COLOMBO MUNICIPALITY.

Administration Report

1906.

Public Health Department.

REPORT BY WM. MARSHALL PHILIP, M.B., D.P.H.,
Medical Officer of Health.

PRINTED BY S. M. JOHAR, MUNICIPAL PRINTER, COLOMBO, CEYLON.
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From the MEDICAL OFFICER OF HEALTH, COLOMBO to the CHAIRMAN, MUNICIPAL COUNCIL, COLOMBO.

No. 184.

PUBLIC HEALTH DEPARTMENT,
Colombo, June 7, 1907.

Annual Report 1906.

SIR,

WITH reference to your Nos. 5 of January 10, 1907; 76 of April 8, 1907, 105B of May 15, 1907, and 110S of May 21, 1907, I have the honour to submit the following Report :—

As this is the first Annual Report which has been submitted from this Department its preparation has been a matter of some difficulty and has been delayed on account of the pressure of other work.

It was my intention, when I took charge of the Public Health Department at the end of 1902, to submit a report each year, dealing with the various points of interest disclosed by the office records, &c., in regard to the health and sanitary condition of the town, and the work done by the Department; but the preparation of such a report being to a large extent dependent upon their being available the services of a trained staff of Inspectors and Clerks, and the store of information which can only be accumulated by such a staff, I was unable to carry out my intention, as I found it necessary to reorganise the work and train the staff, and, *pari passu*, to collect information, all of which was necessarily slow work, and has been much hindered by frequent changes in the personnel of the staff, and it was consequently not until 1906, *i.e.*, after 3 years work, that I felt in a position to satisfactorily deal with these matters in the form of a comprehensive report.

I accordingly, in 1906, set about its preparation, dealing first with the mortality statistics for the eleven preceeding years for purposes of comparison; but, unfortunately, owing to my having to go on leave sooner than I had anticipated, on account of ill-health, I was unable to complete my report.

As however I had collected and tabulated a considerable amount of valuable information, and, as it appeared desirable that this should be placed upon record, I submitted it before going on leave in the form of a preliminary note on the mortality (*vide* 353 of May 31, 1906), my intention being to deal upon my return with the various points of interest disclosed by these statistics, together with an account of what I had observed in regard to the sanitary condition of the town, and the work done by this Department during the time I had been in charge, as disclosed by the records kept during the last four years.

Upon resuming duty therefore at the beginning of this year, I began the preparation of this further report, but while so engaged I received a copy of a voluminous report by the Registrar of the Ceylon Medical College on "The Sanitation of Colombo, and the causes of abnormal incidence of specific diseases in 1906" which had been prepared and submitted to Government during my absence.

As I find upon reference to Doctor Chalmers' report that it is not only to a great extent a summary of the recommendations which have previously been made from time to time and the steps which have been taken, or are still under consideration with a view to improving the health and sanitary condition of the town, but, that it is largely based upon the information contained in the records of my Department, it necessarily follows that it covers practically the same ground as mine must traverse.

Under these circumstances I find myself in a position of some difficulty, for, while I of course agree with much of what he says, there are a number of his remarks, conclusions, and recommendations with which, in view of my experience here, I cannot agree, and, as I presume the Council will wish to have my views on the many points raised, but as his report has not been referred to me for any specified purpose, no instructions having accompanied the copy which I received*, I have considered it better to omit the fuller discussion of many of these points until I have had an opportunity of more carefully considering his remarks than the time now at my disposal permits.

For these and other reasons I have omitted, amongst other things, the important section on Vital Statistics, and the further discussion on the incidence of sickness from such diseases as Enteric Fever, but hope to deal with these later.

* Since received.

A.—SANITATION BRANCH.

I.—NOTIFIABLE INFECTIOUS DISEASES.

The following are the notifiable infectious diseases :—

Cholera, Plague, Small-pox, Acute or Choleraic Diarrhoea, Typhoid or Enteric Fever, Simple Continued Fever of seven days duration or over, Chicken-pox, Measles, Scarlet Fever, and Diphtheria.

There were 1,597 cases of these diseases notified and dealt with by this Department during the year, the details of which are shewn in statements I, II, III and IV ; 114 contacts were sent to the Segregation Camp and maintained there at a cost of Rs. 627·37 for food.

(1) **Small-pox.**—This is a compulsorily removable disease.

(*a*) *Incidence.*—26 cases were notified from the port, and 40 from the town.

The following shews the sources of infection in the town cases :—

Registered No.	Source of Infection.
1	India.
2	Contact with case No. 1.
3 to 21 and 23 to 33 (30 cases)	India a concealed case at Green Path.
22	India.
34	India.
35	Contact with fatal Port case.
36	Not traced— was a Harbour cooly.
37	Not traced—was a Medical student.
38	Not traced—had been visiting in country.
39	Not traced—but infection and onset both outside Colombo.
40	Not traced.

The most noteworthy point about the above was the thirty Green Path cases, Nos. 3 to 21 and 23 to 33.

The primary source of infection in these cases was conclusively traced to a concealed case of fatal confluent Small-pox in a child in whom the infection was contracted in India and developed at Green Path, seven days after arrival in Ceylon. The death of this child was returned by the Registrar as due to debility and convulsions (*vide* Special Reports 183, 261, and 262). 67 contacts were segregated in connection with these cases at a cost of Rs. 376·53 for victualling them. 9 of the contacts developed the disease subsequent to removal to the Segregation Camp. 6 of the cases died giving a case mortality of 20 per cent.

(*b*) *Vaccination.*—*Vide* statement V.

This work is carried on by vaccinators who are under the control of the Civil Medical Department, the Council's action in the matter being confined to payment of the rent of the Vaccine Stations, and the furnishing of the same.

There were in all, as shewn by the statements furnished by the Provincial Surgeon, 14,505 vaccinations performed during the year, of which 9,547 were primary and 4,958 were re-vaccinations.

(2) **Chicken-pox.**—This disease was most prevalent during the first four months of the year.

There were 231 cases in all reported, giving a case rate of 1·33 per 1,000 living. There were no deaths from this disease recorded.

(3) **Measles.**—This disease was most prevalent during January, but cases were fairly numerous during the first half of the year. There were 354 cases reported, giving a case rate of 2·04 per 1,000. There were four deaths ascribed to this cause, representing a case mortality of 1·13 per cent., but this cannot be accepted as correct, since it is highly probable that a number of deaths, primarily due to measles, and which should therefore have been returned under that heading, were recorded as due to such causes as broncho-pneumonia, &c.

(4) **Continued fever of 7 days duration and over.**—This group of diseases was first made notifiable by Regulation 22 of December 18, 1903, with a view to enable this Department to adopt preventive measures, as many cases of Enteric were believed to pass under this unspecific heading, and so to escape preventive measures being taken.

There can be little doubt that many of these cases of so called 'Simple Continued Fever' are really modified cases of Enteric, since, in tracing out the source of infection of typical cases of Enteric, it is not uncommon to find that they originate with the occurence of a case of so called 'Simple Continued Fever.'

Only 42 cases were reported during the year, giving an apparent case rate of 0·24 per 1,000 living, but no fewer than 144 deaths were recorded as due to this cause, shewing how very defective the notification of cases is.

(5) **Cholera.**—This is a compulsorily removable disease.

Only one case was reported from the town, *viz.*,—from Maradana Mosque premises. No history could be got of this case as it proved fatal soon after admission to Hospital. One case was reported from Welikade Jail and two from the Port. (See remarks under Acute Diarrhoea.) Two deaths were recorded as due to this disease.

(6) **Acute Diarrhœa.**—4 cases were reported from the town and 8 from the Prisons. The death returns do not distinguish between 'Acute Diarrhœa' and Simple 'Diarrhœa.'

The subjoined statement shews the incidence of Cholera and Acute Diarrhœa as recorded during the year, and is of interest in view of the outbreak of Cholera which commenced on the 2nd January this year (1907).

Case No.	Date.	Acute Diarrhoea.	Case No.	Cholera.
	Jan. 17	.....	(1)	... Port
(1) ...	May 4	... 39, Ferguson's road, recovered in 1½ days.		
(2) ...	June 9	... 6, Flower road. Burgher boy 7 years old.		
	July 16	.....	(2)	... Port.
	Oct. 10	.....	(3)	... Maradana Mosque.
(3) ...	Nov. 7	... Welikade Jail		
(4) ...	,, 8	... do.		
(5) ...	,, 21	... do.		
(6) ...	,, 21	... do.		
(7) ...	,, 24	... do.		
(8) ...	,, 27	... 5, 5th Cross street, fatal on 2nd day		
	,, 28	.....	(4)	... Welikade Jail.
(9) ...	Dec. 8	... Mutwal Prison.		
(10) ...	,, 10	... Welikade Jail.		
(11) ...	,, 10	... do.		
(12) ...	,, 16	... 180, Madampitiya road, fatal.		

(7) **Scarlet fever.**—No cases were reported from the town ; 1 case was reported from the Port. The conditions here would appear to be unfavourable to the spread of this disease.

(8) **Diphtheria.**—Ten cases, widely scattered throughout the town, were reported from the addresses noted below. One death was reported as due to this cause.

I think it is probable that this disease, while it seldom assumes an epidemic form here, is more common than the returns shew. It is known in England and elsewhere, where the matter has been investigated, that the throats of apparently perfectly healthy persons may contain the diphtheria bacillus ("*Bacilli Carriers*"). It is possible therefore that there may be an untraced connection between some of the cases notified in the shape of undetected cases and "*Bacilli Carriers.*"

The disease cannot however be considered to be one of our serious diseases, otherwise the returns should shew it more frequently.

Distribution of Cases.

February	23rd	...	...	...	49, Peachaud's lane.
March	7th	...	...	...	do
May	6th	...	...	...	41, Forbes road.
May	15th	...	...	...	33, Hultsdorf street.
May	19th	...	...	...	7, Turret road.
June	6th	...	...	...	90, 1st Division Maradana.
July	18th	...	...	...	21, San Sebastian street.
August	1st	...	...	...	1, Van Rooyan street.
October	4th	...	...	...	33, New Chetty street.
October	4th	...	...	...	91, 3rd Division Maradana.

(9) **Enteric Fever.**—There has been a progressive and rapid increase in the number of cases of Enteric reported during the last four years as the following shews :—

Year.	Cases reported.	Case rate per 1,000 living.	Deaths.	(Apparent) per cent. case mortality.
1903 ...	262	... 1·48 ...	98	... 37·4
1904 ...	303	... 1·8 ...	92	... 30·3
1905 ...	451	... 2·6 ...	136	... 30·1
1906 ...	903	... 5·2 ...	272	... 30·1

The number of deaths, as well as the number of cases reported during 1906, being double what they were in 1905.

With regard to the great increase reported during the last four years, I have already shewn in my "note on the mortality 1895–1905" that the increase during the three years 1903–1905, for which we have records of cases reported, was probably largely due to improved notification, and to some extent also to improved diagnosis, and not, as the figures at first sight appeared to indicate, to an actual increase in the prevalence of Enteric. How far the same explanation applies to the further great increase in 1906 I am unable to say without a detailed consideration of the mortality returns. This I intend doing later, but, as 1906 was an unusually unhealthy year, and as the (apparent) percentage case mortality is the same as in 1905, it is more than probable that there was a genuine increase in the prevalence of Enteric. Every additional year's accumulation of information in regard to this disease, as represented by our registers and Office files, will help to throw light upon the true state of affairs.

The distribution of the cases reported is shown in the attached statements I to IV.

A very careful analysis of the death returns in conjunction with the facts disclosed by the returns of cases, must be made before a true estimate of their value for purposes of comparison with previous years can be made. I propose to deal with this matter in detail in a further note on the mortality.

I may however point out here that 319 of the 903 cases reported, *i.e.*, over one-third of the total, were reported either from outside the town, or their addresses were unknown and could not be traced, while a considerable number of these reported from the town were found upon enquiry to have acquired the infection outside the town. This is a matter of great importance and will be dealt with more fully later. See also remarks under paragraphs 14 and 16.

(10) **Rabies.**—*Vide* statement XVI.

(*a*) *Incidence.*—Three cases of rabies in dogs were reported during the year, one being found in Slave Island, one in the Fort, and another in Cinnamon Gardens.

(*b*) *Prevention.*

1. *Dog seizing.*—4,370 stray dogs were seized, of which 1,493 were redeemed, 2,730 were destroyed, 57 died in the pound, 8 were sold, and 16 were sent to the Medical College, leaving a balance in the pound on December 31 of 66.

Only well bred dogs are now sold, all others are destroyed at the end of the exposure period prescribed by the by-laws.

The seizure of stray dogs is not on a satisfactory footing. The pariah nuisance is in some parts of the town intolerable, and I have received many complaints, particularly from residents in the Cinnamon Gardens.

The owners of these dogs instead of locking them up at night, or at least chaining them in the verandah where they could quite as effectively serve the purpose for which they are kept, *viz.*, as house guards, turn them loose before retiring to bed, with the result that these animal meet in the roads and compounds and howl and fight, rendering night hideous to a light sleeper, and there are many such in this neurasthenia producing climate. Section 3 of Ordinance No. 7 of 1893, defines a 'stray' dog as "any dog wandering at large and not being under the control or charge of any person" while section 10 of Ordinance No. 25 of 1901 requires their seizure; hitherto seizure has only been carried on during the day, but it is, as I have said, at night that the real nuisance from these animals commences, and it is at night therefore that the work of seizure should be most rigorously carried on, as I have suggested in my No. 73 of January 27, 1906.

Another point is that we have only two seizers, which is quite inadequate, and, as suggested by the Superintendent of Police, and recommended in my No. 112 of February 12, 1906, their number should be increased.

A further point is that the seizers complain that they are liable to be assaulted at night by the irate owners of these animals, and have, as a matter of fact, declined to work at night unless afforded Police protection. A constable must therefore be detailed to accompany each seizer at night if we are to make any headway in this matter.

2. The old *carts* used by the seizers are shortly to be replaced by a new type * with separate compartments for diseased and healthy dogs respectively.

The new *dog pound* which was completed in October, 1905, is a great improvement on the old insanitary pound, as diseased dogs can now be kept separate from healthy ones, instead of being all penned up in one small evil smelling den as formerly.

3. *Destruction* of unclaimed worthless dogs is carried out in the lethal chamber attached to the pound, the agent employed being coal gas.

(11) **Plague.**—As hitherto, the town has been fortunate in having no case of Plague; preventive measures have however been carried out as usual.

56,406 rats were captured and destroyed as against 49,286 in 1905. Destruction is carried out in the lethal chamber, and the bodies are sent to Kanatte for incineration, after having their tails cut off. A payment of five cents per rat is made. The Plague camp is at present utilised for segregating Small-pox, Cholera, and Diphtheria contacts.

(12) **Notification of Infectious Diseases.**—Prior to 1903 both the Medical Practitioners and this Department were handicapped owing (1) to there being no recognised form for notification (backs of envelopes and other scraps of paper which were liable to be mislaid were used) and (2) owing to the fact that practitioners were not in any way recompensed for the issuing of the certificate of notification.

A form was accordingly drafted and issued free of charge, and later, the Council, on May 13, 1904, agreed to pay a notification fee of Rs. 1·50 for each case reported. The result, as was anticipated, has been to greatly increase the number of cases notified, and has so enabled this Department to adopt preventive measures in a large number of cases which would otherwise been a source of danger to the public health.

(13) **Disinfection.**—This branch of the work has been completely reorganized. Instead of the old and useless method of sulphur fumigation, which was carried out by the Inspectors with the aid of untrained coolies, whom each Inspector employed as he required, there is now a gang of 6 trained Municipal coolies, who live in the Municipal lines adjacent to the ambulance shed. They are supplied with uniforms, spraying pumps, measure glasses, graduated buckets, cyllin, &c. They are supervised by the Ward Inspectors who have all been trained in this work.

The antiquated stove, which was the only disinfector possessed by the Council, has been replaced by an Equifex Steam Disinfector, which is housed in a disinfecting station where all the modern requirements in the way of cement flooring, glazed tiled walls, &c., have been attended to. This was completed and handed over ready for use on September 24, 1906.

Specially designed *carts*, for the conveyance of articles to and from the disinfector, are under construction.

917 houses were disinfected during the year.

(14) **Insolation.**—Section 27, part 1, of the Plague Regulations authorises the compulsory removal to hospital only in the case of the specified dangerous infectious diseases, *viz.*, Plague, Cholera, and Small-pox.

* Since supplied.

We have no power to enforce the removal of Enteric patients, no matter how insufficient the means for insolation in the home, and the consequent danger of infecting others, may be. In this connection I may mention that, as the result of careful enquiry into all the cases of Enteric which have been reported during the last four years, it has been shewn that in the majority of cases amongst the poorer classes isolation in the home is very unsatisfactory, and I formed the opinion that the infection in a large number of these cases is acquired by direct infection from case to case, and, as Enteric is the most prevalent, and difficult to control, of the notifiable diseases, it is essential that it should be included in the list of compulsorily removable diseases specified in the Plague Regulations.

(15) **Conveyance of Patients to Hospital.**—The carts available for this purpose are very crude and ill-adapted either for the conveyance of a sick person or on the subsequent disinfection of the cart. This is a matter which is under consideration and will be dealt with in a separate report.

(16) **Proposed Municipal Infectious Diseases Hospital.**—If Enteric were made one of the compulsorily removable Infectious Diseases, much more Hospital accommodation than is at present available would be required. This has been foreseen and provided for in the recommendations in regard to the proposed Municipal Infectious Diseases Hospital.

The question of the erection of this hospital has been under consideration for some two years, and I selected a site at Kolonnawa, which was approved by the Principal Civil Medical Officer after inspection.

Further progress was however for some reason delayed at the instance of Government, in connection with, I understand, the question of the site.

II.—FOOD AND MARKETS.

(1) **Food Inspection.**—The control over the food supply is most unsatisfactory. The inspection of food should, as I have repeatedly urged, be done by special trained food Inspectors aided by the Sanitary Inspectors and Market-keepers.

Statement XV. shews the quantities of food stuffs seized as unfit for consumption.

(2) **Fish.**—The article most commonly found in an unwholesome condition is fish, particularly dried and salted fish. Much of the cured fish sold has a most repulsive appearance, but it has been eaten for centuries, and is a very popular article of diet amongst the native races. An effort is being made to improve the quality, but here again the services of trained food Inspectors are necessary.

The importation of fish manure has undoubtedly added to the danger of bad fish finding its way into the market. If it could be made compulsory to treat all fish imported as manure with some offensively smelling liquid which, while rendering its sale as food out of the question, would not at the same time interfere with its manurial value, this difficulty would be solved.

There should in my opinion be separate wharves and sheds for landing and storing this and other offensive substances.

(3) **Meat.**—*The quality of the* meat sold in Colombo is for the most part exceedingly poor. An effort is being made to improve it by rejecting old and wasted animals produced for slaughter. This was first commenced on August 4, 1905, and 585 animals were rejected last year on this account. I have, however, had to impress upon the Superintendent of the Slaughter-house the necessity for more rigidly enforcing this measure, as I found that a very sorry lot of animals were still being produced for slaughter, the fact being, that the large majority of the animals brought up are old done brutes, of no value for any other purpose; the difficulty is not so much to pick out the unfit animals from amongst the good ones as to find any good ones at all. I have seen days when there was not an animal in the sheds really fit for food purposes.

An attempt was made in 1905 to differentiate between buffalo and cattle meat in their sale in the Municipal markets, by setting aside one stall and restricting it for the sale of buffalo meat only, and labelling the stall to that effect, but as the sale of buffalo meat was not at the same time prohibited in the other stalls (there being no legal power to enforce this) the experiment proved a failure. There is, I understand, more profit to the stall-holder in the sale of buffalo than of cattle meat, and there can be no question that a large quantity of buffalo meat is palmed off as cattle meat upon householders, hotels, and ships, although the price for cattle meat is paid. I have had buffalo meat placed before me in one of the principal hotels in the town, and was able to recognise it as such by the presence of the parasite apparently peculiar to the buffalo and known as *Sarcocystis tenella bubali*. I have also had an instance brought to my notice where a contractor supplied one of His Majesty's ships with buffalo meat, although the contract specified prime ox, and any breach of this clause was punishable by a very heavy penalty.

This question of the differentiation between buffalo and cattle meat in the market is one requiring legislation, not on the grounds that buffalo meat is unwholesome, because it is not, but on the grounds that the purchaser is being defrauded.

(4) **Analytical work.**—*Vide* statements VI. and VII.

This is done by the City Analyst and the Government Bacteriologist.

587 mixed samples were sent to the Analyst as shewn in statement VI., while the Bacteriologist examined the town water once a quarter.

(*a*) **Town water.**—156 samples examined by the Analyst were passed as fit for consumption; no pathogenic bacteria were found by the Bacteriologist.

While this is satisfactory, so far as it goes, I would invite attention to the large amount of suspended matters frequently present and the tendency towards an increase in the number of non-pathogenic organisms, and would suggest, as I have previously pointed out, the desirability of having

the Bacteriological examination done oftener. The question of filtration at Labugama has several times arisen but cannot be properly considered until the negotiations now in progress in regard to the handing over of the Waterworks to the Council have been completed.

I would also here add the desirability of having food stuffs examined bacteriologically, which cannot be done without prohibitive expenditure under the present arrangement. It is desirable that the services of a Bacteriologist should be available without the Council's having to pay a fee for each sample as at present.

(*b*) **Wells.**—Of the 357 samples of well water analysed by the City Analyst, 271 were condemned, while 218 wells were closed.

In this connection I would note that the number of samples does not correspond to the number of wells, as in every case of doubt more than one, and sometimes several samples are taken from the same well. The results sufficiently indicate the general polluted and dangerous condition of the wells.

(*c*) **Aerated waters.**—11 samples were taken, of which 6 were condemned on account of traces of the heavy metals—lead and copper. Upon enquiry in 1905 I found that this was due to the use of lead and copper pipes in the bottling apparatus, and that block tin piping, which is the most suitable for this purpose, was not available in Ceylon, but, at the instance of this Department a quantity has since been imported and substituted for the lead and copper pipes, with the result that wherever adopted the waters have become free from those poisonous metals.

Nothing but Labugama water is allowed in ærated water factories, and no wells are permitted on the premises. A number of the factories were found in 1903 to be using polluted well water, but the wells have been closed long ago.

Some difficulty was at first experienced in inducing some of the manufacturers to replace their fixed, out of date, filters by filters which could readily be cleansed. All the large factories have however now conformed to the rule of using removable charcoal and of boiling it once a week, on a fixed day, and at a fixed hour, so that the officers of this Department can, by paying surprise visits, ascertain whether this is being done. It is to the credit of the majority of the manufacturers that they have shewn their willingness, and even eagerness, to comply with the requests of this Department. Chamberlain-Pasteur filters, which are the soundest form of filters, were suggested some years ago, but the manufacturers objected to their use on the grounds that the filtration was too slow with the pressure in the Colombo mains, and the cost of a large number of candles to facilitate it was too expensive, and as we have no power to enforce the use of any particular kind of filter, or, indeed of any filter at all, we had to be content with the undoubted improvement of the regular boiling of the charcoal.

There is, in my opinion, little to be apprehended from the use of ærated waters in Colombo, at all events as supplied by the large factories. Some of the small factories however require considerable improvement. In this connection I would note that it is unfortunate that the by-laws with regard to registration of factories deal only with newly established factories, as there are one or two old established small factories which I should like to see either closed or removed to more commodious buildings, but which we cannot compel to do so, short of their being downright insanitary, as a recent instance has shewn.

(*d*) **Milk.**—The important work of standardising the milk in Colombo was completed and the City Analyst's report submitted during the year, after two year's work and the examination of over 1,000 samples. Much valuable information has thus been acquired and placed on record in the City Analyst's report referred to.

Very little was done in the way of sampling milk during 1906, as the standard proposed by the City Analyst has not yet been fixed by law. Of the 11 samples taken, 3 were condemned; but I may mention in passing that a considerable number of samples taken this year (1907) from vendors in the streets shew, as was anticipated, the most abominable adulteration of milk. The fixing of the standard by law should be done without delay.

The problem of a pure milk supply is one which is surrounded by difficulties—legal and otherwise—which only those who have to deal practically with the matter can properly appreciate. It is certain that our powers of control must be increased, and in the meantime, as I have so often pointed out, the householders must protect themselves by boiling all their milk before use, and by patronising only registered dairymen who send out their milk in locked cans or sealed bottles, preferable the latter. The itinerant milk vendor should be shunned like the plague.

(*e*) **Flour.**—52 samples were taken and all were passed. No case of adulteration of flour has been detected so far. Sometimes it gets somewhat damp and musty and taints the bread, but that is the only defect which has been so far detected. The quality of the bread is poor, this is probably due to the bakers substituting other substances for yeast, and to lack of skill in the manipulation. *Vide* also V (*b*),

(*f*) **Ice.**—No samples of ice were analysed, all the ice sold in Colombo being made from Labugama water which, as I have shewn, is regularly examined.

The chief danger in ice is the method of its delivery. It generally arrives at the bungalow in a cart from which it is conveyed, per the unwashed hand of a cooly, covered with sawdust, which may not be of the cleanest. Common sense should suggest to the householder the necessity for washing the ice before introducing it into food or beverages.

(5) Registered Trades.

(*a*) **Dairies.**—*Vide* statement VIII.

12 dairies were registered during the year, while 13 were discontinued, leaving a total at the end of the year of 42. The system of registering dairies and dairymen has been improved. No dairy is now registered under more than one number (as used to be done), separate registers being kept for dairymen and dairy premises respectively.

The condition of dairies has considerably improved during the last few years in the matter of having a supply of town water free of charge, in the closure of wells, properly constructing the

sheds, and providing for lighting, ventilation, and drainage, the provision of properly constructed milk rooms, the cleansing of utensils, the scavenging of the premises, the use of covered and sealed vessels for distribution, &c., but there is still much to be effected. It is unfortunate that the Ordinance does not require the annual registration of Dairies. This would increase our control, and I would suggest that this alteration be effected.

The great difficulty in dealing with dairies is, as I have previously pointed out, the single cow man. He cannot afford the expenditure necessary to put his dairy into proper order, and I have been gradually closing these small dairies.

I issued a memorandum on January 10, 1906, a copy of which is sent to every applicant for registration, in which I have pointed out that it is useless any one thinking of starting a dairy unless he has sufficient means to do it properly, and to comply with the Public Health Department's regulations. I also laid down in detail the points which must be attended to in starting a dairy. Copies of this memo. were issued not only to all applicants for registration, but also to all existing dairymen within the town, while a large number were given to the outside dairies Inspector for distribution amongst the dairymen in the extra urban districts.

The question of the sanitary condition and control over the **dairies outside the gravets** is a most serious one, upon which I have already fully reported, *vide* my 95 of March 21, 1907.

(*b*) **Bakeries.**—*Vide* statement IX.

56 bakeries were registered during the year.

The passing of the new by-laws has made the licensing of bakeries compulsory, and has thereby greatly increased our control over them. Great improvement has taken place in their condition, they used formerly to be amongst the most filthy and unwholesomely conducted of all the food trades. *Vide* also remarks under Flour II. (4) (*e*).

(*c*) **Laundries.**—*Vide* statement X.

There are no laundries in Colombo in the sense understood by the term in England, there being no steam laundries. Every dhoby's house is a laundry here.

There were 365 of these on the register at the end of the year. These are as closely supervised as their large number and the time at the disposal of the Inspectors will permit, but the conditions under which most of them carry on their work leave much to be desired, the chief faults being the use of impure water for washing, and the lack of sufficient accommodation in their premises where the clothes are dressed.

The majority of their washing places are very insanitary, *e.g.*, the Beira Lake, the water of which, in addition to being highly impure apart from the filth derived from the washing of dirty clothes, is further polluted by this operation, and as there is little or no current at the washing places, batch after batch of dirty, and no doubt frequently specifically contaminated clothes, collected from all sorts of sources, are washed in the same water, and returned to the confiding owner as clean.

Every registered laundryman, after his premises have been inspected and passed, is supplied with a certificate of registration signed by the Medical Officer of Health, stating the registration number, the name and address, and date of registration of the dhoby.

The granting of this certificate does not presuppose that the washing place has been approved of, because very few of the existing laundries could be registered under such a condition. This point has been considered in the proposal to establish Municipal washing tanks.

I propose to issue presently a new form of certificate stating, in addition to the particulars mentioned above, the place where the dhoby washes, and also grouping them into 1st and 2nd class; the first class to be on coloured paper, and to include only such as wash in town water or in well water which has been examined and passed by the City Analyst, and whose laundry premises where the clothes are dressed are in good order.

The co-operation of householders is however essential to the success of this scheme. If they will insist upon the dhoby producing the certificate of registration before employing him they need no longer be exposed to the risks they now run from having their clothes washed in foul places such as the Beira Lake. By these means I believe the dhobies could be made to realise the necessity, in their own interests as well as in the interests of their customers, for carrying on their trade under sanitary conditions.

It is unfortunate for householders, and for their clothes, that European methods of laundry work cannot apparently be made a financial success here, I believe it has been tried more than once and failed. It is possible that an officially conducted steam laundry might prove a success, and might lead the way to this method being ultimately more or less generaly adopted. The best place to start such an attempt would be the General Hospital or the proposed Municipal Infectious Diseases Hospital.

There is much to be said for such a scheme on sanitary grounds alone.

(*d*) **Eating Houses.**—*Vide* statement XI.

Registration of these has been made compulsory for the first time by the passing of the new by-laws. 220 were registered during the year. Only those where cooked food is sold come within the meaning of the by-law. Their condition has considerably improved.

(*e*) **Barbers and Hairdressers Shops.**—The unsatisfactory condition of these and the question of requiring them to comply with sanitary regulations prior to registration has been under consideration for sometime, and the regulations which I proposed have, I believe, recently been referred to the Council's Lawyers.

(*f*) **Public Markets.**—The condition of these is for the most part so bad as to be a positive disgrace to the town, and I would urge that no time should be lost in taking the matter of their improvement in hand. I would invite attention to my report No. 779 of June 13, 1906, detailing the requirements for each market, and to my No. 194 of March 15, 1906, suggesting the erection of a large central market, and indicating a convenient site.

(*g*) **Private Stalls.**—If our drainage system were in order, and the streets paved, so that they could be flushed and cleansed, the existence of these stalls practically on the roadside would not so much matter; but at present the meat and fish are exposed under most insanitary conditions.

The number of these private stalls should, under the existing circumstances, be limited as much as possible; but there is little object in doing so until our Municipal markets are put in a more sanitary condition.

(*h*) **Offensive and Dangerous Trades.**—A list of licenses issued for the year is given in statement XIII.

1. **Tanneries.**—There are no tanneries now in Colombo the last license having been cancelled on December 31, 1906, but there are a number of places where *raw hides* from inland are received and salted preparatory to export, or for sale to the tanneries outside limits, these hides are only stored for a day or so prior to export. The question of removing these outside the town or at least to less crowded quarters is under consideration.

2. **Dyeing Houses.**—The process of *dyeing* is carried on largely in Silversmith street. I had the dyes analysed by the City Analyst about three years ago and they were shewn to be harmless. It is an inoffensive process as usually conducted.

3. **Timber Yards and Firewood Stores.**—These are sometimes the source of a disagreeable smell like that of a tannery, the bark of certain kinds of wood being responsible for this. Registration is required chiefly on account of the danger from fire.

4. **Soap Factories.**—Only three of these were licensed during the year. They are at times associated with an offensive smell, but, when properly conducted, need not be a nuisance.

I have found them breeding enormous numbers of mosquitoes in tanks where water had been stored for soucing. These tanks I found, after enquiry into the process, were unnecessary, and I gave instructions for their abolition.

5. **Cotton and Straw Stores.**—These are dangerous on account of fire unless due precautions are taken, but they are not offensive.

6. **Manure Works.**—These are an undoubted nuisance within the town, and I have been endeavouring to have them all removed beyond limits, but time must be allowed.

7. **Slaughter-houses.**—*Vide* statement XIV.

There are no *private slaughter-houses*, but a good deal of illicit slaughter of sheep, goats, and pigs undoubtedly goes on. This is difficult to detect. A number of plain clothes detectives would be necessary to effectively deal with this. I think at least one such should be attached to this Department for this and other work, *e.g.*, sampling of milk, detection of illicit sale of poisons, &c.

Private slaughter is authorised under certain conditions during the period of the Hadji festival. This is open to the objection that it cannot be properly supervised if done on a large scale, and there is every indication of an increasing tendency towards this, owing either to the more prosperous condition of the Mohammedan community, or to the fact that the more thorough inspection of recent years (*vide* statement XIX (12) has rendered unauthorised slaughter more difficult. The latter is, in my opinion, the chief reason.

This issue of licenses for private slaughter should be discouraged.

Municipal Slaughter-house.—Vide statement XIV.

There were two such at the beginning of the year, *viz.*, a small sheep and goat slaughter-house at Madampitiya and a large general one at Demetagoda.

The Madampitiya one was abolished on August 1, 1906, as it was not considered necessary in view of the extension of the Demetagoda slaughter-house.

Considerable improvements are urgently required at the Demetagoda slaughter-house, *viz.* the accommodation is insufficient; the method of slaughter is, as pointed out by the Chairman, barbarous; the means for disposal of waste both liquid and solid are defective; the appliances for hoisting carcases are crude and insanitary; the latrines are defective, and too near the slaughter sheds; and the neighbouring land is constantly abused by passers by.

These questions have all been under consideration for some considerable period.

The management of the slaughter-house is very satisfactorily conducted by the Superintendent, Mr. Ebert.

25,108 cattle (including buffaloes) 64,280 sheep and goats, and 2,286 pigs were slaughtered during the year.

56 carcases were condemned, chiefly for sarcosporidiosis, 111 livers, &c., were condemned, chiefly for cysts, flukes, &c. 631 animals were rejected as unfit for slaughter on account of their being too old and wasted, or suffering from disease.

III.—CEMETERIES.

The manner in which the General Cemetery has been, and still is, kept up and administered is so unsatisfactory that I was compelled to bring the matter to the notice of the Chairman, and a Special Committee of enquiry was appointed but has not yet met I believe. It is therefore unnecessary for me to say further on the matter here.

IV.—GENERAL SANITARY MEASURES.

(1) **Buildings.**—The sanitary condition of the town is largely dependent upon the facilities for removal of waste, and the efficiency with which these measures are carried out by scavenging, conservancy, and drainage.

The greatest bar to the effective carrying out of these works is, as I pointed out in my report for the 4th quarter of 1903, the almost hopeless manner in which the land has been covered with houses, no regard having been paid to the sanitary requirements in the matter of light, ventilation, drainage, and access for scavenging purposes. The houses of the poorer classes, more particularly in the central parts of the town, are crowded together in a way which is scarcely conceivable, many of them being imperfectly lighted and ventilated, sometimes not at all, while drainage scarcely exists. All this, as is well known, is the result of lack of legal control over the erection of buildings. In my quarterly report referred to, I remarked " This evil of every small landowner running up a building on his few feet of land, to the detriment of all the surrounding houses, is going on to-day as much as ever." The same remark applies now, 3 years later, with even greater force.

The sanitary condition of the town is getting worse and worse by reason of this indiscriminate building, and, as I remarked in the report referred to, " There is now no possible way in which many of these areas can be made sanitary except by pulling a lot of the houses down, and driving streets through so as to open up the districts and render access easy."

So much has been said in the past on this matter that it seems scarcely necessary to repeat that what is required is more control in the shape of building by-laws, coupled with some definite system of laying out streets and lanes and constructing houses before building is allowed.

This question of control over, and betterment of, buildings is perhaps the most important, far reaching, and difficult of the many problems which the Council of every town built in pre-sanitary days has sooner or later to face.

(2) **The Removal of Waste.**—This is generally understood to include public and private scavenging, night-soil conservancy, and drainage.

(*a*) Private Scavenging.

This is the duty of the householders, and much of the work of the Sanitary Inspectors consists as will be seen by a reference to statements XIX. (*a*) and XX. of endeavouring to compel the householder by advice, warning, and prosecution, to discharge his obligation to himself and the public in this respect, and I would here note that, as shewn by statement XIX (2) the number of inspections paid by the Inspectors to private premises has increased from 13,368 in 1903 to 98,886 in 1906, which I think is highly satisfactory. This increase is attributable to improved systems in the methods of work.

Difficulty has always been experienced, in the absence of a working gang attached to the Department, in getting insanitary premises quickly cleaned up and limewashed, and so long as there was no unusual outbreak of disease the only method at our disposal was the slow one of compelling the responsible parties, by repeated warnings and prosecutions, to take the necessary steps.

Towards the middle of the year, however, the mortality became so abnormally high, that more rapid methods of dealing with insanitary premises became necessary and the Chairman proposed the formation of a cleansing gang to work directly under this Department: one Inspector, 3 Overseers, 2 Masons, and 18 Coolies were accordingly appointed, and started work on July 26, 1906. By October practically the whole of the most insanitary parts of the town had been gone over and cleansed. and the gang was then reduced to 1 Overseer, 1 Mason, and 8 Coolies, which is the present staff.

The expenses were at first defrayed out of a special vote but are now recovered from the owners in the Municipal Court, unless paid up voluntarily on being served with the bill of costs.

The effect of this work has been most salutary, for, not only is it now possible to get insanitary premises quickly cleaned up, but I find that the mere presence of the Municipal coolies working in a particular locality, causes a fever of cleanliness amongst the occupants of the adjoining premises, and although the mortality has of late returned to the normal, I would strongly urge the continuance of this most useful (and self supporting) branch of the Department. The scavenging of backyards and compounds is still exceedingly defective, and will be so until the people have learned the importance from a health point of view of keeping the surroundings of their dwellings clean. *Vide* remarks on page 20. *See* Filth diseases.

(*b*) Public Scavenging.

1. Removal of Solid Waste.

(*a*) *System of Scavenging.*—A short account of the history of the scavenging during the last few years will explain the present position in regard to this matter.

At the time I took charge of the Public Health Department it was being done by contract. I found that although the specification provided for very thorough cleansing of the town, including the lake, it was being very much neglected, few if any of the requirements of the specification being properly complied with. After a careful investigation I came to the conclusion that the contractor had tendered at such a low rate that he could not possibly fulfil his obligations, and that, realising this, he had made up his mind that his work, and not his pocket, should suffer. I further came to the conclusion that in preparing his tender he could never have really expected to be compelled to comply properly with his specification, and had apparently relied upon laxity of supervision to enable him to shirk his work.

When he found that he had misjudged in this respect, and was fined for neglects, he inundated the office with excuses for the neglect, and protests against the fines, while every conceivable obstacle was placed in the way of any measure intended as a check upon his work.

As little else than a waste of Council's funds could result from an arrangement of this sort, I brought the matter to the notice of the Chairman and urged the necessity for adopting Departmental scavenging, and, as the Municipal Engineer was obviously in a better position than I

to undertake a work of this nature, involving as it did the organisation and control of a large labour force, I suggested that the scavenging should be placed under him, instead of being kept under the Public Health Department. The Municipal Engineer agreed to this, and he took it over on January 1, 1905.

As a result, a definite system is being gradually evolved and great improvement has already taken place in the removal of rubbish, one of the most important of sanitary measures. This as was to be expected, has not been accomplished without a considerable increase in the matter of expenditure, as compared with the old unsatisfactory contract scavenging, when, as I have said, there was neither enough voted for the proper performance of the work, nor did it appear that the little that was voted was satisfactorily utilised.

(*b*) *Dust.*—This is, at certain seasons, one of the worst nuisances in Colombo. In addi tion to the discomfort which it entails, and its recognised powers of conveying the contagia of diseases such as cholera, enteric, phthisis, tetanus, &c., certain kinds of it are liable, when inhaled for a length of time, to set up, by mechanical irritation, inflammatory conditions in the lungs which are favourable to the development of phthisis and respiratory diseases generally..

Now phthisis is, according to the death returns, exceedingly common in Colombo, as is shewn in statement IV. of my report No. 353 of May 31, 1906, on the mortality in Colombo. This statement shews that not only did phthisis head the list of principal causes of deaths in Colombo in 1905, but that what is even more serious, it has been steadily on the increase during the last 11 years, the death-rate from this cause having gradually risen from 2·26 per 1,000 in 1895 when it stood fourth in the list to 3·65 per 1,000 in 1905 when it stood first, being in this respect in strong contrast to the phthisis mortality in England which in the 57 years from 1838 to 1894 dropped from 3·8 to 1·4 per 1,000.

Not only has phthisis increased, but respiratory diseases (other than phthisis) as represented by the various forms of bronchitis and pneumonia have also increased from a minimum of 2·95 in 1896 to 4·63 in 1905.

In view of these figures it is interesting to enquire into the character of the dust, since it is known that "sharp angular mineral particles are more injurious than other kinds of dust," hence the exceedingly high phthisis mortality amongst potters, earthenware manufactures, Cornish miners, &c. If a sample of fine dust, such for example as collects upon one's papers in the office be examined under the microscope, it will be found to consist for the most part of minute particles of rock crystal, many of which are sharply angular and pointed and decidedly dangerous looking. This is at once explained if the formation of the roads is considered. The metal which is used on the main thoroughfares and many of the minor streets is a gneiss, and the dust is simply pulverised gneiss mixed of course with varying quantities of contamination in the shape of animal and vegetable debris. Such dust is therefore, if habitually inhaled, distinctly dangerous, quite apart from the question of its power of conveying contagia.

I do not mean it to be inferred from the above that I consider this is the only or even the chief cause of the heavy phthisis mortality in Colombo—this is not a discussion on phthisis, but on dust; but it shows that the dust, which is so often prevalent, is a possibly potent power for evil, and every means should therefore be adopted to reduce it to a minimum. Sweeping, watering, and scraping will no doubt help in this respect, but those are, at the best, only palliative measures, they cannot effect a radical cure, or anything like a radical cure, the only measure which will do this short of the discovery of some satisfactory road spray appears to me to be paving of the streets.

I therefore suggest that the question of paving the streets should be considered, with regard at all events to the main thoroughfares.

In addition to improving the facilities for cleansing and improving the sanitary condition generally, besides other advantages which need not be considered here, this would no doubt greatly improve the appearance of the streets.

(*e*) *Disposal of Rubbish.*—This is at present effected by tipping in authorised (and sometimes by private parties in unauthorised) dumping grounds, which in the absence of immediate and efficient covering, are most insanitary.

The question of the erection of destructors has been under consideration for some time, and as it is in the hands of the Municipal Engineer need not be further referred to here, except to state that I think there should be as little delay as possible in carrying it out, as the need for a more sanitary method of disposing of the highly contaminated refuse of the town is becoming yearly more pressing.

2. **Removal of Liquid Waste.**

(*a*) *Private Drainage.*—The manner in which properties have been developed as described in section IV, (1) has rendered the drainage of large numbers of premises, otherwise than by underground sewers, practically impossible. When a landowner builds a house, the question of the necessity for drainage does not apparently, as a rule, enter into his calculations. A large number of surface drains have been built on private premises at the instance of this Department, and many premises which previously discharged all their house waste into the soil at their doors have thus been much improved; but the great difficulty is of course the lack of public sewers for the ultimate reception and disposal of the sewage from these private drains.

The Mansergh Scheme of sewerage now under construction has been designed with a view to solving this problem.

(*b*) *Public Drainage.*—The Mansergh Scheme has as just stated been designed to meet this need. I would merely invite attention to the Report by the Municipal Engineer and myself No. R/83 of December 2, 1905, pointing out the necessity for extending the Mansergh Scheme to all parts of the town, and indicating the order in which the extension should proceed.

(3) **Municipal Midwives.**—This branch of the work was started as the result of enquiries into the causes of infant mortality, as detailed in my report for the 4th quarter, 1903.

Six midwives were appointed and commenced work on May 1, 1905. Statements XVIII (*a*) (*b*) and (*c*) shew the number of cases conducted by these midwives during 1906, classified according to districts, race, and sex, and shewing the number of still births and deaths amongst the infants.

This work is not yet however on a satisfactory footing. These midwives are not under sufficient medical supervision. This is a point which must be considered along with the question of the establishment of Municipal Dispensaries.

(4) **Female Sanitary Inspector of Mohammedan Houses.**—Mohammedans are for the most part a grave courteous people, amongst whom it is a pleasure to work; but they are intensely conservative, and sternly resent the encroachment upon their domestic privacy which modern sanitary measures entail.

A number of representations were I believe made to Government against the intrusion by the male Inspectors of this Department in the exercise of their duty, and as a result Government called for a report and suggested the desirability of employing a Female Inspector for this work.

The Council agreed to this and Mrs. Salgado was appointed and commenced work on February 19, 1906. Her services have been of great value in the detection of cases of infectious diseases, and insanitary conditions generally in the Mohammedan quarters.

(5) **Sanitary Inspectors.**—The first step which I found necessary upon taking charge of the Public Health Department was, as pointed out in my introductory remarks, the organisation of a definite system of inspecting and reporting, and keeping records. It was found that a considerable part of the Inspectors' time was occupied in attending to duties which had no connection with sanitary work such as revision of voters lists, the licensing of rickshaws and carriages, and the whole of the outdoor revenue work of the Council, in addition to various other duties. They were in fact the handy men of the Council, being styled Municipal Inspectors instead of, as now, Sanitary Inspectors. They had no definite hours for inspection, nor were their inspections carried out in accordance with any system, there being no routine inspection of premises, their work in this respect being for the most part confined to visiting in connection with complaints received from householders, and to a small extent in connection with Infectious Diseases, notification at that time being most defective, comparatively few cases of diseases such as Enteric, which now form the bulk of our Infectious Diseases work, were dealt with.

Under these conditions there was very little sanitary inspection being done, and such as it was it could not be checked, as one never knew where an Inspector might be, or what he was doing at any given time of the day. It was therefore arranged that the Sanitary Inspectors should be relieved of revenue work by the appointment of Revenue Officers.

Instructions were issued to the Sanitary Inspectors prescribing the hours of work and the nature of the work. Routine daily inspection of premises was instituted, hours were set apart for routine inspection and for work in connection with papers, and for attendance at the office, forms were drafted for reporting the results of routine inspection, and of inspection of dairies, laundries, &c., and for recording the results of enquiries into infectious diseases.

Another important matter which required reorganisation was the method of conducting prosecutions. Formerly prosecutions were entered by Inspectors more or less on their own responsibility, this was altered and improvements in the methods of procedure were from time to time instituted, for an account of which see my Report No. 65 of February 26, 1907. Concurrently with all this a definite system had to be formulated for the clerical work of receiving, despatching, and filing of papers, so that the information collected should be readily accessible, and should not get lost. New registers had to be drafted, the Clerical Staff which consisted at first of one badly paid untrained clerk, had to be increased and the innumerable other matters incident to the reorganisation of the Department had to be attended to.

As one result of the gradual development of system in the work of the Department the following statement shews the progressive increase in the amount of work done by the Inspectors during the last four years:—

Year.	No. of Inspectors.	No. of Inspections.	Average No. of inspections per Inspector.	No. of notices served.
1903	12	13,368	1,114	173
1904	12	45,339	3,778	841
1905	12	64,916	5,409	1,389
1906	13	98,886	7,605	2,387

In other words the effect of the gradual evolution of system in the work of the Department has been a progressive increase in the amount of inspection done, from an average of 3 inspections per Inspector per day in 1903, to an average of 20·8 in 1906.

A still more important result of this systematic work is the steadily increasing accumulation of valuable information in respect of the various points of interest in connection with the public health and sanitation of the town.

When the more urgent matter of enquiring into the methods in force, and devising and introducing new and improved methods, had been got more or less in hand, attention was directed to the systematic theoretical teaching of the Inspectors. A course of Lectures, accompanied by practical demonstrations, was undertaken by the Assistant Medical Officer of Health, to whom great credit is due for the painstaking manner in which he has instructed the Inspectors, in some of whose work the beneficial results of this training is markedly evident.

It may appear at first sight that the theoretical training of the Inspectors should have come first, but of necessity the first thing to be done was to keep the current work going, and at the same time to gradually improve it, a task which taxed to the utmost the energies and the time of myself and my assistant.

B.—CONSERVANCY BRANCH.

I.—GENERAL.

THIS work was carried out during the first half of the year by Mr. P. de S. Wijeyeratne and during the second half by Mr. P. Don P. A. Wijewardene, Muhandiram, under the supervision of the Conservancy Branch of the Public Health Department, which is also responsible for the collection of the dues.

The staff of this Branch is quite distinct from that of the Sanitation Branch, and consists of a Superintendent, an Accountant, 7 Clerks, 4 Day and 4 Night Supervisors, a Public Latrine Overseer, a Depôt Overseer, an Assistant Depôt Overseer, and 4 Coolies for special work at the Depôt.

Until the end of 1902 this Branch was a separate Department under the name of the Health Department, with a Manager who was responsible directly to the Chairman, it was however at that date amalgamated with the then Sanitary Department to form the present Public Health Department.

The work of conservancy was on the whole satisfactorily carried out during the year under review by the contractors, with the exception of the cleaning out of the buckets after emptying them and the neglect to supply coir dust in the poorer quarters.

The thorough cleaning out of the buckets, although an exceedingly important matter from a sanitary point of view, is extremely difficult to satisfactorily enforce owing to the large number of premises which have to be conserved nightly, *vide* Statement XXII and the neglect of a large number of the householders, particularly among the poorer classes, to use coir dust even when it is supplied ; a bucket in which no coir dust is used being much more fouled during the process of emptying than when coir dust is used.

With a view to gauging the work of the contractor I have caused a classified record of the complaints by householders and by the Officers of the Department to be kept, *vide* Statement XXIII This will be of interest when compared with the statement of subsequent years.

II.—COLLECTION OF DUES AND EXPENDITURE.

A detailed account of this from 1897 when the Health Department was started until the end of 1904 is given in my No. 2239 of September 23, 1905. The particulars for 1906 are given in Statement XXI. annexed.

The methods employed in the collections of the dues have frequently been the occasion of complaint by householders, and steps have been taken from time to time with a view to rendering the collection of these petty dues as little irksome to the householders as possible, without at the same time interfering with the efficiency of the collection.

Amongst these measures may be mentioned the following, *viz.*, the replacement of form 183 by form 22, which was, like form 183, sent out only when a new service was undertaken. A further step was the half-yearly issue of notice No. 575 to all householders in addition to form 22. As complaints were still received this form was ultimately superseded by the issue of Reminder Post Cards, form No. 629, to all householders who were in arrears, prior to the issue of summons. So that what is now done is to serve form 22 of May, 1906, only when a new service is undertaken and threafter to issue the Reminder Post Cards. Comparatively few complaints are now received *re* the method of recovery. Sample notice forms referred to are annexed.

III.—THE PRESENT SYSTEM OF CONSERVANCY.

This, consisting as it does of dry-earth closets, removal by tank carts, and burial in trenches at the Narahenpitiya Depôt, is obviously open to many and very serious objections; but, in the absence of a system of sewers such as are at present under construction, and which will take several years to complete, there is no alternative, all other methods of disposal, such as disposal at sea, incineration, removal by rail, &c., having been long ago carefully considered and rejected as impracticable.

The various objections to the present system are referred to in the succeeding paragraphs.

(1) **The Dry Earth Closet.**—This, unless assiduously attended to both by the contractor and the householder, which it seldom is in the poorer quarters, is an absolute abomination, and in my opinion a serious source of danger to health. The chief faults so far as the contractor is concerned are the neglect to conserve and to properly cleanse the buckets after emptying them, and to supply coir dust, *vide* Statement XXIII.

It must be remembered that it is practically impossible to clean a galvanised iron bucket when it becomes corroded, filth lodges in the erosions, and nothing short of washing and scrubbing with a brush could clean it; but the general introduction of such a measure would entail the production of enormous quantities of contaminated washings, which, in the absence of a system of sewers, it would be practically impossible to dispose of without greatly adding to the nuisances which already exist owing to the want of drainage. I have elsewhere pointed out that glazed earthenware commodes are the most sanitary type of receptacle and might with advantage be used in the bungalow.

The chief fault in regard to the dry-earth privy, so far as the householder is concerned, is neglect to cover up the dejecta, the large majority of householders, particularly amongst the poorer classes, being utterly careless in this matter, and systematically neglect to cover up their dejecta even when coir dust is supplied, and they have been instructed in its use and advantages.

Covering up of dejecta even with wet coir, although it has little deoderising power in this condition is a great safeguard inasmuch as it prevent flies from setting upon the dejecta and carrying infection into the house.

It would be an undoubted advantage if the coir could be supplied in a dry condition, but it arrives from the mills in a damp condition, and for want of storage sheds throughout the town it is dumped in the open, and during the wet weather gets saturated with moisture, and is distributed to the houses in this condition. The only means of improving matters in this respect would be the erection of coir sheds all over the town, but there are a number of practical difficulties in the way of such a measure.

(2) **Cesspits.**—Section 209 A of Ordinance No. 7 of 1887 provides that the Chairman may be notice in writing, when especially empowered by the Council thereto, require the owner of any cesspit to fill it up and substitute therefor a dry-earth privy.

There is however, unfortunately, no penalty for failure to comply with this order, the only course open in the event of noncompliance being for the Council to do the work themselves and recover the cost from the owner.

This cumbrous mode of procedure has rendered the closure of these pits an exceedingly difficult matter, and has caused endless trouble and correspondence on the part of this Department, so much so indeed that when opposition is raised it is practically impossible to enforce the order, and files of papers have grown up in connection with the closuse of these pits which it is a weariness to the flesh to have to wade through, with little ultimate hope of success.

It is very necessary that a penalty should be attached for failure to comply with the Chairman's notice and that increasing penalties should be provided for a continuance of neglect in this respect.

I have fully reported on this matter and would request reference to my last report on the subject, *viz.*, 176 of May 30, 1907.

With a view to dealing systematically with these pits I had a census of all pits in the town taken in 1905, which shewed that there were 1837 of these in existence, distributed as follows, *viz.* :—

	Cesspits in existence in 1905.	Cleared out in 1906.	Closed during 1906.
Fort ...	— ...	— ...	—
Pettah ...	94 ...	39 ...	23
San Sebastian ...	265 ...	37 ...	5
St. Paul's ...	354 ...	73 ...	30
Kotahena ...	426 ...	113 ...	69
New Bazaar ...	318 ...	70 ...	21
Maradana ...	291 ...	63 ...	18
Slave Island ...	33 ...	14 ...	11
Kollupitiya ...	556 ...	9 ...	1
	1,837	418	178

418 of these were cleaned out during the year as shewn in statement above as against 374 in 1905 ; while 178 were filled up and replaced by dry-earth privies as against 158 in the preceeding year.

The principle adopted in the closing of these pits was to select the most insanitary of them as indicated by their situation in crowded localities, in proximity to dwellings, and particularly when on a higher level than wells and dwellings, also when situated on low lying land where they were subject to inundation as the humification of the contents of such pits is greatly retarded, and they frequently give rise to most offensive odours, and, with justice, call forth complaints from those dwelling in the neighbourhood. There is less difficulty in getting these latter closed, as on account of the very offensive odours which emanate from them we are in a better position to demonstrate to the Court the existence of nuisance, than in pits where subsoil drainage, filtration, and humification of the contents go on rapidly.

(3) **Public Latrines.**—Complaints of offensive smells from the Public Latrines used very frequent, particularly in regard to the large public latrines such as the Beira, the Fort, St. John's, and St. Thomas'. This was to a great extent due to the large collection of night-soil which used to be stored during the day in open drums in the centre of the latrines.

It was therefore arranged to keep one or more night-soil carts during the day in such of the latrines as had the necessary space available. The night-soil is now tipped into these carts instead of standing in open drums, and this has materially improved matters ; but there is still much to be desired. As I pointed out in my Report No. 47 of January 12, 1903, on public latrines. the squatting places are so arranged that the bulk of the urine is projected on to the squatting place, from which it it conducted by a channal to the floor, thence to find its way into such places as the lake, the Harbour and the San Sebastian Canal, thus polluting these places. The Municipal Engineer has, I believe, had the question of improving these public latrines under consideration for sometime.

The number of public latrines is as I have pointed out in my Report No. 334 of May 30, 1906, inadequate, and I have in that report suggested a number of sites for the erection of new latrines in conjunction with Municipal Public Bathing Places. There are other places where public latrines are required in regard to which a further communication will in due course be made.

(4) **The Night-soil Carts.**—Every endeavour has been made to render these as airtight and inoffensive as possible ; but with the high temperature here, and the consequent rapid formation of gas which goes on in the contents of the carts, it is practically impossible to prevent the gas escaping when it gets under pressure and is subjected to the jolting movement of the carts. I have repeatedly met carts in the streets smelling abominably although an inspection shewed that the lid was tightly closed and the exterior of the cart was clean.

The night Supervisors were appointed chiefly with a view to more rigidly enforcing compliance with the rule about keeping the lids of the carts closed while the carts were in motion. They no doubt help in this respect but these carts always will be source of nuisance.

Another cause of complaint in connection with the carts is the noise which they make at night. It is apparently impossible to prevent this, as the carts being made entirely of iron and without springs necessarily make a noise, particularly when empty or only partly full, when being driven over an uneven or hard road.

(5) **The Depot at Narahenpitiya.**—This will be dealt with under the following headings, *viz.* :—description ; the buildings, including offices, workshop, cartsheds, cattlesheds and cooly lines ; the roads ; drainage ; the trenches ; the cart washing arrangements ; and finally general remarks on the relation between the Depôt and the spread of disease in Colombo.

(*a*) Description of the Depot.

Situation.—The Depôt is situated immediately beyond the Narahenpitiya toll bar, at the extreme end of the Base Line road, one mile from the gates of the General Cemetery. *Area* :—It covers an area of 50 acres, 2 roods, 9·60 poles, and is roughly triangular in shape with the apex to the East just beyond the Kelani Valley Railway which thus passes through a small part of it, and the base to the West.

It is bounded on the North-east and North by the road to Nawala and the by-road to Havelock Town, and by dense cocoanut plantations ; on the South it is bounded by the low-lying grassfields which extend to the Kirilapane canal : on the West by a dense cocoanut plantation which stretches right to Havelock Town and is nowhere less than ½ a mile in depth ; The country to the East is more or less open swampy land and is very sparsely inhabited for some miles. The foot-path to Kirilapane passes through the Depôt but does not appear to be very much used.

The general *slope of the land* is towards the Kirilapane Canal. The *Soil* at the Depôt is for the most part of a light sandy nature, a large part being above flood level which was originally planted up with cinnamon ; a strip on the East, South, and West is low-lying and swampy and subject to inundation, and is therefore unsuitable for burial except after a prolonged spell of dry weather.

(*b*) The Buildings.

1. *The Night-soil carts sheds.*—These were formerly sandwiched in between the cooly lines, and as this was most objectionable they were removed some 3½ years ago, and placed by themselves at the far end of the Depôt reserve, thereby greatly improving, not only the sanitary condition of the cooly lines, but, also the appearance of the Depôt.

2. *The Cattle sheds.*—These are unsatisfactory inasmuch as the floors are unpaved and there is no proper provision for drainage. The consequence is that a nuisance, particularly noticeable in wet weather, constantly exists here from stagnation of urine, &c. I have requested that these sheds should be paved and drains built, and would again urge that this should be done.

Two of the small portable iron cattle sheds are too close to the cooly lines and I have requested that they be removed to another site.

3. *The Cooly lines.*—Considering their situation almost in the centre of the trenched area of the Depôt and the consequent foul nature of the subsoil water and ground air, it is essential that the floors should be rendered impervious by paving and cementing. I have requested that this should be done and would again urge that this should be carried out.

(*c*) The Roads.

The upkeep and repair of the roads within the depôt used to cause some trouble, but a definite scheme of roading was drawn up in 1905, and a plan made, since when this matter has been on a satisfactory footing.

(*d*) The Drainage.

Subsoil drainage is non existent except by the slow process of the ground water movement through the soil, and this lack of drainage is the chief cause of delay in the process of humification of the night-soil, the ground becoming more or less water logged during the wet weather, a condition unfavourable to humification, and it takes a considerable time to regain a condition of sufficient dryness to suit the natural processes concerned in soil purification.

This has been pointed out by the Municipal Engineer and myself in our conjoined report No. 86/R of December 6, 1905, wherein we suggested the remedy, *viz.*: the digging of drainage ditches between the pits. If this had been approved and carried out a great improvement in the condition of the depôt would I believe have been effected. The growth of vegetation on and around the night-soil trenches greatly helps to check the passage of water into the deeper layers of the soil, and grass has been grown here partly with this object in view and partly with a view to utilising the vast store of organic matter here, and to prevent dust being formed and blown about. Much more might however be done in the matter of cultivation here, and I have at present in hand an experimental scheme for more effective and useful planting up of a portion of the depôt.

(*e*) The Trenches.

The method of trenching prior to 1903 was to dig deep trenches 4 to 8 feet deep according to the height of the subsoil water, and to dump the night-soil into these pits. As this obviously placed the night-soil beyond the reach of effective biological action I instituted the method of shallow burial, my instructions being that not more than one foot of night-soil should be placed in the trenches and that the top level of the night-soil should not be raised above the ground level by heaping up the earth at the sides and ends. Even so it was found that owing to the want of under-drainage and on account of the length of the pits it was impossible for some time to cover the night-soil with more than a layer of coir dust, as, when earth was thrown on top it sank to the bottom thus leaving the night-soil exposed.

The Depôt Overseer hit upon the plan of partitioning off the trenches, after they have been filled, with cross walls of earth at short intervals of 15 feet. This has rendered it possible to cover in the pits considerably earlier than was hitherto possible.

Another change effected during the year was that of burying each nights collection in different parts of the depôt instead of, as formerly, systematically trenching from block to block, each block being finished before passing on to the next. This interference with the previous systematic burial has practical disadvantages, and I am not yet satisfied that it has effected a compensatory improvement. I have the matter at present under consideration with a view to deciding whether it is to continue.

(*f*) The cart washing arrangements.

One of the greatest sources of nuisance at the depôt has always been the cart washing pits. The arrangements were most primitive, *viz.*: the Contractor used to dig a number of shallow pits down to the subsoil water in the lowest lying parts of the depôt, the carts were then backed into these pits and the same water was used for cart after cart until the pit and its contents became so foul and offensive that no cleansing of the carts could be effected by the further use of the liquid. A fresh pit was then dug somewhere else and the same process repeated.

I drew attention to the highly objectionable character of these pits, in my letter No. 1080 of June 9, 1905, and suggested that the septic tank installation which had been lying idle for some time and was rapidly becoming ruinous, should be converted into a cart washing place by paving the surroundings of the mixing tank so as to form a cart stand, fixing up pumps, &c., this was ultimately done and the new arrangement commenced on August 15, 1906.

A great improvement has as a result been effected. The chief draw back, from a biological point of view, to even this small scale of operation, is the same as was found when these tanks were being used experimentally in 1903, *viz.*, the lack of a continuous and slow flow through the septic tanks, the whole bulk of the sewage having necessarily, owing to their construction, &c., to pass through in about 7 hours (*i.e.*, the time it takes to wash all the carts,) and then their having to stand idle for 17 hours.

There are other defects in connection with this installation which were pointed out when I was conducting experiments in 1903 and which still exist, such as the imperfect construction of the septic tank screens, the imperfect distributing arrangements on the filter beds, &c.

It was my intention to run these beds as continuous filters at first and failing satisfactory results by this method to utilise them as contact beds but I found upon return from leave that alterations had been made in the beds, which render their use as contact beds impossible.

(*g*) The Night-soil Depot and the spread of disease In Colombo.

The question as to whether the depôt is responsible for the spread of disease in Colombo, and if so, to what extent, and for what disease or diseases, is of great interest, and it was perhaps natural when the death-rate, particularly the mortality from "filth diseases" such as Enteric and Dysentery, assumed abnormally high proportions last year (1906), that public attention should turn with suspicion to the spot where the whole of the night-soil of the town is deposited as being possibly responsible in some measure for the unusual incidence of sickness.

It is a question however which demands very careful investigation before one would be justified in expressing an opinion. Something more than mere conjecture and assertion is necessary when one is dealing with a question of this sort, particularly when it is considered that it has been for years recognised that whether the depôt is or is not responsible for the spread of disease, it must remain where it is for some years to come, all other methods of disposal having been long ago carefully considered, and, with the exception of the water carriage system commenced some $4\frac{1}{2}$ years ago, dismissed as impracticable.

The disease which one has perhaps most to fear in this connection is Enteric fever, and consequently the following account by Professor Poore, of University College, London, of the methods of disposal of excreta in relation to the Enteric incidence in Holland is of peculiar interest inasmuch as the pail system and the removal of the excreta to a depôt in tank carts is practiced there also. He describes the system as follows :—

"The town of Groningen with 63,863 inhabitants is in point of population the fifth town in Holland, and a reference to the table (not reproduced here) will shew that the improvement in its death-rate in the past 20 years has been as remarkable as that observed in the other Dutch cities or in any town or city in this country (England). In this town, as also in Leeuwarden the capital of Friesland, and in the great majority of Dutch towns, the foecal matter is collected in pails, and it is probable that in the whole extent of the two Northern provinces of Groningen and Friesland there is not a water closet to be found. The whole of the foecal matter is scrupulously and religiously collected and returned to the soil. Dutch cleanliness is proverbial, and certainly *I have never been in a town so exquisitely clean as is the town of Groningen.*

The accumulation of ordure in the streets and back yards is simply not tolerated, and *the inhabitants co-operate with the scavengers* in clearing away all refuse as quickly as possible. The collection of foecal matter is very simple. *The closet pails* are much smaller then those which are commonly used in this country (England), and they are emptied twice or thrice a week or daily if the householder is ready to pay a small fee.

The collecting cart is really a tank upon wheels, with a sort of hood like the hood of a carriage facing the wrong way. The pails are brought out, and the man and pail are hidden by the hood as the contents are simply tipped into the tank. The pails even when full, being such as one man can lift easily, the collection is probably ten times as rapid as is the case in those English towns which make use of huge two men pails which weigh 50 lbs. and more when empty. Again it is obvious that the Groningen authorities do not make the mistake (as is I believe done in Madras W. M. P.) of hauling about an immence weight of pails, which adds enormously to the expense.

The Depôt where the material is collected, is *on the outskirts of the town*, where a wharf has been constructed with a view to its removal by barge for the purposes of the farmer. Here again, the arrangements are very simple. *The stuff is simply stacked beneath rough sheds* covered with corrugated iron. The men employed have found out exactly how to do it, and by arranging a layer of street sweepings and rubbish (dung, straw paper, rags, &c.,) with peat ashes (the fuel used in this district is almost exclusively peat) alternately with a layer of pail contents, the whole mass drains and consolidates into a very rich black manure which the farmer highly appreciates. *The floor of the Depôt is concreted* and provided with channels so that the urine drains away into a large tank whence it is pumped into barges for the use of the agriculturist. Considering the work which went on in it, this depôt was wonderfully neat, the stacks were as evenly made as the best hay stacks, and the paths between them were quite free from befoulment. *The smell from the putrid draining was to say the least powerful*, but the solid stuff soon ceases to be very offensive. *There were large numbers of flies in this depot*, but I frequently remarked that *the flies in the town of Groningen were not nearly so troublesome as is the case in Cities less carefully scavenged*."

With such a crude system it is interesting to note the state of the health of the town.

The following shews the progressive decline in the death-rate from all causes in the town of Groningen as given in Prof. Poores account :—

1877	...	29.51.	1888	...	20.04.
1880	...	24.39.	1892	...	17.27.
1884	...	22.00.	1896	...	16.01.

While as regards Enteric there were only 97 deaths during the 10 years 1885–1894 or an average of 9·7 deaths per year, and he adds. "It is a remarkable and most interesting fact that *in 1897 there was no death from Enteric fever* in either of the capital towns of Groningen or Leeuwarden, containing over 95,000 inhabitants (Groningen 63,863 and Leeuwarden 31,598)" and after referring to the large amount of dairy farming carried on in Holland and the use of excreta as manure he adds. "These facts seem to me to afford a very large measure of proof, that *there is no inherent danger in the methods of sanitation pursued in Groningen*, and Friesland, and in fact, in Holland generally."

The following comparative résumé of the conditions in Groningen as described above and the conditions in Colombo is I think most instructive.

GRONINGEN.	COLOMBO.
(1) Day conservancy by open tank carts.	(1) Night conservancy be closed tank carts.
(2) Depôt on outskirts of town, isolation not mentioned.	(2) Depôt some distance in country and isolated by dense cocoanut plantations on the town side.
(3) Night-soil mixed with scavenging rubbish stored on cement floors.	(3) Night-soil buried in trenches and immediately covered with coir, and ultimately with earth. Cultivation carried on over the trenches.
(4) Offensive smell at depot	(4) Offensive smell at depôt.
(5) Swarms of flies at depot.	(5 Swarms of flies at depôt.
(6) Immediate and thorough removal of all ordure from back yards and streets and a consequently "exquisitely clean" condition of the town particularly in the neighbourhood of dwellings.	(6) Very imperfect removal of ordure particularly from back yards, and a consequently dirty condition of the town, particularly in the neighbourhood of dwellings.
(7) Spontaneous co-operation of inhabitants with scavengers.	(7) Great lack of co-operation of inhabitants with scavengers (*vide* list of prosecutions for filth premises in attached Statement No. XX.)
(8) Comparative freedom of the town from flies noteworthy.	(8) A plague of flies all over the town at certain seasons.
(9) A low Enteric incidence.	(9) A very high Enteric incidence.

This statement emphasises what I have always insisted upon in regard to Colombo, *viz.* :— That the insanitary conditions which exist within the town in the form of insufficiently cleaned and improperly used latrines, and badly scavenged back yards, streets, and drains, and polluted grass fields in the neighbourhood of dwellings, are a far more probable source of the periodical fly pests in the town generally and an infinitely greater source of danger to the inhabitants at large in respect of "Filth Diseases" like Enteric than the remote and isolated depôt with all its necessarily disagreeable attributes.

When to these visible and well known insanitary conditions we add the almost certain existence within the town of "bacilli carriers" and unrecognised mild cases of Enteric, and defective notification of recognised cases, and the power which, as is well known, convalescents from Enteric frequently have of harbouring and discharging the contagion long after they have recovered (all of which entail neglect of preventive measures and consequently unchecked facilities for infection) it, will I think be conceeded that we have, within Colombo enough and to spare of insanitary conditions to account for the high incidence of "Filth Diseases" like Enteric when compared with the low incidence in a town like Groningen where as Professor Poore state "the accumulation of ordure in the streets and back yards is simply not tolerated, and the inhabitants co-operate with the scavengers in clearing away all refuse as quickly as possible."

If to the insanitary conditions mentioned above we add unusually unfavourable meteorological conditions such as I believe prevailed last year, the abnormal rise in the mortality rate which occurred appears less surprising. On this latter point however I propose to report later.

It must not be inferred from my remarks above that I have formed the opinion that the depôt is free from all blame in the matter of the spread of disease in Colombo, because I have not; on the contrary I retain an open mind and recognise that there are some points which demand careful investigation, and in regard to which I have for some time, and still am enquiring and I should in a sense be glad to find evidence against the depôt as it would throw light upon much which is still obscure in regard to the spread of disease within the town; but what I desire to emphasise is that pending the discovery of specific evidence against the depôt, one must guard against the risk involved in diverting the attention of the public from the nearer and more certain danger due to insanitary conditions within the town for which they themselves are chiefly responsible, to the comparatively remote and as yet unconvicted depôt.

In other words I consider that as a matter of policy it is better that the public should be encouraged to believe that it is the undoubtedly insanitary condition of their own premises, and their on carelessness in regard to their food and water supplies, and in regard to avoiding contact with infected persons, clothing, &c., in adopting preventive measures generally, which are responsible for their illnesses, and that consequently their attention should be directed to endeavouring to improve these conditions, rather than that they should be encouraged while neglecting these nearer and more certain dangers to turn their attention to the relatively distant, and for the present, necessary and possibly harmless depôt.

C.—STAFF.

I left for England on May 31, 1906, and was absent 7 months, during which time Dr. Pani acted for me, while Dr. Loos of the Infectious Diseases Hospital acted for Dr. Pani.

Sanitary Inspector E. T. Koch retired on pension after over 30 years service on June 10, 1906. It is worthy of note that during that long period of service in a post constantly open to temptation Mr. Koch maintained an untarnished reputation for rigid honesty and faithful service, a record any one might well be proud of.

He was succeeded by Mr. E. Ambrose who was promoted from being a Supervisor in the Conservancy Branch.

The post of Female Sanitary Inspector for duty in the Mohammedan quarters was created, and Mrs. Salgado was appointed and took up duty on February 19, 1906.

Mr. Cyril Foenander the Acting Head Clerk of the Sanitation Branch was appointed Superintendent of Conservancy on September 1, 1906, *vice* Mr. D. Moreira who obtained the post of Secretary to the Galle Municipal Council.

Mr. Foenander was succeeded by Mr. A. Vanden Driesen of the Works Department.

Mr. W. H. Samarasinghe, 2nd Clerk, Sanitation Branch, resigned his appointment owing to ill health, and was succeeded by Mr. Jacob De Silva of the Secretary's Department.

Mr. M. De Fonseka, 3rd Clerk, was at his own request transferred to the Works Department, and was succeeded by Mr. Vincent Silva of the Municipal Court.

Mr. S. P. Peris, 4th Clerk, resigned owing to ill health, on May 1, 1906, and was succeeded by Mr. W. E. La Brooy, a new hand.

Mr. Silvathurai, Market Clerk, who had been under the Secretary was transferred to this Department where he now carries on his work as Market Clerk.

Collector Maloney was promoted Market-keeper of St. John's, *vice* Ramasamy resigned.

Edinburgh Market-keeper D. B. Perera was transferred to Dean's Road Market, *vice* D. A. Silva retired on pension.

A. J. Wijeyratna succeeded D. B. Perera as Keeper of Edinburgh Market.

D. Alwis was appointed Collector of St. John's, S. Dharmadasa, Collector of Edinburgh, and L. Herft Collector at Grandpass Markets.

Conservancy Branch.

Mr. D. Moreira after much good work as Superintendent of Conservancy resigned upon securing the post of Secretary to the Municipal Council of Galle. He was succeeded by Mr. Cyril Foenander.

Mr. D. W. B. Mylvaganam was appointed Supervisor in succession to Mr. Ambrose. Mr. E. Sepion, Registering Clerk, was transferred to Municipal Court and was succeeded by Mr. Noordeen.

WM. MARSHALL PHILIP,
Medical Officer of Health.

June 7, 1907.

INDEX TO APPENDICES.

STATEMENTS.

I.—Zymotic Diseases.

The following table shews the Cases reported during the months of the year.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug	Sep.	Oct.	Nov.	Dec.	Total for year.	Case rate per 1000 population.	Deaths.
Chicken-pox ...	50	53	37	30	9	11	7	2	7	8	11	6	231	1·33	0
Measles ...	124	42	51	32	25	39	20	10	5	—	4	2	354	2·04	4
Simple Continued Fever ...	2	4	3	2	2	6	2	10	4	2	3	2	42	0·24	144
Cholera ...	1	—	—	—	—	—	1	—	—	1	1	—	4	—	2
Diphtheria ...	—	1	1	—	3	1	1	1	—	2	—	—	10	0·05	1
Scarlet Fever ...	—	—	1	—	—	—	—	—	—	—	—	—	1	0·005	0
Acute Diarrhoea ...	—	—	—	—	1	1	—	—	—	—	6	4	12	0·069	Not stated
Enteric Fever ...	70	42	48	66	77	86	112	71	73	63	111	84	903	5·21	269
Small-pox ...	1	12	20	-	6	-	-	-	—	1	—	—	40	0·23	11
TOTAL ...	248	154	161	130	123	144	143	94	89	77	136	98	1597		

II.—Enteric Fever, 1906.

CASES NOTIFIED.

	Inside and address not known	Outside.	Port.	Grand Total.	Quarterly Total.
January ...	58	10	2	70	
February ...	36	6	—	42	160
March ...	43	4	1	48	
April ...	54	12	—	66	
May ...	63	14	—	77	229
June ...	71	14	1	86	
July ...	84	28	—	112	
August ...	58	12	1	71	256
September ...	62	9	2	73	
October ...	48	15	-	63	
November ...	72	36	3	111	258
December ...	60	23	1	84	
TOTAL ...	709	183	11	903	

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III.—Enteric Cases distributed among Wards during 1906.

LOCALITY.		Cases.	Case rate per 1000.
Colombo 584	Fort ...	2	0·8
	Pettah ...	7	0·9
	San Sebastian r...	18	1·77
	St. Paul's ...	31	1·36
	Kotahena ...	120	3·29
	New Bazaar ...	53	2·7
	Maradana ...	190	5·48
	Slave Island ...	42	2·2
	Colpetty ...	121	5·6
Outside and not traced 319.	Outside limits ...	183	—
	From onboard ...	11	—
	Not traced ...	122	—
	No fixed abode ...	3	—
		903	

IV.—Distribution of Enteric Cases according to Sex, Races, and different Age periods, 1906.

		0–1 Month.	1 M.–1 Yr.	1–5.	5–10.	10–15.	15–20.	20–25.	25–30.	30–40.	40–50.	50–60.	60 & over.	
Europeans	M	—	—	—	1	1	1	6	4	10	7	—	—	30
	F	—	—	—	2	—	4	4	1	3	—	—	—	14
Burghers	M	—	2	6	16	13	17	4	10	5	1	1	1	76
	F	1	2	4	8	10	13	9	10	7	—	—	—	64
Sinhalese	M	—	—	23	31	38	72	66	42	23	6	2	1	304
	F	—	—	20	50	32	41	38	30	25	4	2	2	244
Tamils	M	—	—	3	7	5	17	16	15	7	—	—	—	70
	F	—	—	—	3	5	4	1	4	1	1	—	1	20
Moors	M	—	1	5	7	6	5	4	3	4	1	—	—	36
	F	—	—	2	3	3	4	8	1	3	1	—	—	25
Malays	M	—	—	3	—	1	4	1	1	—	1	—	—	11
	F	—	—	—	1	1	3	—	—	—	1	—	—	6
Others	M	—	—	—	—	—	—	—	1	1	—	1	—	3
	F	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...		1	5	66	129	115	185	157	122	89	23	6	5	903

Males, 530. Females, 373.

V.—Vaccination performed during the year 1906.

Ward.	No. Vaccinated.	No. Re-vaccinated.	Total.
St. Paul's	1,581	700	2,281
Kotahena	1,735	706	2,441
Slave Island	939	531	1,470
New Bazaar	1,328	989	2,317
Maradana	1,462	481	1,943
Fort and Galle Face Pettah and San Sebastian	875	434	1,309
Colpetty	883	710	1,593
Itinerating	744	407	1,151
	9,547	4,958	14,505

VI.—Analyses made by City Analyst during 1906.

	No. of samples sent.	No. condemned.	No. passed.
Town water	156	—	156
Well water	357	271	86
Aerated water	11	6	4
Milk	11	3	8
Flour	52	—	52
	587	280	306

VII.—Bacteriological Examination of Town Water by Director, Bacteriological Institute.

Summary of Reports.

Year	1904.	1905.				1906.			
Quarter	IV.	I.	II.	III.	IV.	I.	II.	III.	IV.
No. of bacteria per C. C. (Agar plates)	342	—	—	422	304	—	—	289	596
Do. (Gelatine do.)	420	520	590	494	458	466	470	302	610
B. Coli	—	—	—	—	—	—	—	—	—
B. Enteritides Sporogenes	—	—	—	—	—	—	—	—	—
B. Typhosus	—	—	—	—	—	—	—	—	—
Cholera Vibrio	—	—	—	—	—	—	—	—	—
Streptococci	—	—	—	—	—	—	—	—	—
Germs Liquifying gelatine	Very few	—	—	Very few	Very few	Fairly numerous	Few	8 %	9 %

VIII.—Dairy Registration.

Ward.	No. of Dairies 1st January, 1906.	No. Registered.	No. Discontinued.	No. on Register 31st Dec., 1906.
Kotahena South	3	—	1	2
Kotahena North	—	1	—	1
St. Paul's	2	4	—	6
Maradana South	1	2	—	3
Maradana North	13	1	3	11
New Bazaar	4	2	1	5
Colpetty South	5	1	1	5
Colpetty North	8	1	4	5
Slave Island	7	—	3	4
Fort	—	—	—	—
Pettah	—	—	—	—
San Sebastian	—	—	—	—
	43	12	13	42

IX.—Number of Bakeries Registered during 1906.

Ward.	Number.	Ward.	Number.
Pettah	4	Maradana South	7
San Sebastian	5	Maradana North	7
St. Paul's	10	Slave Island	6
New Bazaar	5	Fort	3
Kotahena South	4	Colpetty North	—
Kotahena North	3	Colpetty South	3
Total	31	Total	56

X.—Laundry Registration.

	No. of Laundries on Register at Dec. 31, 1906.		No. of Laundries on Register at Dec. 31, 1906.
Kotahena South ...	32	Colpetty South ...	—
Kotahena North ...	—	Colpetty North ...	87
St. Paul's ...	4	Slave Island ...	40
Maradana South ...	53	Fort and St. Paul's ...	—
Maradana North ...	44	Pettah ...	40
New Bazaar ...	47	San Sebastian ...	18
Total ...	180	Total ...	365

XI.—Number of Eating Houses on Registers at end of 1906.

Fort ...	... 20	Kotahena South ...	... 12
Pettah ...	... 55	Maradana North ...	... 21
San Sebastian ...	... 13	do South ...	... 19
St. Paul's ...	... 44	Colpetty North ...	... 8
New Bazaar ...	... 19	do South ...	... 6
Kotahena North ...	... 3		
Total.	154	Total.	220

XII *(a)*.—Statement shewing number of Meat and Fish Licenses issued for the year 1906.

Month.	Butcher's License.	Special License of Mutton.	Special License of Beef.	Special License of Fish.
Deeember, 1905 ...	44 (for 1906)			
January ...	1	... 14	... 22	... 3
February ...	2	... 1	... 3	... 11
Mareh ...	1	... 2	... 1	... 28
April ...	1	... —	... 2	... 2
May ...	1	... 1	... 1	... —
June ...	—	... —	... —	... 7
July ...	1	... —	... —	... —
August ...	1	... —	... 1	... 1
September ...	—	... —	... 1	... —
October ...	1	... —	... —	... —
November ...	—	... —	... —	... 1
December	48 (for 1907)			
Total for 1906.	53	18	31	53

XII *(b)*.—List of Stalls in the different Public Markets used for the sale of Mutton, Beef, &c.

Name of Market.	No. of stalls.	Mutton stalls.	Beef stalls.	Pork stalls.	Vacant.
Edinburgh meat market ...	24	... 6	... 12	... 4	... 2
Dean's road meat market ...	19	... 5	... 14	... —	... —
Slave Island meat market ...	10	... —	... 7	... —	... 3
Slave Island mutton market ...	10	... 4	... 3	... —	... 3
Gintupitiya mutton market ...	9	... 9	... —	... —	... —
Colpetty market ...	5	... 2	... 3	... —	... —
Mohammedan meat market ...	6	... —	... 6	... —	... —
Bambalapitiya market ...	4	... 4	... —	... —	... —
Total ...	87	30	45	4	8

XIII.—List of Licenses issued for the following trade purposes during 1906.

Month.	Manure.	Timber & firewood.	Cotton.	Dyeing.	Straw.	Soap.
January ...	2	... —	... —	... —	... —	... 1
February ...	—	... 19	... 3	... 5	... 4	... —
Mareh ...	1	... 63	... —	... 10	... 6	... 1
April ...	—	... 6	... 4	... 1	... 3	... —
May ...	—	... —	... 1	... —	... —	... 1
June ...	—	... —	... —	... —	... —	... —
July ...	1	... 8	... 5	... —	... 1	... —
August ...	—	... 3	... —	... —	... —	... —
September ...	—	... 2	... —	... —	... —	... —
October ...	—	... 2	... —	... —	... —	... —
November ...	1	... 2	... 1	... —	... 1	... —
December ...	1	... 2	... —	... 1	... —	... —
Total ...	6	107	14	17	15	3

XIV.—Slaughter House Returns.

Demetagoda Slaughter House.

Quarter.	Carcases condemned.	Livers condemned.
1st	9	292
2nd	11¾	321
3rd	9¼	277
4th	14	227
	44	1117

Cattle, &c., slaughtered.

Quarter.	Cattle.	Sheep & Goats.	Pigs.
1st	6,092	6,906	551
2nd	6,312	8,680	583
3rd	6,159	16,901	568
4th	6,545	17,611	584
	25,108	50,098	2,286

Madampitiya Slaughter House.

Quarter.	No. of animals slaughtered. Sheep.	Goats.	Livers. Condemned
1st	626	6,160	6
2nd	663	6,733	6
3rd	closed	closed	closed
4th	—	—	—
	1,289	12,893	12

Return of cattle rejected.

Quarter.	Indian. Black.	Indian. Buffalo.	Ceylon. Black.	Ceylon. Buffalo.	Nature of Disease. Hoof.	Sore & Abscess.	Skin.	Wasted.	Total.
1st	150	3	4	12	—	8	1	160	169
2nd	146	2	3	2	9	3	—	141	153
3rd	130	—	8	—	—	10	—	128	138
4th	137	3	21	10	1	9	5	156	171
	563	8	36	24	10	30	6	585	631

XV.—Food Stuffs condemned as unfit for consumption.

Name.		Pettah.	San Sebastian.	St. Paul's	New Bazaar.	Kotahena.	Maradana.	Slave Island.	Fort.	Colpetty	Total.
Fish	lb.	210	29¼	38	—	213	7	—	—	—	497¼
Meat	,,	½	44	—	—	15	—	2½	—	—	62
Apples	..	32	—	—	—	—	—	—	—	—	32
Apples (single ones)		24	—	38	—	—	—	—	—	—	*62
Mangoes		8	11	—	—	—	—	—	—	—	*19
Potatoes	lb.	16	97½	—	—	—	—	—	—	—	113½
Onions	,,	14	—	—	—	—	—	—	—	—	14
Pork	,,	—	24½	—	—	—	—	—	—	—	24½
Beans		—	350	—	—	—	—	—	—	—	*350
Potatoes and onions		—	100½	—	—	—	—	—	—	—	*100½
Potatoes (single)		—	63	—	—	—	—	—	—	—	* 63
Sausages	lb.	—	4¾	—	—	—	—	—	—	—	4¾
Slime apples		—	21	—	—	—	—	—	—	—	* 21
Brinjals		—	52	—	—	—	—	198	—	—	*550
Mutton	lb.	—	—	—	—	1½	—	—	—	—	1½
Wood apples		—	—	—	—	61	—	—	—	—	* 61
Offal, splun, &c..	lb.	—	—	—	—	—	1	—	—	—	4
Plantains	,,	—	—	—	—	—	66½	—	—	—	* 66½
Umbrella fruit	,,	—	—	—	—	—	50	—	—	—	* 50

* These were counted instead of being weighed.

Note.—This return does not shew the imported food stuffs condemned at the Customs Warehouses, of which there were considerable quantities.

XVI.—Number of Dogs seized, destroyed, &c., during the 4th Quarter, 1906.

	Seized.	Re-deemed.	Des-troyed.	Died in Pound.	Excaped from Pound.	Sold by Auction.	Sent to Medical College.	Balance.
Dogs seized 1st quarter, 1906 ...	776	254	471	7	—	—	7	—
Balance in pound end of 1st quarter ...	—	—	—	—	—	—	—	37
Seized during 2nd quarter ...	974	282	668	6	—	—	8	—
Balance in pound end of 2nd quarter ...	—	—	—	—	—	—	—	47
Seized during 3rd quarter ...	1201	448	728	12	—	5	1	—
Balance in pound end of 3rd quarter ...	—	—	—	—	—	—	—	54
Seized during 4th quarter ...	1419	509	863	32	—	3	—	—
Balance in pound end of 4th quarter ...	—	—	—	—	—	—	—	66
Total ...	4370	1493	2730	57	—	8	16	—

Balance in pound on 1st January 1907—66.

XVII.—Rats destroyed during 1906.

1st Quarter	15,282	
2nd Quarter	13,952	
3rd Quarter	14,408	
4th Quarter	12,764	
	56,406	as against 49,286 during 1905.

XVIII.—(*a*) Number of Cases conducted by Municipal Midwives during 1906.

Name.	District.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Totol.
S. Fernando ...	St. Paul's ...	6	4	12	3	25
M. P. Muruger ...	do ...	12	11	19	18	60
Sara Dias ...	New Bazaar ...	19	15	11	21	66
Agida Perera ...	Kotahena ...	22	17	26	19	84
Nona Hamy ...	San Sebastian ...	13	15	18	13	59
C. Caldera ...	Slave Island ...	37	34	17	15	102
	Total ...	108	96	103	89	396

(*b*) Work by Municipal Midwives, Births by Race and Sex 1906.

	Burghers		Sinhalese		Tamils.		Moors.		Malays.		Others.		Total.		Births Total.	Deaths Total.	Deaths per cent.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
I. St. Paul's Div., Mrs. Fernando.	3	4	3	6	1	3	3	2	—	—	—	—	10	15	25	4	16·0
II. Kotahena. Agida Perera...	4	5	33	27	4	5	2	4	—	—	1	—	44	41	85	5	5·9
III. San Sebastian, Nono Hamy	3	1	10	9	10	10	8	11	—	—	—	—	31	31	62	6	9·6
IV. St. Paul's, Mary Muruger.	—	—	5	4	28	21	—	3	—	—	1	1	34	29	63	8	12·7
V. Slave Island, C. Caldera ...	3	5	26	25	17	6	10	2	5	4	—	—	61	42	103	7	6·8
VI. New Bazaar, Sarah Dias ...	7	8	20	12	2	3	4	4	2	1	3	1	38	29	67	5	7·4
	20	23	97	83	62	48	27	26	7	5	5	2	218	187	*405	35	8·6
	43		180		110		53		12		7		405				

* This total includes a number of multiple births.

(*c*) Births and Deaths.

Still Births and Deaths within 4 days.

	Births.	Deaths.			Deaths per cent.
		Male.	Female.	Total.	
Burghers	43	1	1	2	4·6
Sinhalese	180	6	7	13	7·2
Tamils	110	9	5	14	12·7
Moors	53	3	1	4	7·5
Malays	12	—	—	—	0·0
Others	7	1	1	2	28·5
	Deaths.	20	15	35	8·6
	Births.	218	187		
	Rate per cent	9·1	8·0		

XIX.—(*a*) Work done by Ward Inspectors.

	Pettah.	San Sebastian.	St. Paul's	New Bazaar.	Kotahena.	Maradana.	Slave Island.	Fort.	Colpetty.	Total.
No. of inspections ...	11772	8310	17456	8165	18311	13162	8067	2334	11309	98886
No. of premises in which sanitary defects were found.	1568	675	1543	1091	2051	1684	1144	168	1005	10929
No. of Notices served ...	1191	116	374	242	728	288	273	210	165	2387
do voluntarily complied with ...	171	78	287	175	605	247	244	9	140	1956
No. of premises where sanitary defects were rectified after warning ...	858	224	834	450	1404	845	713	97	505	5930
No. of wells closed ...	14	15	37	23	28	28	53	3	17	218
do cesspits closed ...	23	5	30	21	29	18	11	—	1	178
do houses disinfected ...	27	46	59	70	216	252	71	5	171	917
do prosecutions ...	714	445	736	641	747	746	580	66	360	5031
do convictions ...	534	313	537	436	559	601	460	58	287	3787
No. discharged or otherwise dealt with ...	83	71	96	68	108	91	11	9	49	586
No. pending at end of the year	12	11	27	38	3	20	25	1	8	145
Work done by Municipal Engineer at cost of owner	—	—	—	—	—	—	—	—	—	—
Amount of fines ...	2,681·48	1,368·00	3,330·00	2,307·25	2,932·11	2,944·50	3,718·00	202·00	1,635·00	21118·34

XIX.—(*b*) Statement of work done by Inspectors 1903-1906.

	No. of Inspectors.	No. of Inspections.
1903 ...	12 ...	13368
1904 ...	12 ...	45339
1905 ...	12 ...	64916
1906 ...	13 ...	98886

XX.—Details of Prosecutions by Ward Inspectors for 1906.

	Pettah.	San Sebastian	St. Paul's	New Bazaar.	Kotahena.	Maradana.	Slave Island.	Fort.	Colpetty.	Total.
Filthy premises	277	188	344	369	376	361	314	16	189	2434
do space and drain	59	9	31	3	17	11	10	4	1	145
Foul privies	37	38	71	51	116	55	5	—	7	380
Allowing urine to flow in public drain ...	5	1	1	1		—	2		—	10
Laundries	7	2		7	11	3	3	—	1	34
Nuisances due to keeping animals... ...	2	15	58	69	39	13	17		11	224
Bakeries	10	1	6	17	19	17	12	—	20	102
Eating houses	199	74	124	48	81	189	154	46	64	979
Wells	5	16	8	11	23	9	3	—	11	86
Exposing putrified food stuffs for sale ...	30	17	3	—	7	1	5	—	2	65
Rank vegetation	—		5	8	1	5	—	—	16	35
Filthy bathing tubs	—	11	6	12	9	2	1	—	1	42
Overcrowding	4	—	7	—	—		—	—	—	11
Collecting rubbish without authority ...	—	—	2	—	—	—	—	—	1	3
Cattle sheds	—	2	2	21	2	1	—	—	2	20
Markets	17	59	43	1	27	54	31	—	9	241
Digging pit without permission of the Chairman...		—	—		1	1			2	4
Boiling offal without license	1	5	—						—	6
Unlicensed cotton depot	5	—	—	—			—	—	—	5
Committing nuisance on road	1	—	6	—	—		—	—		7
Criminal intimidation	—	—	—	—	1		—	—	—	1
Illicit slaughter of animals	1		1	1	1			—	—	4
Neglect to register common lodging house ...	9		—							9
Foul cesspool		3	—	—					—	3
Burial of night-soil				4		1	1			6
Unlicensed firewood depot	—	—	—	1	1	1	—	—	—	3
Unlicensed dyeing house	—	—	—	—	2	—	—	—	—	2
Storing hides without license	5		2	—	—		—	—	—	7
Recovering cost of limewashing	3	1	3	—			—		—	7
Depositing rubbish on roadside	24	2	3	—		7	4		10	50
Resistance to public officer	—	—	—	1	—	—	2	—	—	3
Burial of dead child in compound... ...	—	—	—	—	1		—	—	—	1
Unlicensed timber depots	—	—	—	—	—	1	1		—	2
Filthy ærated water manufactory... ...	—	—	—	—	—	—	2	—	—	2
Illicit sale of fish	1	—	—	—	—	—	—	—	—	1
Filthy barbers shop	—	—	—	—	—	—	2	—	—	2
Smoke nuisance	—	—	—	—		1	—	—	—	1
Concealing infectious disease	—	—	—	—	1	—	1	—	1	3
Dairies	8	1	10	16	10	12	10	—	12	97
	710	445	736	641	746	745	580	66	360	5029

XXI.—Conservancy receipts and expenditure.

Receipts.	Rs.	c.	*Expenditure.*			Rs.	c.
By recoveries for conserving latrine ...	157351	86	To vote No.	138	Salaries wages allowances, &c.	13921	11
			do	139	Conservancy of dry-earth closets	63290	29
By recoveries for buckets and covers sold ...	166	0	do	140	Supply of Coir dust ...	5527	70
			do	141	Purchase of Stationery ...	711	88
By recoveries for disinfectants sold ...	917	73	do	142	Refunds	508	0
			do	143	Hire of bulls	42894	43
By recoveries on account of clearing cesspit privies ...	1037	0	do	144	Construction and repairs of night-soil carts ...	9686	77
			do	145	Miscellaneous	798	15
By recoveries for lease of grassland night-soil depot, Narahanpitiya ...	3548	0	do	146	Post card reminders & postage	250	0
			do	147	Supervisors Uniform &c. ...	707	94
			do	148	Cost of Disinfectants ...	914	68
			do	149	Repairs of buildings cart and cattle sheds at night-soil depot	1992	33
			do	150	Repairs and maintenance of roads at night-soil depot ...	3046	85
			do	151	Construction of sheds for night-soil carts ...	1250	82
			do	152	Rent of night-soil depot Narahanpitiya	1638	0
			do	153	Septic tanks	346	55
			do	154	Metalling Narahanpitiya road	2722	54
			do	224	Typewriter, Conservancy Branch	375	0
			do	236	Washing places for carts Night-soil depot ...	436	66
Total ...	163020	59			Total ...	151019	70

XXII.—Conservancy work statements.

Division.	*Total amount collected.	†Total amount due.	Buckets daily conserved in private premises.	Buckets daily conserved in public latrines.	Cesspits Cleared.	
					By Conservancy Contractor.	By Private Contractors.
	Rs. c.	Rs. c.				
I.	29473 70	30953 20	1377	—	3	6
II.	39050 16	39132 12	1731	45	4	10
III.	44647 0	46495 0	2473	‡116	70	69
IV.	44181 0	47727 0	2775	120	59	197
	157351 86	164307 32	8356	281	136	282

* Includes arrears of previous years and advance payments.
† Represents amount due for the year under reference.
‡ 10 standard buckets

Amounts paid to Contractor.

(*a*)	Bulls and conservancy of dry-earth closets	...	Rs. 104848·36
(*b*)	On account clearing cesspits	...	,, 3381·60
			Rs. 108229·96

Fines imposed by Chairman on Contractor Rs. 947·70

XXIII.—Fines imposed during the year 1906.

Month.	Depot.	Miscellaneous.	Lids or parts of cart left open whilst at work.	Public latrines.	Non-reporting of vacations.	Coolies without badges.	Neglect to conserve.	Neglect to clean buckets.	Neglect to supply coir-dust.	Neglect of Day cooly.	Neglect of Special cooly.	Cesspits.	Neglect to return Carts chits.	Late arrival of Carts at Depot.	Total.	Amount.
																Rs. c.
January ...	1	30	14	19	6	2	45	4	21	5	1	—	20	—	168	41 5
February ...	—	14	5	7	3	—	40	6	15	6	2	—	16	2	116	32 70
Mareh ...	2	34	25	15	8	5	78	17	42	6	1	1	31	—	265	75 45
April ...	3	63	18	20	13	3	80	31	48	12	—	—	22	—	313	85 30
May ...	—	18	6	9	1	—	30	9	19	4	—	—	6	—	102	37 45
June ...	6	63	22	31	9	3	224	322	81	11	2	—	32	12	818	342 40
New Contract.																
July, August & September.	2	72	19	45	2	6	113	114	48	19	1	—	5	5	451	142 95
October ...	1	8	—	25	4	—	31	12	11	6	1	1	—	—	103	37 95
November ...	2	15	3	19	3	—	51	25	18	6	—	—	—	—	142	79 55
December ...	—	12	7	22	3	6	77	15	22	3	1	—	—	—	168	72 90
Total ...	17	329	119	212	52	25	772	555	325	78	9	2	133	19	2646	947 70

XXIV.—Shewing number of cesspits cleared and closed during 1906.

Ward.	No. of Cesspits cleared.	Cesspits closed.
Fort and Galle Face ...	0	0
Pettah ...	39	23
San Sebastian ...	37	5
St. Paul's ...	73	30
Kotahena ...	113	69
New Bazaar ...	70	21
Maradana ...	63	18
Slave Island ...	14	11
Colpetty ...	9	1
Total ...	418	178

XXV.—Births and Deaths and their rates for each Race in the Town of Colombo for 1905 and 1906 and the averages for 1899-1905.

Race.	Population (inclusive of the Military) at the Census of 1901.	Births.			Deaths.			Birth-rate per Mille.			Death-rate per Mille.		
		Average 1899 to 1905.	1905	1906	Average 1899 to 1905.	1905	1906	Average 1899 to 1905	1905	1906	Average 1899 to 1905.	1899	1906
All Races ...	155869	3581	3916	4726	5326	5902	6890	22·5	23·1	27·3	33·4	34·7	39·8
Europeans ...	2657	83	86	80	80	78	103	30·4	29·3	27·5	29·1	27·3	35·4
Burghers ...	11861	379	414	457	313	328	370	31·9	33·3	36·4	26·3	26·4	29·5
Sinhalese ...	68772	1927	2246	2584	2439	2833	3244	27·9	30·8	34·9	35·3	38·8	43·8
Tamils ...	34640	420	422	610	1242	1306	1728	12·2	10·5	14·6	35·8	32·4	41·4
Moors ...	28898	599	557	744	935	1000	1031	20·8	17·9	23·5	32·2	32·2	32·6
Malays ...	4493	120	123	166	161	163	175	26·9	24·4	32·0	35·7	32·3	33·8
Others ...	4548	53	68	85	156	194	239	11·5	12·0	14·21	32·6	34·21	40·0

XXVI.--Births and Deaths and their rates in each Ward of the Colombo Municipality with the principal Zymotic Causes of Death 1906.

Name of Ward.	Population (inclusive of the Military) at the Census 1901.	Births.										Deaths.																				Deaths of Children under one year.	Deaths of Children under 1 year to 1,000 Register Births.	Birth Rate.			Death Rate.		
		Total Births.			Race.							Total Deaths.			Race.							Causes of Death.							Violence.										
		Persons.	Males.	Females.	Europeans.	Burghers.	Sinhalese.	Tamils.	Moors.	Malays.	Others.	Persons.	Males.	Females.	Europeans.	Burghers.	Sinhalese.	Tamils.	Moors.	Malays.	Others.	Cholera.	Small-pox.	Measles.	Fevers.	Dochmius. Duodenalis.	Diarrhoea and Dysentery.	Accident.	Homicide	Suicide.				Average 1899 to 1905.	1905.	1906.	Average 1899 to 1905.	1905.	1906.
Colombo Municipality.	155869	4726	2429	2297	80	457	2584	610	744	166	85	6890	3928	2962	103	370	3244	1728	1031	175	239	2	11	4	588	85	1267	97	20	8	1428	302	22·5	23·1	27·3	33·4	34·7	39·8
Fort and Galle Face ...	2285	13	5	8	10	—	2	1	—	—	—	54	49	5	16	2	9	14	1	1	11	1	3	—	5	—	3	15	1	1	1	76	7·3	26·3	5·6	13·4	17·5	23·6
Pettah ...	7561	61	30	31	—	3	41	13	3	—	1	124	76	48	1	8	45	49	19	—	2	—	—	—	6	—	11	2	—	1	20	328	7·3	6·9	8·0	13·5	14·3	16·4
San Sebastian ...	9349	232	123	109	2	19	84	9	100	11	7	280	141	139	1	10	88	37	136	5	3	—	—	—	25	—	41	2	—	—	97	418	20·8	17·7	22·7	25·2	23·1	27·5
St. Paul's ...	20260	436	221	215	1	26	131	180	76	5	17	513	285	228	—	18	116	250	103	3	23	—	—	—	40	1	62	1	—	1	147	337	18·0	14·4	19·2	26·5	27·8	22·6
Kotahena ...	33355	920	464	456	2	92	646	99	72	3	6	1013	513	500	3	48	672	172	103	5	10	—	1	—	91	—	217	10	—	2	288	310	18·8	20·4	25·1	28·3	27·5	27·6
New Bazaar ...	17470	521	272	249	2	60	245	39	159	6	10	573	283	290	1	38	204	60	236	11	23	—	—	1	48	1	73	1	—	—	186	357	25·4	23·6	27·0	31·1	31·0	29·7
Maradana (Hospitals)	30381	666	347	319	3	56	528	58	19	1	1	2247	1490	757	46	61	1151	825	61	7	96	—	1	1	155	80	534	51	18	—	140	210	—	—	—	—	—	—
do Exclusive of do ...		900	446	454	15	110	464	65	202	32	12	1039	523	516	12	103	503	130	224	35	32	1	1	1	89	3	156	9	—	1	259	287	23·3	23·1	25 9	26·9	28·8	29·9
Slave Island ...	16927	575	314	261	12	34	216	94	90	104	25	579	306	273	4	29	198	102	113	101	32	—	5	1	72	—	106	2	1	1	179	311	23·4	21·3	30·3	29·4	29·1	30·5
Kollupitiya ...	18281	402	207	195	33	57	227	52	23	4	6	468	262	206	19	53	258	89	35	7	7	—	—	—	57	—	64	4	—	1	111	276	18·8	16·8	18·7	19·4	19·1	21·7

XXVII.—Mortality in the Town of Colombo from Groups of Diseases in 1905 and 1906 and the average in 1899–1905.

Causes of Death.	Total Death. Average. 1899–1905.	1905.	1906.	Mortality per 1000 living. Average. 1899–1905.	1905.	1906.
All Causes.	5326	5902	6890	33·40	34·74	39·80
Zymotic Diseases	1579	1588	2108	9·93	9·35	12·17
Parasitic Diseases	165	240	205	1·04	1·41	1·19
Dietetic Diseases	8	14	8	·05	·08	0·05
Constitutional Diseases	651	738	869	4·07	4·34	5·02
Developmental Diseases	343	299	349	2·16	1·76	2·02
Local Diseases	2040	2374	2547	12·77	13·97	14·70
Violence	88	86	125	·55	·52	0·72
Ill-defined and not specified causes	452	563	679	2·83	3·31	3·92

XXVIII.—Causes of Deaths in each Ward and among each Race in the Colombo Municipality during the year 1906.

CAUSES OF DEATH.	Colombo Municipality.	WARD.										NATIONALITY.						
		Fort and Galle Face.	Pettah.	San Sebastian.	St. Paul's	Kotahena.	New Bazaar.	Maradana Hospital.	Maradana exclusive of Hospitals.	Slave Island.	Kollupitiya.	Europeans.	Burghers.	Sinhalese.	Tamils.	Moors.	Malays.	Others.
All Causes	6890	54	124	280	513	1013	573	2246	1040	579	468	103	370	3244	1728	1031	175	239
I. Specific, febrile or zymotic diseases ...	2108	13	23	75	115	321	140	816	279	196	130	41	111	967	604	266	52	67
II. Parasitic diseases	205	—	1	3	7	25	15	86	19	23	26	—	6	120	55	13	5	6
III. Dietetic diseases	8	1	—	—	1	1	—	2	3	—	—	—	—	3	4	1	—	—
IV. Constitutional diseases ...	869	—	17	30	55	108	66	321	153	65	54	8	60	420	182	141	23	35
V. Devclopmental diseases ...	349	—	7	4	14	68	26	45	90	55	40	3	24	194	44	59	17	8
VI. Local diseases	2547	17	56	140	206	367	271	598	433	209	196	39	142	1135	618	455	71	87
VII. Violence	125	17	3	2	2	12	1	69	10	4	5	3	6	63	28	8	1	16
VIII. Ill-defined and not specified causes ...	679	6	17	26	59	111	54	309	53	27	17	9	21	342	193	88	6	20
I.																		
1. Miasmatic diseases	441	9	3	13	17	57	14	148	69	59	52	23	42	258	57	32	13	16
2. Diarrhœal diseases	1269	4	11	41	62	217	73	534	157	106	64	18	57	536	432	165	25	37
3. Malarial diseases	274	—	5	14	27	39	38	95	31	19	6	—	4	117	90	41	10	12
4. Zoogenous diseases	1	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—
5. Venereal diseases	19	—	—	1	4	3	1	6	4	—	—	—	1	9	7	2	—	—
6. Septic diseases	104	—	4	6	5	5	14	33	18	12	7	—	7	48	17	26	4	3
II. Parasitic diseases	205	—	1	3	7	25	15	86	19	23	26	—	6	120	55	13	5	6
III. Dietetic diseases	8	1	—	—	1	1	—	2	3	—	—	—	—	3	4	1	—	—
IV. Constitutional diseases	869	—	17	30	55	108	66	321	153	65	54	8	60	420	182	141	23	35
V. Developmental diseases ...	349	—	7	4	14	68	26	45	90	55	40	3	24	194	44	59	17	8
VI.																		
1. Diseases of nervous system ...	870	2	16	63	99	153	135	61	160	84	99	10	52	394	177	187	32	18
2. do organs of special sense ...	2	—	—	—	—	—	—	2	—	—	—	—	—	1	1	—	—	—
3. do circulatory system ...	147	9	6	1	16	21	3	32	32	5	22	10	12	61	39	17	4	4
4. do respiratory system ...	943	4	24	59	107	144	103	204	169	86	43	6	52	395	250	174	20	46
5. do digestive system ...	323	1	4	12	15	29	10	153	54	19	26	10	18	161	74	41	5	14
6. do lymphatic system & ductless gland.	4	—	—	—	1	—	—	1	1	—	1	1	—	2	—	—	1	—
7. do urinary system ...	108	—	3	2	11	13	12	46	11	7	3	2	5	55	25	13	5	3
8. do reproductive system																		
a Organs of generation ...	22	1	—	1	1	2	—	15	—	1	1	—	1	14	5	2	—	—
b. Parturition ...	46	—	3	1	7	4	7	13	6	4	1	—	1	16	10	14	4	1
9. do locomotion ...	6	—	—	—	—	—	—	2	—	3	1	—	—	3	2	1	—	—
10. do integumentary system ...	76	—	—	1	3	1	1	69	—	—	—	—	1	33	35	6	—	1
VII.																		
1. Accidents or negligence ...	97	15	2	2	1	10	1	51	9	2	4	2	5	42	24	8	1	15
2. Homicide	20	1	—	—	—	—	—	18	—	1	—	—	—	14	5	—	—	1
3. Suicide	8	1	1	—	1	2	—	—	1	1	1	1	1	3	3	—	—	—
VIII.																		
1. Execution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Ill-defined and not specified causes. ...	679	6	17	26	59	111	54	309	53	27	17	9	21	342	193	88	6	20
Miasmatic Diseases.																		
Small-pox	11	3	—	—	—	1	—	1	1	5	—	2	—	7	2	—	—	—
Measles	4	—	—	—	—	—	1	1	1	1	—	1	2	1	—	—	—	—
Whooping cough	1	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
Mumps	1	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—
Diptheria	1	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—
Simple and ill-defined fever ...	144	2	1	6	9	8	7	12	28	41	30	4	10	79	26	14	7	4
Enteric fever ...	269	3	—	6	6	46	5	133	37	12	21	16	28	166	26	17	6	10
Influenza	9	—	1	1	1	2	1	—	2	—	1	—	1	4	2	1	—	1
Bubonic Plague	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Diarrhœa Diseases.																		
Cholera	2	1	—	—	—	—	—	—	1	—	—	—	—	—	1	1	—	—
Diarrhœa	693	—	5	13	22	126	35	267	106	83	36	3	38	316	218	83	18	17
Dysentery	574	3	6	28	40	91	38	267	50	23	28	15	19	219	213	81	7	20
Malarial Diseases.																		
Remittent fever	174	—	5	13	25	36	36	10	24	19	6	—	4	85	30	35	9	11
Ague	1	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—
Malarial cachexia	99	—	—	1	2	2	2	85	7	—	—	—	—	31	60	6	1	1
Zoogenous Diseases																		
Hydrophobia	1	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—
Venereal Diseases.																		
Syphills	19	—	—	1	4	3	1	6	4	—	—	—	1	9	7	2	—	—
Septic Diseases.																		
Phagedæna	16	—	—	—	—	—	—	16	—	—	—	—	—	12	3	—	—	1
Erysipelas	11	—	—	1	—	5	—	4	1	—	—	—	—	9	1	1	—	—
Pyaemia septicaemia	22	—	2	3	1	—	3	6	4	2	1	—	2	7	6	6	—	1
Puerperal fever	55	—	2	2	4	—	11	7	13	10	6	—	5	20	7	19	4	—

Causes of Deaths in each Ward, &c.—(*Continued.*)

CAUSES OF DEATH.	Colombo Municipality.	WARD.										NATIONALITY.						
		Fort and Galle Face.	Pettah.	San Sebastian.	St. Paul's.	Kotahena.	New Bazaar.	Maradana Hospital.	Maradana exclusive of Hospital.	Slave Island.	Kollupitiya.	Europeans.	Burghers.	Sinhalese.	Tamils.	Moors.	Malays.	Others.
Parasitic Diseases.																		
Thrush	3	—	—	—	—	—	—	1	—	1	1	—	—	2	1	—	—	—
Worms (Animal)	117	—	1	3	6	25	14	5	16	22	25	—	5	80	15	11	4	2
Dochmius duodenalis	85	—	—	—	1	—	1	80	3	—	—	—	1	38	39	2	1	4
Dietetic Diseases.																		
Starvation, want of breast milk ...	7	1	—	—	1	—	—	2	3	—	—	—	—	3	3	1	—	—
Chronic alcoholism	1	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—
Constitutional Diseases.																		
Rheumatism	5	—	—	1	1	1	1	1	—	—	—	—	1	1	—	2	—	1
Rickets	1	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—
Cancer	21	—	1	—	—	4	1	7	6	1	1	—	3	12	3	1	—	2
Tabes of messenterica	44	—	—	1	—	6	3	11	13	5	5	—	4	28	1	10	—	1
Tubercular muringitis (hydrocephalus) ...	3	—	—	1	—	1	1	—	—	—	—	—	—	—	1	2	—	—
Phthisis	725	—	13	26	47	86	58	284	124	48	39	7	47	344	171	110	20	26
Other forms of tuberculosis scrofula ...	2	—	—	—	—	—	—	2	—	—	—	—	—	1	1	—	—	—
Anaemia cholorosis leucocythemia ...	37	—	1	—	2	5	2	6	4	11	6	—	4	15	3	8	3	4
Diabites mellitus	20	—	1	1	4	2	—	7	2	—	3	—	1	13	1	4	—	1
Leprosy	9	—	1	—	1	2	—	1	4	—	—	—	—	5	—	4	—	—
Elephantiasis	2	—	—	—	—	1	—	1	—	—	—	—	—	1	1	—	—	—
Other and undefined constitutional diseases ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Developmental Diseases.																		
Premature birth	69	—	—	—	—	8	—	28	12	12	9	1	5	43	12	4	2	2
Imperforate anus	1	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—
Other congenital defects	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—
Old age	278	—	7	4	14	60	26	16	78	42	31	2	19	150	32	55	14	6
Diseases of Nervous System.																		
Inflammation of the brain or its membranes ...	49	—	2	2	4	3	7	16	7	2	6	1	6	15	15	10	1	1
Apoplexy	23	—	1	1	5	5	3	—	7	—	1	1	4	9	4	4	—	1
Paralysis	61	—	1	3	4	7	8	17	12	3	6	2	4	32	10	11	1	1
Epilepsy	8	—	—	—	1	—	2	1	—	—	4	—	1	1	6	—	—	—
Infantile convulsions	519	1	8	35	48	126	80	6	127	55	33	2	34	263	90	102	22	6
Tetanus	160	—	4	20	35	12	32	13	5	24	15	1	2	48	41	55	7	6
Mania	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	—
Paraplegia, diseases of the spinal cord ...	3	—	—	—	—	—	2	1	—	—	—	—	—	1	1	—	1	—
Other and undefined diseases of brain and nervous system	46	1	—	2	2	—	—	7	2	—	32	3	1	25	10	4	—	3
Organs of Special Sense.																		
Otitis and other diseases of ear	1	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—
Epistaxis and other disease of nose ...	1	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—
Circulatory System.																		
Pericarditis	3	—	1	—	—	1	—	1	—	—	—	—	—	—	3	—	—	—
Valve disease of heart	6	—	—	—	—	—	—	3	2	—	1	1	—	2	2	—	—	1
Angina pectoris syncope	6	1	—	—	—	1	1	2	—	—	1	1	—	2	1	1	1	—
Aneurism	3	—	1	—	—	2	—	—	—	—	—	1	—	1	1	—	—	—
Embolism thrombosis	1	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—
Varicose veins	5	—	—	—	3	—	—	1	1	—	—	—	1	2	2	—	—	—
Other and undefined diseases of heart and circulatory system ...	123	7	5	1	13	17	2	25	29	4	20	6	11	54	30	16	3	3
Respiratory System.																		
Laryingitis	3	—	—	—	—	—	—	3	—	—	—	1	—	2	—	—	—	—
Croup	1	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—
Bronchitis	246	—	4	12	47	29	37	10	42	46	19	—	14	103	44	58	14	13
Asthma	21	—	—	—	—	3	—	3	3	9	3	—	1	11	2	6	1	—
Pneumonia	652	4	19	45	58	110	66	181	121	29	19	5	33	273	195	108	6	32
Pleurisy	13	—	1	2	1	1	—	4	1	2	1	—	1	5	7	—	—	—
Other & undefined diseases of respiratory system ...	7	—	—	—	1	1	—	3	1	—	1	—	2	1	2	2	—	—
Digestive System.																		
Stomatitis	11	—	—	—	3	3	1	2	1	1	—	—	—	5	2	2	1	1
Sore throat	1	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—
Haematamesis	1	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—
Disease of stomach	2	—	—	—	—	—	—	—	1	—	1	1	—	—	—	1	—	—
Enteritis	136	—	1	4	3	12	—	62	38	6	10	3	13	61	33	18	3	5
Ulceration of intestines	5	—	—	—	—	—	—	1	—	—	4	—	—	3	2	—	—	—
Ileus obstruction of intestines	9	—	—	1	—	1	—	6	1	—	—	—	—	4	4	1	—	—
Debility	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stricture of strangulation of intestines ...	3	—	—	—	—	1	—	—	—	1	1	—	—	1	1	1	—	—
Hernia	14	—	—	2	1	1	1	5	1	2	1	—	—	8	1	4	1	—
Fistula	1	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—
Peritonitis	47	1	2	3	1	3	3	27	4	2	1	1	1	29	7	7	—	2
Ascites	3	—	—	—	1	—	1	—	—	1	—	—	—	1	1	1	—	—

Causes of Deaths in each Ward, &c.—(*Continued.*)

CAUSES OF DEATH.	Colombo Municipality.	WARD.										NATIONALITY.						
		Fort and Galle Face.	Pettah.	San Sebastian.	St. Paul's	Kotahena.	New Bazaar.	Maradana Hospital	Maradana exclusive of Hospital.	Slave Island.	Kollupitiya.	Europeans.	Burghers.	Sinhalese.	Tamils.	Moors.	Malays.	Others.
Digestive System. (CONTINUED.)																		
Currhosis of liver	37	—	—	—	1	4	—	31	1	—	—	1	—	23	11	—	—	2
Other diseases of liver	19	—	—	1	4	1	2	7	2	—	2	1	2	8	6	1	—	1
Other and undefined diseases of digestive system ...	34	—	1	1	1	3	2	11	5	5	5	3	2	14	6	6	1	2
Diseases of Lymphatic system and Ductless Gland.																		
Diseases of lempatic system ...	3	—	—	—	—	1	—	1	1	—	—	1	—	1	—	—	1	—
Diseases of spleen	1	—	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—
Diseases of Urinary System.																		
Nephritis	53	—	2	—	9	4	11	18	3	4	2	—	1	26	12	9	4	1
Brights disease	37	—	1	1	—	4	—	23	5	2	1	—	3	20	10	1	1	2
Uraemia	6	—	—	—	2	2	—	—	1	1	—	1	—	2	2	1	—	—
Suppression of urine	2	—	—	1	—	—	—	—	1	—	—	—	—	1	—	1	—	—
Calculus (stone)	1	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—
Diseases of bladder	5	—	—	—	—	3	—	1	1	—	—	1	—	2	1	1	—	—
Other and undefined diseases of urinary system ...	4	—	—	—	—	—	—	4	—	—	—	—	—	3	—	1	—	—
Diseases of Organs of Generation.																		
Ovarian diseases	2	—	—	—	—	—	—	2	—	—	—	—	—	1	1	—	—	—
Diseases of uterus and vagina	10	—	—	1	—	1	—	7	—	—	1	—	1	8	1	—	—	—
Pelvic abscess	1	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—
Diseases of penis testis scrotum... ...	9	1	—	—	1	1	—	6	—	—	—	—	1	4	4	—	—	—
Diseases of Parturition, &c.																		
Puerperal mania	1	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—
Puerperal convulsions	26	—	2	1	3	3	3	8	4	2	—	—	—	9	5	8	3	1
Placenta plaevia flooding	2	—	—	—	—	—	—	2	—	—	—	—	—	2	—	—	—	—
Other and undefined diseases of child-birth ...	17	—	1	—	3	1	4	3	2	2	1	—	1	5	4	6	1	—
Diseases of Organs of Locomotion.																		
Ules necrosis	1	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—
Arthritis ostitis and periostitis ...	5	—	—	—	—	—	—	1	—	3	1	—	—	2	2	1	—	—
Diseases of Integumentary System.																		
Carbuncle	6	—	—	1	—	—	1	4	—	—	—	—	—	3	2	—	—	1
Phlegmon cellutitis	10	—	—	—	—	—	—	9	—	—	1	—	1	6	2	1	—	—
Ulcer bed sore	56	—	—	—	2	—	—	54	—	—	—	—	—	22	30	4	—	—
Pemphigus	3	—	—	—	—	1	—	2	—	—	—	—	—	2	1	—	—	—
Other & undefined diseases of integumentary system.	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—
Accident or Negligence.																		
Fractures, contutions	42	5	—	—	1	1	—	27	5	—	3	—	3	19	10	4	1	5
Gunshot wounds	1	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—
Cut stab	2	—	—	—	—	—	—	2	—	—	—	—	—	2	—	—	—	—
Burn scald	19	—	—	2	—	—	—	14	3	—	—	—	1	7	2	2	—	7
Poison	2	—	—	—	—	—	1	1	—	—	—	—	—	1	1	—	—	—
Drowning	20	9	1	—	—	7	—	—	1	1	1	2	1	8	6	1	—	2
Suffocation	2	1	—	—	—	1	—	—	—	—	—	—	—	1	1	—	—	—
Otherwise	9	—	1	—	—	—	1	6	—	1	—	—	—	3	4	1	—	1
Homicide.																		
Murder. man-slaughter	20	1	—	—	—	—	—	18	—	1	—	—	—	18	1	—	—	1
Suicide.																		
Poison	2	1	—	—	—	—	—	—	—	1	—	1	1	—	—	—	—	—
Hanging	5	—	1	—	1	2	—	—	—	—	1	—	—	3	2	—	—	—
Otherwise	1	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—
Execution.																		
Hanging	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ill-defined and not Specified Causes.																		
General dropy	50	—	3	3	4	17	4	1	12	5	1	—	2	26	15	7	—	—
Debility	544	1	12	21	51	83	47	265	30	21	13	1	12	274	161	77	4	15
Abscess	35	2	—	—	—	6	1	26	—	—	—	8	—	20	4	2	—	1
Tumour	14	—	—	—	—	—	—	12	1	—	1	—	1	10	3	—	—	—
Haemorrhage	26	—	1	2	3	2	2	5	8	1	2	—	6	10	5	2	2	1
Other ill-defined and not specified causes ...	10	3	1	—	1	3	—	—	2	—	—	—	—	2	5	—	—	3

(Form No. 183)

The Municipal Office,
Health Department.

Colombo, , *190*

To.....
No.....

PLEASE note that a sum of Rs. in due for Conservancy of Dry-earth closets at your premises from to end of current month.

R. R. DUNUWILLE,
Secretary, M.C.

Note. The amounts must be paid into this office in advance. The Chairman reserves the right of either suspending the service until such amounts are paid or ordering prosecution for recovery of same under the by-laws published in *Government Gazette* No. 5,520 of December 31, 1897. By-laws 18, 19, and 20 are annexed for your information.

Annexure referred to.

18. Every person so employing a Municipal Officer for the removal of night-soil shall pay to to the said Municipal Council in advance the sum of two rupees per mensem. for each standard bucket in which such night-soil is deposited on his premises for removal by such officer. provided that in the case of any house, building, land, or tenement assessed for Municipal rates at the annual value of less than Rs. 400, the sum payable per standard bucket shall be one rupee only per mensem.

The sum payable if not paid on or before the 10th day of the month in respect of which it is due shall be recoverable as hereinafter provided.

19. Any person committing a breach of any of the foregoing by-laws shall be guilty of an offence and shall be liable on conviction to a fine not exceeding twenty rupees.

20. Any sum payable to the said Council under the foregoing by-laws may if not duly paid be reported to the Police Magistrate or Municipal Magistrate and if after summary inquiry such sum appears to be due such Magistrate shall order the same to be paid by the person liable therefor and the same shall be recovered as if it were a fine imposed by such Magistrate.

(Form No. 575)

COLOMBO MUNICIPALITY.

HALF-YEARLY NOTICE.

To ....

No. .....

PLEASE note that the amount due for Conservancy of dry-earth closets has to be paid into the Municipal Office in advance before the 10th of the month for which it is due, as per by-laws quoted below.

The amount due by you is as follows :—

From ..... to ..... Rs. .....

The Municipal Office,
Public Health Department.
Conservancy Branch.

WM. MARSHALL PHILIP,
Medical Officer of Health.

Colombo, ... , 190

NO FURTHER NOTICE WILL BE SENT.

By-laws referred to.

10. The rates of payment to the said Municipal Council, by any person so employing a Municipal Officer for the removal of night-soil shall be as follows :—

(*a*) In the case of any house, building, land, or tenement assessed for Municipal rates at the annual value of Rs. 400 or more for each standard bucket in which such night-soil is deposited on his premises for removal by such officer at the rate of two rupees every month or fraction of a month.

(*b*) In the case of any house, building, land, or tenement assessed for Municipal rates at an annual value of less than Rs. 400 for each standard bucket in which such night-soil is diposited on his premises for removal by such officer, at the rate of one rupee for every month or fraction of a month.

All such payments shall be made in advance, and every person who has become liable to the payments mentioned in this by-law shall continue to be so liable until he gives notice in writing to the Chairman of the Council that he wishes the services of the Municipal Officer to be discontinued, together with the date from which he wishes such services to be discontinued.

All sums payable under this by-law if not paid on or before the 10th day of the month in respect of which or of any part of which it is due, or in the case of a first application as soon as notice is given the commencement of the service of the Municipal Officer, shall be recoverable as hereinafter provided.

11. Any person committing a breach of any of the foregoing by-laws shall be guilty of an offence, and shall be liable on conviction to a fine not exceeding twenty rupees.

12. Any sum payable to the said Council under the foregoing by-laws may. if not duly paid, be reported to the Police Magistrate or Municipal Magistrate, and if after summary inquiry such sum appears to be due, such Magistrate shall order the same to be paid by the person liable therefore. and the same shall be recovered as if it were a fine imposed by such Magistrate.

(Form No. 22)
May, 06.

Sent only when a new service is started. It is not repeated.

COLOMBO MUNICIPALITY.

PUBLIC HEALTH DEPARTMENT.
Conservancy Branch.

The Municipal Office,

Colombo, , *190*

To.....
No. ....

Memo. of charges for Conservancy of Dry-earth Closet for the month of , *190*

THE amounts herein specified should be paid into this Office in advance (on or before the 10th day of the month in respect of which it is due) in failure whereof the Chairman reserves the right of either suspending the service until such amounts are paid or ordering prosecution for recovery of same under the by-laws published in *Government Gazette.* No. 6,080 of 28th October, 1905. Rules 23 to 25 of Chapter VIII., of the said by-laws is annexed for your information :—

CONSERVANCY.								Commuted payments.		Miscellaneous charges, *i.e.*		TOTAL.	
No. of buckets conserved.				No. of coolies.									
at Re. 1		at Rs. 2		Day at Re. 1		Special at Rs. 15							
Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.

No further Memo. will be sent.

Secretary, M.C.

N.B.—Householders can pay in advance by the quarter or by the year.

Annexure referred to.

23. THE rates of payment to the said municipal council by any person so employing a municipal officer for the removal of night-soil shall be as follows :—

(*a*) In the case of any house, building, land, or tenement assessed for municipal rates at the annual value of Rs. 400 or more, for each standard bucket in which such night-soil is deposited on his premises for removal by such officer at the rate of two rupees for every month or fraction of a month.

(*b*) In the case of any house, building, land, or tenement assessed for municipal rates at an annual value of less than Rs. 400 for each standard bucket in which such night-soil is deposited on his premises for removal by such officer, at the rate of one rupee for every month or fraction of a month.

All such payments shall be made in advance, and every person who has become liable to the payments mentioned in the by-law shall continue to be so liable until he gives notice in writing to the chairman of the council that he wishes the services of the municipal officer to be discontinued, together with the date from which he wishes such services to be discontinued.

All sums payable under this by-law if not paid on or before the tenth day of the month in respect of which or of any part of which it is due or in the case of a first application as soon as notice is given of the commencement of the service of the municipal officer, shall be recoverable as hereinafter provided.

24. On the application of any person employing the services of a municipal officer for the removal of night-soil the services of a day cooly or a special cooly will be given.

The services of the day cooly will be as follows :—

He will be required to attend at the premises of the householder and perform the work specified below for about 15 minutes per diem.

(*a*) He must empty all chamber vessels and the contents of smaller buckets, &c., into a standard bucket or other bucket of no larger size than a standard bucket provided by the householder for the purpose ; (*b*) clean, disinfect (if disinfectants are provided by the housclolder), and replace them in their proper positions ; (*c*) place the standard or other bucket so filled in a convenient and secluded place (this spot must be first agreed upon with the householder), appointed for the purpose so as to be easy of access to the night cooly ; (*d*) fill up all coir dust receptacles with coir dust from the supply delivered by the night cooly ; (*e*) sweep, clean, or flush closets or compartments.

The services of a special cooly will be as follows :—

His services shall be at the entire disposal of such applicant for a period of eight hours per day. This cooly will have to be at his work and leave at a given time to be arranged with the applicant, and will devote the whole of that time to cleansing and keeping latrines and closets clean and attending to all work in connection with the latrines on such premises.

The rates of payment to the said municipal council by any such persons employing the services of a day or special cooly shall be as follows :—

For a day cooly, at the rate of one rupee for every month or fraction of a month.

For a special cooly, at the rate of fifteen rupees for every month or fraction of a month.

All such payments shall be made in advance, and every person who has become liable to the payments mentioned in this by-law shall continue to be so liable until he gives notice in writing to the chairman of the council that he wishes the services of the day or special cooly to be discontinued, together with the date from which he wishes such services to be discontinued.

All sums payable under this by-law if not paid on or before the tenth day of the month in respect of which or of any part of which it is due, or in the case of a first application as soon as notice is given of the commencement of the service of the day or special cooly, shall be recoverable as hereinafter provided.

25. Any sum payable to the said council under the foregoing by-laws may, if not duly paid, be reported to the police magistrate or municipal magistrate, and if after summary inquiry such sum appears to be due, such magistrate shall order the same to be paid by the person liable therefor, and the same shall be recovered as if it were a fine imposed by such magistrate ; and such magistrate may, in addition to making such order, order the person liable to pay a sum not exceeding five rupees by way of costs, such sum to be recovered as if it were a fine imposed by such magistrate.

(Form No. 629)

CONSERVANCY.

REMINDER.

KINDLY remit a sum of Rupees ..... overdue by you on above account from ..... to .....

These dues are payable in advance and it is requested that payment may be made before the ....., otherwise action under the Ordinance will become necessary.

Cheques should be made out in favour of Secretary, Municipal Council.

CYRIL FOENANDER,
Superintendent of Conservancy.

The Municipal Office.

Colombo, ..., 190

S. M. JOHAR, MUNICIPAL PRINTER, COLOMBO, CEYLON.