

[L. & M.]

Local & Munl. (1899) Department.

MISCELLANEOUS.

G.O., No. 1557/M

DATED 23-10-99.

INDEXED.

RECORDED

[Despatch Abstract.]

Memorandum by the Army Sanitary Commission

Communicating to the Municipal Commissioners of Madras, letter from the Secretary of State for India, forwarding 70 Copies of a — on the Administration Report of the Madras Municipality for 1897-98.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Local & Muni. (1897) Department.

CURRENT No. 2585 m

From

The Secretary of state for India

Misc:

Order No. 1537 mms 23/10/99

Communicated to the Municipal Commissioners of Madras.

No.

1/10/99

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Dated 7th Sept. 99
Received 2nd Oct. 99
Registered 3rd Oct. 99
Enclosures nil
Spare copies 70

SUBJECT.

Forwarding 70 copies of a memorandum by the Army Sanitary Commission on the Administration Report of the Madras Municipality for 1897-98. To the President, m.c. Madras. 10/10/99

10/10.

BACK PAPERS

G.O.	No.	Department.	Date.
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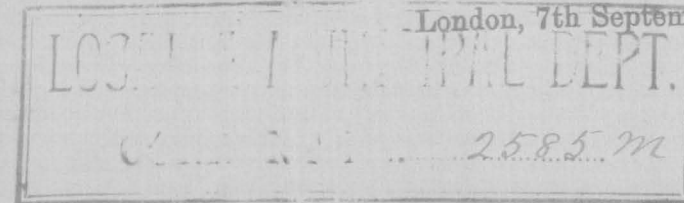
FURTHER PAPERS.

G.O.	No.	Department.	Date.



India Office,

London, 7th September 1899.



Statistics,
No. 2.

To His Excellency the Honourable the Governor
in Council, Fort St. George.

Sir,

I forward, for the information of your Excellency's Government,

70 copies* of a Memorandum by

* 3 with Despatch and 67 by book post.

the Army Sanitary Commission on

the Administration Report of Madras for 1897-98.

I have the honour to be,

Sir,

Your most obedient humble Servant,

George Hamilton

1088
Madras

MEMORANDUM by the Army Sanitary Commission on the Administration
Report of the Madras Municipality for 1897-98.

The year 1897 was healthier than its predecessor. Whilst the birth-rate remained nearly the same as in 1896, showing a slight increase, the death-rate fell considerably. The most marked meteorological features of the year were excess of temperature and abnormal rainfall. From the 15th of October until the close of the year, only 9.43 inches of rain were recorded against an average of 26 inches. The high prices of food, which commenced in 1896, continued during the year under report, causing much distress amongst the poorer classes, "and exercising a potent influence on their mortality." The table given in paragraph 184 of the Report shows the very high rates which ruled throughout the year, more especially in the price of second-quality rice and of *ragi*, the ordinary food grains of the poor.

2. *Vital Statistics*.—A birth-rate of 41.3, and a death-rate of 35.5, show that the registration of vital statistics in the City of Madras is carried out with probably a close approximation to accuracy. The contrast between the rates of births and deaths in the City and in the Presidency as a whole, is very striking. Whilst, as just stated, Madras City records a birth-rate of 41.3 *per mille* of its population, the Presidency records a rate of 28.7; and whilst the former records a death-rate of 35.5, the latter records a death-rate of only 25.4. As stated in the Report, increase in the number of births during the year, slight although it was, "must be received with satisfaction, considering the distress induced by famine, which was felt in the town as well as in the Presidency. The birth-rate of a population being directly influenced by its prosperity and adversity, it would not have been surprising if a considerable reduction in the birth-rate had occurred." The contrast between the birth-rate recorded for the City and that recorded for the Presidency is sufficiently striking; but, when compared with 11.36 recorded in Bombay during the same year, it shows to what extent "adversity" had overtaken the latter city. For Madras, only 2.2 still-births to every 100 live-births were registered; but the President of the Municipal Commission thinks the ratio is unquestionably too low for a city like Madras. In Bombay, more than 14 still-births were recorded for every live-birth; so, if the ratio is understated in Madras, it is probably overstated in Bombay. The proportion of male children born approximates very closely to that of female children born, having been 101.5 of the former to every 100 of the latter. This approximation may be accepted as some proof of the accuracy of the registration in Madras. As a rule, in India the divergence in the relative number of male, as compared with female children born, increases directly as the defective nature of the registration. The decrease in the death-rate was mainly owing to less mortality from fevers and bowel complaints. Probably the decrease in the fatality of these diseases was, in part at least, owing to the comparative dryness of the latter months of the year. As already stated, the rainfall between the 15th of October and the end of the year amounted to only 9.43 inches as compared with an average of 26 inches.

3. *Chief Diseases*.—Although it prevailed in epidemic form, small-pox cannot be said to have been excessively fatal. The 114 deaths caused by the disease, represent only a death-rate of 0.2 *per mille* of population. Of these deaths, 91 occurred amongst unvaccinated persons, and 13 amongst persons said to have been vaccinated but who had

no marks; whilst 10 occurred amongst those who had previously been vaccinated. Of the 149 unvaccinated persons who were attacked 91, or 61.0 per cent., died; whilst of the 44 vaccinated persons attacked only 10, or 22.7 per cent., died. Owing to the high proportion of the population protected in the City of Madras by vaccination, the small-pox epidemic does not seem to have got out of control. The greatest number of deaths due to the disease in any one month took place in August, when 15 persons died of it. In September it caused only eight deaths, and only a total of nine deaths during the remaining three months of the year. Vaccination, revaccination, disinfection of the houses and clothing of those attacked, and, when practicable, isolation of the affected, appear to have kept the disease in check. It is curious to find in some reports the outbreak of small-pox assigned as one of the reasons to account for a decrease in the number of persons vaccinated. If vaccination is the efficient prophylactic against small-pox disease which it is proved beyond reasonable doubt to be, it might be expected that, in the presence of a danger against which it is a protection, people would have recourse to it more readily than when such danger is less imminent. In Madras during 1897-98, a year of epidemic small-pox prevalence, the total number of cases of vaccination increased from 27,021 in the preceding year to 33,082, "and the increase was chiefly due to the prevalence of small-pox in an epidemic form during the latter part of the year under review." The thoroughness of the system of verification of vaccination in Madras may be gathered from the following quotation from the Report:—"During the year 1897-98, 1,991 cases voluntarily resorted to the Vaccine Depôts for the inspection of the vaccinator, and in 24,410 cases the results were verified by the Divisional Vaccinators under Byelaw 11, and, after inspection, certificates of success were issued to the parents or guardians at their own houses. These results were again inspected by the Deputy Inspector and four Assistant Deputy Inspectors." Under the revised vaccination byelaws, which have received the sanction of the Government and come into force on the 1st April 1898, the parents of children are bound to produce the vaccinated children at the Depôts for the inspection of the vaccinators. There was a very considerable decrease in the number of persons prosecuted for failure to comply with the vaccination byelaws as compared with the number in the previous year. The results in the case of the 424 prosecutions instituted were that, 316 of the children were vaccinated, in 19 cases vaccination was postponed on account of illness, 26 had left the town, in 48 of the cases proceedings were withdrawn, in two the parents were warned and discharged by the magistrate, and three of the children died before the date fixed for hearing in the Court. The President thinks that "in the majority of the cases prosecuted the fines were inadequate, varying from 4 annas to 1 rupee, which did not act as a deterrent." He adds:—"The consequence is that people do not resort to the Vaccine Depôts with their children within the period specified in the notices served on them, but wait till prosecution is actually instituted." According to Statement No. I., showing the particulars of vaccination, the percentage of successful cases in primary vaccination was 99.56, and in revaccination 86.97. As regards the high percentage of success recorded in revaccination, the Health Officer has been requested by the Government to examine 1,000 cases as a test of the accuracy of this record, and to report on the result obtained. At the time the Report was written the whole of the 1,000 cases had not been examined. The total number of births registered in 1897-98, including still-born, having been 18,799, when the 362 still-births and the 5,100 deaths of children under one year are deducted, 13,337 would remain available for vaccination. According to Statement No. I., 15,083 children under one year were successfully vaccinated. The number successfully vaccinated was, thus, in excess of the number born in Madras available for vaccination. This is accounted for by the fact that infants born up-country and who resided within the

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city for more than two months were also vaccinated under the byelaws. Of the total number of infants vaccinated during the official year, 11,300 only were born in Madras, the remaining 4,023 having been born in the country. The percentage of persons vaccinated to population was 7.31, or greatly above the birth-rate, which was 4.13. Looked at from every point of view Madras, for an Indian city, should have a well-vaccinated population. The percentage of infants vaccinated is high—81.50 of the births according to the table in paragraph 152; the percentage of vaccinations to population is high; and, best proof of all, the mortality from small-pox even in a year when the disease prevailed in epidemic form, did not exceed 0.2 per thousand of population. Owing mainly to the increased number of cases vaccinated during the year, the cost of each case fell from six annas in the previous year to five annas and one pie.

4. *Cholera* was credited with 196 deaths, or a ratio of 0.3 per thousand of population. Although above the average of the preceding four years, this mortality cannot be considered high. For the Madras Presidency the ratio was, in the case of cholera, 4.4; and in the case of small-pox 0.7 for the calendar year 1897. The mortality from cholera in Madras City was thus fourteen times less, and from small-pox three times less, than in the Madras Presidency.

5. As usual, *fevers* had a greater number of deaths attributed to them than any of the other chief diseases; but they were less fatal than during the previous year, and the death-rate due to them fell from 13.3 to 12.1 per thousand of population. The causes which favour fever prevalence are known, and "until adequate provision is made for effective drainage, the proper disposal of dead bodies and refuse of all kinds, the supply of wholesome water and other sanitary requirements of prime importance, any great reduction in the fever death-rate cannot be expected." If decreasing mortality may be accepted as an indication that the causes which give rise to fever are in course of being removed in Madras, the diminishing death-rate from this disease from 1892, when it was 15.2, down to the year under report, when it had fallen to 12.1, must be matter for satisfaction. As with fevers, so with *bowel complaints*, which depend for their prevalence largely on the same causes as the former, there has been a steady decrease in their fatality since 1892. Of the unhealthiness of a town there is perhaps no more sensitive gauge than its infant mortality, and measured by this Madras cannot be classed amongst healthy cities. Although the death-rate amongst infants fell from 407 of every 1,000 births in the preceding year to 369.6 in the year under report, it is still high and may safely be accepted as indicating the existence of serious defects in the hygienic conditions of the city.

6. Fortunately, although a case of plague was introduced, the disease failed to secure a permanent footing in Madras. As stated in the report, "the precautionary measures adopted against this disease have formed an important feature of the administration" of the year, and, so far, appear to have been successful.

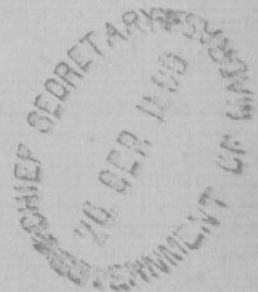
7. Under the heading "Sanitary Defects," a summary is given of the chief sanitary wants of the city. Drainage remains the most urgent of these, "though a beginning has been made in the right direction by the connection of a certain number of houses in Mylapur with a sewerage system which will discharge, *via* a pumping station, over a sewage farm just to the north of Mylapur." The sewage farms, it is stated in the Government review of the Report, were worked at a profit of Rs. 33,545 against Rs. 2,851 in the previous year. When practicable, town refuse than by utilising them as fertilisers of the soil. The importance of preserving the ground within the inhabited area from pollution is forcibly put:—"The ground in such places is soaked with

“organic matter, and, when the ground air is forced out by a rise in subsoil water, it is hardly surprising that the death-rate takes a leap up. Even the daily variations of temperature give rise to great movements of the ground air.” The improvement of sanitation is no doubt an up-hill task in Madras. Not only has the dead weight of native apathy and neglect to be overcome, but the labour supply difficulty is ever present in a more or less acute form. A sufficient number of scavengers cannot always be obtained, and when obtained they will only work when they choose: “there is no way of making them work if they do not wish to.” The water supply will not be satisfactory until it is made continuous, instead of being, as it is at present, intermittent. If all the pipes were kept full “it would then be possible to have all the wells in the town closed; for it is scarcely possible, infiltrated as the soil is with organic matter, for any of the wells in populous quarters to contain water that is fit to drink.”

8. Briefly, the year was healthier than the preceding one. Whilst the birth-rate remained nearly the same as in 1896, the death-rate fell from 37·8 to 35·5 *per mille* of population. The poorer classes suffered under pressure of high prices of the food grains chiefly used by them. Short rainfall between the middle of October and the end of the year doubtless contributed towards diminished mortality from malarial diseases. The decrease in the death-rate was mainly due to lessened mortality from fevers and bowel complaints. Small-pox prevailed in epidemic form, and was accountable for 114 deaths. Owing to the previous well-vaccinated state of the population, together with the vigorous prosecution of vaccination and of revaccination during the epidemic period, the disease was held in check and the mortality did not exceed a ratio of 0·2 *per mille* of population. There was a large increase in the number of persons vaccinated during the year, a result which is attributed to the stimulus given to vaccination by the epidemic prevalence of small-pox. The percentage of infants vaccinated was high, and equalled 81·5 of the births. Cholera was credited with a ratio of 0·3 deaths *per mille* of population in Madras City, as compared with 4·4 in the Madras Presidency. A progressive decrease in the mortality due to fevers and bowel complaints since 1892 is a satisfactory feature of the returns. Although a case of plague was introduced during the year, the disease failed to secure a footing in Madras. A summary is given of the chief sanitary defects still existing. Drainage continues to be the most important of the sanitary requirements of the City. Next in importance is the need for a continuous water supply. Until the latter is provided, the inhabitants will have to go on using well-water, which, in populous quarters, owing to the pollution of the soil in which the wells are sunk, can hardly be fit to drink.

10th August 1899.

No. 4.



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