

(1) Number of pages 5 sheets
(2) Date of repair 13-8-82
(3) Initials of the Referencer _____

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue

DEPARTMENT

G.O. No.	<u>83</u>	Press.
B.P. No.		Mis.
Dated	<u>10. 1. 1878</u>	197 .

Not to be folded or roughly handled

Public Department
Proceedings of the Madras Government
Read the following: 37

INDIA OFFICE;
London, the 19th July 1877.

Statistics & Commerce.
No. 103.

To His Excellency the Right Honourable the GOVERNOR GENERAL of
India in Council.

MY LORD,—I forward herewith a copy of a memorandum* by the
Army Sanitary Commission on the
Bengal sanitary report for 1875.

* Dated 29th May 1877.

2. I notice that the Sanitary Commissioner for that Province objects to a continuance of the system of registration of vital statistics in selected areas on the grounds (1) that the main object of registration as an index to the sanitary condition of localities is not attained under that system, and (2) that it tends to the undervaluing and possible neglect of general registration. The Sanitary Commissioner with your Government and the Sanitary Commissioner for Bombay hold, I understand, similar opinions; on the other hand, the Government of Bengal are resolved to continue the system, and the Army Sanitary Commission remark that the matter may safely be left in their hands. I shall be glad to be furnished with the views of your Government on this subject. It must be remembered that the main object of registration is to obtain data for sanitary procedure, and this is the principle that should guide any decision as to the expediency or otherwise of continuing the system in question. I am much gratified to find in this report evidence of the satisfactory amount of attention given throughout the Province of Bengal to measures of sanitary improvement. The circulation of rules and suggestions among the village communities is a proceeding calculated to produce much benefit, and I concur in the wish expressed by the Army Sanitary Commission that the example might be followed all over India.

3. I have also read with satisfaction the account of the measures taken for the preservation of health in the Port of Calcutta, and in the ships frequenting that port.

I have the honour to be,

MY LORD,

Your Lordship's most obedient, humble Servant,

SALISBURY.

Memorandum of the Army Sanitary Commission on the Report of the Sanitary Commissioner for Bengal for 1875.

The duty of Sanitary Commissioner for Bengal was ably fulfilled in 1875 by Surgeon Major Pilcher, who acted for Dr. Coates during a year's absence on leave.

The present report is, therefore, Mr. Pilcher's, and is marked by the same attention to practical details which distinguished Dr. Coates' report of last year.

1. There is not much to report regarding registration, which is still in its infancy, but the following abstract will show that while the number of deaths

registered in the general circles, and by ordinary methods, is increasing, the death-rates in selected circles remain tolerably constant; but there is no doubt that these rates are still considerably under the truth:

Years.	Registered deaths per 1,000.	
	General Circles.	Selected Circles.
1870	...	...
1871	3.92	
1872	4.00	
1873	5.81	
1874	7.75	24.85
1875	8.42	24.72
	10.01	24.80

A nearer approach to accuracy was obtained by special statistical inquiry in certain villages in the zemindary of Tushbhunder carried out by the zemindar.

The result was a death-rate of 32.84 per 1,000 for males, 30.92 per 1,000 for females, and for both 31.91 per 1,000.

It need scarcely be pointed out that, if this rate for one year at all represents the state of public health in Bengal villages, it shows them to be very unhealthy. But it also shows that with due care the registration of deaths may become more trustworthy than it is at present. The subject is discussed in the Resolution of the Government of Bengal which follows the report, and it may safely be left in their hands. So far the introduction of selected areas of registration has led to results far in advance of those obtained in general circles.

2. The following abstract gives the registered mortality in some of the principal towns in Bengal for 1875:

	Popula- tion.	Mortality per 1000.		Popula- tion.	Mortality per 1000.
Burdwan	32,321	25.95	Rungpur	14,845	39.33
Sooree	9,001	23.33	Darjeeling	3,157	43.07
Hooghly and Chin- surah.	34,761	26.78	Dacca	69,212	24.96
Serampore	24,440	32.48	Comillah	12,948	27.72
Ooterpara	4,389	42.60	Chittagong	20,604	24.41
Howrah	97,784	49.03	Gya	66,843	36.63
North Suburban Town.	27,263	42.25	Mozafferpur	38,223	17.76
Kishnaghur	26,750	21.45	Chuprah	46,287	29.95
Jessore	8,152	29.19	Monghyr	26,274	21.88
			Bhagalpur	30,148	25.44

Some of these death-rates are evidently too low. They represent the best results obtainable at present, but it is something to have got such information regarding the public health statistics of so large a number of towns even for one year.

3. There is no trustworthy information regarding the total deaths in Bengal in 1875. All that is known on this point is the number of deaths registered, which appears to have been nearly 600,000, out of a population of 59,946,314. But how far below the real mortality this number is may be estimated by the fact that the rural population, amounting to 57,975,352, had a death-rate of only 9.54 per 1,000, probably not one-fourth of what it should have had during the great cholera epidemic of 1873.

4. *Principal Death Causes.*—Cholera prevailed in every district in Bengal in 1875, and the deaths registered from this cause were 108,262.

Diseases classed as "fevers" gave rise to 368,087 deaths. These are not, however, to be considered as all being deaths from nosological fevers. The Acting Sanitary Commissioner informs us that "almost all diseases associated with febrile symptoms are returned in this class", but he at the same time states that for practical purposes the class is sufficiently well defined, and that no sub-division of it could be made with advantage. This view would seem to imply that errors in diagnosis in this class are not such as materially to alter the sanitary relations of these diseases.

Bowel complaints occasioned 35,645 deaths, and small-pox 5,280 deaths.

The following table shows the registered monthly mortality from each of these causes of death:

		Total deaths registered.			
		Cholera.	Bowel diseases.	Fever.	Small-pox.
January	...	4,993	2,529	29,352	297
February	...	5,580	2,409	22,791	520
March	...	11,191	2,618	23,403	812
April	...	12,396	2,807	25,150	908
May	...	10,695	2,522	24,683	706
June	...	7,998	2,401	21,479	498
July	...	6,140	2,932	25,175	352
August	...	4,297	3,319	31,418	251
September	...	2,623	3,330	32,750	155
October	...	5,425	3,294	38,320	112
November	...	18,363	3,505	48,894	209
December	...	18,562	3,596	44,764	360

These four diseases account for all the registered mortality in Bengal, except about 83,000 deaths. The monthly numbers show how much more important a death cause is fever than even an epidemic of cholera. Fever is universally prevalent, and in 1875 the mortality from it was above $3\frac{1}{2}$ times that from cholera.

5. There are several practical points of importance connected with the prevalence of these diseases which may be noticed.

The preceding table shows that cholera had two periods of augmentation, viz., March, April, May and November and December.

The following was its distribution as stated by Mr. Pilcher: In January it was present in 211 circles of 34 districts (there are in all 44 registration districts and 644 circles). From February it gradually spread over the districts, increasing also in intensity until April, when 367 circles in all the 44 districts were suffering. From May to July the disease declined. In August and September there was a comparative lull, the disease existing in 263 and 242 circles respectively. In October 274 circles in 43 districts were affected. The disease existed in 426 circles, and in all the districts, in November, and in 443 circles in all the districts in December.

It would have been important to have had the distribution of cholera by villages as well as by circles. Information on this point is only given about certain districts. Such as it is, however, the facts are important in their bearing on certain views on the spread of cholera by contagion.

In Jessore District, the old head quarters of cholera, there are 4,247 villages, of which 1,352 were attacked.

In the 24-Pergunnahs 1,330 villages out of 4,991 were affected. Dacca District had cases in 1,275 villages out of 5,016. At the two large fairs held in this district there was a comparative absence of the disease.

Poorce suffered as usual with the adjacent districts. It is stated that "the disease appeared in thanas quite removed from pilgrim routes and at a time of the year when it usually breaks out. . . . Many thanas through which the main pilgrim route passes are scarcely affected, while others suffer severely. These are facts not in keeping with the theory that cholera is communicated by travellers from infected districts." They are results of the statistics which have always been the true correctives of hypothesis founded on insufficient data.

The following fact regarding cholera in Darbhanga District may be cited, although it is not very definite: "In the District of Darbhanga cholera appeared among the pilgrims at a festival held at Bazirpur in March, and is said to have been disseminated by the pilgrims. Efforts were made to prevent the entrance of pilgrims into the Town of Darbhanga by establishing a cordon of police, which failed in its object. After the fair cholera is said to have broken out along the lines of road taken by the pilgrims", but there is no statistical proof of this. The total deaths in Darbhanga Town were 52, and in the district 1,950, the chief weight of which fell on the portion of the district furthest from the fair.

The real practical remedy, however, is that there should be no cholera at fairs, so far at least as it can be averted by sanitary measures.

This Commission, many years ago, in their instructions for the Cholera Inquiry in India, directed special attention to the great importance of statistical and topographical details in elucidating the history of Indian cholera.

Of course, as Mr. Pileher points out, the solution of problems of this class is essentially connected with the advance of registration of deaths.

A few more statistical facts regarding villages may be added—

Districts.	Total villages.	Villages attacked with cholera.
Maldah	2,100	382
Rajshahye	4,228	176
Rungpur	4,206	1,225
Bogra	2,666	512
Pubna	2,792	1,061
Total	15,992	3,956

The attacked villages amounted to about 24½ per cent. of the whole number.

Cholera appeared in the tea gardens in the Terai in 1875. The gardens attacked were in malarial positions, the coolie lines too close together, the ventilation impeded by jungle, which is also the latrine of the place. The food used by the coolies is coarse and unwholesome, and they get drunk on bad liquor, and sleep in the damp, cold open air. In this case fires had no effect on the disease.

6. There is not much information respecting the sanitary state of attacked villages, but what there is shows that nothing could be worse than the condition of those severely affected. There is one remark of importance which may be abstracted from its connection with the health of the troops. Mr. Pileher says—"These filthy villages exist around nearly every cantonment, and as they are evident sources of danger, they should receive more attention than they do. . . . To absorb these villages into the cantonments, by taking up the land upon which they are built, would seem, at first sight, to be the most natural way of meeting the evil, but this it is considered would not answer, and he thinks it the best course to bring them all, as far as practicable, under the Municipal Act.

This is a matter of great importance, and was considered so by the Indian Army Sanitary Commission, who directed special attention to it. The Army Sanitary Commission has also dwelt repeatedly on its connection with health of cantonments,

and as it has again been mentioned, the whole subject may very well engage the attention of the authorities in India.

7. Another matter of great importance has received due attention, namely, the sanitary state of shipping in the Port of Calcutta, especially with reference to cholera. There were 34 cases on board 20 ships, which there is reason to believe were mainly caused by foul water sold to the ships by boatmen, supplemented by river water. It is very satisfactory to learn that the Port Commissioners and the Chairman of the Justices for Calcutta will afford the means of supplying all ships with good water from the Calcutta mains, and a diminution of cholera attacks may be expected for the future. The grave importance of the state of water supplied to shipping, especially in the case of ships proceeding to sea, can scarcely be overrated, and it is possible that inquiries instituted by the Port Medical Officer, together with the action of the municipal and port authorities, may lead to a marked improvement in the health of the ships in port. An indispensable part of this reform is that the tanks should be kept clean and wholesome for the reception of the filtered Calcutta water, and it may be further suggested that much benefit might be realized if every ship were provided with a filter for drinking water.

8. The most important fact regarding fever is that a conviction has become general that the fatal Burdwan epidemic was a malarial fever, and that it has passed away for the present. How far this satisfactory occurrence has been the result of improved sanitary condition there are no means of knowing from the report, and there is no additional information as to the local conditions culled for remark, except, perhaps, the following account of Tipperah. It appears that in consequence of heavy rains in June the river burst its bounds and inundated the country. "Some 300 villages are reported to have suffered, the inhabitants being driven to take shelter in the sadr station and in other places of higher level. The water thus collected remained on the ground, no means of draining it away being practicable, and as it dried up sickness, particularly fever and cholera, were very rife and fatal."

As regards Terai fever, it is stated that some Europeans and Natives who live constantly in the Terai may have only slight attacks; but if they go up to Darjeeling they are almost certain to get fever of a much more severe type, running sometimes into remittent and continued forms with cerebral complications.

There are no remarks called for in regard to other diseases. But attention may again be directed to the larger mortality from snake-bites shown in the present report. It is true that this is not given separately, but is included among 9,046 deaths from wild beasts and snake-bites. It is evident that not much progress has yet been made in reducing this preventable death cause. There need be no difficulty now in distinguishing between venomous and non-venomous reptiles, and much good might be done, and many lives saved, by appointing suitable persons to superintend the destruction of the former in districts where they are most numerous and dangerous to the people.

The most important sections of Mr. Pileher's report are those relating to sanitary progress, and to his own personal proceedings.

9. *Sanitary Progress.*—A very important step towards the sanitary improvement of the port and shipping of Calcutta was the one already mentioned, viz., the appointment of Surgeon Major French as Port Medical Officer. He entered on his duties on 1st September 1875, which are as follows:

1. To superintend the conservancy and sanitation of the port.
 2. To board all vessels arriving in port with infectious diseases on board.
 3. To inquire into disease among the shipping in the harbours and into the sanitary condition of vessels.
 4. To inspect pilgrim vessels before departure, and grant certificates upon which Bills of Health will be issued by the Commissioner of Police.
- "The Health Officer is required to devote his whole time to the duties of his office, and not to engage in private practice. He is also to be guided by the instructions of the Sanitary Commissioner."

It is not stated in what manner the advice of the Port Medical Officer is to be acted on, but it may be taken for granted that there is some executive authority, otherwise the appointment would lead to little good. Under these circumstances, it may not be out of place to enumerate a few practical points that may come under the notice of this new officer.

It may be safely stated that a properly managed ship, especially on the open sea, ought to be tenanted by as healthy a group of people as can be found anywhere in the world. And yet this is not always the case. On the contrary, ships have sometimes had sick and mortality rates far exceeding those of the worst quarters of unhealthy towns. This startling fact is the foundation of quarantine which, until lately, was the means of levying excessive taxes on commerce. Twenty-five years ago it was calculated that quarantine delays and expenses in the Mediterranean alone amounted to four millions sterling per annum.

The idea of saving this vast outlay by dealing directly with the causes of it seldom occurred to men's minds. The sole fact recognized was that ships might sometimes be unhealthy, or that they might have sailed from unhealthy ports, and that, in either case, it was dangerous to permit intercourse with them, even although the ports claiming this protection were themselves suffering from the very diseases they wished to keep out.

Ports suffering from cholera have kept out ships arriving from other ports where there was none, merely because those ports were suspected. A worse result than the quarantine tax was that quarantine ports took little or no steps for their own improvement, and the people whose commerce suffered never thought of inquiring why ships sometimes carried pestilential diseases among crew or passengers.

A wisely and firmly administered port sanitary service has more in its power in dealing with such questions to protect other ports, to preserve the health of crews, and to save the losses inflicted by quarantine, than all the restrictive measures that human ingenuity can devise.

Let us see what are the usual causes of sickness on board ship. These are bad and defective accommodation for crews, overcrowded, badly ventilated, and not clean; dirty ships; unwholesome cargoes, against the ill effects of which suitable precautions are not taken; foul unwholesome water; foul bilges, sometimes primarily caused by leakage of putrescent mud and water, and even sewage, in foul ports; want of sufficient means of cleanliness on board; bad articles of diet; sometimes embarking persons suffering from infectious diseases.

Of late years there have been very considerable improvements in some of these matters, and comparatively little is now heard of ships carrying pestilential diseases on board. If the principle were adopted that certificates of health should be required to state that the ship, cargo and crew had departed in health, and that all sanitary requirements had been complied with, or otherwise that the certificate should not be granted, and if moreover a similar inspection and certificate by the port sanitary authority were required at the port of entry, quarantine would soon cease to be heard of.

If security be taken that there are no known disease causes on board at the time of departure, and that none have arisen on the voyage from careless management, there would be nothing to fear, and the costs of delay from negligence would, in this way, very properly fall not on the whole commerce of a country, but on the property only of those persons who had neglected their obvious duties. Under quarantine law the innocent and the guilty suffer alike.

To complete the reform, the authorities in all seaports should attend to their sanitary improvements.

We must hope that as the metropolis of India has taken the lead in sanitary improvement in the Eastern Hemisphere, her authorities may also, under the recent port sanitary improvements, be able to set the example of successful treatment of questions of ship hygiene, and help to abolish the tradition of quarantine.

The introduction of ship hygiene on board Her Majesty's Indian troop ships has shown results which ought not only to be aimed at, but which, if intelligently followed up, would be realized elsewhere. These troop ships have practically solved the problem.

In the course of 1875 important progress was made in sanitary legislation in Bengal. The Bengal Irrigation Act which was passed in this year provides for carrying out works of irrigation and of general drainage connected with them for removing drainage obstructions and for the general conservation of all such works in the interests of the public health amongst other reasons.

The Calcutta Municipal Consolidation Act, passed during the present year, is said "to provide effectually for the maintenance and regulation of all the sanitary matters relating to the inhabitants and town of Calcutta".

At the date of Mr. Pileher's report, a district Municipal Bill was under consideration which will give enlarged powers for sanitary purposes to town committees.

Existing laws relating to conservancy and improvement of towns, prevention of inoculation, &c., were extended.

In 1868 conservancy rules for villages and suggestions for the preservation of health were circulated. They were re-circulated last year among the village communities, and it is stated that great benefit had resulted from this step. They are described as being "an exposition of sanitary truths in the simplest possible form", and direct attention to such matters as "overcrowding, accumulations of garbage, ordure, &c., in and about dwellings, carrying on of insanitary trades, converting of localities in the vicinity of habitations into latrines, sanitary evils arising from ditches and water holes, the pollution of water-supply, excessive growth of under-wood and grass near houses, cremation and burial, precautions against cholera, &c."

Instructions on these matters for popular use have long been advised by the Army Sanitary Commission, and their circulation might be extended with great advantage all over India.

11. The following very important orders on sanitary procedure have been issued by the Lieutenant-Governor of Bengal for the guidance of district officers. After inspection of municipal town, Sanitary Commissioner to forward report to district officer, who will lay it, together with his own recommendations thereon, before the Municipal Committee, who will pass resolutions thereon and forward copies to Sanitary Commissioner who, in his turn, will submit them with a copy of his report to Government. The Civil Medical Officer will report at the end of the year the extent to which the recommendations have been carried out. The Sanitary Commissioner to include this matter in his inspection reports.

A similar procedure is to be followed in non-municipal towns and in villages, and much benefit may be expected from it.

12. As regards actual progress in improvements, it is most satisfactory to learn from the report that "there are signs everywhere of activity in promoting minor improvements in connection with drainage, water-supply, conservancy, &c.", although few large costly sanitary works have been undertaken in municipal districts.

Burdwan is being thoroughly improved. Its conservancy arrangements are far in advance of other towns visited, and its water-supply has been improved.

Beerbhoom has been provided with a small-pox hospital, but it is scarcely satisfactory to learn that only one cesspit has been filled up.

Hengli and Chinsurah have had their tanks improved, and considerable water-supply and drainage works are in hand.

In *Serampore* District many tanks were deepened and new ones excavated. A simple engineering improvement in the Damooda has given the people water and prevented fever. Drainage has been carried out to some extent, and the Municipal Commissioners are fully alive on the subject of cleanliness.

In the *24-Pargannas* cleansing is progressing, but the bustees require improvement. A number of tanks have been deepened and improved.

Meershadabad has had public latrines erected. *Disagepur* has been well cleansed, a latrine put up, and a municipal market erected. *Rajshahye* has received the benefit of a public garden and a school. The town is to be surveyed for drainage. *Rungpur* has a large scheme for district drainage before Government. At *Bojra* the water-supply has been improved.

The conservancy at *Darjeeling* has been improved, and loans have been applied for to increase the water-supply and drainage.

Much attention is being paid to the sanitary improvement of *Dacca*.

Considerable improvements are being carried out at *Chittagong* in better water-supply, closing old burial grounds and providing new ones, active conservancy arrangements and a professional survey for drainage and embanking has been carried out.

Noakhally and Tipperah have been somewhat improved in water-supply and drainage.

Patna has had a swamp converted into a garden, but "the sanitary needs of this large town are very numerous", and little has comparatively been done for them.

Improvements have been initiated at a few other towns. It is satisfactory to learn that great efforts have been made to improve *Poorce* in lodging-house regulations, conservancy, &c. The abominable tank has been cleansed out and protected.

13. Mr. Pilcher states that similar improvements are progressing in many other places. He gives details of inspections carried out by him of 16 municipal towns. Defects were noticed in drainage, water-supply, &c., and brief reports were presented on each. These reports show clearly the general direction in which improvements should be carried out, and when the whole system is in full operation under the orders already referred to, there will apparently be no difficulty in arriving at a proper estimate of the measures required for improving the public health in Bengal.

The inspection details are of more local interest, and must be left to the consideration of the local authorities.

This report, as a whole, is satisfactory. It is evident that sanitary improvement is occupying a considerable share of the attention of the Government, as well as of the municipal and other authorities in Bengal. The work to be done is very great, and all that can be said is that a very hopeful beginning has been made, and that Mr. Pilcher's proceedings and reports have apparently aided in the good work, by far the greatest part of which must, however, be done by the people themselves and by the village authorities, for no Government could undertake and find funds for carrying out all the improvements indicated as necessary in these Bengal reports. The Government itself appears to be moving in the right direction in these important questions.

29th May 1877.

No. 14/30/20

Copy forwarded to the Government of Bengal and to the Military and Public Works Departments for information.

No. 14/321.

Copy forwarded to the other Governments and Administrations, and attention drawn to the desire expressed in para. 2 of the despatch that the measure of circulating rules and suggestions on sanitary matters carried into effect in Bengal should be adopted all over India.

By Order of the Governor General of India in Council,

HOME DEPARTMENT,
SANITARY;
FORT WILLIAM;
The December 1877.

(Signed) F. C. Danke.

Offg. Under Secretary to the Govt. of India.

Order thereon 5 January 1878 No. 22

Communicated to the Sanitary Commissioners

(See Extract)

REI-D. N. M.

Home Dept. Press—No. 49—13-12-77—126

Under Secretary

Revenue Dept. Secret. 5/1
Sanitary Commission

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Post. Public Dept.

Letter 5 }
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No 22.

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Commission on the Report
of the Secretary
in Bengal 27th 1875
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10: Jan 188