of Muhammadans is the result of plague. In the Mooltan District, which was free from plague, the Hindu death-rate was 54:17 as against a Muhammadan death-rate of 28 86, but the striking disparity here would point to defective registration in rural areas, where the Muhammadans predominate.

3. The influence of fevers and plague on the vital statistics has already been noticed, and the following figures display the part borne by various diseases in making up the mortality bill for the Province:—

			Deaths.
Fevers	***	 	509,307
Plague		 ***	205,462
Respiratory	diseases	 	68,064
Dysentery a	and Diarrhœa	 	16,498
Small-pox		 	15,635
Cholera		 	14,688
Dysentery a Small-pox	and Diarrhæa	 	15,635

Plague has recently formed the subject of an exhaustive review by His Honour the Lieutenant-Governor, and it is only necessary to add that while apathy is still the prevailing note, there are occasional indications that the attitude of the people towards this disease is undergoing some slight change, and Sir Charles Rivaz trusts that these will initiate the commencement of a period, in which the people will gradually realize the futility of passive obstruction to all remedial measures and the importance of both self-help and co-operation with Government officers in their efforts to cope with this terrible scourge.

The fever mortality is still far above that recorded against any other form of disease, though only slightly in excess of the quinquennial average. A very high death-rate from this cause is recorded in certain districts, which were subject to unusual rainfall and heavy inundations.

The mortality from small-pox was in excess both of the ratio for the previous year and also of the quinquennial average. Although its incidence is probably dependent on the efficacy or otherwise of vaccination measures, the varying virulence of the disease in different years is not easily accounted for, and the only immediate cause traceable for the rise in the year under review is probably to be found in the interference of plague with vaccination operations in the Province.

The outbreak of cholera in the Punjab is directly traceable to the Kumbh Fair at Hardwar in April 1903. Compared with previous Kumbh Mela years the mortality was small, and the Lieutenant-Governor acknowledges with satis-

faction that this appears to have been largely due to the prompt and effective measures adopted by the district staffs of the Province to cope with, and obviate a spread of, the disease.

- 4. The Lieutenant-Governor has noticed with regret the extremely small average of the fines inflicted in Municipalities on defaulters in the matter of registration of births and deaths. It may be that only the poorer members of the community neglect their duty in this respect, but, if this is not the case, it is open to question whether the infliction of a purely nominal fine is not rather an encouragement to neglect of this kind than a deterrent. It is useless to expect efficient registration unless defaulters are made to feel that indifference and neglect will entail something more than merely nominal inconvenience, and His Honour hopes that Magistrates will in future regard offences against registration bye-laws as at least on a par with petty nuisances or other minor misdemeanours.
- 5. The Lieutenant-Governor observes with satisfaction the steps which have been taken during the year in the matter of the protection and clearance of wells, but, on the other hand, the report indicates that village sanitation generally is still in a very backward condition. The Jhang, Shahpur, Gurdáspur and Jullundur District Boards appear to have done something to encourage sanitation by the offer of rewards, but their efforts have been met with apathy on the part of the people. It may be, however, that the rewards offered are too small to attract interest, and His Honour will be glad to learn the result of the Delhi experiment, where a sum of Rs. 500 has been suggested as a suitable grant to make to the most deserving village. Against this apathetic attitude on the part of villages must be noted the various instances of public spirit displayed by private individuals, enumerated in paragraph 60 of the Sanitary Commissioner's Report.
- 6. The record of work performed by the Sanitary Board during the year is satisfactory, and the extent to which the services of the Sanitary Engineer have been utilized in the preparation and supervision of sanitary projects is a gratifying feature of the Report. Amongst much that is of interest in the Annual Report of the latter officer the very instructive experiments with septic tanks at Simla are worthy of attention. Although it is evident that the biological method of dealing with sewage is by no means so simple and easy, as its advocates have represented it to be, the results appear to have been, on the whole, fairly satisfactory, and the initial difficulties connected with working have been largely overcome. With the grant-in-aid of Rs. 30,000, which His Honour has been able to place at the disposal of the Sanitary Board with a view to assisting local bodies in carrying out sanitary works, the Board will, it is hoped, be able to ensure that many useful and deserving projects are not indefinitely deferred.
- 7. The Lieutenant-Governor desires to thank Lieutenant-Colonel Bamber and Mr. Goument for the Reports they have submitted and the useful work performed by them during the year.

ORDER.—Ordered that a copy of the foregoing remarks be circulated with the Report and be furnished, with the usual number of copies of the Report, to the Government of India; also that the Review be published in the Punjab Government Gasette.

Ordered, also, that a copy be forwarded to the Sanitary Commissioner, Punjab, for information.

By order of the Hon'ble the Lieutenant-Governor,
A. B. KETTLEWELL,

Judicial and General Secretary to Government, Punjab.

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Section V.-Vital Statistics.

The Meteorological Reporter to the Government of the Punjab has Chief meteorological furnished me with the following brief summary of the features of the year. chief meteorological features of the province in 1903:-"During the cold weather months of January and February the weather was generally finer and drier than usual. The rainfall was deficient at all stations except Murree, Umballa and Simla in January, and at all stations, both on the hills and plains, in February. No rain whatever fell at Sirsa during January, and at Sirsa, Delhi, Montgomery, Siálkot, Khusháb and Mooltán in February. The only periods of unsettled weather during these two months were between the 23rd and 27th January and the 18th and 19th February. The mean temperature was generally lower than the average during January and the first ten days of February, but after the latter date the heat increased and was very excessive for the time of year from the 25th to the 28th February. With the setting in of March very unsettled weather commenced. Rain was received over the whole province and was heavier than usual on the mean of the month at all stations except Lahore, Delhi and Sirsa. At several places the rainfall was twice as heavy as usual. The excessive heat which prevailed at the close of February continued during the first four days of March, but with the commencement of unsettled weather temperature fell and was more or less largely below the normal from the 6th to the end of the month. The highest temperature recorded during the month was 96°.2 at Delhi on the 30th. Unsettled weather continued during the hot weather months of April and May, but with decreasing intensity, and finally disappeared in June when the weather was finer and hotter than usual. The rainfall was, however, lighter than usual over the greater part of the province in April and was generally heavier than the average in May. No rain fell at Delhi during April, and less than 0.10" at Mooltan, Lahore, Montgomery and Sirsa, while in May all stations received rain though it was lighter than usual at Khushab, Montgomery, Delhi and Sirsa. During both months the mean temperature was generally below the normal, and the relative coolness was very remarkable between the 1st and the 7th of April and the 13th to the 21st of May. In June, as mentioned above, the weather was hotter than normal and the rainfall deficient, more especially over the east and south of the province. The heat was very great on the 13th and 14th and the 23rd and 24th, and the highest temperatures recorded during the month were: 104° 5 at Umballa on April 23rd, 114° 5 at Mooltan on 30th May, 118° 5 at Mooltan on the 4th and 119° 0 at Montgomery on the 13th June. The rains were on the whole lighter than usual over the Punjab during July and August and heavier during September. rainfall was unevenly distributed during most of the monsoon period and was generally light in the south-east though Sirsa received a heavy fall of 3.2" on the 23rd of July. The heat was much greater than usual between the 9th and 12th of July, but generally speaking it was normal or in slight to moderate excess during the greater part of the monsoon. The highest temperatures recorded were: 116°.4 at Khushab on July 11th, 113°.8 at Montgomery on August 23rd, and 110°4 at Mooltan on September 3rd. Monsoon rainfall ceased over the Punjab on the 19th September. In October a few showers occurred, but the rainfall was generally insignificant and the mean temperature was higher than usual throughout the month. The excess was greatest on the 1st and 2nd when Montgomery registered maxima of 104°-3 and 104°-8. Fine and dry weather prevailed over the Punjab during November and the greater part of December with temperatures varying slightly above or below the normal, but between the 23rd and the 28th December unsettled weather with rain on the plains and heavy snow on the hills was experienced. Temperature fell quickly and from the 25th to the end of the month was very largely below the normal.

2. The following is a brief note on the fluctuations of prices of food Prices of food grains and grains, &c., in the Punjab during the agricultural year ending wages of labour.

30th September 1903, received from the Director of Land Records and Agriculture, Punjab:—"As was to be expected in a normal year,

the prices of food grains at the principal markets of the province remained very steady. The rates have been moderate, and, on the whole, rather lower than those of the past year. At Delhi, wheat sold at from Rs. 2-9-4 to Rs. 2-10-9 per maund. The highest and lowest rates in Ferozepore, Lahore, and Amritsar were Rs. 2-12 and Rs. 2-1-8. The highest prices at Ráwalpindi and Mooltan were Rs. 2-13-9 to Rs. 2-12-9. The price of maize rose to Rs. 2 per maund at Mooltan in the month of June 1903, but, otherwise, it has remained below this figure, the average rates being Re. 1-13 at Delhi, Re. 1-9-6 at Ferozepore, Re. 1-12-3 at Lahore, Re. 1-13 at Amritsar, and Re. 1-15 at Ráwalpindi. Bájra has been selling at Re. 1-14 per maund at Ferozepore, Rs. 2-1 at Lahore and Rs. 2-4 at Ráwalpindi and Mooltan. The price of firewood has remained stationary everywhere, and there is no sign of a rise at present. The price of ghí has risen from Rs. 28-8 in January to Rs. 31 in June in Delhi and Ferozepore, and in other districts a slight rise is apparent of about Re. 1 a maund. The price of salt remained unchanged up to the month of March when it fell by about 8 annas per maund, this being due to the reduction in the salt duty." The rates of wages were practically the same as in the previous year.

- 3. Births During the year 1903, the births registered in the Punjab numbered 862,862 equal to a rate of 42.9 per mille which is Annual Form No. I. 0.9 less than the birth-rate of the previous year and 2.2 above the mean ratio in the preceding five years, calculated on the population according to the census of 1901. The provincial birth-rates of 1902 and 1903 are almost in the same proportion, but those recorded in the five-year period 1898-1902 show considerable fluctuations caused principally by the debilitating effects of famine and the great prevalence of malarial fevers. The rate for 1898, the first year of the quinquennium, was 39.0 per mille. The autumn of 1898, however, was very healthy. And, as usually happens in this province, there was a great rise in the birth-rate of the following year, the increased rate amounting to 46.2. As regards the prevalence of autumnal fevers, the year 1899 was still better. But a severe famine broke out in consequence of the failure of the monsoon of that year, lowering the birth-rate of 1900 to 38.8, the decrease being very large in the most severely affected parts of the province, as for instance, the district of Hissar, the greatest sufferer, in which it was 50 per cent. The heavy monsoon rainfall of 1900 gave rise, as usual, to a great epidemic of malarial fevers. And in consequence of the abnormal sickness following immediately a period of widespread scarcity, the birth-rate in 1901 fell to a figure as low as 35.4. The rise in the birthrate of 1902 to 43.8 was doubtless the evidence of the combined effects of returning prosperity and the fairly healthy autumn of the preceding year. The rate of 42.9 in 1903 differed but slightly from that recorded in 1902, the variation amounting to only 0.9, and this remarkable steadiness in the birth-rates of the two years may be accounted for by the normal rates of food grains that have prevailed generally since 1901, and the absence of excessive autumnal sickness. These rates were, however, still below 46.2 registered in 1899, and this deficiency may, to some extent, be attributed to the effects of plague.
- 4. The United Provinces of Agra and Oudh and the Central Provinces

 Birth-rates registered in different provinces of India.

 These provinces showed the highest rates last year also. The Punjab, with its rate of 42.9, again stood third in the list. The birth-rates in the other provinces of India were as follows:—Bengal 39.0, Assam 35.6, Bombay 31.2, North-West Frontier Province 31.6, and Madras 31.2.
- 5. The disparity between the birth-rates of 1902 and 1903 is insignificant in the district ficant in the majority of the districts, particularly when compared with the great differences between the rates of 1903. Annual Form No. I. 1901 and 1902 as noticed in the last Report. There are no less than eighteen districts in which the extreme variation between their birth-rates for the two years does not exceed 2.7 per mille. There are, however, a few exceptions. The district of Gujrát shows a decrease of 7.0 as compared with the previous year, Hissár 6.5, and Jhelum, Montgomery, Siálkot,

Ráwalpindi and Ferozepore record a falling-off at rates varying between 3.4 and 4.7. Possibly these decreases may be due, to some extent, to the natural falling-off after the very high rates recorded in them in 1902. Ludhiána and Jhang are the only districts which show an appreciable rise in the birth-rate during the year under review, viz., 6.0 and 4.4. The population of the district of Jhang, which consists of a large portion of the Chenáb Colony, has probably greatly increased since 1901, while the birth-rate, under the orders of Government, is calculated on the lower population of the last census. The excess in Ludhiána can be ascribed, in some degree, to the fact that the district suffered very little from plague last spring, and very severely the previous spring.

- 6. It was stated in paragraph 4 of the Review on the last Report that Effect of plague on "much of the sickness which accounts for the abnormally high death-rates in Ludhiána, Siálkot, Umballa, Jullundur, Gurdáspur, Lahore, and Hoshiárpur must have occurred in the early part of the year 1902, but still it had no appreciable effect on births." This was certainly not the case in Ludhiana, which recorded in the early part of 1902 more than half the total plague mortality of all the other districts named above. The birth-rate of Ludhiana in 1899 was as high as 50 per mille and the mean ratio in the quinquennial period 1897-1901 was 43.0, while it was only 36.7 in 1902. And I see no reason to doubt that the diminution in 1902 was due, to a great extent, to the excessive prevalence of plague. The effect of plague on births is most marked in the worst infected parts of a district. For instance, the district of Gujránwála, taken as a whole, with a plague mortality of 63 per 1,000 in 1903, shows a birth-rate of 44.4, or only 0.3 less than in 1902 when the death-rate from plague was 4.2. But when we compare the statistics of the rural circles of Gujránwála, Kamoke, Kila Didár Singh and Wazírabad, in which the disease prevailed in a most virulent form in the spring of 1903, we find that the births registered in them during the last quarter of the year were only 3,856 against a number as high as 5,376 recorded in the corresponding period of 1902, the year in which the plague mortality in the spring was very small in those thanas.
- 7. The highest birth-rates in 1903 were registered in the districts of Siálkot, Jhang, Mooltan, Gurdáspur and Amritsar. birth-rates in 1903. Annual The birth-rates of Siálkot, Gurdáspur and Amritsar are usually very high. And it is worthy of note that these are the districts, with a few others, which also show the largest rates calculated on the population of married women between the ages of 15 to 45 years according to the last census. The birth ratios in nineteen districts in 1903 fluctuated from 36.9 to 45.1, but in most of them they did not differ much from the provincial rate of 42.9. The smallest rates in 1903 were recorded in Simla, Dera Gházi Khan and Kángra. The rate in these districts is usually low, and the reasons were given in the last Report. The birth-rate per 1,000 of married women between 15—45 was 102 in Simla, 190 in Kángra and 198 in Dera Gházi Khan as compared with 271 in Gurdáspur, 270 in Siálkot, 252 in Amritsar and 240 for the province as a whole. As regards the rates in the remaining districts, they occupy nearly the same places in the list as those calculated in the ordinary way on the total population.
- 8. The birth-rate of the 42 large towns in 1903 was 39 per 1,000.

 Birth-rates in large In half of them the rates are below that figure, descending to a ratio as low as 26, while in the other half they vary between 39 and 53. The aggregate town rate is 4 per 1,000 less than in the rural circles including minor towns. I propose to employ the Divisional Inspectors and Superintendents of Vaccination this summer on the inspection of the Birth and Death Registers of principal towns, with the view to ascertain to what extent the habitually low rates registered in certain towns are due to defective registration.
- 9. The total provincial birth-rate of 42.9 in 1903 includes a rate of Proportion of male to 22.5 of males and 20.4 of females as against 21.3 and female births. Annual 19.4, the average ratios for the previous five years, showing Form No. 1.

 an excess, during the year under review, of 1.2 in the male and 1.0 in the female rate. The number of males to every 100 females

born during the year was 110.3. The largest proportions were registered, as usual, in the districts of Dera Gházi Khan and Miánwáli, viz., 121.8 and 115.9, indicating that a large number of female births are not registered in them.

- Number of births and deaths compared. Annual Annual Porm No. I. the increase was 6·1 per mille, compared with 0·3 in 1902 and 0·7 in 1901. This shows that since 1901, the year of the last census, the population of the province, according to registration, has decreased by 7·1 per 1,000. As in 1902, so also in 1903, the excess of deaths over births took place almost wholly in the severely plague-stricken parts of the province, the greatest increase having occurred in the districts of Gujránwála, Amritsar and Jullandur, in which the epidemic was most fatal. The birth-rate exceeded the death-rate, as last year, in all the districts of the Ráwalpindi and Mooltan Divisions, in the district of Montgomery in the Lahore Division, and in a few others in the Delhi Division; the excess, however, was not so great as in 1902 on account of the greater prevalence of fevers in many of them, the most noticeable increase having taken place in the districts of Mooltan, Montgomery, Jhang, Gujrát and Miánwáli. Fortunately, excepting certain limited areas, plague has not yet taken root in these parts of the province.
- 11. Deaths.—The total deaths registered from all causes in the province during the year amounted to 985,476, yielding a rate of 49.0 per mille of population. This rate is 19.7 and 21.0 higher than in the healthy years 1898 and 1899; 2.9 in excess of the famine year 1900 in which the fever epidemic was most severe; 12.9 over that of 1901; 4.9 above that of the last year when plague broke out in a virulent form; and 12.3 greater than the mean ratio of the quinquennial period 1898-1902.
- 12. The total provincial death-rate of 49.0 included 0.73 from cholera,

 Deaths from different 0.8 from small-pox, 10.2 from plague, 25.3 from fevers,
 causes. Annual Form No. 0.8 from dysentery and diarrhea, 3.4 from respiratory
 II. diseases, 0.3 from injuries and 7.4 from all other causes.

 As regards the prevalence of plague, the year under notice is worse than its predecessor, showing an increase in the plague death-rate of 1.7. The fever death-rate was 1.8 over that of 1902, cholera shows an excess of 0.71, small-pox 0.2, respiratory diseases 0.6 and dysentery and diarrhea 0.1. The rate from all other causes decreased by 0.2.
- 13. The Punjab, with its high death-rate of 49.0, was the unhealthiest Death-rates in different province in India. In the previous two years also it showed the highest death-rate. The mortality in the other provinces in 1903 was registered at the following rates:—Bombay 43.9, United Provinces of Agra and Oudh 40.3, Central Provinces 35.5, Bengal 33.3, North-West Frontier Province 28.4, Assám 26.6, and Madras 22.2.
- 14. The district of Gujránwála had the highest death-rate during the District death rates in year, viz., 96·3 per mille, of which 63·0 was recorded under the head of plague. If we exclude the death-rate from plague, the balance 33·3 is almost equal to the average rate of 32·3 of the previous five years, so that the great increase in the death-rate registered in 1903 was caused by plague. The district of Amritsar recorded the next highest rate of 74·9. Of this 25·6 was from plague and 32·2 from fevers, the fever rate being 8·3 in excess of the average. Jullundur and Lahore followed Amritsar with the total death-rates of 66·1 and 60·6, of which 28·6 and 20·7 were due to plague, and, but for this cause, their mortality would have been about the average. The following districts also recorded very high rates:—Umballa 56·3 including 7·4 from plague, Ludhiána 54·9 of which 12·3 was attributed to plague, Hoshiárpur 53·3, the plague mortality amounting to 18·3; and Gurdáspur and Siálkot 53·5, each, the death-rates reported to have occurred from plague being 6·1 and 13·8. The smallest death-rates registered in 1903 were 24·5 in Simla, 26·3 in Dera Gházi Khan, and 26·6 in Montgomery. In consequence of the higher death-rate from fevers, the total mortality in all the districts of the

Ráwalpindi and Mooltan Divisions was greater than the average; notably in Sháhpur, which shows an increase of 13.3 in the fever-rate over the mean ratio. The Civil Surgeon of Sháhpur states in his report that "malarial fevers were very prevalent throughout the district, but more markedly in those parts which are irrigated by the canal or are subject to inundation from Jhelum and Chenáb."

- Death-rates in municipal towns in 1903, taken as a whole, was 52.89, being 3.5 over that of 1902 and 13.19 over the mean ratio of the preceding five years. The plague death-rate was 9.04, or 1.09 higher than in the last year. Compared with the total death-rate of rural circles the town ratio was 4.31 in excess.
- Death-rates in the three largest towns of Delhi, Lahore and Amritsar in 1903 were 52.0, 44.8 and 54.0, being, in largest cities, Annual Form of the previous five years. Fevers and respiratory diseases were the principal causes of the increased rates. There were only 8 deaths registered from plague during the year in Delhi; and 497 and 293 in Lahore and Amritsar, yielding the small rates of 2.7 and 1.8 per mille. The immunity of these towns from a severe epidemic of the disease is remarkable.
- Death-rates in other large recorded rates exceeding 60 per 1,000:--Jagráon, Tánda-and minor towns. Annual Torm No. VI B. Urmar, Wazírabad, Jagádhri, Umballa, Raikot, Karnál, Chiniot, Kartárpur, Gujránwála, Rewári, Kaithal, and Bhiwáni. The abnormal increase in most of these towns was caused by plague. Among the minor towns, Makhu in the Ferozepore district, and Eminábad, Kila Didár Singh, Hatizabad, Pindi Bhattián and Sangla in the Gujránwála district registered the excessively high rates ranging from 102 to 132 per 1,000, in consequence of the most severe prevalence of plague. In Sangla (notified area) most of the deaths from plague appear to have been misclassified under the heads of fevers and "other causes,"
- 18. Of the total provincial death-rate of 49.0 per mille during the year, 23 Seasonal mortality. An. per 1,000 was registered in the months of January to May, mual Form No. III. or almost the same as last year, 12 per 1,000 in June to September and 14 per 1,000 in October, November and December. The great increase in the first five months of the year was due to plague and in the last quarter of the year to fevers. The most unhealthy months were April and May when the epidemic of plague reached its climax. In the previous year the epidemic was at its worst in March and April. Of the total of 128,106 and 107,206 deaths recorded in April and May as many as 73,414 and 47,790 were registered under the head of plague. In the most severely infected district of Gujránwála, the total mortality of 26,557 in April included no fewer than 24,521 deaths from plague. The healthiest months were July and August when the province was practically free from that disease. The rate in July was, however, higher than last year partly on account of the prevalence of cholera. The epidemic of malarial fevers broke out, as usual, in September, and increased the total mortality of November to 105,114, including 75,562 from fevers.
- 19. The male death-rate of the province during the year was 45·1

 Deaths by sexes at all and the female 53·6 per 1,000 of the population of each sex. Annual Form No. 11 sex, compared with 41·1 and 47·6 in the previous year. 12 If we deduct the plague mortality from the figures of 1902 and 1903, the average male and female death-rates for the two years come to 35·4 and 39·2, showing an excess of 10·7 per cent. in the female over the male ratio—which is almost precisely the same as the amount of increase in the female mean rate of 35·4 over the male mean rate of 32·2 recorded in the five years ending 1901, during which period there was little or no plague in the province. These figures show that the abnormal increase in the female over the male death-rate in 1902 and 1903 was due entirely to plague. They also prove the accuracy in the registration of deaths by sexes

at all ages in the province. The excess was most marked, as in last year, in the districts which suffered severely from plague, as for instance Gujránwála, Jullundur, Amritsar, Lahore and Hoshiárpur.

- 20. The death-rate among male infants under one year on infant popu
 Death-rate of infants lation at the last census was 346 and among female infants

 351, the rates calculated on births recorded during the year
 being 260 and 270, respectively. The excess of female over the male infant rate
 was, as usual, most marked in the Jullundur district in which the female ratio
 according to the infant population of 1901 was 395 and the male rate 305,
 as against 322 and 272 calculated on the number of births, the corresponding
 figures in Amritsar were 442 and 368 against 336 and 290, and in Ludhiána
 459 and 371 against 324 and 284. On the other hand, the male rates were
 higher than the female, in all the districts of the Delhi Division excepting
 Umballa, notably in Rohtak in which the male ratio on the infant population of
 1901 was 412 and the female 355 compared with 258 and 235, calculated on the
 number of births.
- 21. The next highest death-rates calculated on the population of each Death-rates in other age sex were, as usual, recorded in the following order :-Sixty years and upwards 102.26 for males and 120.92 for females; over one and under five years 72.48 and 80.17; fifty years and under sixty years 50.22 and 56.57; forty years and under fifty years 35.69 and 40.89. In the age-group, five to ten, the male and female rates were 20.26 and 25.99; in ten to fifteen 17.74 and 27.7; in fifteen to twenty 19.44 and 26.36; twenty to thirty 22.03 and 27.84, and thirty to forty 26.04 and 33.71. The abnormal excess in the mortality at all ages, particularly among females, is accounted for by plague, but the exact proportion of the increase contributed by that disease among persons of different ages cannot be given, as deaths from different diseases are not classified separately according to specified age-periods. A rough comparison, however, of the death-rates for 1903, with those for 1901, under each age-group, will show that the total increase of 13 per 1,000 in 1903. of which no less than 10 per 1,000 was due to plague, was most noticeable in the age-periods from 10 to 40 years, while the amount of excess was small among children under five years and among old persons of the ages of sixty years and upwards.
- 22. The total death-rate amongst Muhammadans was 49.36 per mille Death-rates by classes, and amongst Hindús 48.68, as against 41.88 and 46.75 annual Form No. V. in the previous year, the Muhammadan rate having increased in 1903 by 7.48 and the Hindu rate by only 1.93. Excluding from Annual Form No. V the districts which include in their total figures the great bulk of the plague mortality, the death-rates for the remaining portion of the province come to 38.79 for Muhammadans and 43.16 for Hindús in 1903 and 34.99 for Muhammadans and 39.37 for Hindús in 1902, the increase in the Muhammadan rate in 1903 amounting to 3.80 and in the Hindu rate to 3.79, or in the same proportion; so that the greater increase in the Muhammadan death-rate in 1903 was due to plague. It was most marked in the districts of Gujránwála and Lahore. The Hindu death-rate in the Mooltan district during the year was nearly twice as high as the Muhammadan rate. The death-rate among Native Christians was 23.9 compared with 23.74 in 1902.
- 23. There were 201 deaths registered during the year at the Railway Births and deaths at Stations outside municipal limits. Two deaths were reported from cholera, 1 from small-pox, 8 from plague, 108 from fevers, 12 from dysentery and diarrhæa, 23 from respiratory diseases, 6 from injuries, and 41 from all other causes. The number of births recorded during the year was 185, of which 88 were males and 97 females.
- 24. The appointments of Divisional Inspectors of Vaccination and Results of inspection of Registration of Births and Deaths for the Lahore and Mool-Birth and Death Registers. The number of entries checked by all the five Divisional Inspectors was 59,552 of male and 55,330 of female births, and 68,238 of male and 68,341 of female deaths.

The number of omissions discovered by them was 1,596 of male and 1,637 of female births, and 959 of male and 1,168 of female deaths, the percentage of omissions to entries checked being 2.7 of male and 3.0 of female births, and 1.4 of male and 1.7 of female deaths. The entries verified by the Vaccinators were 221,688 of male and 194,677 of female births, and 148,778 of male and 163,104 of female deaths, the omissions detected were 2,314 of male and 2,277 of female births and 821 of male and 921 of female deaths. The proportion of omissions to entries examined was 1 per cent. in the case of male and 1'2 of female births, and 0.55 in the case of male and 0.56 in that of female deaths. The entries checked by Revenue Officers were 41,042 of male and 34,637 of female births, and 34,882 of male and 32,429 of female deaths, the omissions discovered being 765 of male and 535 of female births, and 416 of male and 359 of female deaths, the proportion of omissions to entries was 1.9 per cent. in the case of male and 1.5 in that of female births, and 1.2 in the case of male and 1.1 of female deaths. Judging from the percentages of omissions discovered by these agencies, it appears that the inspection by Divisional Inspectors is more thorough than that of Revenue Officers and the inspection by the latter better than that of Vaccinators; and that births are more largely omitted than deaths. With reference to paragraph 8 of the review on the last Report, it appears from inquiries made that in many districts one locality is not visited more than once during the year by more than one of the above-mentioned agencies. The Civil Surgeons have been asked to issue instructions to inspecting officers to carry out the orders of Government strictly in future. The number of chaukidars fined for neglecting to report births and deaths was 302, and the fines inflicted amounted to Rs. 148.

- 25. There were 19 municipalities in which fines were inflicted for Persons fined for breach of municipal bye-laws regarding the registration of of municipal bye-laws. births and deaths, the number of persons fined, mostly in Bhiwani, Mooltan and Isa Khel was 149 and the total amount of fines inflicted was Rs. 77.
- 26. During the year the births registered among Europeans and
 Births and deaths among
 Europeans and Eurasians.

 Eurasians amounted to 122 and deaths to 129. There were
 2 deaths recorded from cholera, 1 from plague, 25 from
 fevers, 11 from dysentery and diarrhea, 14 from respiratory diseases, 3 from
 injuries, and 73 from other causes.

Section VI.-Chief Diseases.

- 27. Cholera.—Cholera prevailed in an epidemic form during the year, causing 14,688 deaths, equal to a rate of 0.73 per 1,000 of the population. The disease was practically absent from the province during the previous two years, the number of deaths recorded being 371 and 180. It was, however, very fatal in the famine year 1900, when the mortality was as high as 24,840, corresponding to a rate of 1.24 or 0.51 greater than in the year under review.
- 28. The province was quite free from cholera in the first quarter of the year. Two isolated cases imported from Calcutta occurred in the town of Delhi in the first week of April. Cholera broke out at the great Kumbh Fair which took place at Hardwar about the 13th of April, and immediately after the Fair, cases began to occur in different parts of the province among pilgrims returning from Hardwar. There were 229 deaths registered from cholera in April in fifteen districts, and in every one of them the first case was that of a pilgrim returning home from the Hardwar Fair.
- 29. The mortality from cholera rose from 229 in April to 959 in May.

 The disease increased in June, the deaths recorded in that month being 3,054. The epidemic reached its maximum intensity in July when a mortality of 6,184, or twice as high as in the previous month, was registered. The disease declined considerably in August, the deaths having decreased to 2,300. In September the number fell to 1,512 and in October to 431. The deaths reported in November and December were 17 and 2 respectively.
- 30. The largest number of deaths was recorded in the following districts:—Ferozepore 2,807, Lahore 2,657, Ludhiána 2,060, and Umballa 1,611, the rates per 1,000 of population being 3.01, 2.32, 3.06 and 2.11 respectively. It will thus be seen that no less than 62 per cent. of the total provincial mortality from cholera occurred in these four districts alone. The smallest number of deaths was registered in the districts of Dera Gházi Khan, Muzaffargarh, Gujrát, Mooltan, Rohtak, Kangra, Jhelum and Miánwáli. There were 41 deaths registered in the Simla district, mostly among the coolies employed on the Simla-Kálka Railway, which was in course of construction; the epidemic ceased at once on the disinfection and change of water supply.
- 31. Immediately on receipt of the intimation from the Sanitary Commissioner of the United Provinces of Agra and Oudh, Preventive measures. regarding the appearance of cholera at the Kumbh Fair at Hardwar, the attention of all Commissioners of Divisions was drawn to the desirability of necessary instructions being issued to district officers to carry out the suggestions for the prevention of the spread of the disease, contained in Punjab Government Consolidated Circular No. 17. The progress of each outbreak was carefully watched and, as far as possible, the disinfection of wells with permanganate of potassium was carried out in places affected by the disease. It is gratifying to observe that the epidemic was not so severe as that of 1892, the year of the previous Hardwar Kumbh Fair. In that year the mortality from cholera for the province, as at present constituted, was no less than 68,295 as against only 14,688 in the year under review. In the preceding two Kumbh Fair years of 1867 and 1879, the deaths registered from cholera in the province, excluding the frontier districts, were roughly 37,565 and 23,507; but it must be remembered that registration was then very defective, and many deaths were not reported.
- 32. The figures given in Appendix C to this Report show a considerable decrease in the mortality from cholera in most of the towns provided with pure water supply. In the case of Simla the pipe water has stamped the disease out of the sanitarium. Since 1880, the year in which the new water supply was

brought to the town, a period of twenty-four years, Simla has enjoyed complete freedom from cholera there being one death in 1892 and four last year, all imported cases. Before the introduction of water works, Simla was subject to severe outbreaks of cholera. In the epidemic of 1879 it had a death-rate of 4.82 per mille and in that of 1875 it recorded a rate as high as 9.5 per mille. In other towns in the plains supplied with water-works, the improvement is not so marked as the people drink well water in preference as it is much cooler.

- 33. Small-pox.—The mortality registered under the head of small-pox amounted to 15,635, at the rate of 0.78 per 1,000 of population. It was 0.2 higher than in the previous year and more than double the average rate of 0.34 recorded in the preceding five years. The total deaths included 8,026 of males and 7,609 of females, the male death-rate being 0.74 and the female 0.82 per 1000.
- 34. The deaths reported among infants under one year were 4,286, or 27 per cent. of the total mortality from small-pox in the province as against 26 in the previous year, the number of deaths among children over one and under ten years was 8,312, being 53 per cent. of the total in the province compared with 50 per cent. in 1902.
- 35. The largest number of deaths from small-pox was registered in the Seasonal prevalence of months of May and June, viz., 2,151 and 2,141, and the smallest in October, i.e., 376. There was a marked rise in the mortality during November and December in the districts of Ráwalpindi, Gurgáon and Amritsar.
- Mortality by districts. Year, the deaths reported were no fewer than 2,614 giving a rate of 2.95 per mille. The next highest rates were returned in the following districts:—Jhelum 1.63, Muzaffargarh 1.49, Miánwáli 1.48, Ferozepore 1.22, Lahore 1.13 and Montgomery 1.01 per mille. These rates (excepting Montgomery) were considerably above the normal. The average number of persons successfully vaccinated per 1,000 of population in the districts named above is below the provincial rate. The best vaccinated district of Kángra recorded, as usual, the lowest rate. There were only 14 deaths registered from small-pox in this district, the same low figure being the average annual mortality of the district in the previous five years. The districts of Rohtak, Delhi and Gujránwála also showed a very small rate of mortality both in 1903 and in the preceding five years. The rate of successful vaccine operations performed in the Delhi district has been very satisfactory in recent years, and in the other two districts there is much room for improvement.
- 37. The mortality in the municipal towns was 0.97 per 1,000 compared with 0.76 in the rural circles. The highest rates during the year were returned in the following towns:—Rewári 6.19, Dharmkot in the Ferozepore district 8.32, Dínanagar in the Gurdáspur district 6.16, Shahpur 4.95, Pindigheb and Hazro in the Ráwalpindi district 7.45 and 6.53, and Dunyapur in the Mooltan district 5.58. The towns of Dínanagar, Pindigheb and Dunyapur suffered severely from small-pox last year also. Vaccination was not started in Rewári in the vaccination season of 1902-03 on account of the severe epidemic of plague, and in the other towns there was a large number of children that remained unvaccinated during the year. A proposal for the introduction of compulsory vaccination in Rewári is under consideration.
- 38. The mortality in the twenty-three towns, in which the Vaccination Mortality in towns in Act is in force, was registered at the rate of 0.72 per mille, which vaccination is the highest rates, 2.16, 1.57 and 1.46, were recorded in the towns of Amritsar, Rohtak and Rúpar. In three towns no death was recorded, in four only one death each, and in ten others, the number reported ranged from 2 to 11. Small-pox is, on the whole, much less fatal in these towns than in others in which vaccination is not compulsory.
- 39. Plague.—The subjoined report on plague in the Punjab for 1903 is furnished by the Inspector-General of Civil Hospitals, Punjab. As stated in paragraph 2 of the Review on the Sanitary Report for the last year,

the figures of the Plague Department for rural circles are taken from the reports specially submitted by patwaris, and they differ, as usual, from my figures which are reported, along with deaths from other causes, by the ordinary agency of chaukidárs. The greatest difference is in the district of Gujránwála, the deaths according to the Plague Department being 11,814 less than those shown in my returns The Civil Surgeon of Gujránwála states that the difference is due mostly to the omission from the returns of the District Plague Medical Officer of the figures of 181 villages and 9 municipal towns. In accordance with the orders conveyed in Punjab Government Resolution No. 1936 L. P., dated the 16th November 1903, the agency of Patwaris is abolished and plague occurrences are now reported by chaukidárs.

Plague report by the Inspector General, Civil Hospitals Punjab State-

This report deals with the epidemic of plague in the Punjab from 1st January to 31st December 1903. In accordance with paragraph XXXVII of Panjab Government Resolution No. 1936 L. P., dated 16th November 1903, the report is incorporated in that of the Sanitary Commissioner.

- 2. By the Resolution just mentioned important changes were introduced in the measures for dealing with plague and in the administration and control of plague operations.
- 2. As regards the measures for dealing with plague the element of compulsion has been almost entirely eliminated, and while Government has recognised and provided for the obligation of rendering assistance to the inhabitants of plague-stricken towns and villages it has left the choice of adopting or neglecting precautionary measures almost entirely to the people themselves.
- 4. One duty is still compulsory, namely, the reporting of plague occurrences, but while in the case of villages it was formerly the duty of the patwaris to maintain registers and to submit returns of plague occurrences, those occurrences are now reported by chaukidars at the same time and in the same way as deaths from other diseases.
- 5. In villages the only occasion on which compulsion may be now resorted to for the adoption of any precautionary measures, is in the case of evacuation, and even here compulsion may only be applied to an inconspicuous minority who refuse to leave their houses in opposition to the wishes, of the remainder of their fellow villagers.

In towns compulsory action is limited to the isolation of houseless or unattended persons suffering from plague.

6. While chemical disinfection by official agency is still advocated both in towns and villages, rules have been framed with the object of seeing that it shall be carried out only under conditions calculated to secure its effectiveness.

Thus in villages free chemical disinfection is limited to the initial stage of a fresh outbreak of plague, and though in towns it is directed that the free disinfection of infected houses and rooms should be offered throughout epidemics it should only be carried out provided that the owners consent to have their clothes and other belongings disinfected.

- 7. In cases where chemical disinfection is not carried out the desiccation of infected houses and rooms has been advocated.
- 8. Inoculation is still freely offered to the people and all dispensaries in the Province in charge of Assistant Surgeons have been provided with inoculation equipment.
- 9. Important changes have been made in the financial arrangements for meeting plague charges.

Plague charges have been divided into two heads-Provincial and Local, the latter consisting only of those in connection with local precautionary measures and disinfection. Arrangements have been made by which all district expenditure is treated in the first instance as if it were Provincial, adjustments between Provincial and Local accounts being made later.

- 10. In the case of municipalities, although no direct contributions are made from Provincial Revenues, provision has been made for the prompt granting of loans to Municipal funds to meet plague expenditure.
- 11. The Inspector-General of Civil Hospitals, Punjab, is now the Chief Administrative Officer for all plague measures and is the Controlling Officer for all plague expenditure.
- 12. The routine work connected with the administration of plague measures is subject to the general control and advice of Executive Officers, now entrusted to officers of the Medical Department as part of their ordinary duties. The Civil Surgeon of each infected district is now the District Plague Medical Officer, and has under his immediate control the plague work both in villages and towns in the district.

Where necessary Assistant Plague Medical Officers and Assistant Surgeons are deputed to the assistance of District Plague Medical Officers.

- 13. In view of the facts that a detailed report by districts on the epidemic of plague as well as on inoculation operations and their results in the Punjub from 1st October 1902, to 30th September 1903, has already been submitted to Government by the Chief Plague Medical Officer, Punjab, and that the epidemic and other operations during the subsequent three months (1st October to 31st December 1903) being in continuation of those of the plague season of 1902-03 (up to 30th September 1903), and for almost the same districts and Native States as were under operation during the plague season referred to above, it will only be necessary to give a brief description of the epidemic during the year.
- 14. There is nothing further to add concerning many of the subjects dealt with in that report, such as the bearing and attitude of the people, precautionary measures, the manner in which the infection of plague is conveyed and so forth.
- 15. Between 1st January and 31st December 1903, 317,256 cases and 192,068 deaths due to plague were reported in British districts of the Punjab, while the number of plague cases reported by Native States was 24,011 and of deaths 18,629 bringing the totals for the whole Province up to 341,267 cases and 210,697 deaths, the monthly details of these figures by districts are given in Statement No. 1 attached.
- 16. The number of attacks during the year under report exceeded that of any previous epidemic, the number of deaths was less than that of 1902, hitherto the worst year.
- 17. This applies only to the Province as a whole, for the numbers, both of attacks and deaths, in British districts exceed those of any previous epidemic. A portion of the increase in the number of cases reported in British districts is perhaps attributable to the improvement in reporting of plague occurrences during the present year, owing to the supervision that was exercised by the large number of Medical Officers on duty in the Province in connection with the work of inoculation. This remark does not apply, however, to the reporting of deaths, which are believed to have been as correct during the previous, as in the present year.
- 18. At the commencement of the year there were 13 districts infected, and one more district, Gurgáon, became infected during January. Thus in 14 districts the epidemic ran its course from the commencement of the year.

These districts were Jullundur, Hoshiárpur, Gurdáspur, Siálkot, Ludhiána, Lahore, Umballa, Ferozepore, Gujrát, Amritsar, Jhang, Gujránwála, Karnál and Gurgáon.

19. In addition to the 14 districts above mentioned 7 others became infected later in the year, viz., Hissár and Rohtak at the end of February, Montgomery and Shahpur in March, Jhelum and Ráwalpindi in May, and Dagshai Sanitarium in the Simla District in November.

While 21 districts were thus actually infected 4 districts, viz., Kángra, Delhi, Mooltan and Miánwáli reported imported cases which did not give rise to epidemics.

20. The Montgomery District became free from the disease during August and since then no cases of plague have occurred in this district.

The Native States of Patiála, Kapurthala, Nábha, Kalsia, Maler Kotla, Jind, Farídkot and Dujána suffered from the epidemic.

21. The Hissár, Rohtak, Gurgáon and Montgomery Districts and the Faridkot and Dujána States reported cases for the first time.

The Ráwalpindi District may also be included in this category, as with the exception of such as were imported, the few cases previously reported had been of a very doubtful nature, and the disease had never spread from the villages, the places in which it was reported to have occurred. Compared with the epidemic of the previous year the Karnál, Hoshiárpur, Jullundur, Gujránwála, Lahore, Amritsar, Gujrát, Shahpur and Jhang Districts, and the Kapurthala and Jind States suffered more severely.

The greatest increase occurred in the case of the Gujránwála District, in which 67,901 cases with 44,267 deaths occurred as compared with 6,834 cases with 4,330 deaths during the previous year.

- 22. The Ferozepore District experienced an epidemic about equal in severity with those of the previous year.
- 23. The Umballa, Ludhiána, Siálkot, and Gurdáspur Districts, and the Patiála, Nábha, Kalsia and Maler Kotla States suffered less severely than during the previous year.
- 24. The decrease was most marked in the case of Ludhiána District which had 11,661 cases with 7,145 deaths against 65,594 cases with 48,201 deaths during the previous year.
- 25. The Native States of Baháwalpur and Nálagarh, which had suffered from epidemic during the previous year, escaped entirely during the present one.
- 26. Statement No. 1, referred to in paragraph 15, shows, month by month, the seizures and deaths in every infected British district and Native State in the Province.

On reference to this statement it will be seen that there was a gradual rise during the first four months, the number of cases rising from 16,608 in January to 113,074 in April when the epidemic began to decline and the number of cases from 80,852 in May fell to 111 in August. From the beginning of September the epidemic again began to rise and the number of attacks from 369 in September rose to 8,416 in December.

- 27. As shown in Statement No. 2 attached, 325,550 inoculation operations were performed in the British districts between 1st January and 31st December 1903. In addition the number of operations reported by the Native States was 1,807, bringing the grand total for the Province as a whole to 327,357 operations, the monthly details of these figures by districts are given in this statement.
- 28. Statement No. 3 attached shows by districts the number of plague seizures and deaths among both classes of population (inoculated and uninoculated).
- 29. Although the results of inoculation vary in different areas the inoculated were everywhere much better off than the uninoculated as regards their liability both to attacks of plague and to deaths when attacked.
- 30. Taking the figures for the Province as a whole the liability of the uninoculated to deaths was two and a half times as great as that of the inoculated.
- 31. Statement No. 4 shows the strength of the Medical Staff and establishment employed on plague duty in each month of the year 1903. The number of officers employed on plague duty in addition to their ordinary duties has been excluded from this statement.

- 40. Fevers.—The deaths caused by fevers in the province during the year numbered 509,307 equal to a rate of 25·33 per mille, being 1·85 in excess of the mean ratio of 23·48 in the previous five years. Compared with each year of the preceding quinquennial period, the mortality was 1·79 higher than in 1902 and about the same proportion as in 1901, it was still 6·98 below the excessive rate of 32·31 registered in 1900, and 7·93 and 6·46 greater than in the healthy years 1899 and 1898.
- 41. The most noticeable feature of Annual Form No. IX during the year bistricts with increased under review was the great increase in the fever death-rate over the average in the districts of Amritsar, Gurdáspur, Shahpur, Mooltan and Muzaffargarh. In Amritsar the fever death-rate in 1903 was 32·19 per 1,000 compared with the mean ratio of 23·86 in the previous five years; in Gurdáspur the death-rate was 29·98 as against the average rate of 21·44; in Shahpur 28·62 contrasted with 15·28; in Mooltan 24·87 against 17·47, and in Muzaffargarh 29·73 against 22·2.
- Causes of the increased in the last quarter of the year in consequence of the abnormal months. In Amritsar and Gurdás-pur the rainfall registered in the months of July, August and September was 25.55 and 43.87 inches, compared with 13.54 and 21.54, respectively, recorded in the corresponding period during the preceding five years. In Mooltan it was 5.16, the average amount of monsoon rainfall in this district being only 1.64 inches. According to the Civil Surgeon of Shahpur, the causes of the severe prevalence of malarial fevers were "the heavy rains in the autumn months, and a large part of the district being subject to inundations from the rivers Jhelum and Chenáb and irrigation by the canals." As regards the increased death-rate in the Muzaffargarh district, the Civil Surgeon states that during the months of July and August there were "unusually heavy floods throughout the district, so much so that the greater part of the district remained under water for several months afterwards, and as a consequence a most severe epidemic of malarial fevers burst out a month after the floods."
- 43. Among the districts in which the fever mortality during the year was below the average, Hissár and Ferozepore show a marked retevers.

 5.73 per 1,000 less than the normal. Karnál shows a decrease of 2.6 and Rohtak of 3.09 per mille, their fever-rates of 32.32 and 28.24 during the year being still very high. The average rates of these four districts are considerably enhanced by the excessive fever mortal ty of 1900. The district of Ludhiána also records a noticeable diminution of 4.86 per 1,000 compared with its normal rate, but the mortality is higher than in the previous year.
- 44. The lowest district death-rates from fevers, 8.63 per 1,000 in Simla and 13.78 in Montgomery, are about the average fever mortality registered in these districts during the preceding quinquennium. The district of Simla includes the large population of the town of Simla, and Montgomery is one of the driest districts, its normal rainfall is very light.
- Outbreak of cerebrospinal fever in the Dera Spinal fever in the district of Dera Gházi Khan district. Spinal fever in the district of Dera Gházi Khan, referred to in last year's Report. There were 28 cases reported in the Buzdár Hills of the district of Dera Gházi Khan from about the beginning of February to the middle of March, three suspicious cases in the beginning of January among the Buzdár Section of the Border Military Police stationed at Dera Gházi Khan, and one case in the town in the last week of March. All necessary measures for the supply of medicines and the disinfection of clothes and dwellings were taken.
- 46. Under the orders of Government, trial measures have been carried out Trial measures for the during the year in the towns of Gujránwála and Gujrát for destruction of mosquitoes. The severe prevalence of plague in Gujránwála again interfered with the operations. These measures will have to be carried out systematically and on a larger scale for a number of years before any reduction in the prevalence of malarial fevers is expected. A separate report on this subject has been submitted to Government.

- 47. The subject regarding the filling up or draining of pools around villages has received but little attention during the year for want of funds and the severe prevalence of plague. On the recommendation of the Sanitary Board, Government have sanctioned grants-in-aid for filling up depressions around the municipal towns of Palwal, Hánsi, Ládwa and Mukerián. It will be seen from Section X of this Report that quinine was distributed during the year, as usual, in a large number of districts.
- 48. Dysentery and Diarrhæa.—The deaths reported from dysentery and diarrhæa amounted to 16,498, equal to a rate of 0.82 per 1,000, which is precisely the same as the mean ratio in the previous five years. The total deaths included 9,302 of males and 7,196 of females, the male death-rate being 0.86 and the female 0.77 per mille. The largest mortality from these diseases was registered, as usual, in September, October and November when malarial fevers were prevalent, and the lowest in February and March.
- 49. The districts with the largest proportion of mortality to population reported by the population re
- 50. A reference to Appendix C of this Report will show that a marked decrease in the mortality from dysentery and diarrhoea has followed the introduction of pure water-supply in most of the towns given in the statement.
- 51. Respiratory diseases.—There were 68,064 deaths attributed to reAnnual Forms Nos. II spiratory diseases, giving a rate of 3.38 per 1,000 compared
 and VI A. and B. with 2.84 in the previous year. The returns show, as last
 year, an extraordinary difference in the district rates, ranging from 0.5 in
 Montgomery to 14.0 in Gurdáspur. In the last named district, the death-rate recorded under "all other causes" was only 0.9 as against 10.8 in the neighbouring
 district of Amritsar. Evidently most of the deaths from "all other causes" in
 Gurdáspur are returned as respiratory diseases. The Civil Surgeons have been
 requested to see that deaths reported from different causes are classified under
 proper heads in the returns compiled in their offices.
- 52. Injuries.—The deaths under the head of injuries amounted to 6,581 during the year, equal to a rate of 0.33 per 1,000 compared with the mean ratio of 0.32 in the preceding quinquennial period. Of the total deaths from "Injuries" 323 were ascribed to suicide, 439 to wounding, 4,678 to accidents and 1,141 to snake-bites and killed by wild beasts. The deaths reported from snake-bite were 917 against 1,029 in the previous year, and from hydrophobia 114 against 98. Most of the deaths from hydrophobia were among villagers.
- Patients treated at the Pasteur Institute at Kasauli, of whom 269 were Europeans and 315 Natives.

 Pasteur Institute.

 There were 6 failures, all among Natives.
- 54. All other causes.—The deaths grouped under the head of "all other causes" numbered 149,241 corresponding to a rate of 7.4, or very nearly the same as 7.6 registered in the preceding year. The district death-rates varied between 0.9 in Gurdáspur and 11.9 in Ludhiána.

Section IX.—Sanitary Works.

- 55. As directed by Government, the Annual Report of the Sanitary Engineer to the Government, Punjab, on Sanitary Works, for the year 1903, is given as Appendix B to my Report.
- 56. The income derived from the sale of manure of all municipal towns in the province during 1903 amounted to Rs. 1,62,344 against Rs. 1,55,674 in the previous year. The largest sums were realized in the following towns:—Amritsar Rs. 43,351 against Rs. 43,131 in 1902; Delhi Rs. 14,621 against Rs. 10,809; Gujránwála Rs. 6,507 against Rs. 7,272; Siálkot Rs. 15,248 against Rs. 13,987; Lahore Rs. 10,951 against Rs. 12,260; Mooltán Rs. 5,343 against Rs. 6,159; and Ludhiána Rs. 4,538 against Rs. 3,793.
- 57. During the year 8,825 wells were cleared and 2,710 parapets con-Clearance and repairing structed at a cost of Rs. 36,733. The most substantial progress in this respect was made in the districts of Mooltan, Hoshiárpur, Amritsar, Jullundur, Umballa, Siálkot, and Gujránwála.
- 58. With regard to the grant of rewards and khillats to village communities the Deputy Commissioner of Jhang states that "the District Board of Jhang has agreed to carry out Government proposals by selecting a village which showed interest in village sanitation. Rs. 50 per village have been sanctioned by the District

Board to be paid towards the revenue of the village. No application has been received for the grant of rewards in question." In the Shahpur District "the District Board have already agreed to give prizes for the villages of each tahsil, but none of them have gained a prize, having shown no sign of any effort in the direction of sanitary improvements." The Deputy Commissioner of Jullundur reports that "the Sanitary Sub-Committee, of which mention was made in last year's report, continue to submit quarterly reports to the District Board, and in order to encourage village sanitation, the Board, in a general meeting held on the 24th December 1903, decided to grant rewards and the Tahsildars were directed to report once a year in what villages and by whose efforts sanitation has been improved." The Deputy Commissioner of Delhi says "that effort to promote sanitary improvements in villages did not occur during the year, the District Board having decided upon no hopeful means of such promotion, the system of rewards not having found favour with the Board. My opinion is that small rewards are useless. A lump sum of Rs. 500 or so paid into the malba fund of one village, if any village could be possibly got to deserve it, would cause a stir, and possibly excite envy and emulation, which might be worked upon usefully if such a reward were announced for succeeding years. This suggestion will be laid before the District Board." The Deputy Commissioner of Karnál states that "for want of sufficient funds at the disposal of the District Board no remission of revenue or reward from District Fund was made to any of the villages or any individuals in the district for village sanitary improvements during the year under report, but efforts will be made to do something towards this subject if the funds are available in the next year." The Deputy Commissioner of Gurdáspur states that "the attention of the villagers was drawn last year to the Board's Resolution regarding grant of rewards, but none were earned during the year."

59. During the year 185 villages were supplied with the village sanitary village sanitary note-books in the district of Hissár. In the Rohtak district books. 13 villages were supplied with these books. The Deputy Commissioner of Gurgáon states that "10 more villages were supplied with sanitary note-books during the year under report and the total number of villages so supplied has now gone up to 44. The arrangement has resulted in the improvement of cleanliness and health of the villages." The Deputy Commissioner of Lahore reports that "12 villages were selected for the maintenance of village inspection books. Each patwári has been supplied with an inspection book with instructions to make no entries therein without the approval of the Tahsildars." In the Ráwalpindi district 30 more villages were supplied with the village sanitary note-books during the year. The Deputy Commissioner of

Muzaffargarh states that "13 more villages were supplied with village sanitary notebooks and the instructions contained therein were carried out as far as possible." In the Gujrát district 28 villages were furnished with these books. In the Shahpur district the village sanitary inspection book has been tried in 16 villages.

60. During the year 1902-03 the following works of public utility were constructed by private individuals at their own expense to serve sanitary purposes:—

In the Umballa district Lálas Harnám Dás and Bhagwán Dás, sons of Lála Ganda Mal, Kalál of Kurali, Tahsil Kharar, built a Delhi Division. of Rs. 18,000. Háji Sandhi Khan, son of Najíb Khan, Rájpút of Khanpur in Tahsil Kharar, constructed a chaupál (meeting house) at Khanpur at a cost of Rs. 1,200. A dharmsála and a pacca well near railway station at Thánesar in the Karnál district were built by Lála Bahál Singh, Mahájan of Thánesar town, at a cost of Rs. 3,700. In the Karnál district Sardár Bahádur Jowála Singh, jágírdár of Jharauli, Tahsil Thánesar, constructed a pacca serai at Shahabad near railway station at a cost of Rs. 2,700. Lala Jai Ram Das, Mahajan of Siwan village, Tahsil Kaithal, built a pacca well and a rest-house on Kaithal-Siwan Road at a cost of Rs. 2,200. A pacca well at Alewa village, Tahsil Kaithal in the Karnál district, was built by Lála Ruldu Mal, Mahájan of Alewa village, at a cost of Rs. 1,200. In the Rohtak district Lálas Tej Rám and Lekh Rám, sons of Lála Mohan Lál, constructed a pacca well and a dharmsála near village Kasendi at a cost of Rs. 1,400.

Lálas Rúpa and Bhikha, sons of Badna Súd of Garli, in the Dehra Tahsil, built a dharmsála of pacca masonry in village Garli of Dehra Tahsil, for the accommodation of travellers, at a cost of Rs. 2,000. In the Hoshiárpur district, Rái Sáhib Buta Rám, son of Ruldu Rám, Brahmin of Ghanari in Tahsíl Una, constructed a pacca well near village Harwal on the Ispur-Daulatpur road at a cost of Rs. 1,100. Lála Badháwa Mal, son of Pohu Mal, and Dalla Mal, son of Badháwa Mal of Kaliánpur, built a serai at Lambra on the Nakodar road at a cost of Rs 3,825. In the Jullundur district a pacca tank at Mahatpur in Tahsil Nakodar was constructed by Rai Bahádur Pohlu Mal, late Extra Assistant Commissioner, at a cost of Rs. 12,000.

Sardár Maya Singh, Ahlúwália, in the Gurdáspur district, constructed a building for a dispensary in the Batála city, at a cost of Rs. 6,000. In the Gujránwála district, Lála Nand Lál, son of Atma Rám, Khatri of Háfizabad, built a dharmsála and a well with four shops at Háfizabad at a cost of Rs. 4,000. Lála Gurdiál, son of Bálak Rám, Khatri of Háfizabad, constructed a musáfarkhána (rest-house) and four shops at Háfizabad at a cost of Rs. 2,000. In the Siálkot district, Gopál Singh, Arora of Kotli Lohárán Lahundi, Tahsil and district Siálkot, constructed a pacca public tank at Kotli Lohárán Lahundi, on the road from Kotli Lohárán to Sambriál, at a cost of Rs. 2,000.

Guláb Rái Chopra, son of Pharia Rám of Bhera, built a pacca well on the road from Bhera to Chakwál, at a cost of Rs. 1,200 In the Jhelum district, 6½ acres of land were given to the Mission School in Dalwal by Faizulla Khan of Dalwal. In the Ráwalpindi district, Khudadád Khan of Dadhucha constructed a tank at Dadhucha, Tahsil Ráwalpindi, at a cost of Rs. 1,500. Sunder Singh of Gujar Khan in the Ráwalpindi district built a pacca well at Gujar Khan at a cost of Rs. 1,150.

In the Mooltan district, Bhái Kaman Dás, son of Bhái Jamna Dás of Mooltan built a bauli (well with steps) outside Delhi Gate, near Giyán Thala at Mooltan, for bathing purposes, at a cost of Rs. 1,000. Mián Gholám Mohamed, son of Azim Khan Daultána of Ludan, in Tahsil Mailsi, district Mooltan, constructed a musáfarkhána (rest-house) near Tahsil Court at Mailsi for the convenience of suitors at a cost of Rs. 1,000. In the Muzaffargarh district Rijhu Rám, son of Bhanjan Rám, and Teju Rám, son of Bhoja Rám, Kukrejas, of Sitapur, constructed a parca musáfarkhána (rest-house) at Sitapur at a cost of Rs. 1,500. In the Dera Gházi Khan district, Honda Rám, son of Nibha Rám of Taunsa, built a well for the public benefit in the old Diwánkhána, once used as a Thána in Taunsa, at a cost of Rs. 1,100.

Section X.—General Remarks and Personal Proceedings.

- The office of Deputy Sanitary Commissioner, Punjab, throughout the year.

 The office of Deputy Sanitary Commissioner, Punjab, was held by Captain W. F. Harvey, I. M. S. During the first four months of the year Captain Harvey was employed on the work of testing plague prophylactic. From May to September he inspected vaccination work, whilst during the last part of the year, in addition to the work of supervision of the special staff of vaccinators, he was engaged in conducting certain experiments in connection with vaselinated and glycerinated vaccine pulp. All this work left him but little time for sanitary inspection.
- 62. In January I halted at Delhi to wind up the medical and sanitary arrangements there after the Coronation Durbár. In February Inspection work of Sanitary Commissioner. I visited the towns of Chúnián, Miánwáli, Hissár, Hánsi, Sirsa, Kaithal, Gurdáspur, Mukerián, Dínanagar and 7 villages. In March I inspected the sanitation and vaccination of the towns of Hoshiarpur, Ludhiana, Machiwara, Jagraon and the vaccination work of 52 villages. I then proceeded to Campbellpur to attend a meeting held there for the selection of a site for the head-quarters of the new Attock district. After that I inspected Lyallpur and proceeded to Simla to inspect the water-works there. I then visited Mooltan and inspected the sanitation and vaccination of the town of Shujabad and of 42 villages. In April I inspected the towns of Thánesar, Ládwa, Karnál, Simla, Pánipat, Sonepat and Delhi and went to Kasauli and afterwards visited the towns of Pind Dádan Khan, Ráwalpindi and 15 villages. In May I inspected the town of Murree and the Lawrence Memorial Asylum there, also Dharmsála and Rohtak. I then went up to Simla, whence I proceeded to Kotgarh and inspected the vaccination work in Rámpur-Bushahr State. In August, on the outbreak of cholera, accompanied by the Railway officials, I inspected the Simla-Kalka Railway Line and Road; I also visited the towns of Delhi, Rewari, Amritsar and Rawalpindi. In September I inspected Rohtak, Gohána, Delhi, and came to Kasauli and inspected the Lawrence Military Asylum at Sanáwar. In October I again inspected the sanitation and water-supply springs along the Simla-Kálka Road and went to Kasauli and visited Umballa city, where I went to Handesra to see the water-supply wells there and inspected Kálka. In November I inspected the vaccination work of several large and small villages in the Lahore Tahsil and then visited the town of Ferozepore. In December I inspected the towns of Gujránwála, Gujrát, Jullundur and Siálkot.
 - 63. The usual number of lectures was delivered by me to the students of the Medical College, Lahore, in my capacity of Professor of Hygiene.
- 64. Captain W. F. Harvey visited the following municipal towns:—Banga, Inspection work of Deputy Sanitary Commissioner. Nawashahr, Jullundur, Amritsar, Murree, Dalhousie, Ludhiána and Jagádhri.
- 65. During the year the Civil Surgeons inspected 204 towns and 1,248

 Inspection work of Civil Surgeons and Assistant Surgeons inspected 8 towns and 59 villages. The Assistant Surgeons inspected by the Civil Surgeons of Gujránwála, Hoshiárpur, Miánwáli and Rohtak.
- 66. In 1903 quinine was freely distributed in the districts of Rohtak, Gratuitous distribution Kángra, Hoshiárpur, Ferozepore, Montgomery, Amritsar, of quinine. Gurdáspur, Gujrát, Shahpur, Ráwalpindi, Muzaffargarh, Dera Gházi Khan and Gurgáon. In the Gurgáon district, in addition to the free distribution of quinine, a special supply of quinine was procured and distributed in all fever-stricken tracts through the agency of Tahsíldárs during the unhealthy season of the year.

Brief history of the Sanitary arrangements of all new towns formed within Railway precincts.

Brief history of the Sanitary arrangements of all new towns formed within Railway precincts be given, the Manager of the North-Western Railway states that no new towns have been formed in the vicinity of stations on the North-Western Railway system during the year 1903.

- Sewage irrigation.

 1903 was 202 acres, practically the same as last year, and the average rate realized was much the same also, as cultivators refused to accept the enhanced rates fixed by the Municipal Committee for irrigation with sewage water. In Amritsar the area under sewage irrigation was 138 acres and Rs. 12-1-6 were paid per acre. In Lyallpur sewage irrigation was commenced in August 1903. The total area under sewage cultivation was 34 acres. The lessees pay rent in a lump sum of Rs. 250 in addition to the ordinary demand for lift irrigation which is Rs. 2-8 per acre. In Delhi the amount of land under sewage cultivation was 45 acres and Rs. 12 per annum per acre were paid. There were 36 acres of land under sewage irrigation in Ludhiána with an income of Rs. 203. In Gujránwála 20 acres of land were under sewage irrigation, and the amount realized was Rs. 240 during the year.
- 69. A brief summary of the work done by the Sanitary Board during Proceedings of the Sani. the year is given, as usual, in Appendix A to this Report.

C. J. BAMBER, La.-Col., I.M.S., Sanitary Commissioner, Punjab.

APPENDIX A.

PROCEEDINGS OF THE SANITARY BOARD.

There were six meetings held by the Sanitary Board during the year 1903, and the following is a brief account of the work done by the Board :—

- 1. Grants-in-aid to Local Bodies for Sanitary Works.—(a) The application from the Deputy Commissioner of Gujránwála for a grant-in-aid for the drainage scheme of Sángla town was disallowed, and the papers forwarded to the Financial Commissioner, Punjab, for disposal; (b) the application from the Fázilka Municipality asking for assistance to build drains was disallowed and they were told to carry out the work by degrees; (c) the application from the Lahore Municipality for grant-in-aid for several sanitary works was disallowed as the Board did not think it necessary to give funds; (d) the application from the Pind Dádan Khan Municipality asking for a grant-in-aid for filling up depressions was disallowed; (e) the Commissioner of the Delhi Division was asked whether he was prepared to recommend the Palwal Municipality for a grant for filling up depressions round the town; (f) the Municipalities of Dharmsála and Gujrát were recommended for grants of Rs. 5,000 and Rs. 11,000, respectively, and further a recommendation for Rs. 12,000 was made for works in the Delhi Division for which full estimates had not been received. Rupees five thousand for Dharmsála and Rs. 11,000 for Gujrát were sanctioned for expenditure during 1903-04, but as the estimates were not sanctioned in time, these sums could not be expended. Government was again asked that the grants might be repeated in the estimates for 1904-05, but they have disallowed the grant-in-aid for the Gujrát Drainage Scheme.
 - 2. Sángla Drainage Scheme. The Scheme was approved by the Board.
- 3. Ambala City Water-Works.—A recommendation was made to the Local Government to give a grant-in-aid of Rs. 12,000 towards the construction of four new wells, as the Deputy Commissioner of Ambala had shown that the Municipality were quite unable to raise the funds, but Government declined to give any assistance from the Provincial revenues beyond waiving the Departmental charges in respect of the Drainage Project and the four new wells required for the City Water-Works.
- 4. A letter from Government, Punjab, regarding grants-in-aid to Local Bodies for Sanitary Works, was laid before a Meeting of the Board, and the Sanitary Commissioner and Sanitary Engineer were asked to bring up, before November 1903, any schemes they considered deserving of grants-in-aid, and at a Meeting of the Board, held on the 9th December 1903, recommendations were made to Government for grants-in-aid of Rs. 3,903 for Palwal, Rs. 906 for Ládwa, Rs. 635 for Mukerián, Rs. 8,000 for Gujránwála, and Rs. 7,607 for Hánsi. These grants-in-aid which are to be expended on the filling up of excavations in and around the above mentioned towns, were sauctioned by Government, except for Gujránwála.
- 5. Grants-in-aid for Experimental Works.—Rs. 340 were allotted to the Sanitary Engineer for the Anemometer Tower at Ambala, Rs. 302 were allowed for the building of flights of aerating steps and remodelling the Ducat filter at Lálpáni (Simla) Experimental Works, and Rs. 240 were granted as an allowance to the Municipal Superintendent in charge of the engines at the Ambala City Water Supply Head Works. A grant of Rs. 435 was also asked for by the Sanitary Engineer for conducting in pipes to some distance the septic tank effluent at Lálpáni and there constructing aerating steps like those near the septic tank but with a greater fall to see if the effluent improved proportionately; this amount was disallowed as it was found that provision had been made for such steps in the estimates for the septic tanks that had already been agreed to.
- 6. Sewage Farm at Ambala —A recommendation was made to the Municipal Committee to take up a piece of land for a sewage farm and work it themselves.

- 7. Water-supply Scheme for Miánwáli.—The scheme was approved by the Board and the papers relating to it were forwarded to the Local Government in the Public Works Department for disposal.
- 8. Sargoda Drainaje Scheme.—The scheme was approved, with the suggestion that 3 squares of land be taken up instead of 2 squares, and that the plans and estimates be forwarded to the Local Government for disposal.
- 9. Ferozepore Urainage Scheme.—The scheme was approved and forwarded to the Local Government with a recommendation that the Municipal Committee be advised to use centrifugal pumps for lifting the sewage.
- 10. Ráwalpindi Drainage Scheme.—The Board approved of the scheme and forwarded it to the Local Government with a recommendation that the work be started as soon as possible.
- 11. Mooltan Drainage Scheme.—The scheme, including the supplementary estimate for draining the north corner of the city, was approved by the Board and forwarded to the Local Government.
- Commissioner and Sanitary Engineer on the Simla Sewage Disposal Works, with Sanitary Engineer's proposal that the Board recommend that the sewage installations be constructed at the different outfalls, were considered, and the Board agreed to all the sections of paragraph 18 of Sanitary Engineer's Note and thought that the continuance of the filter experiments (Section (b)) might throw a light on the disposal of the sewage at the Snowdon outfall. As regards the sewage farms, the Board noted that the land lies in State territory and would have to be acquired by negotiations with the State Authorities. While the land is under the Sanitary Engineer, arrangements would be made for the proper working of the sewage farms. It is for the Municipal Committee to consider whether they would be prepared to undertake the management of the farms when ultimately made over to them. The Notes were forwarded to the Local Government with the above remarks.
- 13. Scheme for remodelling a length of intercepting sewer at Lahore.—The scheme was approved and forwarded to the Sanitary Engineer for disposal.
- 14. With reference to Government of India letter and Punjab Government Gazette Notifications proposing certain alterations in the existing rules regarding Public Works and fees to be paid by Local Bodies to Government for the services of the Sanitary Engineer and certain other officers of the Public Works Department, the Board submitted certain suggestions to the Local Government, and in reply to a subsequent communication the Local Government was informed that, after a careful consideration of the arguments brought forward, the Board saw no reason for altering the opinion previously expressed by them.
- The question was referred to a Sub-Committee of the Sanitary Board, and the Sub-Committee were of opinion that instead of introducing a system of rewards for village sanitation, as proposed in the papers that were before them, it would be preferable to arrange that the Colonization Officer should have authority to give grants-in-aid for improvements to village sites in which sanitary improvements should preponderate, and that such grants should be given out of the income from ground rents in villages, which is estimated in the correspondence at Rs. 80,000 a year, and has since, as they understand, exceeded that figure. The Sub-Committee further stated that if this principle is approved by the Sanitary Board and Government, it should be communicated to the Financial Commissioner for further necessary details to be worked out in communication with the Settlement Commissioner and Colonization Officer.
- 16. Schemes relating to (a) the clearance of the storm channels round the Amritsar City and (b) the construction of the intra-mural street drains through Bhagtan Gate of the Amritsar City.—The schemes were approved by the Board and forwarded to Government for sanction.

APPENDIX B.

ANNUAL REPORT OF THE SANITARY ENGINEER TO GOVERNMENT, PUNJAB, FOR THE YEAR 1903.

The post of Sanitary Engineer to Government was held by me throughout the year.

2. The following works were in progress under my direct supervision :-

Amritsar Water Works.—Estimated cost Rs. 10,49,935. Good progress was made by the Executive Engineer, Mr. H. C. Sanders. Of the forty wells to be sunk, twenty-two were completed to the full depth of 65 feet. Five more were nearing completion and the rest were well in hand. All the large bore pipes and valves required for the work were received from England and the smaller sizes were purchased in the country from the Barrakar Iron and Steel Company. Pipe-laying was well in hand, about two-thirds of the entire work having been completed. The city service reservoirs were well advanced and an order for the pumping machinery was placed by the India Office with Messrs. Simpson and Co. of London.

Simla Sewerage Extension Works.—Estimated cost Rs. 5,18,622. The construction of soil depôts was completed and the main system of new sewers on the south slope of the hill, leading to the Lálpáni outfall, was in regular use throughout the year.

Experiments in connection with the biological treatment of sewage were continued at Lálpáni and Kasumpti. The septic tank at Lálpáni continued to work satisfactorily but the filter did not give good results. It clogged badly early in the year, and its effluent became cloudy and offensive. Clear water was run through and after a short rest it was given another trial, but it only worked for about six weeks when it again clogged and became very offensive. This filter contained hard quartz ballast ¼" to ½" size, 8 feet in depth, arranged as specified by Colonel Ducat, and the rate of filtration was 500 gallons of septic tank effluent per square yard. The Sanitary Commissioner recommended a trial of a filter described in Notter and Firth's "Hygiene," consisting of alternate layers of ballast of different sizes from ¼" to 1", with aerating layers at intervals of larger stone. This was tried but failed after a short time by clogging. The fine ballast in the body of the filter was then removed and it was again brought into use towards the close of the year. The rate of filtration was reduced to 200 gallons per square yard and the surface ballast was raked daily to keep it from clogging. The filter was giving fairly good results at the end of the year.

The Kasumpti experimental installation was brought into use in February. It was started with sewage diluted with water to a strength of 20 gallons per head of population. The strength of the charge was gradually increased till, on the 28th May, it reached 10 gallons a head, which is the maximum we expect to have to work to in the hot weather. This strength has since been maintained approximately. The septic tank did not work satisfactorily at first. There was a heavy deposit of sludge in the grit chambers and the tank. The former filled up to the top and had to be cleaned out. As the deposit in the grit chambers was mostly sludge which should have passed on to the tank, the length of these chambers was reduced from 10' to 4' and better results were obtained. After about four months, the septic tank began to improve and at the end of the year it was working fairly well, the percentage of purification shown by the permanganate test being about 70. The sludge over the bottom was not increasing and was distributing itself better over the whole length of the tank. The filters here, as at Lálpáni, have given trouble. About the end of April they began to smell badly and the effluent became turbid and offensive. Sewage stood on the surface showing that the interior had begun to clog. The surface was then raked and the ballast scoured with clean water. A week's rest was given and the rate of filtration reduced to 250 gallons per square yard. The

filters were again brought into use on the 25th May 1903. In July they again failed. They were washed out and brought into action again in August with a rate of filtration of 100 gallons per square yard. This rate was gradually increased to 200 gallons per square yard in October, at which they have since worked. The surface ballast is raked daily and the man in charge has instructions to give a filter bed a week's rest as soon as it begins to show signs of failing. They were working satisfactorily at the close of the year. It remains to be seen how long they will continue to do so.

The effect of running septic tank effluent down a long flight of steps to thoroughly aerate it was also tried. As Simla sewage is stale before it reaches the outfall and after 24 hours' further detention in the septic tank all the putrefaction that is likely to occur has already taken place, it was thought that thorough aeration in this manner might prove as effective as filtration in supplying the effluent with the necessary oxygen for nitrification of organic matter. The steps were about 8 inches each and the total height of flight was 35 feet. The effluent was deodorised to a considerable extent by the escape of dissolved gases but analysis did not show any appreciable reduction of albuminoid ammonia or increase of nitrates. It should, however, be noted that the effluent analysed was always taken at the bottom of the steps before it had mixed with the water of the stream. It is possible that aeration may produce a good effect in hastening nitrification after the effluent has joined the stream and run down the bed for some distance below the works. Further analyses will be made to show if this occurs.

As septic tanks have given good results so far, it has been decided to put these in at once at all the outfalls and to continue experiments with the filters.

Simla Bazar Drainage Works.—Estimated cost Rs. 92,300. These works were completed during the year. They have effected a great sanitary improvement in the crowded bazars of Simla. Instead of polluting streets and ravines as it did before, sullage is now carried away rapidly from the crowded areas in glazed stoneware drains and cast iron half pipes to gully traps at the different outfalls below the cart-road. At these gully traps the solids are separated automatically from the liquids and caught in a receptacle below the trap, while the latter pass through the trap to the sewage mains below. The solids are removed periodically by sweepers to the municipal incinerator.

3. The following sanitary works were inspected and reported on during the year under review:—

Simla Water Works.—The pumping machinery at Cherot Nullah was found to be in good order. The discharges of the springs were gauged and recorded. Owing to long continued drought and deficient snowfall, their yield fell very low last summer. The Municipal records showed an average daily supply during the three hot months, April to June, of 325,631 gallons, which is about 14 per cent. lower than the estimated average minimum, viz., 380,000 gallons a day. The waste water meter diagrams were examined and the result of the examination communicated to the Municipal Committee.

Bacteriological analysis showed that the quality of the water was very good. The Municipality was strongly advised to adopt certain measures for checking losses from waste and leakage of fittings with a view to make the most of the present water supply, and it was at the same time pointed out how the supply might, if necessary, be increased in the hot months by 70,000 gallons a day for a small initial expenditure of Rs. 20,000.

A survey was made of a line beyond the present headworks of the Lower Gravitation line to bring in when required a further supply of 30,000 gallons daily by flow from the Gurani Nullah.

In view of the probability of having to submit proposals shortly for a further extension of the water works on a large scale, I examined the likely sources of supply on the north side of Mahásu and the water power available in Nauti Khad. The Punjab Government had received reports regarding these in 1899 from Mr. E. DuCane Smithe, then Executive Engineer. Further information was collected, and, at the request of the Chief Engineer, a survey was made

by the Executive Engineer, Extension Works Division of the Nauti valley, from the point up to which it had previously been surveyed down to its junction with the river Sutlej.

Umballa City Water Works.—In common with other places in the Punjab, dependent on spring or underground water for their supply, Umballa City suffered from shortness of water in the hot weather. The yield of the wells was not equal to the demand. As the consumption in the city is increasing, works were commenced to augment the supply by adding four more wells to the headworks. The pumping machinery was inspected and found to be in good order.

The experimental aermotor pump at the headworks continued to work satisfactorily. It raised 1,575,400 gallons in the course of the year. The best month's work was 174,600 gallons in March. Encouraged by the good results obtained at Umballa, the Local Government has sanctioned the trial of two similar pumps at the new civil station of Miánwáli where a strong steady wind blows during the day for the greater part of the year and the conditions are therefore favourable.

Lahore Water Works and Drainage.—A new pumping engine of 100 H.P. was installed and the old engines, which had been in use about 25 years, were dismantled. Both the engines at this station are now new and fully equal to the duty required from them.

The extension of the trench wells, commenced in 1902, was completed. The old wells were dredged and cleaned. The supply was thus substantially increased and the yield of the wells was fully up to the demand. The extension of the distribution system in the city and civil station (estimated cost Rs. 2,41,785) was proceeded with by the Municipal Committee and nearly completed.

A spill of an abnormal flood in the river Rávi passed over the site of the headworks during the rains. It stood 2' 6" deep all round the wells and passing into them caused extensive blows which blocked the trench wells with silt and sand and stopped pumping for a few days. The damage done was repaired as quickly as possible and an embankment 100' wide and 3' high was thrown up along the line of wells to prevent a similar occurrence in future.

No real progress was made with the construction of the conservancy tramway as the Municipal Committee was unable to come to any definite decision as to the location of the line. The alignment of certain parts of it was still under consideration when the year closed.

A scheme, estimated to cost Rs. 12,526, for improving a part of the city intercepting drain, was approved by the Sanitary Board, and the work was put in hand:—

4. The following sanitary works were under construction by the Public Works Department and were inspected by me as Sanitary Engineer from time to time.

						Rs.
1.	Lyallpur Water Works, estimated c	ost	***	***	***	1,28,585
2.	Lyallpur Drainage Works		***			79,091
3	Umballa City Extramural Drains		***			43,130
4.	A sewer in Chándni Chowk at Delhi					25,818
5.	Fázilka Drainage					5,000
6.	Toba Tek Singh Drainage					90,449
7.	Gojra Drainage			***		62,392

Of the above Nos. 1 to 6 were completed or nearly so during the year under review. The first two on the list are particularly interesting works as they provide complete sanitary arrangements for a new town at the head-quarters of the Chenáb Canal Colony. The water supply is from large storage tanks and filters on the canal bank, and is pumped by a water wheel, worked by a 3-foot fall, to a service reservoir near the town from which it is distributed in the usual manner through a network of cast iron piping and standposts. A reserve of steam plant is provided in the pumping station to be used in case of a temporary break-down of the water wheel. The daily supply is 100,000 gallons. The drainage scheme consists of surface street drains and underground intercepting drains leading to an open outfall which carries the sewage to a collecting tank about half a mile from the town. From this tank the sewage is lifted and used for irrigating a small sewage farm. The external

intercepting drains which surround the town are flushed from a common point with canal water from a rajbaha. The street drains are flushed by a hose from water works hydrants.

Projects were prepared on the same lines as the above for water works and drainage of Sargoda City which is to be the chief town of the new Jhelum Canal Colony.

- 5. I submitted special reports at the request of the Local Government on the following schemes:—
 - (1). Water supply of the Kálka Military encamping ground.
 - (2). Quetta Drainage.
- 6. I was consulted by Local Bodies and Deputy Commissioners regarding the following works:--
 - (1). Jellalábad Water Supply.
 - (2). Disposal of Lahore City Sewage.
 - (3). Majitha Town Drainage.
 - (4). Watering of Lahore Civil Station Roads.
- 7. A list of projects prepared under my supervision or in consultation with me is given in Statement A attached.
- 8. Statement B shows the quantity of water pumped and used during the year at the different water works stations in the Province and the cost of pumping.
- 9. In last year's report I referred to an experiment which was about to be taken in hand on raising water from a deep tube well by means of an air lift. This experiment was carried through. The result, I regret to have to record, is not favourable and goes to show that this method of raising water is not suitable for places where the subsoil consists of fine or moderately coarse sand. The tubes, 9" diameter, were sunk to a depth of 100 feet and water was raised by means of compressed air to a height of 6 feet above ground. The instructions of the makers were carefully followed in working the plant but, in spite of all precautions, the difficulty of keeping sand out of the tube could not be entirely overcome. The experiment was first made with the tube open at the bottom, but when it was found that large quantities of sand came up with the water, stone ballast was thrown into the cavity below and a plug of cement concrete put into the bottom of the tube as recommended by the makers. This improved matters, but the ingress of sand into the well was not entirely stopped. It continued to come in through the perforations in the lower 50 feet of tubing. The lift was worked about nine hours a day for ten weeks, in the hope that, after a time, the cavity round the lower end of the tube would be sufficiently large to prevent sand being drawn in with the water, but no improvement was noticeable. Some sand came in daily, the quantity varying irregularly from 1 to 5 cubic feet, the greater part of which was received during the first ten minutes or quarter of an hour, after which the water usually ran clear or nearly so. The experiment was stopped when the ground round the tube cracked and showed signs of subsidence. The water in the tube was lowered 22 feet and the yield was about 7,000 gallons an hour, the initial air pressure being 40 fbs. per square inch and the ordinary working pressure 26 fbs. The lift was 40 feet. The consumption of coal was considerably in excess of what would have been required for pumping the same quantity of water by ordinary steam plant.
- 10. Special efforts were made during the year to encourage the use of sewage at outfalls for land irrigation. The estimates approved by the Sanitary Board for drainage works included, in nearly all cases, the cost of land and its preparation for a sewage farm and every opportunity was taken to impress on District Officers and Local Godies the advisability of adopting a regular and systematic method of disposing of sewage in this way. The inertia of municipalties in the matter of sanitation is not easily overcome and the results, so far, in respect of sewage farms, have not, I must admit, been encouraging, but a commencement has been made and it is hoped, that, if the Local Government and the Sanitary Board continue to press the point, Local Bodies will see that the question of proper sewage disposal is one of some importance and will give it greater attention in future.

STATEMENT A.

LIST OF PROJECTS FOR SANITARY WORKS PREPARED IN 1903 UNDER THE SUPERVISION OF THE SANITARY ENGINEER.

			PROJEC	TS UNDER	PRI	EPARATION,				
	PROJECTS APPROVED I LOCAL GOVERNMENT SANITARY BOARD	OR	In the Sanitary E Office,	ngineer's	Engi	the Office of Ex incer or Munici n consultation Sanitary Engis	palities with	PRE	LIMINARY EST PARED IN SAN NGINEER'S OF OR LOCAL BOD	FICE
	-	Estima t e d cost,		Estim a tod cost.	-		Estimated cost,			Estima t e d
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.	Ráwalpindi City Drainage. Mooltan City Drainage. Ferozepore Extramural Drainage. Dharmsála Water Supply. Gujrát City Drainage Sargoda do. Sargoda Water Supply. Miánwáli Water Supply. Miánwáli Water Supply. Increasing the Water Supply of Omballa City. Estimate for clearance of storm channels round Amritsar City. Estimate for reconstruction of intramural street drains Sowing through Bhagtán Gate, Amritsar City. Connection of European Clerks' Cottages at Simla with the Municipal Sewerage System. Subsidiary Pumping Installation below A & B streams of the lower gravitation line, Simla Water Works. Gurani Nalla Exten-	Rs, 1,38,967 73,179 37,046 21,734 41,301 90,273 1,35,875 51,180 13,342 16,915 15,457 9,955 14,049 8,490	1. Water Supply, Campbellpur. 2. Drainage of Lahore Mall. 3. Internal sanitary fittings of Government of India Civil Secretariat 4. Connection of the Government of India Civil Secretariat Se wage System with the Municipal Mains.		6.	Mooltan Jail Water Supply. Lyallpur Jail Water Supply. Jagráon Draina ge Scheme. Project for the Drainage of the suburbs of Delhi. Barnes Court Draina ge, Simla. Revised Estimate of Simla Sewerage Extension Works. Amritsar Intramural Drainage. Majítha Drainage.		1. 2. 3.	Chiniot Drainage. Hánsi Drainage. Patti Drainage.	66,700
15.	Gurani Nalla Exten- sion of the Simla Water Supply.	49,595								

STATEMENT B.

STATEMENT OF WATER PUMPED AND USED IN THE FOUR WATER WORKS STATIONS OF SIMLA, DELHI, LAHORE AND UMBALLA, AND OF COST OF PUMPING.

	Bewares.		Sajour. The winter popu-		This high rate is due to the engines having worked irregularly owing to shortness of supply.
suolls:	Cost per 100,000 g	Rs.	<u>.</u>	25.25	9.9
peed.	Lift including triction	1,300	155	100	61
	Totel.	Rs. 28,951	64 64 68	31,569	6,420
1.	Establishment,	Bs. 6,048	64 47 60	10 00 10 10	\$. \$35,
Cost.	Value of stores.	Rs. 1,718	1,920	2,020	746
	Value of fuel used.	Rs 21,185	16,582	13,624	2,519
.0.	Quantity	Ton,Cwt	1 498	738 16 15 0	408 e
FURE USED.	Describçion-	Wood,	Coal.	Coal, Wood,	Wood, mostly green.
WATER PUMPED.	In the 3 bot months,	Gallons. 21,309,979	125,339,122	133,542,245	8,742,708
WATER	Daring the year.	Gallons, 52,500,452	459,417,711	27,962,872	36,168,660
pasq 2	Daily consumption per in gallons.	10 00	e.	6	, es
DEED.	Daily average.	Gallons. 250,734	1,258,678	1,391,680	290'66
WATER USED.	Daring the year.	Gallons. 91,517,710	459,417,711	507,962,872	36,166,660
Baibro	Population served (accept to the Consum of 1901)	Average. 29,357	141,169	150,000	28,200
		1	. 1	1	:
	Lation	1	1	1	1
	Name of Station.	1	1	1	:
	×	almin		Labora	Umballa

APPENDIX C.

Statement showing the death-rates from Cholera, Small-pox, Fevers, and Dysentery and Diarrhaa for the five years preceding, and for the period since, the introduction of Drainage or Water Supply, or both, in the under-mentioned Towns.

	DATE COMPL OF WO		RATE S	AGE ANS	IE INTR AINÁGE	OB OB	RATE PERI INTROI	AGE AN FOR THE OUCTION TER SUP	OF DRA	THE INAGE	
Towns	Drainage.	Water supply.	Cholora,	Small-pox.	Fovers.	Dysentery and distribut.	Cholera,	Small-pox.	Fevera.	Dysentery and diarrhos.	REMIRES
Delhi	 	1893	0.08	0"8	24-6	1.8	0.4	0.6	26.7	1.8	
Umballa	 	1895	0.5	0.2	13-7	4.6	0.2	0.4	19.3	64	
Simla	 1893	1893	0.03	0.9	14.8	0.8		1.1	17-1	1.4	The works were begun in 1876 and completed in 1893.
Lahore	 	1881	0.0	0.7	20.1	1.7	1.9	1.6	27.8	2.3	
Dalhousie	 	1894	0-1	0.1	11.0	2-2			9-6	24	
Gujránwála	 1892		0.3	0.2	16.5	1:2	0.2	0.6	19.7	1.7	
Ráwalpindi	 	1887	0.8	0.3	21.8	2-3	0.2	0.1	16'4	3.4	
Murros	 	1894	0.1		16-5	1.7	0.7	0.4	14-8	0.9	
Kálka	 	1890	0.7	0-1	16.3	26	1.7	0-2	15.2	3.9	or hands before the parameter



ANNUAL FORM No. I.

SHOWING THE BIRTHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1903.

1	2		3			4			6		6	7	8		,		10
			HON ACCO			EL OF BI		PER	0F B1 1,000 ULATIO	OF	n to every	er deaths	er births	DUSTS	BATE S PER S PER FB TEA	1,000 VIOUS	
No.	Destricts.	04.	Females.	77	,	ales.	7	, t	ales.	-	Number of males born, 100 females born.	Excess of births over d per 1,000 of population.	res of deaths over r.1,000 of population.		ales,	. 7	No.
		Males.	E B	Total.	Males.	Females	Total.	Males.	Pemales	Total.	Num 100	Broc	Excess per l,	Males	Females	Total.	
1	2	3	4	5	6	7	8	9	10	11	13	13	14	15	16	17	10
	DELHI DIVISION.																
1 2	Hissár	418,167	363,550	781,717	15,130	13,735	28,864	19-4	17-6	36-5	110-2		1'2	199	18-8	887	1
3	Robtak Gurgáon	333,217	297,455 356,765	630,672 746,208	12,861	11,889	24,750	2014	18-9	39-2	109-2	3.3		20-3	18-4	38-7	
4	Delhi	370,103	316,896	686,998	17,571	16,897	33,468	23 5	21.9	441	110-5	0.3		22'6	20'7	42'0	
5	Karnál	478,953	604,273	683,225	19,754	17,719	37,473	22.4	20.1	42-4	111.8		64	21.4	19.3	60-6	8
6	Umballa	419,742	343,508	763,250	15,937	14,540	30,477	2019	19:1	39-9	109-6		16-4	20'2	18'2	38'4	
7	Simla	23,012	12,567	35,579	326	290	616	0-2	8*1	17:8	112-4		72	9.6	8.2	18-2	7
	JULLUNDUR DIVISION.																
	Kángra Heshiárpur	396,494	867,967	764,441	13,768		28,743	18-0	100		106-1		0.1	17'8	16.8	34'6	
10	Juliandar	525,854 488,290	463,928	989,782	21,768	19,596	41,364 38,530	22.0	19'8	1000	111-1		23.5	21'0	19-3	400	10
11	Ludhiána	369,165	203,932	673,097	14,919	13,833	28,752	21.0	2016	42'6	106-0		12-2	21.8	2016	41'3	11
12	Ferozepore	507,258	424,948	932,206	20,396	18,124	38,520	21'9					818	21.8	19-8	I III	18
	LAHORE DIVISION.																
13	Montgomery	268,606	229,100	497,706	10,343	9,308	19,651	2018	18-7	39-5	1111	12'9		19-4	17.5	136'0	13
14	Lahore	629,360	516,660	1,146,029	27,261	24,268	51,529		21.2	45-0	112-3		15-6	22-2	19-7	41.9	14
16	Amritear Gardáspur	558,989	463,549	1,022,438	24,844	22,393	47,237		810	1000	Chine I	1	28-7	23-6		45-4	15
17	Siálkot	565,124	506,203	1,071,327	22,713	25,684	43,554 53,641	24.2	17:00				3.4	23'8	23-2	40%	16
18	Gujránwála	485,260	405,317	890,577	20,908	18,641			5000		112-2		51'9	2310	20'4	143'5	
а	21						-										
1	RAWALPINDI DIVISION.																
19	Gujrát	389,402	361,146	750,546	17,649	16,180	33,620	23.5	21.6	45.0	109-1	9-6		22.1	20.3	42-4	19
20	Shabpur	273,144	251,115	524,250	11,821	10,544	STEEL STEEL	22.5			112-1	1000	100	20.0	100	1000	
21	Jhelum	297,854	292,916	590,770	12,296	10,846	23,132	2018		1000	113-3	100		19-4			
22	Ráwalpindi	463,704	422,300	896,064	18,194	16,302	34,406	2015	18*4	3819	111-6	14		19-7	17-8	37'8	22
	MOOLTAN DIVISION.																
23	Mianwali	224,009	200,580	424,589	9,894	182	Walter L		19.5	42-1	115-9	9.1		20.8	18-1	381	21
24	Jhang	559,295	443,361	1,002,656	28,213	0000000	20-20-2	10000	3103	1000		1000		17:8	15-7	1333	
26	Moraffargarh	379,769 230,207	318,090	697,859 405,656	16,850	170000	1000			133		100		22-2	700	100	1
27	Dera Ghari Khan	255,448	214,499	469,947	9,336		- 111	60.0	1000	3.7		1 3		1710	1000		1
					-				100	34.0	121.8	8.	-	170		31	1
	and the second					1			-								
1	Total	10,799,255	9,310,435	20,108,690	452,622	410,240	862,862	22.5	2014	421	110:		6.1	31:	19	40	1
		The state of the s	2000000	100000000	100000000	The said	110513	1000		1	1	1	-	1	1	1	1

^{*} Excluding population of Military Cantonments.

† The figures of Montgomery, Gujránwála and Jhang in this and other forms do not correctly represent the mean ratio for five years on account of the inclusion of the statistics of the Chouse Colony for shorter period.

STATEMENT OF BIRTHS AND DEATHS REGISTERED IN EACH DISTRICT

1	-	2	-	-	-	Ī	3	4		5		6	
					-	-		per	POPULAT	ION (CENSUS	1901).	Вівтн	8.
Serial No.		District	ove,				Area in square miles.	Average population square mile.	Malos.	Females.	Total.	Total number.	Birth-rate per 1,000 of population.
1		:	2				3	4	5	6	7	8	9
1	Hissár	DELHI D					5,217	150	418,167	363,560	781,737	28,865	36-9
2	Dabtah					***	1,797	0.333			170000000000000000000000000000000000000		39-2
3	Gurgáon	10.00					1,984		1				44'9
4	Delhi						1,290						441
	Karnál						3,153			404,272		I Maria	42.4
. 6	Umballa				***		1,851		1 77 1 1 1 1	343,508	100000000000000000000000000000000000000		39-9
7	Simla						101		100	10000	35,579		17:3
	ju	LLUNDUI	DIVIS	ION.									
8	Kángra			***	***		9,978	77	396,484	367,957	764,441	26,743	35.0
9	Hoshiárpur		***			***	2,244	441	525,854	463,928	989,782	41,364	41.8
10	Jullandar						1,431	632	488,299	416,008	904,307	38,530	42.6
11	Ludhiána			***		***	1,455	463	369,165	303,932	673,097	28,752	42.7
12	Ferozepore						4,302	217	507,258	424,948	932,206	38,520	41.3
	L	AHORE I	DIVISIO	N.									
18	Montgomery			***			4,771	104	268,606	229,100	497,706	19,651	39.5
14	Lahore			***		***	3,704	309	629,360	516,669	1,146,029	51,529	45-0
15	Amritsar		***	199	***	***	1,601	639	558,889	463,549	1,022,438	47,237	46.2
16	Gurdáspur		***		***	***	1,889	496	507,488	429,296	936,784	43,554	46.5
17	Siálkot				***	***	1,991	538	565,124	506,203	1,071,327	53,641	50.1
18	Gujránwála				***	•••	3,198	278	485,260	405,317	890,577	39,549	44'4
10.3	The second secon	WALPING	NIVIO I	SION.						-	1		- Total
19	Gujrát					***	2,051	366				33,829	45'1
30	Shahpur		***	•••	•••	***	4,840				- 350		427
21	Jhelum					***	3,995	1533			700000	1	
22	Ráwalpindi		 DIRECT	in	***	***	4,850	183	463,70 4	422,360	886,064	34,496	38-9
	The second second	OOLTAN	DIAIRIC	JN.					100000	cho va	-	ANNES	-
28	Mišawáli			***	***	***	7,816					17,869	42.1
24	Jhang Mooltan			***		***	6,652				1,002,656		497
26	Musaffargarh			***		***	6,107				2000	78.03	467
27	Dera Ghari Kha					***	3,635 5,306	2 1000		185,449 214,499	405,656	17,518 16,228	34.5
			***				3,000	60	200,946	213,500	900,047	20,220	
1		Total for	the Prov	rince			97,209	207	10,798,255	9,310,485	20,108,690	862,862	42-9

No. II.

OF THE PUNJAB DURING THE YEAR 1903.

	7		1 8	1			-	-	9	-		-			1	10		111
Num	BER OF I	EATHS	eg o	-				nen 1 i	000 oF			-		-		N BATIC		-
R1	EGÍSTERE	D	ma hs		1	1	PEATHS			FOPULA	TION FI	I I		-	DURIN	G PRES	TOUS	
Males.	Females,	Total.	Number of deaths of to every 100 deat females.	Cholera,	Small-pox,	Plague,	Forer.	Dysentery and distr-	Respiratory diseases	Injuries.	All other causes,	Males.	Females.	Total,	Males.	Females.	Total.	Serial No.
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	-	26	27	28
15,397 12,463	14,389		-	0-5		2:2		0.2	1.3	0-3	6.3	100			407		47:1	
16,611	15,759	32,370	105.4	0.2	0.9	5.2	23-9	1.2	1.2	0.4	97	42.5	44'3	43'4	36.8	36.7	36-8	3
15,842	14,301	30,143	110-8	0.5	0.1	0.01	28-3	1.3	3.5	0.3	9.9	42.8	45'1	43'9	38.5	42.4	40.3	4
22,514	20,559	43,073	109-5	10	0.6	1.2	32-3	0.8	2-6	0.3	10-0	47-0	50-9	48'8	46.3	50:4	48-2	5
21,578	21,210	42,788	101-7	2-1	0.9	7.4	26.2	2.1	7-5	0.3	9.5	51'4	61.8		44'3	52'4	47.9	6
516	356	872	144'9	1.5	0.3	0.03	8-6	1.7	5.0	1.0	6.6	22.4	28.3	24.5	18-8	25'4	21-1	7
13,478	13,376	26,854	100.8	0-1	0.02	0.01	22-6	1.3	3.1	0-4	7.6	34-0	36'4	35.1	31.3	33.3	32'2	8
24,660	28,081	52,741	87-8	0.3		18-3		1.0	7.5	0.3	5.6	46.9			32.8	37-6	35-0	9
27,187	82,592	59,779	83'4	0.6		28.6		0.9	6-0	0.5	8.2	55.7	78-3		34.0	43-9	38-5	10
18,557	18,415	36,972	100-8	3.1	0-8	12.3		0-8	5.1	0.3	11.9	50°3	60.6	2003	202	62.4	ina	11
23,850	22,890	46,740	104-2	3.0	1.2	6.7	27-3	0.6	1.7	0.3	93	47-0	53'9	50-1	43'6	49.4	46.3	12
6,758	6,474	13,232	104-4	0-3	1.0	0.4	13.8	0.3	0.2	0.4	10.0	25.2	28-3		26.5	28-2	27.3	13
33,781	35,607	69,388	94-9	2.3	1.1	20.7	22-8	0.7	2.6	0.4	10.0	53.7	68-9	60.6	37-2	42.6	39-6	14
35,629	40,937	76,566	87.0	0.9	9.6	25.6	32.2	1.0	3.4	0.3	10-8	63.8	88.8	74'9	35.9	43.2		15
24,277	25,825	50,102	94-0	0.2	0.4	6.1	26'3	1.5	14-0	0.3	0.9	47.8	59.4	53'5	36.3	-	39.4	16
27,265	30,090	57,355	90'6	0.3	0.2	63.0	24.6	0.2	6.1	0.3	5.5	48-3	1106	96-3	39.4		43.1	17
40,967		85,786	91.4	-				0.3	14	0.4	63	84.4	-		1	34:3		18
13,026	13,651	26,677	95.4	0.03	0.9	3.7	21.2	0-5	3'3	0.3	5.6	33-5	37-8	35.5	29-8	30-9	10000	19
11,043	10,809	21,852	102-2	0.0	0.7	14	28 6	0.6	1.0	0.5	82	40'4	43.0	41.7	26-7		26.9	20
10,863	10,839	21,702	100.2	0.1	3.0	0'4	25 9	10	0.9	0-5	6.7	36'5	37-0	36-7	31.1	29-7		21
16,891	16,338	33,229	103-4	02	30	12	244		1.5	0.3	6.2	20.4	60.1					22
7,190	6,833	14,023	105.2	0.5	1.2	0.002	25.4	0-7	0-5	0.3	4:4	32-1	34-1	33.0	27.8	27.5	. 1	23
20,617	18,869	39,486	109-3	0.3	0.8	2.7	25.7	0-7	1.0	0.3	7.9	36.9	42.6	39.4	22.8	25.0		24
11,853	11,622	23,475	102-0	0.1	0.8	***	24-9	0.4	0.6	0.4	6.5	31.2	36-5	33.6	24'6	26'8	1	25
7,409	7,368	14,777	100.6	0.03		0.004	29.7	0.3	1.2	0.5	3-2	33.7	39.7	36.4	25.8	27.3	- 1	26
6,580	5,785	12,365	113.7	0.01	0.9	0 004	22-3	0.3	9.0	0-3	2.0	25'8	27.0	26-3	21.9	22-0	61.9	27
486,802	498,674	985,476	97.6	0.7	0.8	10.2	25-3	0.8	3-4	0.3	7.4	45'1	53'6	490	34'9	38-8	36-7	_

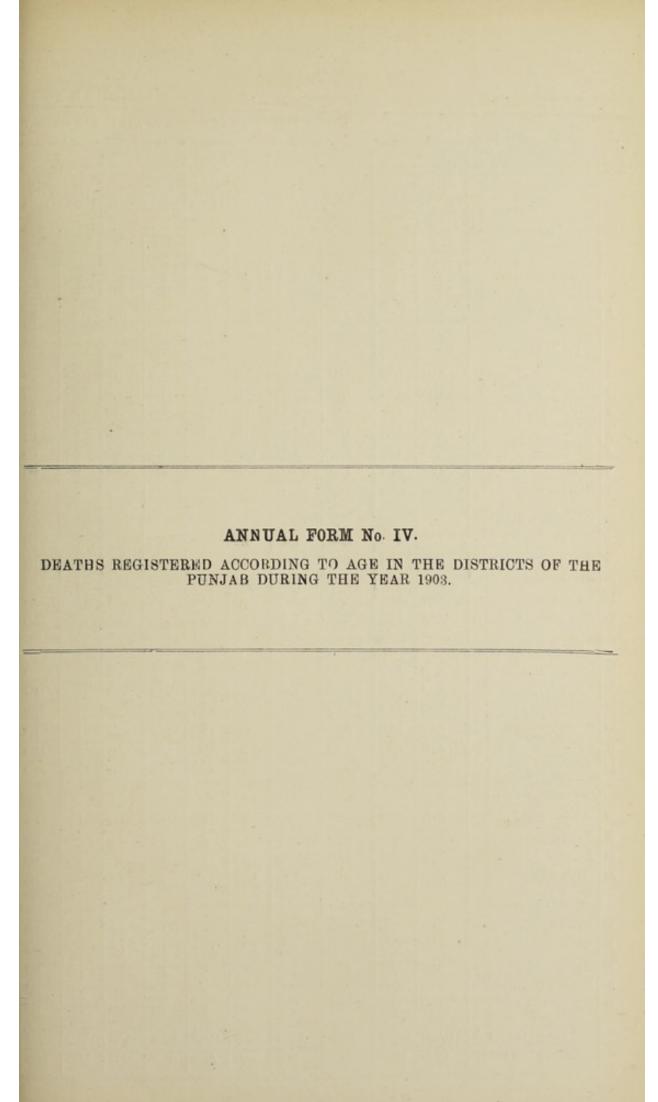
In this or any other statement,

[·] Fide foot-note at Form I.

ANNUAL FORM No. III.

DEATHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1903.

1	2							3		-			1	4	5
-			-												
l No.	DISTRICTS.	January.	February.	March,	April.	May.	June.	July.	Angust.	September.	October,	November,	December,	Total deaths regis- tered during the year,	0,
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
-				-	-					-					-
	DELHI DIVISION.									-					
1	Hissár	2,283	2,035	2,203	2,052	2,079	2,599	2,056	1,843	2,527	3,699	3,712	2,698	29,786	1
2	Rohtak	1,886	1,596	1,794	2,580	1,804	2,252	1,955	1,206	2,278	2,321	20,50	1,621	23,343	2
3	Gargáon	2,178	2,510	3,915	3,832	2,502	2,929	2,167	1,801	2,808	2,794	2,486	2,448	32,370	3
4	Delhi	2,770	2,100	2,426	2,520	2,647	3,349	2,335	1,675	2,285	2,871	2,630	2,535	30,143	4
5	Karnál	3,543	3,055	3,484	3,633	4,172	4,239	3,095	2,305	3,085	4,090	4,737	3,635	43,078	5
6	Umballa	3,088	2,854	3,245	3,641	3,197	3,256	3,254	1,926	3,289	4,892	5,387	4,759	42,788	6
7	Simla	85	52	66	83	105	87	72	95	73	62	45	47	872	7
	JULLUNDUR DIVI-												10		
8	Kángra	1,945	1,885	1,451	2,043	2,367	2,852	1,701	1,494	2,790	3,416	2,360	2,550	26,854	8
9	Hoshiárpur	4,261	4,390	6,297	8,465	6,530	3,221	2,116	1,924	3,125	4,461	4,412	3,539	52,741	9
10	Jallandar	4,495	4,353	7,534	13,196	9,606	3,173	2,522	1,987	2,919	2,876	3,376	3,742	59,779	10
11	Ludhiána	1,926		2,074		3,615	3,414	3,414	1,895	2,286	3,594	4,682	4,971	36,972	11
12	Ferozepore	3,716	3,552	4,450	5,571	5,013	4,444	4,868	2,444	2,195	2,702	3,924	3,861	46,740	12
	LAHORE DIVISION.		60.												13
13	Montgomery	991	880	883	825	946	980	801	832	985	1,473	1,998	1,638	13,232	13
14	Lahore	4,688	4,696	7,420	12,172	11,458	4,483	4,115	3,677	3,204	3,848	5,113	4,514	69,388	14
15	Amritear	5,847	6,382	9,525	12,512	10,330	3,793	3,084	2,941	3,305	5,265	7,856	5,726	76,566	15
16	Gardáspar	3,036	2,717	3,152	4,213	4,997	2,982	2,072	2,239	3,483	6,607	8,780	5,824	50,102	16
17	Siálzot	3,472	3,160	4,327	6,825	7,246	3,327	2,474	2,957	4,474	6,162	7,311	5,620	57,355	17
18	Gujránwála	5,628	7,265	13,382	26,557	12,487	4,228	1,493	2,088	2,227	2,724	3,575	4,132	85,786	18
	RAWALPINDI DIVI- SION.														
19	Gnjrát	1,971	1,556	1,633	2,407	2,943	1,743	1,324	1,621	2,136	3,097	3,447	2,799	26,677	19
20	Shahpur	1,512	1,184	1,126	1,104	1,201	1,274	1,314	1,153	1,435	3,037	4,131	3,381	21,852	20
21	Jhelum	1,850	1,341	1,358	1,129	1,246	1,329	1,178	1,313	1,573	2,747	3,547	3,091	21,702	21
23	Ráwalpindi	3,068	2,319	2,406	2,041	2,375	2,456	2,139	2,172	2,419	3,534	3,970	4,330	33,229	22
	MOOLTAN DIVISION.														
23	Miánwáli	1,150	958	1,030	950	1,145	995	859	812	817	1,417	2,106	1,789	14,023	23
24	Jhang	3,152	2,634	2,980	3,388	3,704	2,800	2,158	2,478	3,225	3,458	4,763	4,746	39,486	
25	Mooltan	1,748	1,594	1,529	1,278	100		1,312	1,297	1,587	2,367	4,613	2,658	23,475	100
26	Muzaffargarh	1,197	931	894	816	880	850	792	701	1,004	2,128	492	2,092	14,777	122
27	Dera Gházi Khan	1,058	834	710	1,014	868	1,087	693	622	766	1,535	1,611	1,567	12,365	27
	Total for the Province	72,544	68,640	91,294	137,100	107,206	69,891	55,393	47,498	62,300	87,177	105,114	90,313	085,476	
-	Matio of deaths per 1,000 in each month,	3.61	3.41	4:5)	6-37	5:33	3-48	2.75	2:36	3-10	4'34	5-23	4.49	49-01	



DEATHS REGISTERED ACCORDING TO AGE IN THE DISTRICTS

1	2	3					1	(1	7	
-	-		-								-
		Under		ONE YEAR . 5 YE.		5 YEAR UNDER 1	S AND O YEARS,	10 YEAR UNDER 1		15 YEAR UNDER 20	
No.	Districts,			-	-					-	-
			Females.	. 98.	Females.	*	Females.	38.	Females.	80	Females.
		Males.	Fem	Males.	Fem	Males.	Fem	Males.	Fem	Males.	Pem
1	2	3	4	5	6	7	8	9	10	11	12
	DELHI DIVISION.				1						
1	Hissár	3,922	3,294	2,375	2,260	775	835	587	673	489	462
2	Rohtak	3,314	2,801	1,135	916	755	720	643	656	636	626
3	Gurgáon	3,902	3,444	3,247	3,154	1,043	1,013	611	579	526	430
4	Delhi Karnál	4,232	3,734	2,528	2,516	742	591	351	325	415	448
5	77 D W	5,686 4,615	4,966	3,140 2,858	2,921 2,842	1,097	1,048	902	870 1,063	920	696 774
7	Ot-1	130	105	2,800	2,8+2	1,065	1,039	993	1,063	14	99
,	Simia	100	100	20	21	12	.0	7	0		20
	JULLUNDUR DIVISION.							- 1		7	
8	Kángra	4,230	3,782	1,580	1,662	571	559	434	402	343	590
9	Hoshiárpur	- 5,665	5,529	3,956	4,159	1,009	1,245	1,258	1,563	1,054	1,185
10	Jellundur	5,405	6,021	3,329	3,512	1,929	2,251	1,783	2,320	1,394	1,834
11	Ludhiána	4,232	4,481	2,568	2,481	1,069	1,080	957	1,177	770	741
12	Ferozepore	5,525	5,305	3,471	3,362	1,433	1,465	1,231	1,279	1,202	1,239
	LAHORE DIVISION,										
13	Montgomery	2,323	2,159	1,419	1,340	337	280	175	202	114	131
14	Lahore	7,116	6,576	4,610	4,457	2,568	3,147	2,282	3,108	1,713	1,947
15	Amritsar	7,205	7,531	4,790	4,912	2,595	3,017	2,408	3,210	1 839	2,279
16	Gurdáspur	6,464	5,926	5,419	6,018	994	1,229	1,041	1,253	767	925
17	Siálkot	6,868	6,387	5,605	6,084	1,848	2,219	1,334	1,645	926	1,124
18	Gujránwála	5,361	4,926	4,297	4,485	3,691	4,668	3,887	4,189	2,354	2,423
	RAWALPINDI DIVISION						12				
19	Gujrát	3,874	3,524	2,739	2,778	677	719	380	528	368	421
20	Shahpur		2,662	2,461	2,598	730	874	347	360	232	208
21	Jhelum		2,743	2,052	2,212	678	660	331	371	237	243
22	Ráwalpindi	4,412	4,183	3,147	3,238	1,173	1,165	553	645	498	499
	MOOLTAN DIVISION.			-							
23	Miśowáli	2,294	1,960	1,498	1,685	547	576	215	189	147	136
24	Jhang		5,873	3,262	3,215	1,438	1,361	958	847	893	868
25	Mooltan		4,267	2,330	2,489	685	722	339	313	240	235
26			2,328	1,289	1,526	453	459	239	205	180	159
27	Dera Gházi Khan		1,719	1,281	1,216	381	329	215	192	134	124
	Total for the Province		110,782	76,415	78,059	30,295	33,377	23,961	28,167	19,272	20,769
-	Ratio per 1,000 living .	845-96	351.08	72.48	80'17	20.26	25'99	17:74	27.70	19:44	26-36

No. IV.
OF THE PUNJAB DURING THE YEAR 1903.

	8	9		1 10	0	1	1	1:	2	1	3	14
-				-		-				-		
	LES AND 30 YEARS,	30 year under 4	RS AND O YEARS,	40 YEAR UNDER 5	es and O years,	50 YEARS A 60 YE		CO YEAR		Тот	AL.	
Males.	Females,	Males.	Females,	Males.	Females.	Males.	Females.	Males,	Females.	Males.	Females.	No.
-		15	16	-				21	22			05
13	14			17	18					20		25
1,208	1,277	1,100	1,104	1,392	1,133	1,280	1,043	2,269	2,308	15,397	14,389	1
894	747	884	918	1,032	910	1,281	1,048	1,889	1,538	12,463	10,880	2
1,392	1,237	1,304	1,397	1,319	1,249	1,318	1,126	1,949	2,130	16,611	15,759	3
1,384	1,263	1,372	1,255	1,400	1,135	1,569	1,268	1,849	1,766	15,842	14,301	4
2,142	1,968	2,238	2,199	2,134	1,840	1,786	- 1,551	2,522	2,500	22,514	20,559	5
2,122	2,157	2,184	2,246	2,108	1,911	1,786	1,487	2,927	3,135	21,578	21,210	6
60	51	101	42	59	24	34	33	70	49	516	356	7
903	1,521	1,019	1,141	1,048	901	1,009	688	2,841	2,130	13,478	13,376	8
1,931	2,655	2,055	2,757	2,087	2,492	1,891	2,041	3,754	4,455	24,660	28,081	9
2,265	2,848	2,251	2,987	2,214	2,909	1,972	2,375	4,645	5,535	27,187	32,592	10
1,565	1,571	1,499	1,627	1,652	1,502	1,430	1,234	2,815	2,521	18,557	18,415	11
2,032	2,044	1,968	1,984	2,118	1,856	2,168	1,886	2,702	2,470	23,850	22,890	12
									-	300		1
277	340	322	381	341	356	396	306	1,054	879	6,758	6,474	13
3,347	4,024	2,991	3,337	2,811	2,874	2,165	2,129	4,178	4,008	33,781	35,607	14
3,171	4,120	2,882	2,792	2,856	3,420	2,486	2,829	5,388	5,827	35,629	40,937	15
1,577	2,137	1,654	2,041	1,631	1,650	1,408	1,325	3,322	3,321	24,277	25,8:5	16
1,909	2,623	1,880	- 2 ₁ 437	1,693	1,984	1,502	1,635	3,700	3,952 5,406	27,265	30,030	17
4,899	5,341	4,554	5,463	3,911	4,575	3,085	3,343	5,428	3,400	40,967	4-,010	10
											-	1
764	1,039	836	1,050	769	850	636	774	1,983	1,968	13,026	13,651	-19
463	554	496	590	500	535	625	527	1,995	1,901	11,043	10,809	20
629	753	688	761	676	613	686	556	1,987	1,927	10,863	10,839	21
1,186	1,323	1,372	1,366	1,148	1,019	1,038	794	2,364	2,106	16,891	16,338	
										121		
294	363	352	427	391	347	455	312	997	838	7,190	6,833	23
1,053	995	1,280	1,161	1,485	1,252	1,889	1,534	2,177	1,763	20,617	18,869	24
542	746	628	658	612	512	555	364	1,483	1,316	11,853	11,622	25
426	593	465	593	471	358	377	321	1,005 961	826 689	7,409 6,580	7,368 5,785	26 27
609	634	469	435	342	255	292	192	361		0,000	0,100	-1
39,053	44,924	38,842	44,149	38,200	38,462	35,119	32,721	67,754	67,264	486,802	498,674	
22.03	27'84	26:04	33.71	35.69	40'89	50-22	56.57	102.26	120'92	45.08	53.26	

viii

ANNUAL FORM No. V.

DEATHS REGISTERED ACCORDING TO CLASSES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1903,

1	2	II.		3			1		4			1		5			6
-		POPULATI	ON ACCOR	DING TO	CENSU	s of 1901.	NUMBE	R OF DEA	THS	REGIS	STERED.	RAT		DEATH	s PER 1,	000	-
Ne.	DISTRICTS.	Muhammadans,	Hindús.	Native Christians.	Other classes.	Total,	Muhammadans.	Hindús.	Native Christians.	Other classes,	Total.	Muhammadans.	Hindús,	Native Christians.	Other classes,	Total.	No.
1	2	3	4	5	6	7	8-	9	10	11	12	13	14	15	16	17	18
	DELHI DIVISION,																
1	Hissár	202,009	579,444	53	211	781,717	6,578	23,206	1	1	29,786	32.56	40.05	18:87	4.74	38-10	1
2		91,687	538,904	41	40	630,672	3,194	20,149			23,343	34.84	37:39	***		37-01	2
	Gurgáon	242,548	503,381	221	58	746,208	9,419	22,937	13	1	32,370	2				43.38	3
	Delhi	166,655			668	686,998	1 2000	22,471	88	93		1000		10000	139-22	43.88	
	Karnál	241,412		11000	958	883,225	15.00		2	***	43,073	1			1000	48-77	
- 8	Umballa	221,679	537,612	3.6	100	763,250		30,266	9	***	42,788					56:28	
7	Simla JULLUNDUR DIVISION.	5,560	27,770	368	1,881	35,579	180	683	9		872	32.37	24.59	24'46		24:51	7
8	Kángra	39,584	720,389	203	4,315	764,441	1,519	25,335			26,854	38:49	35-17			35.13	8
3	Hoshiárpur	312,958	676,009	+ 1000	30	989,782		35,277			52,741			2.55		53.29	
18	Jullundur	416,691	487,234		106	904,307					59,779					66.10	
11	Ludhiána	235,937	436,212		533			24,340			36,972					54.93	
1	Ferozepore	436,995	100	0.00	5	932,206			100		46,740		11858	1000		50.14	
	LAHORE DI VISION.		40,000	240		500,000	20,127	20,010			40,140	02.02		***		00 14	
18	Montgomery	355,893	141,439	314	61	497,706	10,081	3,151			13,232	28.33	22.28			26:59	13
14	Lahore	711,171	428,753	2,990	3,115	1,146,029	48,791	20,521	75	1	69,388	68-61	47.86	25.08	0.32	60-55	14
15	Amritsar	474,457	546,208	1,492	281	1,022,438	35,184	41,354	26	2	76,566	74.16	75.71	17:43	7.12	74:89	15
16	Gurdáspur	462,996	469,346	4,198	244	936,784	24,573	25,431	80	18	50,102	53.07	54.18	19.06	73.77	53.48	16
17	Siálkot	710,778	349,867	10,662	20	1,071,327	39,909	16,976	198	272	57,355	56.15	48 52	18:57	?	53:54	17
18	Gujránwála	603,464	281,439	5,592	82	890,577	65,520	19,989	118	159	85,786	108-67	71.02	21.10	9	96.33	18
	RAWALPINDI DIVISION.																
19	Gujrát	655,838	94,250	241	219	750,548	23,305	3,356	3	13	26,677	35.23	35.61	12.45	59:36	35'54	19
20	Shabpur	442,921	81,247	21	70	524,259	18,696	3,150		6	21,852	42 21	38'77		85.71	41.68	20
	Jhelum	525,884	64,673	111	102	590,770	19,441	2,218	2	41		Same of the last			401.96	36.74	21
22	Báwalpindi	786,627	98,373	514	550	886,064	29,256	3,803	3	167	33,229	37.19	38-66	5-84	303'64	37-50	22
	MOOLTAN DIVISION.																
23	Miánwáli	371,674	52,870	16	28	424,588	12,423	1,589		11	14,023	33.42	30.05	***	392.86	33.03	23
	Jhang	687,164			73	1,002,656	28,487	10,701	257	41	39,486	41.46	34.25	47.43	261.6*	39 38	24
	Mooltan	565,557	131,852		252	697,859	16,324	7,142	1	8	23,475				31.75	33'64	25
02	Muzaffargarh	350,177	55,446	100	16	405,656	12,861	1,913		3	14,777	36-73	34.20		187 50	36'43	26
27	D. G. Khan	411,315	58,530	81	21	469,947	10,577	1,725		63	12,365	25-72	29:47		?	26-31	27
	Total for the Province	10,732,580	9,824,476	37,695	13 939	20,108,690	529,726	453,949	901	900	985,476	49-36	48.68	23'90	*64:57	49.01	

^{*} Figures incorrect, due to misclassification.

ANNUAL FORM No. VI. DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS (RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1903.

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS

1	2	3	4	5	6	7	8	9	-		10		-
-		9						-			INJUR	IES.	-
No.	A.—RURAL CIRCLES.	Population according Consus of 1901.	Cholera.	Small-pox.	Plague.	Гечета.	Dysentery and diarrhos.	Respiratory diseases.	Males.	Females.	Wounding and acci-	Snake-bite and killed by wild beasts.	Total,
1	2	3	4	5	6	7	8	9	10	11	12	13	14
-	DELHI DIVISION.												
1	Hissár	693,044	358	159	229	18,860	207	578	2	1	118	54	175
2	Rohtak	576,415	39	37	187	16,699	92	361	2	5	68	18	93
8	Gurgáou	678,503	49	479	2,754	16,721	703	732	19	43	194	39	295
4	Delhi	457,658	194	23		12,305	408	648	4	12	95	47	158
5	Karnál	799,607	894	287	552	26,310	412	1,602	1	2	177	59	239
6	Umballa	698,479	1,294	654	4,537	18,801	1,304	5,279	5	1	130	29	165
7	Simla	21,449	37	1		111	49	54			7	1	8
	JULLUNDUR DIVI- SION.					orear!							
8	Kángra	751,945	51	14		17,057	960	2,274	14	13	200	50	307
9	Hosbiárpur	923,773	155	239	17,349	18,440	692	6,855	11	8	201	36	236
10	Jullandur	789,950	337	237	23,745	17,542	417	4,294	9	4	140	7	160
11	Ludhiána	586,569	1,924	497	7,357	12,610	234	2,571	6	3	158	4	171
12	Ferezepore	881,750	2,736	1,064	5,584	24,182	503	1,431	7	5	187	28	227
	LAHORE DIVISION.							- 10					-
13	Montgomery	477,936	150	491	207	6,626	113	192	1	3	113	56	173
14	Lahore	906,012	2,111	1,069	21,985	21,080	366	1,175	12	9	215	67	303
15	Amritsar	842,818	831	255	25,593	26,948	723	2,155	7	7	231	10	255
16	Gurdáspur	871,990	129	336	5,195	26,194	1,191	12,514	8	2	190	35	235
17	Siálkot	994,914	280	522	13,678	26,485	627	5,716	8	4	219	59	293
18	Gujranwála	802,306	43	80	52,725	19,651	151	788	6	2	241	78	327
	RAWALPINDI DIVI- SION.												
19	Gujrát	709,017	15	599	2,535	15,225	285	2,127	3	1	156	27	187
20	Shahpar	471,938	294	341	731	13,491	189	444	1		167	55	223
21	Jhelum	565,297	38	955	21	14,608	251	498	3	5	201	42	251
2		819,219	183	2,479	118	20,447	746	752	9		233	35	277
	MOOLTAN DIVISION.												
23	Miánwáli	395,033	49	614		10,214	216	200	1	1	102	22	126
24	Jhang	954,602	266	791	2,175	24,817	Ø1	896	4	3	210	56	273
25	Mooltan	601,975	18	473		15,684	72	104	1	1	209	56	267
26		393,253	11	593		11,733	113	447	2	2	125	58	187
27	Dera Gházi Khan	428,705	1	400	1	9,598	65	194	3	1	94	37	135
									_	-			
	Total of the Rural Circles	18,094,164	12,487	13,689	187,258	462,439	12,700	54,881	149	138	4,411	1,065	5,763

No. VI.
(RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1903.

1 11		12	-			-	13	-	-	The same of the sa	-	-	14
-	7	1969.			RAT	O OF DEATH	IS PER 1,00	O OF POPUL	ATION.				-
	1	Total deaths from all causes.					pus	808.			From al	Il causes,	
unes.		s from						Respiratory diseases.		MISES.	e e	of five	
All other causes.		death	10	-pox.	6		Dysentery diarrhosa,	ratory	.608	All other causes.	For the year,	Mean ratio of previous five years.	
All of		Total	Cholera,	Small-pox.	Plague.	Fevers,	Dyser	Respi	Injuries	All of	For th	Mean pre yea	No.
15		16	17	18	19	20	21	22	23	24	25	26	27
3,1	539	24,105	0.52	0.53	0.33	27*27	0.30	0.83	0.25	5:11	34.78	45:69	1
10000		21,278	0.02	0.06	0.32	28 97	0.19	0-63	0.10	6:54	36-91	41-12	2
6,8	90	28,123	0.07	0.71	4.06	24.64	1.04	1.08	0.43	9 42	41'45	36-76	3
4,7	10	18,446	0.42	0.05		26 89	0.89	1:42	0-35	10:29	40.31	39-31	4
- 77	550	37,911	1.13	0.36	0.69	32 90	0.52	2.00	0.30	9-52	47 41	47'54	5
		38,414	1.85	0.94	6.20	26-92	1.87	7:36	0:24	9:13	55.00	48.72	6
1	24	384	1.73	0.02		5.18	2*28	2.25	0 37	5.78	17.90	16.36	7
							1						
5,7	23	26,386	0-07	0.02		22.68	1.58	3.05	0.41	7.61	35.09	32.16	8
5,1	00	49,086	0.17	0.26	18.78	19-96	0.75	7:42	0.28	5.25	53.14	34-65	9
6,4	15	53,147	0.43	0.30	30.08	22.21	0.23	5'44	0.20	8.12	67:28	38'65	10
7,0		32,371	3.28	0.85	12.24	21.50	0.40	4.38	0'29	11:95	55.19	54:75	11
8,5	81	44,008	3.10	1:21	6.33	27:43	0.24	1.62	0.26	9.39	49.91	46.46	12
		1											
4,7	20	12,672	0.31	1.03	0.43	13'86	0.24	0.40	0.36	9.88	26 51	27-27	13
9,8	94	57,483	2.33	1.18	24:27	23'27	0.40	1.30	0 33	10:37	63:45	40.15	14
9,9	84	66,744	0.99	0.30	30-37	31-97	0.86	2.56	0.30	11.85	79-19	38.29	15
	3.6	46,396	0.12	0-39	5.96	30'04	1 37	14:35	0.27	0 69	53-21	39.51	16
5,3		52,969	0.28	0.25	13.75	26-62	0.63	5.75	0.29	5:40	53-24	43°56 31°96	17
4,7	69	78,534	0.92	0.10	65.72	24.49	0.19	0.98	0.41	5.94	97-89	3130	18
										1			
3,9		24,953	0.02	0.84	3.58	21:47	0.40	8.00	0-26	5.61	35'19	29'89	19
3,7		19,478	0.62	0.72	1.55	28'59 25'84	0.40	0°94 0°88	0.47	7·98 6·60	41°27 36°01	26:51	20
4,9	684 68	29,933	6.22	3.03	0.14	24'96	0:91	0.92	0.34	6'02	36.54	29-11	22
												3	
1,6	75	19.001	0.12	1.55		25'86	0.22	0.21	0.32	4.21	33-15	27-62	23
7,2		37,048	0.28	0.83	2.28	25'00	0.64	0.91	0.29	756	38 81	23-35	24
3,6	Carlo Li	20,307	0.03	0.79		26'05	0.15	0.17	0.44	6:13	33-73	25-06	25
1,1		14,244	0-03	1'51		29'83	0.29	1'14	0.48	2795	36-22	26 17	26
		11,069	0'002	0093	0.002	22'39	0.12	0.42	0.31	. 1.57	25'82	21:29	27
	1	1			1		. 6					200	
-	-		1-75										
130,7	20 87	78,937	0.69	0.76	10.35	25'56	0.65	3.03	0.35	7,22	48:58	36:35	

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

Sira	14
B. Towns	3 4 21
B. Towns	3 4 21
HISSAR DISTRICT.	3 4 21
HISSAR DISTRICT.	3 4 21
Hissar	3 4 21
Hissár	21
Hánsi	21
Sirva	
ROHTAK DISTRICT.	
Table Tabl	
Beri	6
Bahádurgarh	4
12 Palwal	3
14 Ferozepúr	5 2
DELHI DISTRICT. 206,534 89 32 8 6,485 413 1,676 3 1 47 18 Sonepat 12,996 32 8 128 19 10 12 12 19 Balabgarh 165 20 19 1 1 1 196 12 125 1 1 1 1 1 1 1 1 1	1 4
17 Delhi	1
19 Balabgarh	60
KARNAL DISTRICT. 22,703 1 79 100 804 77 186 13 14,408 9 49 121 652 47 144 5 5 23 Pánipat .	13 3
22 Kaithal 14,408 9 49 121 652 47 144 5 23 Pánipat 26,914	0
24 Ládwa 3,518 5 12 173 36 17 27 2 26 Thánear 5,066 17 93 22 27 27 Umballa 13,462 71 20 40 294 66 97 2 29 Burya 5,865 12 9 125 137 41 54 1 30 Sadhaura 9,812 162 4 90 391 44 80 5 31 Rúpar 8,888 13 156 132 45 42 32 Simla 14,130 4 11 1 196 12 125 1 33 Kángra 4,746 2 64 29 29 34 Dharmsála 3,288	16 8 11
26 Thánesar 5,068 17 93 22 27 UMBALLA DISTRICT. 26,744 72 1 692 382 111 147 2 14 28 Jagádhri 13,462 71 20 40 294 66 97 2 29 Burya 5,865 12 9 125 137 41 54 1 30 Sadhaura 9,812 162 4 90 391 44 56 5 31 Rúpar 8,888 13 156 132 45 42 32 Simla 14,130 4 11 1 196 12 125 1 26 33 Kángra 4,746 2 64 29 29 34 Dharmsála 3,288 5 2 36 3 13<	2
27 Umballa 26,744 72 1 692 382 111 147 2 14 28 Jagádhri 13,462 71 20 40 294 66 97 2 29 Burya 5,865 12 9 125 137 41 54 1 30 Sadhaura 9,812 162 4 90 391 44 80 5 31 Rúpar 18,888 13 156 132 45 42 5 Simla 14,130 4 11 1 196 12 125 1 26 8 Kangra 4,746 2 64 29 29 34 Dharmsála 3,288 5 2 36 3 13 1 .	" 1
29 Burya	16
31 Rúpar 8,888 13 156 132 45 42 32 Simla 14,130 4 11 1 196 12 125 1 26 KANGRA DISTRICT. 4,746 2 64 29 29 34 Dharmsála 3,288 5 2 36 3 13 1	1 6
32 Simla	
33 Kángra 4.746 2 64 29 29 34 Dharmsála 3,288 5 2 36 3 13 1	27
	3
HOSHIARPUR DISTRICT. 36 Hoshiárpur 17,037 67 5 180 235 87 162 6	6
	4
37 Khánpur	2 2
41 Tanda Urmar 10,247 9 2 219 235 16 100 2 42 Miáni 6,118 6 3 58 239 35 21 3 43 Mukerián 3,589 2 46 144 18 41 3	3
43 Mukerián 3,589 2 46 144 18 41 3 44 Una 4,746 2 19 56 7 69 2 45 Anandpur 5,028 1 19 96 13 21	2
JULLUNDUR DISTRICT. 46 Jullundur 54,455 124 2 631 982 187 423 20	20
47 Aláwalpur 4,423 2 9 91 7 13 1 2 48 Kartárpur 10,840 9 3 547 174 19 54 4	3
49 Bungah 4,697 2 8 11 61 11 28 1 50 Ráhon 8,651 4 3 75 94 48 366 1	1
51 Nawashahr 5,641 29 9 71 23 27 2 52 Phillour 6,986 14 2 164 155 9 84 3 53 Núrmahal 8,766 8 3 428 96 23 79 2 1 4	3 7
relative to core at the core of all all all all all all all all all al	3

No. VI.

TOWNS OF THE PUNJAB DURING THE YEAR 1903.

11	12			-		18	3					14
	IIa IIa			RA	TIO OF DE	ATHS PER	1,000 or	F POPULATI	on.			
*	from					and	- de	- 1	8	From al	l couses.	
All other causes.	Total deaths causes.	Cholera,	Small-pox.	Plague.	Forers.	Dysontery diarrhoea.	Bespiratory cases.	Injuries.	All other causes.	For the year.	Mean of pre- vious five years.	No.
15	16	17	18	19	20	21	22	23	24	25	26	27
234 306 741 127 12	862 723 3,279 693 124	0.06	0·12 0 61	0.08 41.96 0.38	27 20 16 04 20 16 31 08 35 18	2°60 3°15 2°26 1°58 2°51	5 50 5 69 4 94 2 72 2 15	0°17 0°24 0°58 0°36	13 26 18 52 20 63 8 04 4 31	48°85 43°76 91 29 43°86 44 51	60 98 49 74 55 27 71 53 53 98	3 4
215 200 94 54 17	687 467 412 239 240		1.57 0.16 0.10 0.46	0°05	16:54 15:46 23:96 23:91 34:65	1.37 2.37 2.47 3.5 0.67		0.41	10-93 16-36 9-67 8-22 2-85	38°19 42°37 39°44	35-7- 44-66 44-98	8 9
338 161 50 116 61 91	2,418 634 222 357 296 320	7 87	6:19 0:47 1 4 0 *2 0 33 0:49	49 97	8°02 23°85 18°09 25°56 30°54 16°33	3:30 1:87 2:93 3:02 1:06 4:18	8°54 2 65 5 38 3°16 5 98 5°90	0 18 0 16 0 16 0 55 0 50 0 12	12:48 12:55 8:15 15:94 10:13 11:18	49:42 36:18 49:05 49:14	40 48 41 00 37 6 47 58	8 12 7 13 2 14 8 15
1,979 68 29 3	10,742 506 227 222	7.10	0°15 0°08 1°78 0°94	0.04	31:40 24:25 27:96 31:07	2:00 3 3 4 12 3:77	8·11 3 08 2·22 3·58	0.29 1 i.0 0.67 0.56	9-58 5-24 6-44 0-56	38'95 50'38	35°2 36°3	3 18 5 19
327 247 513 42 53 31	1,590 J,277 1,327 314 463 191	0·62	1 56	4°41 8°40 49 18 9-90	35:41 45:25 18:61 10:23 13:63 18:36	3 39 3 26 3 57 4 83 3 00 4 34	8·19 9·99 6·09 7·67 10·72 5·33	0.70 0.56 0.41 0.57	14 40 17 14 19 4 6 11 94 4 81 6 12	88 63 49 31 89 26 42 06	81 3 48 2 52 4 39 3	0 22 6 23 9 24 9 25
267 249 123 118 54	1,688 847 602 895 442	245 1651	1 49 1 53	25·87 3·42 21·31 9·17 17·55	14 28 21 84 23 36 39 85 14 85	4:15 4:90 6:99 4:48 5:06	7°21 921 815	0·30 0·17 0·61	9:98 18:50 20:97 12:03 6:08	62 92 85 55 91 21	35-0 38-4 26-8	0 28 0 29 5 30
112	488	0-28	0.78	0.07	13 87	0.85	.8 85	191	7-93	34 5	28 3	2 32
57 14 37	181 74 213	1.25		0.61 1.79	13:49 10:95 25:10	6·11 0·1·1 5·60		0.30	12°C1 4°26 8°29	22.51	32.6	0 34
143 32 31 52 46 48 31 24 39 45	885 242 204 250 381 631 396 278 194	1.57 1.33 0.27 0.47 0.88 0.98	189 0°33 0°55 0°44 0°20 0 49 0 56 4°00	10:57 26:08 3:66 36:14 3:44 21:37 9:48 12:82	13-79 21-99 11-32 11-56 38-16 22-93 39-17 40-12 11-86 18-89	5:11 6:91 4:10 1:92 3:44 1:56 5:72 5:02 1:47 2:59	9°51 7°54 7°9 8°49 5°62 9°76 3°43 11°42 14°54 4°18	0.67	8-39 10-05 5-16 8-76 7-18 4-68 5-07 6-69 8-22 8-95	76-03 33-97 68-46 59-49 61-58 64-73 77-46 40-88	56°2' 35°2' 34°3' 41°19 43°4' 27°30 52°50 31°50	4 37 33 4 39 4 40 41 42 43 43 6 44
510 36 63 45 34 62 80 74 59		0.83 0.43 0.46 5:14 2:00 0.92	0·45 0·28 1·70 0·35 0·29 0·34	11·59 2·03 50·46 2·34 8·67 1·60 23·48 49·16 21·29	18-03 20-57 16-05 12-99 10-67 12-59 22-1- 11-03 10-54	3:43 1:58 1:75 2:34 5:55 4:08 1:29 2:64 2:11	7.77 2.94 4.98 5.96 42.31 4.79 12.02 9.07 6.13	8 67 6 68 0 37 0 1 0 12 0 35 0 43 0 80 0 30	9:37 8:14 5:81 9:58 3:93 10:99 11:-5 8:50 5:92	80°54 35°55 72°25 39°53 73°15	32:87 28:71 45:56 54:93 46:34 46:12 44:25	47 48 49 50 51 52 53

DEATHS BEGISTERED FROM DIFFERENT CAUSES IN THE

1		2				3	4	5	6	7	8	9			10		
						2					noen.				Injus	nes.	
						according 1901.					and diarrhosa.	diseases.	Suic	ide.	pue	wild	
	E	.—To	WNS.			of 19					pas .	ry die			ts.	by	
3						Population accord Census of 1901,	Cholera,	mall-pox	Plague,	92.0	Dysentery	Respiratory	es.	Femules.	Wounding necidents,	Snake-bite killed by beasts.	10
No.					740	Pop	Cho	Smo	Pla	Fevers	Dys	Res	Males.	Per	Wo	Sna	Total
1		2				3	4	5	6	7	8	9	10	11	12	13	14
	LUDHI	ANA	DIST	RICT.													
55 56	Ludhiána Jegráon					48,211 18,760	41 55	4 53		214	223 30	486 216	1	1	14		1
57 58 59	Kaikot Khanna				***	10,131 3,838 5,588	33 5 2	8	245 114 69	42	21 7 10	48 30 50	1		6 1	***	
	Máchiwára	***	***		***	9,000		***	69	110			-	***			
	FEROZE	POR	E DIS	TRICT						257.0							
60	Ferozepore Zfra				***	23,475 4,001	***	4		152		46 55			1		
63	Mokhu	***	***			1,355 6,731	27	56		62	10	37			4		***
64 65	Mukusar Fázilka					6,389 8,505		8	450	123 76		13 25		***	3		
	MONTGO	MPP	v nie	TRICT											-		
66	Montgomery	JA LV LL				6,602	1			25	3	16			1		
67 68	Kamália Pákpattan					6,976 6,1s2		***	5			12	4		1 2	1	
	LAHO	DE D	TETPI	IOT.										13			
69	Labore					186,884	259	138	497	4,104	314	1,669	3	2	95	2	100
70 71	Sharekpur Counián		***			4,474 8,959	2 44	6 23	28 226	80	10 23	11 25			***	***	
72	Khúdián	***			***	3,401	. 5	4	123	73	5	9		***	7 2 6	î	
73 74	Kasór Khem Karn		***			22,022 6,083	180 16	55	238 312	308 86	57 5	86		***	4		1
75	Patti		30.0	***		8,187	40	1	259	111	7	31			***	***	
76	AMBIT		DIST	RICT.		161.039	124	348	293	5,428	286	1,253	1	1	57	3	6:
77	Majitha		***			6,403	***	2	43	138	30	32		-	1	***	
78 79	Jandiála Taro Táran					7,750 4,428	5	- 12 5	167 85	305 92	8 10	48 21			2	1	
	GURDAS	PUR	DIST	RICT.											1000	-	
80 81	Gurdáspur Dinanagar			***	***	4,903 5,191		7 32	7	27:2 223	21	37 30			7 3	2000	1
82	Kalánaur Pathánkot	***		***		5,251	2	1.5	35	164	25	35			***		
84	Sujánpur	***	***	***		6,091 5,687	28 17	5 14	7 50	139 81	40 45	90 55	***		3	***	1
85	Dulhousie Butála					27,365	1 28	13	229	5 802	1 83	270		***	4 13	3	12
87	Srigobindpur	***				4,380			204	125	5	19	10			***	
00	Dera Nának SIALK	OT D	ISTR	ICT.		5,118		*.*	13	152	19	48	1	***		1	
89	Siálkot					44,789	61	18	395	1,080	67	521		744	17	1	15
90	Dask s Jámke	***	***		***	3 655 4,216			211 236	175 66	8	26 18	100000	***	3	715.00	
92	Kila Sobha Si					3,338	***	00 00	27	147	4	41				1	
94	Pasrúr Zaffarwál	***	***			8,335 4,658	14	2 4	74 155	78 66	16 13	89		***	4		1
95	Nárowál			***		4,422		1		74	7	51					
4	GUJRAN		A DIS	TRICT					1					-			100
96	Gujránwála Wazriabad		***			28,356 18,069	47 60	13	1,008 294	1,021	40 37	131	1 1	10000	19 10		20 11 4 2 3 4
98	Eminábad Kila Didár Sir	***		***		6,494		21	459	104	***	37	î	***			1
100	Akálgarh	ogn	***	***		2,705 4,961			266 201	39 56	7	19		100	3 2 3		0.00
101	Ramoagar Sohdara		***	***	***	7,121	17	. 3	351	185	8	42	***	***	2	2 2	4
103	Háfizabad					5,313 4,692			120 387	173 66	3	47 16			4	2	1
104	Rhángah Dog Pindi Bhattiá			***	***	5,349 4,229		****	234	11 146	1 5	8					
105			200			Wyww.d)	111		40000			100	100	400			

No. VI -continued.

TOWNS OF THE PUNJAB DURING THE YEAR 1903.

11	12					1	3					14
	- E			RATIO	OF DEATHS	PER 1,00	0 of Popu	LATION.				
ź	from	1				pur	die-		*	From all	causes.	
All other cazees.	Total deaths causes.	Cholera.	Small-por.	Plague.	Fevers.	Dysentery diarrhon.	Respiratory eases.	Injuries.	All other causes.	For the year.	Mean of pre- vious five years.	No.
15	16	17	18	19	20	21	22	23	24	25	26	27
499 223 161 36 47	2,233 1,137 692 242 297	0:85 2:93 3:26 1:30 0:36	0.08 2.83 2.08	3:59 18:07 24:18 29:70 12:35	16:41 11:41 18:06 10:94 21:12	4·63 1·60 2·07 1·82 1·79	10-08 11-51 4-24 7-82 8-95	0°33 0°37 0°59 	10°35 11'89 15'89 9'38 8'41	46:32 60:61 68:31 63:05 53:15	50°98 64°97 71°09 67°22 66°61	
171 31 3 85 59 45	353 145 303 224	1.06 5:90 4:01 1:72	0.04 1.00 8.32 1.25 0.35	1°32 27°24 16°24 3°27 52°91	33.74 37.99 68.63 9.21 19.25 8.94	1·19 0·25 1·49 1·25 1·06	13-75 14-02 5-50 2-03	0.09 0.25 0.59 0.31 0.35	7-28 7-75 2:21 12:63 9:23 5:29	46·69 88·23 107·01 45·02 35·06 71·84	44:56 67:03 54:76 46:86 34:37 29:11	61 62 63 64
43 112 86	258	0·15 0·48	2:26	0.72	3-79 17-06 14-53	0·45 1·72 0·97	1'15	0·15 0·29 0·32	6-51 16-06 13-89	36-98	16'81 35'49 30'49	67
1,294 47 200 36 244 98 93	184 806 258 1,175 538	1:39 0:45 4:91 1:47 8:17 2:03 4:89	0.74 1.34 2.57 1.18 2.50 0.33 0.12	2-66 6:26 25:23 36:17 10:81 51:29 35:30	17 88 28 69 21 46 13 99 14 14	1.68 2.24 2.57 1.47 2.59 0.82 0.86	2:46 2:79 2:65 3:91 1:15		6:92 10:51 22:32 10:59 11:08 16:11 11:36	41'13 89'97 75'86 53'36 87'62	34°84 34°20 63°73 49°57 48°23 47°90 37°33	70 71 72 73 74
902 46 26 45	292 571	0°77 0°26 1°13	2-16 0-31 1-55 1-13	1.82 6.72 21.55 19.20	21.55 39.35	1.78 4.63 1.03 2.26	5 00 6 19	0.16	5:60 7:18 3:35 10:16	45.60 73.68	44-08 43-21 36-01 34-44	77
40 51 38 32 14 1 47 10	339 299 344 279 23 1,489 363	0°38 4°60 2°99 1°24 1°02	1'43 6'16 0 82 2'46 0'48	1·43 6·67 1·15 8·79 8·37 46·58 2·54	42°96 31°23 22°82 14°24 6°19 29°31 28°54	4·76 6·57 7·91 1·24 3·03 1·14	5.78 6.67 14.78 9.67 13.61 9.87 4.34	0.58 0.49 0.53 4.95 0.62	8-16 9-82 7-24 5-25 2-46 1-72 1-72 2-93	65:31 56:94 56:48 49:06 28:47 54:41 82:88	50·2 55·9 43·2 38·0 32·6 34·0 34·0 39·7	81 82 83 84 84 85 86 87
312 48 35 21 56 48 18	472 366 1 243 3 333 3 345	 1.68 0.21	0.40 0.60 0.24 0.86 0.23	8:82 31:71 55:98 8:09 8:88 33:28	26.30 15.65 44.04 9.86	2:61 1:20 1:92 2:79	3-91 4-27 12-28 10-68 12-88	0.60 0.30 0.48 0.21	6-97 7-21 8-30 6-25 6-72 10-30 4-07	70-92 86 81 72:80 39:95 74:71	56 6 54 4 37 0 47 9	90 91 92 93 94
233 161 56 36 44 88 74 56 11	1 1,123 6 681 9 356 2 328 8 683 4 438 3 526 8 431	0.28 3.20	0·18 0·72 3·23 0·42 	35-55 16-27 70-68 98-34 40-52 49-29 22-56 82-48 4-30 55-33 13-24	24·13 16·01 14·42 11·29 25·98 32·56 14·07 2·06 34·52	1:48 1:41 1:12 0:19 0:64 0:19 1:18	4'98 5'70 2'96 3'83 5'90 8'85 3'41 1'50 4'49	0-66 0-62 0-74 0-60 0-56 1-13 0-21	8-22 10-02 8-63 14-42 8-47 12-36 11-30 21-45 6-62 27-46	62:15 104:87 132:35 66:12 95:91 82:44 112:11 10:47	41.7 35.7: 33.2: 38.4: 43.5:	98

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

1		2				3	4	5	6	7	8	9			10		
						. 8c to					1 cen.				INJUBI	IES.	
	1 4 111					Population according Census of 1901,					Dysertery and diarrhees.	diseases.	Sui	icide.	and	and	
		в.—т	owns.			n nc					pue	y disc		T		by v	
						lation nens	TB,	Small-por.	6	ž	rtery	Respiratory	19	ales.	Wounding accidents,	led l	_
No.						Popu	Cholera	Smal	Plague.	Fevers.	Dyse	Resp	Males.	Females.	Wou	Snake-bit killed beasts.	Total.
1	REEL		2			3	4	5	6	7	8	9	10	11	12	13	14
	GUJI	AT D	ISTRIC	OT.													
107	Gujrát Jalá pur	***				19,04 10,64		31							3	1	
109	Konjah Uinga					6,43		8		163	5	36			3 3 2 2	1	
			DISTR	ICT.													7
111	Shabpur	***	***			5,85 9,16		29		1°6 277					1 4	1	1
113	Sáhiwal Bhera				***	18,686		3		50x	41	4%			13	1	1
	Miáni Khusháb		***		+1+	11,40		à	1					***	6		1
	JHE	LUM	DISTRI	ICT.		100											-
116 117	Jhelom Pind Dádan	Khan		***		11,70: 13,770	31								13	***	1:
	RAWAL		DIST	RICT.			1000				-						
	Ráwalpindi	***			***	47,077 1,517			- 1000	885 23	77 7 6	268 14			14		1
120	Murree Pindigheb Hazro			***		8,455 9,796		63 64		162 119	6 28	2 51			3		
121	MIANV	ALI	DISTR			0,100	1	0.		2.00							
122						7,546	19			103	6	7			1		1
123	Karor Bhakkar					3,243 5,319	8		***	96 79	8	4 3			1		1
125	Isa Khel Kálátágh				***	7,630 5,82	8			136 153	9	6		***	6	1	
			ISTRI	CT.													
						8,783		6		182		7 27			2		
	Maghiána Chiníot		***		***	14,413 15,683	1	10	497	225 383	21	28	***		4	***	3
130	Lyalipor	TAN	DISTR	1CT		9,171	43	5	33	172	13	10	,	***		***	
131	Mooltan					74,027	1	65		1,211	145	251			20	4	24
132	Kahror Shujabad	***				5,552		8		100		21		***	1 2	1	1
134	Jaláipur Talamba			111	111	5,145 2,526		4 3	***	107 52	12	10 15			5 2		2
	Duniapur		-111			2,150		15		78					8		3
	MUZAFFA	RGAI	RH DIS	STRIC	Г.												
	Muzaffargarl Khángurh			***		3,737		10		89 141	14	11			22		2
189	Alipur Khairpur					2 78× 2,257	***	1		51 46	2 2	1 2		***	1		1
	DERA GHA		BAN D	ISTRI	28.4												
	Dera Gházi l	Khan	***	***		21,697			1	415	19	48	1		6		7
	Jámpur Uajal	***	***			5,928 6,218				179 125	17 14	8 22	1		1	1	7 3 2 2 1
	Ráj - pur Kot Mithau					3,917 3,487			:::	114 43	7 3	8			1		1
								-				-				100	
1			Te	inte		2,014,526	2,201	1,946	18,204	46,868	4,798	13,153	29	7	706	76	818
-			-									1	-				
		Fam. 43	a Parat		1	20,108,690	14 090	15 695	205,462	509,307	16 499	68.064	178	145	5,117	1,141	6,581
	Total	for the	e Provi	uco	***	20,108,600	A-9,000	10,000	200,402	000,007	10,400	30,001	-10		-,	1	-

No. VI—concluded.

TOWNS OF THE PUNJAB DURING THE YEAR 1903.

11	12		-	www.combonie	-	and the last	13	-		-		14
	Tig.			R	ATIO OF D	EATHS PE	в 1,000 от	F POPULATI	on.			
6	from					and	dis-		,	From all	causes.	
All other causes,	Total deaths causes.	Cholera,	Small-pox.	Plague.	Fovors.	Dysertery s diarrhosa,	Respiratory enses.	Injuries.	All other causes,	For the year,	Mean of pre- vious five years.	Nσ
15	16	17	18	19	20	21	23	23	24	25	26	27
120 96 20 12	537 177	0'26	0:37 2:91 1:24	7·56 11·18 0·47 0·55	17:85 15:32 16:02 14:04	2·52 3·38 0·78 0·55	8-92 8-27 5-60 13-86	0°21 0°38 0°31 0°55	630 9-02 3-11 2-22	43 99 50 47 27 52 31 78	40°68 39°14 30°66 32°93	108 109
36 156 176 76 111	468 792		4·95 0·22 0·16 	0.33 0.37 0.14 0.18	30°06 30°28 26°93 42°52 22°01	2:73 1:86 2:19 3:60 3:16	1-20 0-98 2-57 2-35 0-61	0·34 0·44 0·75 0·55 0·53	6·15 17·02 9·42 10·53 9·73	45:43 51:07 42:40 59:70 36:57	24'08 35:14 31'03 36'98 22'63	113 113 114
92 116	608 740	2·65 0·29	0.60 0.07	17-09 0-15	18°88 33°26	1·11 9·78	2.65 1.82	111	7'86 8'42	51·95 53·74	23·05 42·96	
387 14 67 79	58 363	0.15	0·17 7·45 6·53	20.03	18 80 15 16 19 17 12 14	1.64 4.61 0.71 2.86	5·69 9·23 0·24 5·20	0.35	8:22 9:23 7:93 8:06	55 04 38 23 35-85 35 11	33·42 34·94 38·69 29·23	119 120
60 46 38 25 36	167 127 189	2 52 0 93 1 05	278 0-19 0-66	 	73-65 29-60 14-87 17-82 26-27	0.80 2.47 0.75 1.18 8.76	0.79	0.10	7:95 14:18 7:15 3:28 6:18	51.50 23.91 24.77	17-52 31-39 31-48 25-87 41-96	123 124 125
145 236 241 93	1,185	0-06 4-69	0.68 0.07 0.64 0.55	31-69 3-60	20-72 15-61 24-41 18-75	1:14 2:36 1:34 1:42	0.80 1.87 1.79 1.96	0°14 0°26	16°51 16°37 15'36 10'14	30·42 75·55	35°06 37°11	
627 36 38 65 43 26	151 241 203 128	0-01 3-06	0.87 1.44 2.59 0.78 1.19 5.58		16:23 18:01 21:26 20:78 20:59 36:28	1-94 0'36 3'23 2 33 5'15 0-93	0:72 3:57 1:94 5:94	0°18 0°51 0°97	8-46 6-48 6-46 12-61 17-02 12-09	40°99 39°43 50°67	29°54 31°26 29°26 30°46	131 133 133 134 135 136
23 43 52 21	222 107	=	0·27 2·76 0·44	:	23-82 38-94 18-29 20-38	1:34 3:87 0:72 0:80	3.31	0°55 0°36	6 15 11 58 18 65 9 30	61·31 38·38	35°35 39°60	137 133 139 140
161 31 35 10 5	198 141	0-09	0-51	0.05	19-13 30-20 20-12 29-10 12-33	0 88 2 87 2 25 1 79 0 86	2.04	0°82 0°51	7-42 5-23 5-63 2-55 1-48	40·15 31·87 36·00	28'81 35'22 27'98	141 142 143 144 145
18,521	106,539	1.09	0.97	9:04	23-27	2'38	6:54	0.41	9:19	50'89	39.70	
149,241	985,476	0.73	0.78	10-22	25:33	0.82	3:38	0.33	7-42	49.01	36-72	

ANNUAL FORM No. VII.

DEATHS REGISTERED FROM CHOLERA IN THE DESTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1903.

1	3	1	3		•		-			-	-	5	-	-	-				8			7	1	8 9
-		Bas	LES OF		S AND	-	11.0				Mon	ns.	1999					- 1	Готац		722	OF DE 1,000 ULATIO	OF	ious five
No	Districts.	Number in each district.	Number from which deaths from cholors were report- ed.	Number in each district,	Number from which deaths from cholers were report- ed.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October,	November.	December.	Males.	Females.	Total.	Males.	Females.	Total	Meanwatio per 1,000 for previ- years. No.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	26	25 26
3 3 4 8 6	DELMI DIVI- SION, Hissir Rohtak Gurgéon Delhi Karnál Umballa Simla JULLUNDUR DIVISION.	27 15 21 15 26 19		503 1,179 718 1,390	5	-	Second Holder	1111	30	337 63	132 	218 33 27 101 175 600 22	15 91 15 42 151 19	30 41 15 378	 40 8 133			163 17 65 207 516 935 22	181 22 74 115 303 676 19	364 39 159 322 909 1,611 41	0.44 0.05 0.22 0.56 1.08 2.23 0.96	0-50 0-07 0-21 0-36 0-97 1-97	0°47 0°06 0°21 0°47 1°03 2°11 1°15	1-72 1 0-67 3 0-34 3 0-12 4 0-41 5 0-12 6 7
8 5 10 11 12	Kángra Hoshiárpur Jullundur Ludbiána Ferozepore LABORE DIVISION,	15 24 19 15 25	10 17 15 15 23	718 2,128 1,836 969 1,511	117 46 50 180 200			1 1 1 1 1	44- 83- 26-	7 28 47 135 68	46 802 771	 14 207 962 1,729	14 18 121 111 210	25 91 69 2 9	61 8		1111	31 136 267 1,224 1,668	28 121 231 836 1,189	59 257 528 2,000 2,907	0°08 0°26 0°61 3°32 3°29	0-08 0-26 0-56 2-75 2-68	0°08 0°26 0 58 3°06 3°01	6701 8 6703 9 6707 10 0714 11 0-50 13
13 14 15 16 17 18	Montgomery Labore Amritsar Gurdaspur Sialkot Gujránwála	20 29 15 25 21 23	9 28 14 14 12 9	1,374 1,540 1,047 2,255 2,355 1,339	26 320 98 24 38 13				2 32 35 2 	11 97 21 2	52 300 48 	39, 1,113; 489 15 18 12	35 826 215 61 97 87	15 267 139 162 158 67	22 21 33 73 13	3		92 1,629 565 59 188 98	62 1,028 397 105 168 83	154 2,657 962 205 356 181	0°34 2°69 1°01 0°20 0°33 0°20	0°27 1°99 0°86 0°25 0°33 0°20	0°33 2°32 0°94 0°22 0°33 0°20	0°22 13 0°54 14 0°11 15 0°06 16 0°11 17 0°13 16
19 20 21 22	RAWALPINDI DIVISION. Guirét Shahppe Jhelam Réwalpindi MOGLITAN DIVISION.	14 21 16 23	3 3 6 7	1,340 794 978 1,714	30 10 14 15				18	38	3 16 84	238	1 66	16 1 20				12 163 48 98	8 131 25 92	20 294 73 190	0°03 0°60 0°16 0°21	0°03 0°53 0°09 0°23	0°03 0°56 0°13 0°21	0°06 19 0°47 20 0°21 21 0°18 22
25 24 25 26 27	MIL - (III	19 29 22 18 23	5 16 5 1	431 1,835 1,357 704 718	6 47 1 2	11111		1 1 1 1 1	1 3 	 52 11 3	90 30	21 52 12 	33 88 4	7 65 1	12			38 203 19 6	41 107 18 5	79 310 37 11	0·17 0·36 0·06 0·03 0·01	0°20 0°34 0°06 0°08	0°19 0°31 0°06 0°03 0°01	0°05 23 0°13 24 0°10 25 0°01 26 0°34 27
	Total for the Province	544	277	12,434	1,507	-			229	959	3,084	6,184	2,300	1,612	431	17	2	8,582	6,106	14,689	0.79	0.86	0.73	0.27

ANNUAL FORM No. VIII. DEATHS REGISTERED FROM SMALL-POX IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1903.

DEATHS REGISTERED FROM SMALL-POX IN THE DISTRICTS

1	2		1 8	3	4	1			NATIONAL PROPERTY.	-	-	-	5
-			CIRCLE	s or Re-	Town	s AND							
				ATION,		AGES.							MONTES,
No.	Districts,		Number in each dis- trict.	Number from which deaths from small- pox were reported.	Number in each dis- trict.	Number from which deaths from small- pox were reported,	January.	February.	March.	April.	May.	June.	July.
1	2		3	4	5	6	7	8	9	10	11	12	18
-		_											
	DELHI DIVISIO	N.		i									
1	Hissár	***	27	16	972	40	1	1	15	10	26	52	20
2	Rohtak	***	15	6	502	12		1		1	2	15	12
3	Gurgáon		21	21	1,179	160	8	14	44	48	75	123	82
4	Delhi		- 15	9	718	20	1	1	5	5	8	24	13
5	Karnál		26	21	1,390	69	6	13	41	65	114	93	48
6	Umballa		19	19	1,725	256	19	21	33	55	89	123	120
7	Simla		4	2	. 51	2	1	3	1	1	4	1	
	JULLUNDUR DIVIS	RION				4							
8	w/	***	18	8	718	10	- 1	2			3	4	
9	Hoshiárpur	***	24	24	2,128	223	38	36	49	48	57	34	18
10	Jullander		19	18	1,226	155	50	36	28	30	24	31	42
11	Ludhiána		15	13	869	202	17	21	26	34	91	93	96
12	Ferozepere		25	24	1,511	289	38	39	74	106	184	213	159
											-		
	LAHORE DIVISI	ON.		10	1,374	103	33	45	53	68	53		
13	Montgomery	***	20	18	1,540	425	147	102	119	117	183	155	58
14	Lahore	***	29	15	1,047	143	33	37	52	38	66	57	147
15	Amritsar		15 25	21	2,255	99	45	29	58	47	70	64	83
16	Gurdáspur	***		19	2,355	186	14	32	32	34	59	63	91
17	Siálkot	***	21	14	1,339	32	24	22	17	12	9	10	5
18	Gujránwála	***	20		2,000	113			- :				
	RAWALPINDI DIVI	SION.									1		
19	Gujrát		14	13	1,340	233	82	72	77	79	84	66	43
20	Shahpur		21	18	794	86	80	57	53	50	50	53	23
21	Jhelum		16	15	978	382	129	113	130	116	148	109	47
22	káwalpindi	***	23	21	1,714	967	312	240	328	289	305	231	139
	MOOLTAN DIVIS	ION.											
23	Miánwáli		19	17	431	141	100	75	98	94	92	59	43
21	Jhang	***	28	24	1,899	385	83	100	105	96	117	117	95
25	Mooltan		22	22	1,357	110	60	68	55	62	97	110	57
26	Muzaffargarh		18	16	704	193	57	63	79	66	87	106	74
27	Dera Ghási Khan		22	15	718	80	35	66	59	82	54	57	25
			-	-		-	-		-				
	Total for the Provin	99	544	458	32,834	5,003	1,414	1,303	1,631	1,658	2,151	2,141	1,575
	1		1		1	1			1				

No. VIII.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1903.

200		and the same												
-			3/1/12/13			6	THE PARTY OF		7		8		9	10
						TOTAL.	-	DEATE	BER OF S AMONG LDREN,		OF DEAT		for pre-	
August,	September.	October,	November.	December.	Males.	Females.	Total,	Under one year.	Over one year and under 10 years.	Males.	Females.	Total.	Mean ratio per 1,000 for pre- vious five years.	Ne.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
25,17	and a	41.5	To a se	100	TEL .							-	- 1	
6	8	2	9	33	99	84	153	43	120	0.24	0.53	0-23	0.42	1
4	4		1	34	40	34	74	16	52	0.15	0.11	0.12	0.13	2
29	27	14	61	150	333	342	675	131	511	0.85	0.96	0.90	0.71	3
3	2	1	2	5	37	32	69	16	43	0.10	0.10	0.10	0.16	4
31	12	14	30	19	247	239	486	115	291	0.52	0.59	0.55	0.16	5
62	60	53	29	38	375	326	701	174	386	0.89	0.92	0.03	0.36	6
				1	8	4	12	1		0.32	0-32	0.34	0.47	7
Ear.	200	1001	14.	GIES.			112					1 2	44 3	
11.1	1		1	2	6	8	14	2	1	0.02	0.03	0.02	0.02	8
10	4	2	4	5	154	151	305	68	105	0.29	0.33	0.31	0-25	9
11	4	2	3	12	139	134	273	82	137	0.58	0'32	0.30	0.33	10
51	28	28	29	48	300	262	562	121	. 336	0.81	0.86	0-83	0.15	11
105	87	28	29	74	616	520	1,136	277	643	1.21	1'22	1.22	0.37	12
1					1		100					-		
28	43	21	17	7	264	241	505	111	326	0.98	1.05	1:01	1:11	13
99	68	40	39	82	675	623	1,298	344	703	1.07	1.21	1.13	0.47	14
64	20	16	44	112	304	318	622	197	346	0.24	0.69	0.61	0.52	15
23	10	***	3	21	189	218	407	100	169	0.37	0.21	0.43	0.14	16
68	39	15	44	58	277	272	549	176	289	0.49	0.54	0.51	0.44	17
2		1		21	56	67	123	41	61	0.13	0.12	0.14	0.14	18
30	12	8	29	64	320	325	645	265	305	0.82	0.90	0.86	0.28	19
3	8	1	190	1	196	183	379	125	203	0.72	0.73	0.2	0 63	20
39	19	17	40	56	474	489	963	311	487	1.20	1-67	1.63	0.58	21
68	31	59	216	396	1,309	1,305	2,614	824	1,474	2'82	3.09	2.95	0.30	22
										100	em q	27311.00		
34	11	7	7	9	318	311	629	133	348	1'42	1.22	1.48	0.19	23
22	17	18	11	32	446	367	813	266	407	0.80	0.83	0.81	0.40	24
27	19	13	12	8	310	272	582	144	304	0.82	0.86	0.83	0.40	25
18	5	7	5 2	8	325 209	280	605	116	214	0 82	0.94	0.87	0.93	26
868	559	376	667	1,297	8,026	7,609	15,635	4,286	8,342	0.74	0-82	0.78	0.31	-

DEATHS REGISTERED FROM FEVERS IN THE DISTRICTS

1	2		3	4	4						5
		CIRCLE	ES OF	Towns							MONTHS.
No.	Districts.	Number in each dis- triot.	Number from which deaths from fevers were reported.	Number in each dis- trict.	Number from which deaths from fovers were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	. 10	11	12
77	DELHI DIVISION.										497
1	Histár	27	27	972	972	1,719	1;547	1,661	1,438	1,398	1,748
2	Rohtak	15	15	502	497	1,548	1,238	1,426	1,996	1,508	1,772
3	Gurgáon	21	21	1,179	1,179	1,540	1,501	1,556	1,540	1,538	1,896
4	Delhi	15	15	718	710	1,869	1,391	1,671	1,751	1,876	2,213
5	Karnál	26	26	1,390	1,275	2,544	2,187	2,440	2,390	2,539	2,594
6	Umballa	19	19	1,725	1,682	1,304	1,105	1,102	1,165	1,376	1,636
7	Simla	4	4	51	51	17	15	25	25	39	34
	JULLUNDUR DIVISION,										
8	Kingra	18	18	718	653	1,197	1,115	862	1,269	1,607	1,886
9	Hoshiárpur	24	24	2,128	1,642	1,360	1,083	1,186	1,500	1,623	1,418
10	Jullundur	19	19	1,226	1,182	1,857	1,308	1,495	1,766	1,795	1,527
11	Ludhiána	15	15	869	869	894	698	724	828	971	1,183
12	Ferozepore	25	25	1,511	1,305	2,511	2,315	2,418	2,291	2,048	2,074
	LAHORE DIVISION,										
13	Montgomery	20	20	1,374	1,107	534	441	415	355	390	391
14	Lahore	29	29	1,540	1,487	2,318	1,957	2,087	1,925	2,016	1,841
15	Amritser	15	15	1,047	1,039	2,524	2,255	2,528	2,531	2,636	1,835
16	Gurdáspur	25	25	2,255	2,216	1,612	1,306	1,303	1,424	1,711	1,429
17	Siálkot	21	21	2,355	2,305	1,850	1,397	1,296	1,379	1,615	1,443
18	Gujránwála	23	23	1,339	1,339	2,542	2,023	1,630	1,330	1,269	1,582
	RAWALPINDI DIVISION.										
19	Gujrát	_14	14	1,340	1,283	1,211	901	927	1,030	986	874
20	Shahpur	21	21	794	794	981	765	681	502	545	716
21	Jhelum	16	16	978	917	1,243	910	833	677	682	788
22	Ráwalpindi	23	23	1,714	1,714	2,098	1,529	1,467	1,213	1,479	1,498
	MOOLTAN DIVISION.										
23	Miánwáli	19	19	431	394	866	711	765	663	809	773
24	Jhang	28	28	1,899	1,844	2,069	1,629	1,653	1,555	1,844	1,656
25	Mooltan	1	22	1,357	1,357	1,209	1,090	1,061	915	1,243	1,208
26	Muzaffargarh		18	704	597	937	693	668	601	632	558
27	Dera Gházi Khan	22	22	718	507	869	673	564	805	686	859
	Total for the Province	544	544	32,834	30,917	41,223	33,783	34,444	34,864	36,861	37,432

No. IX.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1903.

-								6		1	7	-	8	19
-								TOTAL.			10 OF DE.		for	
-	Jaly.	Angust,	September.	October,	November.	December.	Males,	Females,	Total.	Males.	Females.	Total,	Mean ratio per 1,000 previous five years.	Ne.
ľ	13	14	15	16	17	18	19	20	21	22	23	24	25	26
ľ			-		3									-
ı	1,290	1,252	1,922	2,694	2,414	1,835	10,801	10,117	20,918	25-83	27.83	26-76	35.39	1
1	1,474	824	1,534	1,757	1,513	1,222	9,452	8,360	17,812	28-37	28.11	28-24	31-33	2
1	1,277	934	1,575	1,667	1,490	1,346	9,274	8,586	17,860	23.75	24'13	23.93	25:40	3
1	1,406	950	1,311	1,723	1,657	1,604	10,024	9,398	19,422	27.08	29.66	28-27	25:47	4
-	1,882	1,364	1,925	2,755	3,392	2,534	14,802	13,744	28,546	30-90	34.00	32"32	34.92	5
1	1,478	858	1,556	2,898	3,187	2,472	10,123	10,014	20,137	24-12	29.15	26:49	28.05	6
1	22	34	34	26	25	11	163	144	307	7.08	11.46	8-63	9.01	7
1														
1														
1	1,094	934	1,858	2,277	1,580	1,590	8,546	8,723	17,269	21'55	23-71	22.59	22 42	8
1	1,190	1,004	1,772	2,889	2,862	1,981	9,428	10,440	19,868	17.93	22.50	20-07	18-80	9
1	1,318	1,000	1,547	1,688	2,047	1,998	9,134	10,237	19,371	1871	24.61	21.42	18:46	10
1	1,979	853	1,128	1,813	2,019	1,524	7,079	6,879	13,958	19:18	29-42	20-74	25'60 25'60	11
1	2,010	1,303	1,250	1,908	2,829	2,654	12,050	12,500	25,480	25-59	20 42	27:33	00 00	12
1														
	341	. 377	482	885	1,216	1,033	3,380	3,480	6,860	12.58	15.19	13.78	15'31	13
1	1,721	1,563	1,676	2,504	3,547	2,944	13,006	13,093	26,099	20-67	25:34	22-77	24 10	14
	1,524	1,557	1,903	3,629	5,939	4,050	15,715	17.196	32,911	28:12	37:10	82.19	23'86	15
ľ	1,120	1,137	1,940	4,537	6,617	3,951	13,403	14,684	28,087	26:41	34:20	29-98	21:44	16
١	1,448	1,615	2,660	4,218	5,527	3,723	13,689	14,482	28,171	24-22	28.61	26.30	24'02	17
ı	1,075	1,317	1,592	2,048	2,644	2,893	11,027	10,918	21,945	22-72	26.94	24'64	23.19	18
1														
1													1000	
1	867	1,019	-1,396	2,232	2,541	1,923	7,696	8,211	15,907	19.76	22.74	21.19	19.61	19
1	587 733	591 858	935	2,163	3,501	2,794	7,366	7,639	15,005	26.27	30-42	28'62	15-28 21-36	20
1	1,361	1,455	1,374	2,237	2,899	2,466	7,489 10,884	7,798	15,287	25.14	26-62	25.88	20.64	22
1	10.01	2,100	2,074	2,201	2,832	3,093	19,00%	10,752	21,636	23'47	20 40	24.42	20.01	
-														
-	615	536	575	1,148	1,814	1,506	5,430	5,351	10,781	24.24	26.67	25:39	22.92	23
-	1,262	1,577	2,319	2,624	3,842	3,749	13,345	12,434	25,779	23-86	28:04	25.71	*15:74	24
1	853 576	806 497	1,085	1,811	3,853	2,223	8,592	8,765	17,357	22-62	27.56	24:87	17:47 22:20	25
1	540	467	801 640	1,941	2,267 1,508	1,889	5,965 5,565	6,095	12,060	27:09	32·87 22·89	29:73	18:47	27
1	710			1,050	1,508	1,474	3,503	4,909	10,474	21.97	22.00	22 20	1047	
-	30,386	26,682	37,825	59,768	75,562	60,477	254,358	254,949	509,307	23-56	27-38	25.33	28.48	
1		1000					ide foot-not							=

xxiv

DEATHS REGISTERED FROM DYSENTERY AND DIARRHOEA IN THE DISTRICTS

-			-		-										
. 1	0 1		2	NA PERM			3		4					CO COLOR	5
	1,001	VI SEE	Liter.		1	CIRCLES C	F REGIS-	Towns A						1	MONTHS.
and a		Die	TRICT		- 15 - 15 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Number in each dis- trict.	Number from which deaths from dysen- tery and diarrhora were reported	Number in each dis- trict.	deaths from which deaths from dysen- tery and diarrhosa were reported.	January.	February.	March.	April.	May.	ne.
No.		- 11			12	N	N N		4				-		Jane.
1			2			3	4	- 5	- 6	7	8	9	10		12
	D	ELHI	DIVIS	SIUN.	1431	1000	11		401	19/3		HAR	tal 1	100	The state of the s
1	Hissár			***		27	25	972	150	31	29	23	20	38	23
2	Rohtak					15	15	502	122	13	15	11	25	8	12
3	Gargáo	a	***		17.	21	21	1.179	268	53	45	45	47	65	62
4	Delhi		***		100	15	15	718	537	81	56	59	71	86	70
5	Karnál	***		·	1,,	26	26	1,390	146	40	43	41	41	78	97
6	Umball				1.	19	19	1,725	522	70	69	62	77	128	216
7	Simla	***			***	4	4	51	24	14	4	1	4	1	11
													1		100
	JUL	UND	OR DI	VISIO	N.	1005	1 18		170	PAT !	and a	17-3	1	110	1000
8	Kángra	***				18	18	718	488	49	62	47	56	101	. 128
0/9	Hoshián	pur	***	***		24	24	2,128	388	47	23	55	59	138	74
10	Julland	or		***		19	19	1,226	208	40"	27	43	66	120	58
11	Ludhián	а				15	15	869	105	21	14	12	39	62	36
12	Ferozer	ore				25	24	1,511	269	22	30	26	46	76	85
		HORN	Direct	MAION											100
14	LA	HORE	DIVI	ISION.	114	115.00	9			(GU)					-
13	Montgo	mery	***		10.0	20	19	1,374	74	5	5	7	5	11	8
14	Lahore					29	28	1,540	231	47	42	43	49	62	89
15	Amrits	ır				15	15	1,047	357	78	55	60	81	77	59
16	Gurdás	pur				25	24	2,255	642	67	40	53	68	130	96
17	Siálkot		***			21	21	2,355	679	19	28	25	40	61	54
18	Gojrán	wála	***	***		23	22	1,339	98	19	14	17	16	30	12
	RAW	ALPI	NDI D	ivisio	N.	-									100
19	Gujrát					1 34	1 1	100	1	- IVAL				No.	-
20	Shahpu	r				14	14	1,340	158	16	8	12	22	32	16
21	Jhelum		***			21	21	794	205	26	18	23	25	20	28
22	Ráwalp	indi				16	16	978	235	41	18	28	24	34	32
	M	OOLTA	N DI	VISION		23	23	1,714	112	43	32	49	61	73	87
23	Miánw					Bi	1	1	May 1	LAND.	J. Stella	201	1994	P. Commission	our f
24	Jhang			***		1000	19	431	81	19	12	18	17	40	16
25	Moolta						24	- 21/13	1000	72	23	22	32	39	36
26		argarh							THE REAL PROPERTY.	15	14	9	19	19	20
27	1000	házi K							1000	11		5	8	10	7
						22				9	9	2	8	10	5
	To	tal for	the Pr	rovince	200	-		-		968	741	797	1,029	1,549	1,437
_	1					•	1	1	1	1	1			1 2,020	1,101

No. X.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1903.

	6 7 8													
								6			7		8	0
								TOTAL.		RATIO	OF DEATHS	PER 1,000	-	
	July.	August.	September,	October.	November,	December.	Males.	Females.	Total,	Males.	Females.	Total,	Mean ratio per 1,000 for vious five years.	No.
	13	14	15	16	17	18	19	20	21	22	23	24	25	26
													-	
	39	39	60	58	37	28	229	190	419	0.35	0.2	0.24	1.29	1
	12	14	23	22	23	20	107	91	198	0.32	0.31	0.31	0.65	2
	67	79	154	130	98	56	475	426	901	1.55	1.20	1:22	1.46	3
	46	58	113	94	98	76	497	406	903	1.34	1.28	1.31	1.49	4
	45	36	45	84	87	67	399	305	704	0.83	0.75	0.80	0-93	5
	182	91	131	217	281	137	985	626	1,611	2:35	1.82	2.11	1.42	6
	8	5	5	3		5	37	24	61	1.61	1.91	1.71	1.79	7
	69	63	90	159	163	90	558	459	1,017	1:41	1.25	1.33	1.01	8
	36	43	136	145	100	87	523	420	943	0.99	0.91	0.95	0.98	9
	50	74	115	65	52	55	382	383	765	0.78	0-92	0.85	0.72	10
	33	32	73	89	75	39	304	221	525	0.83	0.73	0.78	0.96	11
	89	53	46	25	36	25	344	215	559	0.68	0.21	0-60	0.74	12
1										200				
1	11	17	11	18	16	20	82	52	134	0.31	0.23	0.27	0.46	13
١	62	69	72	58	99	95	469	318	787	0.75	0.62	0.69	0.68	
ı	36	77	118	129	176	111	579	478	1,057	1.04	1.03	1.03	0.90	15
ı	75	98	169	244	255	135	766	664	1,430	1.21	1.55	1.23	1.23	16
1	58	66	130	134	100	38	419	334	753	0.74	0.66	0.70	0.96	17
1	17	39	32	23	23	16	143	115	258	0.59	0.58	0.29	0.23	18
ı														
1			73	83	44	33	196	181	377	0.20	0.20	0.20	0.22	12
1	19	32	37	24	36	33	193	132	325	6-71	0.23	0.62	0.70	20
	31	36 22	55	38	43	32	244	154	398	6.83	0.23	0.67	0.63	21
-	57	78	91	95	97	98	490	374	864	1.06	0.89	0.88	0.52	22
1	01	10	01	00										
1							1 11 11							
1	19	23	19	46	36	29	174	120	294	0:78	0.60	0.69	0.44	23
1	47	68	79	77	87	107	405	284	689	0.72	0.64	0.69	0.41	24
1	16	31	29	31	40	22	153	112	265	0:40	0.35	0.38	0. 50	
1	7	9	16	11	17	29	76	60	136	0.35	0.32	0.34	0.59	26
1	13	12	16	19	9	13	73	52	125	0:29	0.24	0.27	0.30	27
	1,150	1,264	1,938	2,116	2,013	1,496	9,802	7,196	16 498	0.88	0.77	0.82	0.82	
E	-	April 17 19 19			-	Account to the Alberta	*******	H	All American State of	-	- Printed to the last	THE RESERVE THE PERSON NAMED IN		A 101-2



PLAGUE STATEMENTS Nos. 1 to 4.

STATEMENT

Showing the number of Plague Cases and Deaths monthly by

	Nam	to of	Distri	ct.		January.		Febru	ary.	Marc	h.	April		May,	
Serial No.						Cases,	Deaths.	Cases,	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Hissár							1	1	91	59	251	193	213	173
2	Rohtak		***	***				7	7	113	79	154	121	11	7
3	Gurgáon .		***			43	37	413	380	1,930	1,597	1,821	1,543	162	141
4	Delhi .		***		***							10	7		
5	Karnál .		***	***	***	143	132	183	132	430	265	666	429	367	248
6	Umballa .		***	***		896	679	1,088	791	1,982	1,308	1,989	1,522	1,112	755
7	Simla .			***									·	***	
8	Kángra .							5	3	2	2	5	4	4	3
9	Hoshiárpur			***		2,286	1,361	3,640	2,036	6,482	3,540	8,133	4,469	9,381	4,729
10	Jallundur .		(11)	***		2,022	1,076	3,575	1,888	8,338	4,391	16,789	8,967	9,816	5,981
11	Ludhiána			***		191	117	446	269	942	498	2,579	1,487	2,241	1,463
12	Ferozepore					464	329	772	462	1,572	1,033	3,550	2,364	3,647	2,691
13	Siálkot		***			742	505	1,199	781	3,495	2,173	7,432	4,677	6,745	4,196
14	Gujránwála			***		2,977	1,326	7,913	4,530	18,686	11,681	23,271	16,218	12,062	7,712
15	Montgomer	У	***	***					***	11	2	208	88	353	102
16	Lahore		111	***		2,090	973	3,335	1,534	8,991	3,698	19,097	8,701	15,737	2,855
. 17	Amritsar			***		3,073	2,068	4,494	3,091	8,026	5,251	11,939	8,136	8,421	5,792
18	Gurdáspur		***	,***		294	179	366	262	828	545	2,800	1,777	2,505	1,521
19	Gojrát		111	***		68	44	81	47	233	157	1,412	898	1,908	1,246
20	Shahpur			***						6	4	347	226	300	205
21	Jhelum			***		***								53	35
22	Ráwalpind	i	***							1				9	4
23	Miánwáli			***						1	1			2	
24	Mooltan		***	***	***		***	***	***				***	2	
25	Jhang					113	80	314	221	658	505	1,705	1,080	841	567
			Total			15,402	8,906	27,832	16,435	62,818	36,789	104,158	62,907	75,892	40,426
	N	ATIV	E STAT	res,											
1	Patiála	***	***	***		372	302	818	532	1,975	1,384	2,864	2,831	1,219	1,308
2	Kapúrthal	a	***		***	161	91	452	267	1,445	903	2,862	1,813	2,515	1,718
3	Nábha	***		***						319	282	1,720	1,491	756	660
4	Kalsia	***						14	(224	148	249	186	88	50
	Máler Kot	la	***			233	216	107	107	230	239	324	324	131	131
(Jind		***	***		84	41	133	10	654	469	575	451	176	123
2	Faridkot			***		356	248	223	100	146	66	24	150	75	43
	B Dujána		***					23	1	46	39	71	6		
				Total		1,206	898	1,770	1,13	5,048	3,530	8,91	7,31	4,960	4,033
	GRAND TOTAL					16,608	9,80	29,609	17.56	67.886	40.31	113 07	4 70.219	80,852	44,455

No. 1.

Districts in the Punjab from 1st January to 31st December 1903.

38	_		_		1	-	-	_				-		-	,	
38 38 6 4 345 278 807 710 354 316 2,105 1,705 7 6 <th>Ju</th> <th>ine.</th> <th>Ju</th> <th>ly.</th> <th colspan="2">August.</th> <th>Septe</th> <th>mber.</th> <th>Oct</th> <th>ober.</th> <th>Nove</th> <th>mber.</th> <th>Dece</th> <th>mber.</th> <th>To</th> <th>tal,</th>	Ju	ine.	Ju	ly.	August.		Septe	mber.	Oct	ober.	Nove	mber.	Dece	mber.	To	tal,
7 6 3 2 6 6 3 3 304 2 1 198 182 4,572 3	Cases.	Deaths.	Cases,	Deaths.	Cases.	Deaths.	Cases,	Deaths.	Cases,	Deaths.	Cases.	Deaths.	Cases,	Deaths.	Castes.	Deaths.
7 6 3 2 6 6 3 3 304 2 1 198 182 4,672 3 12 12 12 12 12 12	38	38			***	***	5	4	345	278	807	710	354	316	2,105	1,773
	7	6			***				3	2	6	6	3	3	304	
65	2	2							3	2		1	198	182	4,572	3,885
290									2	2				***	12	9
	65	46	6	5			8	7	25	13	131	80	236	159	2,260	1,516
1,327 756 62 26 3 1 24 6 216 80 229 138 427 285 32,210 17,	290	138	15	8	. 5	3		***	288	125	747	451	1,129	737	9,541	6,517
1,327 756 62 26 3 1 24 6 216 80 229 138 427 285 32,210 17,1,13 820 41 23 2 116 51 411 212 530 417 42,513 23,327 262 10 7 4 1 231 106 975 474 2,150 1,380 1,565 1,142 11,660 7,701 490				***							15	9			15	9
1,173 820 41 23 2 116 51 411 212 530 417 42,813 23, 327 262 10 7 4 1 231 105 975 474 2,150 1,820 1,565 1,142 11,661 7, 701 490 12 5 76 40 266 183 11,060 7, 1,213 867 22 8			***				***				***				16	12
327 262 10 7 4 1 231 105 975 474 2,150 1,320 1,565 1,142 11,601 7,701 490 12 5 76 40 266 183 11,060 7,1213 867 22 8 8 6 151 104 366 289 570 504 67,001 44,	1,327	756	62	26	3	1	24	6	216	89	229	138	427	285	32,210	17,436
701 490 <td>1,173</td> <td>820</td> <td>41</td> <td>23</td> <td></td> <td></td> <td>2</td> <td>***</td> <td>116</td> <td>51</td> <td>411</td> <td>212</td> <td>530</td> <td>417</td> <td>42,813</td> <td>23,826</td>	1,173	820	41	23			2	***	116	51	411	212	530	417	42,813	23,826
1,213 867 22 8 36 14 422 209 808 453 1,043 743 23,157 14 1,892 1,892 5 5 8 6 151 104 366 289 570 504 67,901 44,78 23 5 5 8 6 151 104 366 289 570 504 67,901 44,78 25 6,867 34 21 3 20 6 23 3 10 6 51,765 24 1,247 825 25 23 3 2 1 23 15 69 39 140 113 37,461 25, 562 378 12 11 13 13 15 5 226 135 812 562 8,433 5, 320 227 9 2 1 3 1 67 39 190 117 177	327	262	10	7	4	1	231	105	975	474	2,150	1,320	1,565	1,142	11,661	7,145
1,892 1,892 5 5 8 6 151 104 366 289 570 504 67,901 44, 67,901 44, 78 35 5 1 <	701	490	***	***		***			12	5	76	40	266	183	11,060	7,597
78 35 5 1 <td>1,213</td> <td>867</td> <td>22</td> <td>8</td> <td></td> <td></td> <td>36</td> <td>14</td> <td>422</td> <td>209</td> <td>808</td> <td>453</td> <td>1,043</td> <td>743</td> <td>23,157</td> <td>14,626</td>	1,213	867	22	8			36	14	422	209	808	453	1,043	743	23,157	14,626
2,425 6,867 34 21 3 20 6 23 3 10 6 51,765 24 1,247 825 25 23 3 2 1 23 15 69 39 140 113 37,461 25 562 378 12 11 13 13 15 5 226 135 812 562 8,483 5, 320 227 9 2 1 3 1 67 39 190 117 177 128 4,469 2, 268 134 12 6 5 1 9 8 25 13 164 86 198 145 1,334 69 44 6 3 1 1 605 491 173 125 16 11 1,397 1, <td< td=""><td>1,892</td><td>1,892</td><td>5</td><td>5</td><td></td><td></td><td>8</td><td>6</td><td>151</td><td>104</td><td>366</td><td>289</td><td>570</td><td>504</td><td>67,901</td><td>44,267</td></td<>	1,892	1,892	5	5			8	6	151	104	366	289	570	504	67,901	44,267
1,247 825 25 23 3 2 1 23 15 69 39 140 113 37,461 25,562 378 12 11 13 13 15 5 226 135 812 562 8,433 5,320 227 9 2 1 3 1 67 39 190 117 177 128 4,469 2,268 134 12 6 5 1 9 8 25 13 164 86 198 145 1,334 69 44 6 3 1 1 61 34 90 46 83 62 363 499 394 18 14 76 43 805 491 173 125 16 11 1,397 1,	78	35	5	1				***	***		***				655	228
562 378 12 11 13 13 15 5 226 135 812 562 8,433 5,320 227 9 2 1 3 1 67 39 190 117 177 125 4,469 2,268 134 12 6 5 1 9 8 25 13 164 86 198 145 1,334 14 69 44 6 3 1 1 61 34 90 46 83 62 363 499 394 18 14 76 43 605 491 173 125 16 11 1,397 1,	2,425	6,867	34	21	1935		3		20	6	23	3	10	6	51,765	24,664
320 227 9 2 1 3 1 67 39 190 117 177 128 4,469 2 268 134 12 6 5 1 9 8 25 13 164 86 198 145 1,334 69 44 6 3 1 1 61 34 90 46 83 62 363 499 394 18 14 76 43 605 491 173 125 16 11 1,397 1,	1,247	825	25	23	3	2	1		23	15	69	39	140	113	37,461	25,355
268 134 12 6 5 1 9 8 25 13 164 86 198 145 1,334 69 44 6 3 1 1 61 34 90 46 83 62 363 499 394 18 14 76 43 605 491 173 125 16 11 1,397 1,	562	378	12	11	13	13		***	15	5	226	135	812	562	8,433	5,388
69 44 6 3 1 1 61 34 90 46 83 62 363 499 394 18 14 76 43 605 491 173 125 16 11 1,397 1,	320	227	9	2	1		3	1	67	39	190	117	177	128	4,469	2,906
499 394 18 14 76 43 605 491 173 125 16 11 1,397 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497 1,497	268	134	12	6	5	1	9	8	25	13	164	86	198	145	1,334	828
.	69	44	6	3	1	1			61	34	90	46	83	62	363	225
2 2 4 52 47 9 4 19 7 34 30 3,745 2, 12,557 14,270 282 163 111 65 330 151 3,383 1,961 6,700 4,267 7,791 5,728 317,256 192, 217 412 22 50 37 17 125 70 396 278 369 258 8,414 7, 389 273 3 2 3 34 22 178 97 195 129 8,236 5, 17 18	499	394	18	14	76	43			605	491	173	125	- 16	11	1,397	1,082
52 47 9 4 19 7 34 30 3,745 2, 12,557 14,270 282 163 111 65 330 151 3,383 1,961 6,700 4,267 7,791 5,728 317,256 192, 217 412 22 50 37 17 125 70 396 278 369 258 8,414 7, 389 273 3 2 3 34 22 178 97 195 129 8,236 5, 17 18			***		***	***								***	3	1
12,557 14,270 282 163 111 65 330 151 3,383 1,961 6,700 4,267 7,791 5,728 317,256 192, 217 412 22 50 37 17 125 70 396 278 369 258 8,414 7, 389 273 3 2 3 34 22 178 97 195 129 8,236 5, 17 18 2,814 2, 2 2 25 15 30 7 632 4 4 3 3 1,029 1, 5 11	2	2	***	***			***	***					***	•••	4	2
217 412 22 50 37 17 125 70 396 278 369 258 8,414 7,389 273 3 2 3 34 22 178 97 195 129 8,236 5,414 7,416 17 18 <td< td=""><td>_</td><td>-</td><td></td><td>-</td><td></td><td>-</td><td>_</td><td>-</td><td></td><td>- 4</td><td></td><td></td><td>-</td><td>-</td><td>-</td><td>2,541</td></td<>	_	-		-		-	_	-		- 4			-	-	-	2,541
389 273 3 2 3 34 22 178 97 195 129 8,236 5, 17 18 .	12,557	14,270	282	163	111	65	330	151	3,353	1,961	6,700	4,267	7,791	5,728	317,256	192,068
389 273 3 2 3 34 22 178 97 195 129 8,236 5, 17 18 .									2.05				-		1,000	
17 18				50			199			333	1 7 7 7 7	1	300			7,443
2 2			3	***		***	2	3	34	22	178	97	195	129		5,316
4 4 3 3 27 27 31 28 1,099 1, 5 11			***	***				***		***						2,451
5 11				***	***		***				100			1 with		414
1			3	3	***	***	***	***		***	27	27	31	28	15.15	1,079
	5		***		and the same of							***		***		1,199
116	1				40.3		1900	2000							The same	610
	-			_	-	-	_	_	-	_	_	-	_			118
		_	_	-	-		_					-	_			210 697
13,191 14,991 310 216 111 65 360 171 3,542 2,053 7,326 4,684 8,416 6,150 341,267 210,	10,101	14,001	010	-10	***	00	508	1/1	0,012	2,000	1,050	4,004	0,410	0,100	011,207	210,697

STATEMENT No. 2.

Showing the number of Inoculations performed monthly in the Punjab by Districts from 1st January to 31st December 1903.

_		-	The same of the sa	,	-	-	-		-		-		-	-
Serial No.	Name of Distric	January.	February.	March.	April.	May.	June.	July.	Angust.	September.	October.	November.	December,	Total.
1	Hissár					41					***	48	16	105
2	Rohtak													
8	Gurgáon			760	297	59								1,116
4	Delhi													
5	Karnál		5 562	1,083	996	63							337	3,046
6	Umballa	. 10,83	10,794	5,670	3,950	570					2	323	1,167	33,306
7	Simla										***			
8	Kángra												***	
9	Hoshiárpur .	. 40,95	44,931	24,584	10,848									121,317
10	Juliandar	. 6,72	8 16,139	15,889	11,324	2,079	300	83				121	. 8	52,671
11	Ludhiá-a	82	6,057	1,244	680	117				58	5	3		8,991
12	Ferozepore .	. 7,57	3,682	1,866	1,183	833					248			15,391
13	Siálkot	. 18	342	4,390	2,613	53	1				***		21	7,601
14	Gujránwála .	. 63	2,926	2,562	3,709	347						6	73	10,255
15	Montgomery .						***							
16		. 63	883	2,089	1,205	309	5						36	5,158
17		. 5,27	14,862	17,417	13,322	5,898		1	1					56,772
18	Gurdáspur ,	. 3,37	1,832	1,402	1,021	518	2							8,151
19	Gujrát					***								
20	Shahpur				***		***							
21	Jhelum				***									
22					***		***							
23	District Control of the Control of t		ar.			***					***			
24							***							
25		. 9	273	686	368	247								1,670
26	Dera Gházi Khan									***		***		
	Total .	77,110	103,283	79,642	51,516	11,134	308	84	1	58	255	501	1,658	325,550
	NATIVE STATES.	-												
1	Patiála													
2	Kapúrthala .				***	839								839
3	Nábha								***					
4	Kalsia		***		54									54
5	Máler Kotla	-		20										20
6	Jiad			[***									***
7	Faridkot	8		467	419									894
8	Dujána	1-												
	Total	-		487	473	839								1,807
	GRAND TOTAL	77,118	103,283	80,129	51,999	11,973	308	84	1	58	255	501	1,658	327,357

STATEMENT No. 3.

STATEMENT

Showing the number of Plague Seizures and Deaths among uninoculated and inoculated case mortality among both

-		contr	_				-	-		
								TOTAL.		
Serial No.	Nam	ne of	Distric	ıt.		Population according to the Census of 1901,	Cases.	Deaths.	Percentage of attack to population.	Case mortality per cest.
1	Hissár					781,717	2,105	1,772	0-27	84'18
2	Rohtak	***				630,672	304	231	0.05	75:99
3	Gurgáon		.,,	***		746,208	4,572	3,885	0.61	84:97
4	Delhi		***			689,039	12	9	0.00	75'00
5	Karnál			***		883,225	2,260	1,516	0.26	67'08
6	Ambala					815,880	9,541	6,517	1.17	68-31
7	Simla.		***	***		40,351	15	9	0.04	6000
8	Kángra			***		768,124	16	12	0.00	75'00
9	Hoshiárpur		***	***		989,782	32,210	17,436	3-25	54:13
10	Jallandar					917,587	42,813	23,826	4-67	55-65
11	Ludhiána			***		673,097	11,661	7,145	1.73	61-27
. 12	Ferozepore					958,072	11,060	7,597	1.15	68-69
13	Siálkot		***	***		1,083,909	23,157	14,626	2.14	63.16
14	Gujránwála			***		890,577	67,901	44,267	7-62	65'19
15	Montgomery					497,706	655	229	0.13	34'81
16	Lahore		***			1,162,109	51,765	24,664	4.45	47.64
17	Amritsar			***		1,023,828	37,461	25,355	3.66	67-68
18	Gurdáspur	***	***			940,334	8,433	5,388	0.80	63-89
19	Gujrát	***	***	***	***	750,548	4,469	2,906	0.60	65.03
20	Shahpur				***	524,259	1,334	828	0.25	62-07
21	Jhelum			***		594,018	363	225	0.06	61.98
22	Ráwalpindi		***		***	930,535	1,397	1,082	0.12	77.45
23	Miánwáli	***	***	***	***	424,588	3	1	0.00	33'34
24	Mooltan			***	***	710,626	4	2	0.00	50.00
25	Jhang				***	1,002,656	3,745	2,541	0.37	67-85
			Total	***		19,431,447	317,256	192,068	1.63	60-54
	N.	LTIVE	STATE	s.						
1	Patiála	***		***	***	1,596,692	8,414	7,442	0-53	88:45
2	Kapúrthala		***	***	***	314,351	8,236	5,316	2.62	64-55
8	Nábha		***	***	***	297,949	2,814	2,451	0.94	87.10
4	Kalsia		***		***	67,181	632	- 414	0.94	65.21
5	Máler Kotla	***	***		***	77,506	1,099	1,079	1'42	98.18
6	Jind			***		282,003	1,624	1,199	0.58	73:83
7	Faridkot	***	***	***		124,912	1,041	610	0-84	58'43
8	Dujána			***		24,174	148	118	0.61	79.73
			Total	***		2,784,768	24,011	18,629	0.86	77.59
	Provin	ncial	Total			22,216,215	341,267	210,697	1'54	61.74
-	95	-	-	-	-	-	-	-	ATTENDOCTOR .	A STATE OF THE PARTY OF THE PAR

No. 3. population by Districts in the Punjab, and the incidence of attack to population and classes during the year 1903.

	τ	ININOCULATE	ID.		INOCULATED.							
Population.	Ganes,	Deaths.	Percentage of attack to population.	Case mortality per cent.	Population.	Cases,	Deaths.	Percentage of attack to population,	Case mortality per-			
781,612	2,105	1,772	0.27	84.18	105							
630,672	304	231	0.05	75-99								
745,092	4,554	3,882	0:61	85*24	1,116	18	3	1.61	16-6			
689,039	12	9	0100	75-00				0.00	0-0			
880,179	2,228	1,503	0:25	67-46	3,046	32	13	1.05	40-6			
782,574	9,262	6,367	1:18	68.74	33,306	279	150	0.84	53-7			
40,351	15	9	0104	60-00			- 10	0.00	0.0			
768,124	16	12	0:00	75:00				000	0.0			
868,465	29,749	16,978	3:43	57:07	121,317	2,461	458	2.03	18.6			
864,916	42,055	23,715	4:86	56:39	52,671	758	111	1:44	146			
664,106	11,640	7,139	1.75	61:33	8,991	21	6	0:23	28'5			
942,681	10,879	7,514	1.12	69:16	15,391	181	83	1.18	45'8			
1,076,308	23,109	14,612	2:15	63:23	7,601	48	14	0-63	29.1			
880,322	67,688	44,168	7.69	65-25	10,255	213	99	2:08	46'4			
497,706	655	228	0.13	34.81		***		000	0.0			
1,156,951	51,582	24,619	4'46	47-92	5,158	183	45	3-55	24.5			
967,056	36,704	25,123	8.79	68-45	56,772	757	232	1.33	30-6			
932,183	8,396	5,376	0.50	64-03	8,151	37	12	0.45	32.4			
750,548	4,444	2,892	0.59	65.08		25	14	0.00	56'0			
524,259	1,333	827	0-25	62.04		1	1	0.00	1000			
594,018	362	224	0.06	61.87		1	1	0.00	1000			
930,535	1,397	1,082	0.12	77:45				0.00	0.0			
424,588	3	1	0.00	33-34				0-00	00			
710,626	4	2	0.00	50.00	***			0.00	0.00			
1,000,986	3,735	2,538	0-37	67 95	1,670	10	3	0.20	30-00			
19,105,897	312,231	190,823	1.63	61.12	325,550	5,025	1,245	1.24	24-78			
1,596,692	8,414	7,442	0.23	88:45								
313,512	8,234	5,315	2 63	64.55	839	2	1	0.24	50-00			
297,949	2,814	2,451	0.94	87.10		***		0.00	0.00			
67,127	632	414	0.94	65.21	54			0.00	0.00			
77,486	1,081	1,062	1:40	98:24	20	18	17	90-00	94.4			
252,003	1,624	1,199	0.28	73.83				0.00	0.00			
124,018	1,044	610	0.84	58'43	894			0.00	0.0			
24,174	148	118	0 61	79:73			***	0.00	0.0			
2,782,961	23,991	18,611	0.86	77 57	1,807	20	18	1.11	90'0			
1,888,858	336,222	209,434	1:54	62 29	327,357	5,045	1,263	1:54	25.0			

STATEMENT No. 4.

Showing the strength of the Medical Staff and Establishment employed on Plague

Duty in the Punjab as it stood duriny each month of the year 1903.

Serial No.	Name	of I	month.		Commissioned Medical Officers.	European Medical Practitioners.	Temporary Medical Officers.	Lady Dectors.	Assistant Surgeons.	Hospital Assistants.	Compounders.	Dháis.	Clerks,	Chaprásia,	Khalsesse.
1	January			,	9	33	11	4	17	20	70	8	223	83	70
2	February				9	32	8		15	19	64	4	205	77	64
3	March	***			10	32	8	1	15	19	64	4	206	78	64
4	April	***	***	***	8	32	6	1	17	19	60	4	194	74	60
5	May		244	***	7	32	: 6	1	17	19	60	6	194	74	60
6	June	***			7		6		17	19	28	6	98	42	28
7	July	***		***	3	***	6		15	19	21	6	27	24	20
8	August	***		***	1		4	***	14	18	21	6	27	24	20
9	September			***	1		4		12	15	8	6	15	15	8
10	October	,,,	***		1	5	4		12	15	8	6	20	25	10
11	November	***			3	6	4	***	10	14	8	3	20	25	12
12	December				2	6	4		14	31	12	2	33	42	22



