

# **Annual report of the Director, Medical & Health Department / Colony of Mauritius.**

## **Contributors**

Mauritius. Medical and Health Department.

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COLONY OF MAURITIUS

Annual Report on the  
Medical and Health Department  
1938.

(1st January to 31st December)

[Price R. 1.30 cents]

PRINTED AND PUBLISHED BY  
A. L. CHANIER, AG. GOVERNMENT PRINTER.  
PORT LOUIS, MAURITIUS,  
1940.

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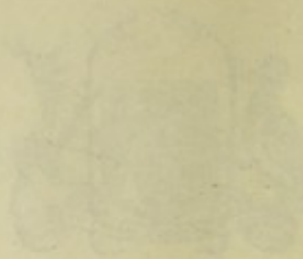
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GOVERNMENT OF MADRAS

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## ERRATA

- PAGE 21—*Report on Hospitals for the year 1938* : Column " Patients remaining on 31.12.38 " 143 should be read for 136, as regards Victoria Hospital and the total should consequently be altered from 483 to 490.
- PAGE 78—Item 154 B.—Scabies: Column " Remaining in Hospital at end of 1938 " : 9 should be read for 2, and the total carried forward should consequently be altered from 363 to 370.
- PAGE 79—Brought Forward and Total Carried forward: Column " Remaining in Hospital at end of 1938 " : 370 and 393 should be read for 363 and 386 respectively.
- PAGE 80—Brought Forward and Total carried forward: Column " Remaining in Hospital at end of 1938 " : 393 and 409 should be read for 386 and 402, respectively.
- PAGE 81—Brought forward and Total: Column " Remaining in Hospital at end of 1938 " : 409 and 490 should be read for 402, and 483, respectively.
- PAGE 82—Summary: Column " Remaining in Hospital at end of 1938 " 97 should be read for 90 as regards Group IX—Affections of the skin and cellular tissues, and the total should consequently be altered from 483 to 490.

ERRATA

- Page 21—Report on Statistics for the year 1925: Column "Patients remaining in Hospital at end of 1925" 148 should be read for 150, as regards Victoria Hospital and the total should consequently be altered from 180 to 182.
- Page 25—From 100 to 1000: Column "Remaining in Hospital at end of 1925" : It should be read for 100 and the sum carried forward should consequently be altered from 308 to 370.
- Page 29—Brought forward and Total Carried forward: Column "Remaining in Hospital at end of 1925" : 870 and 903 should be read for 882 and 904 respectively.
- Page 30—Brought forward and Total Carried forward: Column "Remaining in Hospital at end of 1925" : 882 and 100 should be read for 884 and 102 respectively.
- Page 31—Brought forward and Total: Column "Remaining in Hospital at end of 1925" : 100 and 100 should be read for 102 and 102 respectively.
- Page 32—Summary: Column "Remaining in Hospital at end of 1925" : 102 should be read for 90 as regards Group IX—Affections of the skin and cellular tissue, and the total should consequently be altered from 482 to 490.

ANNUAL REPORT ON THE MEDICAL AND  
HEALTH DEPARTMENT 1st JANUARY  
TO 31st DECEMBER, 1938.

**I.—Administration.**

Only minor changes of establishment have been effected during the year. A certain amount of adjustment was made in the grading of Dressers so as to provide an increased number of posts in the grade Rs. 1,200 by Rs. 120 to Rs. 1,800 per annum, and the total number was increased by three. An increase of six posts was made in the establishment of nurses.

2. An additional pathologist was provided for the Bacteriological Laboratory owing to the need for making special arrangements for the preparation of bovine B.C.G. for the immunisation of calves against tuberculosis, the bovine form of which is common in the Colony.

3. Great difficulty is still experienced in finding suitable recruits for the nursing staff of the hospitals. Nursing is not yet regarded favourably as a means of livelihood by young women of the type one would like to recruit for service in the public hospitals. Recruitment just manages to keep pace with wastage. There is little immediate prospect of the possibility of obtaining enough probationers to enable an increase in establishment to be made.

LEGAL

4. Two ordinances were enacted during the year:

- (1) Ordinance 7 to regulate the Manufacture of Medicinal Tinctures and Drugs in the Colony.
- (2) Ordinance 43 to control and regulate the maintenance and disposal of stocks in respect of Dangerous Drugs in the Colony.

Two proclamations and one regulation were also issued:—

Proclamation No. 9 to proclaim Port Elizabeth an infected port.

Proclamation No. 26 to proclaim that certain preparations containing Morphine, Cocaine, etc. are excluded from the provisions of Part IV of the Dangerous Drugs Ordinance 1934.

Regulation No. 38 refers to the control of stocks of Dangerous Drugs.

FINANCIAL

5. The revenue of the Colony for the financial year  
1937-38 was ... .. Rs. 17,259,848.79

The expenditure on Medical and Sanitary Services  
including Municipal expenditure under this Department's  
control was ... .. 1,584,829.32

## ANNUAL REPORT ON THE

### II.—Public Health.

6. No major epidemics occurred and the state of the public health, so far as can be judged from the vital statistics, was about normal. A widespread outbreak of influenza was principally responsible for the increased number of deaths recorded during the year. Its effects influence the statistics not only of influenza itself but of pneumonia. It was probably also concerned in the increased numbers of deaths ascribed to old age and debility.

The number of patients treated in the hospitals was 28,605 as compared with 27,968 for the previous year, and the number of attendances at dispensaries and out-patient departments of the hospitals was 365,449. In 1937 the comparable number was 286,575.

The birth rate for 1938 was 33.4‰; that for 1937 35.2‰ and the death rate 29.9‰ as compared with 28.8‰ for 1937.

7. The number of cases of malignant disease admitted to the public hospitals was 157. The distribution of these malignant tumours was as follows. The numbers in parenthesis are the figures for 1937 included for comparison.

Female genital organs and breast	...	100	(87)
Peritoneum and intestinal tract	...	15	(15)
Stomach and liver	...	20	(25)
Buccal cavity	...	7	(7)
Skin	...	6	(10)
Site not specified	...	9	(12)
The non-malignant new growths numbered		100	(102)

The total number of deaths in the Colony from Cancer and other tumours is reported by the Registrar General to be 93 (75).

### COMMUNICABLE DISEASES

#### INSECT BORNE DISEASES.

8. *Malaria*.—The total number of patients suffering from malaria admitted to the hospitals was 2,814, a decrease of 344 over the figure for the previous year. The case mortality was 3.19%.

The following tabular statement shows the admissions for malaria and deaths ascribed to it during this and the preceding year:

INSTITUTIONS	ADMISSIONS		DEATHS	
	1937	1938	1937	1938
Civil Hospital	966	675	24	20
Port Louis Prison	94	87	0	0
Long Mountain Hospital	271	265	10	11
Poudre d'Or Hospital	218	155	4	6
Flacq Hospital	340	361	23	11
Mahebourg Hospital	284	325	14	17
Souillac Hospital	277	274	13	8
Victoria Hospital	410	349	24	12
Moka Hospital	128	88	9	4
Beau Bassin Prison Hospital	61	111	0	0
Mental Hospital Infirmary	43	37	1	1
Barkly Industrial School Hospital	66	87	0	0
<b>Total</b>	<b>3,158</b>	<b>2,814</b>	<b>122</b>	<b>90</b>

## MEDICAL AND HEALTH DEPARTMENT

The total number of deaths in the Colony from malaria and malarial cachexia, 2,302, is equivalent to a death-rate of 5.72‰ living. The rate for 1937 was 5.35‰.

9. *Filariasis*.—There is nothing new to record regarding the distribution of filariasis in the Colony. Though the infection may be classed as common there occur remarkably few instances of its disabling complications or effects.

### MISCELLANEOUS COMMUNICABLE DISEASES

10. *Plague*.—No case of plague occurred during the year.

11. *Small Pox*.—There has been no small pox in the Colony since 1913, though a number of ship-borne cases have been quarantined at Flat Island Quarantine Station during the period between that year and this. 11,109 children were vaccinated during 1938 by the Public Vaccinators. The statistics are as follows:

Successful vaccinations on 1st attendance	...	...	9,326	
Successful vaccinations on 2nd and subsequent attendances			1,235	
			10,561	
Unsuccessful vaccinations	...	...	...	533
Vaccinations in which results could not be obtained				15
			Total	11,109

The proportion of children vaccinated by Government Vaccinators to live births is 82.7%.

With reference to this it should be borne in mind that an appreciable number of infants are vaccinated by private practitioners and are not included in the above-mentioned figures.

12. *Enteric Fever*.—The number and distribution according to Districts of cases of Enteric Fever notified to the Sanitary Authority are given in the following table.

ENTERIC FEVER FOR THE YEAR 1938.

Districts	January	February	March	April	May	June	July	August	September	October	November	December	Total
Port Louis	—	—	1	1	—	—	—	—	2	—	—	1	5
Plaines Wilhems	3	3	5	4	3	4	1	—	—	3	2	3	31
Moka	1	—	1	—	—	—	—	—	—	—	—	1	3
Pamplemousses	1	—	—	1	1	2	—	—	—	1	2	1	9
Rivière du Rempart	—	—	—	—	—	—	2	—	—	—	—	—	2
Flacq	—	1	—	—	1	—	—	—	—	—	—	—	2
Savanne	1	—	2	—	—	1	—	—	—	—	—	—	4
Grand Port	—	—	—	2	1	—	—	1	1	—	1	—	6
Black River	—	—	—	—	—	—	1	—	—	—	—	—	1
Total	6	4	9	8	6	7	4	1	3	4	5	6	63

The above statistics are compiled from returns submitted by the various Sanitary Officers. It is anomalous that fevers of the enteric group are appa-

## ANNUAL REPORT ON THE

rently more common in Plaines Wilhems where sanitation is, on the whole, very much better than elsewhere. Reference to the returns from the hospitals shews the same peculiar feature and the explanation is probably that in the rural districts where medical attention is expensive and sometimes difficult to obtain, cases of typhoid fever occur which are not notified at all.

13. *Diphtheria*.—19 cases of diphtheria were notified in 1938. The disease occurs sporadically; no epidemic outbreaks have been recorded for years. It is generally mild.

### DISEASES AND ACCIDENTS ASSOCIATED WITH THE PUERPERAL STATE

14. Though a number of non-communicable conditions are included in these statistics it is convenient to group them under one head since their significance lies in revealing certain causes of maternal and infantile mortality. 167 deaths were registered as being due to the puerperal state. They are classified as under:

Abortion	...	...	...	1
Puerperal albuminuria and convulsions	...	...	...	17
Puerperal hæmorrhage	...	...	...	8
Puerperal Sepsis	...	...	...	22
Other accidents of pregnancy	...	...	...	6
Other toxæmias of pregnancy	...	...	...	11
Other accidents of childbirth	...	...	...	102

28 cases of puerperal septicæmia, of which 13 proved fatal, were treated in hospital—a case mortality of 47.14%.

The maternal mortality rate (the ratio of the number of deaths ascribed to the puerperal state to the total number of births including still-births) was 11.38‰ in 1938 as compared with a rate of 10.97‰ for the previous year.

15. *Erysipelas*.—85 cases were notified, compared with 67 in 1937. 10 deaths were registered.

16. *Tuberculosis*.—Out of the 12,046 deaths of 1938, 327 were due to tuberculosis. These figures shew a death-rate from tuberculosis of 813.2 per million living. The crude death-rate for tuberculosis has shewn a considerable reduction in recent years. The following table shews the relevant figures.

#### CRUDE DEATH-RATE PER MILLION FROM TUBERCULOSIS.

Year	Estimated population	No. of deaths ascribed to Tuberculosis	Rate
1927	401,693	485	1,200
1928	404,802	560	1,351
1929	405,549	513	1,256
1930	405,549	447	1,102
1931*	395,492*	463	1,170
1932	391,044	421	1,070
1933	388,400	431	1,109
1934	391,867†	345	880
1935	394,316	336	850
1936	397,550	300	750
1937	399,897	329	822
1938	402,112	327	813

\* Census Year.

† Mid-Year population.

## MEDICAL AND HEALTH DEPARTMENT

It will be seen from these figures that the general trend has been distinctly downwards during the past ten years. Even if one admits that there is considerable error in the classification of such deaths owing to defects in the colonial system for the collection of vital statistics, it may be presumed that this cause operates fairly consistently throughout the period under consideration because the system for the collection of statistics has not changed.

The cause of the decline is difficult to ascertain unless we assume that the population as a whole are constantly becoming slowly immunised as is the case with most European population.

Though the statistics contained in this paragraph relate to deaths from all forms of tuberculosis, they may be taken as a rough practical index of the deaths due to pulmonary form. Other forms of tuberculosis are not common.

17. *Leprosy*.—The report on the work of the Leprosy Board and of the Leper Hospital appears in Appendix VII.

18. *Venereal Diseases*.—218 cases of admission for syphilis and 1 death from this disease were recorded from the hospitals during the year. 181 cases of gonorrhoea were treated and 164 cases of soft chancre.

Mauritius is a signatory of the International Agreement signed at Brussels in 1924 respecting facilities to be given to merchant seamen for treatment of venereal diseases.

This agreement provides for the free treatment of seamen suffering from venereal disease. The treatment is open to all seamen or watermen without distinction of nationality.

Treatment cards drawn up in the form indicated in the agreement are issued to seamen coming for treatment for the first time. On the card is recorded a short clinical account of the case: the diagnosis, the treatment carried out at the centre, indications for treatment on the voyage and the results of the serological examination undertaken in cases of syphilis.

The only difference between local practice and the requirements of the agreement is that the Kahn test is used instead of the Wassermann reaction in the serological diagnosis of syphilis.

The treatment centre is situated at the Civil Hospital, Port Louis, within easy reach of the harbour. It is open daily, Sunday excepted, from 8 a.m. to 5 p.m.

Hospital cases are accommodated in the hospital free of charge.

### HELMINTHIC DISEASES

19. *Ankylostomiasis*.—The report of the Hookworm Branch of the Department is printed as Appendix III.

23,218 cases were treated in the hospitals and dispensaries and the number of deaths in Hospitals ascribed to hookworm disease was 75.

20. *Filariasis*.—Has already been mentioned in paragraph 9 above.

21. *Schistosomiasis*.—23 cases were treated in the hospitals during the year, and 256 at the dispensaries.

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## DEFICIENCY DISEASES

22. The following deficiency diseases were recorded during the year.

### CASES OF DEFICIENCY DISEASES TREATED IN HOSPITALS.

	Rickets	Beri-Beri	Pellagra
Civil ... ..	—	6	1
Long Mountain ... ..	—	—	1
Poudre d'Or ... ..	1	3	—
Flacq ... ..	—	2	—
Mahebourg ... ..	—	1	1
Victoria ... ..	1	18	—
Moka ... ..	—	1	—
	—	—	—
	2	31	3
	—	—	—

### DISPENSARIES.

*(The figures for the dispensaries represent the number of attendances—  
not cases).*

	Rickets	Beri-Beri	Pellagra	Avita- minosis 'A' undetermined
Central ... ..	—	23	—	—
Eastern ... ..	2	—	—	—
Bell Village ... ..	—	—	—	3
Long Mountain ... ..	—	—	—	52
Terre Rouge ... ..	—	—	1	—
Pamplemousses ... ..	—	—	1	—
Bon Air ... ..	2	—	—	133
Poudre d'Or ... ..	1	—	—	3
Grand Gaube ... ..	—	2	—	—
Flacq ... ..	1	2	—	—
Medine Camp de Masque ... ..	—	1	—	—
Rivière Sèche ... ..	2	—	—	—
Mahebourg ... ..	—	—	2	—
Rose Belle ... ..	1	—	—	—
Plaine Magnien ... ..	—	—	—	3
St. Hubert ... ..	—	1	—	28
Souillac ... ..	—	4	—	—
St. Pierre ... ..	—	—	—	27
Pailles ... ..	—	—	—	2
Quartier Militaire ... ..	—	—	—	8
Petite Rivière ... ..	—	1	—	7
Victoria ... ..	—	4	—	—
Vacoas ... ..	1	—	—	6
Curepipe Road ... ..	1	—	—	2
Rose Hill ... ..	—	1	—	—
	—	—	—	—
	11	39	4	274
	—	—	—	—

## MEDICAL AND HEALTH DEPARTMENT

It will be noted that 274 attendances of "Avitaminosis" have been reported from the dispensaries. They have been so grouped because the patients shewed a mixed type of avitaminosis, some symptoms suggesting "A" deficiency ; others "B".

A large group of cases complain of a burning sensation of the skin of the upper and lower limbs from the elbows and knees downwards. In several cases the burning sensation is so painful as to cause acute distress and insomnia and to warrant admission to hospital for treatment. Signs of motor and sensory disturbance other than the burning sensation are lacking.

The patients give a history of previous chronic ill-health which they describe as "fever." There is no clear evidence of antecedent malaria but some degree of anæmia and puffiness is nearly always present.

This condition is encountered almost exclusively among members of the Indian population and is more common among females than males. Children do not appear to suffer.

Dispensary treatment consisting in the administration of cod liver oil with extract of malt is nearly always sufficient to effect a cure. Hospital cases are given Marmite in addition to the cod liver oil and malt and relief is obtained more quickly ; due, perhaps, to the additional effect of the hospital diet.

Other patients complain, in addition to the symptoms noted above, of burning pains in other parts of the body. They manifest also angular stomatitis, poorness of both day and night vision, and hyperkeratosis of the hair follicles on the limbs. All of this group shewed Xerosis conjunctivæ.

A number of children from 10 years upwards complained of night blindness, associated with physical debility, anorexia and a certain amount of wasting. This combination is rare in adults.

All cases react well to treatment.

## VITAL STATISTICS

23. The value of vital statistics depends largely upon the quality and number of the staff employed in their collection and compilation. The figures and rates themselves may be most misleading unless they are interpreted with relation to local conditions and with a knowledge of the imperfections of the system by which they are compiled.

To give vital statistics value three classes of the community must work in intelligent co-operation. These are the general public, the professional reporting staff and those whose duty it is to attempt to interpret the results in plain terms.

The system in force for the collection of vital statistics is governed by a number of ordinances which are designed to ensure that statistics of births, deaths and infectious diseases shall be brought to the knowledge of the Government. So far as marriages are concerned, only civil contracts are registrable ; religious marriages are not compulsorily registrable unless a civil contract has been entered into at the same or a subsequent date. Since there are many religious marriages which are not followed by any civil

contract any "illegitimate birth rate" based on official figures is fantastic and is, in fact, not taken into account in this report at all. The official marriage rate is quoted because it has some significance as a comparative index of prosperity when followed from year to year.

As a general rule the statistics of deaths are recorded by officials known as Civil Status Officers, who may have little or no medical training. A number of dressers serving in dispensaries are employed as the Civil Status Officers of their areas. A medical certificate of the cause of death is required only in certain parts of the Colony. Elsewhere what usually happens is that the death is reported by relatives or friends of the deceased who, in the absence of any medical certificate, are asked a few questions by the Civil Status Officer designed to give some indication of the cause of death. When the last illness has been a definite and familiar one such as pneumonia, acute dysentery, or infantile diarrhoea, or there happens to be an outbreak of influenza in the neighbourhood, it is probable that the statement of the cause of death is accurate enough; but when the relatives have been faced with an unfamiliar or obscure complaint the usual diagnosis given is "fever" which is recorded as "malaria."

The causes of death recorded by medical practitioners may be a little more accurate when they deal with the deaths of persons of families of some education and intelligence or with patients whom they have treated in their last illness. But so far as concerns the ignorant it is sometimes impossible even for a doctor to arrive at any definite conclusion because the relatives are unable to give any intelligible account of the features which might lead to a diagnosis being made.

So far as the Mauritian Statistics are concerned, therefore, the crude death and birth rates may be regarded as substantially accurate. The group statistics of causes of death give a reasonable picture of the general causes of death according to their grouping because the grouping tends to eliminate individual errors of diagnosis.

The statistics of individual causes of death, while being perhaps better than nothing at all cannot be regarded as being even approximately accurate.

A useful check on the accuracy of the group statistics is the comparison which can be made between them and the hospital statistics. It will be seen from the subjoined graph that both correspond fairly well within the limits of permissible comparison.

No progress will be made in attaining in the Colony's vital statistics a greater degree of accuracy than that just described until the bulk of the population avail themselves of the service of medical practitioners to a much greater extent than they do at present. Disease can best be diagnosed in the living. In the absence of a post-mortem examination little information can be obtained from the dead body.

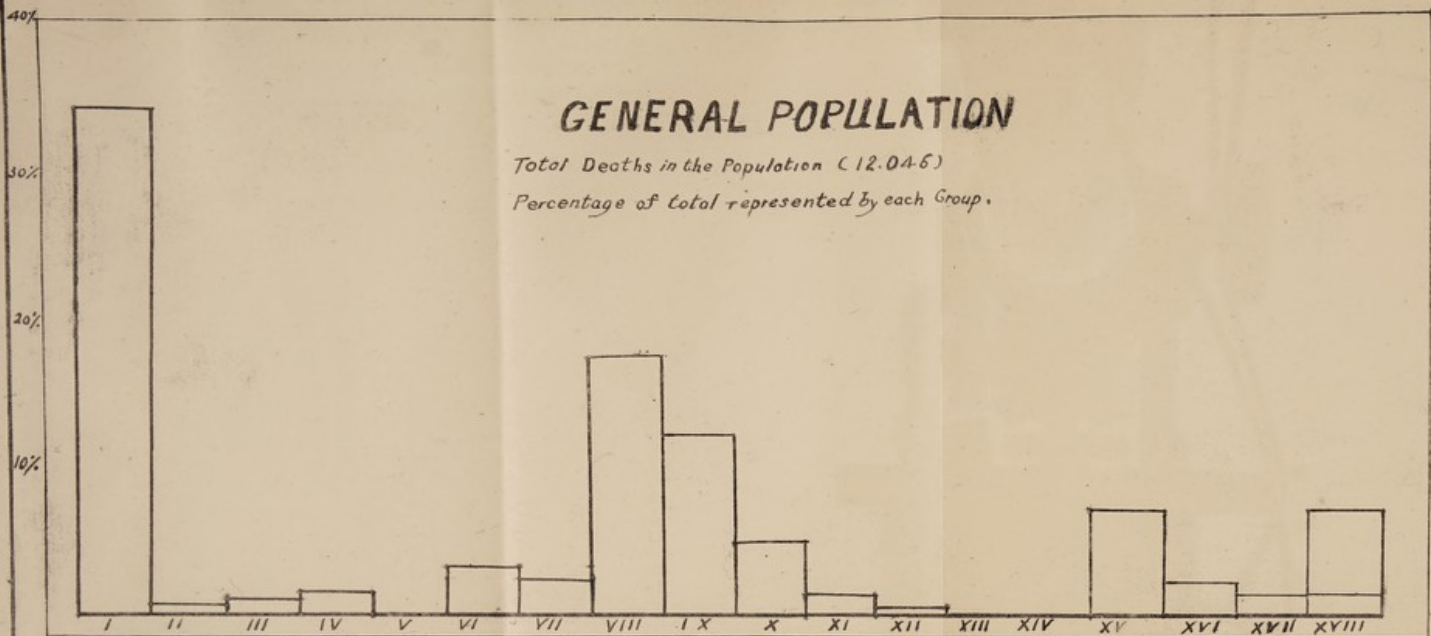
The basis for the calculation of the vital statistics is the number of the population on the 30th June of the year under reference. The figures for population are arrived at as follows.

The basis of these figures is the census which is made decennially. When the figures for any inter-census period are required they are ascertained by

## GENERAL POPULATION

Total Deaths in the Population (12,046)

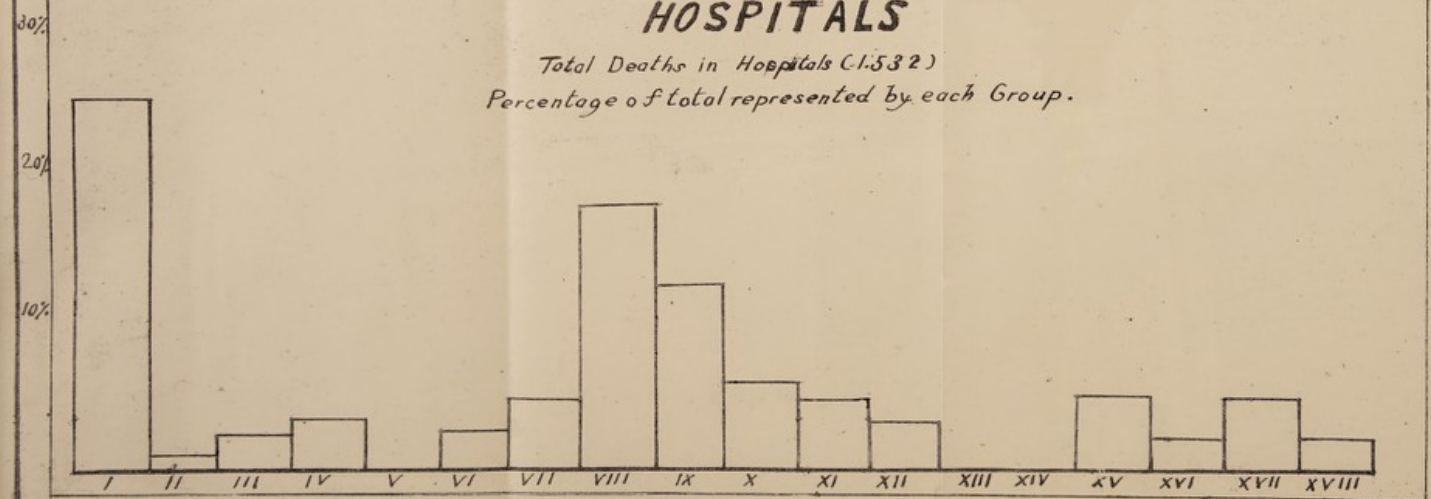
Percentage of Total represented by each Group.



## HOSPITALS

Total Deaths in Hospitals (1,532)

Percentage of total represented by each Group.



# GENERAL POPULATION

Total Deaths in the Population 18,000

Percentage of Total represented by



# HOSPITALS

Total Deaths in Hospitals 15,000

Percentage of Total represented by



## MEDICAL AND HEALTH DEPARTMENT

adding to or subtracting from the census figures the difference between the sums of the deaths and departures and the births and arrivals occurring during the period intervening between the date of the census and the date for which the statistics are required.

### ACTUAL POPULATION OF MAURITIUS ON THE 30TH JUNE, 1938.

Districts	Area in square miles	Total population	Density per square mile
Port Louis ...	16	56,322	3,520.12
Pamplemousses ...	69	35,237	510.66
Rivière du Rempart ...	57½	32,670	568.17
Flacq ...	115	50,825	441.95
Grand Port ...	101	48,046	475.70
Plaines Wilhems ...	78	104,999	1,346.14
Savanne ...	93½	31,129	332.93
Moka ...	89	29,773	334.52
Black River ...	101	13,111	129.81
Grand Total ...	720	402,112	558.48 (mean)

The chief feature of interest here is the high density of population 558.48 per square mile.

24. *Marriages.*—2,113 marriages were celebrated in 1938 as compared with 1,951 in 1937; showing an increase of 162. This is equivalent to a marriage rate (number of persons married to every thousand of population) of 10.50‰ against 9.80‰ in 1937.

25. *Births.*—The total number of births for the year was 13,420 (males 6,790 and females 6,630). 4,792 of these occurred in the General and 8,628 in the Indian population. The birth-rate was 33.4 against 35.20‰ in 1937.

The District birth-rate and the five year mean rate are as follows:

	1934	1935	1936	1937	1938	Mean
Port Louis ...	38.5	38.4	38.7	39.3	35.7	38.12
Pamplemousses ...	36.9	38.1	30.5	29.4	28.3	32.64
Rivière du Rempart ...	36.9	38.1	38.3	34.2	39.8	37.46
Flacq ...	29.8	28.8	27.8	30.9	28.4	29.14
Grand Port ...	35.5	33.5	34.2	37.6	32.2	34.60
Savanne ...	33.9	32.5	38.9	40.2	35.4	36.18
Plaines Wilhems ...	37.3	35.9	38.6	37.4	36.6	37.16
Moka ...	35.0	31.0	30.8	30.6	29.1	31.30
Black River ...	28.4	26.0	28.1	27.3	23.3	26.62
Whole Colony ...	34.5	33.6	34.9	35.2	33.4	34.32

26. *Deaths.*—During the year 1938, the total number of deaths was 12,046 (6,274 males and 5,772 females); 3,546 in the General and 8,500 in the Indian population. The number is an increase of 519 over the total deaths of 1937.

The death-rate for the Colony was 29.9 compared with 28.80‰ for 1937 and with 26.94‰ for the quinquennial period preceding 1938. The month of maximum mortality was August whilst in 1937 it was June.

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27. The following table shows the district death-rate yearly for the five yearly periods 1934-1938 and the average rates for the same period.

	1934	1935	1936	1937	1938	Mean
Port Louis ... ..	25.9	31.0	27.4	32.8	30.3	29.48
Pamplemousses ... ..	28.3	28.6	28.6	31.3	35.2	34.40
Rivière du Rempart ... ..	22.5	20.7	24.6	27.0	27.8	24.52
Flacq ... ..	25.4	33.1	30.8	32.6	35.0	31.38
Grand Port ... ..	29.7	30.9	29.3	31.6	36.1	31.52
Savanne ... ..	30.6	25.2	27.0	28.5	29.4	28.14
Plaines Wilhems ... ..	21.2	19.9	20.3	22.5	22.8	21.34
Moka ... ..	28.0	25.3	28.5	28.1	27.5	27.48
Black River ... ..	29.1	29.5	34.0	36.7	41.9	34.24
Whole Colony ... ..	25.7	26.5	26.4	28.8	29.9	27.46

The death-rate, after having been gratifyingly low has begun to rise. It is as yet too early to say whether this tendency will continue or not.

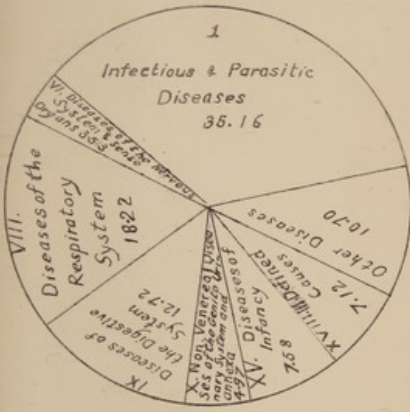
28. The next table with the figures for 1937 inserted for purposes of easy comparison, exhibits the causes of deaths and rates classified according to the "Manual of International List of Causes of Death" adopted by the Registrar General of England (Based on the Fourth Decennial Commission, Paris, 1929).

GROUP	NO. OF DEATHS		RATE PER ‰	
	1937	1938	1937	1938
1. Infectious and parasitic diseases ...	3,979	4,234	9.9	10.5
2. Cancer and other tumours ...	75	93	.2	.2
3. Rheumatism, diseases of nutrition ...	122	119	.3	.3
4. Diseases of the blood and blood forming organs ... ..	142	162	.4	.4
5. Chronic poisoning ... ..	—	2	.0	.0
6. Diseases of the nervous system and sense organs ... ..	384	425	1.0	1.1
7. Diseases of circulatory system ...	311	277	.8	.7
8. Diseases of the respiratory system ...	2,209	2,194	5.5	5.5
9. Diseases of the digestive system ...	1,425	1,532	3.6	3.8
10. Non-venereal diseases of the genito-urinary system and annexa ...	638	599	1.6	1.5
11. Diseases of pregnancy and childbirth* ... ..	169	167	.4	.4
12. Diseases of the skin and cellular tissue ... ..	53	55	.1	.1
13. Diseases of bones and organs of locomotion ... ..	11	6	.0	.0
14. Congenital malformations ... ..	6	5	.0	.0
15. Diseases of infancy ... ..	897	913	2.2	2.3
16. Senility ... ..	241	232	.5	.6
17. Deaths from violence ... ..	160	173	.4	.4
18. Ill-defined causes ... ..	705	858	1.8	2.1
	11,527	12,046	28.8	29.9

\* or 11.38‰ total births registered (live born and still born) against 10.97‰ in 1937.

GRAPH I

PERCENTAGE CLASSIFICATION OF DEATHS (TOTAL—12,046)

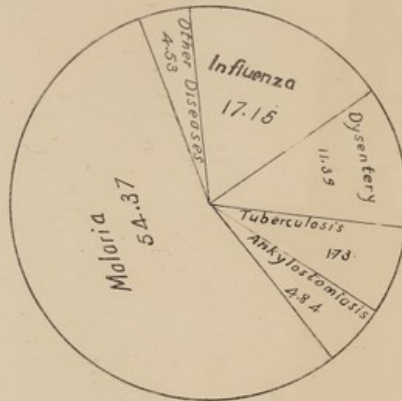


OTHER DISEASES

Group II. Cancer and other tumours	... .77
III. Rheumatism and diseases of nutrition	... .98
IV. Diseases of the blood and blood-forming organs	1.35
V. Chronic poisoning	... .02
VII. Diseases of the circulatory system	... 2.30
XI. Diseases of pregnancy and child birth	... 1.38
XII. Diseases of the skin and cellular tissue	... .46
XIII. Diseases of bones and organs of locomotion	... .05
XIV. Congenital malformation	... .04
XVI. Senility	... 1.92
XVII. Deaths from violence	... 1.43
<b>Total</b>	<b>10.70</b>

GRAPH II

PERCENTAGE CLASSIFICATION OF DEATHS DUE TO INFECTIOUS AND PARASITIC DISEASES (TOTAL—4,284)



OTHER DISEASES

Typhoid fever	... .45
Whooping Cough, Measles, Diphtheria, Erysipelas, Encephalitis Lethargica, Cerebro-spinal Fever, Tetanus, Leprosy, Syphilis, Septicaemia, other Melninthic diseases, other infectious and parasitic diseases	... 4.08
<b>Total</b>	<b>4.53</b>

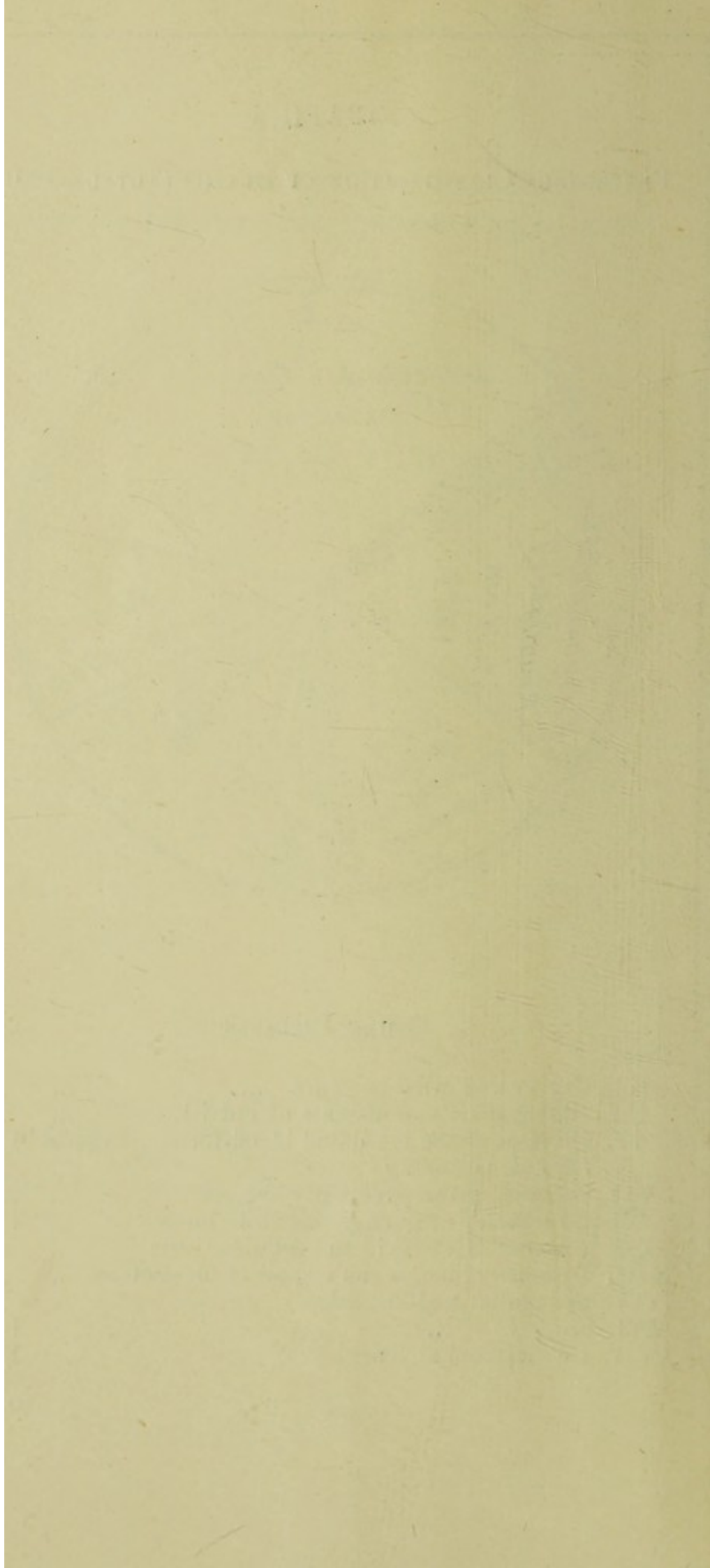
GRAPH III

DISEASES IN OUT-PATIENT POPULATION TREATED AT PUBLIC DISPENSARIES



OTHER DISEASES

Group IV. Affections of the circulatory system	... 1.53
Group VII. Diseases of the genito-urinary system (non-venereal)	... 2.52
Group VIII. Puerperal state	... .09
Group X. Diseases of the bones and organs of locomotion (other than Tuberculosis)	... .28
Group XI. Malformations	... .15
Group XII. Diseases of infancy	... .05
Group XIII. Affections of old age	... .05
Group XV. Affections produced by external causes	... 2.05
Group XV. Ill-defined diseases	... .69
<b>Total</b>	<b>7.31</b>



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The more notable causes of deaths were as follows:

DISEASES	NO. OF DEATHS		RATE PER ‰	
	1937	1938	1937	1938
Malaria and malarial cachexia ...	2,139	2,302	5.35	5.72
Pneumonia, broncho and lobar ...	1,470	1,453	3.68	3.61
Influenza ...	440	726	1.10	1.80
Diseases of early infancy** ...	897	913	2.24	2.30
Phthisis and tuberculosis ...	329	327	.82	.81
Diarrhoea and enteritis ...	1,177	1,325	2.94	3.29
Bronchitis ...	564	559	1.41	1.39
Old age and debility ...	607	697	1.52	1.73
Dysentery ...	375	482	.94	1.20
Albuminuria, nephritis and uræmia...	618	573	1.54	1.42
Heart diseases (organic) ...	238	203	.59	.50
The puerperal state ...	169	167	.42	.40

### INFANTILE MORTALITY.

29. The infantile mortality rate is the number of deaths of infants under one year of age occurring in any year for every thousand live births registered during the year.

The infantile rate for 1938 was 162.5‰ as compared with 154.5‰ for 1937.

The deaths under 5 years were distributed as follows:

	Males	Females	Total
Under 1 year ...	1,151	1,030	2,181
1 year and under 2 years ...	261	223	484
2 years and under 3 years ...	182	193	375
3 years and under 4 years ...	116	117	233
4 years and under 5 years ...	64	76	140
	1,774	1,639	3,413

The following table shows the grouping of these deaths according to the causes inscribed on the death certificates:

	Under 1 year	1 to under 5 years
Infectious and Parasitic diseases ...	538	505
Cancer and other tumours ...	1	1
Rheumatism, Diseases of nutrition etc. ...	8	3
Diseases of the blood and blood-forming organs ...	4	3
Nervous system and organs of special senses ...	53	61
Diseases of Circulatory System ...	—	4
Diseases of Respiratory System ...	272	189
Diseases of Digestive System ...	329	303
Diseases (non-venereal) of the genito urinary system and annexa ...	8	37
Diseases of the skin and cellular tissue ...	8	—
Diseases of Bones and organs of locomotion ...	—	1
Malformations ...	4	—
Diseases of early infancy ...	913	—
Affections produced by external causes ...	3	20
Ill-defined causes ...	40	105
	2,181	1,232

\*\* or 68.03‰ live births against 63.63 in 1937.

## ANNUAL REPORT ON THE

The distribution of the deaths attributed to the diseases of early infancy and a comparison of these figures with those of 1937 is shown below:

Designation of Diseases and accidents	1937	1938
Infantile debility ...	813	852
Premature birth ...	66	46
Atelectasis ...	8	5
Injuries at birth ...	2	7
Diseases of umbilicus ...	3	—
Melæna neonatorum ...	2	1
Cyanosis ...	—	—
Pemphigus Neonatorum ...	2	1
Hæmorrhage of new born...	1	1
	897	913

It is seen that the main groups of diseases responsible for the loss of infant life are the infectious and parasitic diseases and diseases of the respiratory and digestive systems. The diseases of early infancy mainly comprise infantile debility and premature birth, both of which may owe their origin to the occurrence of chronic malaria or of ankylostomiasis in the mother during pregnancy. Diseases of the respiratory and digestive systems point to lack of proper care infancy; undue exposure to cold; errors in feeding and the insanitary environment usually associated with the conditions under which an agricultural community lives in a tropical country.

### STILL-BIRTHS.

30. A still-birth is defined by the Registrar General as "a child born dead at or after the seventh month of pregnancy."

The number of still-births registered during 1937 and 1938 is as under:

	Males		Females		Total	
	1937	1938	1937	1938	1937	1938
Port Louis ...	95	90	85	64	180	154
Pamplemousses ...	60	58	50	44	110	102
Rivière du Rempart ...	58	60	46	39	104	99
Flacq ...	115	108	90	87	205	195
Grand Port ...	101	88	71	77	172	165
Savanne ...	61	64	47	54	108	118
Plaines Wilhems ...	164	151	136	132	300	283
Moka ...	47	53	44	42	91	95
Black River ...	18	16	17	19	35	35
Total ...	719	688	586	558	1,305	1,246

It is equivalent to 9.3% of live births for the same period as compared with 9.3% for 1937.

## MEDICAL AND HEALTH DEPARTMENT

The still-births are distributed as follows for the two great classes of the population :

	Males		Females		Total
General Population ...	151	...	128	...	279
Indian Population ...	537	...	430	...	967
	688		558		1,246

The number of still-births registered during 1938 is slightly lower than that recorded for the preceding year, but the decrease is not significant. Malaria and ankylostomiasis are probably a fruitful cause of still-birth in the Colony.

31.—*Malaria*.—No unusual features are to be recorded in the malarial situation for 1938.

Active work of the Department has been confined to the central elevated plateau which area comprises the District of Plaines Wilhems and most of the District of Moka. The work here consists of a combination of anti-mosquito work ; diagnosis and treatment of cases and a continual survey of the situation by means of the examination of the blood of inhabitants of different parts of the area. The major anti-mosquito works in this region have been completed so far as is necessary at present. The staff are now principally occupied in dealing with the numerous minor mosquito nuisances which are revealed as a result of routine inspections. Comparatively few of those nuisances may now be regarded as " natural " collections of water. Most of them are caused by the action or indifference of the inhabitants themselves. Such nuisances consist chiefly of obstructed or inadequate absorption pits or watering ponds in gardens and small allotments. 1,600 of them were abated during the year, but still they persist. The report of the Medical Officer in charge of the Hookworm-Malaria Branch of the Department (p. 44) furnishes further details.

In Port Louis the routine upkeep of anti-mosquito works, the distribution of quinine derivatives and the oiling of mosquito nuisances combined with routine inspection, the detection and abatement of minor nuisances, are the means employed for the control of malaria.

In the country districts old major works are upkeep and chief reliance is placed upon making widely available to the population free of cost as much totaquina as they require.

The term " upkeep " comprises a variety of operations. In general, it means the repair of structural work, the clearing of obstructed drains, the regrading of streams and drains, trimming of the banks of streams in order that there shall be no pools of stagnant water along the edges, the straightening of undesirable curves, walling of banks and a number of minor operations suited to the particular condition of the case at the time. Two gangs of labourers trained in this work are kept continually occupied, while minor repairs and upkeep are ensured by placing each major work or important stream in charge of part time employees known as cantonniers, each of whom is responsible for the maintenance of a certain length of drain or stream. The main work of the cantonnier is to keep his part of the stream free from

## ANNUAL REPORT ON THE

obstruction and from the accumulation of *spirogyra*, since this plant is associated with the occurrence of anopheline larvæ in water.

32. *Plague*.—No case of plague occurred during the year.

### HELMINTHIC DISEASES

33. *Ankylostomiasis*.—Routine mass treatments for this condition are still necessary because, in rural areas, the people have not yet acquired the habit of using the latrines with which their premises are provided.

34. It is unfortunate that there is no simple means of ascertaining the degree of infestation of large numbers of persons. The method of standard treatment combined with an enumeration of the worms passed by each person submitting to it, and followed up by a re-examination of the patients bristles with fallacies, is tedious and requires much too great a staff in comparison with the value of results obtained to make it worth while. It is therefore difficult to know whether mass treatments really effect any permanent improvement in the absence of a radical change of habits of defecation in the population concerned. Regarding the immediate benefit to the patient there is no doubt, but the improvement he experiences can only be maintained by his own acts and it is here that the campaign is at its most vulnerable point.

35. *Schistosomiasis*.—From the Public Health view point there is no change in the position regarding this infection. No work has been possible on it during 1938.

### OTHER COMMUNICABLE DISEASES

36. Of the other communicable diseases which occur from time to time, enteric fever and the dysenteries are the most common, and outbreaks of bacillary dysentery occur from time to time. These have the general characteristics of water-borne outbreaks. Leprosy is not on the increase, in fact only 1 new case has come to light during 1938. It is the practice when a new case of leprosy is discovered, to require all members of the patient's family to submit to expert examination so that if there are any members of the family suffering from recently acquired infection they may be brought under treatment as soon as possible. Concealment of cases has not been common since non-infectious cases have been allowed their freedom under periodical surveillance. This Colony was one of the first places to recognise officially the great value of a relaxation in the rule of strict segregation which formerly operated. The results have justified the action taken.

### GENERAL MEASURES OF SANITATION

37. *Night Soil and Conservancy*.—In the rural districts the pit latrine is the means of necessity if not of choice in areas where those latrines may be constructed. In areas where the soil is shallow and overlies rock a double bucket service is provided and the disposal of faeces is effected by trenching them on trenching grounds approved by the Sanitary Authority.

In Curepipe the Department conducts a pail night soil service on premises not provided with septic tank and absorption pit systems of water

## MEDICAL AND HEALTH DEPARTMENT

carriage. This township is growing and, in my opinion, the time has come to consider the advisability of sewerage at least part of the town. In many parts of Curepipe the ground water occurs too near the surface at certain seasons of the year to make advisable any extension of a system of septic tank effluent disposal by means of absorption pits.

Though most of Port Louis is sewerage there are still premises in the municipal area which are not connected to the system. For these and for dwellings outside the sewerage area, the Medical Officer of Health's Department maintains a bucket service. The contents of the buckets are disposed of by tipping them into the main outfall sewer.

38. *Collection and Disposal of Refuse.*—The Medical and Health Department are still responsible for the town cleansing services in Port Louis. In the townships the Township Boards undertake this work.

39. *Water Supplies.*—There is no change to record in the water supplies of the Colony during the year.

No outbreaks of disease attributable to infection of state-provided water supplies were reported.

### CONTROL OF BUILDING.

40. Under Ordinance No. 38 of 1926 applications for permits to build houses for human habitation are submitted to the Medical and Health Department by the Building Authorities before adjudication. The Medical and Health Department are largely concerned with the suitability of the proposed site and the provision of adequate means of ventilation and lighting, so far as buildings other than thatched huts are concerned. In addition to this the Department co-operates with the Department of Public Works and Surveys which is the Building Authority for all parts of the Colony lying outside the jurisdiction of the Municipality of Port Louis or the Township Boards of Commissioners. This means a good deal of work since the site must be visited and reported upon in the case of all buildings, and where wooden buildings are concerned a visit is generally paid to the property during the course of construction. The numbers of such applications reported upon by officers of the Department during the past four years are as follows:

Year	Public Works	Municipality of Port Louis	Board of Rose Hill	Board of Quatre Bornes	Board of Curepipe	Total
1935	1,066	88	122	38	86	1,400
1936	1,920	109	142	49	88	2,308
1937	1,660	104	101	32	68	1,965
1938	1,850	97	216	46	94	2,303
Grand Total	6,496	398	581	165	336	7,976

41. *Labour Conditions.*—The general health of the labouring classes was about the average if one may judge from the returns of vital statistics. Cases of severe malnutrition are extremely rare.

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### FOOD AND DRUGS IN RELATION TO HEALTH AND DISEASE

42. There are six public and four private abattoirs in the Colony. The public abattoirs administered by the Municipality of Port Louis, the Boards of Beau-Bassin Rose Hill, and Curepipe, are each controlled by a veterinary officer.

The other abattoirs are conducted under the supervision of the sanitary staff.

It may be said that on the whole, the foodstuffs marketed are wholesome and of good quality. The only condition found with any frequency in the meat trade is tuberculosis. Cestode infection is practically non-existent among cattle and it is very rare in human beings.

The only exception to this general rule is milk which is seldom retailed in its natural state. In spite of the control which is exercised and the heavy penalties inflicted upon offenders, sophistication is rife and appears to be ineradicable.

In Appendix XI is recorded the number of times action was taken in connection with the sale of food.

43. *Tri-ortho-cresol phosphate poisoning*.—On March 7th a private practitioner notified the occurrence of three cases of beri-beri in Plaines Wilhems.

Departmental investigation revealed a number of other cases, and by the middle of April, 95 cases had been discovered in Plaines Wilhems and Port Louis. None of the other districts was affected.

The patients suffered from a peripheral neuritis affecting principally the motor nerves of the limbs. The symptoms in a fully developed case were paralysis of lower limbs, foot drop, paresis of hands, and a certain amount of paraesthesia of the limbs. The condition was not painful. Early cases resembled dry beri-beri very closely except that sensory disturbance was much less than would have been the case had beri-beri been the cause.

Early in the investigation it was found that the outbreak was limited to persons who had purchased their groceries at the same shop. This signified that we were dealing with a beri-beri which was not typical or with some kind of intoxication associated with food. Eventually the elimination of a number of possible causes reduced the suspected foodstuff to soya bean oil. The cause of the intoxication was however unknown.

Towards the end of May, Dr. Lavoipierre, who had been in charge of the investigation obtained a cutting from a South African Newspaper which stated that the cause of the "mysterious disease" which has been puzzling the medical profession in Durban had been found to be certain impurities in cooking oil. It had struck Dr. Lavoipierre that there might be some relation between the peripheral neuritis occurring in Plaines Wilhems and the "mysterious disease" of the South African press. So a letter was addressed to the Medical Officer of Health Durban containing an account of the Mauritius outbreak and asking for information regarding the outbreak in Durban of what we only knew in Mauritius as the "mysterious disease." In due course a reply was received confirming our suspicions and giving an account of the physical signs of a number of cases. The cause of the Durban

## MEDICAL AND HEALTH DEPARTMENT

outbreak was the contamination of soya been oil by tri-ortho-cresol phosphate. A comparison of the records of the Mauritius cases with those of the Durban outbreak shewed that we were dealing here with the same thing. Unfortunately none of the oil which might have caused the outbreak was available for analysis.

It is probable that the cause of the Mauritius outbreak was the accidental contamination of a small quantity of the oil.

Arrangements have now been made for the testing of cooking oils for this substance before their release from the Customs Warehouse.

### MEASURES TAKEN TO SPREAD THE KNOWLEDGE OF HYGIENE AND SANITATION

44. The hookworm control staff deliver talks on hookworm infection and its prevention on the occasions on which mass treatments are being given. The sanitary staff have also been instructed to lose no opportunity of giving advice on hygienic subjects in the course of their routine duties. It is hoped that by entrusting sanitary duties to the Government Medical Officers of the districts, opportunity will be provided for the effective dissemination of a knowledge of elementary hygiene practice in the Colony. It is also hoped that as the department attains its proper complement it will be able to reinforce the hygienic instruction given in the schools.

### TRAINING OF SANITARY PERSONNEL

45. Another batch of seven candidates for sanitary posts was under training during the year.

### RECOMMENDATIONS FOR FUTURE WORK

46. The internal organisation of the Department has been practically completed so far as the relation of posts to one another and the revision of emoluments is concerned. It is hoped that we may look forward to a period of comparative stability so that the new organisation may have time to settle down and opportunity afforded for the making of any adjustments found necessary. Having been able to obtain quantity it will now be the care of the administration to procure quality by a judicious thinning out of the unfit and encouragement of those of more than average ability.

### PORT HEALTH WORK AND ADMINISTRATION

47. The following table summarises the work done by the Port Sanitary Authority:

	Sailing Craft	Steamer
Vessels arriving	7	230
Crew examined	60	23,051
Passengers examined	47	4,032
Vessels given pratique on arrival	7	150
Vessels given pratique after disinfection of the linen and effects of the passengers, crew, fumigation and disinfection of the fore-castle	—	6
Vessels given pratique after disinfection of linen, etc., and claytonisation of cargo	—	74
Vessels arriving from infected ports	—	114
Vessels detained for purposes of disinfection and fumigation on account of plague, cholera or small pox	—	80

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### MATERNITY AND CHILD WELFARE

48. The two Societies, the Maternity and Child Welfare Society and the Goutte de Lait were afforded the usual financial support by the Government. In the 1935 report a full account was given of their history and progress. Progress has been maintained this year.

49. As supplementary provision seven qualified midwives are employed by the Government. Their work is summarised below:

	No. of visits made	No. of confinements conducted
Grand Port ...	2,200	196
Curepipe ...	248	75
Flacq ...	403	153
Rivière du Rempart...	404	231
Savanne ...	730	75
Long Mountain ...	46	34
Bon Air ...	69	26

### THE MIDWIVES BOARD

50. No occasion arose for a meeting of the Midwives Board during the year.

51. The Leprosy Board consists of:

The Director, Medical and Health Department,—*Chairman*.

The Medical Superintendent, Leper Hospital.

The District Magistrate, Port Louis.

The Board held two meetings during the year as the results of which 1 patient was recommended for admission and detention at the Leper Hospital.

### HOSPITALS

52. There has been an increase in the number of patients treated in the hospitals of the Colony: 28,605 against 27,968 for the previous year. The number of confinements conducted in hospitals was 1,098 against 1,133 for 1937.

The number of estate hospitals at the end of the year was 39.

53. The professional work of the hospitals is summarised in the table on page 21. In the rural districts the principal causes of admission to hospital are malaria, ankylostomiasis and respiratory diseases. It will be noted from these returns that pneumonia and malaria are noteworthy causes of death in hospital.

The small number of patients remaining in hospital at the end of the year is owing to the fact that most people in the Colony like to be at home during the New Year, and hospital patients who might otherwise be detained for some days longer frequently apply for their discharge from hospital at this time.

54. The nursing establishment of the hospitals is now almost sufficient, but recruitment for the hospitals staff still presents great difficulty. Suitable applicants for hospital posts are not coming forward in sufficient numbers to make up for the normal wastage in establishment. The subject is receiving consideration.

REPORT ON HOSPITALS FOR THE YEAR 1938.

MEDICAL AND HEALTH DEPARTMENT

HOSPITALS	Patients remaining on 31/12/37	New admissions	Deaths	Patients remaining on 31/12/38	No. of beds	No. of surgical operations	Particular diseases causing the largest number of admissions	Particular diseases causing the largest number of deaths
Civil ... ..	148	7,849	509	175	301	4,428	Malaria, Bronchitis, Injuries.	Pneumonia, Tuberculosis.
Port Louis Prison	1	254	1	—	16	7	Malaria and Influenza.	Pneumonia.
Long Mountain	17	2,057	79	9	65	210	Malaria and Ankylostomiasis.	Pneumonia, Bronchitis and Malaria.
Poudre d'Or	34	1,495	63	19	70	158	Ankylostomiasis Cellulitis and Malaria.	Enteritis, Pneumonia and Nephritis.
Flacq	8	2,333	109	5	86	577	Malaria, Influenza and abscesses.	Enteritis, Influenza and Malaria.
Mahebourg	46	2,947	200	54	106	814	Ankylostomiasis, Malaria and Dysentery.	Ankylostomiasis, Dysentery and Pneumonia.
Souillac	38	2,423	112	39	103	457	Ankylostomiasis and Malaria.	Diarrhoea and Influenza.
Moka	13	1,841	85	33	83	872	Ankylostomiasis.	Dysentery and Ankylostomiasis
Victoria	146	5,985	326	136	254	2,398	Ankylostomiasis, Malaria and Dysentery.	Pneumonia, Enteritis and Bronchitis.
Mental	6	293	44	7	64	303	Influenza, Malaria and Dysentery.	Epilepsy, Pneumonia and Nephritis.
Beau Bassin Prisons	6	371	4	5	32	13	Malaria.	Heart disease.
Barkly Industrial School	5	289	—	1	12	11	Malaria and Influenza.	.....
Total	468	28,137	1,532	483	1,192	10,248		

## ANNUAL REPORT ON THE

### DISPENSARY RETURNS

55. The dispensaries and the hospital out-patient departments were consulted by male patients 191,715 times and by female patients 173,734 times ; total 365,449.

The number of new cases amounted during the year to 250,326. In 1937, 211,244 were recorded.

The statistics of the number of new cases seen at hospital out-patient departments and at Dispensaries are not accurate owing to the difficulty frequently experienced in deciding whether a case should be registered as a new case or as a reappearance. The most reliable figures are those of attendances.

A new Dispensary was opened at Medine in July 1938.

### PRISON HYGIENE

56. The general hygiene in the prisons has been maintained at its usual satisfactory standard.

### METEOROLOGY

57. The Director of the Observatory has kindly furnished the following table.

#### METEOROLOGICAL RETURN FOR THE YEAR 1938.

*From the records of the Royal Alfred Observatory 178 ft. above sea level.*

Month 1938	Mean of Grass Minimum °C	Mean Maximum °C	Mean Minimum °C	Mean Range °C	Mean °C	Mean Relative Humidity %	Rainfall ins.	Mean Wind Velocity m.p.s
January	20.1	29.7	22.8	6.9	25.8	76.7	5.25	3.52
February	20.7	30.2	23.0	7.2	26.2	78.9	8.79	2.97
March	21.1	29.2	23.1	6.1	25.8	80.7	6.37	3.26
April	18.6	27.6	21.0	6.6	23.9	81.6	4.64	2.63
May	16.8	26.7	19.6	7.1	22.7	79.7	3.12	2.79
June	14.3	24.1	17.4	6.7	20.5	74.0	0.85	4.02
July	15.0	23.8	17.4	6.4	20.3	77.4	1.79	3.87
August	12.7	24.2	15.8	8.4	19.7	72.1	1.21	3.37
September	14.4	25.1	17.2	7.9	20.6	71.6	1.08	3.73
October	17.2	26.6	19.1	7.5	22.2	69.8	0.83	4.17
November	17.8	27.9	19.4	8.5	23.2	67.8	0.77	3.66
December	19.1	29.1	20.9	8.2	24.6	71.3	1.74	3.48
Year	17.3	27.0	19.7	7.3	23.0	75.1	36.44	3.46

Maximum Shade Temperature = 32.1°C. on February 2nd.

Minimum Shade Temperature = 10.9°C. on July 17th.

Maximum Hourly Wind Velocity = 10.6 m.p.s. on February 17th.

Maximum Rainfall in 24 hours = 6.09 ins. on February 17th.

### GENERAL

58. *River Reserves Board.*—Though there was no need to call a meeting of the River Reserves Board 107 applications requiring the consideration of the Board were dealt with during the year.

59. *Rodrigues.*—The Report of the Government Medical Officer, Rodrigues, printed as Appendix XII gives an account of the Medical and Sanitary matters in the Dependency.

60. It is my pleasant duty to thank all members of the Department for their willing co-operation in the work recorded here.

J. BALFOUR KIRK,

*Director, Medical and Health Department.*

*June, 1939.*

## MEDICAL AND HEALTH DEPARTMENT

### APPENDIX I.

#### Professional Staff of the Medical and Health Department.

##### STAFF.

*Director* : J. BALFOUR KIRK, M.B., Ch.B., M.R.C.P., D.P.H., D.T.M. & H.

*Deputy Director of Medical Services* : L. A. C. D'ARIFAT, L.R.C.P., M.R.C.S.

*Medical Officer of Health, Port Louis and Port Health Officer* : L. M. J. RAYMOND PILOT, M.B.B.S., M.R.C.S., L.R.C.P., D.T.M. & H.

*Senior Pathologist* : H. D. TONKING, L.R.C.P., M.R.C.S.

*Pathologist* : G. R. SIPPE, M.B., B.S. (Sydney).

*Superintendent, Civil Hospital* : Y. CANTIN, M.R.C.S., L.R.C.P., D.T.M.

*Medical Officer, Civil Hospital* : J. SEGOBIN, M.D. (Paris)

*Medical Officer, Civil Hospital* : M. SHUN SHIN, M.R.C.S., L.R.C.P., M.B.B.S., D.T.M. & H.

*Superintendent, Victoria Hospital* : L. R. DU VERGÉ, M.C., M.R.C.S., L.R.C.P.

*Medical Officer, Victoria Hospital* : E. H. MADGE, M.B.B.S., L.R.C.P., M.R.C.S.

*Medical Officer, Victoria Hospital* : F. X. LETELLIER, L.R.C.P., M.R.C.S.

*Superintendent, Mental Hospital* : J. D. DYSON, M.B.B.S., D.P.M., M.R.C.S., L.R.C.P.

*Medical Officer, Mental Hospital* : J. F. E. BRUNEL, M.D. (Montpellier).

*Medical Officer, Port Louis* : L. N. R. COMTY, M.B.B.S., M.R.C.S.

*Health Officer, Plaines Wilhems and Black River* : R. LAVOPIERRE, M.D. (Paris), D.T.M. (Paris), L.R.C.P., L.R.C.S., L.R.F.P. & S., D.P.H.

*Superintendent, Leper Hospital* : H. ANDRÉ, M.B.E., M.R.C.S., L.R.C.P.

*Senior Medical Officer, Hookworm and Malaria* : L. J. Mc.GREGOR, M.B.B.S., M.R.C.S., L.R.C.P., D.T.M. & H.

*Medical Officer, Hookworm and Malaria* : L. V. PIERRE GOUPILLE, M.D. (Paris).

*Medical Officer, Hookworm and Malaria* : (vacant)

*Radiologist* : W. R. DUPRÉ, L.R.C.P. & S., L.F.P. & S., D.M.R.E.

*Assistant Radiologist* : R. PIERRE, M.B.B.S., L.R.C.P., M.R.C.S., D.T.M. & H., D.P.H., D.M.R.E.

## ANNUAL REPORT ON THE

*Government Analyst* : E. COLLINS, A.I.C., F.I.C.

*Police Medical Officer* : L. J. MAINGARD, M.B.E., L.M.S., S.A., (London)  
Medecin Colonial (Paris).

*Medical Officer, Rodrigues* : L. A. H. M. ROUSSET, M.D. (Paris) (on probation).

### DISTRICT MEDICAL OFFICERS.

*(Government Medical Officers having charge of a district hospital and of all the dispensaries in their district, and also of the Sanitation of the district)*

*Pamplémousses* : H. ANDRÉ, M.B.E., M.R.C.S., L.R.C.P.

*Rivière du Rempart* : S. PEERBAYE, M.D. (Montpellier)

*Flacq* : R. LAVENTURE, M.D. (Montpellier) in charge of Rivière Sèche, Trou d'Eau Douce, Sébastopol and Flacq Dispensaries.

*Flacq* : L. V. PIERRE GOUPILLE, M.D. (Paris) in charge of Brisée Verdière, Médine and St. Julien Dispensaries.

*Grand Port* : F. A. BOULOUX, M.R.C.S., L.R.C.P.

*Savanne* : JEAN CANTIN, M.D., (Paris) D.T.M.

*Moka* : R. PILOT, M.B.E., M.D. (Lyons).

### LEAVE, MUTATIONS, ETC., AMONG PROFESSIONAL STAFF

Dr. F. A. Bouloux, Government Medical Officer, Grand Port returned from European leave on 10.9.38.

Dr. J. F. E. Brunel, Medical Officer, Mental Hospital went on leave in Europe on 9.3.38 and returned on 10.12.38. He was replaced by Dr. A. Vellin.

Dr. R. Pilot, Government Medical Officer, Moka, went on leave on 20.7.38 and was replaced by Dr. P. Doger de Spéville.

Dr. J. Maingard, Police Medical Officer, arrived in the Colony from European leave on 13.4.38 and resumed duty on 3.6.38.

Dr. L. N. R. Comty, left the Colony on European leave on 1.9.38 and was replaced by Dr. Shun-Shin.

Dr. D. Atchia, was temporarily employed to replace Dr. Shun-Shin.

## MEDICAL AND HEALTH DEPARTMENT

### APPENDIX II.

#### **Annual Report of the Bacteriological Laboratory for the Year 1938.**

*(Considerably abridged and compressed).*

#### STAFF, 1938.

*Senior Pathologist and Superintendent* : H. D. TONKING, M.R.C.S. (England),  
L.R.C.P. (London).

*Pathologist* : G. SIPPE, M.B., B.S. (Sydney).

*Government Analyst* : E. COLLINS, M.A., F.I.C.

*Assistant Bacteriologist* : LOUIS MASSON.

*Laboratory Assistant (Pathology)* : LEWIS WEBB.

*Laboratory Assistant (Chemistry)* : R. AVICE DU BUISSON, Dip. Ag. (Mauritius).

*Microscopist* : J. E. HERVEL.

*Clerical Assistant* : L. F. LEGRIGORE.

#### ADMINISTRATION AND CHANGES IN STAFF.

2. The Senior Pathologist was in Hospital suffering from enteric fever from the 22nd March to July 9, 1938.

Dr. G. R. Sippe was appointed Pathologist and assumed duty on the 28th November, 1938.

Mr. E. Collins was appointed Government Analyst and assumed duty on the 28th October, 1938.

Mr. L. Webb proceeded on leave on the 9th July, 1938.

Mr. J. Havel was seconded from Victoria Hospital on the 17th October 1938, to work at the Bacteriological Laboratory.

With the appointment of a Pathologist and a Government Analyst the situation with regard to the staff of the Laboratory has been considerably alleviated.

3. Considerable internal reorganisation and change have been effected. All the laboratory rooms have been repainted white, which have resulted in a large increase in the amount of light and has given the whole place lighter and cleaner atmosphere.

A large electric refrigerator has been installed in place of the expensive and obsolete ice chest ; the saving of money being quite considerable with the new plant but, what is more important is that we now have reliable refrigeration whereas before the temperature in the ice chest varied between 60°F and 80°F.

A simple system of filing and record keeping has been introduced both with regard to correspondence and the compilation of permanent laboratory records.

Certain alterations have been effected in the upper storey of the new wing which previously consisted of a room for the preparation of B.C.G., the library, the clerical assistant's room, and an empty room. Two rooms have been set aside for the preparation of B.C.G. vaccine, which will enable the vaccine to be prepared more closely to the conditions laid down by Calmette. This has entailed the moving of the library and the clerical assistant and now has filled the last empty room which was kept for the accomodation of any visiting worker.

## ANNUAL REPORT ON THE

An application is being made to the Public Works Department to alter two of the stables, of which there are twelve, thus giving two more rooms, which could be utilised for animal experimentation, or any work which it was desirable to keep away from the main laboratory.

An application for the construction of windows in the walls of the basement has also been submitted which resulted in rendering a large cellar inhabitable.

Attention has also been paid to the laboratory grounds in the planting of flower beds and care of lawns. A sum of money has also been voted to tar the circular drive and piece of road outside the laboratory which are, at present, a continual source of worry owing to dust.

### LABORATORY RECEIPTS IN THE FORM OF FEES.

4. The practice of performing examinations free of charge, when the specimen is accompanied by a certificate from the practitioner, stating that the patient is unable to pay the laboratory fees, has been continued.

This arrangement though unsatisfactory in many ways will have to continue until a better method is discovered.

The value of the free work done on these certificates amounted to approximately Rs. 9,337. The paying examinations brought in Rs. 2,351. Thus the ratio of indigent patients to paying patients is approximately 5: 1.

Fees paid to the laboratory amounted to Rs. 2,351 and fees received after reference to the Treasury Department amounted to Rs. 901.75 bringing the total earnings for the year to Rs. 3,252.75. This year no money has been collected from the sale of B.C.G. vaccine, owing to the cessation in the preparation of this product (vide later in report).

### ROUTINE EXAMINATIONS.

5. A total of 8,292 examinations were made during the year exclusive of those made by the Chemical branch.

The nature of the examinations are recorded under the following headings:

- I—MEDICAL BIOLOGICAL.
- II—PATHOLOGY.
- III—BACTERIOLOGICAL.
- IV—HAEMATOLOGY.
- V—SEROLOGY.

The report of the Government Analyst will be found appended. (Appendix IIa).

### MEDICAL BIOLOGICAL.

6. A—2,696 simple routine clinical examinations were made.

(a)—BLOOD. (MICROSCOPICAL).

#### *Films for malaria :*

<i>Plasmodium malariae</i>	...	...	...	...	1
<i>Plasmodium vivax</i>	...	...	...	...	13
<i>Plasmodium falciparum</i>	...	...	...	...	31
No parasites found	...	...	...	...	189

#### *Films for microfilariæ :*

<i>Wuchereria bancrofti</i>	...	...	...	...	37
No microfilariæ	...	...	...	...	125

Total ...	396
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MEDICAL AND HEALTH DEPARTMENT

(b)—FAECES. (MICROSCOPICAL).

Total number examined	...	...	...	...	1,685
<i>Helminths :</i>					
<i>Trichuris ova</i>	...	...	...	...	1,048
<i>Ascaris ova</i>	...	...	...	...	258
" Hookworm " ova	...	...	...	...	702
Strongyle larvæ	...	...	...	...	23
<i>Heterodera radiciola ova</i>	...	...	...	...	
<i>Enterobius vermicularis ova</i>	...	...	...	...	3
Trichostrongyle ova	...	...	...	...	22
<i>Bertiella studeri segments</i>	...	...	...	...	1
<i>Protozoa :</i>					
<i>Entamœba histolytica</i>	...	...	...	...	81
<i>E. coli</i>	...	...	...	...	92
Vegetative entamœbæ	...	...	...	...	6
<i>Endolimax nana</i>	...	...	...	...	7
<i>Giardia intestinalis</i>	...	...	...	...	34
<i>Trichomonas intestinalis</i>	...	...	...	...	32
<i>Chilomastix mesnili</i>	...	...	...	...	6
<i>Blastocystis hominis</i>	...	...	...	...	276
Coprozoic flagellates	...	...	...	...	8
No helminths or protozoal parasites	...	...	...	...	298

(c)—URINE. (MICROSCOPICAL).

Total number examined	...	...	...	...	587
Hyaline casts	...	...	...	...	74
Granular casts	...	...	...	...	96
Waxy casts	...	...	...	...	2
Leucocytic casts	...	...	...	...	2
Cellular casts	...	...	...	...	28
<i>Schistosoma hæmatobium ova</i>	...	...	...	...	53
Microfilariaë	...	...	...	...	3

(d)—CEREBRO-SPINAL FLUID.

Total number examined	...	...	...	...	23
Leucocyte counts	...	...	...	...	12
Differential leucocyte count	...	...	...	...	1
Nonne-Apelt globulin test	...	...	...	...	8
Estimation of Albumen	...	...	...	...	2

(e)—THROAT AND NASAL SWABBINGS. (MICROSCOPICAL).

Total number examined	...	...	...	...	1
<i>Oöidium albicans</i>	...	...	...	...	1

(f)—PUS, DISCHARGES, SCRAPINGS, ETC.

Total number examined	...	...	...	...	4
<i>Tinea cruris</i>	...	...	...	...	2
<i>Demodex bovis</i>	...	...	...	...	1

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## II.—PATHOLOGY

6. A—Morbid and histological examinations were made of 88 specimens of material. The following are the findings in some of these specimens.

1.—*Appendix.*

(a) Inflammation (acute and chronic) ... ..	29
(b) <i>Schistosoma hæmatobium</i> ova ... ..	1
(c) <i>Trichuris</i> ova ... ..	1

Fibrosis was marked in all specimens examined ; whether this is due to parasite infection is not certain.

2.—*Breast.*

(a) Acute mastitis ... ..	1
(b) Chronic mastitis ... ..	1
(c) Fibro-adenomata ... ..	4
(d) Carcinomata ... ..	9

3.—*Female Genitalia*

(a) Cervix—cystic glandular hyperplasia ... ..	3
" —carcinoma ... ..	1
(b) Uterus—cystic glandular hyperplasia ... ..	1
" —carcinoma ... ..	1
(c) Ovary —teratoma ... ..	1
" —malignant cyst (adenoma) ... ..	1
" —tubo-ovarian abscess ... ..	1
" —broad ligament—adenomyomata ... ..	2

4.—*Male Genitalia.*

(a) Tuberculosis of spermatic cord ... ..	1
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5.—*Glands.*

(a) Tuberculosis ... ..	2
(b) Secondary carcinoma ... ..	1
(c) Cylindroma of parotid ... ..	1

6.—*Kidney.*

(a) Hypernephroma ... ..	1
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7.—*Organs of special sense.*

(a) Carcinoma of eye (?lid) ... ..	1
(b) Basal-celled carcinoma of antrum ... ..	1

8.—*Miscellaneous.*

(a) Sarcomata of leg ... ..	3
(b) Peritoneal nodule of unstriated muscle ... ..	1
(c) Angiosarcoma of back ... ..	1
(d) ? Resolving hæmatoma of foot ... ..	1
(e) Myxofibroma of abdominal wall ... ..	1
(f) Cast from rectum ... ..	1
(g) Adenoma of thyroid... ..	1
(h) Teratoma of ? peritoneum ... ..	1
(i) Banti's disease of spleen ... ..	1
(j) Fibrosis of myocardium ... ..	1
(k) Gallstones and possible early malignancy of gall bladder ... ..	1

The number of specimens submitted has again increased. An attempt has been made to induce surgeons to send all tissues removed to the Laboratory. Formerly it has been the custom for practitioners to send only those tumours the character of which was not obvious microscopically.

All specimens received are now entered in a special pathological register instead of entering them among the other routine specimens.

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Sections are stained with Erlich hæmatoxylin and eosin, and one with Van Gieson's picro-fuchsin. The paraffin blocks are kept in cockroach proof tubes, most of the previous blocks having been consumed by these insects.

### III.—BACTERIOLOGICAL

8. A—820 simple routine clinical examinations were made.

#### (a)—SPUTUM. (MICROSCOPICAL).

Total number examined	...	...	...	...	655
<i>Mycobact. tuberculosis</i>	...	...	...	...	133

#### (b)—CEREBRO-SPINAL FLUID. (MICROSCOPICAL).

Total number examined	...	...	...	...	1
<i>Neisseria intracellularis</i>	...	...	...	...	1

#### (c)—THROAT AND NASAL SWABBINGS. (MICROSCOPICAL).

Total number examined	...	...	...	...	63
<i>Corynebact. diphtheriæ</i>	...	...	...	...	9
<i>Corynebact. hofmani</i>	...	...	...	...	4
Vincent fusiform organisms	...	...	...	...	5
Streptococci	...	...	...	...	5
Staphylococci	...	...	...	...	1

#### (d)—PUS, DISCHARGES, SCRAPINGS, ETC. (MICROSCOPICAL).

Total number examined	...	...	...	...	101
<i>Neisseria gonorrhœæ</i>	...	...	...	...	36
Staphylococci	...	...	...	...	3
Streptococci	...	...	...	...	1

B—471 cultural examinations were made.

#### (a)—BLOOD.

Total number cultured	...	...	...	...	30
<i>Bact. typhosum</i>	...	...	...	...	2
<i>B. gallinarum</i>	...	...	...	...	2
Staphylococci	...	...	...	...	2
Streptococci	...	...	...	...	1
Diphtheroid organism	...	...	...	...	1
Inoculation to guinea-pig for diphtheroid organism	...	...	...	...	1

#### (b)—FAECES.

Total number cultured	...	...	...	...	32
<i>B. gallinarum</i>	...	...	...	...	1
<i>B. alkaligines</i>	...	...	...	...	1

#### (c)—URINE.

Total number cultured	...	...	...	...	149
<i>B. coli</i>	...	...	...	...	23
<i>B. coli anærogenes</i>	...	...	...	...	3
<i>Pseudomonas pyocyanea</i>	...	...	...	...	2
<i>B. lactis ærogenes</i>	...	...	...	...	18
<i>Bact. typhosum</i>	...	...	...	...	1
<i>B. acidi lactici</i>	...	...	...	...	5
Staphylococci	...	...	...	...	7
Inoculation to guinea-pig for <i>mycobact. tuberculosis</i>	...	...	...	...	1

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### (d)—SPUTUM.

Total number cultured	1
Inoculation to guinea-pig for <i>mycobact. tuberculosis</i>	1

### (e)—CEREBRO-SPINAL FLUID.

Total number cultured	3
Pneumococci	1
Streptococci	1

### (f)—THROAT AND NASAL SWABBINGS.

Total number cultured	192
<i>Corynebact. diphtheriæ</i>	27
<i>Corynebact. hofmanii</i>	3

### (g)—PUS, DISCHARGES AND SCRAPINGS, ETC.

Total number cultured	64
<i>Corynebact. acnes</i>	1
<i>Neisseria gonorrhoeæ</i>	1
Streptococci	3
Staphylococci	45

C.—Autogenous vaccines were prepared from the following organisms isolated, among others, from various samples, 55 in all.

#### (a)—BLOOD.

<i>Bact. typhosum</i>	2
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#### (b)—URINE.

<i>B. coli</i>	6
<i>B. lactis aerogenes</i>	2
<i>B. asiaticus</i> (Castellani)	2
<i>B. acidilactici</i>	1
<i>Pseudomonas pyocyanea</i>	1
Staphylococci	1

#### (c) PUS, DISCHARGES AND SCRAPINGS, ETC.

<i>Neisseria gonorrhœæ</i>	1
<i>Corynebact. acnes</i>	1
Streptococci	3
Staphylococci	37

D.—Stock vaccines. The following were prepared.

T.A.B. for prophylaxis	2,800 c.c.
T.A.B. for protein shock	1,000 c.c.
Besredka's antiviral from streptococci	2,500 c.c.
Besredka's antiviral from staphylococci	3,000 c.c.

### B.C.G. VACCINE.

In July, 1937 it was felt that the production of B.C.G. vaccine, as carried out at Réduit, was not by any means complying with the precautionary measures laid down by Calmette. A careful comparison of the technique advocated by Calmette and the methods used at Réduit was carried out. This survey led to the decision to stop the supply of vaccine.

## MEDICAL AND HEALTH DEPARTMENT

The discrepancies in technique were not due to negligence on the part of the Officer preparing the vaccine, but were inevitable owing to the lack of staff.

In 1925 four officers were engaged solely in the preparation of B.C.G. whereas from 1930 one officer only was employed.

When the preparation of B.C.G. was started in Mauritius in 1925 the personnel of the laboratory was much greater than at present. In fact up to 1930 the staff numbered 15, which number finally shrank to 4 in June of 1937. It was therefore impossible to provide separate technicians for the preparation of the vaccine, or even to insure that the workers did not come in contact with virulent T.B.

With the appointment of Dr. Sippe as Pathologist it will be possible in the near future to issue B.C.G. vaccine to stock breeders for use for cattle only. No B.C.G. vaccine for human use will be manufactured.

### D.—Agglutination tests.

Agglutinated by <i>Bact. typhosum</i> " H " serum	...	...	61
Agglutinated by <i>Bact. typhosum</i> " O " serum	...	...	83
Agglutinated by <i>Bact. enteriditis</i> (Gaertner)	...	...	3
Agglutinated by <i>Salmonella enteriditis</i>	...	...	1
No agglutination with <i>Bact. typhosum</i> " H " serum	...	...	198
No agglutination with <i>Bact. typhosum</i> " O " serum	...	...	176
No agglutination with <i>Bact. paratyphosum</i> A " H " serum	...	...	10
No agglutination with <i>Bact. paratyphosum</i> B " H " serum	...	...	10
No agglutination with <i>Bact. paratyphosum</i> C " H " serum	...	...	4
No agglutination with <i>Bact. paratyphosum</i> B " O " serum ( <i>bact. aetryke</i> )	...	...	10
No agglutination with <i>Bact. enteriditis</i> (Gaertner)	...	...	2
No agglutination with <i>Salmonella enteriditis</i>	...	...	2
Unsuitable for test	...	...	4
Total number of sera submitted for agglutination tests	...	...	305

### E.—Water Analyses.

276 samples were examined during the year. An attempt was made to ascertain if the sterilisation of the Mare-aux-Vacoas water supply by chlorination was satisfactory. For this purpose samples were taken at frequent intervals from the laboratory taps at Réduit. The findings are embodied in the following table. The quantity of water containing lactose-fermenters was the only test done, time and lack of staff precluded the further examination of the positive tubes.

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*Results of the daily examination of the Mare-aux-Vacoas water supply.*  
 Sample collected at a tap inside the Laboratory at Réduit.

Date 1938	Lactose-fermenters ; 48 hrs. at 37°C.	Parts of chlorine added per million
14. 3	+ in 90 c.c.	0.3
16. 3	+ in 70 c.c.	"
17. 3	+ in 90 c.c.	"
18. 3	nil in 100 c.c.	"
19. 3	" "	"
22. 3	+ in 90 c.c.	"
23. 3 to 7. 4	nil in 100 c.c.	"
8. 4 to 16. 4	" "	0.25
19. 4	+ in 40 c.c.	"
20. 4 to 22. 6	nil in 100 c.c.	"
23. 6	+ in 100 c.c.	"
24. 6 to 22.11	nil in 100 c.c.	"
28.11	+ in 80 c.c.	"
29.11	+ in 80 c.c.	"
30.11	+ in 80 c.c.	0.30
1.12	+ in 80 c.c.	"
2.12	+ in 50 c.c.	"
5.12	+ in 80 c.c.	"
7.12	+ in 70 c.c.	"
9.12	+ in 70 c.c.	"
13.12	+ in 80 c.c.	"
15.12	+ in 70 c.c.	"
16.12	+ in 60 c.c.	"
17.12	+ in 90 c.c.	"
20.12	+ in 80 c.c.	"
21.12	+ in 80 c.c.	"
22.12	+ in 90 c.c.	"
23.12	+ in 80 c.c.	"
26.12	+ in 90 c.c.	"
27.12	+ in 100 c.c.	"
28.12	+ in 90 c.c.	"
29.12	+ in 100 c.c.	"
30.12	+ in 90 c.c.	"

In addition, the monthly routine examinations were carried out at Pailles and La Marie Filter beds. The Pailles supply maintained its high standard of purity throughout the year. Towards the end of the year with the increase in temperature, the Mare-aux-Vacoas commenced to show signs of marked deterioration. Drought conditions prevailed and the level of the Mare-aux-Vacoas fell very considerably.

The routine monthly examination for November showed that the Mare-aux-Vacoas raw water had only 15 colonies per c.c. on agar after 48 hours incubation at 37°C and was positive in 30 c.cs for lactose-fermenters ; after filtration and chlorination the water contained 1,456 colonies per c.c. on agar and was positive in 40 c.cs. for lactose-fermenters.

*Beggiatoa alba* was present in large quantities in all filter beds, and the collecting chambers, though clean, smelt strongly of sulphuretted hydrogen.

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It is felt that experiments should be carried out on rapid sand filtration at La Marie and also enquiries be made as to the feasibility of passing the water through a bed of "Activated carbon" for the months of the year during which the water cannot be efficiently dealt with by filtration and chlorination.

To solve the problem of the Mare-aux-Vacoas water supply it will be necessary to make careful and detailed study of the daily changes in the water. The present monthly examination, though it is the most that can be done with the staff available, is quite inadequate for finding out faults in a system as complicated as a water supply.

The following is a table showing the monthly examinations, omitting the list of types of lactose-fermenters, for the Mare-aux-Vacoas and Pailles supplies.

<i>Mare-aux-Vacoas water supply.</i>			
Month	Source of supply	Colonies	Lactose-fermenters
January	Raw inlet water	28	+ in 1 c.c.
"	Mixed filtered	83	+ in 10 c.c.
"	Standpipe	87	+ in 40 c.c.
February	Raw inlet water	62	+ in 30 c.c.
"	Mixed filtered	111	+ in 80 c.c.
"	Standpipe	153	+ in 100 c.c.
March	Raw inlet water	73	nil in 100 c.c.
"	Mixed filtered	156	" "
"	Standpipe	36	" "
April	Raw inlet water	37	+ in 40 c.c.
"	Mixed filtered	56	+ in 90 c.c.
"	Standpipe	28	+ in 100 c.c.
May	Raw inlet water	40	+ in 90 c.c.
"	Mixed filtered	32	+ in 90 c.c.
"	Standpipe	28	nil in 100 c.c.
June	Raw inlet water	58	+ in 30 c.c.
"	Mixed filtered	22	+ in 100 c.c.
"	Standpipe	9	+ in 70 c.c.
July	Raw inlet water	6	+ in 70 c.c.
"	Mixed filtered	11	+ in 100 c.c.
"	Standpipe	22	nil in 100 c.c.
August	Raw inlet water	10	+ in 90 c.c.
"	Mixed filtered	10	+ in 100 c.c.
"	Standpipe	9	+ in 90 c.c.
September	Raw inlet water	15	+ in 5 c.c.
"	Mixed filtered	32	+ in 100 c.c.
"	Standpipe	19	+ in 60 c.c.
October	Raw inlet water	10	+ in 5 c.c.
"	Mixed filtered	30	+ in 90 c.c.
"	Standpipe	22	+ in 90 c.c.
November	Raw inlet water	15	+ in 30 c.c.
"	Mixed filtered	123	+ in 5 c.c.
"	Standpipe	1,456	+ in 40 c.c.
December	Raw inlet water	27	+ in 50 c.c.
"	Mixed filtered	112	+ in 50 c.c.
"	Standpipe	71	+ in 60 c.c.

# ANNUAL REPORT ON THE

## *Pailles water supply.*

Month	Source of supply	Colonies	
		on agar	Lactose-fermenters
January	Raw	142	+ in 1 c.c.
"	Mixed filtered	54	+ in 1 c.c.
"	Monneron Reservoir	18	nil in 100 c.c.
February	Raw	139	+ in 40 c.c.
"	Mixed filtered	339	+ in 20 c.c.
"	Monneron Reservoir	79	nil in 100 c.c.
March	Raw	150	+ in 40 c.c.
"	Mixed filtered	82	+ in 20 c.c.
"	Monneron Reservoir	53	nil in 100 c.c.
April	Raw	69	nil in 100 c.c.
"	Mixed filtered	38	+ in 80 c.c.
"	Monneron Reservoir	27	nil in 100 c.c.
May	Raw	128	nil in 100 c.c.
"	Mixed filtered	24	+ in 100 c.c.
"	Monneron Reservoir	28	nil in 100 c.c.
June	Raw	100	+ in 30 c.c.
"	Mixed filtered	17	nil in 100 c.c.
"	Monneron Reservoir	4	nil in 100 c.c.
July	Raw	39	+ in 1 c.c.
"	Mixed filtered	18	+ in 50 c.c.
"	Monneron Reservoir	16	nil in 100 c.c.
August	Raw	178	+ in 5 c.c.
"	Mixed filtered	22	+ in 80 c.c.
"	Monneron Reservoir	71	nil in 100 c.c.
September	Raw	18	+ in 10 c.c.
"	Mixed filtered	16	+ in 100 c.c.
"	Monneron Reservoir	7	+ in 100 c.c.
October	Raw	90	+ in 0.5 c.c.
"	Mixed filtered	33	+ in 80 c.c.
"	Monneron Reservoir	5	nil in 100 c.c.
November	Raw	79	+ in 10 c.c.
"	Mixed filtered	33	+ in 80 c.c.
"	Monneron Reservoir	11	nil in 100 c.c.
December	Raw	63	+ in 5 c.c.
"	Mixed filtered	108	nil in 100 c.c.
"	Monneron Reservoir	30	nil in 100 c.c.

At the request of the Public Works Dept. pH values of samples of water from various parts of La Nicolière reservoir were taken. The following were the findings:

Date	13.10.38	14.10.38	20.10.38	26.10.38
Sluice Gate	7.4	7.0—7.2	7.4—7.6	7.2—7.4
Outlet Canal	7.0	7.2	7.0	7.2
West side of Dam	—	8.2	7.8	7.4
South end of Reservoir	—	7.8	7.4	7.2
Baffle Chamber entry canal	—	—	7.2—7.4	—

### *Milk.*

F.—Milk: Examinations of 4 samples from the Government Dairy were made.

## MEDICAL AND HEALTH DEPARTMENT

### IV.—HAEMATOLOGY

Total number examined	...	...	...	...	86
Full counts of red and white cells and haemoglobin determinations...					17
Differential counts (leucocyte)	...	...	...	...	60
Arneth count	...	...	...	...	4
Erythrocyte fragility test	...	...	...	...	2
Platelet count	...	...	...	...	3

It was decided to devote a separate section to hæmatology, as this is a branch of laboratory work which is of the greatest importance ; in view of the fact that there is a dense mixed population which is subject to many of the anæmia producing diseases.

The Pathologist is embarking on a piece of research to establish a series of normals for various groups of the population, which standards, when completed and compared with comparable findings elsewhere in the tropics, will enable a very fair assessment to be made of the general health and working capacity of the inhabitants.

If this work at a later date could be correlated with analyses of local foodstuffs and dietaries information of vital importance, both from an economic and health point of view, would be available.

Cases of interest encountered during the year included :

A case of chronic myeloid leukæmia in a child of nine with a leucocyte count of 240,000, 53% of the white cells were polymorphonuclears.

Two cases of Banti's disease were seen, one in the late stages of the disease with marked cirrhosis of the liver and ascitis, which was considered not to be suitable for operation, on account of the cirrhosis. The other case was considered to be much more favourable for operation in that there was no involvement of the liver and the platelet count was very low ; splenectomy was performed on this case with excellent results, an immediate improvement in the general condition of the patient being seen, together with a rise in the erythrocytes of over 1,000,000.

A case of " ? infective mononucleosis was diagnosed by the Government Medical Officer of Grand Port and though the differential count was typical of the disease, the Paul Bonnell test for the agglutination of sheep's cells was not by any means conclusive.

### V.—SEROLOGY

#### (a) BLOOD SERUM.

Kahn Test :					
Negative	...	...	...	...	2,365
Doubtful reactions	...	...	...	...	315
+	...	...	...	...	158
+ +	...	...	...	...	457
+ + +	...	...	...	...	167
+ + + +	...	...	...	...	27
Unsuitable for test	...	...	...	...	79
				Total	<u>3,478</u>

# ANNUAL REPORT ON THE

## (b) CEREBRO-SPINAL FLUID.

Kahn Test:

Negative	...	...	...	...	...	...	...	...	9
Doubtful reactions	...	...	...	...	...	...	...	...	2
+	...	...	...	...	...	...	...	...	2
+ +	...	...	...	...	...	...	...	...	1
									—
							Total		14
									—

### CONCLUSION.

The year shows a marked improvement in the general organisation of the Laboratory. The volume of routine work, both in the chemical and in the medical sections, has again increased.

Taking into consideration the fact that every examination is made by the Officers, and not, as in so many colonial laboratories, by low paid laboratory assistants of the "peon" class, the volume of work is very large.

With the appointment of a Pathologist who will take charge of the laboratory during the leave overseas of the Senior Pathologist some continuity of policy is possible.

The same excellent atmosphere has prevailed during the year, and I would like to express my thanks to the staff for their whole hearted support and collaboration during the year.

25.1.1939.

H. D. TONKING,  
*Senior Pathologist.*

(N.B. Owing to Dr. Tonking's absence from the Colony certain abridgements and alterations made in the form of the report have been effected without reference to him. J.B.K.).

# MEDICAL AND HEALTH DEPARTMENT

## APPENDIX IIa.

### Annual Report of the Government Analyst for the Year 1938. STAFF.

*Government Analyst* : E. COLLINS, M.A., F.I.C.

*Laboratory Assistant* : R. AVICE DU BUISSON, Dip. Ag. (Mauritius).

This report covers the work of the analytical branch during the year 1938.

Mr. Avice du Buisson held the appointment of Acting Government Analyst until the arrival of Mr. E. Collins on first appointment on the 28th November, 1938.

Advantage was taken of the extension to the laboratory of the electric power supply to install an electric water bath, an oven, a hot plate, a small high speed centrifuge, and a small low temperature heater.

During the year 2,364 samples were received for examination as compared with 1,753 for the previous year and with an average of 1,661 for the period 1933-37. This increase was distributed fairly evenly over the various kinds of work undertaken.

Work was performed for the Medical and Health Department, the Customs Department and Excise Branch, the Police Department and the Forests Department, for private medical practitioners, and for the Military Authorities.

In this report the record of the work done is divided into the following five sections, according to the nature of the examination required, viz:

- I.—BIO-CHEMICAL.
- II.—PUBLIC HEALTH.
- III.—CUSTOMS AND EXCISE.
- IV.—FORENSIC.
- V.—MISCELLANEOUS.

#### I.—Bio-Chemical Section.

Examinations were made of the following 1,502 specimens, the number examined in 1937 being 1,128.

		(a) BLOOD.	
Van den Bergh reaction	... ..	... on	7 specimens.
Estimation of urea	... ..	... on	592 "
"    "    glucose	... ..	... on	242 "
"    "    Chlorides in cells and plasma	... ..	... on	20 "
		Total 861 specimens.	
		(b) URINE.	
General qualitative clinical analysis	... ..	... on	349 specimens.
Qualitative examination for acetone	... ..	... on	78 "
"    "    for aceto-acetic acid	... ..	... on	3 "
"    "    for urobilin	... ..	... on	1 "
"    "    for bile salts and pigments	... ..	... on	1 "
Quantitative estimation of glucose	... ..	... on	195 "
"    "    of albumen	... ..	... on	7 "
"    "    of urea	... ..	... on	1 "
"    "    of chlorides	... ..	... on	2 "
		Total 637 specimens.	

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	(c) FÆCES.				
Qualitative test for blood	...	...	...	on	1 sample.
	(d) URINARY CALCULUS.				
Composition required	...	...	...	on	1 sample.
	(e) BILIARY CALCULUS.				
Composition required	...	...	...	on	1 sample.
	(f) HUMAN MILK.				
Proximate analysis	...	...	...	on	1 sample.

### II.—Public Health Section.

The following 518 samples were received during the year.

Milk	...	...	...	...	431 samples.
Water	...	...	...	...	48 „
Drugs	...	...	...	...	19 „
Oil	...	...	...	...	7 „
Margarine	...	...	...	...	2 „
Wines	...	...	...	...	11 „
Total					518 samples.

*Milk.*—Of 431 samples received, only 113 *i.e.* 40.1% complied with the regulations, as compared with 55.4% in 1937 and 47% in 1936. The following table shows the results of the analyses of samples from the various districts of the Island.

District	No. of samples received	Good	Watered	Skimmed	Watered and Skimmed	% Good
Port Louis	29	1	14	4	10	3.4
Plaines Wilhems	124	45	51	8	20	36.3
Pamplemousses	39	15	17	4	3	38.4
Rivière du Rempart	37	15	18	2	2	40.6
Flacq	46	29	14	2	1	63.0
Moka	27	8	13	1	5	29.6
Savanne	27	7	16	1	3	25.9
Grand Port	98	51	32	11	4	52.1
Black River	4	2	2	—	—	50.0

*Water.*—Monthly examinations were made of the Port Louis water supply, which was found to be uniformly good.

Monthly examinations of the Mare-aux-Vacoas supply showed the usual seasonal variations. In the winter months, the quality of the supply was good, but during the summer months, at the beginning and end of the period under consideration, the greater warmth and lower rainfall resulted in a great growth of vegetable matter in the lake from which the supply is taken. This was accentuated at the end of the year by a prolonged drought. Moreover the filters are unable to cope properly with their task, as they are dealing with a much greater flow of water than that for which they were designed. For the same reason the settling tanks fail to retain any but the largest fragments of suspended matter. The issuing water, though at the worst periods showing evidence of heavy vegetable pollution, showed no chemical indications of contamination from animal sources.

## MEDICAL AND HEALTH DEPARTMENT

*Drugs.*—The nineteen samples were of dangerous drugs held in stock by local pharmacies. They were examined for the Medical and Health Department to ascertain their degree of purity. Nearly all complied with B.P. et Codex requirements and no evidence of adulteration was found.

*Oil.*—One sample each of soya bean and arachis oils was examined for general purity and both were passed as genuine and suitable for pharmaceutical purposes.

The remaining five samples were of soya bean oil, examination for contamination with tricresyl phosphate being required by the Medical and Health Department, but those samples proved to be uncontaminated. During this work it was confirmed that the simple p-nitraniline test (Analyst 1938, 63, 813) would detect 0.01% of tricresyl phosphate in soya bean oil.

*Margarine.*—The two samples were submitted by the Military Authorities in connection with a War Office specification of 10% butter fat in the total fat content and a minimum vitamin content. No opinion could be given on the latter requirement but the samples were rejected as containing probably no butter fat.

*Wines.*—Six of the samples sent were from the premises of local manufacturers and the other five, also of Mauritius manufacture, were from retailers shops. An opinion was requested as to the wholesomeness or otherwise of these wines, which are made by the fermentation of imported dried fruit, generally raisins, and sugar, a proportion of local grapes, which are not of good quality, being sometimes added. They are then usually coloured with an artificial dye and a preservative added to arrest fermentation. As regards flavour and aroma, their inferiority was evident without analysis, but chemical analysis, though naturally showing great differences in composition between these fictitious wines and genuine wines made from grape juice, did not reveal any ingredient natural to the wine which could definitely be classed unwholesome. Several samples had been preserved with salicylic acid, which is universally considered to be undesirable as a preservative for beverages and has been prohibited in England since 1925. The amount added, moreover, had probably not been strictly controlled, nor, probably, had the purity and suitability of the artificial dyes used to give many of the wines their colour been considered. It would seem that the manufacture of these wines is probably conducted in an irregular fashion samples from the same factory showing considerable differences in composition. There were also indication that an excess of sugar and dye had sometimes been used to cover a deficiency in fruit. The samples from the retailer shops did not show any evidence of having been tampered with since manufacture.

### III.—Customs and Excise Section.

The following 195 samples were examined during the year for this department.

Textile materials	...	...	3
Flavouring essence	...	...	1
Medicinal tinctures and drugs	...	...	70
Rum	...	...	121
		Total	195

*Textile materials.*—The composition of these materials was required for assessment of duty. After a dispute as to the composition of a material des-

## ANNUAL REPORT ON THE

cribed as "Staple Fibre Serge,"—the Acting Government Analyst gave it as his opinion that the material consisted of artificial silk. The percentages of cotton in two samples of tweed were also established.

*Flavouring essence.*—It was proved that alcohol was absent from a consignment on which it had been proposed to charge duty.

*Medicinal tinctures and drugs.*—Under Govt. Notice No. 29 of 1937, when alcohol is issued at low duty as the ingredient of a medicinal tincture or drug, a certificate is required from the Government Analyst that the resulting preparation is not drinkable as a substitute for rum. Sixty nine such certificates were issued during 1938, and in one case a certificate was refused as the preparation was considered potable.

*Rum.*—The 121 samples were submitted by the Excise Branch for a certificate of compliance with the permitted limit of furfuraldehyde content. Furfuraldehyde was absent in 114 samples, present in less than the permitted limit in 3, and exceeded the limit in 4, samples.

### IV.—Forensic Section.

The following 142 exhibits, submitted in connection with 87 cases, were examined during the year.

#### (a) MEDICO-LEGAL.

Poisoning, Human	...	12 exhibits in	3 cases
Poisoning, Animal	...	9    "    "	4    "    "
Detection of Alcohol	...	2    "    "	2    "    "
		Total ... 23 exhibits in 9 cases	

#### (b) GENERAL.

Illicit Distillation Wash	...	23 exhibits in	16 cases
"           "    Rum	...	43    "    "	43    "    "
"           "    Molasses	...	2    "    "	2    "    "
"           "    Raw Sugar	...	2    "    "	2    "    "
Possession of Gandia	...	46    "    "	14    "    "
Coining	...	3    "    "	1    "    "
		Total ... 119 exhibits in 78 cases	

*Human Poisoning.*—Two cases were fatal and one recovered. From the organs of one of the fatal cases cyanide was recovered in quantities which showed that more than a fatal dose had been taken. From the organs of the other phenol was isolated, and was also identified in certain other exhibits sent in connection with the case. In the third case it was shown that dilute hydrochloric acid, as used locally by tinsmiths, had been administered.

*Animal Poisoning.*—It was shown that hens (2 cases) had been poisoned by strychnine, and in 1 case by common salt, towards which they are very susceptible. Strychnine and brucine were present in the organs of a dog poisoned by burglars, indicating that *Nux Vomica* had been employed.

*Detection of Alcohol.*—In one case it was shown that a pedestrian who was fatally injured by a car had taken alcohol; in the other, alcohol was shown to be absent from the blood of a person charged with drunkenness.

*Illicit Distillation.*—All the samples submitted as wash were found to be wash as defined in Ordinance 36 of 1937.

## MEDICAL AND HEALTH DEPARTMENT

Twenty-eight samples of rum were sent in connection with cases of illicit distillation, and all were shown to be of illicit origin. The remaining fifteen were from retailers shops in connection with suspicions of watering or of selling illicit rum. Six were shown to be watered and two to be of illicit origin. The remainder were passed.

The two samples of molasses were both shown to be molasses as defined in Ordinance 36 of 1937, and the two samples of raw sugars to be raw sugar as defined by Ordinance 2 of 1934.

*Gandia*.—Of the samples submitted all but one was found to be gandia.

*Coining*.—A false 25 cents piece was found to consist of commercial solder and was shown to be identical in composition with fragments of metal from a mould in possession of the accused.

### V.—Miscellaneous.

Seven samples were examined comprising—

Whisky	...	...	2
Gin	...	...	1
Soap	...	...	2
Scale	...	...	1
Resin	...	...	1
			—
Total	...	...	7
			—

It was shown that water had been added to two of the three samples of spirits submitted.

The two samples of soap were sent for comparison before purchase ; the sender was advised which was the better.

The scale was submitted by the Customs Department from the boiler of a tug used by them. The boiler was of the fire tube type. The scale was found to consist chiefly of calcium sulphate, with lesser amounts of calcium carbonate and traces of magnesium salts. It was found thus that losses of steam had been made up by water from the Mare-aux-Vacoas public supply, which contains calcium bicarbonate and, although the sulphate content is very low, it is known that the organic matter present contains much sulphur. At the high temperatures of a fire tube boiler this had apparently yielded sulphate in sufficient quantities to form a scale. As a supply of soft water was not available it was suggested that a small base-exchange softening plant be installed.

*Resin*.—A sample of resin *Harunga Madagascariensis* was submitted by the Forests Department, with an inquiry as to its possible medicinal or other economic value. The resin was examined from the point of view of its action against eczema, but any disinfectant action was shown to be very slight.

It was suggested that the resin might find a market for the production of second grade soaps, paints or varnishes.

E. COLLINS,

*Government Analyst.*

28th February, 1939.

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## APPENDIX III.

### HOOKWORM BRANCH

#### Annual Report for the Year 1938.

*Activities of the Branch.*—Two Campaigns are carried out simultaneously: the first in the Central and Southern districts (Plaines Wilhems, Moka, Black River, Grand Port and Savanne); the second in the Northern and Eastern districts (Port Louis, Pamplemousses, Rivière du Rempart and Flacq).

At the Central Dispensary (Curepipe Road), treatments are given on Saturday mornings and specimens are examined, unfortunately, only members of the better classes submit specimens at all.

*Conditions Obtaining.*—The percentage of Hookworm infection is high in the agricultural and poorer population. In towns and villages the infection is kept up by pollution of the soil by children, while in rural localities, adults and children contribute equally.

On Estates, cane fields surrounding labourers' camps are highly polluted and anybody having to work in these is certain of being infected. Although the Sanitary Authorities have seen to it that all dwellings are provided with latrines, the habit of soil pollution seems to be ingrained in the labouring classes and progress in this direction can only be hoped for in the remote future.

Propaganda has had no influence upon this objectionable practice, although it has greatly increased the attendance at the treatments.

*Treatments.*—As the infection is high throughout the colony and especially in rural districts, mass treatments are given as often as the limits of the present staff will permit, the aim being to treat every school, village and estate in the island as often as possible in the course of the year.

There is no doubt as to the popularity of these treatments, as seen by the number obtained on the annexed statistical table.

*Examinations of Specimens.*—Apart from those mentioned on the annexed statistical table, the following were carried out for diagnostic purposes:

Urine specimens examined	...	...	85
Showing presence of albumen in	...	...	21
"  presence of sugar in	...	...	8
"  hyaline casts in	...	...	9
"  granular casts in	...	...	3
"  leucocytic casts in	...	...	1
"  Pus in	...	...	8
"  Pus casts in	...	...	8
"  Schistosomun hæmatobium in	...	...	6
Fæces specimens examined	...	...	12
Showing entamœba coli in	...	...	1
"  "  histolytica in	...	...	3
"  blastocystis hominis in	...	...	7
"  Lamblia cysts in	...	...	2
"  Charcot Leyden crystals in	...	...	1
Blood films examined for differential count in	...	...	7

# MEDICAL AND HEALTH DEPARTMENT

## STATISTICAL REPORT FOR THE YEAR 1938.

### EXAMINATIONS AT CENTRAL DISPENSARY.

#### *Preliminary.*

Examined	...	...	...	1,561
Positive for Hookworm	...	...	...	414
Percentage of infection	...	...	...	26.5

#### *Other Helminths.*

Ascaris	...	...	...	447
Trichocephalus	...	...	...	1,084
Oxyuris	...	...	...	29

#### *After Treatment.*

Examined	...	...	...	82
Negative for Hookworm	...	...	...	62
Percentage of cures	...	...	...	75.6

### TREATMENTS.

Plaines Wilhems	...	15,132	3,302	432	44	18,910
Flacq	...	13,664	2,407	895	—	16,966
Savanne	...	11,595	3,474	909	9	15,987
Grand Port	...	9,558	2,646	389	94	12,687
Pamplemousses	...	9,022	2,390	747	94	12,253
Riv. du Rempart	...	8,710	1,756	479	78	11,023
Central Dispensary	...	7,794	2,258	751	281	11,084
Moka	...	5,037	911	84	8	6,040
Port Louis	...	4,465	1,702	716	112	6,995
Black River	...	577	175	—	—	752
Total	...	<u>85,554</u>	<u>21,021</u>	<u>5,402</u>	<u>720</u>	<u>112,697</u>

LEWIS J. MCGREGOR,

*Senior Medical Officer Hookworm-Malaria Branch.*

February 9th 1939.

Curepipe Road.

APPENDIX IV.

MALARIA BRANCH

Annual Report for the Year 1938.

*Province and Activities of the Branch.*—The activities of the Branch are limited to the Central zone of the island above the 600 ft. altitude line. Since 1927, however, new works have been confined to the districts of Plaines Wilhems and Moka, and, for the last five years have been restricted to the towns of Plaines Wilhems and their close vicinity. This concentration has been necessitated by the great amount of work remaining to be done in and around these towns and by the small number of labourers provided for the purpose, so that, even now, the work remaining to be done for the protection of the towns of Plaines Wilhems will occupy the two gangs available for many years to come.

*Blood Examination.*—These are made in order that any undue rise of malaria in a given locality may be discovered early and dealt with. It is rendered necessary by the unreliability of dispensary statistics as regards malaria, which can be illustrated by the examination mentioned below of blood from cases diagnosed as malaria, in which the diagnosis was correct in 36% of cases only.

Blood films have been taken during the year at:

(a) Curepipe Road, Hookworm Dispensary, throughout the year: Of 44 blood films examined, 11 were positive, all being imported cases.

(b) Vacoas Dispensary during the first six months of the year only: During the 1st quarter, of 51 blood films taken, 24 were positive, 7 being from locally contracted cases, while during the 2nd quarter, of 11 blood films taken, 6 were positive, none being from locally contracted cases.

(c) Victoria Hospital, throughout the year, as follows:

Quarter	Examined	Positive	INDIGENOUS		
			B.T.	M.T.	Q.
1st	336	112	9	5	0
2nd	280	101	10	4	1
3rd	152	56	6	3	0
4th	198	73	5	1	1
Total	966	342	30	13	2

B.T. = Benign tertian. M.T. = Malignant tertian. Q = Quartan.

The cases seen at Victoria Hospital come chiefly from the Central portion of Plaines Wilhems, and the indigenous cases were scattered and unconnected. The only indication of an increase in malaria was the fact that during the 1st quarter 9 positive indigenous cases were registered from La Louise.

## MEDICAL AND HEALTH DEPARTMENT

(d) At Rose Hill Dispensary, for the last four months of the year:

Month	Examined	Positive	INDIGENOUS		
			B.T.	M.T.	Q.
September	... 25	... 10	4	3	3
October	... 30	... 10	4	2	2
November	... 40	... 18	15	0	0
December	... 24	... 9	4	0	1
Total	... 119	47	27	5	6

The positive indigenous cases were equally distributed between Rose Hill and Beau Bassin.

*Anopheline Breeding Places.*—The larval stages of malaria vectors have been rarely found during the year. Those of *Anopheles maculipalpis* were discovered twice in March, once at Mont Martin not far from Curepipe Road and once at Chaulenay, Moka. Those of *Anopheles costalis* were found twice in April, once at Quatre Bornes and once at Bassin Estate.

*Abatement of Water Nuisances.*—This had been interrupted, but was resumed in July and has been since continued. The number of nuisances abated during the last six months of the year was:

Locality	Number abated
Curepipe	196
Vocoas—Phoenix	214
Quatre Bornes	140
Rose Hill—Beau Bassin	719
Moka	332
Total	1,601

It has been found that in towns and villages where no natural nuisances such as swamps exist, the Anopheline mosquitoes, especially *Anopheles costalis*, adapt themselves readily to small man made nuisances. Of these, the ponds are by far the most numerous; they are especially common in the drier parts of Plaines Wilhems: Quatre Bornes, Rose Hill and Beau Bassin, where cases of malaria most commonly occur.

The constant supervision necessary to see that the owners keep them in good repairs, free from weeds and stocked with larvivorous fish, takes up a great part of the time of the entomological staff of the Branch. It will be necessary in the near future to find a way to lessen their number.

*Antimalarial Works.*—Apart from minor works such as oiling and stocking ponds with fish, the following have been carried out during the year by the two Labour Gangs at the disposition of the Branch:

## ANNUAL REPORT ON THE

*Curepipe.*—(a) Canalisation of the head of Rivulet Poule d'Eau, above Colin street, on 785 ft. together with the construction of 962 ft. of side drains. This work is nearing completion.

(b) Repairs to works damaged by floods in Rivulets Eau Bleue, Tata-maka, Gros Cerf, Daguet, Poule d'Eau and Lamy, and in Feeder Maingard and River Sèche on 47,875 feet.

*Phoenix.*—(a) Clairfonds drain: widening, deepening and side-walling of the main drain on 1,090 feet.

(b) Plaines Wilhems River: first clearing of the stream-bed of vegetation, and of the reserves of undergrowth on 9,780 feet.

*Rose Hill.*—Canalisation of River Plaines Wilhems, between the Rose Hill—Moka Road and the Moka Railway bridge, on 1,505 feet together with the construction of 270 feet. of side drains.

*Upkeep of Works.*—The upkeep of works carried out in the past is ensured by cantonniers who contract to keep a certain portion of river or drain free from weeds and other obstruction. More than 120 miles of rivers and drains are, at present, upkept by the Malaria Branch in this way in the districts of Plaines Wilhems and Moka and in other parts of the Central zone.

LEWIS J. MCGREGOR,

*Senior Medical Officer Hookworm-Malaria Branch.*

February 10th 1939.

Curepipe Road.

# MEDICAL AND HEALTH DEPARTMENT

## APPENDIX V.

### Annual Report of the Medical Officer of Health, Port Louis, for the Year 1938.

#### ADMINISTRATION

The Sanitary Staff was composed of one Inspector and three Guards. The Inspector in charge of the section which includes the Docks and Wharves has the additional duty of supervising the sanitary measures imposed on the incoming ships.

#### PUBLIC HEALTH

No epidemics were recorded during the year under review.

#### VITAL STATISTICS

The area of Port Louis is about 16 square miles. The population on the 30th June 1938 was estimated at 56,322.

##### BIRTHS.

	1937	1938
Total	2,181	2,014
Birth-Rate per 1,000 of population	39.3	35.7
Still Births	180	154

##### DEATHS.

Intra-Urban	1,533	1,435
Extra-Urban	295	269
Total	1,828	1,704
Crude Death-Rate per 1,000 of population	32.8	30.3

##### INFANTILE MORTALITY.

Under one year	321	306
Between the age of one and five	210	122
Infantile mortality rate per 1,000	146.5	151.9

#### COMMUNICABLE DISEASES

##### MALARIA.

The number of reported deaths attributed to malaria and cachexia of malarial origin was 117 as against 152 in 1937 and 150 in 1936.

The number of patients treated at the Civil Hospital was 680 in 1938, 984 in 1937, 729 in 1936 and 620 in 1935.

## ANNUAL REPORT ON THE

The total number of deaths due to malaria occurring at the Civil Hospital was 20 in 1938, 24 in 1937, 24 in 1936 and 35 in 1935, with a case mortality of 2.9% in 1938, 2.5% in 1937, 3.3% in 1936 and 5.6% in 1935.

### PLAGUE.

No sign of plague, whether in man or rat has been detected since 1927.

### FILARIASIS.

Ten cases were diagnosed at the Civil Hospital and two at the Eastern Dispensary.

### INFECTIOUS DISEASES.

DISEASES	CASES	
	Crude	Corrected
Diphtheria ... ..	2	2
Enteric Fever ... ..	9	4
Erysipelas ... ..	36	24
Puerperal Sepsis ... ..	10	4

## HYGIENE AND SANITATION

### PLAGUE.

(a) *Rat-proof Granary.*—Grain imported into the Colony is stored in the Granary which was designed to hold a maximum of 300,000 bags. In cases of emergency more grain can be stored temporarily on the top floor which can accommodate 120,000 bags.

Wholesale dealers are allowed to stock a maximum of 1,500 bags in their stores on condition that the latter be made rat-proof and maintained in rat-proof condition.

The result has not been satisfactory. The doors of the rat-proof godowns are not kept locked and rat excreta both stale and fresh have been detected in practically every case.

(b) *Rat-Surveillance.*—Sanitary surveillance over rats in the harbour area and in the strip of the town bordering on the harbour was pursued throughout the year.

(c) *Rat-Destruction.*—The trapping of rats outside the zone of surveillance was started in July 1936 owing to the marked infestation of premises. The Staff consists of 2 overseers and 12 labourers.

The animals caught or found dead are examined microscopically.

Rats caught ... ..	9,591
Flea-rate per rat ... ..	2.09
Gravid females caught ... ..	426
Number of young recorded ... ..	2,050
Fecundity index ... ..	4.8

#### *Species of rats caught :*

<i>Rattus rattus rattus</i> ... ..	62
<i>Rattus rattus alexandrinus</i> ... ..	7,714
<i>Rattus rattus frugivorus</i> ... ..	580
<i>Rattus rattus norvegicus</i> ... ..	1,591

## MEDICAL AND HEALTH DEPARTMENT

(d) *Rat-Proofing*.—The practice of rat-proofing is based on the fact that rats are found to live in close but not visible contact with man.

Buildings in Port Louis are rat-proofed when they are erected or when extensive repairs are carried out.

The materials which builders are allowed to employ are, however, of so poor quality that the effect of rat-proofing is short-lived, while the state of disrepair of most of the houses and shops tends to increase existing rat harbourage.

(e) *Port Sanitary Measures*.—On the arrival of healthy ships from plague-infected ports, the luggage of passengers is disinfected at the Harbour Disinfecting Station and all cargo fumigated with sulphurous acid gas by means of the Clayton apparatus.

Passengers are placed under surveillance.

### MALARIA.

The chief sources of malaria are found in the extra-urban area. They are Lataniers' Stream on the Eastern Side of the town, Dayot Canal and St. Louis' Stream on the Western.

The only measures available for the present are palliative *e.g.* oiling pools, keeping the banks free from weeds and algæ and preventing stagnation of water.

The number of breeding places detected during the year in the intra and extra-urban areas was as follows:

<i>Anophelini</i> :	Intra-Urban	Extra-Urban	Total
<i>A. costalis</i> ...	13	36	49
<i>A. maculipalpis</i> ...	—	14	14
<i>A. mauritianus</i> ...	—	3	3
<i>Culicini</i> :			
<i>Stegomyia</i> ...	40	21	61
<i>Culex</i> ...	41	30	71
<i>L. tigris</i> ...	1	—	1

The nuisances detected were abated immediately after detection by destroying the breeding places.

## GENERAL MEASURES OF SANITATION

### NIGHT SOIL AND CONSERVANCY.

*Sewerage System*.—74 more premises were connected with the Sewerage System, this leading to the abolition of 60 pail services.

*Pail-Latrines*.—At the end of the year there were still 175 pail services in the intra-urban area, and 111 in the extra-urban area.

The night soil buckets are collected in special motor lorries supplied by a Contractor and the contents disposed of at the Cassis and Paul and Virginie Tipping Chambers which connect with the Sewerage System.

## ANNUAL REPORT ON THE

*Pit-Latrines.*—In Cassis, Roche Bois and Sainte Croix, pit latrines are used for the disposal of the excreta.

### COLLECTION AND DISPOSAL OF REFUSE

This work performed by the Sanitary Department was quite satisfactory. The refuse is collected daily in motor lorries belonging to Government and is used for the filling of hollows at Roche Bois and Plaine Lauzun.

The Staff consists of one Dump Overseer, seven Sectional Overseers and 148 labourers.

### WATER SUPPLY

There are four sources of water supply in Port Louis *i.e.*

1. *Grand River North West.*—(a) From "La Digue" Dam, the water is conveyed by two water mains known as the Municipal (18 inch pipe) and the Rectification (19 inch pipe) Canals to the Pailles filter beds. The filtered water is then chlorinated by means of a Paterson's chloronome and stored in the Monneron and Signal Mountain reservoirs. The chlorinated water supply is limited to the intra-urban area and is supplied to shipping.

(b) At the spot nearer to the sea than "La Digue" the Dayot Canal starts. This supplies the Cassis District and ends at Redoute Street. The remaining portion up to Pouce Street is dry.

Dayot Canal is in a dilapidated condition all along its course and, as stated above, is a fertile source of mosquito breeding places.

(2) *Calebasses River.*—Water impounded by a dam near Bois Marchand Cemetery is brought to the Abattoir, Sainte Croix, Terre Rouge and part of Roche Bois. This water-supply was examined by the Pathologist of the Department who reported that it should be regarded with the gravest suspicion.

3. *Lataniers' Stream.*—The water is conveyed by a pipe to Vallée des Prêtres from a dam near the river source.

4. *Mare-aux-Vacoas.*—This water supply reaches Port Louis through an eight inch piping from a reservoir at Petite Rivière and renders available a distribution of approximately one million gallons daily in the town area. It is also supplied to shipping.

Grand River North West and Mare-aux-Vacoas are now constant water supplies throughout the day.

### MARKETS.

The three markets of the town are under the direct supervision of the Municipality. They have now fallen into a state of disrepair and are no longer fly-proof.

### SLAUGHTER-HOUSE.

The slaughter-house at Roche Bois is managed by the Municipality and all carcases are examined by a Veterinary Surgeon.

### CEMETERY.

Two of the three cemeteries belong to the Municipal Corporation ; a third, the Chinese Cemetery, is under the control of the Sanitary Department.

## MEDICAL AND HEALTH DEPARTMENT

### MILK SUPPLY.

The following is a summary of the action taken in connection with the control of milk :

Number of milk sellers whose milk was tested by the Sanitary Inspector ... ..	241
Number of samples sent to the Government Analyst for examination ... ..	29
Number of samples found genuine ... ..	3
" " " " sophisticated ... ..	26
" " milk sellers cautioned ... ..	7
" " contraventions established ... ..	19
" " convictions ... ..	19
Imprisonment ... ..	4
Length of time (days) ... ..	57
Amount of fines ... ..	Rs. 1,226.

L. M. J. R. PILOT, M.B., B.S. (London) D.T.M. & H. (London).

*Medical Officer of Health, Port Louis and Port Health Officer*

11th March, 1939.

# ANNUAL REPORT ON THE

## APPENDIX VI

### Report on the Mental Hospital for the Year 1938.

The total number of certified insane persons in the Colony on December, 1938 was 1,002, compared with the same number on 31st December, 1937.

2. The following table shows the distribution of the 1,002 certified insane persons in the Colony on 31st December, 1938.

	GENERAL			INDIAN			CHINESE			TOTAL
	M.	F.	T.	M.	F.	T.	M.	F.	T.	
At Mental Hospital ...	204	207	411	211	139	350	14	2	16	777
On probation leave ...	41	37	78	80	52	132	1	2	3	213
On leave under G.N. 239/24 ...	5	3	8	4	—	4	—	—	—	12
Total ...	250	247	497	295	191	486	15	4	19	1,002

3. The percentage sex-distribution of the 1,002 certified insane persons was males 55.89 and females 44.11, compared with males 50.66 and females 49.34 for the estimated population of the Island on 31st December, 1938.

4. The following table gives the insane-rates per 10,000 of the population of the Island, calculated on the number of certified insane persons in the Colony on 31st December, 1938:

	M.	F.	TOTAL
General population ...	42.4	37.8	40.0
Indian population ...	21.2	14.6	18.0
Chinese population ...	22.6	12.1	19.1
Total population ...	27.3	22.1	24.8

The above tables show that insanity is more prevalent among males than females.

The total insane-rate for the general population is more than double that for Indians.

5. The following table gives the estimated population of the Island on 31st December of the years 1924 to 1938, the total number of certified insane persons and the total insane-rate per 10,000 of the population for each of those years:

## MEDICAL AND HEALTH DEPARTMENT

Years	Population of Colony on December 31st.	Total number of certified insane on December 31st.	Insane-rate per 10,000 of population.
1924	387,743	686	17.6
1925	393,708	700	17.7
1926	398,236	719	18.0
1927	401,693	729	18.1
1928	404,802	748	18.4
1929	405,549	759	18.7
1930	404,458	833	20.5
1931	391,044	834	21.3
1932	388,400	855	22.0
1933	390,697	895	22.9
1934	393,733	926	23.5
1935	396,271	927	23.3
1936	399,878	949	23.7
1937	402,071	1,002	24.9
1938	403,718	1,002	24.8

The above table shows a slight decrease of the insane-rate for 1938 compared with 1937.

### 6. HOSPITAL POPULATION.

There were 782 persons in hospital (males 432, females 350) on 31st December, 1938. Of these, 3 males and 2 females were under interim detention pending a decision as to their mental state, so that the total number of certified insane persons in hospital on the above date was 777 (males 429, females 348) compared with 783 (males 429, females 354) on 31st December, 1937. Included in the 777 certified insane were 13 male and 23 female paying patients. The daily average number resident was 803 (males 446, females 357) compared with 772 for 1937, 753 for 1936, 730 for 1935, 724, for 1934, 690 for 1933, 681 for 1932, 680 for 1931, and 654 for 1930. The maximum daily number resident during the year was 826 (males 463, females 363) compared with 809 (males 443, females 366) for 1937.

### 7. CRIMINAL MENTAL PATIENTS.

	M.	F.	T.
In hospital on 31st December, 1937	14	—	14
Admitted during 1938	—	—	—
Readmitted during 1938 from probation leave	2	—	2
Discharged or dealt with under Art. 60 of Ord. 23/1906	3	—	3
Died during 1938	1	—	1
Remaining on 31st December, 1938	12	—	12

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8. The following table shows the duration in hospital to 31st December, 1938 of the 777 certified resident patients:

	M.	F.	T.
One year or less ...	59	40	99
Between 1 and 2 years ...	34	33	67
"    2 " 3 " ...	23	29	52
"    3 " 4 " ...	31	22	53
"    4 " 5 " ...	22	19	41
"    5 " 6 " ...	24	16	40
"    6 " 7 " ...	11	19	30
"    7 " 8 " ...	19	14	33
"    8 " 9 " ...	13	19	32
"    9 " 10 " ...	22	9	31
"   10 " 15 " ...	68	40	108
"   15 " 20 " ...	39	27	66
"   20 " 25 " ...	17	29	46
"   25 " 30 " ...	17	14	31
Over 30 years ...	30	18	48
Total ...	429	348	777

It will be seen from the above table that more than half of the patients have been in hospital 5 years or more, the prognosis in the majority of these cases being hopeless.

9. ADMISSIONS.

	1937			1938		
	M.	F.	T.	M.	F.	T.
1st admissions, certified patients ...	62	57	119	63	38	101
2nd admissions, certified patients ...	10	8	18	11	6	17
3rd admissions, certified patients ...	4	2	6	2	2	4
4th admissions, certified patients ...	1	1	2	—	2	2
Readmissions from probation leave...	38	34	72	45	23	68
Readmissions from leave under G.N. 239/24 ...	41	40	81	24	34	58
Admitted under interim detention, later released not being proper persons to be kept in hospital ...	22	17	39	28	15	43
Still under interim detention on 31.12.38 ...	2	—	2	3	2	5
Died whilst under interim detention	—	1	1	3	3	6
Readmitted from Victoria and Civil Hospitals ...	1	2	3	1	3	4
Total ...	181	162	343	180	128	308

The above table shows that in 1938, 124 patients (76 males and 48 females) were admitted into the Mental Hospital as certified insane (1st, 2nd, 3rd and 4th admissions), and are hereunder referred to as direct admissions.

## MEDICAL AND HEALTH DEPARTMENT

10. Table showing the districts whence came the 124 direct admissions and the insane-rates per 10,000 of the populations of such districts:

Districts	No. of direct admissions.	Estimated population of districts on 31st December, 1938.	Insane-rate per 10,000 of population.
Port Louis ...	27	56,576	4.7
Plaines Wilhems ...	45	106,002	4.2
Grand Port ...	18	48,158	3.7
Moka ...	8	29,846	2.6
Savanne ...	8	31,309	2.5
Flacq ...	8	50,782	1.5
Black River ...	2	12,969	1.5
Pamplemousses ...	4	35,148	1.1
Rivière du Rempart ...	3	32,928	0.9
Rodrigues ...	1	—	—
	124	403,718	3.0

The above table shows that insanity is less prevalent in the agricultural as compared with the urban districts.

11. The following table shows the probable causes of insanity in 77 of the direct admissions (males 43, females 34):

CAUSES	M.	F.	T.
Heredity, insane ...	21	9	30
Mental stress, prolonged ...	7	7	14
"    "    sudden ...	1	1	2
Epilepsy ...	2	4	6
Alcohol ...	14	—	14
Convulsions ...	6	1	7
Senility ...	2	3	5
Syphilis ...	4	—	4
Puerperium ...	—	4	4
Lactation ...	—	1	1
Puberty and adolescence ...	—	1	1
Sepsis ...	—	1	1
Meningitis ...	1	—	1
Typhoid fever ...	1	2	3
Uræmia ...	1	—	1
Nephritis ...	1	1	2
Apoplexy ...	2	—	2

In examining the above table it should be borne in mind that one or more of the causes enumerated therein may be responsible for the production of the mental illness; hence the excess of the aggregate of such causes over the number of patients considered.

Heredity, mental stress, alcohol, epilepsy and convulsions, senility, syphilis and the puerperal state are, as usual, prominent etiological factors.

## ANNUAL REPORT ON THE

### 12. DISCHARGES.

The total number of discharges during the year was 267, against 262 in 1937. The following table shows the classification of discharges for 1937 and 1938:

	1937			1938		
	M.	F.	T.	M.	F.	T.
Discharged, recovered ... ..	—	1	1	3	—	3
"  relieved ... ..	73	54	127	88	71	159
"  not improved ... ..	4	6	10	4	—	4
Discharged on leave under G.N.239/24	43	39	82	26	29	55
Alleged mental patients found sane and released ... ..	22	17	39	28	14	42
Transferred to Victoria and Civil Hospitals ... ..	2	1	3	1	3	4
Total ... ..	144	118	262	150	117	267

The percentage of discharges (recovered, relieved and not improved) to admissions (direct admissions plus re-admissions from probation) was 86.4 (males 78.5, females 100) compared with 63.5 (males 66.9, females 59.8) in 1937.

During the year 82 patients (males 44, females 38), out on probation leave, were found cured and finally discharged.

### 13. DEATHS.

During the year there were 44 deaths (males 29, females 15) compared with 36 (males 22, females 14) in 1937, of these 7 took place within one month of the patients' admission at the Mental Hospital and were mainly due to their poor state of health. The death-rate, calculated on the daily average number resident, was 5.48% (males 6.5%, females 4.20%) compared with 4.66% (males 5.16%, females 4.04%) for 1937.

The following table gives the causes of death and the number of deaths from each cause:

CAUSES	M.	F.	T.
Epilepsy ... ..	5	—	5
Chronic pulmonary tuberculosis ...	3	1	4
Nephritis ... ..	4	—	4
Senile debility ... ..	3	1	4
Lobar pneumonia ... ..	1	3	4
Broncho pneumonia ... ..	3	—	3
Dysentery ... ..	2	1	3
Influenza ... ..	1	1	2
Acute enteritis ... ..	1	1	2
Myocardial degeneration ... ..	2	—	2
Cerebral malaria ... ..	—	1	1
Diabetes mellitus ... ..	1	—	1
Chronic enteritis ... ..	1	—	1
Ankylostomiasis ... ..	—	1	1
Acute intestinal obstruction ... ..	1	—	1

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Pulmonary congestion	...	—	1	1
Emphysema	...	1	—	1
Fibrosis of lung	...	—	1	1
Puerperal sepsis	...	—	1	1
Acute mania and cardiac failure	...	—	1	1
Abscess and toxæmia	...	—	1	1
		—	—	—
Total	...	29	15	44
		—	—	—

Nine postmortem examinations were made.

### 14. PREVALENCE OF SICKNESS.

The following table gives the number of cases of physical diseases treated in both infirmaries, the daily average of sick and the sick-rate for the years 1937 and 1938:

	1937			1938		
	M.	F.	T.	M.	F.	T.
Number of cases treated in the infirmaries	145	88	233	177	122	299
Daily average of sick in the infirmaries	3.24	2.86	6.10	4.27	3.02	7.29
Sick-rate per cent calculated on the daily average number of patients in hospital	0.75	0.82	0.78	0.95	0.84	0.90

15. Table of monthly admissions in the two infirmaries, total stay therein and average stay per patient for the years 1937 and 1938:

	1937				1938		
	M.	F.	T.		M.	F.	T.
January	13	10	23	January	24	11	35
February	18	10	28	February	21	6	27
March	11	7	18	March	19	4	23
April	15	8	23	April	14	12	26
May	6	11	17	May	16	7	23
June	11	9	20	June	12	9	21
July	20	4	24	July	13	12	25
August	4	5	9	August	21	36	57
September	7	5	12	September	9	3	12
October	19	2	21	October	3	7	10
November	7	12	19	November	12	6	18
December	14	5	19	December	13	9	22
Total	145	88	233	Total	177	122	299

Total stay in days ... 1,185 1,046 2,231

Average stay per patient 8.17 11.88 9.57

Total stay in days ... 1,560 1,105 2,665

Average stay per patient 8.81 9.05 8.91

The above table shows that in 1938 there was a slight increase in the sick-rate as well as in the average stay per patient in the infirmaries, compared with 1937.

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16. The following table shows the monthly admissions in both Infirmaries for the commoner diseases:

Diseases	January	February	March	April	May	June	July	August	September	October	November	December	Total
Influenza ...	3	—	1	1	—	1	10	44	1	1	—	—	62
Malaria ...	11	10	1	2	4	3	1	1	—	1	1	2	37
Dysentery, amoebic	—	—	1	1	3	—	1	1	—	—	—	—	7
Dysentery— other causes ...	2	2	3	4	5	2	—	—	1	—	2	—	21
Abscess ...	—	2	3	1	1	2	2	2	1	3	2	4	23
Epilepsy ...	2	1	3	—	2	2	—	3	1	—	2	—	16
Pulmonary tuber- culosis ...	1	1	—	2	—	1	—	2	1	—	1	1	10
Boil ...	1	—	1	—	1	—	2	—	1	—	1	2	9
Nephritis ...	—	1	1	2	1	2	—	1	1	—	—	—	9
Ankylostomiasis	1	—	—	2	1	2	1	—	1	—	1	—	9
Whitlow ...	—	1	—	1	—	1	—	1	1	—	3	—	8

### 17. INFECTIOUS AND ALLIED DISEASES.

During the year there were 28 cases of dysentery, 7 of which were of the amoebic type. There were no cases of bacillary dysentery. Influenza cases numbered 62 against 17 in 1937. Malaria accounted for 37 cases.

During the year 10 cases of pulmonary tuberculosis needed active treatment, 4 of which died. No patient suffered from the acute exanthemata.

### 18. VIOLENCE, ESCAPES ETC.

There were no escapes and no cases of homicide or suicide. Cases of injury to patients were as follows:

Self-inflicted	...	...	3
Inflicted by attendants	...	...	—
Inflicted by other patients	...	...	96
Accidental	...	...	95

The accidental injuries were mostly due to falls during epileptic fits.

All the above injuries were of a trivial nature except:

- (i) A Colles's fracture due to the patient being pushed down by another;
- (ii) the crushing of the terminal phalanges of two fingers followed later by amputation. The hand was caught in a door that was slammed by another patient.

Patients injured members of the staff 10 times, the injuries being mostly of a slight nature, except a fractured rib caused by a servant being pushed down.

## MEDICAL AND HEALTH DEPARTMENT

19. Table showing the classification of the 777 certified patients in hospital on 31st December, 1938, according to the types of mental diseases.

TYPES OF MENTAL DISEASES	M.	F.	T.
Terminal dementia ... ..	111	104	215
Senile dementia ... ..	7	6	13
Primary dementia ... ..	117	59	176
Amentia with epilepsy... ..	14	12	26
Amentia without epilepsy ... ..	24	16	40
Mania, recent ... ..	4	10	14
Mania, recurrent ... ..	10	17	27
Mania, chronic ... ..	6	19	25
Melancholia, recent ... ..	3	5	8
Melancholia, chronic ... ..	20	9	29
Alternating insanity ... ..	17	32	49
Paranoia ... ..	6	1	7
Paraphrenia ... ..	14	11	25
Non-systematised delusional insanity	11	9	20
Acute confusional insanity ... ..	10	8	18
Epileptic insanity ... ..	39	28	67
General paralysis of the insane ... ..	5	—	5
Moral insanity ... ..	1	1	2
Insanity with gross brain lesions ... ..	8	1	9
Chronic alcoholic hallucinosis ... ..	1	—	1
Undiagnosed ... ..	1	—	1
Total ... ..	429	348	777

### 20. OCCUPATIONAL TREATMENT.

During the year a daily average of 70 patients attended to the vegetable gardens. All the laundry work of the hospital was done by female patients and this, together with ward work, darning, the upkeep of the hospital grounds and piggery, mattress-making, carpentry and the manufacture of the hospital tinware, gave employment daily to an average of 225 male and 124 female patients. The estimated value of the work done by patients during the year, including garden produce, was Rs. 15,668.02, compared with Rs. 15,396.89 for 1937.

### 21. RESTRAINT AND SECLUSION.

During the year mechanical restraint (strait-jacket) was resorted to in the case of 11 male and 8 female patients, and seclusion in the case of 2 female patients. The greatest duration, in any single instance, for mechanical restraint or seclusion, was 5 hours.

### 22. RECREATION.

During 1938 the Police Band played ten times at the hospital. Twelve cinematograph performances were given as well as two treats consisting of cakes, fruit, lemonade and other delicacies. Gramophone music is played during the week and always on Sundays. Cards, draughts, dominoes and loto are favourite games. A few of the hospital patients play football and very often meet outside teams. French and English papers and periodicals

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were sent by people interested in the welfare of the patients. The piano in the female department was occasionally used by the patients, their friends and relatives.

### 23. COST OF MAINTENANCE.

ITEMS FOR THE PERIOD 1.7.37 TO 30.6.38	Rs.	c.
Provisions, fuel and light, not including institution garden produce	93,287.00	
Personal Emoluments	95,518.46	
Clothing, bedding, uniforms and washing requisites	12,881.00	
Drugs, dressings, surgical instruments etc.	673.05	
Implements, Stores, Sundries	2,219.00	
Fees for District Commissioners of Lunacy	1,930.00	
Fees for Member of the Central Board	240.00	
Recreation for patients	794.00	
Telephone rental and calls	130.00	
Travelling and transport	578.77	
Total	208,251.28	
Less fees from private patients	Rs. 13,187.00	
Less sale of pigs	Rs. 252.56	
Less sale price of empty tins	Rs. 11.80	
Less	13,451.36	
Net total expenditure	194,799.92	
Average weekly cost per patient	4.70	

24. The following table gives the net total expenditure, the daily average number of patients in hospital and the average weekly cost per head for the financial years 1926-27 to 1937-38:

Financial years.	Net total expenditure.	Daily average number of patients in hospital.	Average weekly cost per head.
	Rs.		Rs.
1926-27	245,637.69	601	7.86
1927-28	256,831.02	623	7.92
1928-29	249,134.07	606	7.90
1929-30	226,910.87	637	6.85
1930-31	219,809.08	674	6.27
1931-32	198,170.07	681	5.59
1932-33	183,883.90	688	5.14
1933-34	182,195.68	702	4.94
1934-35	183,056.97	733	4.80
1935-36	193,462.23	740	5.02
1936-37	194,741.34	759	4.93
1937-38	194,799.92	797	4.70

The above table shows a reduction in the average weekly cost per head for the financial year 1937-38, compared with 1936-37.

## MEDICAL AND HEALTH DEPARTMENT

### 25. STAFF.

The Staff of the hospital consists of:

- 1 Medical Superintendent.
- 1 Medical Officer.
- 1 Steward who also acts as Head Male Nurse.
- 1 Dispenser and Storekeeper.
- 1 Matron.
- 1 Assistant Matron.
- 4 Male Nurses.
- 8 Male Attendants.
- 10 Female Nurses.
- 1 Gate Keeper.
- 1 Seamstress.
- 69 Male Servants.
- 53 Female Servants.

Widow Fernand Berthelot, Nurse, retired on pension on the 30th June, 1938, and was replaced by Miss Anne Marie Courau on the 11th July, 1938. An additional post of Nurse was filled on the 1st November, 1938, by the appointment of Miss Marie Ethelka Berton.

The Matron, Miss I. Rogers, returned to the Colony on 28th August, 1938, from European leave and resumed duty the same day. The Medical Officer Dr. E. Brunel, proceeded on European leave on 9th March, 1938, and resumed duty on 10th December, 1938.

### 26. ACCOMMODATION.

The new female refractory ward is nearing completion. The female infirmary also used as an Admission Ward, is much too small; it should be enlarged and modernized. Extra accommodation for female paying patients is also necessary.

### 27. VISITS.

The Marquess of Dufferin and Ava, Parliamentary Under Secretary of State for the Colonies and the Honourable Lady Clifford visited the hospital on the 8th February, 1938. The Central Board of Commissioners of Lunacy held 12 monthly meetings and also visited the hospital on each occasion. Apart from his monthly visits with the Central Board, the Honourable Medical Director also called at the hospital on 8 other occasions. A Board of Survey was held and our accounts and stores were checked 17 times by an Audit Examiner. No irregularities were found.

### 28. RELIGIOUS SERVICES.

During the year Mass was said 12 times and an average of 40 Roman Catholic patients attended each service. The Civil Chaplain of the Church of England held one service which was attended by 3 patients.

### 29. ACKNOWLEDGMENTS.

In conclusion, I have to thank the Honourable Medical Director and the Members of the Central Board for their assistance in the management of the hospital. To the members of the Staff I also offer my thanks for their steady co-operation and help.

J. D. DYSON, M.B., B.S., Lond. ; D.P.M.  
*Medical Superintendent, Mental Hospital.*

20th February, 1939.  
Beau Bassin.

# ANNUAL REPORT ON THE

## APPENDIX VII

### Annual Report on the Leper Hospital for the Year 1938.

The following table gives the number of patients under treatment, together with the figures for admissions, discharges and deaths during the year.

		MALES	FEMALES
Remaining on 1.1.38	...	35	13
Admitted during year	...	5	0
		—	—
		40	13
		—	—
Deaths	...	2	5
Discharges	...	4	3
		—	—
Remaining on 31.12.38	...	34	5
		—	—

*Admissions.*—5 male patients, 2 from Rodrigues and 3 from Mauritius were admitted during the year. Of the two patients from Rodrigues, one was a neural case of six years duration, who had received little or no treatment. He presented fairly extensive hypochromic anæsthetic patches of the face, trunk and limbs, with atrophy of the muscles of the thenor and hypothenor eminences and interosxi of the right hand. His sister, a cutaneous case, had been under treatment at the hospital since 1933, and was discharged in the course of the year as cured.

The second patient was a cutaneous case who, on arrival, turned out to be bacteriologically negative. Of the three cases from Mauritius, one patient, a disease arrested case was admitted for treatment of ulceration and was discharged after the ulcer had healed up. A second patient, also a disease arrested case was admitted on account of destitution.

The third patient, a cutaneous case, was admitted on the recommendation of the Leprosy Board.

*Discharges.*—The three female patients discharged were cured cases. Two of the three discharges were in former cutaneous cases. They had been under treatment for 4 and 5 years respectively, and had remained bacteriologically negative for the last two years.

The third case was that of a girl who had been under treatment for one year. She presented very slight lesions and these had cleared up entirely at the time of her discharge.

The four male patients discharged had the following histories:

(1) A lad now aged 19 who had been under treatment for six years. He had presented extreme nodulation of the face. He was discharged after he had remained bacteriologically negative for one year. He is attending as out patient.

## MEDICAL AND HEALTH DEPARTMENT

(2) A young man, a neural case, cured without disabling deformity.

(3) The son of a female patient discharged. The boy had only very slight lesions.

(4) A disease arrested case, admitted during the year, for treatment of ulcer.

*Deaths.*—The influenza epidemic of August–September carried off three female patients aged 76, 83 and 73. One aged patient succumbed to chronic bronchitis and heart failure. Pulmonary Tuberculosis, Carcinoma of stomach and hydrocephalus account for the three remaining deaths.

*General Remarks.*—A statement is annexed showing type, progress, etc., in each case remaining under treatment at the close of the year. 22 patients are disease arrested cases, the average duration of the disease being  $17\frac{1}{2}$  years. However, in this category, only two of the patients are severely crippled.

1 patient is cured.

5 are apparent cures but are still under observation.

6 patients have progressed satisfactorily.

4 patients have progressed slightly if at all.

1 patient is cured but blind.

I have also to record the fact that the two patients who in last year's report were said to have deteriorated, have died of intercurrent affections in the course of the year.

*Leprosy Board.*—The Leprosy Board held two meetings and examined two patients. One patient was recommended for admission to the Leper Hospital and the second was not so recommended, the disease having run its course and the patient was non-infectious.

*Recreations.*—The Police Band gave its annual performance on the 28.12.38 and the occasion was availed of to hold the annual distribution of presents, sweets, etc. Our thanks go out to the ladies whose inexhaustible charity and unflinching good humour lighten the burden of gloom of our patients.

H. ANDRÉ,

*Medical Superintendent, Leper Hospital.*

12th March, 1939.

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STATEMENT SHOWING CONDITION, PROGRESS AND OTHER DATA OF PATIENTS UNDER TREATMENT ON 31.12.38.

No.	Name Initials	Sex	Age	Duration of disease	Type of disease	Progress	Prognosis	REMARKS
1.	D.R.	Male	33	14 years	N <sub>3</sub>	Stationary	Disease-arrested	.....
2.	A.G.	Male	44	26 "	N <sub>3</sub>	do.	do.	.....
3.	L.R.	Male	45	28 "	N <sub>3</sub>	do.	do.	.....
4.	A.B.	Male	45	19 "	N <sub>2</sub>	do.	do.	A former C <sub>3</sub> case.
5.	N.B.	Male	66	20 "	N <sub>3</sub>	do.	do.	.....
6.	J.L.	Male	37	23 "	N <sub>3</sub>	do.	do.	.....
7.	G.H.	Male	73	22 "	N <sub>3</sub>	do.	do.	.....
8.	O.B.	Male	44	11 "	N <sub>2</sub>	do.	do.	A former C <sub>3</sub> case. Slightly disabled.
9.	E.V.	Male	69	25 "	N <sub>2</sub>	do.	do.	.....
10.	A.M.	Male	44	26 "	N <sub>2</sub>	do.	do.	A former C <sub>3</sub> case. Is affected with elephantiasis of both legs.
11.	R.J.	Male	59	24 "	N <sub>2</sub>	do.	do.	A N case who showed cutaneous manifestations. Is now bacteriologically negative.
12.	E.S.	Male	46	12 "	N <sub>3</sub>	do.	do.	Shows mental deterioration.
13.	L.P.R.	Male	26	9 "	Cured	...	...	A former C <sub>3</sub> case. One eye affected with Keratitis. Is otherwise fit and well.
14.	L.N.R.	Male	24	8 "	N <sub>2</sub>	Stationary	Disease-arrested	Brother of 13 above.
15.	R.R.	Male	37	19 "	C <sub>2</sub> N <sub>2</sub>	Slow	Poor	.....
16.	L.P.	Male	19	13 "	Cured	...	...	Cured but blind.
17.	M.R.	Male	27	16 "	C <sub>3</sub>	Slow	Fair	Progress slow. Showed extensive lesions on admission. Is liable to reactions.
18.	V.M.	Male	40	16 "	N <sub>2</sub>	Good	Good	A former C <sub>3</sub> case. Is bacteriologically negative for last four years. Slightly disabled.

STATEMENT SHOWING CONDITION, PROGRESS AND OTHER DATA OF PATIENTS UNDER TREATMENT ON 31.12.38.—Contd.

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No.	Name Initials	Sex	Age	Duration of disease	Type of disease	Progress	Prognosis	REMARKS
19.	E.G.	Male	41	21 years	N <sub>2</sub>	Good	Fair	A former N case showed cutaneous manifestations. Has become bacteriologically negative in course of year.
20.	B.J.	Male	29	6 "	C <sub>2</sub> N <sub>2</sub>	Slow	Fair	Has progressed satisfactorily. Since last year has had a series of reactions which have not however had an appreciable effect on general health condition.
21.	R.A.	Male	36	8 "	N <sub>3</sub>	Stationary	Disease-arrested	.....
22.	C.L.	Male	49	10 "	C <sub>1</sub>	Good	Good	.....
23.	J.E.	Male	23	6 "	apparently cured	...	...	Has become bacteriologically negative in course of year. A former C <sub>3</sub> case under treatment for 3 years.
24.	B.P.	Male	43	20 "	N <sub>3</sub>	Stationary	Disease-arrested	.....
25.	R.F.L.	Male	59	12 "	C <sub>3</sub>	Slow	Fair	Is almost blind.
26.	G.C.	Male	60	4 "	N <sub>2</sub>	Stationary	Disease-arrested	A new case. Slightly affected.
27.	W.M.	Male	35	10 "	N <sub>3</sub>	do.	do.	.....
28.	R.D.	Male	44	? 3 "	N <sub>2</sub>	do.	do.	Probably an old standing N case who showed cutaneous manifestations three years ago. Has become bacteriologically negative in course of year.

STATEMENT SHOWING CONDITION, PROGRESS AND OTHER DATA OF PATIENTS UNDER TREATMENT ON 31.12.38.—Cont'd

No.	Name Initials	Sex	Age	Duration of disease	Type of disease	Progress	Prognosis	REMARKS
29.	J.C.	Male	35	4 "	C <sub>1</sub> N <sub>2</sub>	Good	Good	.....
30.	R.D.	Male	13	4 "	apparently cured	...	...	A former C <sub>3</sub> case who has cleared remarkably well after 18 months' treatment.
31.	E.C.G.	Male	34	14 "	C <sub>3</sub>	Good	Fair	Is extensively affected. Has done well. Is under treatment for a little over one year.
32.	F.R.	Male	27	7 years	apparently cured	...	...	A new case, bacteriologically negative on admission. Had received treatment in Rodrigues.
33.	J.L.	Male	17	6 "	N <sub>2</sub>	Good	Good	A new case.
34.	S.P.	Male	30	10 "	C <sub>2</sub>	Stationary	...	Recently admitted.
35.	J.B.	Female	76	14 "	N <sub>3</sub>	Stationary	Disease-arrested	.....
36.	L.D.	Female	54	23 "	N <sub>3</sub>	do.	do.	.....
37.	M.M.	Female	39	19 "	N <sub>3</sub>	do.	do.	.....
38.	O.D.	Female	32	6 "	C <sub>2</sub>	Good	Good	Mother of 30 above. Is progressing satisfactorily.
39.	R.B.	Female	40	26 "	N <sub>3</sub>	Stationary	Disease-arrested	.....

## MEDICAL AND HEALTH DEPARTMENT

### APPENDIX VIII

#### Report of the Radiologist for the Year 1938.

Eight hundred and eighty-four patients were examined under the screen at Moka Hospital during the year. Of these, four hundred and thirty-two were gastro-intestinal cases and the remainder had the respiratory system investigated.

The majority of persons examined were paupers and from those paying fees, the sum of Rs. 299.75 was collected. The running expenses will be considerably reduced when the main electrical supply will become available to energise the plant.

This improvement together with the transfer of the examination room to more suitable accommodation will make for more efficient and smoother working of the department.

The fees collected have declined steadily, it is not our intention or is it in our province to discuss the various factors contributing to this fall in receipts, we merely note the fact.

At Victoria Hospital seven hundred and four patients were radiographed and computing an average of two radiograms per patient, which is a conservative estimate, the result will give an idea of the activity of the department.

In the electrological section, one hundred paying out-patients were attended to, the various types of treatment were:

- (1) Infra Red rays.
- (2) Ultra Violet rays.
- (3) Diathermy.
- (4) Galvanic, Faradic and Sinusoidal currents.

Thirty patients received treatment (1) above and a total of one hundred and forty seven applications were made.

Twenty-seven patients, mostly children, received a total of two hundred and six ultra violet rays exposures.

In the Diathermy section fifteen patients received both surgical and medical forms for treatment.

Twenty-eight patients were treated either by the Faradic, Galvanic or Sinusoidal current and treatment was applied one hundred and six times

The record for the electrological part does not represent the whole output of the department, only paying outpatients are noted, the inclusion of in-patients and paupers would involve considerable clerical work. It may not

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be inopportune, in this connexion, to put forward the following suggestion. Probationer nurses should be appointed to attend the X-ray department for three hours daily for one month, thereby supplementing their ordinary hospital training and at the same time assist in keeping count of patients, their assistance would moreover be helpful in treating women and children.

An amusing incident may be related to illustrate how a period of training in the X-ray department will help to make the probationer nurse into the finished product. A female hospital patient was accompanied to the X-ray room by a probationer who has asked to administer to her patient, the already prepared barium enema. After some time she announced quite casually and with evident satisfaction that the enema had been given with good results ! !

Every nursing student could be transferred from other hospitals to Victoria, the new arrival could be temporarily replaced by the one who has just finished the one month's training.

The fees from X-ray examinations and Electrotherapy amounted to Rs. 1,098.54.

At the Civil Hospital, four hundred radioscopic examinations were carried out and of these, gastro-intestinal investigations accounted for one hundred and eighty-five, the remaining two hundred and fifty were chest cases.

The amount from paying patients totalled Rs. 100.63, in this sum is included fees for Infra Red treatment.

W. R. DUPRÉ, D.M.R.E.,

*Radiologist*

MEDICAL AND HEALTH DEPARTMENT

APPENDIX IX

RETURN OF DISEASES AND DEATHS (IN PATIENTS) FOR THE YEAR 1938

DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
<b>I.—Epidemic, Endemic and Infectious Diseases</b>					
<b>1. Enteric Group—</b>					
(a) Typhoid Fever ... ..	2	49	13	51	4
(b) Paratyphoid A. ... ..	...	...	...	...	...
(c) Paratyphoid B. ... ..	...	...	...	...	...
(d) Type not defined ... ..	...	3	...	3	...
2. Typhus ... ..	...	...	...	...	...
3. Relapsing Fever .. ...	...	...	...	...	...
4. Undulant Fever ... ..	...	...	...	...	...
<b>5. Malaria—</b>					
(a) Tertian ... ..	26	1,590	39	1,616	10
(b) Quartan ... ..	...	145	...	145	...
(c) Aestivo-autumnal ... ..	2	37	10	39	1
(d) Cachexia ... ..	6	485	27	491	3
(e) Blackwater ... ..	2	36	8	38	...
(f) Unclassified ... ..	...	521	6	521	...
<b>6. Smallpox—</b>					
Alastrim ... ..	...	...	...	...	...
7. Measles ... ..	...	1	...	1	...
8. Scarlet Fever ... ..	...	...	...	...	...
9. Whooping Cough ... ..	...	2	...	2	...
10. Diphtheria ... ..	2	11	3	13	1
11. Influenza ... ..	5	1,131	37	1,136	1
12. Miliary Fever ... ..	...	...	...	...	...
13. Mumps ... ..	...	2	...	2	...
14. Cholera ... ..	...	...	...	...	...
15. Epidemic diarrhoea ... ..	...	17	1	17	...
<b>16. Dysentery—</b>					
(a) Amœbic ... ..	7	548	32	555	5
(b) Bacillary ... ..	2	204	28	206	5
(c) Undefined or due to other causes ... ..	1	60	7	61	1
<b>17. Plague—</b>					
(a) Bubonic ... ..	...	...	...	...	...
(b) Pneumonic ... ..	...	...	...	...	...
(c) Septicæmic ... ..	...	...	...	...	...
(d) Undefined ... ..	...	...	...	...	...
18. Yellow Fever ... ..	...	...	...	...	...
<b>Total carried forward</b> ... ..	<b>55</b>	<b>4,842</b>	<b>211</b>	<b>4,897</b>	<b>31</b>

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DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward ...	55	4,842	211	4,897	31
<b>I.—Epidemic, Endemic and Infectious Diseases—(Contd.)</b>					
19. Spirochaetosis ictero-haemorrhagica ...	...	...	...	...	...
20. Leprosy ...	...	1	...	1	...
21. Erysipelas ...	3	77	9	80	3
22. Acute Poliomyelitis ...	...	...	...	...	...
23. Encephalitis Lethargica ...	...	...	...	...	...
24. Epidemic Cerebro-spinal Fever ...	...	...	...	...	...
25. Other Epidemic Diseases—					
(a) Rubeola (German Measles) ...	...	...	...	...	...
(b) Varicella (Chicken-pox) ...	...	...	...	...	...
(c) Kala-azar ...	...	...	...	...	...
(d) Phlebotomus Fever ...	...	...	...	...	...
(e) Dengue ...	...	...	...	...	...
(f) Epidemic Dropsy ...	...	...	...	...	...
(g) Yaws ...	...	...	...	...	...
(h) Trypanosomiasis ...	...	...	...	...	...
26. Glanders ...	...	...	...	...	...
27. Anthrax ...	...	...	...	...	...
28. Rabies ...	...	...	...	...	...
29. Tetanus ...	1	44	18	45	4
30. Mycosis ...	...	...	...	...	...
31. Tuberculosis Pulmonary and Pharyngeal ...	13	456	65	469	7
32. Tuberculosis of the Meninges or Central Nervous System ...	...	1	...	1	...
33. Tuberculosis of the Intestine or Peritoneum ...	...	13	6	13	...
34. Tuberculosis of the Vertebral Column ...	...	10	...	10	...
35. Tuberculosis of Bones and Joints ...	2	27	...	29	5
36. Tuberculosis of other organs—					
(a) Skin or Subcutaneous Tissue (Lupus) ...	1	12	...	13	2
(b) Bones ...	...	...	...	...	...
(c) Lymphatic System ...	...	18	1	18	...
(d) Genito-Urinary ...	...	...	...	...	...
(e) Other Organs ...	...	...	...	...	...
37. Tuberculosis disseminated—					
(a) Acute ...	...	...	...	...	...
(b) Chronic ...	...	...	...	...	...
Total carried forward ...	75	5,501	310	5,576	52

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DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward ..	75	5,501	310	5,576	52
<b>I.—Epidemic, Endemic and Infectious Diseases—(Contd)</b>					
<b>38. Syphilis—</b>					
(a) Primary ... ..	1	44	...	45	...
(b) Secondary ... ..	...	23	...	23	..
(c) Tertiary ... ..	2	99	...	101	3
(d) Hereditary ... ..	..	17	1	17	...
(e) Period not indicated ... ..	...	35	...	35	3
(f) Unclassified ... ..	...	...	...	...	...
39. Soft Chancre ... ..	4	160	...	164	7
40. A—Gonorrhœa and its compli- cations ... ..	1	151	...	152	2
B—Gonorrhœal Ophthalmia ... ..	...	11	...	11	...
C—Gonorrhœal arthritis ... ..	2	16	...	18	1
D—Gonorrhœal Venereum ... ..	...	...	...	...	...
41. Septicæmia ... ..	...	22	14	22	...
<b>42. Other Infectious Diseases—</b>					
(a) Trypanosomiasis ... ..	...	...	...	...	...
(b) Filariasis ... ..	1	49	...	50	...
(c) Pyæmia ... ..	...	7	3	7	...
<b>II.—General Diseases not mentioned above</b>					
43. Cancer or other malignant Tumours of the Buccal Cavity ... ..	...	7	2	7	...
44. Cancer or other malignant Tumours of the Stomach or Liver ... ..	1	20	3	21	1
45. Cancer or other malignant Tumours of the Peritoneum, Intestines, Rectum ... ..	...	15	3	15	2
46. Cancer or other malignant Tumours of the female Genital Organs ..	1	79	3	80	3
47. Cancer or other malignant Tumours of the Breast ... ..	...	21	2	21	2
48. Cancer or other malignant Tumours of the Skin ... ..	...	6	1	6	...
49. Cancer or other malignant Tumours of Organs not specified ... ..	...	9	2	9	1
50. Tumours non-malignant ... ..	...	100	...	100	2
51. Acute Rheumatism... ..	4	168	...	172	...
52. Chronic Rheumatism ... ..	1	115	2	116	3
53. Scurvy (including Barlow's Disease)	...	1	...	1	...
54. Pellagra ... ..	...	3	...	3	...
<b>Total carried forward ...</b>	<b>93</b>	<b>6,679</b>	<b>346</b>	<b>6,772</b>	<b>82</b>

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DISEASES	Remain- ing in Hospital at end of 1937	Yearly Total		Total cases treated	Remain- ing in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward ...	93	6,679	346	6,772	82
II.— <i>General Diseases not mentioned above—(Contd.)</i>					
55. Beri-Beri ... ..	...	31	...	31	..
56. Rickets ... ..	...	2	1	2	..
57. Diabetes (not including Insipidus)...	...	72	10	72	3
58. Anæmia—					
(a) Pernicious ... ..	...	33	14	33	...
(b) Other Anæmias and Chlo- roses ... ..	4	427	39	431	8
59. Diseases of the Pituitary Body ...	...	...	...	...	...
60. Diseases of the Thyroid Gland—					
(a) Exophthalmic Goitre ... ..	...	...	..	...	...
(b) Other Diseases of the Thyroid Glands, Myxœdema ... ..	...	2	...	2	...
61. Diseases of the Para-Thyroid Glands ... ..	...	...	...	...	...
62. Diseases of the Thymus ... ..	...	...	...	..	...
63. Diseases of the Supra-Renal Glands	...	19	...	19	...
64. Diseases of the Spleen ... ..	...	...	...	...	...
65. Leukœmia—					
(a) Leukœmia ... ..	...	...	...	...	...
(b) Hodgkin's Diseases ... ..	...	...	...	...	..
66. Alcoholism ... ..	...	8	...	8	...
67. Chronic poisoning by mineral substances (lead, mercury, etc.) ...	...	...	...	...	...
68. Chronic poisoning by organic substances (Morphia, Cocaine, etc.)	...	...	...	...	...
69. Other General Diseases—					
Auto-intoxication ... ..	...	4	...	4	...
Purpura-Hæmorrhagica ... ..	...	1	...	1	...
Hæmophilia ... ..	...	2	1	2	...
Diabetes Insipidus ... ..	...	1	...	1	...
Uraemia ... ..	...	10	3	10	...
Unclassified ... ..	...	114	6	114	...
III.— <i>Affections of the Nervous System and Organs of the Senses</i>					
70. Encephalitis (not including En- cephalitis Lethargica) ... ..	...	4	2	4	...
71. Meningitis (not including Tubercu- lous Meningitis or Cerebro- spinal Meningitis) ... ..	...	19	7	19	1
Total carried forward ...	97	7,428	429	7,525	94

MEDICAL AND HEALTH DEPARTMENT

DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward ...	97	7,428	429	7,525	94
<i>III.—Affections of the Nervous System and organs of the senses—(Contd.)</i>					
72. Locomotor Ataxia ... ..	...	...	...	...	...
73. Other affections of the Spinal Cord...	...	1	...	1	...
74. Apoplexy—					
(a) Hæmorrhage... ..	...	33	13	33	...
(b) Embolism ... ..	...	...	...	...	...
(c) Thrombosis ... ..	...	16	3	16	...
75. Paralysis—					
(a) Hemiplegia ... ..	...	44	2	44	...
(b) Other Paralyzes ... ..	...	15	...	15	...
76. General Paralysis of the Insane ... ..	...	...	...	...	...
77. Other forms of Mental Alienation ..	...	17	2	17	...
78. Epilepsy ... ..	1	56	6	57	...
79. Eclampsia, Convulsions (non-puer- peral) 5 years over ... ..	...	10	3	10	...
80. Infantile convulsions ... ..	...	11	4	11	...
81. Chorea ... ..	...	2	...	2	...
82. A—Hysteria ... ..	...	22	...	22	...
B—Neuritis ... ..	...	39	...	39	1
C—Neurasthenia ... ..	...	1	...	1	1
D—Vertigo .. ...	...	4	...	4	...
E—Neuralgia ... ..	...	30	...	30	2
83. Cerebral softening ... ..	1	1	...	2	..
84. Other affections of the Nervous Sys- tem, such as paralysis Agitans, etc.	...	58	2	58	...
85. Affections of the Organs of Vision—					
(a) Diseases of the eye ... ..	...	152	...	152	2
(b) Conjunctivitis ... ..	...	84	...	84	1
(c) Trachoma ... ..	...	...	...	...	...
(d) Tumours of the eye ... ..	1	1	...	2	...
(e) Other affections of the eye ...	7	318	...	325	8
86. Affections of the Ear or Mastoid Sinus	6	131	...	137	5
<i>IV.—Affections of the Circulatory System</i>					
87. Pericarditis ... ..	...	2	1	2	...
88. Acute Endocarditis or Myocarditis...	...	21	4	21	...
89. Angina Pectoris ... ..	...	4	...	4	...
Total carried forward ...	113	8,501	469	8,614	114

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DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward ...	113	8,501	469	8,614	114
IV.— <i>Affections of the Circulatory System—(Contd.)</i>					
90. Other Diseases of the Heart—					
(a) Valvular—					
Mitral ... ..	2	67	13	69	3
Aortic ... ..	...	2	...	2	...
Tricuspid ... ..	...	...	...	...	...
Pulmonary ... ..	...	...	...	...	...
(b) Myocarditis ... ..	...	98	23	98	2
(c) Unclassified ... ..	...	15	5	15	...
91. Diseases of the Arteries—					
(a) Aneurism ... ..					
(b) Arterio-Sclerosis ... ..	1	19	..	20	...
(c) Other Diseases ... ..	...	41	1	41	1
92. Embolism or Thrombosis (non-cerebral) ... ..					
...	...	6	6	6	..
93. Diseases of the Veins—					
Hæmorrhoids ... ..	...	208	1	208	3
Varicose Veins ... ..	...	4	...	4	...
Phlebitis ... ..	...	4	...	4	...
94. Diseases of the Lymphatic System—					
Lymphangitis... ..	...	37	...	37	...
Lymphadenitis, Bubo (non-specific) ... ..	2	238	...	240	5
95. Hæmorrhage of undetermined cause ... ..					
...	...	3	...	3	...
96. Other affections of the Circulatory System ... ..					
...	1	73	12	74	...
V.— <i>Affections of the Respiratory System</i>					
97. Diseases of the Nasal Passages—					
Adenoids ... ..	...	...	...	...	...
Polypus ... ..	...	11	...	11	...
Rhinitis ... ..	...	8	...	8	...
Coryza... ..	...	1	...	1	...
Unclassified ... ..	...	35	...	35	...
98. Affections of the Larynx—					
Laryngitis ... ..	...	12	...	12	...
Other ... ..	...	1	...	1	...
99. Bronchitis—					
(a) Acute ... ..	1	482	24	483	3
(b) Chronic ... ..	3	408	23	411	5
(c) Unclassified ... ..	...	...	...	...	...
Total carried forward ...	123	10,274	577	10,397	136

MEDICAL AND HEALTH DEPARTMENT

DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward ...	123	10,274	577	10,397	136
<i>V.—Affections of the Respiratory System—(Contd.)</i>					
100. Broncho-Pneumonia . . . . .	..	140	72	140	2
101. Pneumonia—					
(a) Lobar . . . . .	6	332	131	338	4
(b) Unclassified . . . . .	..	10	3	10	..
102. Pleurisy, Emphysema . . . . .	1	82	7	83	1
103. Congestion of the Lungs . . . . .	..	19	5	19	..
104. Gangrene of the Lungs . . . . .	..	2	2	2	..
105. Asthma . . . . .	1	176	11	177	2
106. Pulmonary Emphysema . . . . .	..	30	3	30	1
107. Other affections of the Lungs—					
Pulmonary Spirochaetosis . . . . .	..	..	..	..	..
Unclassified . . . . .	..	29	5	29	..
<i>VI.—Diseases of the Digestive System</i>					
108. A—Diseases of teeth or gums—					
Caries, Pyorrhœa, etc. . . . .	5	130	..	135	1
B—Other affections of the Mouth—					
Stomatitis . . . . .	2	29	1	31	..
Glossitis, etc. . . . .	..	5	..	5	..
109. Affections of the Pharynx or					
Tonsils—					
Tonsillitis . . . . .	..	226	1	226	..
Pharyngitis . . . . .	..	5	..	5	..
Other affections . . . . .	..	3	..	3	..
110. Affections of the Œsophagus . . . . .	..	..	..	..	..
111. A—Ulcer of the Stomach... . . . .	2	47	4	49	1
B—Ulcer of the Duodenum . . . . .	..	130	7	130	6
112. Other affections of the Stomach—					
Gastritis . . . . .	1	68	..	69	..
Dyspepsia, etc. . . . .	14	322	2	336	3
113. Diarrhœa and Enteritis—					
Under two years . . . . .	6	58	17	64	1
114. Diarrhœa and Enteritis—					
Two years and over . . . . .	10	577	97	587	9
Colitis . . . . .	..	36	..	36	..
Ulceration . . . . .	..	..	..	..	..
114a Sprue . . . . .	..	1	..	1	..
115. Ankylostomiasis . . . . .	22	2,090	75	2,112	15
Total carried forward . . . . .	193	14,821	1,020	15,014	182

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DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward ...	193	14,821	1,020	15,014	182
VI.— <i>Diseases of the Digestive System—(Contd.)</i>					
116. Diseases due to Intestinal Parasites—					
(a) Cestodia (Tænia) ...	...	1	...	1	...
(b) Trematoda (Flukes) ...	...	...	...	...	...
(c) Nematoda (other than ankylostoma)—					
Ascaris ...	4	133	2	137	4
Trichocephalus dispar ...	...	...	...	...	...
Trichinia ...	...	...	...	...	...
Dracunculus ...	...	...	...	...	...
Strongylus ...	...	1	1	1	...
Oxyuris ...	...	...	...	...	...
(d) Coccidia ...	...	...	...	...	...
(e) Other parasites ...	...	39	...	29	...
(f) Unclassified ...	...	...	...	...	...
117. Appendicitis ...	...	192	6	192	2
118. Hernia ...	1	181	3	182	3
119. A—Affections of the Anus, Fistula, etc. ...	...	111	1	111	4
B—Other affections of the Intestines—					
Enteroptosis ...	...	...	...	...	...
Constipation ...	...	47	...	47	...
Unclassified ...	1	66	9	67	1
120. Acute yellow atrophy of the Liver ...	...	...	...	...	...
121. Hydatid of the Liver ...	...	...	...	...	...
122. Cirrhosis of the Liver—					
(a) Alcoholic ...	...	25	2	25	...
(b) Other forms ...	1	72	5	73	1
123. Biliary Calculus ...	...	8	...	8	...
124. Other affections of the Liver—					
Abscess... ...	...	11	5	11	...
Hepatitis ...	2	172	15	174	3
Cholecystitis ...	1	93	4	94	2
Jaundice ...	1	32	...	33	...
Unclassified ...	...	31	...	31	...
125. Diseases of the Pancreas ...	...	1	...	1	...
126. Peritonitis (of unknown cause) ...	...	2	1	2	...
127. Other affections of the Digestive System ...	1	137	15	138	5
Total carried forward ...	205	16,176	1,089	16,381	207

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DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward	205	16,176	1,089	16,381	207
VII.— <i>Diseases of the Genito-urinary System (non-Venereal)</i>					
128. Acute Nephritis ... ..	4	176	23	180	4
129. Chronic Nephritis ... ..	..	291	51	291	5
130. A—Chyluria ... ..	..	4	..	4	..
B—Schistosomiasis ... ..	..	23	..	23	..
131. Other affections— Pyelitis, etc. ... ..	1	83	2	84	2
132. Urinary Calculus ... ..	..	31	1	31	1
133. Diseases of the Bladder— Cystitis ... ..	..	134	2	134	2
Unclassified ... ..	2	50	1	52	3
134. Diseases of the Urethra— (a) Stricture ... ..	1	59	2	60	1
(b) Other ... ..	..	45	..	45	3
135. Diseases of the Prostate— Hypertrophy ... ..	..	..	..	..	..
Prostatitis ... ..	..	20	6	20	1
Unclassified ... ..	..	..	..	..	..
136. Diseases (non-Venereal) of the Genital Organs of Man— Epididymitis ... ..	..	3	..	3	..
Orchitis ... ..	1	83	..	84	4
Hydrocele ... ..	2	177	2	179	..
Ulcer of Penis ... ..	..	41	..	41	1
Unclassified ... ..	..	182	3	182	3
137. Cysts or other non-malignant Tumours of the Ovaries ... ..	..	8	1	8	..
138. Salpingitis ... ..	3	94	..	97	2
Abscess of the Pelvis ... ..	1	5	..	6	1
139. Uterine Tumours (non-malignant)	..	15	..	15	1
140. Uterine Hæmorrhage (non- peral) ... ..	..	38	..	38	..
141. A—Metritis ... ..	..	22	..	22	1
B—Other affections of the Female Genital Organs— Displacements of Uterus ... ..	..	46	..	46	1
Menorrhagia ... ..	..	22	..	22	..
Amenorrhœa ... ..	..	8	..	8	..
Dismenorrhœa ... ..	..	3	..	3	..
Leucorrhœa ... ..	..	27	..	27	1
Fibroma of Uterus ... ..	..	10	..	10	..
Unclassified ... ..	2	91	1	93	4
Total carried forward	222	17,967	1,184	18,189	248

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DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward ..	222	17,967	1,184	18,189	248
VII.— <i>Diseases of the Genito-urinary System (non-Venereal)</i> —(Contd.)					
142. Diseases of the Breast (non- <i>puerperal</i> —					
Mastitis .. .. .	...	14	...	14	...
Abscess .. .. .	3	275	1	278	8
Unclassified .. .. .	...	8	...	8	...
VIII.— <i>Puerperal State</i>					
143.—A—Normal Labour .. 12 544 ... 556 8					
B—Accidents of Pregnancy—					
(a) Abortion .. .. .	...	118	...	118	...
(b) Ectopic Gestation .. .. .	...	3	...	3	...
(c) Other accidents of Pregnancy	11	769	39	780	9
144. Puerperal Hæmorrhage .. .. .	...	1	1	1	...
145. Other accidents of Parturition .. .. .	1	24	8	25	...
146. Puerperal Septicæmia .. .. .	1	27	13	28	...
147. Phlegmasia Dolens .. .. .	...	..	..	..	...
148. Puerperal Eclampsia .. .. .	...	10	3	10	...
149. Sequelæ of Labour .. .. .	...	..	..	..	..
150. Puerperal affections of the Breast	...	..	..	..	..
IX.— <i>Affections of the Skin and Cellular Tissues</i>					
151. Gangrene .. .. .	4	64	10	68	4
152. Boil .. .. .	...	27	...	27	2
Carbuncle .. .. .	...	71	3	71	3
153. Abscess .. .. .	23	764	19	787	16
Whitlow .. .. .	...	46	...	46	...
Cellulitis .. .. .	20	621	11	641	15
Unclassified .. .. .	25	1,384	6	1,409	33
154. A.—Tinea .. .. .	...	..	..	..	..
B.—Scabies .. .. .	5	268	...	273	2
155. Other Diseases of the Skin—					
Erythema .. .. .	...	1	...	1	...
Urticaria .. .. .	...	1	...	1	...
Eczema .. .. .	7	102	..	109	1
Herpes .. .. .	...	12	..	12	...
Psoriasis .. .. .	...	5	..	5	1
Elephantiasis .. .. .	...	16	..	16	...
Myiasis .. .. .	...	14	..	14	1
Chigœs .. .. .	...	..	..	..	..
Cutaneous Leishmaniasis .. .. .	...	..	..	..	..
Other .. .. .	4	531	16	535	12
Total carried forward ..	338	28,687	1,814	24,025	363

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DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward	338	23,687	1,314	24,025	363
<i>X.—Diseases of the Bones and Organs of Locomotion (other than Tuberculous)</i>					
156. Diseases of Bones—					
Osteitis ... ..	...	48	...	48	4
157. Diseases of Joints—					
Arthritis ... ..	8	224	16	232	5
Synovitis ... ..	...	27	...	27	...
158. Other Diseases of Bones or Organs of Locomotion ... ..	4	105	13	109	8
<i>XI.—Malformations</i>					
159. Malformations—					
Hydrocephalus ... ..	...	1	...	1	...
Hypospadias ... ..	...	2	...	2	...
Spina Bifida, etc ... ..	...	24	...	24	..
<i>XII.—Diseases of Infancy</i>					
160. Congenital Debility ... ..	3	65	48	68	2
161. Premature Birth ... ..	2	109	26	111	...
162. Other affections of Infancy ... ..	...	9	...	9	...
163. Infant neglect (infants of three months or over) ... ..	...	...	...	...	...
<i>XIII.—Affections of Old Age</i>					
164. Senility— ... ..	...	78	24	78	4
Senile Dementia, etc ... ..	1	18	3	19	...
<i>XIV.—Affections produced by External     Causes</i>					
165. Suicide by Poisoning ... ..	...	13	3	13	...
166. Corrosive Poisoning (intentional) ... ..	...	19	4	19	..
167. Suicide by Gas Poisoning .. ..	...	...	...	...	...
168. Suicide by Hanging or Strangula- tion .. ..	...	1	...	1	...
Total carried forward ... ..	356	24,430	1,451	24,786	386

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DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward ...	356	24,430	1,451	24,786	386
XIV. — <i>Affections produced by External Causes—(Contd.)</i>					
169. Suicide by Drowning ... ..	...	1	...	1	..
170. Suicide by Firearms ... ..	...	...	...	...	...
171. Suicide by cutting or stabbing Instruments ... ..	...	...	...	...	...
172. Suicide by jumping from a height ... ..	...	...	...	...	...
173. Suicide by crushing ... ..	...	...	...	..	...
174. Other Suicides ... ..	...	5	1	5	...
175. Food Poisoning— Botulism ... ..	...	4	...	4	...
176. Attacks of poisonous animals— Snake Bite ... ..	...	...	...	...	...
Insect Bite ... ..	...	..	...	...	...
177. Other accidental Poisonings ... ..	...	7	...	7	...
178. Burns (by fire) ... ..	...	96	23	96	2
179. Burns (other than by fire) ... ..	2	39	8	41	1
180. Suffocation (accidental) ... ..	...	...	...	...	...
181. Poisoning by Gas (accidental) ... ..	..	..	...	...	...
182. Drowning (accidental) ... ..	...	1	...	1	...
182. Wounds (by Firearms, war excepted) ... ..	...	28	1	28	...
184. Wounds (by cutting or stabbing Instruments) ... ..	16	629	2	645	6
185. Wounds (by fall) ... ..	1	171	3	172	3
186. Wounds (in mines or quarries) ... ..	...	...	...	...	...
187. Wounds (by machinery) ... ..	1	29	4	30	...
188. Wounds (by crushing <i>e.g.</i> railway accidents, etc.) ... ..	6	146	5	152	3
189. Injuries inflicted by animals, Bites, Kicks, etc. ... ..	1	35	...	36	1
190. Wounds inflicted on Active Service ... ..	...	...	...	...	...
191. Executions of civilians by belli- gerents ... ..	...	...	...	...	...
192. A—Over Fatigue ... ..	...	...	...	...	...
B—Hunger or Thirst ... ..	...	1	...	1	...
193. Exposure to cold, Frost bite, etc. ... ..	...	...	...	...	...
194. Exposure to heat— Heatstroke ... ..	...	...	...	...	...
Sunstroke ... ..	...	...	...	...	...
Total carried forward ...	383	25,622	1,498	26,005	402

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DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
Brought forward ..	383	25,622	1,498	26,005	402
<i>XIV—Affections produced by External Causes—(Contd.)</i>					
195. Lightning Stroke ... ..	...	...	...	...	...
196. Electric Shock ... ..	...	...	...	...	...
197. Murder by Firearms ... ..	...	...	...	...	...
198. Murder by cutting or stabbing Instruments ... ..	...	...	...	...	...
199. Murder by other means ... ..	...	...	...	...	...
200. Infanticide (Murder of an infant under one year) ... ..	...	...	...	...	...
201. A—Dislocation ... ..	...	39	...	39	...
B—Sprain ... ..	...	41	...	41	...
C—Fracture ... ..	32	512	11	544	22
202. Other external Injuries ... ..	51	1,464	6	1,515	36
203. Death by violence of unknown cause	...	...	...	...	...
<i>XV—Ill-Defined Diseases</i>					
204. Sudden Deaths [cause unknown]..	...	...	...	...	...
205. A—Diseases not already specified or ill-defined—					
Ascites ... ..	...	87	6	87	...
Edema ... ..	...	8	1	8	...
Asthenia ... ..	...	20	...	20	...
Shock ... ..	...	3	3	3	...
Hyperpyrexia ... ..	...	1	1	1	...
Other ... ..	2	326	6	328	22
B—Malingering ... ..	...	13	...	13	...
C—Other ... ..	...	...	...	...	...
<i>XVI.—Diseases, the total of which have not caused 10 Deaths.</i>					
..	...	1	...	1	1
<b>Total</b> ... ..	<b>468</b>	<b>28,137</b>	<b>1,532</b>	<b>28,605</b>	<b>488</b>

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SUMMARY

DISEASES	Remaining in Hospital at end of 1937	Yearly Total		Total cases treated	Remaining in Hospital at end of 1938
		Admis- sions	Deaths		
I—Epidemic, Endemic and Infectious Diseases ... ..	86	6,135	328	6,221	68
II—General Diseases not mentioned above ... ..	11	1,270	92	1,281	25
III—Affections of the Nervous system and Organs of the Senses ...	16	1,069	44	1,085	21
IV—Affections of the Circulatory System ... ..	6	842	66	848	14
V—Affections of the respiratory System ... ..	12	1,778	286	1,790	18
VI—Diseases of the Digestive System	74	5,082	273	5,156	61
VII—Diseases of the Genito-Urinary System ( <i>non-venereal</i> ) ... ..	20	2,088	96	2,108	49
VIII—Puerperal State ... ..	25	1,496	64	1,521	17
IX—Affections of the Skin and Cellular tissues ... ..	88	3,927	65	4,015	90
X—Diseases of Bones and Organs of Locomotion ( <i>other than Tuberculosis</i> )	12	404	29	416	17
XI—Malformations ... ..	..	27	..	27	...
XII—Diseases of Infancy ... ..	5	183	74	188	2
XIII—Affections of Old Age ... ..	1	96	27	97	4
XIV—Affections produced by external Causes ... ..	110	3,281	71	3,391	74
XV—Ill-defined Diseases ... ..	2	458	17	460	22
XVI—Diseases, the total of which have not caused 10 deaths ... ..	...	1	...	1	1
TOTAL ... ..	468	28,137	1,532	28,605	483

RETURN OF BIRTHS

	Number	Deaths
Born alive at term ... ..	762	39
Prematurely born ... ..	120	34
Still-born ... ..	216	216
Total ... ..	1,098	289

# MEDICAL AND HEALTH DEPARTMENT

## RETURN OF SURGICAL OPERATIONS

Operations	Number	Deaths
Tumours ... ..	49	2
Evacuation of abscesses ...	5,157	42
Operations on :—		
Blood Vessels ... ..	7	1
Lymphatic Glands... ..	254	...
Skin and Subcutaneous Tissues ... ..	207	1
Bones ... ..	173	1
Nerves ... ..	5	...
Joint ... ..	57	...
Muscles and Tendons ... ..	96	3
Skull and brain ... ..	9	4
Eye ... ..	294	...
Ear ... ..	93	...
Head and Face .. ..	140	1
Chest ... ..	8	...
Abdominal Cavity ... ..	485	27
Spleen ... ..	5	2
Rectum and Anus ... ..	193	2
Urinary system ... ..	49	2
Male Generative Organs ... ..	390	5
Female Generative Organs ..	280	4
Amputation .. ..	112	6
Obstetric Operations ... ..	95	13
Other Operations ... ..	2,090	2
<b>Total ... ..</b>	<b>10,248</b>	<b>118</b>

MEDICAL AND HEALTH DEPARTMENT

APPENDIX X

RETURN OF DISEASES (OUT PATIENTS) FOR THE YEAR 1938.

DISEASES	Cases		Attendances	
	Male	Female	Male	Female
<i>1.—Epidemic, Endemic and Infectious Diseases</i>				
1. Enteric Group—				
(a) Typhoid Fever ... ..	..	2	...	2
(b) Paratyphoid A. ... ..	...	...	...	...
(c) Paratyphoid B. ... ..	...	...	...	...
(d) Type not defined ... ..	...	...	...	...
2. Typhus ... ..	...	...	...	...
3. Relapsing Fever ... ..	...	...	...	...
4. Undulant Fever ... ..	...	..	...	...
5. Malaria—				
(a) Tertian ... ..	...	...	...	...
(b) Quartan ... ..	...	...	...	...
(c) Aestivo-autumnal ... ..	...	...	...	...
(d) Cachexia ... ..	2,219	2,665	3,243	3,635
(e) Blackwater ... ..	7	1	7	1
(f) Unclassified ... ..	18,051	22,244	25,213	26,971
6. Smallpox—				
Alastrim ... ..	...	...	...	..
7. Measles ... ..	...	...	...	...
8. Scarlet Fever ... ..	...	...	...	...
9. Whooping Cough ... ..	794	655	1,059	947
10. Diphtheria ... ..	1	2	1	2
11. Influenza ... ..	17,705	14,885	21,248	22,027
12. Miliary Fever ... ..	...	...	...	...
13. Mumps ... ..	7	5	8	7
14. Cholera ... ..	...	...	...	...
15. Epidemic diarrhoea ... ..	1,097	814	1,717	1,194
16. Dysentery—				
(a) Amœbic ... ..	1,966	1,504	2,791	2,271
(b) Bacillary ... ..	251	183	543	419
(c) Undefined or due to other causes ... ..	598	449	949	668
17. Plague—				
(a) Bubonic ... ..	...	...	...	...
(b) Pneumonic ... ..	...	...	...	...
(c) Septicæmic ... ..	...	...	...	...
(d) Undefined ... ..	...	...	...	...
18. Yellow Fever ... ..	...	...	..	...
<b>Total carried forward ..</b>	<b>42,696</b>	<b>43,409</b>	<b>56,779</b>	<b>58,144</b>

This form shows in the main the arrangement of diseases in the International Nomenclature, 1921 Edition. To save space unimportant diseases of any class can be grouped in their places as Other "Diseases" of the Class.

ANNUAL REPORT ON THE

DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward	42,696	43,409	56,779	58,144
<b>I.—Epidemic, Endemic and Infectious Diseases— (Contd.)</b>				
19. Spirochaetosis ictero-hæmorrhagica ... ..	...	...	...	...
20. Leprosy ... ..	...	1	...	1
21. Erysipelas ... ..	6	10	6	10
22. Acute Poliomyelitis ... ..	1	1	2	1
23. Encephalitis Lethargica ... ..	...	...	...	...
24. Epidemic Cerebro-spinal Fever ... ..	...	...	...	...
25. Other Epidemic Diseases—				
(a) Rubeola (German Measles) ... ..	...	...	...	...
(b) Varicella (Chicken-pox) ... ..	...	...	...	...
(c) Kala-azar ... ..	...	...	...	...
(d) Phlebotomus Fever ... ..	...	...	...	...
(e) Dengue ... ..	...	...	...	...
(f) Epidemic Dropsy ... ..	...	...	...	...
(g) Yaws ... ..	...	...	...	...
(h) Trypanosomiasis ... ..	...	...	...	...
26. Glanders ... ..	...	...	...	...
27. Anthrax ... ..	7	4	12	9
28. Rabies ... ..	...	...	...	...
29. Tetanus ... ..	8	3	8	3
30. Mycosis ... ..	...	...	...	...
31. Tuberculosis Pulmonary and Pharyngeal ... ..	799	560	1,698	1,178
32. Tuberculosis of the Meninges or Central Nervous System ... ..	..	5	...	5
33. Tuberculosis of the Intestine or Peritoneum ... ..	3	3	8	4
34. Tuberculosis of the Vertebral Column ... ..	6	2	8	4
35. Tuberculosis of Bones and Joints ... ..	5	1	5	1
36. Tuberculosis of other organs—				
(a) Skin or Subcutaneous Tissue (Lupus) ... ..	2	3	3	7
(b) Bones ... ..	...	...	...	...
(c) Lymphatic System ... ..	25	23	38	41
(d) Genito-Urinary ... ..	1	...	1	...
(e) Other Organs ... ..	...	1	...	1
37. Tuberculosis disseminated—				
(a) Acute ... ..	...	...	..	...
(b) Chronic ... ..	118	97	220	193
Total carried forward ... ..	43,677	44,123	58,788	59,602

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DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ..	43,677	44,123	58,788	59,602
I.— <i>Epidemic, Endemic and Infectious Diseases—(Contd )</i>				
38. Syphilis—				
(a) Primary ... ..	136	50	672	327
(b) Secondary ... ..	90	51	619	418
(c) Tertiary ... ..	201	126	862	620
(d) Hereditary ... ..	20	30	51	81
(e) Period not indicated ... ..	107	45	483	230
(f) Unclassified ... ..	49	47	81	76
39. Soft Chancre ... ..	439	50	1,221	498
40. A—Gonorrhœa and its compli- cations ... ..	612	154	1,501	478
B—Gonorrhœal Ophthalmia ... ..	8	6	17	12
C—Gonorrhœal arthritis ... ..	35	8	122	35
D—Gonorrhœal Venereum ..	44	4	52	7
41. Septicæmia ... ..	..	..	..	..
42. Other Infectious Diseases—				
(a) Trypanosomiasis ... ..	..	..	..	..
(b) Filariasis ... ..	55	45	64	68
II.— <i>General Diseases not mentioned above</i>				
43. Cancer or other malignant Tumours of the Buccal Cavity ... ..	3	1	5	1
44. Cancer or other malignant Tumours of the Stomach or Liver ... ..	3	1	3	2
45. Cancer or other malignant Tumours of the Peritoneum, Intestines, Rectum ... ..	1	..	1	..
46. Cancer or other malignant Tumours of the female Genital Organs ... ..	..	18	..	21
47. Cancer or other malignant Tumours of the Breast ... ..	..	6	..	14
48. Cancer or other malignant Tumours of the Skin ... ..	7	1	7	1
49. Cancer or other malignant Tumours of Organs not specified ... ..	9	1	34	2
50. Tumours non-malignant ... ..	10	12	20	23
51. Acute Rheumatism ..	776	859	862	1,095
52. Chronic Rheumatism ... ..	3,104	3,369	4,813	5,542
53. Scurvy (including Barlow's Disease)	..	..	..	..
54. Pellagra ... ..	2	2	2	2
Total carried forward ...	49,388	49,009	70,280	69,155

ANNUAL REPORT ON THE

DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ..	49,388	49,009	70,280	69,155
II.— <i>General Diseases not mentioned above—(Contd.)</i>				
55. Beri-Beri ... ..	17	7	25	12
56. Rickets ... ..	4	7	4	7
57. Diabetes (not including Insipidus)...	46	43	73	85
58. Anæmia—				
(a) Pernicious ... ..	20	42	37	92
(b) Other Anæmias and Chloroses ... ..	2,498	4,243	3,672	5,578
59. Diseases of the Pituitary Body ...	...	...	...	...
60. Diseases of the Thyroid Gland—				
(a) Exophthalmic Goitre ... ..	...	12	...	17
(b) Other Diseases of the Thyroid Glands, Myxœdema ... ..	8	1	5	1
61. Diseases of the Para-Thyroid Glands ... ..	...	...	...	...
62. Diseases of the Thymus ... ..	...	...	...	...
63. Diseases of the Supra-Renal Glands ... ..	...	...	...	...
64. Diseases of the Spleen ... ..	38	345	435	452
65. Leukœmia—				
(a) Leukœmia .. ..	...	...	...	...
(b) Hodgkin's Diseases ... ..	1	5	1	5
66. Alcoholism ... ..	...	...	...	...
67. Chronic poisoning by mineral substances (lead, mercury, etc.) ..	...	...	...	...
68. Chronic poisoning by organic substances (Morphia, Cocaine, etc.)	...	...	...	...
69. Other General Diseases—				
Auto-intoxication ... ..	...	...	...	...
Purpura-Hæmorrhagica .. ..	2	5	2	8
Hæmophilia ... ..	5	7	5	8
Diabetes Insipidus ... ..	...	1	...	1
Unclassified ... ..	1,404	1,223	2,158	1,927
Avitaminosis General ... ..	68	97	128	146
III.— <i>Affections of the Nervous System and Organs of the Senses</i>				
70. Encephalitis (not including Encephalitis Lethargica) ... ..	...	...	...	...
71. Meningitis (not including Tuberculous Meningitis or Cerebrospinal Meningitis) ... ..	1	1	1	1
Total carried forward ...	53,795	55,048	76,826	77,495

MEDICAL AND HEALTH DEPARTMENT

DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ...	53,795	52,048	76,826	77,495
III.— <i>Affections of the Nervous System and organs of the senses—(Contd.)</i>				
72. Locomotor Ataxia ...	2	...	2	...
73. Other affections of the Spinal Cord...	9	1	10	7
74. Apoplexy—				
(a) Hæmorrhage...	8	6	9	6
(b) Embolism ...	...	...	...	...
(c) Thrombosis ...	1	...	1	...
75. Paralysis—				
(a) Hemiplegia ...	72	36	139	69
(b) Other Paralyzes ...	67	49	165	132
76. General Paralysis of the Insane ...	...	...	...	...
77. Other forms of Mental Alienation...	11	3	11	3
78. Epilepsy ...	763	568	1,163	976
79. Eclampsia, Convulsions (non- peral) 5 years over ...	36	24	82	69
80. Infantile convulsions ...	123	110	189	174
81. Chorea ...	9	6	10	8
82. A—Hysteria ...	4	64	9	102
B—Neuritis ...	289	309	453	452
C—Neurasthenia ...	48	24	80	48
D—Vertigo ...	...	...	...	...
E—Neuralgia ...	...	...	...	...
83. Cerebral softening ...	...	...	...	...
84. Other affections of the Nervous Sys- tem, such as paralysis Agitans, etc.	563	546	717	624
85. Affections of the Organs of Vision—				
(a) Diseases of the eye ...	81	98	119	144
(b) Conjunctivitis ...	1,649	1,527	2,367	1,993
(c) Trachoma ...	...	...	...	...
(d) Tumours of the eye ...	16	17	27	22
(e) Other affections of the eye ...	566	572	703	747
86. Affections of the Ear or Mastoid Sinus	1,829	1,590	2,464	2,062
IV.— <i>Affections of the Circulatory System</i>				
87. Pericarditis ...	1	4	1	4
88. Acute Endocarditis or Myocarditis...	11	17	20	28
89. Angina Pectoris ...	5	4	6	4
Total carried forward ...	59,958	60,623	85,573	85,169

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DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ...	59,958	60,628	85,573	85,169
<b>IV.—Affections of the Circulatory System—(Contd.)</b>				
<b>90. Other Diseases of the Heart—</b>				
<i>(a) Valvular—</i>				
Mitral ... ..	61	73	101	110
Aortic ... ..	15	16	24	20
Tricuspid ... ..	..	..	..	..
Pulmonary ... ..	..	..	..	..
<i>(b) Myocarditis ... ..</i>	137	238	171	284
<i>(c) Unclassified ... ..</i>	229	440	321	569
<b>91. Diseases of the Arteries—</b>				
<i>(a) Aneurism .. ..</i>	..	2	..	2
<i>(b) Arterio-Sclerosis ... ..</i>	717	455	981	1,151
<i>(c) Other Diseases .. ..</i>	52	51	71	70
<b>92. Embolism or Thrombosis (non-cerebral) ... ..</b>				
... ..	..	..	..	..
<b>93. Diseases of the Veins—</b>				
Hæmorrhoids ... ..	394	235	491	275
Varicose Veins ... ..	27	10	33	15
Phlebitis ... ..	3	10	4	11
<b>94. Diseases of the Lymphatic System—</b>				
Lymphangitis... ..	50	48	69	73
Lymphadenitis, Bubo (non-specific) ... ..	214	121	292	181
<b>95. Hæmorrhage of undetermined cause</b>				
... ..	33	16	41	26
<b>96. Other affections of the Circulatory System ... ..</b>				
... ..	71	75	81	88
<b>V.—Affections of the Respiratory System</b>				
<b>97. Diseases of the Nasal Passages—</b>				
Adenoids ... ..	12	13	15	15
Polypus ... ..	32	28	33	31
Rhinitis ... ..	122	112	162	171
Coryza ... ..	120	71	144	90
Unclassified ... ..	38	25	48	37
<b>98. Affections of the Larynx—</b>				
Laryngitis ... ..	463	331	496	379
Other ... ..	2	..	2	..
<b>99. Bronchitis—</b>				
<i>(a) Acute ... ..</i>	976	808	1,174	986
<i>(b) Chronic ... ..</i>	1,840	1,362	2,848	2,031
<i>(c) Unclassified ... ..</i>	287	84	421	125
Total carried forward ...	65,853	65,247	98,546	91,903

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DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ...	65,853	65,247	93,546	91,903
<i>V.—Affections of the Respiratory System—(Contd.)</i>				
100. Broncho-Pneumonia . . . . .	89	46	102	76
101. Pneumonia—				
(a) Lobar . . . . .	232	114	260	142
(b) Unclassified . . . . .	23	9	30	12
102. Pleurisy, Emphysema . . . . .	79	39	124	58
103. Congestion of the Lungs . . . . .	1	1	1	1
104. Gangrene of the Lungs . . . . .	...	...	...	...
105. Asthma . . . . .	2,193	1,594	3,524	2,866
106. Pulmonary Emphysema . . . . .	13	10	26	19
107. Other affections of the Lungs—				
Pulmonary Spirochaetosis . . . . .	...	...	...	...
Unclassified . . . . .	599	454	676	548
<i>VI.—Diseases of the Digestive System</i>				
108. A—Diseases of teeth or gums—				
Caries, Pyorrhœa, etc. . . . .	11,207	9,249	12,429	9,668
B—Other affections of the Mouth—				
Stomatitis . . . . .	521	505	698	619
Glossitis, etc. . . . .	144	109	210	162
109. Affections of the Pharynx or				
Tonsils—				
Tonsillitis . . . . .	406	660	477	539
Pharyngitis . . . . .	70	101	90	146
Other . . . . .	38	44	57	77
110. Affections of the Œsophagus . . . . .	...	...	...	...
111. A—Ulcer of the Stomach... . . . .	57	16	84	26
B—Ulcer of the Duodenum . . . . .	56	19	122	62
112. Other affections of the Stomach—				
Gastritis . . . . .	1,205	1,437	1,594	1,888
Dyspepsia, etc. . . . .	3,689	3,996	4,941	5,373
113. Diarrhœa and Enteritis—				
Under two years . . . . .	991	938	1,229	1,185
114. Diarrhœa and Enteritis—				
Two years and over . . . . .	2,107	1,863	2,648	2,380
Colitis . . . . .	269	241	336	296
Ulceration . . . . .	...	...	...	...
114a Sprue . . . . .	...	...	...	...
115. Ankylostomiasis . . . . .	10,070	11,036	15,884	17,464
Total carried forward . . . . .	99,912	97,728	139,098	135,510

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DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ..	99,912	97,728	139,098	135,510
VI.— <i>Diseases of the Digestive System</i> —(Contd.)				
116. Diseases due to Intestinal Parasites—				
(a) Cestodia (Tænia) ... ..	1	...	1	...
(b) Trematoda (Flukes) ... ..	...	...	...	...
(c) Nematoda (other than ankylostoma)—				
Ascaris ... ..	3,895	4,386	5,448	6,034
Trichocephalus dispar ... ..	2	1	2	2
Trichinia ... ..	...	...	...	...
Dracunculus ... ..	...	...	...	...
Strongylus ... ..	2	1	3	1
Oxyuris ... ..	84	60	131	98
(d) Coccidia .. ..	...	...	...	...
(e) Other parasites ... ..	152	182	156	185
(f) Unclassified ... ..	554	711	986	1,219
117. Appendicitis ... ..	81	93	97	111
118. Hernia ... ..	161	17	186	17
119. A—Affections of the Anus, Fistula, etc. ... ..	79	61	117	147
B—Other affections of the Intestines—				
Enteroptosis ... ..	1	..	1	...
Constipation ... ..	1,787	1,706	2,432	2,285
Unclassified ... ..	447	472	487	523
120. Acute yellow atrophy of the Liver				
121. Hydatid of the Liver ... ..	1	...	1	...
122. Cirrhosis of the Liver—				
(a) Alcoholic ... ..	...	...	...	...
(b) Other forms ... ..	32	23	52	38
123. Biliary Calculus ... ..	1	4	1	4
124. Other affections of the Liver—				
Abscess... ..	2	3	6	2
Hepatitis ... ..	598	364	778	529
Cholecystitis ... ..	95	78	127	102
Jaundice ... ..	83	65	116	91
Unclassified ... ..	90	89	148	145
125. Diseases of the Pancreas ... ..	...	...	...	...
126. Peritonitis (of unknown cause) ..	1	2	1	2
127. Other affections of the Digestive System ... ..	451	703	538	670
Total carried forward ...	108,512	106,748	160,913	147,715

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DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ...	108,512	106,748	160,913	147,715
VII.— <i>Diseases of the Genito-urinary System (non-Venereal)</i>				
128. Acute Nephritis ... ..	261	240	396	308
129. Chronic Nephritis ... ..	336	337	496	497
130. A—Chyluria ... ..	22	17	38	27
B—Schistosomiasis ... ..	139	117	271	197
131. Other affections—				
Pyelitis, etc. ... ..	43	47	47	58
Bilharziasis ... ..	22	14	25	36
132. Urinary Calculus ... ..	6	1	6	1
133. Diseases of the Bladder—				
Cystitis ... ..	345	295	512	423
Unclassified ... ..	137	93	172	123
134. Diseases of the Urethra—				
(a) Stricture ... ..	27	...	30	...
(b) Other ... ..	45	12	60	40
135. Diseases of the Prostate—				
Hypertrophy ... ..	7	...	7	..
Prostatitis ... ..	15	...	18	...
Unclassified ... ..	3	...	3	...
136 Diseases (non-Venereal) of the Genital Organs of Man—				
Epididymitis ... ..	27	...	63	...
Orchitis ... ..	258	...	331	...
Hydrocele ... ..	226	...	260	...
Ulcer of Penis... ..	84	...	126	...
Unclassified ... ..	202	...	247	...
137. Cysts or other non-malignant Tumours of the Ovaries ... ..	...	146	...	156
138. Salpingitis ... ..	...	...	...	...
Abscess of the Pelvis .. ..	...	...	...	...
139. Uterine Tumours (non-malignant)	...	3	...	3
140. Uterine Hæmorrhage (non- peral) ... ..	...	299	...	371
141. A—Metritis ... ..	...	57	...	80
B—Other affections of the Female Genital Organs—				
Displacements of Uterus .. ..	...	7	...	7
Amenorrhœa ... ..	...	370	...	467
Dismenorrhœa ... ..	...	239	...	335
Leucorrhœa ... ..	...	817	...	1,092
Unclassified ... ..	...	383	...	535
Total carried forward ...	110,717	110,247	164,021	152,470

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DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ...	110,717	110,247	164,021	152,470
VII.— <i>Diseases of the Genito-urinary System (non-Venereal)—(Contd.)</i>				
142. Diseases of the Breast(non-puerperal—				
Mastitis ... ..	...	133	...	188
Abscess ... ..	1	371	4	904
Unclassified ... ..	...	93	...	188
VIII.— <i>Puerperal State</i>				
143.—A—Normal Labour ... ..				
B—Accidents of Pregnancy—				
(a) Abortion ... ..	...	42	...	54
(b) Ectopic Gestation ... ..	...	...	...	...
(c) Other accidents of Pregnancy	...	72	...	75
144. Puerperal Hæmorrhage ... ..	...	...	...	...
145. Other accidents of Parturition ... ..	...	...	...	...
146. Puerperal Septicæmia ... ..	...	2	...	2
147. Phlegmasia Dolens ... ..	...	...	...	...
148. Puerperal Eclampsia ... ..	...	1	...	1
149. Sequelæ of Labour ... ..	...	4	...	4
150. Puerperal affections of the Breast	...	...	...	...
IX.— <i>Affections of the Skin and Cellular Tissues</i>				
151. Gangrene ... ..	10	11	13	11
152. Boil ... ..	...	...	...	...
Carbuncle ... ..	312	226	519	406
153. Abscess ... ..	...	...	...	...
Whitlow ... ..	821	630	1,296	938
Cellulitis ... ..	724	522	1,412	947
Unclassified ... ..	1,748	1,306	5,707	4,349
154. A.—Tinea ... ..	31	33	46	55
B.—Scabies ... ..	4,819	4,023	6,816	4,763
155. Other Diseases of the Skin—				
Erythema ... ..	23	17	34	29
Urticaria ... ..	99	116	132	158
Eczema ... ..	654	743	1,029	990
Herpes ... ..	17	12	21	14
Psoriasis ... ..	103	99	131	135
Elephantiasis ... ..	20	32	32	50
Myiasis ... ..	2	4	2	12
Chigoes ... ..	11	7	16	11
Cutaneous Leishmaniasis	141	100	191	148
Other ... ..	1,659	1,517	2,334	1,926
Total carried forward ..	121,912	120,477	183,756	168,944

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DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ...	121,912	120,477	183,756	168,944
<i>X.—Diseases of the Bones and Organs of Locomotion (other than Tuberculosis)</i>				
156. Diseases of Bones—				
Osteitis ... ..	25	15	29	15
157. Diseases of Joints—				
Arthritis ... ..	335	223	458	298
Synovitis ... ..	39	16	43	18
158. Other Diseases of Bones or Organs of Locomotion ... ..	26	15	44	22
<i>XI.—Malformations</i>				
159. Malformations—				
Hydrocephalus ... ..	...	...	...	...
Hypospadias ... ..	...	...	...	...
Spina Bifida, etc ... ..	6	...	6	...
Unclassified ... ..	3	4	3	4
<i>XII.—Diseases of Infancy</i>				
160. Congenital Debility ... ..	27	33	40	56
161. Premature Birth ... ..	...	6	...	10
162. Other affections of Infancy ... ..	11	11	11	11
163. Infant neglect (infants of three months or over) ... ..	3	...	3	...
<i>XIII.—Affections of Old Age</i>				
164. Senility—				
Senile Dementia, etc ... ..	116	154	194	235
<i>XIV.—Affections produced by External Causes</i>				
165. Suicide by Poisoning ... ..	...	...	...	...
166. Corrosive Poisoning (intentional) ... ..	...	...	...	...
167. Suicide by Gas Poisoning ... ..	1	1	1	1
Total carried forward ...	122,504	120,955	184,588	169,614

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DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ...	122,504	120,955	184,588	169,614
XIV.— <i>Affections produced by External Causes—(Contd.)</i>				
168. Suicide by Hanging or Strangulation ...	...	...	...	...
169. Suicide by Drowning ...	...	...	...	...
170. Suicide by Firearms ...	...	...	...	...
171. Suicide by cutting or stabbing Instruments ...	...	...	...	...
172. Suicide by jumping from a height	...	...	...	...
173. Suicide by crushing ...	...	...	...	...
174. Other Suicides ...	...	...	...	...
175. Food Poisoning— Botulism ...	...	...	...	...
176. Attacks of poisonous animals— Snake Bite ...	...	...	...	...
Insect Bite ...	...	...	...	...
177. Other accidental Poisonings ...	...	2	...	2
178. Burns (by fire) ...	71	41	147	105
179. Burns (other than by fire) ...	52	41	129	112
180. Suffocation (accidental) ...	...	...	...	...
181. Poisoning by Gas (accidental) ...	...	...	...	...
182. Drowning (accidental) ...	...	...	...	...
183. Wounds (by Firearms, war excepted) ...	...	...	...	...
184. Wounds (by cutting or stabbing Instruments) ...	749	317	1,210	505
185. Wounds (by fall) ...	393	111	578	221
186. Wounds (in mines or quarries) ...	...	...	...	...
187. Wounds (by machinery) ...	9	2	21	3
188. Wounds (by crushing <i>e.g.</i> railway accidents, etc.) ...	57	8	159	17
189. Injuries inflicted by animals, Bites, Kicks, etc. ...	272	50	418	101
190. Wounds inflicted on Active Service	...	...	...	...
191. Executions of civilians by belligerents ...	...	...	...	...
192. A—Over Fatigue ...	...	...	...	...
B—Hunger or Thirst ...	...	...	...	...
193. Exposure to cold, Frost bite, etc. ...	...	...	...	...
194. Exposure to heat— Heatstroke ...	...	...	...	...
Sunstroke ...	1	1	1	1
Total carried forward ...	124,018	121,528	187,251	170,681

MEDICAL AND HEALTH DEPARTMENT

DISEASES	Cases		Attendances	
	Male	Female	Male	Female
Brought forward ...	124,018	121,528	187,251	170,681
<i>XIV—Affections produced by External Causes—(Contd.)</i>				
195. Lightning Stroke ...	...	...	...	...
196. Electric Shock ...	...	...	...	...
197. Murder by Firearms ...	...	...	...	...
198. Murder by cutting or stabbing Instruments ...	...	...	...	...
199. Murder by other means ...	...	...	...	...
200. Infanticide (Murder of an infant under one year) ...	...	1	...	1
201. A—Dislocation ...	19	15	26	20
B—Sprain ...	121	59	168	79
C—Fracture ...	152	71	191	93
202. Other external Injuries ...	1,727	878	3,064	1,621
203. Death by violence of unknown cause ...	...	...	...	...
<i>XV—Ill-Defined Diseases</i>				
204. Sudden Deaths [cause unknown] ...	...	...	...	...
205. A—Diseases not already specified or ill-defined—	...	...	...	...
Ascites ...	41	56	73	82
Edema ...	51	44	80	76
Asthenia ...	134	115	245	159
Shock ...	...	...	...	...
Hyperpyrexia ...	5	3	5	3
Other ...	508	720	590	879
B—Malingering ...	17	21	17	21
C—Other ...	3	19	3	19
Total ...	126,796	123,530	191,715	173,734

ANNUAL REPORT ON THE

DISEASES	Cases		Attendances	
	Male	Female	Male	Female
I—Epidemic, Endemic and Infectious Diseases ... ..	45,473	44,739	64,533	62,452
II—General Diseases not mentioned above ... ..	8,321	10,308	12,292	15,042
III—Affections of the Nervous system and Organs of the Senses ...	6,147	5,551	8,721	7,639
IV—Affections of the Circulatory System ... ..	2,020	1,815	2,657	2,906
V—Affections of the respiratory System ... ..	7,121	5,101	10,086	7,586
VI—Diseases of the Digestive System	39,430	39,234	62,624	52,090
VII—Diseases of the Genito-Urinary System ( <i>non-venereal</i> ) ... ..	2,206	4,096	3,112	6,035
VIII—Puerperal State ... ..	...	235	...	252
IX—Affections of the Skin and Cellular tissues ... ..	11,194	9,398	19,731	14,947
X—Diseases of Bones and Organs of Locomotion ( <i>other than Tuberculosis</i> )	425	269	574	353
XI—Malformations ... ..	9	4	9	4
XII—Diseases of Infancy ... ..	41	50	54	77
XIII—Affections of Old Age ... ..	116	154	194	235
XIV—Affections produced by external Causes ... ..	3,534	1,598	6,113	2,882
XV—Ill-defined Diseases ... ..	759	978	1,015	1,239
TOTAL ... ..	126,796	123,530	191,715	173,734

MEDICAL AND HEALTH DEPARTMENT

APPENDIX XI  
SUMMARY OF SANITARY WORK CONDUCTED IN THE RURAL DISTRICTS DURING THE YEAR 1938

DISTRICTS	Number of private premises visited	Number of notices served under Ord. 47 of 1925	Number of notices served under Reg. 183 of 1926	Number of notices served under Reg. 198 of 1907	Number of notices complied with	Number of notices not complied with	Slaughtering at Abattoirs										Cemeteries			Fees collected				
							Oxen	Cows	Calves	Heifers	Pigs	Goats	Sheep	Fees collected	Private	Public	Number of burials in public cemeteries	Fees collected	Markets public					
Pamplémousses	4,055	348	144	373	620	245	1	34	92	288	7	...	...	...	...	...	908.50	11	1	1,240	2,897.50	1	Rs. C. 21.15	
Rivière du Rempart	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18	3	629	1,462.25	...	Rs. C. ...
Flacq North	1,571	230	197	130	506	51	2	125	230	298	5	...	...	...	...	...	...	12	2	324	631.00	1	423.15	
Flacq South	3,423	61	78	217	352	4	...	...	...	...	...	...	...	...	...	...	...	4	2	666	1,574.00	...	Rs. C. ...	
Mahebourg	1,200	218	210	...	426	2	1	65	154	144	15	132	526	8	...	...	1,415.50	8	2	439	742.00	1	2,414.60	
Rose Belle	3,197	97	61	192	330	20	1	68	214	159	1	73	...	...	...	...	...	3	2	836	1,540.00	...	Rs. C. ...	
Savanne	8,205	95	...	619	690	24	1	93	116	128	34	...	...	...	...	...	858.50	2	3	747	1,863.00	...	Rs. C. ...	
Black River	1,296	39	36	108	171	12	...	...	...	...	...	...	...	...	...	...	...	...	...	3	365	680.00	...	Rs. C. ...
Rose Hill	3,933	1,200	3	87	1,174	116	1	999	583	1,109	16	365	1,349	59	...	...	...	2	1	520	1,212.50	1	Rs. C. ...	
Vacoas	7,713	206	136	49	372	19	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1,180	3,188.70	...	Rs. C. ...
Curepipe	3,207	101	126	235	319	143	1	872	340	654	40	349	303	131	...	...	...	...	1	1	247	...	1	Rs. C. ...
Moka	2,540	103	...	75	174	4	...	...	...	...	...	...	...	...	...	...	...	...	5	3	509	974.50	...	Rs. C. ...
Total	41,321	2,725	1,024	2,159	5,257	651	5	3,256	1,729	2,780	118	1,064	2,178	198	3,182.50	66	24	7,702	16,765.45	5	2,858.90			

MEDICAL AND HEALTH DEPARTMENT

DETAILS OF CONTRAVENTIONS

Districts	Ord. No. 15 of 1915—(building Ordinance).	Ord. No. 8 of 1898—(Common form and interpretation).	Ord. No. 47 of 1925—(Public Health Ordinance).	Reg. 207 of 1919—(Cowsheds building Regulations).	Regulation 198 of 1907—(Consergency and Sanitary management of villages).	Reg. 183 of 1926—(Pit and Pail Latrines).	Reg. 42 of 1934—(Milk).	Reg. 153 of 1926—(Tuberculosis Certificates).	Reg. 50 of 1914—(Storing of Fruits, dry grains, gunny bags).	Reg. 73 of 1908—(Control of public and private abattoirs).	Reg. 498 of 1900—(Slaughter Houses meat shops).	Regulation 72 of 1920—(Butter Factory).	Reg. 164 of 1927—(Amendment to Regulation 153 of 1926).	Reg. 320 of 1920—(Protection of foodstuffs).	Reg. 61 of 1934—(Public markets in rural districts).	Reg. 242 of 1925—(Slaughtering of cattle Restrictions).	Reg. 39 of 1931—(use of verandahs for sale of vegetables etc.).	Reg. 27 of 1928—(Bathing in River Tabac).	Reg. 59 of 1927—(Pigsties).	Reg. 134 of 1883—(Dhobies premises).	Reg. 162 of 1885—(Consergency of proclaimed areas).	Reg. 316 of 1926—(Aerated water Factories).	Total	Amount of Fines	Rs. C.
Pamplennousses	4	1	113	1	106	164	85	42	2	8	2	1	16	3	3	1	1	1	1	1	1	1	1	545	601.50
Riviere du Rempart	...	...	2	...	5	62	15	10	1	...	2	...	3	4	3	...	...	...	...	...	...	...	...	100	125.25
Flacq North	...	...	25	...	2	44	4	3	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	89	244.25
Flacq South	...	...	2	...	14	6	5	2	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	31	329.00
Mahebourg	...	...	...	...	...	2	10	6	...	...	...	...	5	...	17	...	...	...	...	...	...	...	...	35	274.50
Rose Belle	...	...	13	...	15	298	2	22	...	...	...	...	...	8	...	...	...	...	4	1	...	...	...	370	324.50
Savanne	...	3	2	...	2	37	9	11	...	...	4	2	...	19	...	...	...	...	...	1	...	...	...	91	650.00
Black River	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	2	200.00
Rose Hill	...	1	24	...	3	39	92	...	1	...	...	...	24	82	...	...	...	...	...	...	1	...	...	270	3,979.50
Vacoas	...	1	34	...	1	217	34	17	...	...	3	...	...	20	...	...	...	...	...	1	5	1	...	337	1,136.00
Curepipe	...	...	7	...	30	106	14	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	160	44.00
Moka	...	4	3	...	1	93	28	21	...	...	1	...	...	10	...	...	...	...	...	...	...	...	...	161	1,083.35
Total	4	10	225	1	179	1,068	300	137	4	9	12	3	49	146	20	5	5	5	4	2	3	5	1	2,191	8,991.85

## ANNUAL REPORT ON THE

### APPENDIX XII.

#### **Report of the Government Medical Officer, Rodrigues, for the Year 1938.**

##### GENERAL

It may be said that the year under review has been a very bad one for the Rodrigueans as regards material conditions.

The lack of rain which was felt during the last six months created a very severe economic situation. Two crops were lost, and Government had to assist the population in order that they should have some food.

But these conditions did not affect the general health of the population. There were no epidemics during the year.

The number of deaths was 103, and the number of births 486 (an increase of 54 on last year's figure).

The estimated population of the island on 31st, December 1938 is 10,682.

##### CHANGE OF STAFF

I landed in Rodrigues on the 13th of January and was received by Dr. Letellier, to whom I render thanks for the kind hospitality offered to me.

After a handing over of the stores and drugs of Port Mathurin and Mount Lubin Dispensary, I took charge with Dresser Orioux who relieved Dresser Larché.

Dr. Letellier and Dresser Larché sailed to Mauritius at the end of January.

Dresser Lewis Joseph was recalled to Mauritius in July. He was relieved by Dresser Marie Louise who was put in charge of Mount Lubin Dispensary.

In October I sailed to Mauritius to give evidence in a case of murder and was back in Rodrigues in November. Dr. Letellier had been appointed to act as Government Medical Officer during my absence.

##### PORT MATHURIN HOSPITAL

Some repairs were made and the roof repainted.

*Dispensary Attendances.*—11,809 persons attended the dispensary during the year, showing an increase of 918 on last year.

*Admissions.*—229 persons had to be admitted to hospital.

## MEDICAL AND HEALTH DEPARTMENT

The following table gives the main diseases for which admission was necessary:

Abscesses	...	...	...	48
Anæmia	...	...	...	2
Ascariasis	...	...	...	22
Abortions	...	...	...	4
Broncho-pneumonia	...	...	...	2
Bronchitis	...	...	...	5
Burns	...	...	...	5
Cerebral concussion	...	...	...	2
Carbuncle	...	...	...	1
Convulsions	...	...	...	1
Drowning	...	...	...	1
Dermatitis	...	...	...	3
Dental extraction	...	...	...	1
Dyspepsia	...	...	...	3
Enteritis	...	...	...	3
Food poisoning	...	...	...	2
Fractures	...	...	...	9
Fistula in ano	...	...	...	1
Gonorrhœal arthritis	...	...	...	3
Gastro-enteritis	...	...	...	1
Hysteria	...	...	...	5
Influenza	...	...	...	5
Intestinal obstruction	...	...	...	3*
Injuries	...	...	...	19
Malaria	...	...	...	3
Malnutrition	...	...	...	1
Menoragia	...	...	...	2
Nephritis	...	...	...	3
Osteomyelitis	...	...	...	2
Phlebitis	...	...	...	1
Pulmonary gangrene	...	...	...	1
Pleurisy	...	...	...	2
Prostate (enlarged)	...	...	...	2
Parturition	...	...	...	14
Placenta prævia	...	...	...	1
Rheumatism	...	...	...	2
Salpingitis	...	...	...	1
Syphilis	...	...	...	1
Scabies	...	...	...	6
Tuberculosis	{ Pulmonary	...	...	11
	{ Peritoneal	...	...	1
Valvular and Heart diseases	...	...	...	4
Miscellaneous	...	...	...	18

\* Same patient admitted 3 times.

## ANNUAL REPORT ON THE

*Deaths.*—13 patients died in hospital from the following diseases:

Broncho-pneumonia	...	...	2
Burns	...	...	1
Acute enteritis	...	...	2
Gastro-enteritis	...	...	1
Empyema	...	...	1
Myocarditis	...	...	1
Pulmonary Tuberculosis	...	...	3
Pneumonia	...	...	1
Volvulus	...	...	1

*Operations*—

Minor—200 minor operations were done during the year under local or general anæsthesia.

Major—4 major operations were performed under  $\text{CHCl}_3$ .

One laparotomy for T.B. peritonitis.

Two Curetting.

One Placenta prævia which required podalic version.

Operative mortality—Nil.

*Dental extraction.*—400 patients attended hospital for tooth extraction with or without anæsthesia.

*Post Mortem.*—One autopsy was performed on a Chinaman who had been murdered. The cause of death was shock and hæmorrhage due to numerous injuries of head and face.

### MOUNT LUBIN DISPENSARY

*Dispensary Attendances.*—7,438 patients attended the dispensary during the year, an increase of 427 attendances on last year.

*Admissions.*—95 patients had to be admitted for the following diseases:

Abscesses	...	...	23
Ascariasis	...	...	8
Asthma	...	...	3
Bronchitis	...	...	11
Broncho-Pneumonia	...	...	1
Cellulitis	...	...	2
Debility	...	...	2
Dermatitis	...	...	2
Dyspepsia	...	...	1
Enteritis	...	...	5
Epilepsy	...	...	1
Erysipelas	...	...	1
Fracture	...	...	1
Flu	...	...	1
Gastritis	...	...	2
Hysteria	...	...	1
Injuries	..	...	12
Malaria	...	...	2
Malnutrition	...	...	1
Osteomyelitis	...	...	1

## MEDICAL AND HEALTH DEPARTMENT

Pneumonia	...	...	...	3
Pleurisy	...	...	...	1
Prostate (enlarged)	...	...	...	1
Quinsy	...	...	...	1
Rheumatism	...	...	...	1
Chancre	...	...	...	1
Tuberculosis Pulmonary	...	...	...	2
,,    Osseous	...	...	...	1
Valvular and Heart diseases	...	...	...	3

*Deaths.*—6 patients died in hospital from the following diseases:

Bronchitis	...	...	...	1
Broncho-pneumonia	...	...	...	1
Ascariasis Toxæmia	...	...	...	1
Enteritis	...	...	...	1
Erysipelas of cord	...	...	...	1
Myocarditis	...	...	...	1

*Vaccination against Small Pox.*—296 children were vaccinated against Small Pox at Port Mathurin hospital and Mount Lubin dispensary during the year.

Of these 262 were successful. The remaining 34 were unsuccessful, but may be considered immune having been vaccinated three times without success.

### LEPROSY

The number of leper patients in the island is now 24. They are being kept under close watch. 7 are being treated at Mount Lubin dispensary, and 17 at Port Mathurin hospital. 900 injections of Alepol and E.C.C.O. were done during the year.

### PATIENTS SENT TO MAURITIUS

5 patients were sent to Mauritius at Government expense.

1 Mental patient.

1 Case of chronic osteomyelitis.

2 Leper patients.

1 Case of Carcinoma of Breast.

1 patient went to Mauritius at her own expense and was operated at Victoria Hospital for Salpingitis.

### DOMICILIARY VISITS

About 30 visits of obstetrical cases were made by the Government Medical Officer during the year.

In 10 of these cases, forceps had to be applied under very bad conditions, but their recovery was uneventful.

*Births.*—486 births were registered during the year. Of these children 223 are males and 263 females.

## ANNUAL REPORT ON THE MEDICAL AND HEALTH DEPARTMENT

*Still Births.*—The number of still births during the year was 10 compared with 16 last year.

*Deaths.*—There were 103 deaths in 1938.

Estimated population of Rodriguez on 31st December, 1938, is 10,682.

Death rate is 9.6 per mille.

### DUTIES AS POLICE MEDICAL OFFICER

3 members of the Police Force reported ill during the year.

92 prisoners were ill during the same period, and 2 had to be admitted into hospital.

### DUTIES AS PORT HEALTH OFFICER

31 steamers of the K.P.M. Company called here during the year, they were all given free pratique.

### CONCLUSION

The main points of this report are:

- (a) The steady increase of the population ;
- (b) The salubrity of this Island ;
- (c) The necessity of avoiding introduction of contagious diseases from outside.

I wish to render my thanks to the Magistrate of Rodrigues Joseph Le Roy Esq. for the friendliness and helpfulness extended to me during the performance of my duties.

I also wish to record my appreciation of the assistance which I have received from Dressers Orioux and Marie Louise.

M. ROUSSET,

*Government Medical Officer.*

*February 22nd, 1939.*

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6. Borrowers retaining books longer than the time specified, and neglecting to return them when demanded, forfeit the right to borrow books until the volume or volumes be returned, and for such further time as may be ordered.

Any borrower failing to comply with a request for the return of a book shall be considered liable for the cost of replacing the book, and the Council may, after giving due notice to him, order the book to be replaced at his expense.

No volume may be reissued to the same borrower until at least seven days have elapsed after its return, neither may it be transferred by one borrower to another.

7. Books may not be taken or sent out of the United Kingdom.

8. Volumes returned through the post must be securely packed in a box, or otherwise protected.

Parcels should be addressed :

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LONDON, S.W.1.