

MADRAS RECORD OFFICE.

Government of Madras.

Public **DEPARTMENT.**

G.O. No. *1329* **Press**
Mis.

Dated *20-10-1870*

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Department,
20th October 1870.*

No. 133. Read the following Memorandum from the Sanitary Commissioner, dated Cochin, 3rd October 1870 :—

* The Sanitary Commissioner has the honour to forward, for the information of Government, copy of a letter, addressed to the Vice-President of the Municipality of Madura, on the results of his sanitary inspection of the town.

From the Sanitary Commissioner for Madras, to the Vice-President of the Municipal Commission, Madura, dated Cochin, 3rd October 1870, No. 39.

With reference to the interview I had with the Municipal Commissioners of Madura on the 31st ultimo, I have the honour to recapitulate, briefly, for record, the substance of my recommendations for the sanitary improvement of the town.

2. At the time of my inspection, as you are aware, cholera was prevailing to some extent in the town and neighbourhood. Many parts of the district had been severely affected before the appearance of disease in the town. The measures already adopted by the Commissioners, to avert the extension of the disease, seemed to me judicious and generally to merit approval. The employment of pupils and native practitioners, to distribute medicine from house to house, seemed, so far as I could learn from the daily reports of cases and deaths, to have a favourable influence in checking the rate of mortality. Unfortunately, many causes of disease abound in Madura, and to such of these as can be dealt with by the Municipality, I shall briefly refer.

The town of Madura is, I believe, of considerable antiquity, and, like most old towns of native growth, it has many disadvantages in regard to the introduction of sanitary reforms. In the first place, the surface soil is tainted by a long course of human pollution, and the local water supply from the town wells has suffered from the same cause. The soil on which the town stands is a rich alluvial deposit, somewhat retentive of moisture, and the healthiness of the locality is not favoured by this circumstance.

3. The town, which originally grew up within a fortified area of a little more than a square mile, does not appear to have expanded very much as a result of the demolition of the town wall and ditch, and, at the present time, the area occupied by the old town is very densely crowded with human beings. Wide streets exist in the fort, and the town, as viewed from these, is decidedly imposing, the houses being, for the most part, substantially built and well raised from the ground. But, besides the main thoroughfares, the town is full of blind alleys and dark narrow lanes, and, these being inaccessible to carts, the conservancy arrangements of the poorest, worst ventilated, and dirtiest parts of the town are very defective.

4. WATER SUPPLY.—The drinking water of the people is, by preference, obtained from the sandy bed of the Vigay river. This water would probably be wholesome enough but for the practice of the people washing their clothes and linen over the area used for getting drinking water. The town wells are numerous, and the water is at no great depth from the surface, the rise and fall of the level of the wells being just in proportion to the water level in the bed of the stream. The wells vary a good deal as to the amount of putrefying organic matter they contain, but some of them appear to hold a suspiciously large quantity, and the use of such water must always be looked upon as fraught with danger. In some wells of good repute for wholesomeness, I found a proportion of organic impurity much too large for safe use, and the conclusion I have come to is that wells, sunk in a porous soil, which has been contaminated with human filth for many centuries past, are not safe sources of supply to the population.

5. A project to give a purer supply of water to the town was commenced, many years ago, by Colonel Horsley, R. E. A supply channel from the Vigay river, some three miles to the north of the town, was surveyed and laid out, and the earthwork, up to the site of the old town wall, completed; at this stage the work was abandoned, and nothing has since been done towards the execution of the original design.

6. The work, as designed by Colonel Horsley, consisted merely of an open channel raised in great part above the level of the country on an embankment, the channel being taken off the river

Proceedings of the Madras Government, Public Department,

20th October 1870.

sufficiently high above the town to allow of the water flowing through it by mere force of gravitation. Open channels for the supply of towns are very liable to pollution, I observed, in regard to the bed of this channel, that it was used as a common latrine, and, supposing that water had been flowing through it, I am convinced that the villagers in its neighbourhood would not have scrupled to defile it, as is their custom, whenever they have the chance.

7. It is quite clear to me that one of the most important measures, for the permanent improvement of the healthy state of the town, is a pure water supply. Whether the original work be carried out, or whether my own suggestions be adopted of digging wells in the river bank, so as to filter the river water by percolation, and raising the filtered supply by steam machinery or manual labour, and conveying it to the town in closed pipes and distributing by street hydrants, I believe that the improvement is absolutely needed to remedy the tendency to cholera outbreaks, which was as marked a feature of the town in the days of Robert de-Nobilius and Teranalu Naick, as it is in the year 1870.

8. The question of cost, and the particular mode of obtaining a good water supply, is one that does not fall within my province to discuss. The Municipality of Madura will, doubtless, be able to obtain professional engineering advice and assistance on the subject, especially now that other important towns in India are being provided with hydraulic works suited to their need. I would only remark that, if the open channel be decided upon, some stringent regulations for its conservation will have to be laid down. On sanitary grounds, however, I am decidedly opposed to the use of open channels for the supply of towns with water. The distance from a clean part of the river bed to the town is not so great but that the Municipality of Madura might well afford to incur the expense of iron pipes for the conveyance of the drinking water of the people.

9. DRAINAGE.—In destroying the old fort wall, a large quantity of cut-stone became available, and this appears to have been used in the laying of square-shaped surface drains along the main streets. These drains were badly laid out, and in many of them sewage stagnates, causing much nuisance, and necessitating the employment of a small army of scavengers to keep the channels clean. These drains, to be effective, will have to be, in great part, relaid when the levels and lines of outfall of sewage have been determined.

10. PRIVIES.—In the course of my inspection of the town, I became aware of the fact that, although the public latrines and street conservancy were well-cared for, yet that almost every backyard had a privy arrangement of some sort, either of a cesspit covered in with slabs of wood or flat stone, or else a small walled-in space, in which ordure accumulated on the surface, or was superficially buried in the floor of the privy enclosure. Captain Guthrie, Superintendent of Police, and myself came upon several of these places, in which ordure had been allowed to accumulate to a disgusting extent. These places were mostly removed from the public streets, and only got at by close examination of the narrow lanes and blind alleys which are, to some extent, removed from police and sanitary supervision.

The Commissioners had, prior to my visit, commenced to take a detailed list of the house privies and cesspits, and I hardly need point out that the evil, as shown by the surveyor's list, is one of great magnitude, and that a radical change in the system of house conservancy is absolutely necessary to the safety of the public health. I believe it will be necessary for the Commissioners to place all these backyards under municipal scavenging, levying a special cess for the clearance and conservancy of private privies, or, if this is not done, very much more effective and detailed inspection by the municipal servants will be needed, to maintain them in a state of cleanliness.

11. BACKYARDS.—In many of the narrow streets I found accumulation of ashes and cattle manure in the backyards. In this respect, as well as in regard to privies, a vigilant sanitary supervision is called for.

12. LATRINES.—The number of public latrines (eight) is manifestly too few for the wants of a population of 50,000 persons. The latrines at present in use are merely walled enclosures, open to the sun and rain. They are not suitable to the wants of the people, and I recommend the plan in operation in Coimbatore as better suited for a dense population (plans and specifications will be furnished hereafter).

Proceedings of the Madras Government, Public Department,

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For the outskirts of the town, the trench system of latrines would be suited, provided that the Commissioners could obtain land adapted to the purpose. Probably, some of the cocoanut topes might be thus utilized.

13. COCOANUTS.—I was asked by one of the Commissioners, whether I did not think that the cocoanut plantation around the town were likely to produce fever. I would remark, with reference to this point, that a cocoanut tope, when the trees have attained their full size, does not interfere with free perflation over the surface of the soil, and that the shade of such trees in a tropical country is very grateful. I have no reason to suppose that the cultivation of cocoanut trees is productive of fever or of any other disease, and on the contrary, considering the width of many of the streets in Madura, and their heat and glare, I think the planting of avenues of cocoanuts might be encouraged within the town, without causing any special liability of the people to fever or epidemic disease.

14. BURIAL GROUNDS.—Some of the Mussulman and Christian burial grounds are too near to the living inhabitants to be quite safe. I would suggest, with reference to these, that all burials in populous neighbourhoods should be stopped, and new cemeteries provided outside the town.

15. VACCINATION.—Looking to the extent of population, the number of vaccine operations annually ought not to fall much short of 1500. A fee of four annas for each successful case would, I think, be more likely to induce vigilance on the part of the vaccinator, than the present system of monthly salary, irrespective of the amount of work done.

If suitable arrangements can be made for the inspection of the vaccinator's work, I recommend this change in the mode of payment.

16. Many signs of municipal activity are visible throughout the town. A large number of streets have been metalled and fitted with V shaped side-drains of masonry. The scavenging of the streets and bazaars is well-attended to. The Municipality possesses a good income, and the suggested works of water supply, drainage, and conservancy are not, I think, beyond the means of the town to accomplish.

17. PAGODA TANK.—Although the Municipal Commissioners have no control over the temples, I may remark that the foul water in the sacred tank of the Pagoda is a most dangerous nuisance, considering that devotees actually bathe in, and drink of, the abominable stuff. A specimen examined was nearly as thick as pea soup from a green vegetable growth, and numberless infusoria in it stank abominably. The quantity of putrefiable organic matter in it was so great, that I was unable to determine it by the permanganate of potash test. The temple authorities ought certainly to be called upon to empty and clean out this foul reservoir, considering the estimation in which the water is held by all orthodox Hindoos, and the risk they run in drinking from such a source.

No. 134. ORDER THEREON, 20th October 1870, No. 1329.

The Government consider that the suggestions of the Sanitary Commissioner are well worthy of the consideration of the Municipal Commission of Madura.

(True Extract.)

Chief Secretary.

To the President of the Municipal Commission, Madura.

Sanitary Commissioner.

Exd. J. Wright.

Govt. of 1870; Madras

PUBLIC.

To
THE PRESIDENT OF THE
MUNICIPAL COMMISSION.

Secy, Secy, Secy,
Madras,

Dated October, 20th.

Recd.

Encl.

G. O., 20th October 1870, No. 1329.

OCTOBER.
Nos. 133-134.

Passing orders on the report of the Sanitary
Commissioner, Madras, on the results of his recent
inspection of the Madras Municipality.

McMasters M. C. Moore
Sanitary Commission

Public Works Department

From

Sanitary Commission

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The Sanitary Commission has
the honor to forward for the infor-
mation of Government copy of letter
addressed to the Vice President of
the Municipality of Madras
the results of his sanitary survey

Office of Sanitary Commr
Cochin 3rd October 1870
of H. —

no 1740.

Govt of 1870 Madras.

Public

To The Pres. Comm. Commr.
Madras
Sec

date Oct. 20.

Recd.

Post.

G. O. 21 Oct. 1870 No 1829.

133. 134.

Passing Order on the report of
the Sanitary Commr. Madras
on the results of his recent
inspection of the Madras
Municipality.

20 October 1870 No 1829.

Madras consider that the suggestions

of the Sanitary Commission are well

worthy of consideration of the Government

of Madras.

Order

Order