Annual report on the Medical Department / Sierra Leone.

SIERRA LEONE.

Annual Report

ON THE

MEDICAL DEPARTMENT

FOR THE

YEAR ENDED 31ST DECEMBER, 1910.

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ANNUAL REPORT ON THE MEDICAL DEPARTMENT FOR THE YEAR ENDED DECEMBER 31ST, 1910.

I have the honour to submit the Annual Report on the Medical Department of this Colony for the year 1910.

STAFF.

The Medical Staff of this Colony consisted of the following :—
Principal Medical Officer, Senior Medical Officer, Thirteen Medical Officers, Three Local Medical Officers, and a Senior and Junior Sanitary Officer appointed during the year.

The Junior Staff consisted of five European Nursing Sisters, one Resident and one Assistant Resident Dispenser, Eighteen Male Nurses and Dressers, Eight Female Nurses and Three Probationer Nurses and One Public Vaccinator.

The Clerical Staff consisted of the Chief Clerk and Two Assistants, the Storekeeper and his Assistant.

The following changes, leaves, &c., occurred during the year :—

During my absence from the Colony on leave, viz., from the 18th April to the 11th September, Dr. R. H. Kennan, S.M.O., acted as Principal Medical Officer and Dr. D. Burrows acted as Senior Medical Officer. Also from 1st January to 19th March Dr. Burrows acted as Senior Medical Officer during the absence on leave of Dr. Kennan, S.M.O.

Dr. R. H. Kennan was appointed Senior Sanitary Officer on the 18th May, 1910.

The following Medical Officers returned from leave of absence during the year :—

Drs. C. B. Hunter, R. W. Orpen, W. N. Alexander, J. McConaghy, J. S. Pearson, H. E. Arbuckle, J. C. Murphy, and R. H. Kennan, S.M.O., also Nurse A. McLeod.

The following Officers went on leave :—

Drs. J. Jackson Moore, H. E. Arbuckle, J. C. Murphy, J. S. Pearson, J. F. W. Ward, D. Burrows, W. N. Alexander, W. A. O. Taylor, C. H. Allan, E. W. Wood-Mason, also Nurses McLeod, Stevens and Micklethwaite.

In the Junior Staff the following returned from leave of absence during the year :—

Dispensers D. M. Thomas, H. E. Frazer, M. P. Neville, O. E. King, M. N. Lardner, J. J. Thomas, E. H. Beccles, T. L. Hook, Nurses W. B. Hughes, Betsy Browne, Lucinda Johnson, P.Q.A., John and Matilda Boston.

The following went on leave :—

E. G. Luke, E. F. Smith, T. C. Williams, and Nurses Leah Cline and Janet Sibthorpe.

Clerical Staff.—Mr. M. St. G. Auber, Second Clerk on Leave, Mr. J. H. Thompson, Assistant Store Keeper, on leave and returned during the year.

Promotions.—Dispensing Staff.—Messrs. W. B. Hughes and P. Q. A. John, 1st Class Nurses, were promoted Third Class Dispensers.

Transfers.—Dr. C. B. Hunter as S.M.O. to the Gold Coast on promotion. Dr. J. Jackson Moore, Medical Officer to Northern Nigeria.

Invalidings.—Drs. J. S. Pearson and W. N. Alexander were invalided during the year.

Appointments during the year, W.A.M.S.—Drs. W. A. Nicholson, J. Y. Wood, H. C. Jeffreys (temporary), and Dr. J. B. H. Davson, as Senior Medical Officer, reappointed from the Gold Coast.

Resignations.—Dressers S. J. Aitkins, J. L. Priddy, H. King, Dispenser E. H. Beccles, and Nurse M. Penick and C. McFoy.

Termination of Services.—European Nursing Sister Miss I. Stevens, owing to ill-health, Dressers W. L. Massaquoi, J. J. Wellington, U. A. Edwin, M. A. John, and Probationer Nurse R. C. Davies.

FINANCIAL STATEMENT.

Revenue.

	£	*s.*	*d.*
Sale of Medicine	98	17	8
Nursing Home Receipts	233	5	0
Hospital Receipts	196	6	2
Maintenance of Lunatics from other Colonies	553	15	3
	£1,082	4	1

This shows an increase in the Receipts of £190 18s. 1d. over those for 1909.

Expenditure.

	£	*s.*	*d.*
Personal Emoluments, &c. ...	18,310	11	7
Provisions and Necessaries ...	3,866	6	10
Hospital Equipment	264	4	9
Medicines, &c.	1,278	12	1
	£23,719	15	3

There is an increase of £2,628 12s. 4d., due chiefly to the new appointments of Sanitary Officers, and an Assistant European Matron for the Colonial Hospital, also expenditure in connection with the Yellow Fever outbreak.

PUBLIC HEALTH.

The Colony.—The approximate population of the Colony was 75,051. The deaths registered numbered 1,550 and the births 1,152 showing a death rate of 20 per 1,000 and a birth rate of 15 per 1,000. Registration however is not compulsory and these figures cannot be taken as reliable.

In Freetown registration of births and deaths is compulsory and therefore more reliable. From the Census returns of 1911 it is shown that the population of the town has decreased by 489, so that it must be concluded that the estimated population for 1909 was too high and this fact combined with the undoubted greater amount of illness accounts for the marked difference in the death rate for 1910.

The population for Freetown calculated on the recent Census returns was 34,010.

The births registered numbered 581 and the number of deaths was 936, these give a birth rate of 17 per 1,000 and a death rate of 27 per 1,000 of the population.

The chief causes of death were as follows:—

Malarial Fevers	122
Nervous System	156
Respiratory System	117
Digestive „	190
Circulatory „	52
Genito-Urinary	23
Debility...	80
Premature Births	48
Tubercle	24
Unclassified	42

There were 10 deaths from Yellow Fever, viz.:—

5 Europeans.
3 Syrians.
2 Natives.

as well as several suspicious cases that recovered. The first case occurred early in May and the last on the 22nd September. Fumigation of houses, screening of patients in mosquito proof cages, and rigorous measures directed against the propagation of stegomyia were carried out from the beginning and with success, under the able direction of Dr. Kennan who was at the time Acting Principal Medical Officer.

Of the total deaths registered 214 occurred under the age of one year, which gives an infantile death rate of 368 per 1,000 births, a rise of 24 on that for the previous year.

The infantile death rate for the past nine years being as follows:—

Year ...	1902	1903	1904	1905	1906	1907	1908	1909	1910
Rate ...	466	471	388	461	434	357	351	344	368

HEALTH OF EUROPEAN RESIDENTS.

The health of Europeans was not so satisfactory as in 1909, the death and sick rates being decidedly higher. An outbreak of Yellow Fever in Freetown was the chief cause of this. Blackwater Fever was also unusually prevalent, there being nine cases treated at the Nursing Home, with one death.

The total number of Europeans resident in the Colony and Protectorate during the year was 831, made up as follows :—

Officials	171
Military	361
Commercial, &c.	299
	831

There were 15 deaths among these, 13 in Freetown and 2 in the Protectorate. These were due to the following causes :—

Yellow Fever	5
Blackwater Fever	4
Pernicious Malarial Remittent (Hyperpyrexia)	1
Dysentery	1
Drowning	1
Septicæmia (wounds caused by Buffalo) ...	1
Heart Disease	1
Debility	1

The following table gives a comparative Statement of European deaths during the past 10 years :—

Year.	Landed from Vessels.		Protectorate.		Colony.		Military (Freetown).		Total.
	Climatic.	Otherwise.	Climatic.	Otherwise.	Climatic.	Otherwise.	Climatic.	Otherwise.	
		‡	‡	‡					
1901 ...	Nil.	—	—	—	5	2	3	Nil.	10
1902 ...	3	—	—	—	3	Nil.	1	1	8
1903 ...	2	—	—	—	2	2	2	3	11
1904 ...	3	—	—	—	2	3	2	2	12
1905 ...	3	—	—	—	2	2	1	Nil.	8
1906 ..	3	—	—	—	2	1	1	1	8
1907 ...	2	—	—	—	3	3	2	3	13
1908 ...	1	—	—	—	1	6	3	2	13
1909 ...	3	—	—	—	3	Nil.	Nil.	Nil.	6
1910 ...	Nil.	Nil.	2	Nil.	7	2	2	2	15

‡ Not previously recorded.

OFFICIAL SICK RATE.

The total official strength for the year was :—

Europeans	171
Natives	946
Total	1,117

Among the former there were 83 admissions on the sick list with 2 deaths, and among the latter there were 589 admissions with 10 deaths.

The official sick rate for Freetown for the past five years is shown in the following Tables :—

ALL OFFICIALS.

	1906	1907	1908	1909	1910
Total number on sick list	308	372	405	569	672
„ of days on sick list ...	2,299	2,483	2,099	3,621	3,542
Average daily number on sick list ...	6·28	6·80	5·78	9·90	9·70
„ number of days on sick list ...	7·46	6·67	5·16	6·39	5·27

EUROPEAN OFFICIALS.

Total number on sick list	68	73	60	71	83
„ of days on sick list ...	531	561	305	512	606
Average daily number on sick list ...	1·45	1·53	·83	1·40	1·66
„ number of days on sick list ...	7·80	7·68	5·08	7·21	7·30

NATIVE OFFICIALS.

Total number on sick list	240	299	245	498	589
„ of days on sick list ...	1,763	1,922	1,787	3,109	2,936
Average daily number on sick list ...	4·84	5·26	4·89	8·51	8·04
„ number of days on sick list ...	7·36	6·42	5·17	6·24	4·98

The following deaths and invalidings occurred among Officials (Colony and Protectorate):—

EUROPEANS.

Deaths	2
Invalidings	8

Causes of Deaths:—

Blackwater Fever	}	Colony.
Drowning	}	

Causes of Invalidings:—

Diarrhœa	1
Chololithiasis	1
Pleurisy...	1
Hemiplegia	1
Blackwater	2
Acute Rheumatism	1
Alcoholism	1

NATIVES.

Deaths	10
Invalidings	Nil.

Causes of Deaths:—

Dysentery	1
Hepatitis	1
Yellow Fever	1
Pneumonia	2
Gastritis	1
Anaemia	1
Bronchitis	2
Oedema of foot...	1

The percentage of working days lost to the Government through the ill-health of European Officials was as follows:—

The total number of European Officials resident in the Colony and Protectorate was	171
The total number of days these were resident was	28,244
Number of days spent by them on the sick list was...	615
The percentage of days per head on the sick list was	1·60
Average daily number resident	104

There were however 2 deaths and 8 invalidings to England.

VACCINATION.

This was carried on fairly regularly during the year, throughout the Colony and Protectorate, but, I have to note, not with quite the same success as in the previous year. The results were as follows:—

Total Vaccinated.	Successes.	Failures.	Not Seen.
6,536	4,437 (67%)	890 (13%)	1,209 (18%)

SMALL POX.

The Colony and Protectorate remained free from any epidemic outbreak of this disease during the year.

Sporadic cases however occurred at Bo, York and Freetown. In all only 4 cases were reported

QUARANTINE.

During the year the Quarantine station was opened once for the isolation of persons landed from suspected ships arriving from Sekondi during the Yellow Fever outbreak at that place. 51 persons were isolated at the station during the period it was open, and no cases of illness occurred amongst them.

YELLOW FEVER.

An outbreak of this disease occurred. The first case came under observation in May and the last case in September. There were in all 13 diagnosed cases with 10 deaths, and 11 suspicious cases with 1 death.

The nationality of the patients is shown here:—

	Diagnosed Cases.		Suspicious Cases.	
	Deaths.	Recoveries.	Deaths.	Recoveries.
European	5	3	Nil.	8
Native	3	Nil.	,,	Nil.
Syrian	2	,,	1	1

It is quite possible that other cases occurred among the native population, but being of a mild form no application was made for medical assistance, and such cases not having come under medical observation no record of them was possible.

Medical Officers have been instructed to be on the look out for suspicious cases of fever and to take careful notes of all such cases and send in reports on them. I am of opinion that this disease is of rare occurrence in epidemic form in the Protectorate.

SLEEPING SICKNESS.

Though Medical Officers have been on the special watch for this disease only one diagnosed case, and three suspicious cases were reported from the Protectorate and three suspicious cases in the Colony. From the reports of Medical Officers I am inclined to think that human Trypanosomiasis

is at least not on the increase in Sierra Leone. Regulations for checking the introduction of the disease by Shipping have recently been brought into force, the following is an extract from these regulations:—

"Whereas by Section 57 of the Public Health Ordinance, 1905 (No. 15 of 1905), it is provided that the Governor-in-Council may from time to time make regulations as to the said Council may seem fit with a view to the treatment of persons affected with epidemic, endemic, or infectious disease and preventing the spread of such disease as well on the seas, rivers and waters of the Colony as on land. And whereas it is desirable to take measures for preventing the spread of Sleeping Sickness in this Colony. Now, therefore in pursuance of the said section it is hereby ordered as follows:—

1. "On boarding a vessel arriving in the Port of Freetown the Harbour Master shall at the request of the Principal Medical Officer ascertain from the Master of such vessel whether the condition of any person on board, who is being landed at the Port of Freetown, is such as to render it advisable that he should be examined by the Principal Medical Officer before being allowed to be landed, with a view of ascertaining whether he is suffering from Sleeping Sickness and, if the Harbour Master ascertains that any such person (in these rules referred to as a suspected person), is on board such vessel, he shall instruct the Master of such vessel that such suspected person shall not be allowed to leave the vessel, until permission in writing in that behalf has been granted by the Principal Medical Officer, and the Harbour Master shall at once report the circumstances to the Principal Medical Officer.

2. "The Principal Medical Officer shall at once go on board such vessel and shall examine all such suspected persons and, if on examination the Principal Medical Officer believes any suspected person to be suffering from Sleeping Sickness, it shall be unlawful for such person to land at such Port without the permission of the Principal Medical Officer; but the landing of such person may be permitted by the Principal Medical Officer on an undertaking being given in writing by such person that he will remain under observation in segregation, or isolation, or other condition, and for such time as may be judged necessary at the time, or subsequently, by the Principal Medical Officer.

3. "If the Master of a vessel shall refuse to answer, or shall wilfully give a false answer to, any necessary question put to him by the Harbour Master so as to enable the Harbour Master to obtain the information required by him in pursuance of Rule 1, he shall be liable on summary conviction to a penalty not exceeding £50 or to imprisonment, with or without hard labour, for a period not exceeding six months.

4. "If any suspected person shall land or attempt to land before being examined by the Principal Medical Officer, or after being examined by the Principal Medical Officer shall land or attempt to land without the permission of the Principal Medical Officer, or having received such permission shall refuse to remain under observation or segregation, or isolation or other condition and for such time as the Principal Medical Officer shall judge necessary at the time or subsequently, he shall be liable on summary conviction to a penalty not exceeding £50 or to imprisonment, with or without hard labour, for a period not exceeding six months.

5. "If any person shall permit, assist, council, procure or command any suspected person to commit any of the acts set out in the preceding Rule, he shall be liable on summary conviction to a penalty not exceeding £50, or to imprisonment with or without hard labour, for a period not exceeding six months.

6. "No suspected person shall be allowed to leave the vessel before payment has been made or guaranteed to be made to the Principal Medical Officer of the amount payable in accordance with the scale shown in the Rule next following for the maintenance of such suspected person while under observation as aforesaid."

* * * * *

Leprosy.—From the observations of the Medical Officers, this seems to be most prevalent in the Karene and Kaballa districts, in both of which several cases were met with during patrols. In every instance advice was given as to the necessity for segregation, which the Chiefs promised to follow.

Goitre.—This condition is also reported as being fairly common in certain localities in the Karene and Kaballa districts, several cases being met with during the sanitary patrols of the Medical Officers.

Syphilis.—This disease is met with throughout the country, but from the comparatively small number of cases that come up for treatment I am not in a position to say that it is prevalent to any alarming extent.

371 cases were treated in the various hospitals and dispensaries, chiefly of the tertiary variety.

Beri-Beri.—As will be seen in the special reports on the Colonial Hospital, Freetown, and the Kennema and Daru districts, several outbreaks of Beri-Beri occurred during the year, and the following number of cases came under treatment at the different places:—

Colonial Hospital, Freetown ...	27	Cases.
Kennema Prison	7	,,
Daru Barracks (W.A.F.F.)	10	,,

In each case the incidence of the disease was put down to the use of imported (Indian) rice. Owing to the great scarcity of native rice during a part of the year (May to September), large quantities of rice, chiefly Indian, had to be imported, and it is a notable fact that where this rice was freely used by the people Beri-Beric symptoms became prevalent, though Beri-Beri is not, under normal condition, often met with here.

It is also remarkable, as mentioned by Dr. Davson in his remarks elsewhere, that in the gaol, where there was very little imported rice used, there were no cases of the disease. These facts tend to the conclusion that the imported rice contained the germ or poison of Beri-Beri, though to ordinary inspection it appeared to be of good quality.

SANITATION IN FREETOWN.

The Sanitation of Freetown was as usual under the management of the Sanitary Department of the City Council, to which body the Principal Medical Officer is Medical Officer of Health. During the first half of the year there were only 50 labourers employed for scavenging duties, but later on, owing to the presence of Yellow Fever, it was thought advisable to increase the number to 200, and this was done at the expense of the Government as vigorous anti-Stegomyia measures were considered necessary. A large proportion of the refuse gathered in the town had to be removed by manual labour, owing to the insufficient number of carts employed, viz.: 2 bullock carts and 1 mule cart. This is a serious defect in the important work of scavenging in a large

tropical town. Some difficulty having arisen in the disposal of tin and bottle rubbish by burial, as was formerly the practice, owing to the rocky nature of the remaining available sites around the town, two canoes were provided by the Government for the disposal by dumping in the sea of all such refuse, and this method has proved a great success.

The following is some of the work done by the Sanitary Inspectors in the prevention and detection of nuisances :—

Number of Summonses	169
Number of Convictions	136
Amount received in fines	£36 11 8
Amount received for neglected lots cleaned by Sanitary Department	£3 10 0
Number of persons arrested for committing nuisances...	30
Number of Warning Notices served for abatement of nuisances, &c....	3,477
Number of Notices re Cesspits ...	305
Number of dead animals found and buried	44
Quantity of diseased meat seized and destroyed	1,058 lbs.

During the year the Government carried out the following minor sanitary improvements :—

New Incinerators	7
New Dust-bins	24
New open-air Public Laundries	6

This brings the total of these to : Incinerators 12, Dust-bins 44, Laundries 12. A few more of each are still required, and it is proposed to carry on their construction during 1911 ; it is also intended to have receptacles of expanded metal of suitable form placed in the streets for the collection of old tins and bottles, &c. The new Fish Market was opened during the year ; it affords a more sanitary method for the disposal of fish by sale than the former system of exposing for sale this universal article of food in any vacant bit of road or footpath in the town. The drawing up of a comprehensive plan for the reconstruction of the drains and streets of Freetown is under consideration, but this will not be allowed to interfere with the carrying out of the minor sanitary improvements in drainage, &c., of the town that are at present considered of urgent importance, and which will to a large extent assist in the mosquito extermination-campaign now being fought.

Anti-Malarial Measures.—These were followed out as usual during the year, and consisted of the following :—

1. The collection of all waste tins and bottles and other rubbish likely to act as mosquito breeding grounds, and their disposal by dumping in the sea at a suitable distance from the shore, two canoes being provided for this purpose.

2. The periodical oiling of stagnant pools.

3. Regular attention to the various water courses, to keep their channels free from obstructions, so as to prevent the formation of stagnant pools in them.

4. House to house inspection of premises for the detection of mosquito larvæ in water receptacles. This necessary work was placed on a satisfactory footing by the appointment in October of a Junior Sanitary Officer, who carried out strict larvæ inspections under the Public Health Amendment Ordinance No. 16 of 1910, by which the presence of larvæ in any water vessel in a compound renders the occupier liable to be dealt with summarily, whether a notice has been served to abate the nuisance or not. The result of the enforcement of this new law was an early and marked reduction in the number of mosquito breeding compounds, and a continuance of the campaign now being carried on will be of undoubted benefit to the health of Freetown.

5. The following works were executed during the year by the Public Works Department at a cost of £2,564 19s. 1d., and, connected as they are with the drainage of the town, must be included under the head of anti-malarial measures :—

(*a*)	Length of new masonry drains and concrete culverts constructed	2,562 lin. ft.
(*b*)	Non-masonry drains, *i.e.*, cut in laterite or earth	11,525 ,, ,,
(*c*)	Culverts repaired and cleared	167 ,, ,,
(*d*)	Length of streets ballasted and levelled up	8,200 ,, ,,
(*e*)	New culverts constructed	29
(*f*)	Draining of public standpipes	

6. A new Public Health Amendment Ordinance, dealing specially with the presence of mosquito larvæ in premises, came into force on the 30th September, 1910 ; a copy is attached below. Under this Ordinance from the 30th September to 31st December there were 42 persons convicted for having larvæ in water receptacles on their premises, paying in fines £10 5s. 0d. Under the Principal Ordinance (Public Health) there were during the year 27 convictions for defective mosquito proof covers to barrels, and the amount paid in fines was £11 17s. 6d.

In reference to the removal of tin and bottle refuse, there were 1,021 canoe loads removed from the town and disposed of by dumping in the sea, the capacity of the canoes by measurement being 2 tons. This represents 2,042 tons of this variety of rubbish disposed of during the year.

AN ORDINANCE TO AMEND THE PUBLIC HEALTH ORDINANCE, 1905, No. 16 OF 1910.

Be it enacted by the Governor of the Colony of Sierra Leone, with the advice and consent of the Legislative Council thereof, as follows :—

1. This Ordinance may be cited as the Public Health Amendment Ordinance, 1910.

2. Notwithstanding anything to the contrary contained in the Public Health Ordinance, 1905 (hereinafter called the Principal Ordinance), where mosquito larvæ are found by the Sanitary authority in any collection of water or in any well, pool, channel, barrel, tub, bucket, or any other vessel in any premises, the occupier or owner in occupation of the premises on which the nuisance arises shall be liable on summary conviction to a fine not exceeding twenty shillings for each offence, whether any such notice requiring abatement of nuisance or nuisance order, as in the Principal Ordinance mentioned, is or is not served or made upon him.

3. This Ordinance shall be brought into operation by the Governor-in-Council by order from time to time, and it shall be lawful for the Governor-in-Council by such order to apply this Ordinance or any part thereof to any town or village of the Colony with or without conditions.

4. Notwithstanding the provisions of Section 3, this Ordinance shall, until otherwise ordered by the Governor-in-Council, apply to the City of Freetown, subject to the proviso that no proceedings under the provisions of Section 2 hereof shall be taken in respect of mosquito larvæ found by the Sanitary Authority in any well, pool, or channel in rock or earth till the same have been ordered by a further order of the Governor-in-Council. And subject to the further proviso that nothing in this Section or in this Ordinance shall prevent any proceedings being taken in respect of the nuisances liable to be dealt with summarily under the Principal Ordinance or for the penalties imposed by that Ordinance, on account of the existence of such nuisance.

Passed in the Legislative Council this Twenty-seventh day of September in the year of our Lord One thousand nine hundred and ten.

(Sd.) F. A. MILLER,
Clerk of Legislative Councils.

There are two important points in connection with the sanitation of Freetown which I consider require special and early attention, particularly as they are intimately connected with mosquito extermination measures :—

A.—Improving the Water Supply.

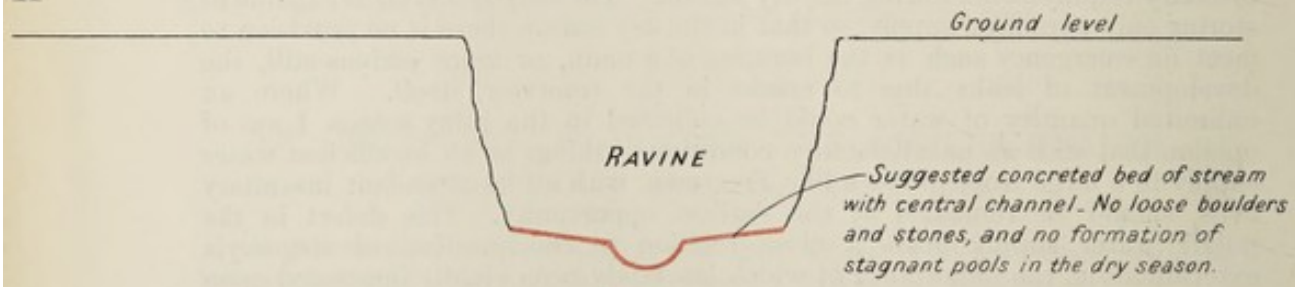
The water supply at Freetown is at present only just sufficient to meet the ordinary requirements during the dry season. The only reservoir is capable of storing only two days' supply, so that in the dry season there is no provision to meet an emergency such as the bursting of a main, or more serious still, the development of leaks due to cracks in the reservoir itself. Where an unlimited quantity of water could be collected in the rainy season I am of opinion that such an unsatisfactory condition of things as an insufficient water supply in a large tropical town like Freetown, with all its attendant insanitary evils, should be remedied at the earliest opportunity. This defect in the public water supply bears a close relation to the question of stegomyia extermination, the importance of which has lately been vividly impressed upon us by an outbreak of Yellow Fever in the town, as it means the continuance of the presence of wells and of an insufficient number of public stand-pipes around the town which in its turn means the keeping of water receptacles by householders. These receptacles, barrels, French jars, drums, tins, &c., have been proved to be the chief source of mosquito larvæ at the present time, resulting in numerous summonses under the new "larvæ" Ordinance, though the Government has arranged to assist the public by the supply of taps and mosquito proof covers at cost price (4s. 7d. to those who can pay, but free to the poor). It would, under the present circumstances, be a hardship on the public to insist on the abolishing of all wells or forbid the keeping of water receptacles in houses, but if the pipe water supply were increased so as to amply meet the requirements of the locality, the prohibition of both could be rightly insisted upon.

B.—Concreting and Canalising of the Water Courses.

There are three large streams running through the town, viz. :— the George River, Sanders brook and Nicol brook, with two or three less important ones ; these have very irregular courses, and run in small ravines varying from a few feet up to ten or fifteen feet deep, the sides and floors of these ravines or natural channels are extremely jagged and uneven, the floor or bed consisting chiefly of large boulders and loose stones of varying sizes. In the rainy season these water courses are frequently and thoroughly flushed from side to side by the rush of water down the mountain sides, every pool and crevice being scoured out, but in the dry season, when the flow of flood water, owing to the absence of heavy rain, falls to a negligible quantity, the total amount of water flowing in them becomes reduced to a mere trickle, and the numerous cul-de-sacs formed by the boulders and stones become so many stagnant pools wherein mosquitos breed. This is another source of mosquito breeding grounds that could and should be got rid of. The only efficient method of doing this would be, in my opinion, by a thorough scheme of concreting (with a central channel) of the bed of each stream within the city boundaries. Below is a rough sketch showing the natural bed of the streams (1) and my proposed concrete bed (2).

I

II



I draw special attention to the above two points in connection with the campaign now being waged against the carriers of Yellow Fever and Malaria, being convinced that action on the lines suggested would result in immediate and certain reduction in the number of both artificial and natural breeding grounds for mosquitos as well as in great benefits to general sanitation.

The following extracts of reports on the Freetown Water Supply by experts corroborate my views on the subject as given above :—

Extracts from joint report of the Directors of Public Works and the Directors of Freetown Water Works, dated 23rd of April, 1908.

* * * * *

8. It is only during the last two months of the dry season that there is any actual shortage of water, but at that time it must be remembered that the present supply can only be considered a "hand to mouth supply." There is no margin, neither is any allowance made for an increase in the population or extension of the city boundaries.

9. If an accident happened to either the service reservoir or mains, the city would be without water as there is no storage to fall back upon.

Extract from the report of Mr. O. Chadwick, the Consulting Engineer, dated May, 1899.

* * * * *

7. I am of opinion that a storage reservoir or reservoirs capable of containing singly or jointly about 30 million gallons should form part of the original scheme. The exact requisite volume of storage cannot be determined at present, but it is probable that the above-mentioned size would be ample. Without some storage it is impossible to predict the extent to which the dry weather flow, and consequently the supply, may dwindle down during droughts. If, therefore, there were no storage, interruptions to the supply might occur, involving the most serious inconvenience, and danger to health would be the result.

Extract from Mr. A. E. Quill's report, dated 9th December, 1906.

* * * * *

14. It must be borne in mind that the city depends entirely for its supply on the water which flows from the streams already mentioned. There is no storage to fall back on.

* * * * *

It should be understood that the reservoir on Tower Hill is not a storage reservoir, but a service reservoir holding 2 days' supply, as a reserve not for drought but for extinguishing fires, serving the distributary mains and collecting the night flow from the streams, which, without it, would run to waste.

THE TEACHING OF HYGIENE.

This subject is now being regularly taught in the Secondary Schools, and at the annual examination in December the results obtained were as follows :—

Of the 107 Candidates who sat for the examination

2	obtained	between	60	and	70	per	cent.
9	,,	,,	50	,,	60	,,	,,
15	,,	,,	40	,,	50	,,	,,
17	,,	,,	30	,,	40	,,	,,
23	,,	,,	20	,,	30	,,	,,
37	,,	,,	10	,,	20	,,	,,
4	,,	under 10 per cent.					

Mr. Nicholas Taylor, of the Church Missionary Grammar School, obtained the first prize—£5, and the seven next best Candidates received £2 each.

The Grammar School	presented	21	Candidates.
Educational Institute	,,	24	,,
A.M.E. Seminary ...	,,	13	,,
Wesleyan High School	,,	20	,,
Albert Academy ...	,,	29	,,
		107	

There were seven more than the previous year. The five Schools received a bonus of £20 each.

The answering was not so good as that of the previous year, but the teachers seem just as eager in instructing their pupils. Under the new education scheme it has been arranged to make the teaching of Hygiene compulsory in all Schools receiving a Government Grant.

HILL STATION.

The health conditions of Hill Station have during 1910 continued to be quite satisfactory. There were during the year 79 residents (counting those who stayed for one month and upwards as residents), an increase of 25 over that for the previous year. With this large addition to the number of residents it is gratifying to note that there was an increase of only two in the number of admissions on the sick list.

The total number of cases on the sick list was 18. Of these 6 were due to climatic causes :—

Malarial Fever	5
Yellow Fever (suspected)	1

In three of the cases of Malaria Fever, infection was contracted during visits to out-stations in the Protectorate. Two of the cases occurred in the Military residents who worked in Freetown daily. The suspected case of Yellow Fever occurred in a newly arrived official who frequently had to remain in his office overtime, owing to extra work, and was not, in consequence, able to leave Freetown until late in the afternoon.

The other cases treated were only of minor importance.

The residents were made up as follows :—

Officials	37
Military	36
Non-Officials	6
	79

On the 31st December, 1910, there were 23 Officials and 18 temporary (Military) tenants (wives included) occupying the 21 Government bungalows.

The only non-Official residences up to the present are the General's, the Cable Company's, and the Wesleyan Mission's, none of the Mercantile firms of Freetown having so far taken the advantage of the undoubted claims of Hill Station as a healthier place of residence for Europeans as compared with the climatic and present sanitary conditions prevailing in the town.

It will be seen that the Military residents almost equalled the Officials. This is due to the fact that bungalows vacated by Officials going on leave are immediately rented to Military men, who are always keen to take advantage of the pleasant climate of Hill Station with its convenient Mountain Railway.

In my opinion this renting of the Official quarters at Hill Station is being overdone, and this was especially so during the past year, when several Government Officers were compelled to reside in the Rest House in Freetown for prolonged periods, great personal inconvenience and discontent being caused thereby, while several bungalows were at the same time occupied by temporary tenants. Rest Houses, as everyone knows, are not intended to be used as quarters, and it is unreasonable to expect an officer to carry on his duties satisfactorily under such unsettled and disturbing conditions, particularly when quarters could have been available at Hill Station.

Another result of this temporary tenant system is the growing tendency of officials to take in one or more lodgers to share their quarters, and when this means that three adults occupy a two-roomed bungalow it is time, I consider, that some steps should be taken to prevent such over-crowding, as I cannot imagine that the attic and the verandah were ever intended to be used as bed rooms or as regular living rooms.

I also think that the renting of temporarily vacant bungalows should be regulated so as to prevent any inconvenience to Colonial Officials, as mentioned above, for whom they are built. I recommend that in future a sufficient number of bungalows vacated by Officials going on leave should be kept unrented to meet the following important requirements, viz. :—

(*a*) For the use of Officials detailed temporarily for duty at Headquarters.

(*b*) For the purpose of the periodical painting and repairs which is so essential for the preservation of the building, and which should always be done during an Officer's absence on leave.

Owing to the increase in the European staff lately several additional bungalows are now required, and the building of some of these should be taken in hand without delay to meet present requirements.

Water Supply.—The Water Supply of the Settlement remains in the same uncertain state as in the previous year. For three or four months between January and May our position as regards this all-important question is certainly precarious, owing to the defective storage arrangements. With the present and prospective still further increase in the number of residents, something must be done to make the water supply more certain and more ample than it is at present during the dry season. With an annual rainfall of 160 inches, it only requires efficient means of storage to secure an abundant supply during the dry season for all purposes. This is impossible with the present defective reservoirs, which seem to have been of very little use since their construction, and the periodical patching up which they undergo does not seem to improve their effectiveness, as this season our shortage difficulties began earlier than ever. This serious drawback to living at Hill Station will certainly deter other Europeans who may desire to do so from selecting it as a place of residence. The appearance of the compounds show that the permanent residents continue to take an interest in them. Defects in some of the surface drains and the waste pipe connections from bath rooms, &c., were pointed out and partly remedied during the year; many of the latter still remain, however. Clearing the bush and undergrowth around the Settlement was carried on steadily during the year by the Sanitary gang, and

there is now a fairly large area cleared of excessive vegetation. The sanitary arrangements worked satisfactorily during the year, with the exception of the water supply as already referred to above. Means of exercise and recreation (these may properly, I consider, be included under sanitation in such a Settlement as Hill Station) owing to the hilly and rocky nature of the land in the immediate neighbourhood, are limited, lawn tennis and croquet being the only games at present played, with a nine hole golf course three miles away at the foot of the hills; this, however, can only be played on during the dry season. A third tennis court has been approved of.

A small Club House or pavilion is very much needed near the tennis courts. This would be particularly useful during the rainy season, as it would obviate tennis players and others running off to their quarters whenever a sudden shower or tornado comes on; this is a rather frequent occurrence during the rains, and often means a severe wetting or getting very hot in the run up hill to ones bungalow, which in either case means the risk of a chill.

HOSPITALS AND DISPENSARIES.

COLONIAL HOSPITAL, FREETOWN.

(*By* Dr. J. B. H. Davson, S.M.O.)

During the year 1910 the following Medical Officers were attached to the Colonial Hospital for varying periods:—Drs. C. B. Hunter, D. Burrows, J. S. Pearson, E. H. Mayhew (temporarily employed), Dr. Davson, and Dr. Renner in charge of the Female Division.

The Matron, Miss Micklethwaite, superintended the Maternity Ward and the Nursing Staff generally until she went on leave in October, when she was relieved by Miss Drewe.

The Matron was assisted in her work by a European Nurse, Miss Cooke, from March 26 till the end of the year.

The resident native staff consists of the Resident Dispenser and his Assistant, and 18 Male Nurses and Apprentices, two of whom are attached to the Nursing Home.

Attached to the Female Division are 11 Female Nurses and Probationers. The quarters provided for these residents are inadequate.

Isolation Arrangements.—Owing to the outbreak of Yellow Fever in the town during the month of May, it was found necessary to make arrangements for the isolation of patients suffering from, or suspected of suffering from this disease.

For this purpose the Matron's Cottage in the Hospital enclosure was divided into two rooms containing one bed each and was set apart for Europeans, a house in the town being rented for the accommodation of the Matron and the European Nurse.

Between the beginning of June and the end of September 14, patients were admitted into this cottage, their illness being diagnosed as follows:—

Yellow Fever	... ...	3 cases.
Malarial ,,	... ...	8 ,,
Pleurisy	... ...	1 ,,
Influenza	... ...	1 ,,
Rheumatism	... ...	1 ,,

Of these 9 recovered and returned to work.
4 ,, ,, were invalided.
1 died (Yellow Fever).

For the purpose of isolating natives at the Hospital, eleven beds on the male side and five beds on the female side were provided with mosquito netting.

Four cases admitted into these beds were diagnosed as Yellow Fever, three of them died and the post-mortem examination confirmed the diagnosis.

Cases Treated.—The number of patients admitted into the Hospital this year, *i.e.*, 1,500, is the largest since the year 1904, when it reached a total of 1,098. No doubt the presence of trained European nurses gives confidence and encourages patients to come.

The number of Out-patients treated has increased from 27,474 last year, to 31,795 in 1910.

This includes Government Officials of all grades whose numbers increase annually. Indeed, there are at present about 670 native officials who, with their wives and children, may receive free treatment in Freetown, as compared with about 440 ten years ago. Greater accommodation in the wards is needed for the satisfactory treatment of these.

Beri-Beri.—Between the months of August and November 27 cases of Beri-Beri were admitted to Hospital. They were characterised by the presence of a very marked Ataxia, comparatively slight muscular weakness, and almost entire absence of sensory symptoms. As a rule there was slight cardiac disturbance and no dropsy.

Five of these patients died, and during an autopsy on one of them, conducted by Dr. Mayhew, a mass of inflammatory tissue, involving the Pancreas, was found round the Pyloric end of the stomach and the Duodenum.

From May onwards till September the supply of native rice in Freetown fell very short and most of these people said that from July onwards they lived wholly or partly on imported rice. There were no cases in the gaol. Very little of the imported rice was used there.

Ankylostomiasis.—During the year 1904, and from time to time since, examinations have been made of the faces of patients for the purpose of estimating the degree of prevalence of Ankylostomiasis among the inhabitants of Freetown. It is, apparently often present, but during this year only 7 patients have been admitted to Hospital with serious symtoms that could be attributed to this infection.

Diarrhœa and Dysentery.—The number of admissions for these complaints is about the same as it has been since 1904; in which year, probably owing to the establishment of an improved water supply, it seems to have considerably diminished in comparison with previous years. The number of deaths from them remains much the same.

Operations.—The number of operations performed has been up to that of previous years.

An increasing number of youths applying for circumcision has been noted, and it is said to be due partly to the death of a favourite native Operator of the town.

The absence of a qualified Dentist is much felt.

Laboratory.—Attempts have been made, as opportunity occurred, to carry on the pathological work required in the Hospital. As time goes on the need for more blood and other examinations increases, and it can never be properly carried out till it is placed in the hands of an Official whose time can be regularly devoted to that work.

REPORT ON THE WORK DONE IN THE KING-HARMAM'S MATERNITY WARD OF THE COLONIAL HOSPITAL FOR THE YEAR 1910.

(*By* Dr. Wm. Renner.)

1. During the year, 117 cases were treated and were distributed as follows :—

Patients remaining in the Ward on the 31st December, 1909	1
Admitted during the year 1910	116
	117

Of these were :—

Discharged Cured	90
Relieved	21
There Died	5
Remaining in the Ward, 31st December, 1910	1
	117

These consisted of :—

Primipara ...	Married	6	Unmarried	30
Multipara ...	do.	30	do.	51

Included in these were :—

Abortions	3
Threatened Abortions	3
Discharged Undelivered	6
Born shortly before admission	6

The condition of the Mothers on admission was as follows :—

Good	33
Fair...	56
Weak	25
Unconscious	1
Exhausted	2
	117

The sexes of the Infants born were :—

Male	43
Female	56
	99

The presentations were as follows :—

Vertex	93
Face...	1
Breach	1
Footling	2
Transverse	2
	99

Of Instrumental Labours there were :—

Application of Forceps	8
Podalic Version	2
	10

Average stay of patients in the Ward ... 8 days.

No paying patient was admitted into the private Ward during the year :—

2. Of patients with complications on admission were :—

Fever (Malarial)	28
Dysenteric Diarrhœa	2
Nephritis	3
Threatened Abortion	3
Retained Placenta	3
Eclampsia	2
Ante-partum hæmorrhage (Placenta Prævia)	3
Prolapse of Uterus	2
Uterine Inertia	5
Paraplegia	1
Ante partum hæmorrhage (Accidental) ...	4
Renal Asthma	1
Bronchitis	1
Pneumonia	1
	59

3. Complaints after admission :—

Post-partum hæmorrhage	7
Retained Placenta	2
Puerperal Fever	1
Eclampsia	1
Ruptured Perineum	5
Malarial Fever	5
Dysenteric Diarrhœa	2
Puerperal Mania	1
	24

4. Particulars of cases which resulted in death :—

(*a*) Admitted in unconscious condition. First child born at home ; second in a hammock on the way. Had frequent fits after admission ; temperature went up to 108° F. Patient died 11 hours and 10 minutes after admission.

(*b*) Ante-partum hæmorrhage. Placenta Prævia. Was admitted in exhausted condition; collapsed and died 1 hour and 45 minutes after admission.

(*c*) Admitted in a weak condition 7 hours after delivery. Puerperal Nephritis; Renal Asthma. Died 36 hours after admission.

(*d*) Hæmorrhage, Placenta Prævia; had hæmorrhage 28 hours before admission. Very exhausted; died an hour and a quarter after delivery (by forceps).

(*e*) Admitted in exhausted condition; head of child born; shoulders fixed; arms brought down and child delivered. Died of exhaustion 2½ hours after delivery.

Admissions during the past nine years were:—

1902	...	...	...	...	47
1903	...	...	...	...	29
1904	...	..	...	...	61
1905	...	...	...	...	74
1906	...	...	...	...	46
1907	...	...	...	...	60
1908	...	...	...	...	57
1909	...	...	...	...	97
1910	...	...	...	...	117
					588

The admissions in the King-Harman's Ward during the year have steadily increased as in the previous year, there being an increase of 20 in 1910 over 1909.

THE NURSING HOME.

This Institution, for the use of Europeans only, is managed by European Nurses, a Sister and two Assistants, under the supervision of the Principal Medical Officer. During the year it was under the management of Miss McLeod, the Senior Sister, except during her absence on leave from May to September, when it was in charge of Miss Drewe.

There were 60 admissions during the year, 10 more than the previous year. During the past five years the number of patients with the number of deaths were as follows :—

	1906	1907	1908	1909	1910
Cases	59	66	42	50	60
Deaths ...	2	4	3	1	4

The classification of patients is as follows:

Government Employees	27
Commercial Firms	28
Shipping	5
TOTAL	60

The diseases suffered from were as follows :—

Adenitis	1
Alcoholism	1
Anæmia	1
Biliousness	1
Blackwater Fever	9
Bronchitis	1
Bubo	1
Cellulitis	1
Chololithiasis	1
Debility	1
Diarrhœa	1
Dyspepsia	3
Febricula	2
Gastritis	1
Gonorrhœa	2
Hemiplegia	1
Jaundice	1
Malaria	16
Pericarditis	1
Pleurisy	4
Rheumatism	2
Wound of hand	1
Yellow Fever	6
Influenza	1

There were four deaths due to :—

Blackwater Fever	1
Yellow Fever	3

The admissions were 10 more than the previous year, climatic diseases, Malaria, Yellow Fever and Blackwater Fever cases accounting for 31 of the total admitted.

The European Nursing Sisters performed their duties with entire satisfaction to all concerned.

The amount received in fees for admission and treatment during the year was £233 5s., being £64 18s. 2d. more than the previous year.

THE GAOL.

(*By* Dr. Davson.)

Throughout the year the prisoners have been divided, the majority being kept at the Gaol and the rest (averaging about 100) at the temporary building on the site of the new prison. This distribution of prisoners has tended to promote good health, except for the fact that those at the Botanic Station (new prison) appear to be more liable to attacks of Diarrhœa. As all prisoners have the same food and water this is probably due to less perfect supervision enabling them to obtain articles of diet they should not have. A small outbreak of Chicken Pox occurred in July, but there were no epidemics.

There are in the gaol several old people and some others very weakly who suffer from chronic diseases, such as Asthma, Heart Disease and Elephantiasis. Those have to be employed always on light tasks.

During the year there have been four executions in the gaol and five deaths from disease, *i.e.*, 3 from Heart Disease and one each from General Debility and Phthisis.

For statistics see table.

KISSY INSTITUTIONS.

(*By* Dr. W. F. Campbell.)

Lunatic Asylum.—There are 70 males and 39 females at the beginning of the year; and during the year 33 males and 14 females were admitted, making a total of 156 under treatment; an increase of 13 patients over the previous year. Of these 18 were found to be sufficiently relieved, and were discharged to the care of their friends. Two male patients absconded and 27 deaths occurred; leaving a total of 109 patients at the end of the year. The deaths were due to the following causes:—Exhaustion, 9; Nephritis, 4; Dysentery, 4; Apoplexy, 1; General Paralysis of the Insane, 1; General Dropsy, 2; Heart Failure, 2; Diarrhœa, 1; Tubercular Abscess, 1; Epilepsy, 2.

There has been no epidemic amongst the inmates throughout the year. During the year the old and defective building in which cells are provided for the accommodation of violent female lunatics was pulled down, and much needed additions and alterations in connection with the Asylum were carried out. These consist of a new block containing cells for violent cases and a Hospital ward, a new washhouse and latrine have also been provided, as well as separate kitchens for patients and female attendants. The administrative block has also been rebuilt giving more ample and suitable accommodation for the attendants, and the dispensary with the Medical Officer's office and consulting room.

The general accommodation in the Female Division is now in a satisfactory state. In the administrative block the quarters are spacious, cool and well lighted, and free from stuffiness. Sierra Leone has now got an asylum built in accordance with modern ideas, and one which cannot fail to have a favourable effect on the health and general well-being of the patients and staff. Only the quietest and most sensible of the lunatics (male and female) were employed in laundry and gardening work. The vegetables grown by the inmates were sold in Freetown, and the proceeds devoted to the purchasing of articles such as biscuits, cakes, cocoa-nuts, tobacco, &c., for their use.

The Garden.—During the year the garden which was started in 1899 did not yield much vegetables owing to the poorness of soil. Vegetables sold during the wet season of 1910 realised £4 8s. 5d.

Female Incurable Hospital.—There were 29 patients at the beginning of the year, but during the year 56 patients were admitted, thereby making a total of 85 under treatment.

There were 26 discharged, 26 deaths and 33 remaining in Hospital on January 1, 1911.

The deaths were due to Syphilitic exhaustion, Senility and Paralysis. During the year continuous repairs have been done to the building, so that it would be better if the old building were pulled down and a new one erected in its place.

Male Incurable Hospital.—Seventy-one cases were under treatment at the beginning of the year and 136 were admitted during the year, 73 were discharged, and 52 deaths occurred from Old Age, Exhaustion, Syphilis and Paralysis; and 82 patients were remaining in Hospital on 31st December, 1910. Owing to the serious nature of the cases, and the advanced stage in which many are admitted, the death rate is always high.

The old building had been thoroughly repaired during the year. There were 9 male lepers at the beginning of the year, and 3 admissions during 1910, 3 absconded during the year and 8 remaining in Hospital on 31st December. These patients are segregated in a special ward and are not permitted to mingle with the other inmates.

The Dispensary, Kissy.—The number of cases treated at this Dispensary was:—New cases, 1,368; old cases, 973. Total, 2,341.

The Dispensary, Wellington.—The attendances were as follows:—New cases, 582; old cases, 558. Total treated, 1,140.

The prevailing diseases were Intermittent Fever, Bronchitis, Diarrhœa, Dyspepsia, Rheumatism, Neuralgia, Lumbago, Intestinal parasites and Ulcers. Out-patients' fees collected during the year amounted to £1 2s. 9d.

Vaccination.—During the year there were 9 children vaccinated at Kissy and 12 at Allentown, making a total of 21, of which 19 were successful. The reason for so small a number is, that for the past two years, vaccination has been successfully and regularly carried out at both places.

Infectious Diseases Hospital.—At the commencement of the year there was one case of Chicken Pox; six cases of Chicken Pox and one of Small Pox were admitted during the year, all aborigines, and all were cured. The case of Variola was of a mild form; the patient came from the Protectorate.

The food, water supply, and the general sanitary arrangements of the Institutions were on the whole satisfactory.

The discipline of the Institutions was well maintained during the year.

Cline Town (Railway Depot, &c.).—The health of both European and native officials was on the whole satisfactory.

Twelve European officials of the Sierra Leone Government Railway were sent to the Nursing Home during the year for the following diseases:—

Blackwater Fever	3
Intermittent Fever (Benign Tertian) ...	5
Diarrhœa	1
Gastritis	2
Pleurisy	1

Two deaths occurred amongst the European officials of the Sierra Leone Government Railway:—

1 from Blackwater Fever.
1 from Drowning.

PROTECTORATE DISTRICT REPORTS.

RONIETTA DISTRICT.

HEADQUARTERS—MOYAMBA.

(*By* Dr. J. Y. Wood.)

European Officials.—The average number during the year was seven ; the number on the sick list was five with an average of 5½ days. Two were sent to Freetown for treatment.

Native Officials.—The number on sick list was 40, with an average of 5½ days. This included one serious case of Dysentery with Malaria.

Deaths among Officials.—None.

Out-patients.—New cases among officials 573, with subsequent attendance 897, a total of 1,470 ; among paupers 985, with subsequent attendances 1,700, a total of 2,685. Total number of attendances of all classes was thus 4,155, an increase over last year of 592, showing a steady increase in this department from year to year.

In-patients.—24 compared with 38 in 1909, a decrease of 14, possibly accounted for by the frequent change in Medical Officers. The number of operations during the year was six, all being minor cases. The prevalent diseases during the year in order of frequency were :—Rheumatism, Constipation, Pulmonary complaints, wounds and injuries, skin diseases including Ulcers, Venereal disease and Malaria.

Dysentery was not very prevalent, and Leprosy seldom seen. There were two cases of Bilharziosis, verified by microscopic observation, and three cases of suspected Trypanosomiasis, all children with symptoms of enlarged glands and constant sleeping, one case terminating in death. None were verified or treated, as the people refused to leave the children under observation at the Hospital.

Elephantiasis is very common, both of the leg and scrotum, but cases seldom came for treatment, and operation was almost always refused.

Venereal Diseases.—Gonorrhœa appears to be more prevalent in the outlying parts of the district that in the neighbourhood of Moyamba. Primary Syphilis is very rarely observed, and but few cases of undoubted secondaries, but Ulcers, very suspicious both from situation and appearance, improving or disappearing under anti-syphilitic treatment, are very common in both sexes, although more frequent in men. I have not seen any definite case of hereditary syphilis.

Although Gonorrhœa is commonly recognised by the natives as venereal under the term "women palaver," Syphilis is not at all recognized as such, and secondary manifestations are treated purely as local. Soft chancres are fairly common, and seem to bere current probably owing to want of cleanliness, although the people are bodily very clean.

Hospital Buildings.—The people still show great dislike to the Government Hospital, preferring the native hut built for Dr. Jackson Moore. The reason they give is that the former is too cold at night and they cannot light a fire on the floor in the native fashion to warm it. Officials are usually attended at their homes, and it has been found more convenient in the case of prisoners to lend beds temporarily to the gaol.

Vaccination.—The people seldom volunteer for this but, on being asked by their chief to attend for it, are usually quite willing. The total number performed was 324, almost all during the early part of the year.

Medical Officers.—During the first three months Dr. Jackson Moore was in charge, being succeeded by Dr. Pearson, who, however, in a short time became ill and was removed to Freetown. For a time the Dispenser remained in charge until Dr. Orpen took up duty, handing over to me at the end of September.

Quarters.—The District Commissioner's bungalow is excellently situated except that on two sides very heavy bush comes rather close. The water tanks have lately been screened and rendered mosquito proof.

The Assistant Commissioner and Medical Officer still occupy the old "Officers' quarters" which have been so often condemned, and which have fallen into a state of very great disrepair. I believe a site was once selected for new bungalows, and again this year His Excellency the Governor along with the Medical Officer selected a site, but no other steps have yet been taken to provide proper accommodation.

Messengers Quarters.—These are excellently situated and are well-built and well kept.

Gaol.—During the year a substantial stone building with corrugated iron roof was erected under excellent sanitary conditions, with the exception of want of light in the kitchen and a very insanitary drain. The kitchen, however, has recently been improved and well lighted, but the drain still remains, constantly holding standing water.

Water Supply.—This is from two sources, a small river used by the inhabitants of Moyamba and also by Europeans for washing purposes, and a mountain spring three miles away used by Europeans for cooking and drinking purposes. The former being exceedingly liable to contamination, I would condemn its use altogether by Europeans, but the spring being at such a distance it is difficult even with the assistance of the prisoners to obtain sufficient for all uses. A scheme for conveying it in pipes has been spoken of and would be of the greatest benefit.

Sanitation.—The pail system, worked by prison labour is in use among Officials and works very well, all rubbish is burnt or buried. Among the Creoles in the town the cesspit system is in use, each cesspit being closed when full. A few of the Chiefs and wealthier natives are also adopting this plan. Some of the towns visited on patrol are also adopting the cesspit system, in some cases even erecting public cesspit-closets. Moyamba town has been kept fairly clean during the year, the chiefs usually readily cleaning up any neglected part on its being pointed out to them. The Creole portion of the town continues to give the most trouble owing to there being no one there with sufficient authority to get things put right. As a rule the Creole part of the population seem to be much more careless

as regards clean surroundings than the natives, and are not so ready to clean up when their attention is drawn to insanitary conditions, paying much less attention to arguments in favour of sanitation. Bottle borders, a fruitful source of mosquito breeding places during the rainy season, are in great favour among them.

The circular road and fence outside the clearing round the native town is of great assistance in getting the people to keep back bush and weeds.

Burial Grounds.—These are now kept at a reasonable distance from the town.

Sanitary Patrols.—During the year extended patrols were undertaken, and at each town where a halt was made sanitation, on the lines suggested in Standing Instruction No. 5, was explained to the chiefs and the people as simply as possible and all were urged to co-operate in carrying out the suggestions. This was also done whenever a patrol was undertaken for other purposes. On subsequent visits great improvement was seen in most of the towns and it was found that the chiefs had sent word round to their sub-chiefs and head-men giving them instructions with orders to clean up generally.

I am of opinion that more frequent and more extended patroling by Medical Officers would lead to very great improvement in general sanitation and consequently in general health among the natives, for here as elsewhere the two go hand in hand, the dirtiest towns being always the most unhealthy.

On patrol also collections of mosquitos, &c., were made and sent to Liverpool for identification, while experiments, in connection with the life history of flies were carried out by Dr. Orpen.

Revenue.—This again showed an increase on the previous year. The people appear to be very willing to pay a small sum such as threepence or sixpence towards the cost of the medicines, but when they state that they are poor, or that they have come a very long distance and have brought no money, payment is never insisted on. All admit they would prefer paying at least a part of the cost than being classed as "paupers," and instead of the numbers attending decreasing on account of being expected to pay they are steadily increasing.

RAILWAY DISTRICT.

BO AND KENNEMA STATIONS.

(*By* Dr. J. McConaghy.)

I have the honour to submit the Annual Report for the medical stations of Bo and Kennema for the year 1910.

The stations have been in the charge of Dr. Arbuckle until June 22nd, and since then have been in my charge.

The number of Officials in, and around Bo is as follows:—Europeans 11, Sierra Leoneans 47, Natives 250, West Indians 2, making a total of 310.

There are 118 school boys at the Bo Government School. Three hundred and five days is the aggregate amount of time lost by the permanent staff through illness.

The health of the European officials has on the whole been good, although two were sent to Freetown for treatment in the nursing home. Two Sierra Leonean officials died during the year, one of Pneumonia and one of Mitral Regurgitation.

The number of out-patients treated at the Dispensary during the year was 1,159 being an increase of just one patient over last year. The amount collected in out-patients fees was £2 2s. 0d.

Forty-two in-patients were treated in the Hospital, this being a decrease of 10 as compared with last year. There were six deaths in hospital, four being due to Cardiac disease, one to Pneumonia and one to Diarrhœa. The hospital is very uncomfortable and the natives do not care to be treated in it. The patients have to supply their own food, &c., and, as during part of 1910 they were so poverty-stricken owing to the rice famine, the difficulty of dealing with cases in hospital was materially increased. There were eight operations performed under chloroform, viz.:—

1 Radical cure of Hydrocele.
2 Catheterization.
1 Case of Incision in Cellulitis.
1 Amputation of Elephantoid Scrotum.
2 Cases radical cure of Inguinal Hernia.
1 Herniotomy in case of Strangulated Hernia.

The health of the children at the Bo School has on the whole been good. There was one death, due to acute general peritonitis, but most of the diseases treated daily were of a trivial nature. A hospital for the treatment of school boys has been suggested. I believe it would be a distinct improvement, as serious cases could be treated much more satisfactorily. During the year a fortnightly inspection of all the boys has been held with the object of detecting chiggers and skin diseases.

All the bungalows in the European Compound are extremely hot during the day. The Medical Officer's bungalow has been improved by widening part of the verandah. This addition practically forms an extra room and is fairly cool in the evenings. Charcoal has been placed between the galvanized iron roof and the ceiling. A site for quarters for an engine driver was chosen in the European Compound, and the building commenced before the end of the year. This house is being built of stone. A new rest house has been built near the Railway Station. It contains 4 rooms, with a verandah running right round the house. It is double-roofed, the outer roof consisting of thatch, and the inner of galvanized iron. The house is cool, but the outer roof leaked during the rains, and, as a consequence, the verandah was always damp during that season. The whole house is built of mud.

The water supply of Bo is quite inadequate. The auxiliary supply, which is brought from Kennema in aluminium bottles during the dry season, obviates the difficulty of obtaining drinking water, but I believe that when the dry season is advanced, water for general purposes such as bathing, &c., is scarce. The European traders have to be supplied with water by the Government, according to the terms of their lease. The sanitary arrangement consists of earth closets which are emptied every night into a

trenching ground near the station. Under each house there is placed a barrel to be used as a receptacle for household rubbish. This is emptied twice a week and the contents buried. There is a Sanitary Gang of 12 men who empty latrines, remove household rubbish, &c., and look after the cleanliness of the Compound generally. The question of sanitation in the town of Bo itself is most unsatisfactory. In addition to the natives there is a large Sierra Leonean population. The Chief does not appear to have much authority over the people, and it seems to be almost impossible to make the inhabitants generally realise the importance of keeping the town clean. The Chief was only appointed a few weeks ago, and labours under the disadvantage of succeeding a man who had been very ill for many months before his death. There is an institution called "town association" which was formed to promote sanitation among the Sierra Leoneans in Bo. The association appears to be quite useless, and its members do not seem to have any influence or authority.

Only 295 vaccinations were done during the year. The people objected strongly to be vaccinated during the famine when they were in a chronic state of hunger.

A patient suffering from Small Pox came to the Dispensary. He was isolated and recovered. It was found that he had come from Blama. A vaccination patrol was made to Blama, and vaccinations performed. Biting flies are not plentiful in Bo. Those found belong for the most part to the Tabanidae. I have not seen any tsetse.

KENNEMA STATION.

The Medical Officer of Bo has paid weekly visits to Kennema during the year 1910. The number of officials is as follows:—European 2, coloured 45. The health of the European officials was good. They live in comfortable stone houses on the hill above the town well separated from all native residences. Among the native officials the Court Messengers have suffered most. The nature of their duties entails a considerable amount of exposure.

The number of new cases treated at the Dispensary during the year was 1,050. There were 1,355 subsequent attendances. Total 2,405. There is no hospital in Kennema and all patients are treated at the Dispensary or at their own houses when seriously ill. There was one death in the gaol from Pulmonary Tuberculosis, and there was also an outbreak of Beri-Beri in the gaol, 7 cases occurring at the same time. The patients were isolated in a native house outside the prison. All the prisoners were accommodated in huts outside the gaol, and the gaol thoroughly disinfected. All the patients recovered.

The Court Messengers' quarters are very comfortable and situated in well laid out lines, with masonry drainage, and water laid on to a standpipe.

The water supply at Kennema is excellent as the water is obtained from an uncontaminated source on the hills led down in pipes and distributed by standpipes.

Sanitation.—Pail closets are used by the Europeans and native clerks and in the prison, the contents are emptied into a trenching ground by prisoners every morning.

A cemetery has been provided in the town. The town generally is very much cleaner than Bo, and it is much easier to get advice on sanitation carried into effect.

STATION—DARU (Headquarters of the W.A.F.F.)

(*By* Dr. J. C. Murphy.)

Since the last Annual Report was written by Dr. Alexander, Kennema, formerly under Daru Medical Administration, has now been placed under the charge of the Medical Officer, Bo.

Dr. Wood-Mason was in charge of the station until December 7th, 1910, when he handed over to me.

Attendances at Hospital.—Out-patients 3,278, including 1,568 subsequent attendances. In-patients 134, with 2 deaths. Total treated 3,412. The large increase in attendances, slightly more than double that for 1909 (1,659) is due to the transfer of one Company of the W.A.F.F. from Kaballa to Daru, making an extra company at Daru. There were two deaths recorded, one resulting from compound fracture of the thigh; the other, a Frontier, died from Beri-Beri. There was an outbreak of Beri-Beri amongst the soldiers in the barracks, and ten cases were recorded, but with one exception they all recovered. The outbreak took place in the "hungry season" and I understand that at the time the troops were supplied with imported rice. There are no records of the natives of the surrounding towns, &c., having suffered from this disease, although they had a hungry season also.

The general health of the officials has been fair, and there has not been any very severe sickness amongst them.

Ten Europeans and eleven natives were placed on the sick list for a total period of 72 and 74 days respectively.

About 20 Europeans resided in the station for varying periods of a month upwards, others passed through, staying for a night or so. They are not recorded. One officer W.A.F.F. and one railway platelayer were invalided to the Nursing Home, Freetown. A fair proportion of the Europeans residing for long periods at Daru had suffered from Diarrhœa with transient mild symptoms of Dysentery, not sufficiently severe, as a rule, to necessitate placing them on the "sick list." I think a certain amount of this is due to want of, or improper filtering of the drinking water. The drinking water is obtained from the rain water collected from the roofs and stored in tanks. There is a plentiful supply of water for domestic and other uses, it is obtained chiefly from the Moa River, which forms the boundary of one side of the barracks. It is usually fairly clean and good water, although there are some small villages on its bank, not far from the barracks and up stream. This river is of considerable width and force with a rocky and sandy bed. Cataracts just above barracks tend to make the water turbid and prevents sediment settling down. On the whole the sources of water supply are good. Fresh food is usually obtainable, and adds to the health of the station.

Hospital and dispensary accommodation are still very backward. I understand, however, that the new Hospital, materials for which have been collecting, will soon be seriously taken in hand and completed. A new Hospital with Dispensary, providing every accommodation, will be built during the coming year.

Vaccination.—238 persons were vaccinated during the year; there were only nine failures. Only a small proportion of the inhabitants of the surrounding district have been vaccinated, however, so a further continuous supply of vaccine will be needed, the Chief of Daru native town having requested me to vaccinate his people.

Owing to the short time elapsed since I took over this district, I have very little knowledge of the surrounding country, habits, diseases, &c. One patrol in the Panguma district showed me that the towns visited there were clean and well kept. At Panguma itself certain changes were made as to water supply which ought to improve health.

Patrols were made during the year and towns inspected including Baiima, Pendembu, Segbwema, Manowa, Bariwalla and Gorahun. The prevalent diseases of the station were Rheumatism, Gonorrhœa, Malarial Fever (Intermittent) and Bronchitis.

Meteorological observations are taken daily, total rainfall for the year 1910 was 95·40 inches.

Weekly inspection of barracks, latrines, &c., have been arranged. Cutting of grass in compounds, also of small shrubs are from time to time carried out by fatigue parties, and the station kept clean and free from excess in vegetation.

WULADE.—(A FRONTIER FORCE OUTSTATION.)

(*By* Dr. W. A. Nicholson.)

Dr. Taylor had charge of the station from the beginning of the year; I took over charge from him on the 26th October for the rest of the year. Dispenser Neville relieved Dispenser Beccles, who was sent down through ill-health.

The health has been on the whole good. There have been 81 cases treated in the hospital of these 60 were cured, 16 relieved and 2 not relieved, 3 remained under treatment at the end of the year. In the out-patients' department there were 887 new cases, 1,390 subsequent attendances making a total of 2,277 treated during the year. The most prevalent diseases seem to be Constipation, Bronchitis, Rheumatism and Rheumatic Affections generally (Lumbago, Sciatica, &c.). There was no deaths amongst the Frontiers during the year and there had been no cases of Small Pox. The water supply is good, being obtained from two streams, one close by for washing purposes and the other at some distance away for drinking.

Kanre Lahun, another Frontier Force out-station, was visited monthly throughout the year; there were 555 cases treated there as out-patients.

KOINADUGU DISTRICT.

HEADQUARTERS—KABALLA.

(*By* Dr. J. S. Pearson.)

Dr. C. H. Allen was in charge of the district until November, when he was relieved by Dr. Pearson.

The general health of the Officials and Court Messengers has been good throughout the year. No deaths or invalidings have occurred among Officials.

Extern Department.—There have been 517 attendances at the Extern Department of the Hospital. The complaints chiefly treated were all of minor character. The most interesting case noted was that of Trypanosomiasis. This patient, a boy of about 15, lives at a village about a day's walk from here. He refused to stay in the Hospital to be treated.

Intern Department.—Three cases were admitted into Hospital. One was a case of rather serious contusions to the leg, and two of Elephantiasis of the Scrotum. These latter two were successfully operated upon. They both weighed from 30 to 40 lbs. each.

Sanitation.—The compounds around the Officials quarters and those of the Court Messengers have been kept clean and in good order. The bucket latrines of the Officials were daily attended to by the prison gang. In the Court Messengers' Barracks, the pit system is in use. These pits are periodically filled up and new ones dug, and are inspected at regular intervals.

Water Supply.—The water supply has been excellent.

Patrols.—The different districts around have been visited fairly regularly. The Chiefs were spoken to, in regard to the cleanliness of their towns, where to keep their cattle and in a general way how to keep down any infectious diseases that may at any time appear. Vaccinations have been regularly carried out. Over a thousand children have been done. This is a good number above that which has been done in former years. It is very difficult for the Officer vaccinating to return to find out whether the cases were all successful on account of the distances from one town to another, but judging from the local reports from these towns a very good percentage of cases were successful. There are still some towns where it is very difficult to get the people to agree to vaccination, but those that are vaccinated are helping the Medical Officer by showing those who do not agree to vaccinating that it is a good thing.

Leprosy.—Several cases of Leprosy have been seen in different towns. Where these cases were seen, the Chief was advised to have them isolated.

Tsetse Flies.—As far as one can surmise these are fairly numerous, especially in and around the towns to the North, North-east and North-west of Kaballa. Several specimens have been sent down to the Colonial Hospital and transmitted to England.

Meteorological Observations.—The Meteorological Observations have been noted carefully daily and records have been kept. The highest temperature noted was 100° and the lowest 51°. The rainfall for the year amounted to 89·92 inches. The greatest in one month was 17·66 inches.

Compounds.—The compounds and out-houses of the Hospital have been kept clean and in order throughout the year.

KARENE DISTRICT.

HEADQUARTERS—BATKANU.

(*By* Dr. H. E. Arbuckle.)

1. The station and district was in the medical charge of Dr. Murphy till June, then in that of Dr. Alexander who left here in October, and for some five or six weeks there was no Medical Officer until I arrived at the end of November.

2. The health of the Officials here has not been very good, two Europeans and 51 Native Officials being on the sick list, and four Officials being invalided, including the District Commissioner, Mr. Burra, and the Medical Officer, Dr. Alexander.

3. The number of out-patients was 1,393, with 2,599 subsequent attendances, an increase of 293. The most prevalent diseases were Constipation, Syphilis, Bronchitis and Rheumatism. The amount of fees paid was only £2 9s. 0d. The number of in-patients was 11.

4. The water supply is from the Mobole River, and although not particularly good, is not so bad as previous reports would show. The river is big and there is no town or farm nearer than at least two miles above Batkanu. The water is boiled and filtered before use by the Europeans.

5. There are two wood and iron bungalows in Batkanu. One is a double one, occupied by the District Commissioner and his Assistant. The bungalow is raised on concrete pillars about 10 feet from the ground. It is divided by a single wooden partition, and each side consists of a single room, surrounded on two sides by a closed verandah. The house is very hot, and to make things worse many of the windows must remain shut to keep out bees, of which there are three swarms in the walls. The bungalow occupied by the Medical Officer is raised only one-third foot, and consists of two rooms, with a low ceiling; it is very hot, especially in the dry season, but now the District Commissioner has given orders for the roof to be covered with grass. If the bungalows at Bo were deemed not fit for human habitation by Professor Simpson, much less are the bungalows in Batkanu. The Court Messengers and Clerks live in houses which are within 100 yards of the Europeans' bungalows; the native village of Batkanu is also about 200 yards away, and is separated from the bungalows and office by a belt of bush which is within 80 yards of the Medical Officer's bungalow and the District Commissioner's office. This bush is used as a burial ground by the town, and also for the deposition of human excrement; it is therefore very objectionable, but as it is regarded as sacred by the Chief and his people, it cannot be touched. On sanitary grounds alone, I think it would be most desirable to alter the Headquarters of this district.

6. The Hospital building of wood and iron is probably by far the best in the Protectorate, yet much use cannot be made of it for several reasons, the chief of which is the absolute, not comparative, scarcity of food in the vicinity for several months in the year.

7. During the year, 251 cases have been vaccinated successfully.

8. Sanitary patrols into outlying parts of the district have been undertaken by Dr. Murphy and myself. The Chiefs seem grateful for the information given them, and will, I believe, act on the Medical Officer's advice to a certain extent. On these patrols I carry a stock of medicines and after addressing the Chief and his people on elementary sanitation, out-patients are given free medicines.

9. In the rainy season when the grass is long and when there is plenty of water about, owing to the annual overflow of the river just in front of the bungalows, mosquitos are fairly common and their destruction is practically impossible. *Glossina palpalis* is, or rather was, very common, but since I have been here this year I have not yet come across any. I found several specimens of the *Glossina morsitans*, in December, not far from the Small Scarcies river north of Samaia.

10. There has been no continuity in keeping the meteorological records, therefore no statement can be made about any temperatures or rainfall.

11. In the north of the district, last month, I came across quite a fair number of cases of goitre and also leprosy. No segregation was observed with the lepers.

12. The pail system of closet is in use in all Government quarters here and gives satisfaction. The pails are emptied in a trenching ground a little distance away from the Court Messenger lines.

The Court Messenger lines are inspected every week and are kept very clean.

All long grass near the lines or bungalows is cut, but the labour is great and as the prisoners are employed for several hours a day drawing water from the river, not as much cleaning is done as I should like.

13. A station gardener has been appointed and his duties are to plant vegetables and look after them, so that the officials may have some green vegetables which are an enormous boon to the unfortunate officials stationed in this very "hungry station."

14. During my first tour in Batkanu, a company of the West African Regiment was stationed here, but as the officers were always more or less on the sick list and being invalided away, the company was removed from Batkanu and a new station was built at Wongkufu. The sickness and invaliding has come last year to the Colonial Service Officials, three having been invalided from this district; the total number of European officials in this district is only three, which makes a very heavy invaliding rate.

15. The water for the Europeans could be improved greatly if tanks were built here to catch the rain from the roofs of the bungalows. There is a sufficient roof area to supply all the water needed by the few officials here.

SHERBRO.

(*By* Dr. R. W. Orpen.)

Changes in Administration.—During the past year the following Medical Officers have been in charge:—Drs. Ward, Hunter, Burrows, and Orpen. Dispenser Metzger and Nurse Johnson have been stationed at the hospital at Bonthe during the whole year.

Apprentice Babin relieved Apprentice Doherty, and in December Apprentice Hedd relieved Apprentice Babin.

European Staff.—The district staff consists of the District Commissioner and two Assistant District Commissioners and the Medical Officer. The health of the European staff during the year has been good.

Native Officials.—The health of the native officials has been good. The number seeking medical advice is practically the same as in 1909; during that year the attendances for treatment were 210, in 1910 the attendances were 207 this showing a reduction of 3. The average time spent on the sick list was 3·5 days for the 207. 54 come under head of Police; the remaining 153 under the head of Customs clerks, &c. The chief causes of their seeking medical advice were Malaria, Bronchitis and Diarrhœa; no serious case was seen.

European Non-Officials.—There are about 35 Europeans employed with various mercantile firms in Bonthe; on the whole the health of these has been good, but I regret to say that during the year two deaths took place, one at Sumbuya an out-station, the cause being Blackwater Fever. The other death occurred in Bonthe, the cause being Hyperpyrexia due to Pernicious Malaria.

Hospital.—The hospital has been kept in a fair state of repair during the past year, but painting and some minor repairs will be required.

Operations.—There were only a few operations done during the past year and all were of minor importance.

In-Patients.—The number of in-patients treated in the hospital during the year 1910 was 213, this when compared with 1909 shows a falling off in number of 20. The number of deaths was 13 (females 2, males 11), thus giving a percentage of deaths in hospital of 6·1 per cent. The causes of death were as follows:—

Females.—Privation and Exhaustion.
Septicæmia.

Males.—Debility.
Broncho-Pneumonia.
Meningitis.
Hemiplegia.
Cirrhosis of Liver.
Aneurism.
Hæmorrhage, penetrating wound of abdomen.
Epilepsy.
Septicæmia (following leopard bite).
Cardiac Disease (Aortic and mitral regurgitation)

Out-Patients.—The number of out-patients treated during the past year was 1,934; in 1909 the number treated was 2,652, thus 1910 shows a reduction of 718. I am informed that one of the causes of this falling off of attendances was due to the famine which was so severely felt during the early part of the year, numbers of people leaving Bonthe and going up country. The diseases seen in the out-patients' department vary greatly. The following are most often seen:—Malaria, Syphilis (second and third), Gonorrhœa, Skin affections, Rheumatism, Bronchitis, Leprosy (from time to time), Elephantiasis (leg, arm and scrotal), and Deformities. Ulcers are an everyday occurrence.

Epidemics.—I am glad to be able to report that there were no epidemics during the year.

Vaccination.—Vaccination was carried out during the early part of the year, the number of successful cases seen was 141. This compares very badly with 1909 when 1,285 cases were successful, but this station has had no lymph since August last.

Visits to Hospital.—During the year the hospital was visited by the Governor, Sir Leslie Probyn and also by the Senior Sanitary Officer, Dr. Kennan.

York Island.—York Island has been visited regularly during the year once a week; the cases seen there are few and are much the same as those seen at the hospital at Bonthe.

Hospital Fees.—Hospital fees collected during the year amounted to £39 2s. 7d. This shows an increase over 1909 of £5 13s. 4d.

Isolation Hospital.—There were no admissions during the year.

The Prison.—The gaol has been visited regularly twice a week and all prisoners examined on admission. One prisoner had to be admitted to hospital, suffering from advanced heart disease, where he died. The yard of the gaol is kept beautifully clean and in good order, also the out-houses, kitchens, latrines, &c.

A new gaol is an absolute necessity here; the present one is quite unfit for its requirements. The health of the prisoners during the past year has been good.

BONTHE—SANITATION REPORT, 1910.

(*By* Dr. Orpen.)

Situation.—The town is situated on the north-east corner of the Island of Sherbro and faces east. The soil is sandy, as no stone is to be found on the Island, all stone for building, &c., being brought from the mainland. The highest point of Bonthe above the sea level is probably 15 feet.

Heddle Swamp.—The town is roughly cut in two by a large swamp called Heddle Swamp, the main portion of which occupies the space between Victoria Road and Heddle Road; this at low tide is an area of foul smelling mud, at high tide it is full of water, being assisted by the stream which flows into the head of the swamp. A portion of the swamp has lately been filled in and houses erected, and I note that there is apparently some further filling in about to take place. The material used for this purpose is turf cut from the Island opposite Bonthe. It makes a good, firm soil. As soon as the ground is prepared, houses are erected; this is far too soon. I think a certain period should elapse before building is allowed. If means could be found to fill in the remainder of this swamp, a large and unhealthy and unsightly area would be removed.

Visit of S.S.O.—During the past year the Senior Sanitary Officer, Dr. Kennan, visited Bonthe and, I believe, has already reported on it.

Sanitary Authority.—The Sanitary Authority is the Sherbro Municipal Board, of whom the Medical Officer for Bonthe is an ex-officio member. There are (1) Sanitary Inspectors, six Sanitary Police and (2) two Scavengers; there is also a gang of men, twelve in number, whose duties are keeping the grass short in the streets, &c., and occasionally, when asked for, increase the Scavenging gang. The duties of the latter consists of cleaning public latrines, removing nuisances, night soil, &c.; it is quite obvious that the number of Scavengers is quite too small. The work done is done in an insufficient manner, bottles, tins, &c., are to been seen lying in every street. Three hammocks of the same type as used in Freetown have been ordered for removing rubbish, as the cart owned by the Sherbro Municipal Board is a quite impossible article. The rubbish, &c., is now being dumped at the head of Heddle Swamp, and an attempt is being made to fill in some ground.

Water Supply.—This is a question of great importance, owing to the shortage of water in the dry season. During the past year, the Government has constructed two tanks (concrete) with catchment areas; each of these tanks has a capacity of 16,000 gallons. This makes four tanks of this capacity total 64,000 gallons; but I do not think that the tank of the Government Hospital should be taken into consideration, as it is used for Hospital purposes, although there is a stand pipe in the street in connection with the tanks. I do not think that these tanks during the dry seasons will be able to supply the wants of Bonthe. One point as regards these tanks (new ones) I have noticed—that the roof, which gradually slopes towards the centre, has a fall of one inch where the inlets are; should a heavy fall of rain occur, such as one would expect in the rainy season, I think a great quantity will be lost, owing to the want of edging or beading; one inch high would be quite sufficient just to hold the water until it has time to flow into the tank. I would suggest that this edging be made. The usual method of obtaining water here is to dig a well; water can be obtained at any point from 3 to 12 feet. There are 116 wells in Bonthe; about two of them are properly covered; they are usually situated in a compound in close proximity to a house, and thus liable to contamination.

Ten pumps are now in process of being erected, seven in Bonthe and three in York Island; they have been placed at various points in the streets, usually at the junction of two or more streets. So far, they are working well and seem to be very popular, judging from the numbers seen using them. The method is to dig a well (average depth to surface of water six feet); place the pump, which has the terminal section perforated and covered with brass gauze, and then fill in to the surface of the water with broken syenite stone. The well is then filled in. But ten pumps are quite inadequate for the requirements of Bonthe. I would suggest that twenty more be supplied and then, by closing the wells at the various areas where the pumps are situated, a very large number of places where mosquitoes breed and flourish would be removed. Obtaining another supply by means of street pumps would be a far less costly method than building tanks. In connection with the tanks great waste of water is apparent. I have spoken to the Sherbro Municipal Board on this subject.

PUMPS AT BONTHE.

SITUATION.	Depth to Water Level.	Depth of Water.	Total Depth.
M.O.'s Compound	6′ 0″	3′ 6″	9′ 6″
Thomas Street	6′ 9″	3′ 0″	9′ 9″
Claffin Lane	7′ 0″	3′ 0″	10′ 0″
Corner of King and Coulson Streets ...	5′ 0″	2′ 6″	7′ 6″
,, ,, Medina Street and Dumbukoro	7′ 0″	3′ 0″	10′ 0″
,, ,, Otto Street and Coulson Street End of Dumbokoro.	4′ 4″	2′ 6″	6′ 10″

Drains—The drains of Bonthe are few in number; these have been constructed by Government and are of various types, some of them oval, others square, and of various capacities. Only portions of the following streets have drains, *i.e.*, Otto, Walshe, Medina, and Victoria Road. One of them (in Otto Street) begins at the surface half-way up the street and ends at the sea shore seven feet deep. It passes the Medical Officer's house, and a portion of it has fallen in, with the result that stagnant water remains in the drain; mosquito larvæ have been found here under the windows of the house. This piece of drain has been in this condition ever since I came to Bonthe. I have made enquiries about it, but apparently no instructions as to rebuilding have been given; it is absolutely necessary that it be repaired before the rains begin. The other drains in Otto Street are apparently useless as they are, as the edge is higher than the surface of the road; thus no water from the surface flows into them. I have been informed that since these drains have been laid down mosquitos have been much more common. These drains are from time to time swept out, the only way of getting rid of the water that lies in them.

Water does not lodge in the streets owing to the porous sandy soil. I am informed that some of the drains are used in the rainy season as places for washing clothes. Other drains have never been finished, concrete sections being just placed together and not jointed; mosquito larvæ have again been found here.

Latrines.—There are only three public latrines in Bonthe, two situated on piers running out over the water; the other is a dry earth closet situated close to the District Commissioner's office, a very bad situation and far too close to public and private buildings. I would suggest that this latrine be removed.

Incinerators.—There are none in Bonthe; they would be of much service. I would suggest the construction of two. Good sites can easily be obtained.

Dust Bins.—Dust bins are much required and would be most useful in the collection of rubbish. If incinerators are constructed they will become a necessity.

York Island—This is a small place, and the native town is by no means clean; at high tide the open drains in places become full of water. There are two European firms at York Island, the Sierra Leone Coaling Company and Messrs. Paterson, Zochonis and Company, Limited. There is one Sanitary Policeman stationed here. I do not think that he is overworked. During the past year a tank similar to those erected in Bonthe has been made in Fisher Street at the back of the Sierra Leone Coaling Company's premises. It has just been completed at time of writing. The method of obtaining water is similar to that at Bonthe, but with this difference; at York Island all the wells are in one place surrounded by a fence which has a padlocked gateway. This is opened twice daily by the Sanitary Police at certain hours for the people to draw water. At present the wells, which number 13, are very low, but I am informed that at high water, the water in the well rises. When I saw them last it happened to be low water. Having the wells all in one place is certainly an improvement to the system in Bonthe, where nearly every house has its own well. During the past three months I have succeeded in closing in a large excavation full of water situated at the back of the Police Barracks, but it was only after three months of continual agitation that I succeeded in doing so. There are several other places in York Island that require the same treatment.

Each of the European Firms has a well in its compound. Three pumps are being erected at York Island:—

Situation.	Depth to Water.	Depth of Water.	Total.
End of York St.	4′ 0″	4′ 0″	8″
,, King St.	5′ 0″	3′ 6″	8′ 6″
Crab Street.	6′ 0″	4′ 0″	10′ 0″

DISPENSARY DISTRICTS IN THE PENINSULAR.

Regent.—Dispenser Nylander was in charge of the Dispensary during the year.

The total number treated was less than that of the previous year.

New cases...	1,000
Old „	1,926
	2,926

The large proportion of cases were of the usual mild type. Cases of a serious nature being sent to the Colonial Hospital. Vaccinations were carried on as usual; there were 113 successful cases.

The sanitary condition of the villages in the district was satisfactory, attention being paid to the removal of rubbish from yards and compounds and the clearing of water courses and gutters.

Waterloo.—This was in charge of Dispensers Luke and Thomas. The number of cases treated was as follows:—

Officials	212
Civil Police	80
Paupers	3,979
	4,271

There was no outbreak of Small Pox or other epidemic disease. The general health was fairly good.

The S.S.O. has recently reported very favourably on the sanitary condition of this town.

Hastings.—This Dispensary is worked by the Dispenser at Waterloo, who visits bi-weekly. There were 2,159 cases treated during the year. The general health of the district was fairly good.

York.—The district Dispensary was in charge of Dispenser M. O. Fraser during the year.

The following cases were treated:—

New cases	1,431
Old „	1,041
	2,472

an increase of 644 on the previous year. Vaccination was carried on during the year; 57 persons were vaccinated, with 45 successful cases and 12 not seen.

Two mild cases of Small Pox were reported by Mr. Fraser, who states that the sanitary condition of York and other villages in the district was not satisfactory.

Tombo.—The Dispensary was in charge of Dispenser P. J. John. The house rented as a Dispensary and Dispenser's quarters was taken as a temporary arrangement, the owner of the premises having promised to build a more suitable house, but this he has not yet done, much to the inconvenience of all concerned.

The number treated was as follows:—

New cases...	841
Old „	465
	1,306

The sanitary condition of the villages in the locality was not satisfactory but showed some signs of improvement, due to the advice and assistance of the District Commissioner.

Vaccination was kept up. There were 58 cases successful; the small number is due chiefly to the objection of the people to vaccination.

Mano Salija.—This was in charge of Dispenser I. H. Wright. The number of cases treated during the year was as follows:—

New cases...	616
Old „	1,152
	1,768

Mr. Wright refers to the custom people in his district have of attending for medicine by proxy.

The sanitary condition of the villages has been good. Vaccination has been kept up with fair success. Total vaccinated, 126; successful cases, 87. There were no outbreaks of epidemic disease.

Bananas Islands.—The Dispensary is at the village of Dublin and was in charge of Dispenser D. M. Thomas.

The cases treated were as follows:—

New cases	1,595
Old „	1,827
	3,422

Vaccination.—The total number vaccinated was 77. The people are to a certain extent opposed to vaccination. There was no Small Pox.

Sanitation.—The sanitary condition of the villages of the island was fair. The other village, Ricketts, was visited occasionally during the year.

The prevailing diseases treated at the above-mentioned dispensaries were :—

Chest Affections, chiefly Bronchitis.
Dyspepsia.
Intestinal Worms.
Intermittent Fever of a mild type.
Rheumatism, chiefly Muscular.
Venereal diseases.
Ulcers.
A few cases of Yaws.

Vaccination was carried on fairly regularly by the dispensers with varying success.

It will be observed that Sanitation also received attention from the dispensers, who take every opportunity to bring to the notice of the people insanitary conditions in their villages and compounds.

It will be seen from a perusal of the various returns which form the second part of this report, that there has been a large increase in the total number of patients treated by the Medical Department during the year 1910 as compared with the previous year :—

Total cases treated	87,094
In 1909 there were	72,560
An increase of	14,534

Of those treated 22,441 consisted of officials, &c., who are entitled to free medical attendance, and paying patients; and 64,653 were paupers and received free treatment and medicine. The actual amount expended for medicines, &c., was £1,278 12s. 1d. The amount received from paying out-patients was £65 2s. 11d. It is well known that a large number of people attend the government dispensaries and hospitals as pauper patients who could very well afford to pay for attendance and medicine, but it is, as in England, a difficult matter to prevent this abuse of the government's generosity in providing these institutions for the relief of the sick poor of the country.

A chart showing the monthly rainfall and death rate is attached.

R. M. FORDE,
Principal Medical Officer.

July 7th, 1911.

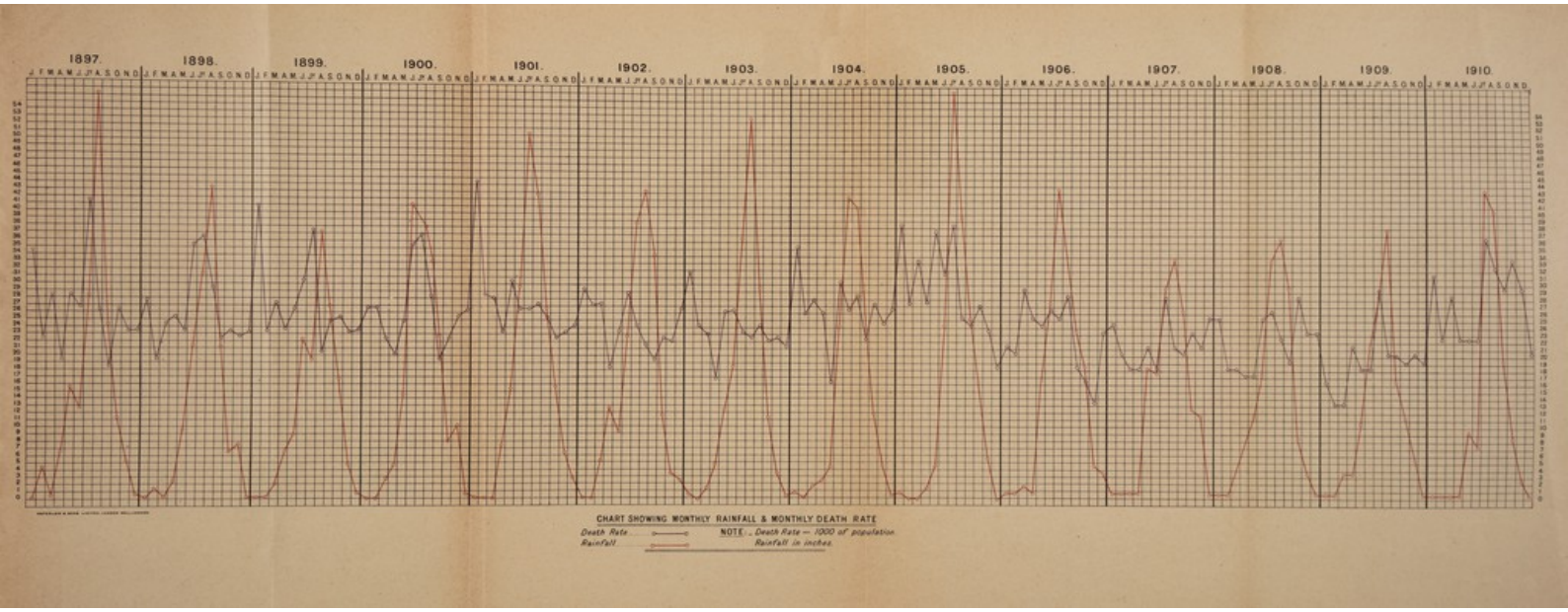


CHART SHOWING MONTHLY RAINFALL & MONTHLY DEATH RATE

Death Rate ——○——

Rainfall ——□——

NOTE:- *Death Rate — 1000 of population*

Rainfall in inches.

APPENDIX.

Table No. 1.

METEOROLOGICAL RETURN FOR THE YEAR 1910.

	Temperature.						Rainfall.		Winds.		Remarks.
	Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.	Degree of Humidity.	General Direction.	Average Force.	
January ..	125·9	66·9	88·7	71·2	17·5	79·9	nil.	61·0	E	1	
February ..	134·0	73·0	90·7	74·4	16·3	82·5	0·48	71·0	N	1	
March ...	138·0	73·0	91·4	75·4	10·6	83·4	0·28	72·0	W	2	
April	140·6	73·2	92·2	77·0	15·2	84·6	0·51	71·0	W	2	
May	139·0	74·0	90·2	76·5	13·7	83·3	9·17	74·0	W	2	
June	140·3	71·3	89·8	73·0	16·8	81·4	7·62	73·0	W	3	
July	130·4	68·9	84·6	71·7	12·9	78·2	43·24	86·0	W	3	
August ...	126·0	67·8	82·7	71·7	11·0	77·2	40·57	88·0	W	3	
September ...	135·3	63·9	85·8	72·1	13·7	78·9	19·80	87·0	W	3	
October ...	138·8	59·6	88·5	71·8	16·7	80·2	8·86	81·1	W	2	
November ...	134·2	55·6	89·2	73·2	16·0	81·2	2·29	91·0	W	2	
December ...	129·2	51·6	89·2	74·1	15·1	81·7	0·62	82·0	W	2	
Total ...	...	...	...	...	...	...	133·44	...	...	...	

Table No. 2.

COPY OF RECORDS IN RESEARCH BOOK FOR 1910.

Name.	Station.	Nature of Study.	Communicated to.	Remarks.
Dr. J. C. Murphy...	Batkanu ...	Blood Sucking Flies ...	British Museum ...	
„ J. J. Moore ...	Moyamba...	do. do. do. ...	do. do.	
„ W. Renner ...	Freetown ...	Adeno-Sarcoma of Breast	Cancer Research Fund	
„ D. Burrows ...	do. ...	Portion of Brain showing Capillaries choked with Malaria Parasites	London School of Trop. Medicine	
„ J. J. Moore ...	Moyamba...	6 Packets Blood Sucking Flies	British Museum ...	
„ D. Burrows ...	Freetown ...	"Relationship of Microfilaria Diurna and Filaria loa"	Journal of Tropical Medicine & Hygiene	
„ do. ...	do. ...	Urinary Calculus in Sierra Leone	do. do.	
„ H. Arbuckle ...	Bo... ...	Native Sanitation in Sierra Leone	British Med. Journal	
„ W. Renner ...	Freetown ...	Spread of Cancer among descendants of liberated Africans or Creoles of Sierra Leone	do. do.	
„ Orpen... ...	Moyamba...	Experiments on contents of Cesspits and fresh fæces *re* maggots, &c.	S. of S. for information of Advisory Comm.	
„ Renner ...	Freetown ...	Myoma of Uterus (1), Carcinoma of Breast (2), Carcinoma of Pylorus (3)	Cancer Research Fund. Found in P.M.	
„ Allan... ...	Kaballa ...	Specimens of Blood Sucking Flies	Sleeping Sickness Bureau	
„ Davson ...	Freetown ...	Cancer of Penis	Cancer Research Fund	
„ Renner ...	do. ...	Carcinoma of Breast	do. do.	
„ Davson ...	do. ...	Section degenerated Scrotum	do. do.	

Table No. 3.

SHOWING THE SPLENIC INDEX OF CHILDREN IN THE TOWNS IN THE COLONY AS FOUND BY DR. ORPEN.

TOWNS.	Number of Children.	Normal Spleens.	Enlarged Spleens.
Freetown	1,149	963	186
Waterloo	152	104	48
Kent	55	48	7
Bananas	52	48	4
Tombo	43	34	9
TOTAL	1,451	1,197	254

Splenic Index for Freetown ... 16·1%
„ „ „ Other Towns ... 22·5%

Table No. 4.

RETURN OF STATISTICS OF POPULATION OF FREETOWN FOR THE YEAR 1910.

	Europeans and Whites.	Africans.	East Indians.	Syrians.	Mixed and Coloured.
Number of Inhabitants in 1910	831	32,847	21	146	165
„ „ Births during the year 1910	—	581	Not Recorded.		
„ „ Deaths „ „ „ 1910	15	936	—	6	—
„ „ Immigrants „ „ „ 1910		Not Recorded.			
„ „ Emigrants „ „ „ 1910		„	„	„	
Number of Inhabitants in 19					
Increase or Decrease	The recent Census shows a Decrease of 489 in general population as compared with 1901.				

HOSPITAL RETURNS, &c., 1910.

Annual Medical and Surgical Returns, Colonial Hospital, Freetown.

Table No. 5.

	Males.	Females.	Total.
Patients remaining in Hospital, 31-12-09	33	20	53
„ admitted during the year 1910	1,046	401	1,447
Total number treated	1,079	421	1,500
Of these were—			
Cured	417	244	661
Relieved	420	80	500
Not relieved	101	43	144
Died	105	36	141
Remaining in Hospital 31-12-10	36	18	54
Total number treated	1,079	421	1,500

Table No. 6.

Status of In- and Out-Patients treated at the Colonial Hospital during the Year 1910.

	Europeans.		Natives.								
			Officials.		Frontier Police.	Civil Police.	Pay Patients.		Paupers.		Total.
	Officials.	Non-Officials.	M.	F.			M.	F.	M.	F.	
In-Patients ...	2	31	183	15	—	99	52	21	712	385	1,500
Out-Patients ...	480	2	2,630	286	—	572	306	382	17,348	9,789	31,795
Total ...	482	33	2,813	301	—	671	358	403	18,060	10,174	33,295

Table No. 7.

Return of Diseases and Deaths, Colonial Hospital, Freetown.

IN PATIENTS.

Diseases.	Remaining in Hospital at end of 1909.	Year's Total.		Total Cases Treated.	Remaining in Hospital at end of 1910.
		Admissions.	Deaths.		
Infective Diseases—					
Beri-Beri	—	27	9	27	—
Dysentery	1	26	6	27	—
Gonorrhœa	2	21	2	23	—
Influenza	—	3	—	3	—
Malaria—					
(*a*) Tertian	—	10	3	10	—
(*c*) Aestivo-Autumnal ...	—	68	2	68	3
(*d*) Chronic Malaria	2	50	—	52	—
) Blackwater	—	1	—	1	—
Measles	—	1	—	1	—
Pneumonia	—	28	13	28	—
Septicæmia	—	1	1	1	—
Trypanosomiasis	—	2	1	2	—
Syphilis—					
(*a*) Primary	—	4	—	4	—
(*b*) Secondary	3	13	—	16	—
Tetanus	—	13	6	13	—
Tuberculosis	—	28	10	28	1
Yellow Fever	—	7	4	7	—
Intoxications—					
Alcoholism	—	5	2	5	—
General Diseases—					
Anæmia	—	11	1	11	—
Debility	1	46	10	47	—
Rheumatism	2	87	—	89	4
LOCAL DISEASES.					
Diseases of the Nervous System — *Sub-section* 1.					
Neuritis	—	2	—	2	—
Cerebral Hæmorrhage	—	3	3	3	—
Cerebellar Hæmorrhage	—	1	1	1	—
Carried forward ...	11	458	74	469	8

RETURN OF DISEASES AND DEATHS IN 1910 AT THE COLONIAL HOSPITAL—*contd.*

Diseases.	Remaining in Hospital at end of 1909.	Year's Total.		Total Cases Treated.	Remaining in Hospital at end of 1910.
		Admissions.	Deaths.		
Brought forward ...	11	458	74	469	8
Sub-section 2.					
Paralysis	1	18	5	19	1
Epilepsy	—	3	—	3	—
Neuralgia	—	3	—	3	—
Hysteria	—	1	—	1	—
Shock	—	2	—	2	—
Vertigo	—	2	—	2	—
Locomotor Ataxy	—	2	—	2	—
Spinal Degeneration	—	1	—	1	—
Sub-section 3.					
MENTAL DISEASES—					
Mania	—	1	—	1	—
Dementia	—	3	—	3	—
Delusional Insanity...	—	2	—	2	—
DISEASES OF THE EYE—					
Conjunctivitis	—	4	—	4	—
Ulceration of Cornea	—	3	—	3	—
Astigmatism...	—	1	—	1	—
Epiphora	—	1	—	1	—
Irido-Cyelitis	—	1	—	1	1
Pan-Ophthalmitis	—	5	—	5	—
DISEASES OF THE EAR—					
Inflammation	—	1	—	1	—
DISEASES OF THE NOSE—					
Coryza	—	1	—	1	—
CIRCULATORY SYSTEM—					
Pericarditis	—	2	2	2	—
Valvular—Mitral	—	11	2	11	—
Aortic	—	3	—	3	—
Aneurism	—	3	2	3	—
Angina Pectoris	—	1	—	1	—
Cardiac Debility	—	1	—	1	—
Palpitation	—	1	—	1	—
Internal Hæmorrhage	—	1	1	1	—
RESPIRATORY SYSTEM—					
Bronchitis	1	38	3	39	1
Broncho-Pneumonia	—	4	3	4	—
Pleuro-Pneumonia	—	2	1	2	—
Pleurisy	—	11	2	11	—
Empyema	—	1	—	1	—
Carried forward ...	13	592	95	605	11

RETURN OF DISEASES AND DEATHS IN 1910 AT THE COLONIAL HOSPITAL—*contd.*

Diseases.	Remaining in Hospital at end of 1909.	Year's Total.		Total Cases Treated.	Remaining in Hospital at end of 1910.
		Admissions.	Deaths.		
Brought forward ...	13	592	95	605	11
DIGESTIVE SYSTEM—					
Stomatitis	—	3	—	3	—
Caries of Teeth	—	2	—	2	—
Inflammation of Tonsils	—	1	—	1	—
Dyspepsia	—	6	—	6	—
Ulceration of Intestines	—	1	—	1	—
Hernia	—	7	1	7	—
Diarrhœa	—	35	9	35	1
Constipation	—	3	—	3	—
Colic	—	14	—	14	—
Hæmorrhoids	—	2	—	2	—
Hepatitis—Acute	2	12	1	14	—
Abscess	—	3	2	3	—
Cirrhosis	—	11	1	11	3
Peritonitis	1	1	—	2	—
Prolapsus Ani	—	1	—	1	—
LYMPHATIC SYSTEM—					
Splenitis	—	1	—	1	—
Inflammation of Lymphatic Gland	—	23	—	23	—
Suppuration of Lymphatic Gland ...	—	1	—	1	1
Lymphangitis	—	1	—	1	1
Elephantiasis	—	11	1	11	—
URINARY SYSTEM—					
Acute Nephritis	—	3	1	3	—
Bright's Disease	1	18	2	19	1
Cystitis	—	3	1	3	—
Suppression	—	5	—	5	—
Hæmaturia	1	3	—	4	—
Extravasation of Urine	—	2	1	2	—
MALE ORGANS OF GENERATION—					
Urethritis	—	1	—	1	—
Stricture	—	5	1	5	1
Soft Chancre	—	4	—	4	—
Inflammation of Scrotum	—	7	—	7	1
Phymosis	4	—	—	4	—
FEMALE ORGANS OF GENERATION—					
Ovarian Cyst	—	1	—	1	—
Endometritis	1	3	—	4	1
Displacement of Uterus	—	5	—	5	1
Vaginitis	—	1	—	1	1
Dysmenorrhœa	—	2	—	2	—
Abortion	—	7	—	7	—
Threatened Abortion	—	2	—	2	—
Delayed Labour	—	89	5	89	1
Retained Placenta	—	2	—	2	—
Puerperal Septicæmia	—	1	—	1	—
Mastitis	—	2	—	2	—
Abscess of Breast	—	9	—	9	—
Carried forward ...	23	906	121	929	24

RETURN OF DISEASES AND DEATHS IN 1910 AT THE COLONIAL HOSPITAL—*contd.*

Diseases.	Remaining in Hospital at end of 1909.	Year's Total.		Total Cases Treated.	Remaining in Hospital at end of 1910.
		Admissions.	Deaths.		
Brought forward ...	23	906	121	929	24
ORGANS OF LOCOMOTION—					
Peri Ostitis	—	4	1	4	—
Myositis Ossificans	1	—	—	1	1
CONNECTIVE TISSUE—					
Cellulitis	—	7	2	7	1
DISEASES OF THE SKIN—					
Eczema	—	2	—	2	—
Boil	—	2	—	2	—
Carbuncle	—	1	—	1	—
Ulcer	8	132	1	140	10
INJURIES—					
General	—	9	4	9	—
Local	10	126	2	136	2
SURGICAL OPERATIONS	8	232	8	240	16
TUMOURS	1	12	—	13	—
POISONS	—	2	1	2	—
PARASITES—					
Nematoda :—					
Ascaris	1	4	—	5	—
Filariasis	1	1	—	2	—
Ankylostomiasis	—	7	1	7	—
Grand Total ...	53	1,447	141	1,500	54

Table No. 8.

RETURN OF DISEASES, COLONIAL HOSPITAL, FREETOWN.

OUT PATIENTS.

REGISTERED NUMBER OF NEW CASES.

	Officials.		C. Police.		F. Police.		Paupers.		TOTALS. Officials.		C. Police.		F. Police.		Paupers.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
INFECTIVE DISEASES									523	22	104	—	—	—	594	384
Beri-Beri	—	—	—	—	—	—	—	6								
Chicken Pox ..	—	—	—	—	—	—	4	2								
Cow Pox	—	—	—	—	—	—	1	—								
Dysentery... ...	11	—	1	—	—	—	26	16								
Erysipelas... ...	—	—	—	—	—	—	1	—								
Febricula	17	1	7	—	—	—	19	25								
Gonorrhœa ...	5	—	1	—	—	—	101	6								
Influenza	13	—	—	—	—	—	1	1								
Malarial																
(*a*) Tertian ...	150	8	25	—	—	—	72	66								
(*b*) Quartan ...	17	—	—	—	—	—	24	15								
(*c*) Æstivo-Autumnal	32	1	4	—	—	—	18	20								
(*d*) Chronic Malaria...	274	11	65	—	—	—	147	137								
Measles	—	—	—	—	—	—	1	—								
Mumps	—	—	—	—	—	—	2	5								
Pneumonia ...	1	—	—	—	—	—	5	7								
Septicæmia ...	—	—	—	—	—	—	6	1								
Syphilis																
(*a*) Primary	—	—	—	—	—	—	19	3								
(*b*) Secondary	—	—	—	—	—	—	96	45								
Tetanus	—	—	—	—	—	—	3	3								
Trypanosomiasis ...	—	—	—	—	—	—	1	—								
Tuberculosis ...	2	—	—	—	—	—	17	5								
Whooping Cough...	—	1	1	—	—	—	17	17								
Yaws	—	—	—	—	—	—	9	4								
Yellow Fever ...	1	—	—	—	—	—	3	—								
Small Pox ...	—	—	—	—	—	—	1	—								
INTOXICATIONS ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9	1
Alcoholism ...	—	—	—	—	—	—	9	1								
GENERAL DISEASES	—	—	—	—	—	—	—	—	299	36	62	—	—	—	802	909
Anæmia	3	—	1	—	—	—	10	13								
Diabetes	—	—	—	—	—	—	4	4								
Debility	64	19	4	—	—	—	78	117								
Rheumatism ...	232	17	57	—	—	—	710	775								
LOCAL DISEASES—																
NERVOUS SYSTEM— *Sub sec.* 1.	—	—	—	—	—	—	—	—	60	7	5	—	—	—	89	114
Neuritis	—	—	—	—	—	—	9	15								
Meningitis ...	—	—	—	—	—	—	1	—								
Total carried forward									882	65	171	—	—	—	1494	1408

	Officials.		C. Police.		F. Police.		Paupers.		TOTALS. Officials.		C. Police.		F. Police.		Paupers.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Total brought forward									882	65	171	—	—	—	1494	1408
Sub sec. 2.																
Neurasthenia ...	—	—	—	—	—	—	3	1								
Paralysis	—	—	—	—	—	—	1	—								
Epilepsy	—	—	—	—	—	—	2	—								
Neuralgia	57	7	3	—	—	—	49	74								
Vertigo	2	—	—	—	—	—	5	7								
Locomotor Ataxy ..	—	—	—	—	—	—	4	3								
Torticollis... ...	1	—	1	—	—	—	1	—								
Sub sec. 3.																
Mania	—	—	—	—	—	—	—	3								
Eye—	—	—	—	—	—	—	—	—	29	—	9	—	—	—	88	47
Conjunctivitis ..	25	—	8	—	—	—	66	35								
Keratitis	1	—	—	—	—	—	9	5								
Iritis	1	—	—	—	—	—	2	2								
Cataract	—	—	1	—	—	—	4	3								
Pan-Ophthalmitis ..	—	—	—	—	—	—	4	1								
Blepharitis ...	2	—	—	—	—	—	3	1								
Ear—	—	—	—	—	—	—	—	—	5	—	2	—	—	—	46	47
Inflammation ...	5	—	2	—	—	—	40	43								
Other Diseases ...	—	—	—	—	—	—	6	4								
Nose—	—	—	—	—	—	—	—	—	18	—	—	—	—	—	14	13
Coryza	18	—	—	—	—	—	10	4								
Epistaxis	—	—	—	—	—	—	3	5								
Ozœna	—	—	—	—	—	—	1	4								
Circulatory System	—	—	—	—	—	—	—	—	6	—	1	—	—	—	42	38
Pericarditis ...	—	—	—	—	—	—	7	4								
Valvular (Mitral)...	3	—	1	—	—	—	27	17								
Palpitation ...	2	—	—	—	—	—	5	10								
Hypertrophy ...	1	—	—	—	—	—	3	7								
Respiratory System	—	—	—	—	—	—	—	—	204	34	23	—	—	—	487	418
Laryngitis ...	—	2	—	—	—	—	20	15								
Bronchitis... ...	199	32	23	—	—	—	451	391								
Pleurisy	2	—	—	—	—	—	5	7								
Asthma	3	—	—	—	—	—	10	4								
Hæmoptysis ...	—	—	—	—	—	—	1	1								
Digestive System—	—	—	—	—	—	—	—	—	406	48	58	—	—	—	925	787
Stomatitis... ..	8	2	1	—	—	—	21	21								
Teething	2	1	—	—	—	—	6	2								
Caries of Tooth ...	10	—	1	—	—	—	54	29								
Gumboil	3	—	—	—	—	—	5	3								
Toothache... ...	26	1	6	—	—	—	106	68								
Glossitis	1	—	—	—	—	—	3	1								
Sore Throat ...	12	—	1	—	—	—	9	11								
Inflammation of Tonsils	14	—	—	—	—	—	19	28								
Pharyngitis ...	6	—	1	—	—	—	9	11								
Gastritis	2	—	—	—	—	—	2	—								
Dyspepsia... ...	101	28	5	—	—	—	204	353								
Enteritis	1	—	3	—	—	—	6	2								
Total carried forward									1550	147	264	—	—	—	3096	2758

	Officials.		C. Police.		F. Police.		Paupers.		TOTALS. Officials.		C. Police.		F. Police.		Paupers.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Total brought forward									1550	147	264	—	—	—	3096	2758
Hernia	—	—	—	—	—	—	58	1								
Diarrhœa	74	4	10	—	—	—	56	52								
Constipation ...	115	10	24	—	—	—	294	164								
Colic	16	1	2	—	—	—	27	13								
Hæmorrhoids ...	3	—	—	—	—	—	5	4								
Hepatitis (Acute) ..	7	1	2	—	—	—	27	21								
Fistula in Ano ...	2	—	1	—	—	—	1	—								
Jaundice	3	—	1	—	—	—	4	1								
Ascites	—	—	—	—	—	—	2	—								
Perityphlitis ...	—	—	—	—	—	—	1	—								
Tongue Tie ...	—	—	—	—	—	—	6	2								
Lymphatic System—	—	—	—	—	—	—	—	—	12	1	1	—	—	—	65	36
Splenitis	—	—	—	—	—	—	8	6								
Inflammation of Lymphatic Gland	12	1	1	—	—	—	52	27								
Suppuration of Lymphatic Gland	—	—	—	—	—	—	5	3								
Urinary System—	—	—	—	—	—	—	—	—	6	—	—	—	—	—	26	29
Nephritis	—	—	—	—	—	—	6	6								
Bright's Disease ...	2	—	—	—	—	—	10	10								
Cystitis	3	—	—	—	—	—	5	3								
Incontinence of Urine	—	—	—	—	—	—	1	1								
Hæmaturia ...	1	—	—	—	—	—	4	—								
Generative System—	—	—	—	—	—	—	—	—	6	8	—	—	—	—	157	228
Male Organs—																
Urethritis ...	1	—	—	—	—	—	6	—								
Stricture	2	—	—	—	—	—	32	—								
Ulcer of Penis ...	—	—	—	—	—	—	6	—								
Condyloma ...	—	—	—	—	—	—	1	—								
Urinary Fistulæ ...	—	—	—	—	—	—	7	—								
Balanitis	—	—	—	—	—	—	3	—								
Phimosis	—	—	—	—	—	—	64	—								
Hydrocele... ...	—	—	—	—	—	—	26	—								
Orchitis	3	—	—	—	—	—	11	—								
Varicocele ...	—	—	—	—	—	—	1	—								
Female Organs—																
Ovaritis	—	—	—	—	—	—	—	8								
Endometritis ...	—	1	—	—	—	—	—	29								
Amenorrhœa ...	—	1	—	—	—	—	—	34								
Dysmenorrhœa ...	—	—	—	—	—	—	—	25								
Menorrhagia ...	—	—	—	—	—	—	—	31								
Metrorrhagia ...	—	2	—	—	—	—	—	6								
Leucorrhœa ...	—	—	—	—	—	—	—	1								
Uterine Congestion	—	1	—	—	—	—	—	5								
Mastitis	—	2	—	—	—	—	—	10								
Abscess of Breast...	—	—	—	—	—	—	—	12								
Delayed Labour ...	—	—	—	—	—	—	—	3								
Ulcer of Nipples ...	—	—	—	—	—	—	—	1								
Other Diseases ...	—	1	—	—	—	—	—	63								
Organs of Locomotion—	—	—	—	—	—	—	—	—	7	—	2	—	—	—	40	29
Periostitis... ...	2	—	2	—	—	—	12	10								
Osteitis	1	—	—	—	—	—	3	2								
Total carried forward									1581	156	267	—	—	—	3384	3071

	Officials.		C. Police.		F. Police.		Paupers.		TOTALS. Officials.		C. Police.		F. Police.		Paupers.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Total brought forward									1581	156	267	—	—	—	3384	3071
Necrosis	—	—	—	—	—	—	2	4								
Synovitis	4	—	—	—	—	—	17	12								
Club Foot... ...	—	—	—	—	—	—	1	1								
Ganglion	—	—	—	—	—	—	3	—								
Caries	—	—	—	—	—	—	2	—								
CONNECTIVE TISSUE—	—	—	—	—	—	—	—	—	8	1	—	—	—	—	80	52
Cellulitis	—	—	—	—	—	—	12	14								
Abscess	8	1	—	—	—	—	61	38								
Elephantiasis ...	—	—	—	—	—	—	7	—								
SKIN—	—	—	—	—	—	—	—	—	53	4	12	—	—	—	673	253
Eczema	18	2	2	—	—	—	74	9								
Psoriasis	—	—	—	—	—	—	3	—								
Impetigo	—	—	—	—	—	—	2	2								
Herpes	—	—	—	—	—	—	3	4								
Vaccinating Ulcer	1	—	—	—	—	—	79	31								
Ulcer	15	1	8	—	—	—	424	173								
Boil	12	—	2	—	—	—	12	2								
Craw Craw ...	2	—	—	—	—	—	33	5								
Whitlow	2	—	—	—	—	—	6	8								
Ring Worm ...	1	1	—	—	—	—	19	7								
Scabies	1	—	—	—	—	—	15	4								
Acne	1	—	—	—	—	—	2	—								
Corns	—	—	—	—	—	—	1	—								
Carbuncle... ...	—	—	—	—	—	—	—	8								
INJURIES, LOCAL...	57	—	23	—	—	—	733	216	57	—	23	—	—	—	733	216
TUMOURS	—	—	—	—	—	—	10	10	—	—	—	—	—	—	10	10
PARASITES—	—	—	—	—	—	—	—	—	6	—	1	—	—	—	164	152
CESTODÆ—																
Taenia Solium ...	—	—	—	—	—	—	32	31								
NEMATODÆ—																
Ascaris	6	—	1	—	—	—	132	121								
INSECTA—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Chiggers	—	—	—	—	—	—	1	1								
UNCLASSIFIED ...	106	2	30	—	—	—	484	190	106	2	30	—	—	—	484	190
TOTAL ...									1811	163	333	—	—	—	5529	3945
SUBSEQUENT ATTENDANCES									1299	123	239	—	—	—	12127	6226
GENERAL TOTAL									3110	286	572	—	—	—	17656	10171

Table No. 9.

SURGICAL OPERATIONS.—(Under Chloroform and other Anæsthetics).
COLONIAL HOSPITAL, 1910.

	Remaining in Hospital, 31-12-09.	Number Admitted.	Total.	Successful.	Not Relieved.	Died.	Remaining in Hospital, 31-12-10.
Abscess, Opening of	—	24	24	23	—	—	1
Amputations	—	15	15	12	—	—	3
Buboes, Incisions for	—	1	1	1	—	—	—
Carbuncle, Removal of	—	1	1	1	—	—	—
Cancer of Penis, Amputation of ...	—	1	1	—	—	1	—
Cellulitis, Incisions for	—	2	2	1	—	—	1
Circumcisions	4	39	43	40	—	—	3
Clitoridectomy	—	1	1	1	—	—	—
Curetting	—	2	2	2	—	—	—
Dilatation, Stricture of Rectum ...	1	1	2	2	—	—	—
Dilatation, Stricture of Urethra ...	—	17	17	17	—	—	—
Dislocation, Reduction of ..	—	1	1	1	—	—	—
Elephantiasis of Scrotum, Removal of	—	9	9	7	—	—	2
Enterectomy	—	1	1	—	—	1	—
Enucleation of Eyeball	—	2	2	2	—	—	—
Examinations	—	1	1	1	—	—	—
Extravasation of Urine, Relief of	—	7	7	7	—	—	—
Fistula in Ano, Incision	—	1	1	1	—	—	—
Fistula Recto-Vaginal, Incision ...	—	2	2	2	—	—	—
Foreign body, Removal of	—	2	2	2	—	—	—
Ganglion, Removal of	—	3	3	3	—	—	—
Glands, Removal of	—	3	3	3	—	—	—
Hernia, Radical Cure	—	16	16	15	—	—	1
Hernia, Taxis	—	1	1	1	—	—	—
Herniotomy	—	5	5	2	—	2	1
Hystero-Myomectomy	—	1	1	1	—	—	—
Hydrocele, Radical Cure ...	—	7	7	7	—	—	—
Hæmorrhoids, Excision of ...	—	1	1	1	—	—	—
Ingrowing Toe-nail, Evulsion of ...	—	8	8	8	—	—	—
Instrumental Delivery	—	1	1	1	—	—	—
Iridectomy	—	1	1	1	—	—	—
Laparotomy...	—	1	1	—	—	1	—
Ligaturing of Artery	—	2	2	2	—	—	—
Necrosis and Sequestrotomy ...	—	4	4	3	—	—	1
Paraphymosis	—	1	1	1	—	—	—
Penile Fistula, Radical Cure ..	—	1	1	1	—	—	—
Perineal Rupture, Suturing ...	—	2	2	2	—	—	—
Perineal Section	—	3	3	3	—	—	—
Periostitis Suppurating, Incision into	—	2	2	1	—	1	—
Pinhole Os Uteri, Dilatation ...	—	2	2	2	—	—	—
Plastic Operations	—	2	2	2	—	—	—
Scraping of Ulcer	—	8	8	6	—	2	—
Sebaceous Cyst, Removal of ...	1	2	2	2	—	—	—
Setting of Compound Fracture ...	—	1	1	1	—	—	—
Stone in Urethra, Removal of ...	—	1	1	1	—	—	—
Stumps, Removal of	—	1	1	1	—	—	—
Testicle, Removal of	—	1	1	—	—	—	1
Tumours Cystic, Removal of ...	1	7	8	8	—	—	—
Tumours, Various, Removal of ...	1	6	8	8	—	—	—
Trephining	—	1	1	—	—	—	1
Whitlow, Incisions for	—	2	2	2	—	—	—
Wounds, Suturing of	—	5	5	4	—	—	1
Total	8	232	240	216	—	8	16

GAOL HOSPITAL.

Annual Medical Return for 1910.

Table No. 10.

	Males.	Females.	Total.
Patients remaining in Hospital, 1st January, 1910 ...	1	—	1
,, admitted into Hospital during 1910	248	4	252
Total number treated 1910	249	4	253
Of these were—			
Cured	132	4	136
Relieved	107	—	107
Not Relieved	2	—	2
Died	5	—	5
Remaining in Hospital on 31st December, 1910 ...	3	—	3
Total	249	4	253
Number of Out-Patients treated			4,927
Total treated			5,180
Daily average number of Prisoners			241
,, ,, ,, ,, treated			13

GAOL HOSPITAL.

Table No. 11.

Return of Prisoners Seen and Examined by the Medical Officer during the year 1910.

	Quarter ending March.	Quarter ending June.	Quarter ending September.	Quarter ending December.	Total.
Reported Sick daily	676	666	747	830	2,919
Sick placed under observation... ...	150	103	95	105	453
Sick admitted into Hospital	66	60	71	56	253
Convalescents on Light Labour ...	56	34	95	74	259
Examined for Solitary Confinement ...	122	93	90	74	379
Seen in Solitary Confinement	122	93	90	74	379
Examined for Corporal Punishment ...	2	7	—	2	11
New-comers, including Remands and Trials...	234	198	266	22	720
Number of Condemned Prisoners seen	—	2	—	2	4
Total	1,428	1,256	1,454	1,239	5,377

Table No. 12.

RETURN SHOWING IN-PATIENTS TREATED IN THE VARIOUS HOSPITALS OF THE COLONY AND PROTECTORATE, EXCEPT COLONIAL HOSPITAL, DURING 1910.

	Diseases.	Remaining in Hospital at end of 1909.	Yearly Total. Admissions.	Yearly Total. Deaths.	Total Cases Treated.	Remaining in Hospital at end of 1910.	Remarks.
INFECTIVE DISEASES.	Beri Beri	—	10	1	10	—	
	Chicken Pox	—	3	—	3	—	
	Dysentery	—	12	—	12	—	
	Gonorrhœa	—	12	—	12	1	
	Malaria—						
	(*a*) Tertian	1	48	—	49	—	
	(*b*) Æstivo-Autumnal	—	4	—	4	1	
	Pneumonia	—	2	—	2	—	
	Small Pox	—	1	—	1	—	
	Syphilis—(*a*) Primary...	—	—	—	—	—	
	(*b*) Secondary	1	7	—	8	1	
	(*c*) Inherited	—	—	—	—	—	
	Tubercle	—	3	—	3	—	
	Other Diseases... ...	—	15	—	15	—	
	GENERAL DISEASES—						
	Rheumatism	1	43	—	44	4	
	Debility	—	7	2	7	—	
LOCAL DISEASES.	Nervous System—Locomotor Ataxy	—	1	—	1	—	
	Nervous System—Neuralgia ...	—	10	3	10	—	
	Diseases of the Eye ...	—	5	—	5	1	
	,, ,, Ear ...	—	2	—	2	—	
	,, ,, Nose ...	—	2	—	2	—	
	,, ,, Circulatory System	—	20	7	20	—	
	,, ,, Respiratory do.	1	20	2	21	1	
	,, ,, Digestive do.	1	36	2	37	1	
	,, ,, Lymphatic do.	—	23	—	23	1	
	,, ,, Urinary do.	—	16	—	16	—	
	,, ,, Generative do.—						
	,, ,, Male organs	1	40	—	41	—	
	,, Female organs	—	4	—	4	—	
	,, ,, Organs of Locomotion	2	5	—	7	—	
	,, ,, Connective Tissue ..	—	17	—	17	1	
	,, ,, Skin ...	6	66	—	72	7	
Injuries—General		1	21	2	22	2	
,, Local		1	33	1	34	—	
Surgical Operations		—	24	—	24	—	
Tumours		—	2	1	2	—	
Parasites		—	1	—	1	—	
Unclassified		—	11	—	11	—	
Total		16	526	21	542	21	

Table No. 13.

RETURN SHOWING OUT-PATIENTS TREATED IN THE VARIOUS DISPENSARIES OF THE COLONY AND PROTECTORATE, EXCEPT THE COLONIAL HOSPITAL, DURING THE YEAR 1910.

	Diseases.	Male.	Female.
INFECTIVE DISEASES.	Beri Beri	8	—
	Chicken Pox	51	19
	Dysentery	165	56
	Gonorrhœa	583	10
	Leprosy (*a*) Nodular	16	9
	(*b*) Anæsthetic	—	1
	Malaria (*a*) Tertian	281	253
	(*b*) Quartan	5	—
	(*c*) Æstivo-Autumnal	192	28
	(*d*) Chronic Malaria	283	158
	(*e*) Blackwater	2	—
	Measles	5	8
	Pneumonia	18	14
	Influenza	12	—
	Trypanosomiasis	—	—
	Small Pox	3	1
	Syphilis (*a*) Primary	33	17
	(*b*) Secondary	204	263
	(*c*) Inherited	—	—
	Tetanus	2	2
	Tuberculosis	7	5
	Yaws	140	56
	Yellow Fever	—	—
	Other Diseases	52	40
INTOXICATIONS		1	1
GENERAL DISEASES		1,614	1,256
LOCAL DISEASES.	Diseases of the Nervous System	189	205
	„ „ Eye	160	88
	„ „ Ear	114	94
	„ „ Nose	67	56
	„ „ Circulatory System	97	100
	„ „ Respiratory „	1,304	1,052
	„ „ Digestive „	3,249	2,374
	„ „ Lymphatic „	176	64
	„ „ Urinary „	69	29
	„ „ Generative System—Male Organs	237	—
	„ „ „ „ —Female „	—	340
	„ „ Organs of Locomotion	64	23
	„ „ Connective Tissues	176	80
	„ „ Skin	1,711	946
Injuries, General		124	38
„ Local		1,283	312
Surgical Operations		6	1
Tumours		1	4
Malformations		6	1
Poisons		2	2
Parasites		656	659
Insecta		7	5
Unclassified		110	74
	TOTAL	13,485	8,744
	Subsequent Attendances	17,123	9,167
	GRAND TOTAL	30,608	17,911

VITAL STATISTICS—FREETOWN, 1910.

Table I.

TABLE SHOWING THE INFANTILE MORTALITY.

	24 Hours and under.		1 Day to 1 Week.		1 to 2 Weeks.		2 to 3 Weeks.		3 Weeks to 1 Month.		1 to 2 Months.		2 to 3 Months.		3 to 4 Months.		4 to 5 Months.		5 to 6 Months.		6 to 7 Months.		7 to 8 Months.		8 to 9 Months.		9 to 10 Months.		10 to 11 Months.		11 to 12 Months.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
January	3	4	—	3	—	2	—	—	—	—	1	—	1	—	—	—	1	1	—	—	2	—	—	1	—	—	—	1	—	—	—	—	20
February	2	1	3	1	1	1	—	1	—	—	—	—	1	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13
March	2	5	3	1	—	1	—	—	—	—	—	—	—	2	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	16
April	2	4	2	—	1	2	1	—	—	—	—	1	2	—	1	—	1	1	1	1	—	1	1	—	—	—	1	—	—	—	—	—	23
May	2	1	2	1	—	—	—	—	2	—	—	—	—	—	1	1	—	—	1	—	—	—	1	—	—	—	—	—	—	1	—	—	13
June	2	2	3	1	1	—	—	—	1	—	1	—	—	1	—	1	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	15
July	3	3	2	1	—	1	—	1	—	—	1	—	—	1	—	—	—	—	—	—	1	—	—	3	2	1	2	—	—	—	1	1	24
August	6	2	3	2	—	—	—	—	—	—	1	2	3	—	1	—	1	1	—	—	1	1	2	—	—	—	—	—	1	—	—	—	27
September	1	3	1	—	2	1	—	—	—	—	—	—	—	1	—	—	1	—	1	1	—	—	1	—	—	—	—	—	—	—	1	—	14
October	1	2	1	2	—	—	—	—	—	1	—	2	1	2	1	1	1	—	—	—	—	—	1	—	—	—	—	—	1	1	—	—	18
November	3	—	3	2	—	—	1	1	—	1	1	—	1	—	2	—	—	—	2	1	1	1	1	—	—	—	—	—	—	1	1	—	23
December	3	1	1	1	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
TOTAL	30	28	24	15	5	8	2	3	3	2	5	5	9	9	6	4	6	4	5	3	6	4	7	4	3	1	3	1	2	3	3	1	214

Table II.

TABLE SHOWING THE MORTALITY OVER 12 MONTHS.

	1 to 5 Years.		5 to 10 Years.		10 to 15 Years.		15 to 20 Years.		20 to 25 Years.		25 to 35 Years.		35 to 45 Years.		45 to 55 Years.		55 to 65 Years.		65 to 75 Years.		Over 75 Years.		TOTAL.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
January	4	2	1	—	1	1	—	—	3	2	10	3	13	2	5	1	4	1	3	5	3	3	67
February	3	3	—	—	—	1	1	3	2	—	7	3	5	4	3	2	2	3	1	3	1	3	50
March	2	8	—	1	1	1	1	1	2	2	5	2	5	4	3	5	3	6	—	2	2	8	64
April	1	1	1	—	2	1	5	1	3	1	11	1	3	4	3	2	2	3	1	3	1	1	51
May	3	2	—	—	2	—	3	—	3	5	8	—	2	2	4	3	4	2	4	2	1	—	50
June	2	2	—	1	2	1	3	1	—	1	4	2	2	2	3	4	5	4	3	3	2	—	47
July	6	11	—	—	—	—	—	1	2	3	11	4	11	5	3	2	5	3	2	1	4	4	78
August	2	6	—	1	—	—	3	2	2	5	7	2	6	6	3	—	4	3	—	2	7	3	64
September	4	5	—	1	2	1	—	3	3	6	2	6	7	2	5	3	3	4	3	2	3	3	68
October	1	6	1	—	1	—	3	—	2	2	12	3	6	2	14	2	4	2	4	6	—	4	75
November	4	1	1	2	2	1	1	—	3	1	5	5	8	3	4	1	4	5	4	1	1	3	60
December	2	1	—	—	1	1	—	2	2	—	10	2	4	—	3	3	4	5	4	1	1	4	48
TOTAL	34	48	4	6	14	8	20	14	27	28	92	33	72	36	53	28	42	41	29	31	26	36	722

Table III.

TABLE SHOWING THE MORTALITY DUE TO DIFFERENT DISEASES UP TO THE AGE OF FIVE YEARS.

DISEASES.	24 Hours and under.		1 Day to 1 Week.		1 to 2 Weeks.		2 to 3 Weeks.		3 Weeks to 1 Month.		1 to 2 Months.		2 to 3 Months.		3 to 4 Months.		4 to 5 Months.		5 to 6 Months.		6 to 7 Months.		7 to 8 Months.		8 to 9 Months.		9 to 10 Months.		10 to 11 Months.		11 to 12 Months.		1 to 5 Years.		TOTAL.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Fever	—	1	6	1	1	2	—	2	—	2	2	2	1	3	—	—	1	1	—	1	3	—	1	1	—	—	—	1	1	2	1	—	6	11	53
Debility	5	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	11
Starvation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exhaustion	1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	6
Nervous System	3	6	9	9	3	5	1	1	1	—	2	3	3	3	3	3	3	2	2	1	—	1	3	3	1	1	1	—	—	—	—	—	16	5	94
Alimentary System	1	—	—	1	—	—	1	—	2	—	1	—	2	3	2	1	1	1	2	1	—	3	1	—	1	—	2	—	1	1	—	—	6	24	58
Respiratory ,, ...	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	3	6	11
Premature Birth	20	20	5	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	48
Dropsy	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Unclassified	—	—	—	1	1	—	—	—	—	—	—	—	2	—	1	—	1	—	1	—	1	—	1	—	—	—	—	—	—	—	1	1	1	—	13
TOTAL	30	28	24	15	5	8	2	3	3	2	5	5	9	9	6	4	6	4	5	3	5	4	7	4	3	1	3	1	2	3	3	1	34	48	295

Table IV.

TABLE SHOWING THE MORTALITY DUE TO DIFFERENT DISEASES OVER FIVE YEARS.

DISEASES.	5 to 10 Years.		10 to 15 Years.		15 to 20 Years.		20 to 25 Years.		25 to 35 Years.		35 to 45 Years		45 to 55 Years.		55 to 65 Years.		65 to 75 Years.		Over 75 Years.		TOTAL.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
General Diseases—																					
Small Pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fever, Intermittent	1	—	—	1	2	2	5	7	10	2	5	1	5	7	3	6	4	2	—	2	65
„ Remittent	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
„ Blackwater	—	—	—	—	—	—	—	—	2	—	—	1	—	—	—	—	—	—	—	—	3
„ Yellow	—	—	—	—	—	—	1	—	4	—	2	1	—	—	2	—	—	—	—	—	10
Syphilis	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	2
Debility	—	—	—	—	1	—	—	2	1	1	1	—	—	—	2	2	2	8	16	33	69
Rheumatism	—	—	1	1	—	—	2	—	2	1	3	1	3	4	2	1	1	2	—	—	24
Tubercle	—	—	—	2	1	1	3	2	2	—	2	2	4	—	1	3	1	1	—	—	25
Cancer	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—	2
Trypanosomiasis	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Malignant, New Growth	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
Local Diseases—																					
Nervous System	1	1	4	—	2	3	2	2	11	5	10	4	3	2	5	2	—	3	1	—	61
Circulatory „	2	—	—	4	1	—	2	2	5	3	2	3	8	1	6	4	5	—	1	—	49
Respiratory „	1	5	—	1	5	5	4	4	25	4	16	6	11	4	8	3	1	4	2	—	109
Digestive „	1	3	2	3	5	1	5	4	26	8	10	7	9	11	10	9	3	5	2	5	129
Lymphatic „	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Urinary „	—	—	—	—	—	—	1	1	5	2	1	1	5	1	—	1	3	—	1	1	23
Generative „																					
Male	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Affections connected with Pregnancy ...	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
„ „ „ Parturition ...	—	—	—	—	—	1	—	3	—	2	—	2	—	1	—	—	—	—	—	—	9
Organs of Locomotion	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Connective Tissue...	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	2
Skin	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	2
Poison	—	—	—	—	—	—	1	—	1	—	1	—	1	—	—	—	—	—	—	—	4
Injuries	—	1	—	—	3	—	1	—	3	—	1	1	1	—	1	1	—	—	1	—	14
Unclassified	—	1	2	—	—	—	2	2	7	1	5	1	3	—	2	1	1	2	—	—	30
TOTAL	6	11	11	13	21	13	30	30	105	30	60	32	53	32	43	37	21	27	24	41	640

Table V.

Table Showing the Mortality due to Different Diseases at all Ages.

Diseases.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
General Diseases—																									
Small Pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fever, Intermitten	4	2	7	6	2	8	8	6	5	7	5	2	7	4	4	4	7	6	3	4	5	4	7	—	117
„ Remittent	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
„ Blackwater	2	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
„ Yellow	—	—	—	—	—	—	—	—	3	—	1	—	2	1	2	—	1	—	—	—	—	—	—	—	10
Syphilis	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	2
Debility...	2	5	4	2	3	7	1	3	2	—	1	2	2	5	4	5	2	6	4	5	5	3	3	4	80
Rheumatism	2	1	1	—	1	2	—	—	1	1	—	2	—	—	3	2	4	2	—	—	2	—	—	1	25
Tubercle	2	—	1	—	—	2	1	1	1	—	—	—	1	—	2	4	1	2	3	1	—	1	1	—	24
Cancer	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	2
Trypanosomiasis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	2
Malignant New Growth	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Local Diseases—																									
Nervous System	8	6	5	4	7	8	9	2	6	4	6	6	7	10	14	6	12	—	7	5	9	4	3	8	156
Circulatory „	4	3	—	1	—	1	5	4	2	1	—	—	2	3	2	—	3	3	8	3	3	2	1	1	52
Respiratory „	12	8	5	3	5	—	—	1	2	1	9	4	13	6	8	6	4	2	8	1	7	4	5	3	117
Digestive „	6	1	3	9	8	11	7	7	8	2	7	6	13	4	5	7	12	7	17	16	14	7	9	4	190
Lymphatic „	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Urinary „	3	—	—	—	—	2	2	—	2	—	2	—	4	2	1	2	—	—	—	1	—	1	1	—	23
Generative „																									
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Affections connected with Pregnancy ...	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
„ „ „ Parturition ..	—	1	—	1	—	1	—	—	—	—	—	1	—	2	—	1	—	2	—	—	—	—	—	—	9
Organs of Locomotion	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	2
Connective Tissue	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Skin	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	2
Poison	2	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Injuries	2	1	1	1	—	1	5	—	4	—	2	—	—	—	1	—	—	—	—	—	—	—	—	1	19
Premature Birth	1	3	3	1	4	3	2	1	2	3	2	1	3	3	4	2	—	2	2	1	2	2	1	1	48
Unclassified	2	1	—	—	—	3	6	2	3	1	1	1	2	5	1	—	4	—	3	—	3	1	3	—	42
Total	54	33	33	30	30	50	47	27	43	20	36	26	56	46	52	39	50	32	55	38	51	31	34	23	936

Table VI.

TABLE SHOWING THE DISTRIBUTION OF DEATHS ACCORDING TO MONTHS AND SEXES, 1910.

MONTH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Male	54	33	30	47	43	36	56	52	50	55	51	34	541
Female	33	30	50	27	20	26	46	39	32	38	31	23	395
TOTAL	87	63	80	74	63	62	102	91	82	93	82	57	936