Annual report on the vital statistics, sanitary conditions and sanitary administration of the Urban Sanitary District of the City of Port-of-Spain.

PORT-OF-SPAIN CITY COUNCIL.

ANNUAL REPORT

ON THE

Vital Statistics, Sanitary Condition and Sanitary Administration of the Urban Sanitary District of the

CITY OF PORT-OF-SPAIN

FOR THE YEAR

1932

BY

GEORGE H. MASSON, M.D., D.Sc. (P.H.), F.R.C.P.E., F.R.S.E.,
MEDICAL OFFICER OF HEALTH.

TRINIDAD:
PRINTED BY THE GOVERNMENT PRINTER,
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1933.

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1934.

Local Authority in the Urban Sanitary District of the City of Port-of-Spain.

1931-32.

The City Council.

His Worship the Mayor (Alderman the Hon. Arthur Andrew Cipriani).

Deputy-Mayor :

Alderman H. A. De Freitas.

Aldermen :

Hon. Gaston Johnston, K.C.

A. Richards.

F. E. Scott, O.B.E., J.P.

Councillors :

N. K. Ablack.

T. P. Achong.

A. P. T. Ambard.

E. W. Bowen.

G. Cabral.

J. E. Lai-Fook.

C. M. Lastique.

J. S. Dayanand Maharaj.

M. A. Maillard.

Garnet J. McCarthy.

T. I. Potter.

L. A. Pujadas.

M. Rigsby.

W. F. Stodart.

L. G. Thomas.

J. M. Thorne.

Staff of the Public Health Department.

Medical Officer of Health	....George H. Masson, M.D., C.M., D.Sc. (Public Health), F.R.C.P.E., F.R.S.E.
Secretary, Local Authority	.... E. Prada, M.R.C.S.E., L.R.C.P.L.
Chief Clerk to the Medical Officer of Health	.... W. R. Smith.
Chief Sanitary Inspector	.... J. E. Ferreira, CERT.R.SAN.I.*
Sanitary Inspectors—1st Grade	.... G. Charles. Henry Thorne. J. W. Parris. F. A. Howard.
2nd Grade	.... N. E. Guppy. C. C. Assing. O. E. Forde, ASSOC.R.SAN.I.
3rd Grade	.... W. G. Williams, Clerk to M.O.H. G. F. Ashe. F. P. Babb. T. M. Mitchell, CERT.R.SAN.I., Clerk to M.O.H. J. A. Wood, CERT.R.SAN.I. H. St. Cyr, CERT.R.SAN.I.
Assistant Sanitary Inspectors	.... J. B. Taylor. S. B. Nurse. A. B. Romain.
Messenger	.... T. H. Christian.

The following are also employed :—

Special anti-mosquito Inspectors	.... Henry Mason. Samuel Abraham and 7 laddermen for eaves gutters inspection.
Rat Trappers	Samuel Barker (Overseer) and 16 men.
Oil Sprayers	Albert Voisin (Overseer) and 10 men.
Chemical Sprayers	.... Two men for infectious diseases and vermin.

---

* Succeeded Capt. E. W. Lack, V.D., who died on the 13th September, 1932.

PORT-OF-SPAIN CITY COUNCIL.

Annual Report of the Medical Officer of Health, 1932.

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Report of the Medical Officer of Health for the Year 1932.

SECRETARY, LOCAL AUTHORITY.

SIR,

For the information of the Local Authority I have the honour to submit the following Annual Report on the vital statistics, sanitary condition and sanitary administration of the Urban Sanitary District of the City of Port-of-Spain for the year ended 31st December, 1932.

1.—VITAL STATISTICS.

INTRODUCTORY.

The health of the City during the year was satisfactory. The birth-rate was only once exceeded in recent times, and the returns of sickness due to infectious disease, and deaths were not only an improvement on the figures for the previous year, but revealed an almost unbroken set of lowest records in the epidemiology of the City, since the Local Authority assumed their duties under the new Public Health Ordinance in January, 1917.

The summaries of vital statistics given below show to advantage the health progress of the City during the past twelve years. The marked contrast between the figures for 1931 and 1932 is clear evidence of the good results which have followed the introduction of a modern public health ordinance in the Colony, and the devolution on the City Council of the responsibility for the health administration of the Urban Sanitary District of Port-of-Spain.

SUMMARIES OF VITAL STATISTICS.

Note.—Unless otherwise stated the rates are per 1,000 population.

YEARS	1921.	1925.	1929.	1931.	1932.
Mean Population	61,836	64,535	67,356	70,462	71,066
Live-births registered	1,687	1,820	1,895	1,956	2,021
Birth-rate	27.88	28.20	28.13	27.76	28.44
Still-births registered	154	153	158	139	160
Still-birth rate per cent. of live-births registered	9.13	8.41	8.34	7.11	7.92
Deaths registered	1,695	1,492	1,503	1,223	1,125
Death-rate	26.83	23.12	22.31	17.36	15.83
Natural increase of population	38	328	392	733	896
Deaths under 1 year	287	282	250	222	207
Infant Mortality rate (deaths under 1 year per 1,000 live-births)	170.12	154.95	131.93	113.50	102.42
Notifiable Infectious Diseases—Death-rate	6.21	3.87	3.31	3.14	2.56
Tuberculosis (Pulmonary)—Death-rate	2.51	2.29	1.92	1.90	1.58
Tuberculosis (Other forms)—Death-rate	0.47	0.26	0.37	0.10	0.14
Enteric Fever—Death-rate	1.25	0.31	0.19	0.16	0.06
Diphtheria—Death-rate	0.02	0.03	....	0.03	....
Pneumonia (all forms)—Death-rate	1.97	0.98	0.83	0.92	0.77
Bronchitis—Death-rate	1.36	1.29	1.14	0.97	0.72
Malaria—Death-rate	0.89	0.82	0.56	0.54	0.51
Syphilis—Death-rate	0.32	1.24	0.53	0.26	0.37
Dysentery—Death-rate	0.50	0.48	0.34	0.26	0.17
Diarrhoea and Enteritis—Death-rate	1.91	1.10	0.79	0.78	0.79
Bright's Disease and Nephritis—Death-rate	2.09	1.72	1.22	1.14	1.00
Diseases of the Heart and Blood vessels—Death-rate	2.65	2.94	3.96	2.60	2.46
Diseases of the Nervous System—Death-rate	1.70	1.66	2.02	1.15	1.15
Cancer and other Malignant Diseases—Death-rate	0.63	0.60	0.79	0.64	0.62
Ankylostomiasis—Death-rate	0.18	0.11	0.06	0.03	0.01
Influenza—Death-rate	0.26	0.03	0.12	0.06	0.04
Filariasis—Death-rate	....	....	....	....	....

The statistics for 1932 are also presented in the following table side by side with the corresponding figures for the City of Georgetown, British Guiana, kindly supplied through the courtesy of the Medical Officer of Health, Dr. W. de W. Wishart.

PORT-OF-SPAIN AND GEORGETOWN.

Comparative Summaries of Vital Statistics for the year 1932.

	Port-of-Spain.	*Georgetown.*
Population at Census Year	70,334	61,899
Estimated Mean Population	71,066	62,334
Area of City including all open spaces (in acres)	1,907	1,612
Density of population—persons per acre	37.2	38
Live births registered	2,021	1,693
Birth-rate per 1,000 population	28.44	27.1
Still-births registered	160	107
Still-birth rate per cent. of live births registered	7.92	6.3
Deaths registered	1,125	1,147
Death-rate per 1,000 population	15.83	18.4
Natural increase of population	896	546
Deaths under 1 year	207	214
Infant Mortality rate	102.42	126
Maternal Mortality rate (Maternal deaths per 1,000 live births)	9.40	5.9
Notifiable Infectious Diseases—Death rate per 1,000 population	2.56	1.79
Tuberculosis (pulmonary)	1.58	1.50
Tuberculosis (other forms)	0.14	0.03
Enteric Fever	0.06	0.12
Diphtheria	....	0.12
Malaria	0.51	1.12
Filariasis	....	0.49
Syphilis	0.37	0.80
Dysentery	0.17	0.?3
Cancer and other Malignant Diseases	0.62	0.56
Diseases of the Nervous System	1.15	1.54
Diseases of the Heart and Blood Vessels	2.46	1.31
Pneumonia (all forms)	0.77	1.17
Bronchitis	0.72	0.68
Diarrhoea and Enteritis	0.79	0.78
Bright's Disease and Nephritis	1.00	1.17

POPULATION.

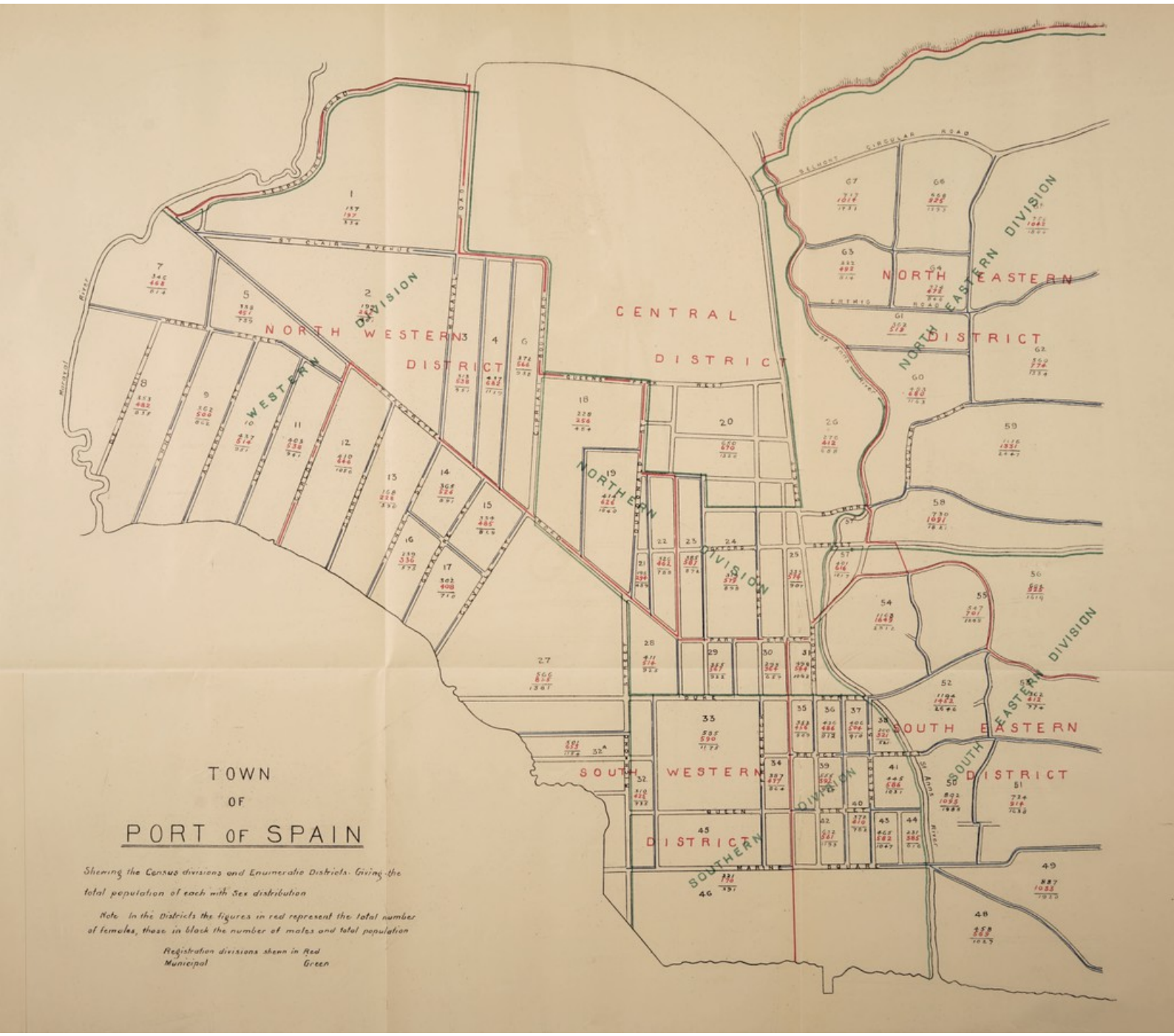
Census Enumeration.— According to the Census taken on Sunday, the 26th of April, 1931, the City population on that date comprised 70,334 persons of whom 30,469 were males and 39,865 females. These figures include 204 male and 53 female " stragglers met with at midnight on the streets and wharves of the City," and are an increase of 3,596 males and 5,158 females, or a total of 8,754 persons of both sexes over the Census population of 1921.

Area and Density.— Formerly 1,793 acres in extent (including the Queen's Park Savannah), the area of Port-of-Spain was enlarged by virtue of the Governor's proclamation dated March, 1932, so as to include 114 acres of rural land forming part of the Woodbrook estate, west of the Maraval River, making a total of 1,907 acres, and reducing the density, based on the mean population estimated to the 30th June, 1932, from 46 to 37.

In the City of Georgetown, British Guiana, which is in many respects comparable with Port-of-Spain, the density of the population is 38 persons per acre.

The Corporation's recently laid out western cemetery, the site of which is unsurpassed in the West Indies for the natural beauty of its surroundings, is situate in the new area.

When properly laid out and drained this land will afford excellent building sites for Workers' homes. At present a small portion of it is occupied by a hangar, and used as the taking off ground of a locally owned aeroplane.

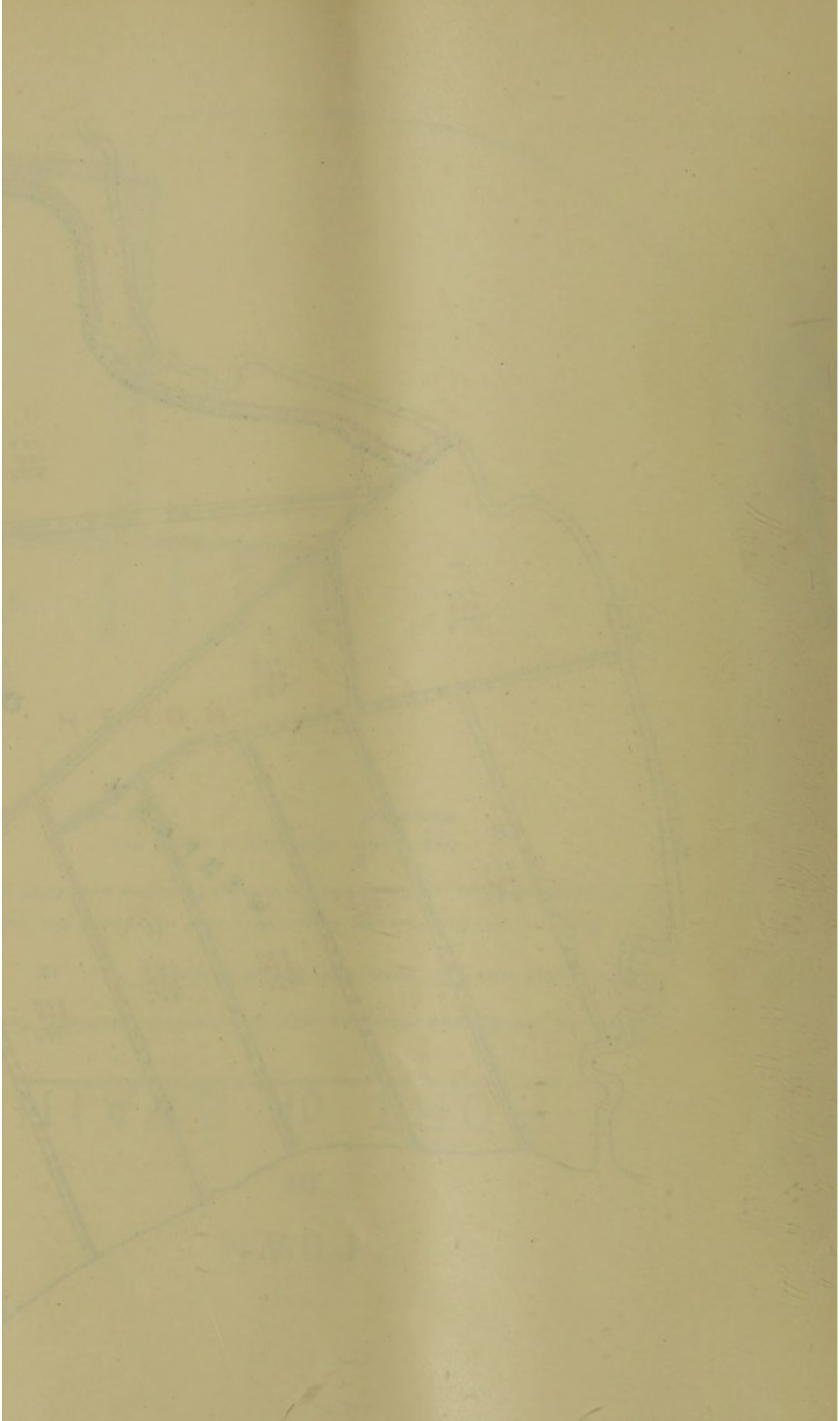


TOWN OF PORT OF SPAIN

Showing the Census divisions and Enumeratie Districts. Giving the total population of each with Sex distribution

Note. In the Districts the figures in red represent the total number of females, those in black the number of males and total population

Registration divisions shewn in Red
Municipal Green



Age and Sex Distribution.—The age and sex distribution of the Census population is tabulated hereunder.

Age and Sex Distribution.

Ages.	Males.	Females.	Both Sexes.	Ages.	Males.	Females.	Both Sexes.
Under 1 year	682	758	1,440	51-55 years ..	880	1,172	2,052
1- 5 years ..	3,135	3,327	6,462	56-60 do. ..	639	1,113	1,752
6-10 do. ..	3,583	3,619	7,202	61-65 do. ..	435	733	1,168
11-15 do. ..	5,296	6,582	11,878	66-70 do. ..	264	515	779
16-20 do. ..	3,322	4,828	8,150	71-75 do. ..	142	315	457
21-25 do. ..	2,948	4,119	7,067	76-80 do. ..	59	174	233
26-30 do. ..	2,556	3,258	5,814	81-85 do. ..	27	85	112
31-35 do. ..	1,975	2,856	4,831	86-90 do. ..	13	29	42
36-40 do. ..	1,662	2,344	4,006	91-95 do. ..	5	10	15
41-45 do. ..	1,536	2,183	3,719	96-100 do. ..	..	..	..
46-50 do. ..	1,309	1,841	3,150	Over 100 years	1	4	5
				Total ..	30,469	39,865	70,334

According to these returns the female exceeded the male population by 9,396, or in the proportion of 132.4 women to 100 men.

In 1921, when the Census population totalled 61,580 persons of both sexes, the preponderance of females over males was less, being only 7,834 and in the proportion of 129.2 women to every 100 men.

Population in Divisions of City.—The registration and municipal divisions of the City are shown in the Census plan appended hereto with the kind permission of the Registrar-General. The population, according to sex, of each of these divisions in the Census year was as follows :—

Divisions.	Males.	Females.	Both Sexes.
North-Eastern	6,784	9,265	16,049
South-Eastern..	10,810	13,069	23,879
Central	2,364	3,438	5,802
North-Western	4,860	6,836	11,696
South-Western	5,447	7,204	12,651
Stragglers	204	53	257
Total	30,469	39,865	70,334

For convenience of sanitary administration the Public Health Department has adhered to the original names of the several sub-districts of the City, as they are better known than the registration divisions, and convey a more definite meaning to the mind of the man in the street than the latter nomenclature.

The names of these sub-districts and their mean population estimated to the 30th June, 1932, are given below :—

Sub-districts of City.	*Estimated Population.*
City Proper	28,689
St. Clair	1,323
East Dry River	17,048
Belmont	13,475
Woodbrook	9,927
Total	71,066

Birth Places of Population.—The cosmopolitan character of Port-of-Spain is reflected in the diversity of the places of origin of the inhabitants, as recorded in the Census report.

Of the total population of 70,334 persons returned in 1931 the number of British-born, or naturalised British subjects, was 65,161, and of Foreign States, 5,173. Their respective birth-places were as follows :—

British.		Foreign.	
Trinidad and Tobago	49,627	Venezuela	2,402
Other British West Indies	13,931	South America (other than Venezuela)	335
United Kingdom	491	Foreign West Indies	517
British North America	56	Portugal and Madeira	197
India	867	China	670
Other British Colonies and Naturalised British Subjects	189	Others and not described	1,052
Total	65,161	Total	5,173

Housing of Population.—The number of separately assessed premises in the City Corporation's Rate Book was 8,840, comprising 4,781 family residences, 3,298 barracks and barrack yards, with a total of 17,994 barrack rooms, and 761 other premises, including offices, business establishments, &c.

Religious Persuasions of Population.—The religious persuasions are as varied as the races of the inhabitants and included the following :—

Christians :		
Roman Catholic	33,543	
Church of England	25,870	
Wesleyan	3,777	
Presbyterian	1,271	
Baptist	609	
Moravian	644	
Seventh Day Adventist	486	
Other denominations	1,808	
		67,952
Non-Christians :		
Hindu	1,223	
Moslem	895	
Buddhist	129	
Parsi	22	
Others	113	
		2,382
Total		70,334

The total percentage of Christians was 96.6.

Degrees of Literacy of Population.—The degrees of literacy among Christians and Non-Christians were as follows :—

	Christians.	Non-Christians.	Total.
Able to read and write	56,431	569	57,000
Able to read only	1,027	38	1,065
Unable to read or write	10,494	1,775	12,269
Total	67,952	2,382	70,334
Percentage of literacy	84.6	20.5	82.6

Marital Conditions of Population.—The marital conditions of the Census population, grouped by (1) sex and (2) age, are tabulated below as follows :—

(1) Marital Conditions grouped by Sex.

	Single.	Married.	Widowed.	Divorced.
Males	22,579	7,132	717	41
Females	28,285	8,249	3,297	34
Both Sexes	50,864	15,381	4,014	75

(2) **Marital Conditions grouped by Age.**

Ages.	Single.	Married.	Widowed.	Divorced.
All ages	50,864	15,381	4,014	75
0- 9	13,590	..	..	..
10-19	13,223	156	13	..
20-29	12,151	2,941	111	14
30-39	5,859	4,331	435	20
40-49	3,051	3,805	841	28
50-59	1,725	2,465	1,008	4
60-69	801	1,202	910	7
70-79	334	373	527	2
80-89	114	88	143	..
90 and over	16	20	26	..

Marriage and Marriage-Rates.—660 couples were married in the City during the year under review—a number equivalent to a marriage rate of 8.75 couples per 1,000 persons at all ages. This was a slight decline on the figure for the previous year, when the marriage rate was 8.87 couples per 1,000 persons living.

The population of the City, estimated by the Registrar-General to the middle of the year 1932, was 71,066, and it is on this figure that the various rates for the year are calculated. The corresponding figure for the previous year was 70,462. The Census population for the year 1921 and 1931 was, respectively, 61,580 (26,873 males and 34,707 females) and 70,334 (30,469 males and 39,865 females).

Births and Birth-rates.—The number of births registered during the year was 2,021—the highest previously recorded in the City—and an excess of 65 over the figure for the preceding year. Male births preponderated, their number being 1,020, compared with 1,001 females born. The birth-rate worked out at 28.44 per 1,000 population, an increase of 0.68 over the previous year, when the total of births was 1,956, and the birth-rate 27.76.

Complete particulars of the births and birth-rates according to sex, from month to month during the year, are tabulated hereunder.

Monthly Births and Birth-rates.

Months.	Males.	Females.	Both Sexes.	Birth-rate per 1,000 population.
January	94	74	168	28.37
February	63	76	139	23.47
March	90	87	177	29.89
April	89	94	183	30.90
May	70	88	158	26.68
June	76	76	152	25.67
July	72	77	149	25.16
August	83	77	160	27.02
September	86	79	165	27.86
October	107	100	207	34.95
November	89	100	189	31.91
December	101	73	174	29.38
Total	1,020	1,001	2,021	28.44

Births and birth-rates for the preceding 10 years 1922-31, and the averages for that decennium with the figures for 1932 are compared below :—

Yearly Births and Birth-rates and Averages for decennium, 1922-31, and 1932.

Year.	Total Births.	Birth-rates per 1,000 population.
1922	1,881	30.12
1923	2,013	31.90
1924	1,890	29.55
1925	1,820	28.20
1926	1,833	28.20
1927	1,753	26.73
1928	1,868	28.14
1929	1,895	28.13
1930	1,935	28.16
1931	1,956	27.76
Averages for decennium 1922-31	1,884.4	28.69
Year 1932	2,021	28.44

The highest number of births, namely, 207, took place in October, with a birth-rate of 34.95 ; the lowest, 139, was recorded in February, with a birth-rate of 23.47.

The most fruitful month for boy babies was October, with 107 male births. Girls came most plentifully in October and December, in each of which months 100 female births took place. They were scarcest in February when only 73 girls arrived.

Deaths and Death-Rates.—1,125 deaths, comprising 553 males and 572 females, were registered during the year, yielding a death-rate of 15.83 per 1,000, compared with a total of 1,223 deaths—of which 647 were males and 576 females—and a death-rate of 17.36 in the preceding year.

As shown in the table below the highest number of deaths for both sexes, namely, 118, occurred in July, and the lowest, 77, in December. July, with 61 deaths to its credit, was also the most fatal month for males, and December, with 35 deaths, the least fatal. Female deaths were most numerous in August, when 68 were registered. They were fewer in September with only 36, or just a little over one-half of the number recorded in August.

Monthly Deaths and Death-rates.

Months.	Males.	Females.	Both Sexes.	Death-rate per 1,000 population.
January	57	49	106	17.90
February	47	40	87	14.69
March	40	43	83	14.02
April	50	40	90	15.20
May	36	50	86	14.52
June	46	46	92	15.53
July	61	57	118	19.92
August	38	68	106	17.90
September	45	36	81	13.68
October	45	46	91	15.37
November	53	55	108	18.24
December	35	42	77	13.00
Total	553	572	1,125	15.83

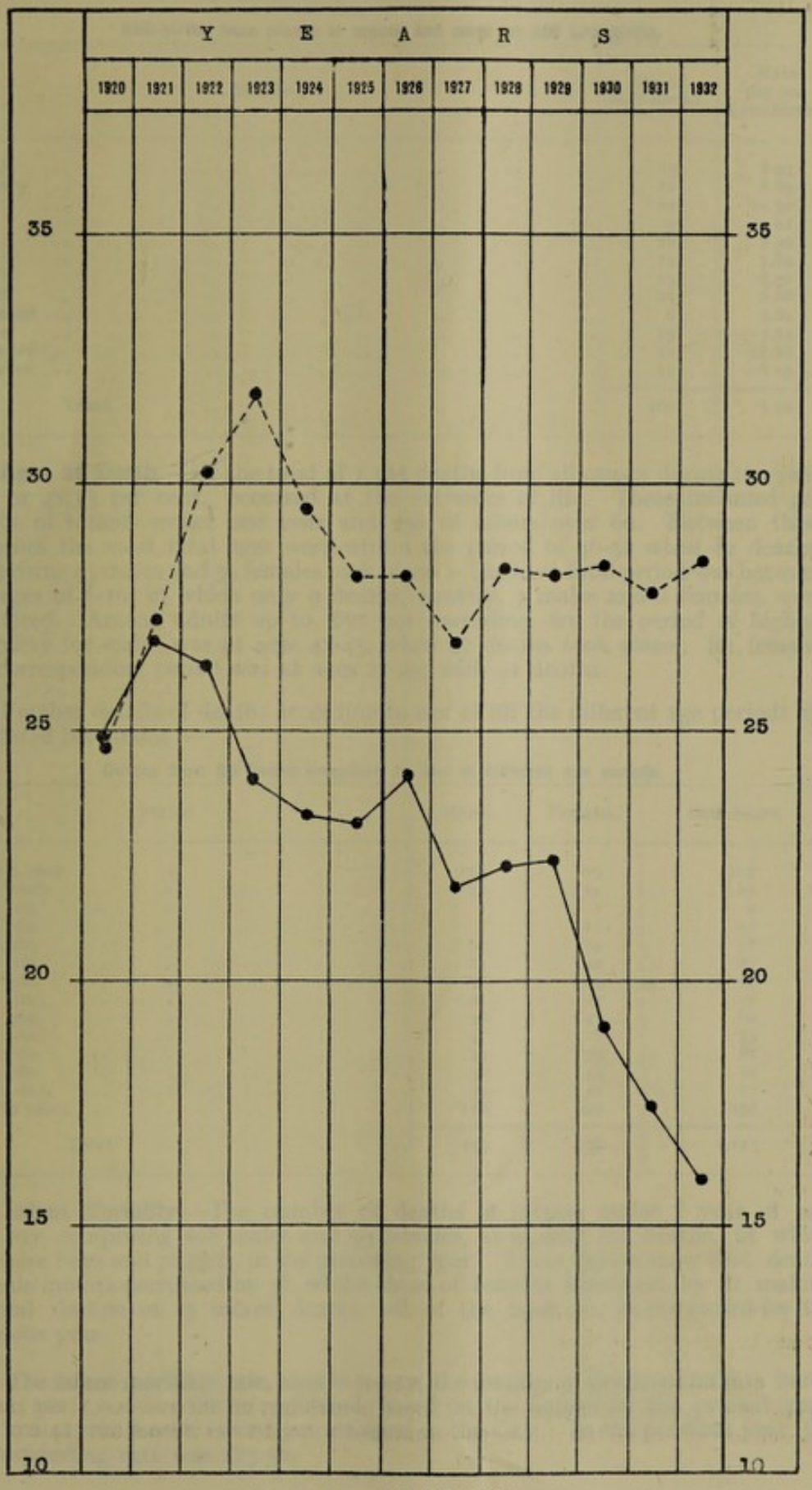
Chart A. contrasts in graphic form the City birth-rates and death-rates from 1920 to the present year.

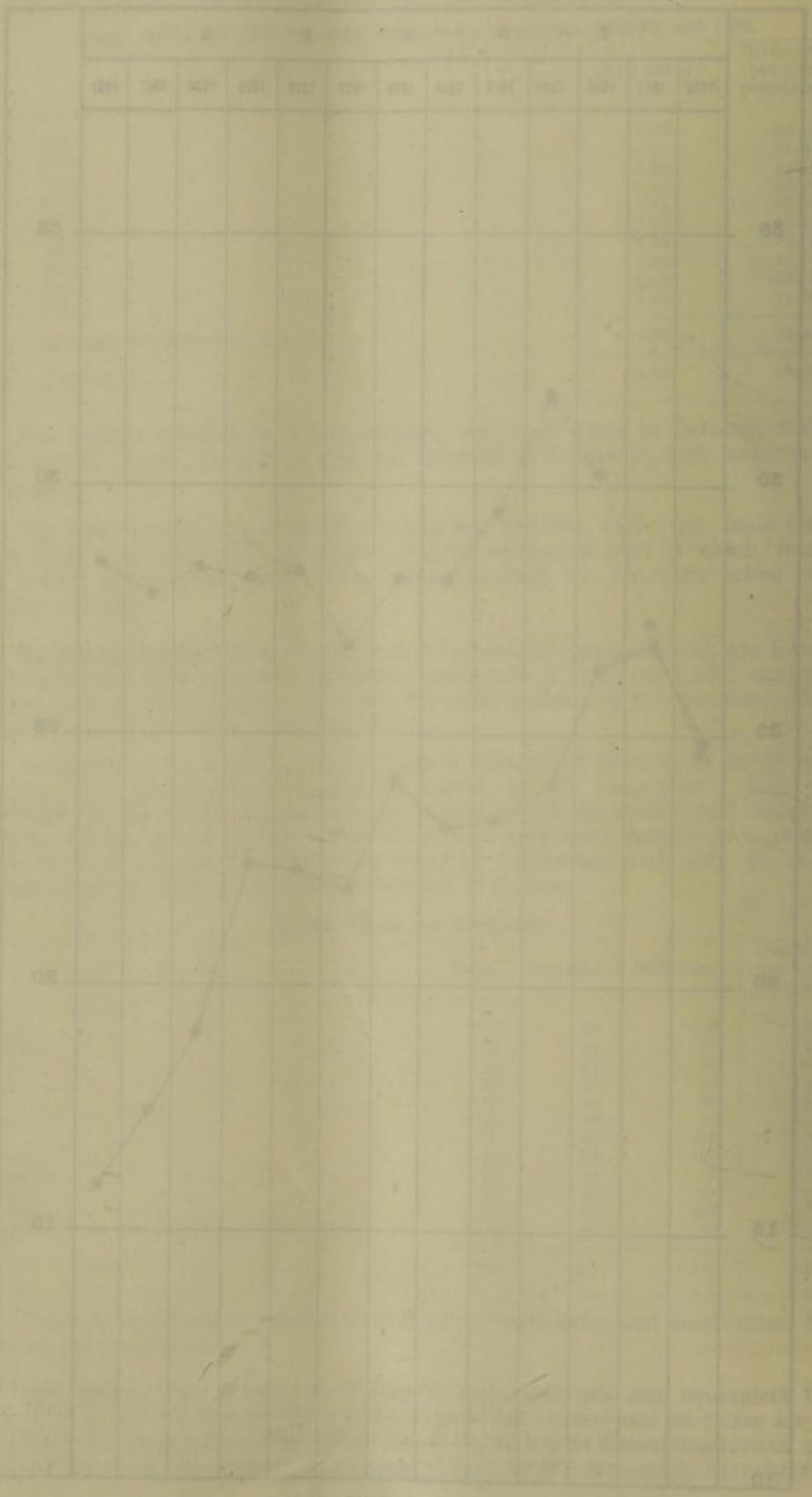
Still-births.—The number of still-births registered was 160, equivalent to a rate of 7.92 per 100 live births. These figures are an increase on those for the previous year when the still-births numbered 139 with a corresponding rate of 7.11, but a decrease on the annual average rate of 8.25 for the decennium 1922-1931.

CHART A

BIRTH-RATE and DEATH-RATE contrasted.

Port-of-Spain 1920—1932.





The number of still-births from month to month and the rate per 100 live-births are tabulated hereunder :—

Still-births from month to month and rates per 100 Live-births.

Months.	No. of Still-births.	Rate per 100 Live-births.
January	15	8.93
February	12	8.63
March	20	11.30
April	9	4.92
May	12	7.59
June	12	7.89
July	13	8.72
August	11	6.88
September	6	3.64
October	15	7.25
November	21	11.11
December	14	8.05
Total	160	7.92

Ages at Death.— Of the total of 1,125 deaths from all causes during the year, 465, or 41.33 per cent., occurred at the extremes of life. These included 207 deaths of infants under one year and 258 of adults over 60. Between these extremes the most fatal ages were within the period of 46-50 when 82 deaths, comprising 43 males and 39 females took place. The least fatal period was between the ages of 6-10, in which only 9 deaths, namely, 7 males and 2 females, were registered. Among adults up to, but not exceeding, 60, the period of highest mortality for males was at ages 41-45, when 47 deaths took place ; for females the corresponding period was at ages 21-25, with 42 deaths.

Further details of deaths according to sex at all the different age periods are tabulated hereunder :—

Deaths from All Causes according to Sex at different age periods.

Period.	Males.	Females.	Both Sexes.
Under 1 year	108	99	207
1- 5 years	33	34	67
6-10 do.	7	2	9
11-15 do.	5	12	17
16-20 do.	14	24	38
21-25 do.	25	42	67
26-30 do.	30	27	57
31-35 do.	21	27	48
36-40 do.	36	33	69
41-45 do.	47	28	75
46-50 do.	43	39	82
51-55 do.	30	24	54
56-60 do.	36	41	77
Over 60 years	118	140	258
Total	553	572	1,125

Infant Mortality.—The number of deaths of infants under 1 year of age was 207, comprising 108 males and 99 females, as against 222 deaths, of which 144 were boys and 78 girls, in the preceding year. These figures show that deaths of male infants decreased by 36, whilst those of females increased by 21, making a total decline of 15 infant deaths, all of the male sex, on the record for the previous year.

The **infant mortality rate,** that is to say, the number of deaths of infants under 1 year per 1,000 live-births registered, based on the figures for the present year, was 102.42, the lowest record yet attained in the City. In the previous year the corresponding rate was 113.50.

Births and deaths under 1 year, with the corresponding infant mortality rates from 1917 to the present year, are tabulated below, and rates are, also, graphically shown in Chart B.

Births and Deaths under 1 year and Infant Mortality Rates for 16 years 1917-1932.

Year.	Number of Births.	Number of Deaths under 1 year.	Infant Mortality Rate.	Year.	Number of Births.	Number of Deaths under 1 year.	Infant Mortality Rate.
1917 ..	1,770	412	232.77	1925 ..	1,820	282	154.95
1918 ..	1,625	347	213.54	1926 ..	1,833	287	156.57
1919 ..	1,590	294	184.91	1927 ..	1,753	236	134.63
1920 ..	1,716	323	188.23	1928 ..	1,868	238	127.41
1921 ..	1,687	287	170.12	1929 ..	1,895	250	131.93
1922 ..	1,881	297	157.89	1930 ..	1,935	233	120.41
1923 ..	2,013	285	141.58	1931 ..	1,956	222	113.50
1924 ..	1,890	278	147.09	1932 ..	2,021	207	102.42

Causes of Death under 1 year.—Full details of the causes of death of infants under 1 year, according to sex, for this and the preceding year are tabulated below :—

Causes of Death of Infants under 1 year.

Diseases.	1932.			1931.			Diseases.	1932.			1931.		
	Both Sexes.	M.	F.	Both Sexes.	M.	F.		Both Sexes.	M.	F.	Both Sexes.	M.	F.
Abscess	1	..	1	1	..	1	Inanition	..	..	..	1	1	..
Acute Poliomyelitis ..	..	..	..	1	1	..	Influenza	1	..	1	..	..	..
Anaemia	1	1	..	..	..	..	Intestinal Obstruction ..	1	1	..	1	1	..
Asphyxia	1	..	1	1	1	..	Intussusception	1	..	1	..	..	..
Asphyxia Neonatorum ..	..	..	..	3	..	3	Melaena Neonatorum ..	1	..	1	..	..	..
Atrophy	1	..	1	4	2	2	Malaria	7	3	4	3	2	1
Bronchitis	19	12	7	17	13	4	Malnutrition	19	10	9	24	14	10
Cellulitis	2	1	1	1	..	1	Marasmus	15	8	7	17	10	7
Colic	1	1	..	..	..	..	Meningitis	2	1	1	..	..	..
Colitis	..	..	..	12	7	5	Meningocele	..	..	..	1	1	..
Congenital Debility.. ..	28	16	12	27	22	5	Miliary Tuberculosis ..	1	..	1	1	1	..
Congenital Heart Disease ..	..	..	..	1	..	1	Natural Causes	1	1	..	..	..	..
Congenital Syphilis	10	5	5	3	..	3	Pneumonia	14	7	7	16	10	6
Convulsions	4	3	1	3	1	2	Prematurity	27	12	15	31	20	11
Dentition	2	1	1	2	2	..	Pulmonary Congestion ..	1	..	1	2	2	..
Diarrhoea	19	10	9	5	3	2	Pulmonary Oedema ..	..	..	..	1	1	..
Dysentery	2	1	1	4	4	..	Pyaemia	..	..	..	1	..	1
Entero Colitis	2	2	..	..	..	..	Pyrexia	..	..	..	1	..	1
Exposure	..	..	..	1	1	..	Rheumatism	..	..	..	1	..	1
Gastritis	2	1	1	..	..	..	Septic Spina Bifida ..	..	..	..	1	..	1
Gastro Enteritis	14	7	7	31	22	9	Septic Umbilicus ..	..	..	..	1	1	..
Haemorrhage	..	..	..	1	..	1	Tubercular Meningitis ..	1	1	..	..	..	..
Haemorrhage from Umbilical cord	5	3	2	1	1	..	Vermes	1	..	1	..	..	..
							Total	207	108	99	222	144	78

The causes of death given in the preceding table are grouped below and the number of deaths in each group is expressed as a percentage of the total infant mortality.

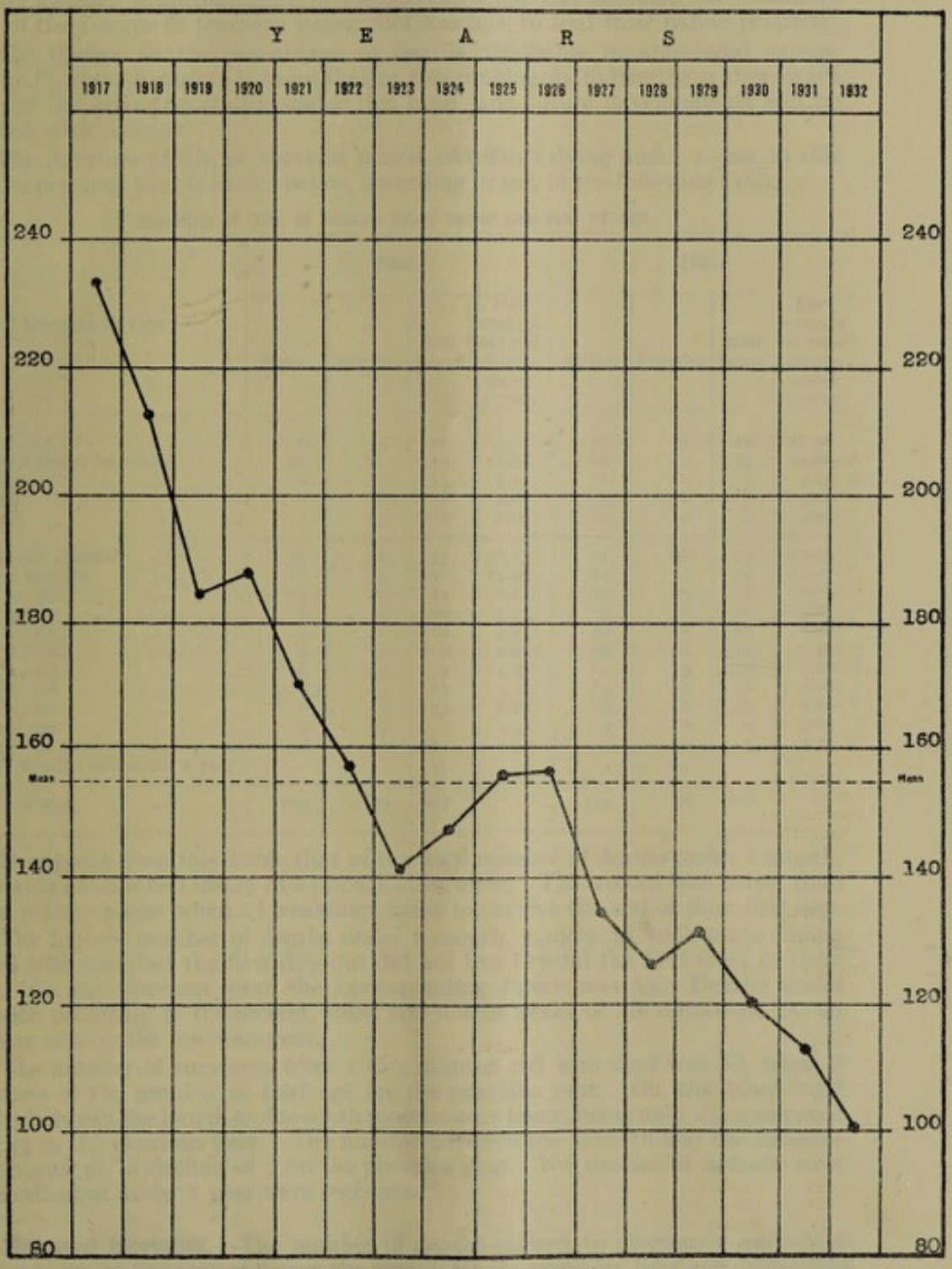
Grouping of Causes of Death under 1 year.

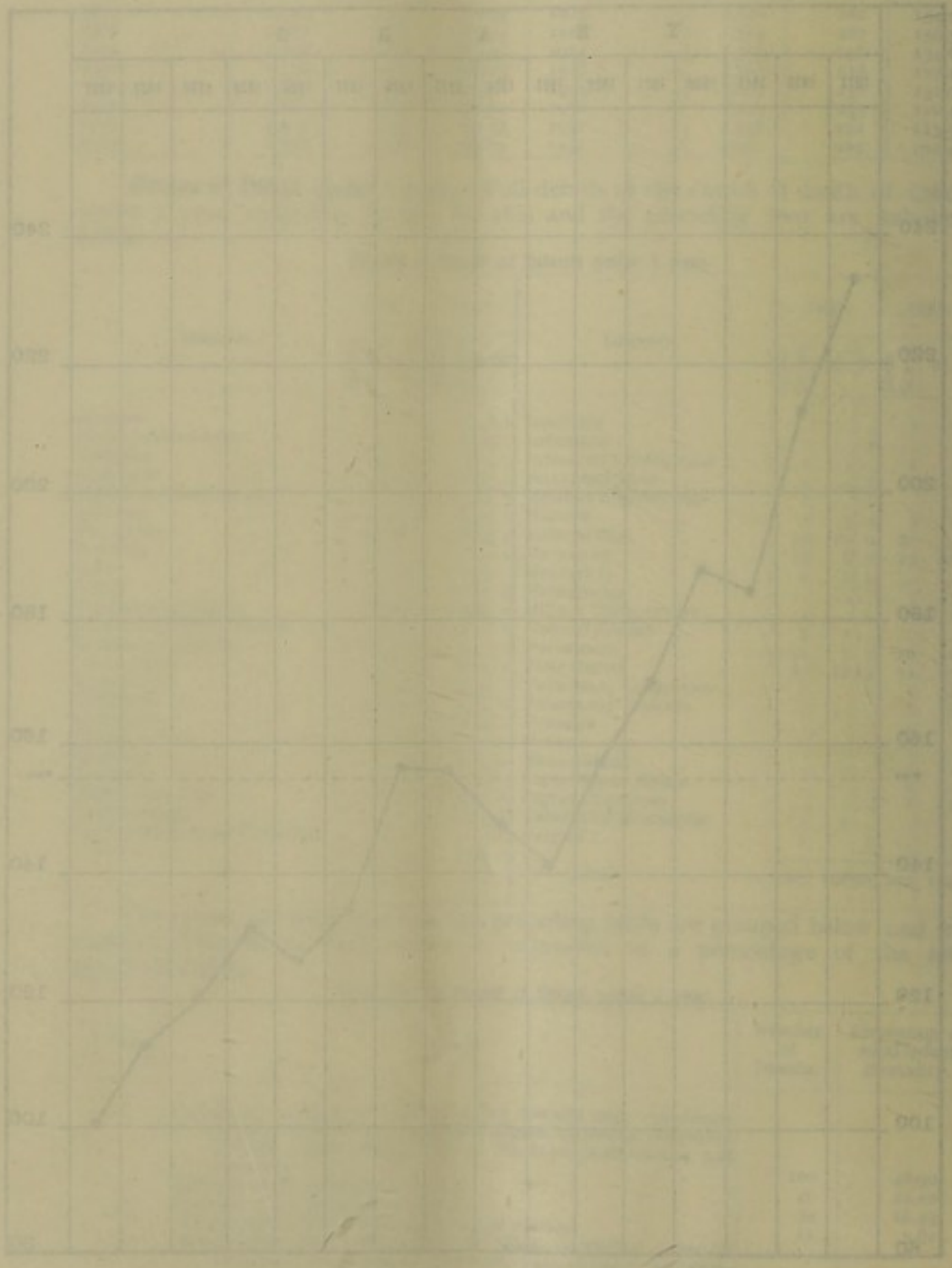
Group.	Diseases.	Number of Deaths.	Percentage of total infant mortality.
I	Congenital syphilis and various other diseases and conditions usually attributed to **antenatal causes**, including congenital debility, prematurity, atrophy, inanition, malnutrition and marasmus	100	48.30
II	Diseases of the Alimentary System	46	22.22
III	Diseases of the Respiratory System	34	16.43
IV	Miliary tuberculosis, malaria and septic diseases	12	5.80
V	Seven other registered causes of death, including anaemia, asphyxia, convulsions, umbilical haemorrhage, influenza, meningitis and an ill-defined natural cause	15	7.25
		207	100.00

CHART B

INFANT MORTALITY RATE.

Port-of-Spain 1917—1932.





From this Table it appears that deaths in the ante-natal group (Group I) constitute nearly one half of the mortality from all causes under 1 year, and more than double the number due to diseases of the alimentary system (Group II). In each of these two groups, however, the number per cent. of the total infant mortality is lower than in the previous year, when the figures were, respectively, 49.55 and 24.77, as against 48.30 and 22.22 this year.

The relatively low proportion of deaths due to stomach and bowel troubles, the prevention of which was one of the principal reasons for establishing the Child Welfare League, is an indication of the success which has attended the educative work of the League in teaching young mothers how to feed their babies properly.

The decline in the percentage of deaths ascribable to ante-natal causes, (Group I), though slight, is nevertheless encouraging as indicating a downward trend of the infant mortality under this head, and future developments will be watched with interest.

The duration of life, or survival period, of infants dying under 1 year in this and the previous year is shown below, according to sex, in the following table :—

Duration of Life of Infants dying under one year of age.

Duration of Life.	1932.				1931.			
	Males.	Females	Both Sexes.	Percentage of total deaths under 1 year.	Males.	Females	Both Sexes.	Percentage of total deaths under 1 year.
Under 1 day	6	5	11	5.31	12	11	23	10.36
1 day and under 1st week ..	19	20	39	18.84	26	7	33	14.86
2nd week	8	3	11	5.31	3	4	7	3.15
3rd week	2	6	8	3.86	5	2	7	3.15
4th week	2	4	6	2.90	5	4	9	4.05
Total under 1 month	37	38	75	36.23	51	28	79	35.58
1 to 2 months	17	13	30	14.49	17	9	26	11.71
2 to 3 do.	14	9	23	11.11	15	3	18	8.11
3 to 4 do.	8	8	16	7.73	5	6	11	4.95
4 to 5 do.	4	6	10	4.83	10	5	15	6.76
5 to 6 do.	4	2	6	2.90	10	2	12	5.40
6 to 7 do.	6	3	9	4.35	11	5	16	7.21
7 to 8 do.	4	7	11	5.31	14	7	21	9.46
8 to 9 do.	6	7	13	6.28	6	6	12	5.40
9 to 10 do.	2	1	3	1.45	4	5	9	4.05
10 to 11 do.	6	5	11	5.31	1	2	3	1.35
Over 11 months and under 1 year	..	..	..	..	..	..	..	..
Total	108	99	207	..	144	78	222	..

It appears from this Table that of the total number of deaths under 1 month, 11 infants succumbed inside of 24 hours after birth. This record was better than in the previous year when 23 weaklings failed to survive the end of their first day.

The highest number of deaths under 1 month, namely 39, took place among babies who survived the first day but did not live beyond the first week of their lives. In the previous year the corresponding figure was 33. Deaths under 1 month occurring in the second, third and fourth weeks of life numbered 25, an increase of 2 on the previous year.

The number of survivors from 1 to 3 months old who died was 53, being 9 in excess of the number at that age for the previous year. On the other hand deaths between the fourth and seventh months were fewer, being only 25, compared with 43 in the previous year. The number between the seventh and the eleventh month was 38, a decline of 7 on the previous year. No deaths of infants over 11 months but under 1 year were registered.

Maternal Mortality.—The number of deaths classed to pregnancy and childbirth was 19, an increase of 5 over the figures for the previous year and equivalent to a **maternal mortality rate,** *i.e.*, the number of such deaths per 1,000 live births registered, of 9.4

This record exceeds the corresponding rate for 1931, namely, 7.15 by 2.25, and the yearly average of 6.87 for the quinquennium 1927-1931 by 2.53. It also exceeds this year's maternal mortality rate of 5.9 for Georgetown, British Guiana, by over 37 per cent.

The causes of maternal deaths according to age for this and the preceding year are compared in the following table :—

Causes of Maternal Deaths according to age for the years 1932 and 1931.

Causes of Death.	1932.							1931.						
	All ages.	16 and under 20	20 and under 25	25 and under 30	30 and under 35	35 and under 40	40 and upwards	All ages.	16 and under 20	20 and under 25	25 and under 30	30 and under 35	35 and under 40	40 and upwards
Puerperal Sepsis	4	..	1	1	2	..	..	6	..	1	2	2	..	1
Puerperal Eclampsia	8	2	1	2	1	2	..	2	1	..	1	..	..	..
Puerperal Haemorrhage ..	..	..	..	..	..	..	..	2	..	..	1	1	..	..
Pernicious Vomiting ..	1	..	..	1	..	..	..	1	..	1	..	..	..	..
Other Causes	6	..	2	2	2	..	..	3	..	3	..	..	..	..
Total	19	2	4	6	5	2	..	14	1	5	4	3	..	1

These figures show a moderate decline in the number of deaths from sepsis which, however, was offset by a sharp rise in the mortality from eclampsia. In both years maternal deaths were most numerous between the ages of 20 and under 35 with a fair increase in the number for this year.

In the subjoined table the birth, death and infant mortality rates, together with the maternal mortality from various causes per 1,000 live births registered for the year under review, are compared with the corresponding records for each of the years 1927-31 and the yearly averages for that quinquennium.

Particulars of Birth, Death, Infant and Maternal Mortality Rates in Port-of-Spain for the years 1927–1932

Year.	Birth-rate.	Death-rate.	Infant Mortality rate.	Maternal Mortality.					
				No. of Deaths.	Rates per 1,000 live births registered.				
					Sepsis.	Eclampsia.	Haemorrhage.	Pernicious Vomiting.	Other Causes.	Total.
1927 ..	26.73	21.85	134.63	8	0.57	1.14	..	..	2.85	4.56
1928 ..	28.14	22.23	127.41	14	1.61	3.21	1.07	1.07	0.54	7.50
1929 ..	28.13	22.31	131.93	16	1.58	3.69	0.53	1.06	1.58	8.44
1930 ..	28.16	19.04	120.41	13	1.03	2.58	1.55	0.52	1.03	6.71
1931 ..	27.76	17.36	113.50	14	3.07	1.02	1.02	0.51	1.53	7.15
Yearly Av. for quinquennium 1927-31 ..	27.78	20.56	125.58	13	1.57	2.33	0.83	0.63	1.51	6.87
1932 ..	28.44	15.83	102.42	19	1.98	3.96	..	0.49	2.97	9.40

It appears from the records that the maternal mortality rate from sepsis this year, though slightly in excess of the average for the quinquennium 1927-31, was markedly lower than in 1931. On the other hand the death-rate from puerperal eclampsia was nearly four times as high as in that year. The mortality rate from pernicious vomiting was somewhat less than in the preceding year, and it is worthy of note that no deaths were registered from puerperal haemorrhage.

Deaths at Ages 1-5.—67 deaths, representing 5.95 per cent. of the total mortality at all ages, took place at the age period 1-5 years. This was a decline on the records for the preceding year, when the corresponding number of deaths was 75, or 6.13 per cent. of the total.

The mortality at this age period was almost evenly distributed between the sexes, the figures being 33 for boys and 34 for girls. The causes of death at these ages are given in the following table :—

Causes of Death of Children at ages 1 to 5.

Diseases.	1932.			1931.		
	Both Sexes.	M	F.	Both Sexes.	M	F.
Acute Poliomyelitis	..	..	..	1	1	..
Acute Rheumatic Fever	1	1	..	..	..	..
Acute Tonsilitis—Asphyxia	1	1	..	..	..	..
Anaemia	..	..	..	3	1	2
Ascariasis	..	..	..	1	1	..
Bronchitis	3	..	3	4	2	2
Colitis	1	1	..	2	..	2
Congenital Debility	..	..	..	1	..	1
Congenital Syphilis	1	..	1	4	4	..
Convulsions	1	1	..	2	1	1
Dentition	1	1	..	..	..	..
Diarrhoea	1	1	..	2	1	1
Diphtheria	..	..	..	2	1	1
Dysentery	3	1	2	6	4	2
Erysipelas	..	..	..	1	..	1
Gastro Enteritis	4	3	1	12	4	8
General Debility	1	1	..	..	..	..
Malaria	8	2	6	8	2	6
Malnutrition	4	4	..	..	..	..
Marasmus	1	..	1	6	2	4
Meningitis	4	2	2	1	1	..
Miliary Tuberculosis	3	1	2	..	..	..
Nephritis	3	3	..	2	..	2
Pneumonia	12	5	7	11	7	4
Prematurity	1	1	..	..	..	..
Pulmonary Congestion	..	..	..	1	..	1
Ruptured Urinary Bladder	1	..	1	..	..	..
Shock and Toxaemia due to burns	1	1	..	..	..	..
Shock due to scalding	1	..	1	1	..	1
Shock and Haemorrhage—Fracture of Skull	1	..	1	..	..	..
Tabes Mesenterica	..	..	..	1	1	..
Tetanus	..	..	..	1	..	1
Toxaemia	2	2	..	..	..	..
Tubercular Meningitis	2	1	1	2	2	..
Uraemia	1	..	1	..	..	..
Vermes	2	..	2	..	..	..
Whooping Cough	1	..	1	..	..	..
Yellow Atrophy of Liver	1	..	1	..	..	..
Total	67	33	34	75	35	40

The **causes of death** given in the above table are grouped in the statement given below which also shows the number of deaths in each group together with its proportion per cent. of the total mortality at the age period 1-5 years.

Grouping of Causes of Death at ages 1 to 5.

Diseases.	No. of Deaths	Percentage of Total.
Congenital syphilis, congenital debility, marasmus and other diseases and conditions commonly ascribed to ante-natal causes	8	11.95
Diseases of the Alimentary System	11	16.40
Diseases of the Respiratory System	17	25.40
Tuberculosis (non-pulmonary forms)	5	7.45
Malaria	8	11.95
Eight other registered causes of death including nephritis, uraemia, rheumatic fever, convulsions, simple meningitis, worms, toxaemia and accidents	18	26.85
	67	100.00

The preceding statement shows that respiratory diseases accounted for the greatest number of deaths in any single group at ages 1-5. They exceeded the proportion of the total mortality under this head in the preceding year by 4.07 per cent. On the other hand deaths in the alimentary group dropped from 23 to 11 and lowered the proportion per cent. of the total mortality from 30.67 to 16.4 per cent., a decline of 14.27 per cent. on the rate for the preceding year.

Deaths from congenital syphilis and other ante-natal causes declined from 11 last year to 8 this year, but there was a rise from 3 to 5 deaths in the mortality from non-pulmonary or bovine forms of tuberculosis, and of 4.45 in the percentage of total deaths at these ages.

NOTIFIABLE INFECTIOUS DISEASES.

The infectious diseases notifiable at the commencement of the Public Health Ordinance were diphtheria, membranous croup, typhoid or enteric fever, cholera, plague, yellow fever, small pox, pulmonary tuberculosis and chicken pox.

Additions to this list made from time to time include tuberculosis (other forms), pneumonia, ophthalmia neonatorum, encephalitis lethargica, cerebro-spinal fever, acute ascending myelitis, acute poliomyelitis and typhus fever.

Among these, plague, cholera, yellow fever, small pox (including alastrim), and typhus fever are designated as dangerous infectious diseases and are quarantinable.

Notifications.—The total number of cases notified by medical practitioners during the year was 351, a slight excess of 1 over the preceding year, but a substantial decline of 125.2 on the yearly average namely, 476.2, for the immediately preceding decennium, 1922-31.

Particulars of the several diseases notified from month to month are set out in tabular form as follows:—

Monthly Notifications of Infectious Diseases.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diphtheria	..	2	5	11	17	8	2	..	5	5	2	4	61
Enteric Fever	4	3	..	2	..	..	1	6	..	1	3	..	20
Pulmonary Tuberculosis	11	3	12	14	11	8	14	11	10	13	16	7	130
Tuberculosis (other forms)	2	..	1	1	3	2	1	1	2	2	..	1	16
Pneumonia	4	8	4	5	3	5	7	6	9	6	8	6	71
Ophthalmia Neonatorum	2	..	1	..	4	2	2	1	1	..	1	4	18
Chicken Pox	1	1	3	15	5	2	1	3	..	1	..	2	34
Encephalitis Lethargica	..	..	..	1	..	..	..	..	..	..	..	..	1
Total	24	17	26	49	43	27	28	28	27	28	30	24	351

The yearly numbers and averages for each of the diseases notified during the decennial period, 1922-31, are compared with the corresponding records for the present year in the table below.

Comparison of Notifications for Decennium 1922-31 and 1932.

Notifiable Diseases.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	1931.	Yearly average for decennium 1922–1931.	1932.
Pulmonary Tuberculosis	190	211	181	173	172	160	152	142	124	137	164.2	130
Tuberculosis (other forms)	..	..	6	15	18	10	16	17	14	10	10.6	16
Small-Pox (Alastrim)	..	..	..	..	16	..	..	..	..	..	1.6	..
Pneumonia	240	76	72	85	86	65	60	70	83	71	90.8	71
Enteric Fever	226	265	370	168	125	95	54	35	55	47	144.0	20
Diphtheria	8	10	27	25	4	16	19	24	29	31	19.3	61
Chicken Pox	27	16	12	31	16	17	23	73	29	30	27.4	34
Ophthalmia Neonatorum	..	..	..	5	28	27	31	35	29	22	17.7	18
Encephalitis Lethargica	..	..	..	..	..	..	..	1	..	..	0.1	1
Acute Poliomyelitis	..	..	..	..	..	..	..	..	..	5	0.5	..
Total	691	578	668	502	465	390	355	397	363	353	476.2	351

This table shows that notifications of pulmonary tuberculosis, which numbered 130, were fewer by 7 than in the preceding year. The figures for non-pulmonary forms of tuberculosis, usually ascribed to bovine—principally cows' milk—infection, were unsatisfactory, the number of cases notified being 16, or an increase of 6 over the previous year. The figures for enteric fever fell from 47 in the preceding year to 20 in this, a decline of 27 notifications. On the other hand notifications of diphtheria, which was unusually prevalent in the June quarter, rose from 31 to 61, or nearly double the number recorded in the previous year. 34 cases of chicken pox of a mild type were notified, an increase of 4 on the preceding year. Ophthalmia neonatorum declined from 22 to 18 notifications. There was one notification from encephalitis lethargica, but none from acute poliomyelitis; neither was there any from small pox or other quarantinable disease.

Deaths from Notifiable Infectious Diseases.—Deaths under this head totalled 182, or 39 fewer than in the preceding year. This improvement, as shown in the table below, was principally due to a great reduction in the mortality from pulmonary tuberculosis, the number of victims who succumbed to the disease having dropped from 134 to 112. Deaths from pneumonia also dropped from 65 to 55 and from enteric fever from 11 to 4—the lowest record for the City. On the other hand deaths from non-pulmonary forms of tuberculosis increased by 3, that is from 7 in the previous year to 10 in this. One death took place from encephalitis lethargica, but in the preceding year no mortality was registered from this cause.

Monthly Deaths from Notifiable Infectious Diseases.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August	September.	October.	November.	December.	Total.
EntericFever	1	2	..	..	..	..	..	..	..	..	1	..	4
Pulmonary Tuberculosis	8	4	9	6	8	13	12	6	7	13	18	8	112
Tuberculosis (other forms)	2	..	1	..	..	..	1	1	1	1	1	2	10
Pneumonia	4	8	3	3	4	4	3	5	5	5	8	3	55
Encephalitis Lethargica	..	..	..	1	..	..	..	..	..	..	..	..	1
Total ..	15	14	13	10	12	17	16	12	13	19	28	13	182

Distribution of Notifications and Deaths.—The distribution of cases notified and deaths therefrom in the sub-districts of the City are shown below in tabular form, together with the respective rates per 1,000 of the population in each sub-district and the City as a whole.

Distribution of Cases and Deaths from Notifiable Infectious Diseases.

Population.	City Proper 28,935		St. Clair 1,334		East Dry River 17,194		Belmont 13,591		Woodbrook 10,012	
Diseases.	Cases notified.	Deaths.	Cases notified.	Deaths.	Cases notified.	Deaths.	Cases notified.	Deaths.	Cases notified.	Deaths.
Diphtheria	36	..	4	..	3	..	8	..	10	..
Enteric Fever ..	8	1	..	..	5	1	1	..	6	2
Pulmonary Tuberculosis ..	65	48	..	..	29	30	25	24	11	10
Tuberculosis (other forms)	8	2	..	..	5	5	2	1	1	2
Pneumonia	31	24	..	1	19	14	16	11	5	5
Ophthalmia Neonatorum ..	10	..	..	..	4	..	1	..	3	..
Chicken Pox ..	16	..	1	..	7	..	2	..	8	..
Encephalitis Lethargica ..	..	..	..	..	1	1	..	..	..	..
Total ..	174	75	5	1	73	51	55	36	44	19
Rates per 1,000 population in each sub-district ..	6.01	2.59	2.75	0.75	4.25	2.97	4.05	2.65	4.39	1.90
Rates per 1,000 population of City (71,066)	2.45	1.06	0.07	0.01	1.03	0.72	0.77	0.51	0.62	0.27

Deaths in Hospital from Notifiable Infectious Diseases.—Of 182 deaths from notifiable infectious diseases—among which pulmonary tuberculosis accounted for 112 and pneumonia, 55—107 or 58.79 per cent. took place at the Colonial Hospital, compared with 66.97 per cent. in the previous year—a decline of 8.18 per cent. on the number of cases isolated in hospital before death.

Although, with the exception of whooping cough of which one case proved fatal, no deaths have been registered from any of the minor infectious diseases, such as chicken pox, diphtheria, measles and whooping cough, these diseases do prevail every year in the City, sometimes in epidemic form, and, apart from the question of death which does occasionally occur in certain cases, a great deal of suffering and expense could be avoided in the homes of poor families, crowded together in single barrack rooms, if the restricted accommodation for acute infectious diseases provided at the Colonial Hospital were expanded by the erection of an adequate isolation block on the premises, or a separate " Fever " hospital somewhere else in or near the City.

Particulars of monthly deaths in hospital from notifiable infectious diseases and of deaths in hospital and deaths at home from the same causes are given below in the following tables.

Deaths in Hospital from Notifiable Infectious Diseases.

Diseases.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Enteric Fever ..	1	1	..	..	..	..	..	..	..	..	1	..	3
Pulmonary Tuberculosis	4	2	4	4	6	5	4	4	5	11	13	5	67
Tuberculosis (other forms)	2	..	..	..	..	..	1	1	1	1	..	1	7
Pneumonia	3	6	1	2	1	1	2	2	2	2	5	2	29
Encephalitis Lethargica	..	..	..	1	..	..	..	..	..	..	..	..	1
	10	9	5	7	7	6	7	7	8	14	19	8	107

Comparison of Deaths in Hospital with Deaths at Home from Notifiable Infectious Diseases.

Diseases.	Died at Home.	Died at Hospital.	Total Deaths.	Percentage of cases isolated in Hospital before death.	Corresponding percentage for the year 1931.
Enteric Fever	1	3	4	75.00	90.90
Diphtheria	..	..	..	..	50.00
Pulmonary Tuberculosis ..	45	67	112	59.82	70.90
Tuberculosis (other forms) ..	3	7	10	70.00	71.43
Pneumonia	26	29	55	52.73	55.39
Encephalitis Lethargica ..	..	1	1	100.00	..
Acute Poliomyelitis	..	..	..	..	50.00
	75	107	182	58.79	66.97

Exclusive of persons habitually residing in the City no fewer than 91 cases of notifiable infectious diseases, of which 15 were classed as enteric fever and 57 as pulmonary tuberculosis, brought into the Colonial Hospital from outdistricts, died at that institution during the year, as shown in the table below. 295 other non-residents also died there from various other causes.

Deaths of Non-residents at the Colonial Hospital from Notifiable Infectious Diseases and other causes.

Diseases.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Diphtheria	..	1	..	..	2	1	..	1	..	..	..	..	5
Enteric Fever ..	1	1	..	..	2	4	1	1	1	1	3	..	15
Pulmonary Tuberculosis	4	5	6	3	6	4	8	3	4	4	6	4	57
Tuberculosis (other forms)	1	..	..	1	..	1	..	..	1	..	..	..	4
Pneumonia	2	..	..	1	1	..	..	1	..	..	2	1	8
Acute Poliomyelitis	..	..	..	..	1	..	..	..	..	..	..	..	1
Cerebro-Spinal Meningitis	1	..	..	..	..	..	..	..	..	..	..	..	1
All other causes ..	32	17	33	22	18	22	28	30	25	15	32	21	295
Total ..	41	24	39	27	30	32	37	36	31	20	43	26	386

NON-NOTIFIABLE INFECTIOUS DISEASES.

As shown in the Table below deaths from non-notifiable infectious diseases numbered 80, the same figure as in the preceding year. The only one of these causes of death which showed an increase was syphilis which rose from 18 to 26. Malaria declined from 38 to 36 deaths, and dysentery from 18 to 12. One death was ascribed to blackwater fever.

Monthly Deaths from Non-Notifiable Infectious Diseases.

Diseases.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Malaria ..	2	3	3	3	4	3	4	1	4	6	3	..	36
Whooping Cough ..	..	..	..	..	..	..	..	..	..	..	..	1	1
Influenza ..	..	2	..	..	..	..	..	..	..	1	..	..	3
Dysentery	1	2	..	1	..	2	2	..	2	1	1	..	12
Ankylostomiasis	..	..	..	..	..	..	..	..	1	..	..	..	1
Syphilis ..	1	4	2	1	1	2	3	1	5	3	2	1	26
Blackwater Fever ..	1	..	..	..	..	..	..	..	..	..	..	..	1
Total ..	5	11	5	5	5	7	9	2	12	11	6	2	80

Of the total of 80 deaths allocated to non-notifiable infectious diseases 41, or a little over 50 per cent., occurred in hospital. These included 14, out of a total of 36 deaths, from malaria, and 19 out of 26 from syphilis. Fuller details of these deaths are tabulated below.

Deaths in Hospital from Non-Notifiable Infectious Diseases.

Diseases.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Malaria ..	2	1	1	..	1	1	1	1	1	3	2	..	14
Whooping Cough ..	..	..	..	..	..	..	..	..	..	..	..	1	1
Dysentery	..	1	..	1	..	1	1	..	1	..	..	..	5
Ankylostomiasis	..	..	..	..	..	..	..	..	1	..	..	..	1
Syphilis ..	1	4	1	..	1	..	2	1	4	3	1	1	19
Blackwater Fever ..	1	..	..	..	..	..	..	..	..	..	..	..	1
Total ..	4	6	2	1	2	2	4	2	7	6	3	2	41

Home and Hospital Deaths from Non-Notifiable Infectious Diseases.—Of the total deaths allocated to malaria, the percentage which took place in hospital declined from 55.26 per cent. in the preceding year to 38.89 in this. On the other hand the corresponding figures for dysentery and syphilis rose, respectively, from 27.78 to 41.67, and from 61.11 to 73.08.

Particulars of these and other non-notifiable infectious diseases are extended below in tabular form :—

Comparison of Deaths in Hospital with Deaths at Home from Non-Notifiable Infectious Diseases.

Diseases.	Died at Home.	Died at Hospital.	Total Deaths.	Percentage of cases isolated in Hospital before death.	Corresponding percentage for the year 1931.
Malaria	22	14	36	38.89	55.26
Whooping Cough	..	1	1	100.00	..
Influenza	3	..	3	..	..
Dysentery	7	5	12	41.67	27.78
Ankylostomiasis	..	1	1	100.00	100.00
Syphilis	7	19	26	73.08	61.11
Blackwater Fever	..	1	1	100.00	..
Total	39	41	80	51.25	48.75

PRINCIPAL INFECTIOUS DISEASES.

Pulmonary Tuberculosis.— The prevalence of pulmonary tuberculosis, as estimated from the notifications received, namely, 130, was somewhat less than in the previous year when the total was 137. The notifications were also fewer by 34.2 than the yearly average for the decennium 1922-1931. Too much stress, however, must not be laid on this promising record, as it is almost inevitable that every year a varying proportion of active cases should escape medical notice until the final stages of the disease. Occasionally notification is only made immediately before or even after the death of the patient.

One of the main objects of the Dispensary of the local Association for the Prevention and Treatment of Tuberculosis is not merely to await the attendance of anxious sufferers from coughs and colds seeking advice on their own initiative, but, through the Tuberculosis Nurses, to forage for cases or suspects of the disease by regular, systematic visits to the homes of patients, seeking out contacts and other suspects and encouraging them to attend the Dispensary for medical examination by the Tuberculosis Officer. In this way many early and previously unsuspected cases are revealed. Bacillary cases whose surroundings at home or at work are such that satisfactory precautions cannot be taken against the spread of the disease, or who by reason of poverty or other cause are unable to be cared for at home, are in the majority of cases prevailed upon to enter the Tuberculosis Ward the Colonial Hospital for isolation and treatment under proper hygienic conditions. In that institution, which is under the medical charge of the Tuberculosis Officer, such cases cease to endanger the public health, and a certain few recover sufficiently to be able to resume their normal lives outside without unduly jeopardising the health of those with whom they come in contact.

It is in regard to the disposal of early suspects and other seedlings of tuberculosis that the position is not so satisfactory. Efforts are made to improve their general health and resistance to the invasion of tubercle bacilli by the administration of liver oils and suitable medical preparations, but in most cases very little, if anything, can be done to overcome the fatal disadvantages of their insanitary domestic surroundings in the overcrowded barracks and barrack yards of the City.

After twenty-eight years ceaseless propaganda no practical success has attended the public efforts made to influence the establishment of a sanatorium or other suitable institution for the care and treatment of juvenile suspects and incipient cases of tuberculosis. The lack of such an institution is a great hindrance to the efficient control of tuberculosis, for having regard to the nature and mode of spread of the disease, it cannot be too clearly borne in mind that, treatment *is* prevention, and suitable provision in that behalf is strongly urged by the writer as an indispensable public health measure of great positive value.

This view has in theory been long accepted by the responsible authorities, and many sites have at different periods been spotted out and plans made for the erection of a tuberculosis sanatorium in or near the City; but further action has invariably been postponed, as if this effective weapon for combating the local ravages of one of the greatest scourges of humanity, at the point where attack is most likely to be successful, were merely an academic measure of social development which, however desirable, might conveniently await the advent of more prosperous times in the Colony's economy.

With great respect the writer is constrained to point out that continued failure to supply this universally recommended equipment for the struggle against tuberculosis is both expensive and uneconomic. Suspects and seedling cases not treated in accordance with accepted modern practice, and the disease, so to speak, nipped in the bud, wearily trail on to the bitter end, their human energy wasted and unproductive. Burdensome from beginning to end they exhaust the substance of friends and relatives as well as their own, finally becoming a ' dud ' charge on charity organisations and the public revenue.

But that is by no means all, for after a merciful release from their protracted sufferings, they more often that not leave behind them a fresh crop of infected victims destined to go through the same gruesome business over again, and so on—unless appropriate preventive measures are taken in time—*ad infinitum*.

Age Distribution of Cases notified.—The table given below shows a preponderance of male over female cases of pulmonary tuberculosis notified, the former numbering 71 and the latter 59—a difference of 12 in the sexes, compared with a corresponding difference of 7 cases in the preceding year. No case was notified under 11 years. Between 11 and 15 years, 8 cases, all except one being girls, were notified, and this preponderance of female over male adolescents, though not so great, was nevertheless well marked in the succeeding age period of 16 to 20 years, when the cases of 6 boys and 11 girls were notified. The peak of the notifications was reached at ages 21-25, but the numbers were almost equally divided between the sexes, the males numbering 17 and the females 16, a total of 33 cases. There was a decline on this figure with 24 notifications in the succeeding age period of 26-30 years, with another slight predominance of males over females. From that age the figures for females dropped sharply, with the exception of a comparatively well marked rise in the age period 46-50 years. Among the males this secondary peak, which was higher than that recorded for the females, took place at the age period of 41-45 years.

Pulmonary Tuberculosis in Port-of-Spain, 1932.—Age Distribution of Notifications according to Sex.

Age Periods.	Males.	Females.	Total both Sexes.
Under 1 year	..	..	..
1 to 5 years	..	..	..
6 to 10 do. ..	..	..	..
11 to 15 do.	1	7	8
16 to 20 do.	6	11	17
21 to 25 do.	17	16	33
26 to 30 do.	13	11	24
31 to 35 do.	5	2	7
36 to 40 do.	7	3	10
41 to 45 do.	9	..	9
46 to 50 do.	4	6	10
51 to 55 do.	2	1	3
56 to 60 do.	6	1	7
Over 60 years	1	1	2
Total	71	59	130

Deaths from Pulmonary Tuberculosis.—The number of deaths registered from this disease was 112 of which number 54 were males and 58 females, equivalent to a death-rate of 1.58 per 1,000 population. The total number of these deaths was fewer by 22 than in the preceding year, and represented a reduction of 0.32 on the corresponding death-rate, both figures being the lowest yet recorded in the City. This year the tuberculosis death-rate was also 0.74 lower than the yearly average of 2.32 for the decennium 1922-1931. As the table given below shows, no deaths of females under 11 were registered, and of males none under 15. For each sex there was a double peak between the ages of 21-25 and 26-30, respectively, the figures for females in each case being 33.3 per cent. higher than those for males. For both sexes, ages 21-30 were the most fatal. Fuller particulars under this head are set out in the table hereunder :—

Pulmonary Tuberculosis in Port-of-Spain, 1932.—Age distribution of Deaths.

Age Periods.	Males.	Females.	Total both Sexes.
Under 1 year	..	..	..
1 to 5 years	..	..	..
6 to 10 do.	..	..	..
11 to 15 do.	..	4	4
16 to 20 do.	7	10	17
21 to 25 do.	9	12	21
26 to 30 do.	9	12	21
31 to 35 do.	5	4	9
36 to 40 do.	5	3	8
41 to 45 do.	7	6	13
46 to 50 do.	3	5	8
51 to 55 do.	4	..	4
56 to 60 do.	2	1	3
Over 60 years	3	1	4
Total	54	58	112

Notifications, Deaths and Death-rates.—The figures for pulmonary tuberculosis under these heads are contrasted in the table below with the corresponding records for the 14 years, 1918-31 and, also, with the annual averages for that period. The statement shows that notifications of the disease dropped from 299 in 1914 to 130 this year ; deaths from 247 to 112 and the death-rate 3.63 to 1.58 per 1,000 population. The yearly averages for the 14 year period preceding 1932 was, for notifications, 184.07 ; deaths 161.28 and the death-rate, 2.47.

The curves of notifications of and deaths from Pulmonary Tuberculosis for the years 1918-32 are shown in Chart C.

PULMONARY TUBERCULOSIS IN PORT-OF-SPAIN.

Notifications, Deaths and Death-rates, 1918-32.

Year.	Notifications.	Total Deaths.	Death-rate per 1,000 population.
1918	299	247	3.63
1919	250	194	2.82
1920	205	185	2.65
1921	179	155	2.51
1922	190	149	2.38
1923	211	192	3.04
1924	181	162	2.53
1925	173	148	2.29
1926	172	183	2.81
1927	160	138	2.10
1928	152	141	2.13
1929	142	129	1.92
1930	124	141	2.05
1931	137	134	1.90
Yearly average 1918-31	183.93	164.29	2.48
Year 1932	130	112	1.58

From the following tabular statement showing the proportionate relationship of deaths from pulmonary tuberculosis to deaths from All Causes, according to age and sex, it appears that up to the age of 15, male deaths from this disease formed no part of the total mortality ; but, between the ages of 11 and 15, females contributed 4 such deaths, equivalent to 33.3 per cent. of the total deaths of females from All Causes. Between 16 and 25 the proportion for males, namely, 41.0 per cent., was the highest recorded for either sex at any age. For females the proportionate rate at ages 16-25 was identical with the rate for the immediately preceding age period. There was little difference between the sexes in the proportionate rates at ages 26-35, 36-45 and 46-55, but at ages 56-65 the proportion was more than double for males.

These details are extended in the table below :—

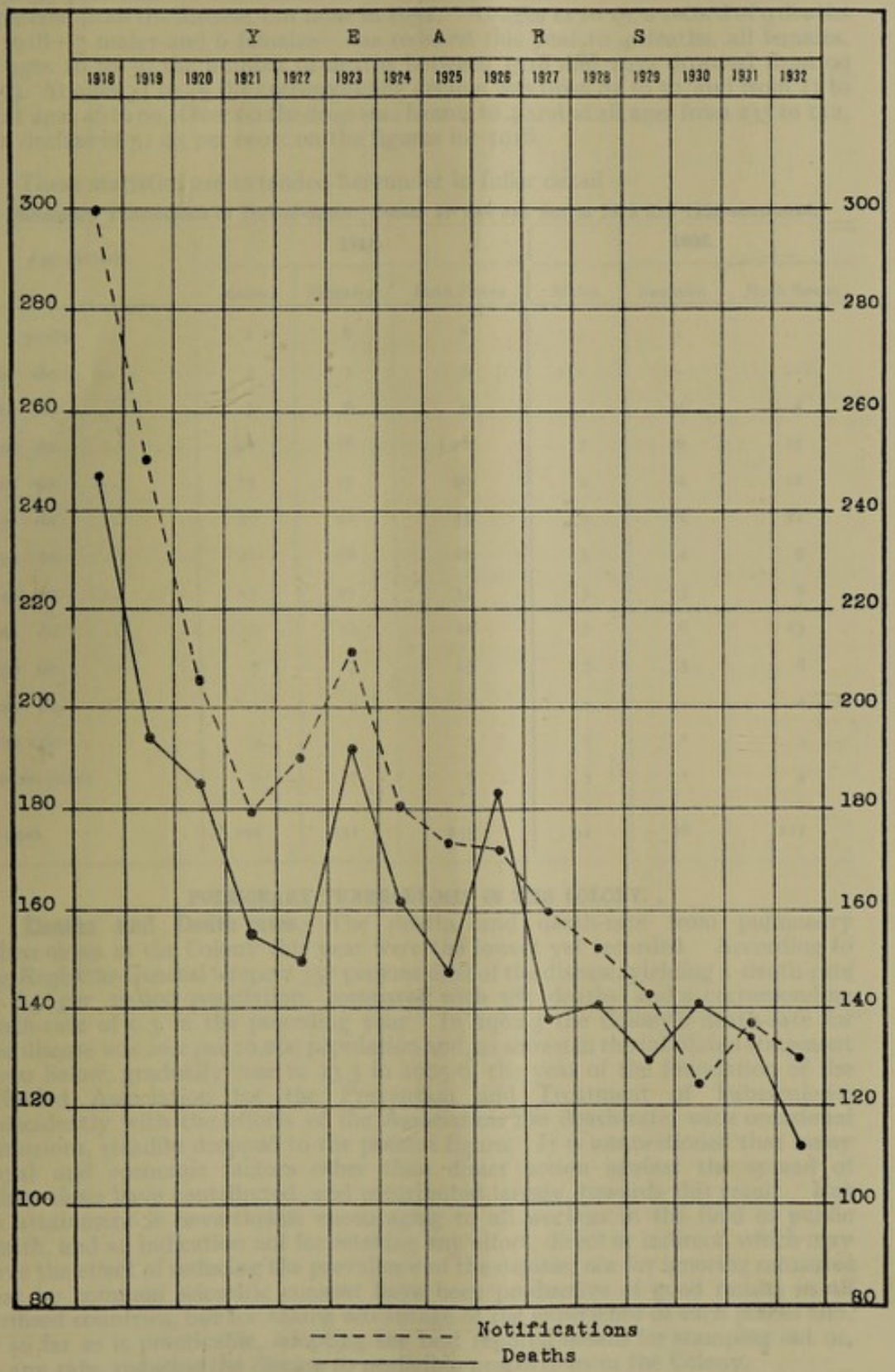
Proportion of Deaths from Pulmonary Tuberculosis to Deaths from All Causes in Port-of-Spain according to Age and Sex in 1932.

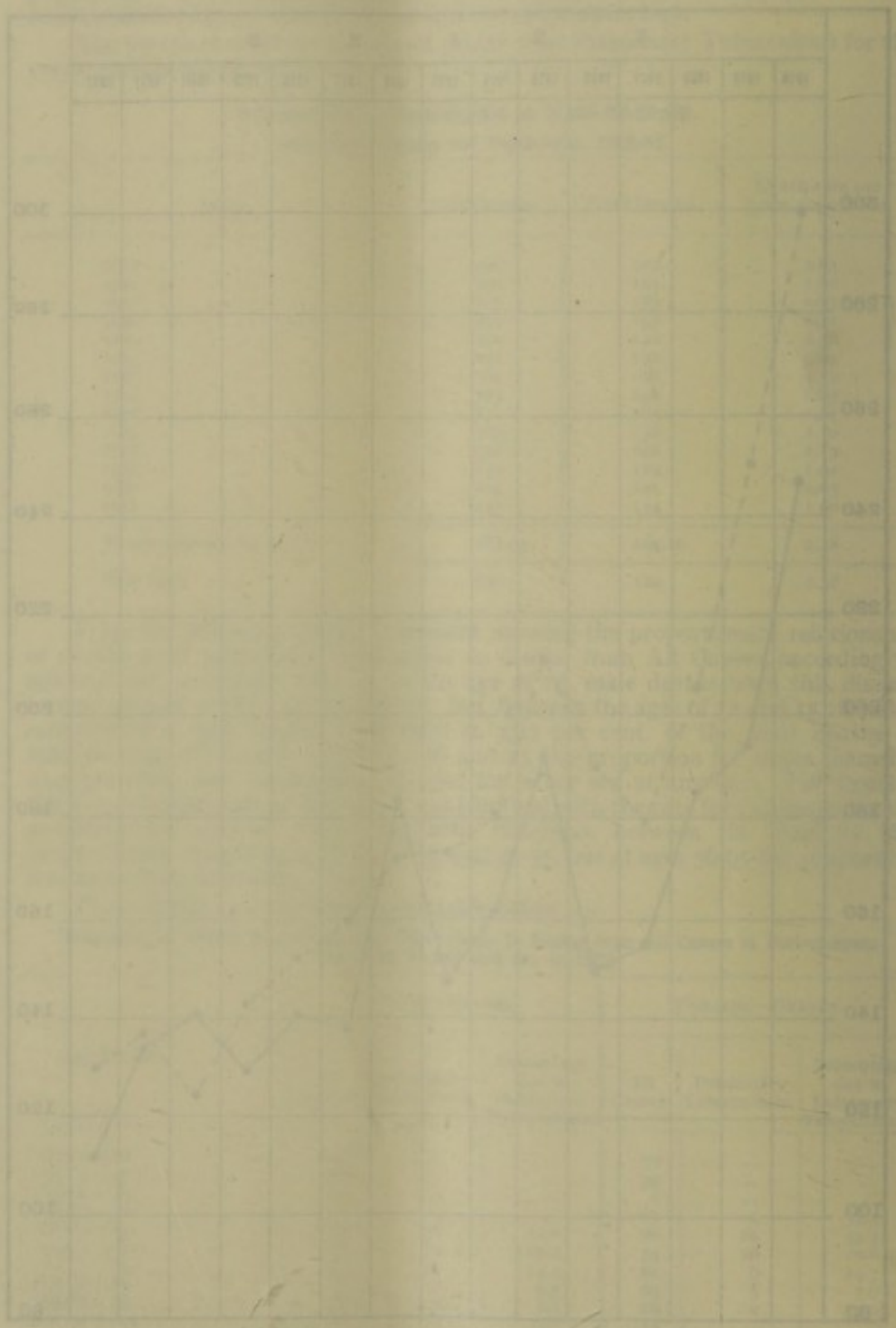
Age Periods.	Males—Deaths.			Females—Deaths.		
	All Causes.	Pulmonary Tuberculosis.	Percentage due to Pulmonary Tuberculosis.	All Causes.	Pulmonary Tuberculosis.	Percentage due to Pulmonary Tuberculosis.
Under 1 year	108	..	..	99	..	..
1 to 5 years	33	..	..	34	..	..
6 to 10 do.	7	..	..	2	..	..
11 to 15 do.	5	..	..	12	4	33.3
16 to 25 do.	39	16	41.0	66	22	33.3
26 to 35 do.	51	14	27.4	54	16	29.6
36 to 45 do.	83	12	14.4	61	9	14.7
46 to 55 do.	73	7	9.5	63	5	7.9
56 to 65 do.	65	4	6.1	66	2	3.0
Over 65 years	89	1	1.1	115	..	..
	553	54	9.7	572	58	10.1

CHART C

PULMONARY TUBERCULOSIS IN PORT-OF-SPAIN.

Notifications and Deaths, 1918—1932.





Pulmonary Tuberculosis in 1918 and 1932.—In the tabular statement given below an interesting contrast is made between the records of deaths from tuberculosis by age and sex for the years 1918 and 1932. From the figures presented the rate of decline of the disease at all ages during this period of 15 years works out at 47.06 per cent. for males, and 55.73 per cent. for females, or an average of 51.39 per cent. for both sexes. In 1918, 13 deaths of children under 11 were registered from the disease, but none in 1932. At ages 11 to 15, a record of 9 deaths in 1918—3 males and 6 females—was reduced this year to 4 deaths, all females. At ages 16 to 30 the number of deaths between 1918 and 1932 dropped from 99 to 59. At ages 31 to 45 the corresponding decline was from 82 to 30, and from 21 to 15 at ages 46 to 60. Over 60 the drop was from 9 to 4 and at all ages from 233 to 112, or a decline of 51.93 per cent. on the figures for 1918.

These statistics are extended hereunder in fuller detail :—

Pulmonary Tuberculosis in Port-of-Spain—Deaths by Age and Sex in 1918 and 1932 contrasted.

Age Periods.	1918.			1932.		
	Males.	Females.	Both Sexes.	Males.	Females.	Both Sexes.
0- 5 years	2	6	8	..	..	..
6-10 do.	2	3	5	..	..	..
11-15 do.	3	6	9	..	4	4
16-20 do.	10	16	26	7	10	17
21-25 do.	13	17	30	9	12	21
26-30 do.	21	22	43	9	12	21
31-35 do.	11	16	27	5	4	9
36-40 do.	17	17	34	5	3	8
41-45 do.	10	11	21	7	6	13
46-50 do.	6	7	13	3	5	8
51-55 do.	..	3	3	4	..	4
56-60 do.	5	..	5	2	1	3
Over 60 years	2	7	9	3	1	4
All ages	102	131	233	54	58	112

PULMONARY TUBERCULOSIS IN THE COLONY.

Deaths and Death-rates.—The deaths and death-rate from pulmonary tuberculosis in the Colony this year were the lowest yet recorded. According to the Registrar-General's report 357 persons died of the disease, yielding a death-rate of 8.5 per 10,000 population, compared with 385 deaths and a corresponding death-rate of 9.3 in the preceding year. In 1902-3 the Colony's death-rate for this disease was 20.2 per 10,000 population and, as shown in the tabulated statement given below, gradually rose to 23.5 in 1905-6, the year of the foundation of the Trinidad Association for the Prevention and Treatment of Tuberculosis. Coincidently with the efforts of the Association the death-rate, with occasional remissions, steadily dropped to the present figure. It is unquestioned that many social and economic factors other than direct action against the spread of tuberculosis have contributed, and contributed largely, towards this result. But its attainment is nevertheless encouraging to all workers in the field of public health, and an indication not for relaxing any effort, direct or indirect, which may have the effect of reducing the prevalence of the disease, nor for ignoring measures that by common scientific consent have been productive of good results in all civilised countries, but for taking advantage of the experience of such places and, in so far as is practicable, adopting the best reputed means for stamping out or, at any rate, reducing the disease to negligible proportions in the Colony.

Deaths and death-rates from the disease for the years 1902-3—1932 are tabulated below and the curve of the deaths graphically shown in Chart D.

Deaths and death-rates from Pulmonary Tuberculosis in the Colony from 1902-3 to 1932.

Year.	No. of Deaths.	Death-rate per 10,000 population.	Year.	No. of Deaths.	Death-rate per 10,000 population.
1902- 3	591	20.2	1917	475	12.6
1903- 4	675	22.4	1918	519	13.6
1904- 5	666	21.5	1919	474	12.3
1905- 6	754	23.5	1920	499	12.8
1906- 7	668	20.2	1921	473	12.8
1907- 8	721	21.4	1922	420	11.2
1908- 9	672	19.5	1923	470	12.4
1909-10	620	17.6	1924	480	12.6
1910-11	710	19.5	1925	440	11.4
1911-12	621	18.4	1926	500	12.9
1912-13	567	16.5	1927	474	12.1
1913-14	518	14.8	1928	425	10.7
1914-15	513	14.4	1929	420	10.4
1915 (9 months)	371	13.6	1930	395	9.6
1916	528	14.3	1931	385	9.3
			1932	357	8.5

NON-PULMONARY TUBERCULOSIS.

Notifications and Deaths.—16 cases of non-pulmonary forms of tuberculosis were notified with 10 deaths, equivalent to a death-rate of 0.14 per 1,000 population, as against 10 cases and 7 deaths with a death-rate of 0.10 in the preceding year. The yearly average death-rate from these forms of tuberculosis for the decennium 1922-31 was 0.29 per 1,000 population.

The curve of deaths from non-pulmonary tuberculosis in Port-of-Spain for the years 1918-1932 are displayed in Chart E.

Particulars of the prevalence of the disease by age and sex and deaths therefrom are given in the tabulated statement below.

Non-Pulmonary Tuberculosis.—Notifications and Deaths by Age and Sex.

Ages.	Notifications.			Deaths.		
	Males.	Females.	Both Sexes.	Males.	Females.	Both Sexes.
Under 1 year	..	..	..	1	1	2
1- 5 years	2	5	7	2	3	5
6-10 do.	1	2	3	1	..	1
11-15 do.	..	1	1	1	..	1
16-20 do.	..	..	..	..	..	..
21-25 do.	..	..	..	..	..	..
26-30 do.	1	..	1	..	..	..
31-35 do.	..	..	..	1	..	1
36-40 do.	2	1	3	..	..	..
41-45 do.	..	1	1	..	..	..
Total ..	6	10	16	6	4	10

As shown in the foregoing statement 11 of the cases notified under this head were below 16 years of age and 5 were adults between the ages of 26 and 45. Of the deaths 9 were children under 16 and the remaining one was an adult in the age period 31 to 35. Two deaths were recorded among infants under 1 year of age and 5, the highest number at any age period, were children at ages 1 to 5.

The various forms of non-pulmonary tuberculosis notified during the year and the deaths registered therefrom by age and sex are shown in the table hereunder. These include acute miliary tuberculosis which is generalised in its distribution and attacks, with invariably fatal results, almost every organ of the body—the meninges or coverings of the brain and the spinal cord, the liver, lungs, spleen and kidneys being specially liable to suffer; tuberculosis of the spine—the common cause of spinal curvature and a hunchback, tuberculosis of joints, lymphatic and other glands, and tubercular meningitis and peritonitis.

The control of non-pulmonary forms of tuberculosis, which are mainly the result of infection by the bovine type of tubercle bacillus, is practically the control of the sale of cows' milk and will be referred to elsewhere under that head.

CHART D

PULMONARY TUBERCULOSIS IN COLONY OF TRINIDAD AND TOBAGO.

DEATH-RATE PER 10,000 LIVING, 1902-03 --1932.

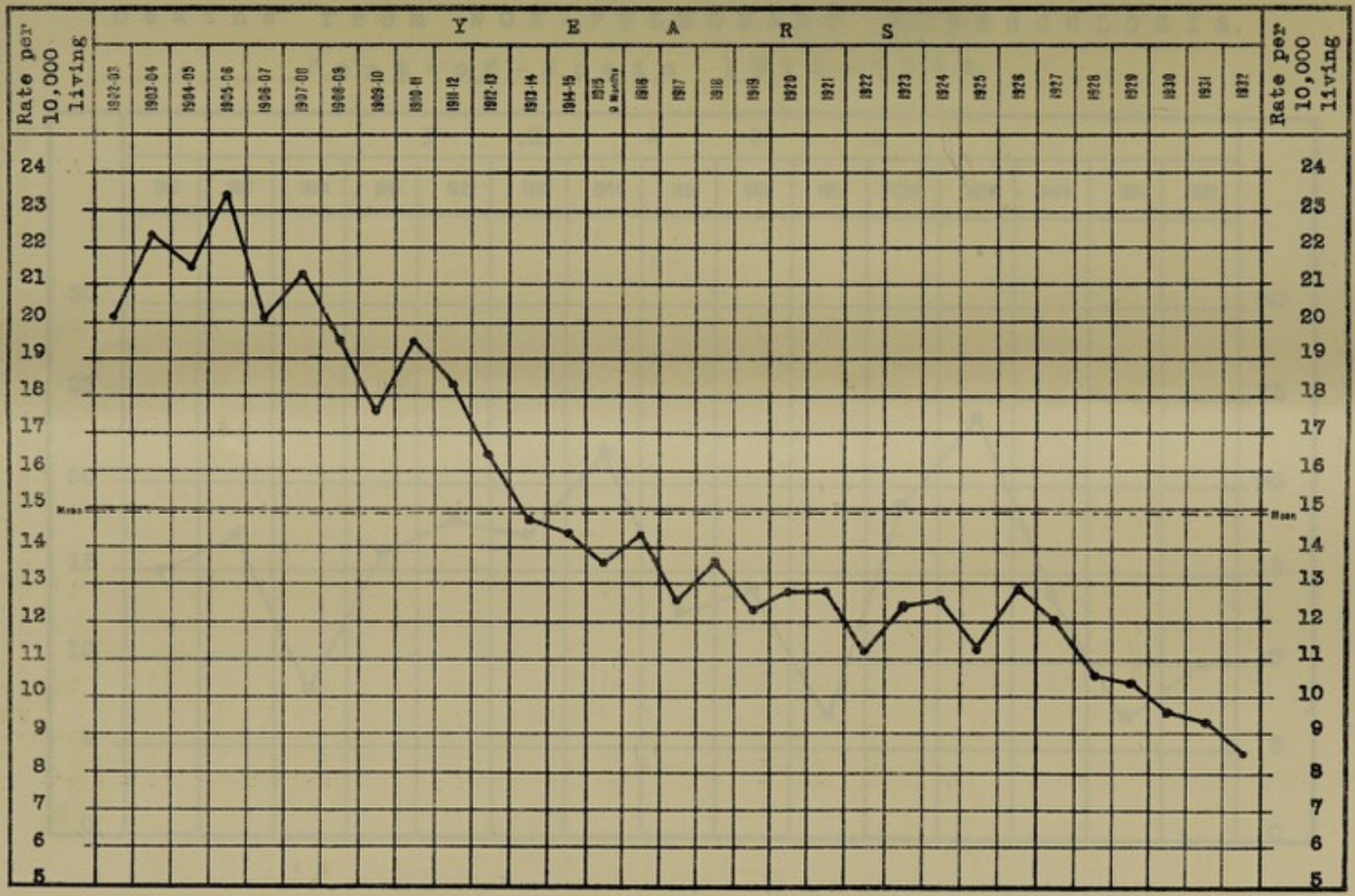
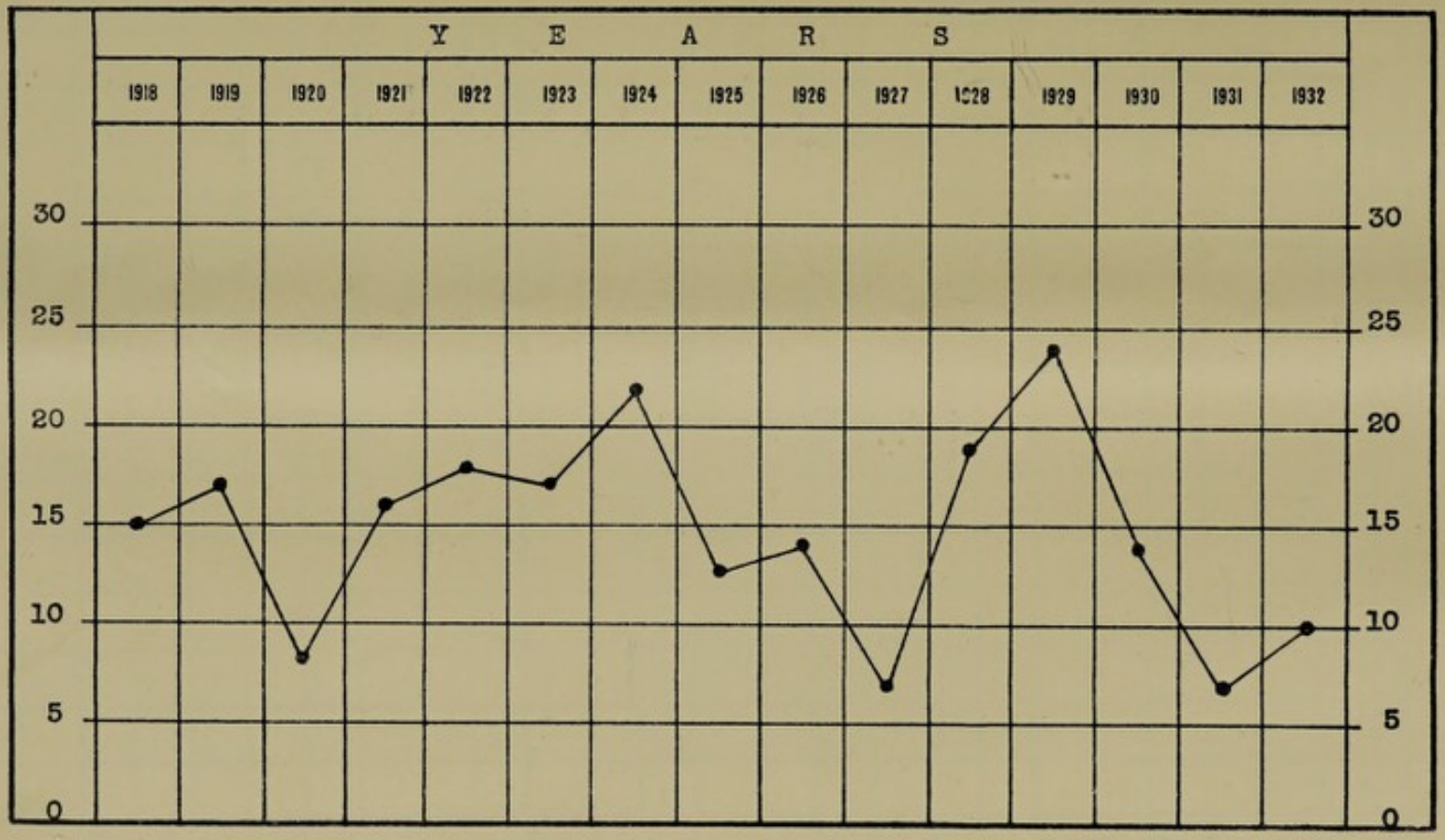


CHART E

Deaths from NON-PULMONARY TUBERCULOSIS.

Port-of-Spain 1918—1932.



Динаміка злочинності дорослих
в м. Київ за 1910—1923 рр.

Схема 6

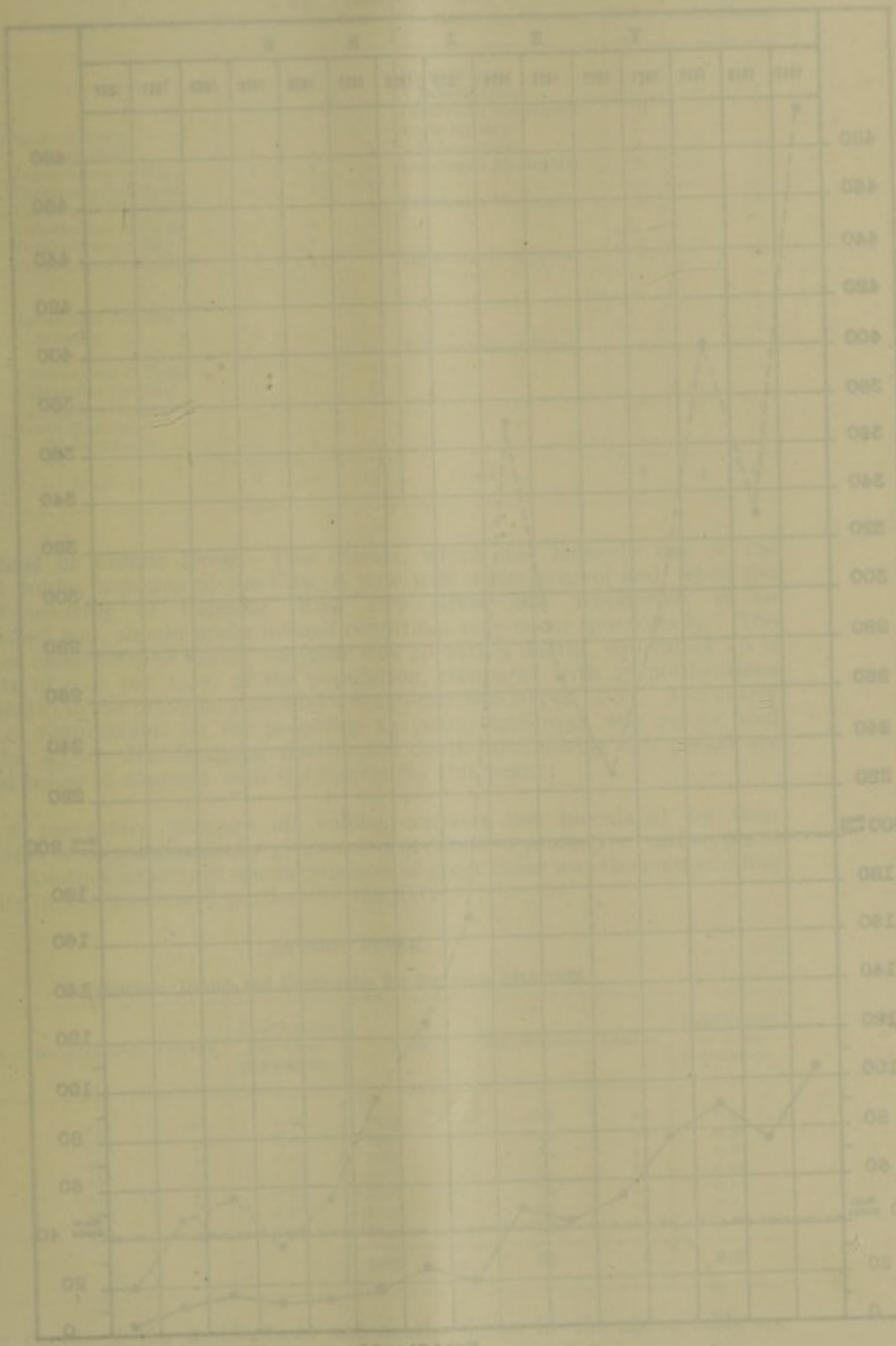
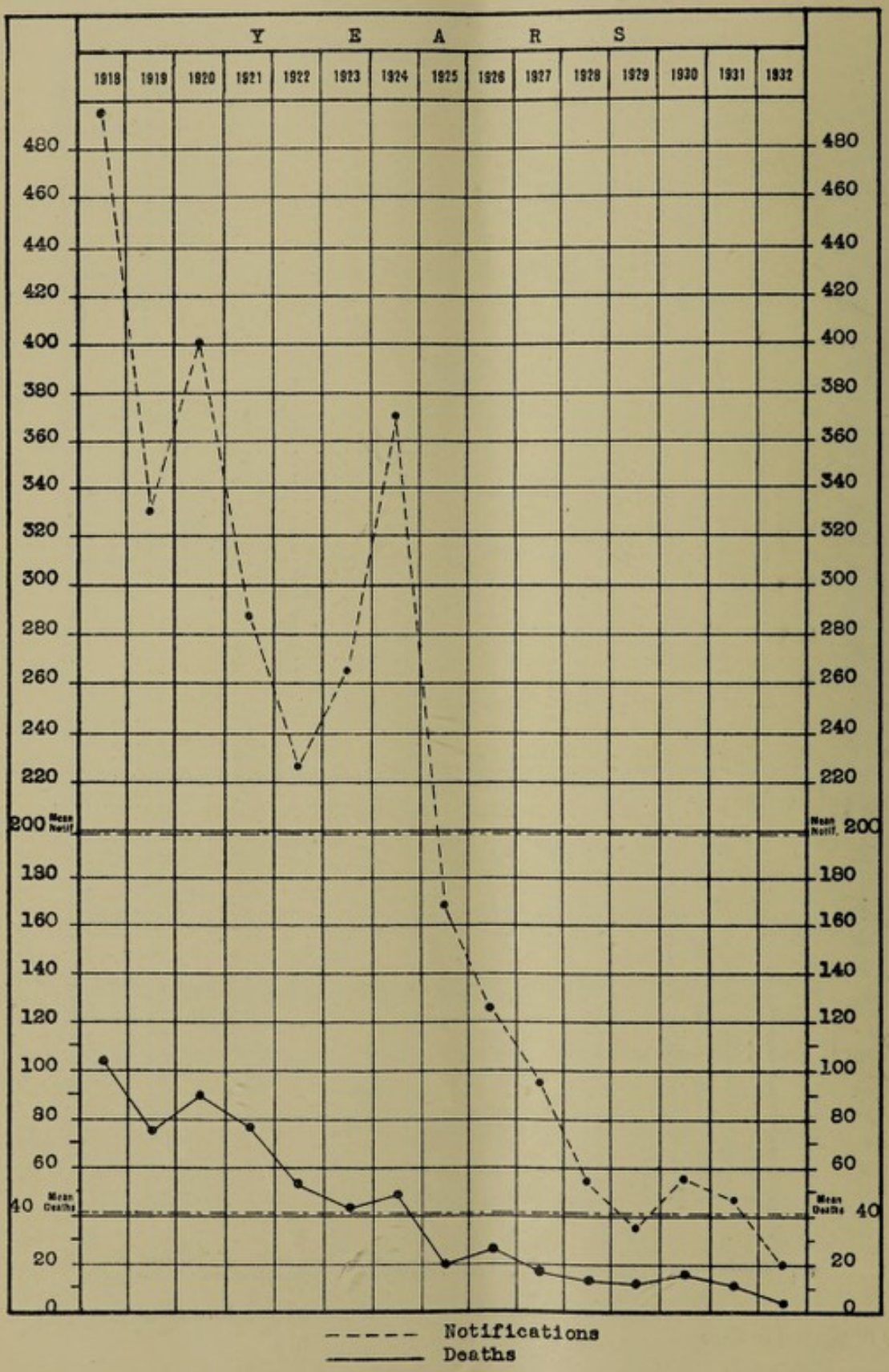


CHART F

ENTERIC FEVER IN PORT-OF-SPAIN.

Notifications and Deaths, 1918—1932.



Non-pulmonary Tuberculosis.—Forms notified and Deaths registered therefrom according to Age and Sex.

Ages.	Notifications.				Deaths.			
	Forms of the Disease.	Males.	Females.	Both Sexes.	Forms of the Disease.	Males.	Females.	Both Sexes.
Under 1 yr.	.. .. ..	..	..	..	Acute Miliary Tuberculosis ..	..	1	1
Do. ..	.. .. ..	..	..	..	Tubercular Meningitis ..	1	..	1
1- 5 ..	Acute Miliary Tuberculosis ..	1	3	4	Acute Miliary Tuberculosis ..	1	2	3
Do. ..	Tuberculosis of Hip ..	1	1	2	Tubercular Meningitis ..	1	1	2
Do. ..	Tuberculosis of Spine ..	..	1	1	.. .. ..	..	..	..
6-10 ..	Tubercular Meningitis ..	1	..	1	Tubercular Meningitis ..	1	..	1
Do. ..	Tuberculosis of Spine ..	..	1	1	.. .. ..	..	..	..
Do. ..	Tuberculosis of Hip ..	..	1	1	.. .. ..	..	..	..
11-15 ..	Tubercular Peritonitis ..	..	1	1	Tuberculosis of Spine ..	1	..	1
16-20 ..	.. .. ..	..	..	..	.. .. ..	..	..	..
21-25 ..	.. .. ..	..	..	..	.. .. ..	..	..	..
26-30 ..	Tubercular Cervical Adenitis	1	..	1	.. .. ..	..	..	..
					.. .. ..	..	..	..
31-35 ..	.. .. ..	..	..	..	Tuberculosis of Spine ..	1	..	1
36-40 ..	Tuberculosis of Spine ..	1	..	1	.. .. ..	..	..	..
Do. ..	Tubercular Orchitis ..	1	..	1	.. .. ..	..	..	..
Do. ..	Tubercular Meningitis ..	..	1	1	.. .. ..	..	..	..
41-45 ..	Acute Miliary Tuberculosis ..	..	1	1	.. .. ..	..	..	..
	Total	6	10	16	Total	6	4	10

Typhoid or Enteric Fever.— This disease, which was formerly one of the principal public problems of the City, is now well under control and, when the proposed sewering of Belmont, East Dry River and Woodbrook is an accomplished fact, should under normal conditions only occur sporadically. The number of cases notified during the year was 20 with 4 deaths, equivalent to a death-rate of 0.06 per 1,000 of the population, compared with 47 notifications and 11 deaths in the previous year, and a death-rate of 0.16 per 1,000. The yearly average of notifications for the preceding 14 years, 1918-1931, was 210.92, and of deaths, 43.5. Notifications, deaths and death-rates during this period are tabulated below in contrast with the figures for this year.

As a preventive measure all willing contacts not inoculated by their own doctors were systematically given two injections of protective anti-typhoid vaccine. Another important special measure of great value was the regular oiling of cesspits in the unsewered portions of the City.

ENTERIC FEVER.

Notifications, Deaths and Death-rates for the years 1918-1932.

Year.	Notifications.	Deaths.	Death-rates per 1,000 population.	Year.	Notifications.	Deaths.	Death-rates per 1,000 population.
1918 ..	495	104	1.52	1925 ..	168	20	0.31
1919 ..	330	76	1.10	1926 ..	125	26	0.39
1920 ..	401	90	1.29	1927 ..	95	17	0.26
1921 ..	287	77	1.25	1928 ..	54	14	0.21
1922 ..	226	53	0.84	1929 ..	35	13	0.19
1923 ..	265	43	0.68	1930 ..	55	16	0.23
1924 ..	370	49	0.76	1931 ..	47	11	0.16
				1932 ..	**20**	**4**	**0.06**

The curves of the notifications and deaths shown in the above table are graphically displayed in Chart F.

Pneumonia.—The prevalence of pneumonia, which includes acute primary or lobar pneumonia and broncho pneumonia, was the same as in the previous year when 71 cases were notified. Deaths, however, were fewer, being 55, equivalent to a death-rate of 0.77 per 1,000 population with a high case-mortality of 77.4, as against 65 deaths with a death-rate of 0.92 and a higher case-mortality of 91.5 per cent. for 1931.

The disease prevailed most in the month of September, when 9 cases were notified, and was at its lowest ebb in May, with 3 notifications. February and November, with 8 deaths each, were the most fatal months for the disease and March, April, July and December, the least so, with 3 deaths each.

Yearly notifications, deaths and death-rates from the disease together with the case-mortality for the decade 1922-31 are contrasted in the table below with the corresponding records for 1932.

PNEUMONIA (All Forms).
Notifications, Deaths, Death-rates and Case Mortality for the years 1922-1932.

Year.	Notifications.	Deaths.	Death-rate per 1,000 population.	Case Mortality.	Year.	Notifications.	Deaths.	Death-rate per 1,000 population.	Case Mortality.
1922 ..	240	140	2.24	58.3	1927 ..	65	41	0.63	63.0
1923 ..	76	75	1.19	98.6	1928 ..	60	51	0.77	85.0
1924 ..	72	50	0.78	69.4	1929 ..	70	55	0.82	71.4
1925 ..	85	63	0.98	74.1	1930 ..	83	55	0.80	66.2
1926 ..	86	62	0.95	72.0	1931 ..	71	65	0.92	91.5
					1932 ..	**71**	**55**	**0.77**	**77.4**

Of the 55 deaths recorded in the above table 29, or 52.73 per cent., were isolated in hospital before death, compared with 55.39 per cent. so treated in the previous year.

Diphtheria.—61 cases of diphtheria were notified during the year. The disease was of a mild type and no mortality resulted therefrom. It began to be unusually prevalent in April when 11 cases were notified, followed by 17 cases in May, after which it declined, there being only 8 notifications in June. Two cases each were notified in February, July and November, 5 each in March, September and October, 4 in December and none in January or August.

As an emergency measure of protection passive immunisation was practised by the writer on a large percentage of contacts unable to afford this service privately by the injection in each case of 1,000 c.c. of diphtheria anti-toxin.

Annual notifications of the disease together with the deaths and death-rates from the disease for 15 years, 1917-1931, are compared in the table below with this year's figures.

DIPHTHERIA.
Notifications, Deaths and Death-rates for the years 1917-32.

Year.	Notifications.	Deaths.	Death-rates.	Year.	Notifications.	Deaths.	Death-rates.
1917	9	4	0.06	1925	25	2	0.03
1918	17	0	0.00	1926	4	1	0.02
1919	9	1	0.01	1927	16	2	0.03
1920	6	1	0.01	1928	19	3	0.05
1921	18	1	0.02	1929	24	0	0.00
1922	8	2	0.03	1930	29	1	0.01
1923	10	3	0.05	1931	31	2	0.03
1924	27	2	0.03				
				1932	**61**	**0**	**0.00**

Small Pox.—There has been no recurrence of small pox in the City since the slight outbreak of alastrim or **variola minor** previously recorded as having taken place between the months of January and June in 1926.

Chicken Pox.—Chicken pox of a mild type, as usual, without mortality, was slightly more prevalent this year with 34 cases notified as against 30 in the previous year.

The table below shows that the cases were equally distributed between the sexes and were most numerous in the age groups 6-10, 11-15, 16-20 and 21-25 years.

Chicken Pox in Port-of-Spain.—Notifications by Age and Sex for the year 1932.

Age Periods.	Males.	Females.	Both Sexes.	Age Periods.	Males.	Females.	Both Sexes.
Under 1 year	..	..	..	26 to 30 years ..	1	..	1
1 to 5 do. ..	1	1	2	31 to 35 do. ..	1	1	2
6 to 10 do. ..	3	4	7	36 to 40 do. ..	1	..	1
11 to 15 do. ..	1	4	5	41 to 45 do. ..	..	2	2
16 to 20 do. ..	2	3	5	Over 45 years ..	3	..	3
21 to 25 do. ..	4	2	6				
					17	17	34

Ophthalmia Neonatorum.—18 cases of this grave affection of the eyes of new born infants were notified, as against 22 in the previous year and a yearly average of 28.8 for the quinquennium 1927-31.

Within recent years propaganda against the spread of venereal diseases has been more frank and enlightening than in the past, and with the improvement gradually taking place in the training and standard of education of candidates who sit for the midwives examination of the Medical Board of the Colony as, also, the better facilities recently provided for the ante-natal work of the Child Welfare League, there is good reason to hope for a continuing decline in the incidence of this blinding affection.

Encephalitis Lethargica.—One fatal sporadic case of this disease, sometimes called "sleepy sickness", occurred during the year in the month of April. The disease which is of rare occurrence in the City was made notifiable in September 1929 since when only one case besides the present has been recorded.

NON-NOTIFIABLE INFECTIOUS DISEASES.

Diseases in this group included malaria, syphilis, dysentery, influenza, ankylostomiasis and whooping cough. Together, the deaths for which they were responsible totalled 79, or 1 less than in the preceding year, and equivalent to 7.02 per cent. of the total deaths from all causes.

Malaria.—36 deaths were ascribed to this disease, equivalent to a death-rate of 0.51 per 1,000 population, as against 38 cases, a death-rate of 0.54 in the preceding year and a yearly average of 0.70 for the decennium 1922-31. In six instances this year the patient was not medically attended and the diagnosis of malaria was made on viewing the body after death. In such cases a lack of definiteness attaches to the cause of death registered. Of the total deaths, 15, or 41.65 per cent., occurred during the dry season, between January and June, when the average monthly rainfall was 4.30 inches, and 21 in the wet season, between July and December, when the average monthly rainfall was 7.89 inches. Particulars of the deaths by age and sex are tabulated below:—

Deaths from Malaria by Age and Sex.

Ages.	Males.	Females.	Both Sexes.	Ages.	Males.	Females.	Both Sexes.
Under 1 year	3	4	7	31 to 35 years ..	1	..	1
1 to 5 years ..	2	6	8	36 to 40 do. ..	1	3	4
6 to 10 do. ..	1	..	1	41 to 45 do. ..	1	1	2
11 to 15 do. ..	..	..	..	46 to 50 do. ..	2	..	2
16 to 20 do. ..	1	2	3	51 to 55 do. ..	..	..	..
21 to 25 do. ..	1	1	2	56 to 60 do. ..	..	3	3
26 to 30 do. ..	1	..	1	Over 60 years ..	1	1	2
				Total ..	15	21	36

Each death from malaria is carefully investigated and among adults a history of having visited or lived in some malarious district outside the City or, sometimes, the Colony is not uncommonly obtained. A certain number of cases, however, do occur among infants and children, as shown in the table above, who have never left the City, and in whom infection must have taken place within its boundaries. This has been specially observed in portions of the City adjoining Laventille on the eastern side, and Mucurapo on the west. Dr. Eric de Verteuil, in his excellent report on the Malaria Survey carried out by him in 1930 and 1931, confirmed the suspicion, previously expressed by the writer in his Annual Report for 1928, of infected anopheles migrating to the City from neighbouring out-districts and giving rise to a certain amount of malaria, more especially in North Belmont, East Dry River and West Woodbrook.

Control of Malaria.—Following upon Dr. de Verteuil's report, Government has made rapid progress with a scheme for the abolishing of dangerous breeding grounds of anopheles which menace the eastern portions of the City. Dr. de Verteuil's remarks on this subject in his Malaria Survey Report for 1932, together with plans prepared by him showing the progress of the work in question, are reproduced through his kind courtesy.

When this scheme is completed and certain dangerous breeding grounds of anopheles on the south-eastern foreshore and in Mucurapo, west of the Maraval River, are abolished, the risk of malarial infection in the City should become a remote contingency.

"Northern Section of Laventille Estuarine Mangrove Swamp.

75. The work now in progress in this section is of particular interest because it constitutes the beginning of the anti-malarial works to be carried out under the anti-malarial scheme submitted by the Government two-and-a-half years ago.

76. This section extends from the Eastern boundary of the City of Port-of-Spain to the Caledonia Road one and three-quarter miles to the East.

It is a focus of high endemicity, and is situated in an area of high potential economic value, mainly on account of its immediate proximity to the city. The spleen rate at John John village amongst 72 people was 12 per cent.; at Success village amongst 231 people it was 44 per cent.; and in the rest of the area amongst 39 people eight per cent. The peripheral blood of 71 persons taken outside of the malaria season, and apparently in ordinary health, showed malarial parasites present in 13 per cent.

77. The swamp proper south of the railway line as well as the borrow pit which receives the drainage from the brackish water area north of the railway line (*see* Plan IV), are distinctly tidal, and have been found to be free of all mosquito breeding as far as the north-eastern corner where brackish water breeding begins south of the railway line (*see* Plan VII).

78. The scheme which has been drawn up by the Sanitary Engineer with my collaboration provides for 21 concrete drains (4,270 lineal yards) from North to South discharging under the Eastern Main Road, and the railway line into the Northern channel of the swamp and involves regrading and reconstruction of 11 culverts under the Main Road.

79. The discharge in each case will be just above High Water Level Ordinary Spring Tide.

80. It provides also for filling in of the low-lying land north of the railway line which now holds stagnant brackish water.

81. This reclaimed area will have a total of approximately 24 acres. It also provides for the clearing of the northern channel of the swamp.

82. Work was begun on this section on 26th August. The plan shows the progress which has been made.

Eastern Section of Laventille Estuarine Mangrove Swamp.

83. The extent of the area in this section, which requires control through anti-anopheline measures is clearly seen in Plan VII, where the boundaries of the *tarsimaculatus* brackish water zone are shown by the B and C lines.

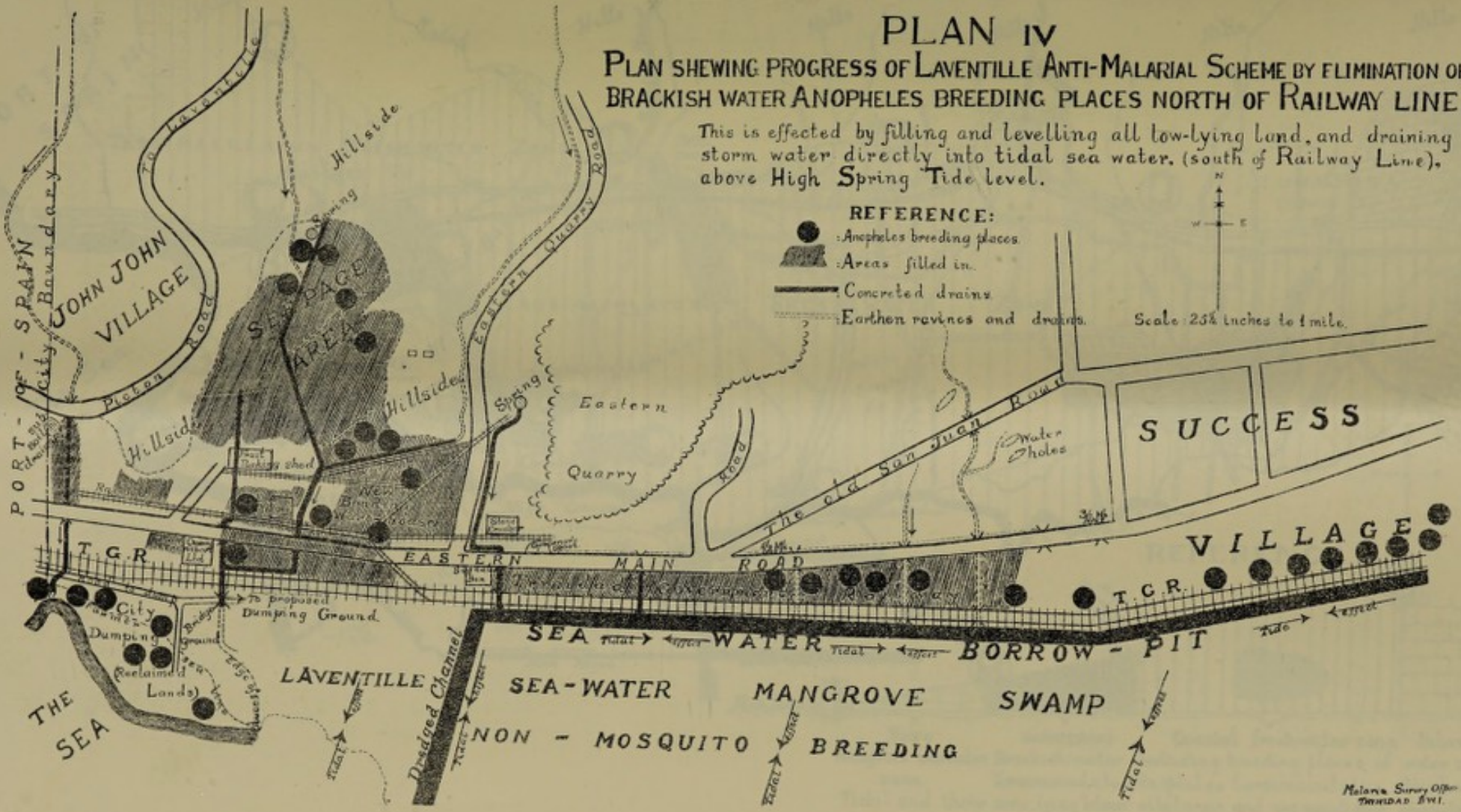
84. The anopheles control of this area is still under consideration, but without going into details it is obvious, as the plan clearly shows, that here we are concerned with a much more difficult and extensive problem than is the case with the northern section of the swamp; and it is likely that the reclamation of this area would involve engineering problems of some difficulty.

85. It is proposed therefore to enlist the co-operation of the Sanitary Engineer in tackling this problem during the coming Dry Season, when a more complete survey will be possible."

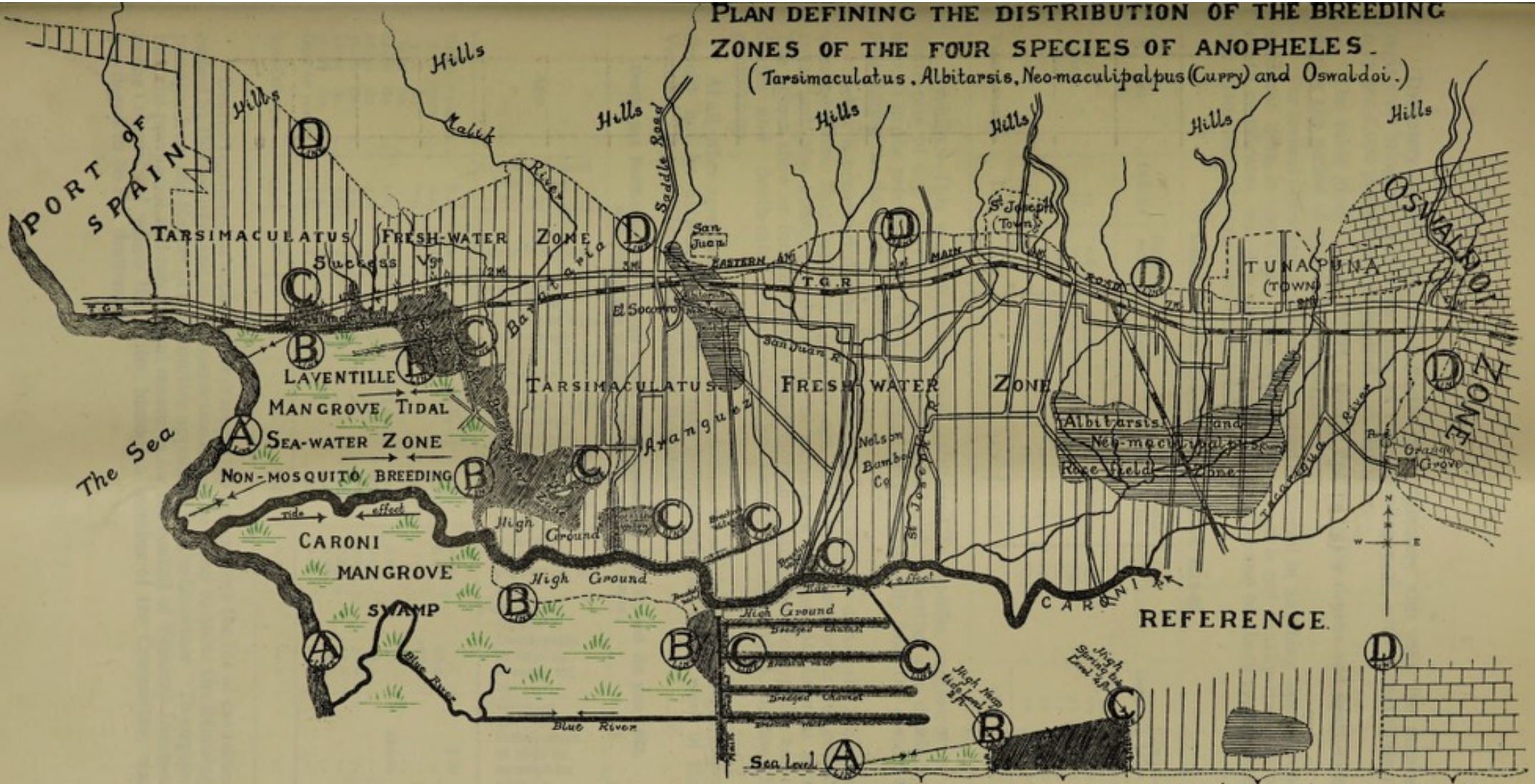
PLAN IV

PLAN SHEWING PROGRESS OF LAVENTILLE ANTI-MALARIAL SCHEME BY ELIMINATION OF BRACKISH WATER ANOPHELES BREEDING PLACES NORTH OF RAILWAY LINE.

This is effected by filling and levelling all low-lying land, and draining storm water directly into tidal sea water, (south of Railway Line), above High Spring Tide level.



PLAN N°1



Malaria Survey Office
Trinidad. B.W.I.
March 1933.

Dysentery.—There were fewer deaths from dysentery this year, the number registered being 12, or 6 fewer than in the preceding year, with a death-rate of 0.17 per 1,000 population, as against 0.26 last year.

The table given below shows a steady decline in the deaths and death-rates during the period of 15 years, 1918-1932.

For several years past dysentery has ceased to prevail in anything approaching epidemic form in the City. The type of the disease is not usually specified on death certificates, but it is gathered that both amoebic and bacillary types occur, the latter being the one more often fatal.

Deaths from the Dysenteries for 15 years, 1918-32.

Year.	Deaths.	Death-rates.	Year.	Deaths.	Death-rates.	Year.	Deaths.	Death-rates.
1918 ..	43	0.63	1923 ..	25	0.40	1928 ..	29	0.44
1919 ..	48	0.70	1924 ..	42	0.66	1929 ..	23	0.34
1920 ..	63	0.90	1925 ..	31	0.48	1930 ..	11	0.16
1921 ..	31	0.50	1926 ..	31	0.47	1931 ..	18	0.26
1922 ..	24	0.38	1927 ..	27	0.41	1932 ..	12	0.17
Yearly average	41.8	0.62		31.2	0.48		18.6	0.27

Syphilis.—This year 26 deaths were attributed to syphilis, equivalent to a death-rate of 0.37 per 1,000 population, compared with 18 deaths, or a death-rate of 0.26 in the preceding year, and an annual average mortality from the disease of 0.64 during the decennium 1922-31.

Below is presented deaths and death-rates from syphilis during the preceding quinquennium, 1927-1931, according to age, with the corresponding records for 1932, and also giving the percentage of increase or decrease at different ages. The figures show an increase in the infant mortality attributed to syphilis and in deaths and death-rates presumably also caused by congenital disease, in group 11-20.

At all other ages there was a moderate decline, to which too great significance should not be attached although it may indicate progress in the work of the Venereal Diseases Clinic at the Colonial Hospital.

Deaths and Death-rates from Syphilis during the quinquennium, 1927-31, and the year 1932, with percentages of decline or increase at different ages.

Ages.	Average Annual Deaths for 1927-31.	Deaths for 1932.	Percentage decline of Deaths in 1932 on average for 1927-31.	Percentage increase of Deaths in 1932 on average for 1927-31.	Average Annual Death-rates per 1,000 population for 1927-31.	Death-rates per 1,000 population for 1932.	Percentage decline of Death-rates in 1932 on average for 1927-31.	Percentage increase of Death-rates in 1932 on average for 1927-31.
Under 1 year ..	8.8	10	..	13.64	0.13	0.14	..	7.69
1- 2 years ..	2.2	1	54.5	..	0.03	0.01	66.6	..
3- 5 do. ..	0.4	..	100.0	..	0.006	..	100.0	..
6-10 do. ..	..	..	..	..	..	..	..	..
11-20 do. ..	0.8	2	..	125.00	0.01	0.03	..	200.00
21-30 do. ..	5.6	5	10.7	..	0.08	0.07	12.5	..
31-40 do. ..	5.4	3	44.4	..	0.08	0.04	50.0	..
41-50 do. ..	2.6	2	23.0	..	0.04	0.03	25.0	..
51-60 do. ..	3.4	2	41.1	..	0.05	0.03	40.0	..
Over 60 years ..	3.8	1	73.6	..	0.06	0.01	83.3	..
Total all ages ..	33.0	26	21.2	..	0.49	0.37	24.4	..

Deaths registered as syphilis, *pur et simple*, do not exhaust the list of casualties caused by this scourge, and in this connection it may be useful to quote the following passages from the Report of a Committee appointed by the Governor "To enquire into the prevalence and recommend measures for the control of Venereal Diseases in the Colony" of which the writer, himself a member of the Committee, was privileged to be the draftsman.

"Syphilis is transmissible through either parent to innocent offspring. It is one of the principal causes of abortion, miscarriage, and debility at or soon after birth and largely contributes to the heavy infantile mortality of the colony. It is also a common source of developmental diseases, cranial deformities, water on the brain or hydrocephalus, hare lip, cleft palate, club foot and other malformations, retardation of growth, defective development of the brain with consequent mental deficiency or actual idiocy. It is also one of the principal causes of deafness in children.

It is one of the chief causes of diseases of the heart and blood vessels including aneurism of which it is perhaps the sole cause.

It is a factor in the causation of Bright's disease of the kidneys, diabetes and cirrhosis of the liver. Stricture of the rectum, resulting from gummatous tumours of that portion of the large intestine, is also of frequent occurrence.

It is a predisposing cause of tuberculosis and also of cancer especially cancer of the tongue for which it is responsible in 80 per cent. of cases.

It is the fundamental cause of general paralysis of the insane and locomotor ataxia, and also of optic atrophy and other blinding diseases of the delicate structures to the back of the eyes. It is the cause of cerebral haemorrhage and of gummatous tumours of the brain, leading to disorders of the special senses and to paralysis in various parts of the body.

It is often the cause of untold misery to innocent and guilty alike.

Through its degenerative influence on the organs and tissues of the body, syphilis is one of the principal causes of premature old age and of death between the ages of 40 and 50.

* * * * * *

The number of deaths from syphilis registered in the Colony in 1916 was 106. In 1917 it rose to 163 which is a very considerable increase over the record for the previous year. These figures, however, by no means disclose the truth with regard to the mortality for which syphilis is really responsible, as it is also the *indirect* cause of a large number of deaths due to diseases that result from previous syphilitic infection. Appendix I is a table showing that in 1916, of a total of 7,526 deaths for that year, there were at least 2,855 in which syphilis played a more or less important part. Reference to this table will show that it includes deaths from aneurism, cancer of the tongue, locomotor ataxia, epilepsy and other diseases of the nervous system, apoplexy, paralysis without specified cause, cerebral softening, convulsions of infants under 5, angina pectoris, diseases of the arteries, atrophy and other diseases of newly born children, ill-defined diseases, syncope and heart failure, diseases of the bones and joints, premature births and congenital malformation—all being diseases for which syphilis is largely and, in some cases, entirely responsible.

Similarly for the year 1917, apart from the deaths registered as being directly due to syphilis, Appendix II shows that of a total of 7,892 deaths no less than 2,965 were caused by diseases which syphilis undoubtedly had a large share in promoting.

The number of still births in the Colony during the two years 1916 and 1917 were 935 and 925 respectively. The actual cause of death is not certified in these cases, but if this were done it would be found that venereal disease, especially syphilis, is primarily responsible for a great many of them.

The Committee therefore suggest, with a view to improving the accuracy of statistics regarding the prevalence of venereal disease, that the Medical Board be invited by the Government to circularise local medical practitioners requesting them, whenever possible, to state the cause of death on certificates of death issued in respect of still born children.

It is evident from all these facts that when a correct estimate is made of the death-rate for which syphilis is directly or indirectly responsible, it is found to constitute an appalling proportion of the Colony's mortality, surpassing even that of malaria or tuberculosis and controverting for all times the deluded notion, unfortunately so widely prevalent in the Colony, that the disease is a mild ailment which can safely be left in the hands of bush doctors and other unqualified persons. Syphilis, in short, is one of the principal "killing" diseases, and the Committee strongly recommend that no effort be spared to spread a true knowledge of this important fact throughout the length and breadth of the Colony."

Following a visit to the Colony in 1920 of Dr. Letitia Fairfield, and a report on the subject of the Control of Venereal Diseases, an effort was made by Government to grapple with this problem, but the Colony did not seem quite ripe for frank and open discussion of the subject which remained more or less taboo in polite circles.

During the last four or five years, however, mainly through Health Week propaganda, discreet Press articles and the valuable work done principally by Dr. V. M. Metivier, as physician to the Blind Institute, in calling public attention to the excessive amount of blindness and other visual disability caused by syphilis in the Colony the *terrain* seemed better prepared for a free presentation to the public than was hitherto the case, and a Venereal diseases section was installed at the Health Week Exhibition this year under the charge of Dr. Moralejo.

The experiment proved successful. The exhibits were viewed and the "V.D. talks" attentively listened to by large numbers of men and women at different times, with occasional 'crashers' of opposite sex. Thousands of leaflets, of which an example is printed at the end of this section, were circulated among visitors to the Health Exhibition.

This, however, is only a small contribution to anti-venereal propaganda work : more comprehensive measures, such as are advocated in the Summary of Recommendations of the 1916 Venereal Diseases Committee Report reproduced below, are necessary for the efficient control of these diseases of which syphilis is regarded as the principal.

Summary of Recommendations of Venereal Diseases Committee.

"The recommendations made may be summarised as follows :—

1. The systematic education of the public as to the nature and perils of venereal diseases by the Government as well as by voluntary organizations formed for the purpose of preventing these diseases.

2. The provision by the Government, free of cost to the public, of the most modern means for the early diagnosis of venereal diseases.

3. The provision by the Government of suitable literature on the question of Venereal diseases and their prevention to all medical practitioners in and out of the Government medical serivce for distribution to patients suffering from venereal diseases.

4. The establishment by the Government of special evening clinics at the Colonial Hospitals in Port-of-Spain and San Fernando, and in other popular centres, on the lines adopted in Jamaica, for the gratuitous treatment of venereal diseases by the most modern methods.

5. The rigid enforcement of the provisions of the Summary Convictions (Offences) Ordinance relating to women who loiter on the streets and solicit passengers for immoral purposes, and the appointment of Policewomen to prevent this form of traffic.

6. Compulsory medical treatment during the period of their incarceration of women found, after conviction for the offences referred to in the next preceding recommendation, to be suffering from venereal disease, and their further detention in Hospital if, on the expiration of their sentence, they are still uncured and in a condition dangerous to the public health ; other infected prisoners to be treated during incarceration and, if necessary, encouraged after liberation to attend regularly at the nearest health office or hospital to complete their cure.

7. The introduction of legislation for preventing the treatment of venereal diseases otherwise than by registered medical practitioners.

8. The addition of ophthalmia neonatorum to the list of infectious diseases notifiable under the provisions of the Public Health Ordinance, 1915.

9. The provision by the Government in Constabulary Barracks and similar establishments, and compelling the provision by employers on estates and other labour centres, of facilities for obtaining Calomel Ointment and Permanganate of Potassium, free of charge, for use in anti-venereal prophylaxis.

10. The Government to request the Medical Board to include in the regulations issued for the observance of midwives (1) the taking of all necessary prophylactic measures against ophthalmia neonatorum when attending on a parturient case (2) the obligatory duty of summoning a medical practitioner immediately in every case of ophthalmia neonatorum.

11. The Board to be further requested to urge upon medical practitioners the importance of including, when possible, the cause of death on certificates of death issued by them in respect of still born children."

By pursuing these methods, some of which, 7 and 8, for example, have already been introduced—though the former is practically a dead letter—and providing improved and extended facilities for the proper treatment of venereal diseases, the prevalence of syphilis may be expected to diminish gradually, and in course of time a new generation will arise having greater freedom from the taint of this dreadful, maiming and killing disease which, mainly through ignorance and the insufficiency of skilled medical attention available to poverty cases and patients of small means, is so widespread in the Colony.

PORT-OF-SPAIN CITY COUNCIL.

PUBLIC HEALTH DEPARTMENT.

Health Week, 1932.

SYPHILIS.

SYPHILIS is a constitutional venereal disease caused by a specific germ, the *Spirochaeta* or *treponema pallida*. It is very widespread in this Colony both in the acquired and congenital forms, and is an important cause of death every year. If the remote influence of syphilis, and the many diseases to which it predisposes are taken into consideration, it represents one of the greatest scourges of civilization.

Syphilis helps to fill the lunatic asylums and causes a marked predisposition to certain forms of Cancer. Directly or indirectly its influence is so far reaching in health and disease that it may be regarded as one of the most important factors governing the bodily and mental efficiency of the human race. It may remain quiescent for 10,30 or even 60 years and finally cause sudden death or incurable paralytic symptoms.

The results of syphilis are not confined to the infected individual but is generally transmitted to his or her offspring. Such offspring may be born apparently healthy but the disease may manifest itself afterwards by all the signs and symptoms of the acquired disease.

Syphilis is one of the commonest causes of abortions and miscarriages, still-births, congenitally weak and debilitated children who die within the first year of life and swell the infant mortality rate.

Syphilis is also the cause of mentally defective children, congenital idiots, congenital malformations and monstrosities.

The traditional view of syphilis as a secret malady, or a shameful disease of individual concern only, no longer holds good in the light of the ravages for which it is now known to be responsible.

Syphilis is a widespread social disease and it is of the utmost importance to the well being of humanity that it should be boldly and vigorously controlled.

A single impure exposure is enough to cause infection. The disease may also be acquired by kissing, drinking from vessels used by infected persons, from infected towels, fondling congenital syphilitic babies or, indeed, through any close or intimate contact with an infected man, woman or child.

Syphilis is commonly marked by certain blemishes on the skin, but it is by no means to be regarded as a cutaneous disease. The poison of the disease is in the blood and tissues of body, and the skin manifestations may be very slight and even imperceptible.

Frequently the victim of syphilis may appear normal and in good health, whilst the poison is insidiously attacking vital internal organs such as the heart, the brain and spinal cord. In such cases the examination of the patient's blood is of great importance as an aid to diagnosis.

The common belief that syphilis is usually characterised by sores, falling hair and other repulsive manifestations is erroneous. In many dangerous cases there are no outward signs visible to the layman.

Syphilis is described as having three stages, Primary, Secondary and Tertiary.

PRIMARY STAGE.

The Primary stage is manifested by a sore called a **hard chancre,** usually situated on the external genital organs. It occurs sometimes on the lips or on the eyelids when infection is contracted by kissing.

The chancre may be painless and harmless looking, resembling a small scratch, or a bruise or what is commonly described as a "hair cut". Any such occurrence coming after exposure to possible infection—and all promiscuity is fraught with danger—must be regarded with the greatest suspicion and the **ADVICE** of the **DOCTOR**—not that of the local druggist or any so-called experienced friend—**MUST BE SOUGHT AT ONCE.** There is no exception to this rule. **Irreparable harm** may be done by following the advice in these matters of well-meaning friends and prescribing druggists who, in violation of the law against such practices, supply lotions, ointments and dusting powders without knowing the nature of the sore.

The average **incubation period** of syphilis, that is to say, the time between the moment of infection and the actual appearance of the sore is 23 days.

A sore that appears two or three days after exposure is a local affection known as a **chancroid** or **soft sore.** It is not a blood or constitutional disease and its effects, which may be painful and destructive to the tissues affected, are purely local.

Soft sores are commonly followed by **buboes** or painful, incapacitating, suppurating glands in the groin.

With the hard sore these glands do not suppurate but get enlarged and are felt like hard shot under the skin.

Sometimes a double infection may be acquired simultaneously, in which cases a soft sore appears two or three days after the foul exposure, followed by a hard sore three weeks or so later.

In every case where there is **the slightest sign** of anything unusual on the external parts or on the lips or eyelids after any risk has been taken, **the Doctor should be consulted at once;** the consequences of delay may be very grave, whereas with early diagnosis and proper treatment the course of the infection may be cut short and serious dangers averted.

SECONDARY STAGE.

The Secondary stage appears between 5 and 10 weeks after the primary chancre. It is characterized by a measly rash on the face and body. The rash has a pinkish look and is called a **Roseola.** Sometimes the rash is sparsely distributed; at other times the whole body may be covered. In other cases it may be so slight as to pass unnoticed except on medical examination.

In this stage the most prominent symptoms are headache, general malaise, so-called "rheumatic" pains in the joints and chest, dropping of the hair, inflammation of the eyes and sore throat.

TERTIARY STAGE.

The Tertiary stage may appear two years after the primary stage—earlier in severe or untreated cases, or may be delayed for over 60 years, long after the primary infection has been forgotten. It is characterized by the formation of nodes or soft doughy tumours of various sizes, some small, others large, on different parts of the body. Such tumours are called *gummata*. A single one is a *gumma*. These tumours ulcerate after a time and form sores; and besides the trunk, limbs and bones they may, and frequently do, occur in any of the organs of the body including the liver, the brain and the spinal marrow.

In this stage the victim may suffer from degeneration of the heart and blood vessels and die suddenly of ruptured aneurism, most commonly of the main blood vessel arising directly from the heart and called the Aorta.

Syphilitic affections of the brain and spinal cord often result in general paralysis of the insane, locomotor ataxia, loss of memory, loss of good judgment and various forms of paralysis of the body.

TREATMENT.

The treatment of syphilis must be adequate and full and is carried out by the skilled injection over a long period of certain arsenical and other similar preparations to be decided upon by the doctor. The patient must rely on the doctor's advice regarding the length of time for which he is to be treated and in no case must a victim of syphilis marry or remarry without the consent of his medical adviser.

Necessitous Victims of Syphilis are *treated gratis* at the V.D. Clinics of the Colonial Hospitals in Port-of-Spain and San Fernando.

SPECIAL WARNING.

Untreated or improperly treated *Syphilis* is one of the outstanding causes of *blindness* in this Colony.

Influenza.—This disease prevailed to some extent in the first and last quarters of the year but the mortality for which it was responsible, even allowing for deaths possibly buried in the statistics for pneumonia, was apparently not great and only 3 deaths, 2 in March and 1 in October, were definitely attributed to that cause, yielding a death-rate of 0.04 per 1,000 population as against 0.06 in the preceding year and 0.07 for the decennium, 1922-1931.

Ankylostomiasis.—One death was registered from this disease, equivalent to a death-rate of 0.01 per 1,000 population, compared with 2 deaths, a death-rate of 0.03 per 1,000 and an average of 0.13 for the preceding 10 years, 1922-1931.

OTHER PRINCIPAL CAUSES OF DEATH.

Cardiac and Vascular Diseases.—Deaths in this group which include diseases of the heart and aorta numbered 175, thereby topping the mortality list and exceeding by 53 deaths the combined slaughter for which all forms of tuberculosis were responsible. This excessive mortality, with a death-rate of 2.46 per 1,000 population was, however, a decline on the death-rate for the previous year and the yearly averages for the decennium, 1922-31, namely, 2.60 and 3.01, respectively.

The direct influence of syphilis is shown by the inclusion of 20 deaths from aortic aneurism, 11 males and 9 females, in the statement tabulated below giving particulars by age and sex of the several forms of cardiac and vascular diseases from which deaths were registered under this head.

Nine of these deaths from aneurism took place at ages 40 and under, but the hidden hand of syphilis is not free from suspicion in 32 other deaths which occurred in this age group. Among these 2 were children at ages 6-10 and 6 others were adolescents between 11 and 20 years old. Excluding 6 aneurisms 31 deaths took place at ages 41-50, a period at which syphilis is not uncommonly a reckoning factor in causing fatal disease of the heart and blood vessels.

The remaining deaths in this group included 28, namely, 13 males and 15 females, between 51 and 60; and 69 deaths, 30 males and 39 females, over 60.

Fuller details of these deaths are given in the table below :—

Deaths registered from Cardiac and Vascular Diseases by Age and Sex in 1932.

Forms.	6-10 years.		11-15 years.		16-20 years.		21-25 years.		26-30 years.		31-35 years.		36-40 years.		41-45 years.		46-50 years.		51-55 years.		56-60 years.		Over 60 yrs.		Total.		Both Sexes.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Aneurism of Aorta ..	..	..	..	..	..	..	1	..	..	..	2	1	..	2	1	2	..	1	1	..	..	..	2	..	7	6	13
Aneurism of Abdominal Aorta	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	..	1	2	2	4	
Cardiac Aneurism ..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Thoracic Aneurism	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	1	2
Aortic Incompetence	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	1	..	2	..	5	1	6		
Aortic Regurgitation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1		
Aortitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	2	..	2		
Auricular Fibrillation	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1		
Endocarditis ..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	1	2	..	3	5	8
Mitral Regurgitation	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	1	..	1	1	..	2	1	6	3	9
Mitral and Aortic Regurgitation	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	2	..	2
Mitral Incompetence	..	..	1	..	..	..	..	1	..	1	..	1	..	..	2	2	1	..	..	..	..	..	1	..	6	4	10
Mitral Stenosis ..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	..	3	2	5
Mitral Disease ..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	
Tricuspid Stenosis ..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	
Valvular Disease of Heart	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2	2	2	..	1	..	6	3	2	5	15	20
Cardiac Incompetence	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	2
Cardiac Hypertrophy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
Cardiac Dilatation ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
Cardiac Degeneration	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	2	..	2
Fatty Degeneration of Heart	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	3	3
Myocardial Degeneration	..	..	..	..	..	..	..	..	..	..	1	1	1	1	..	1	..	1	1	1	1	6	6	9	15		
Myocarditis ..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	2	4	4	6	7	13		
Cardiac Disease ..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	3	..	3		
Congenital Heart Disease	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1		
Cardiac Syncope ..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	2	..	2	1	1	..	1	1	4	6	11	9	20
Angina Pectoris ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	1	2
Arterio Sclerosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	6	18	7	19	26
Total ..	..	2	..	1	2	2	2	3	4	2	1	4	5	5	8	12	8	11	6	5	4	8	11	30	39	85	90	175

Deaths from Cerebral Haemorrhage or Apoplexy.—Deaths from cerebral haemorrhage or apoplexy, though tabulated among nervous diseases in accordance with the International list of causes of death, may conveniently be reviewed at this stage. Under this head 48 deaths were registered, namely 19 males and 29 females. Nine of these deaths, of which 6 were females and 3 males, took place at ages 45 and under, including 1 each in the groups 21-25, 26-30 and 31-35. 12 deaths, 7 males and 5 females, occurred in the 46-50 group and 27, comprising 9 males and 18 females, at ages over 60.

Syphilis, hereditary or acquired, is one of the commonest predisposing causes of death from cerebral haemorrhage occurring in young adults or middle age persons.

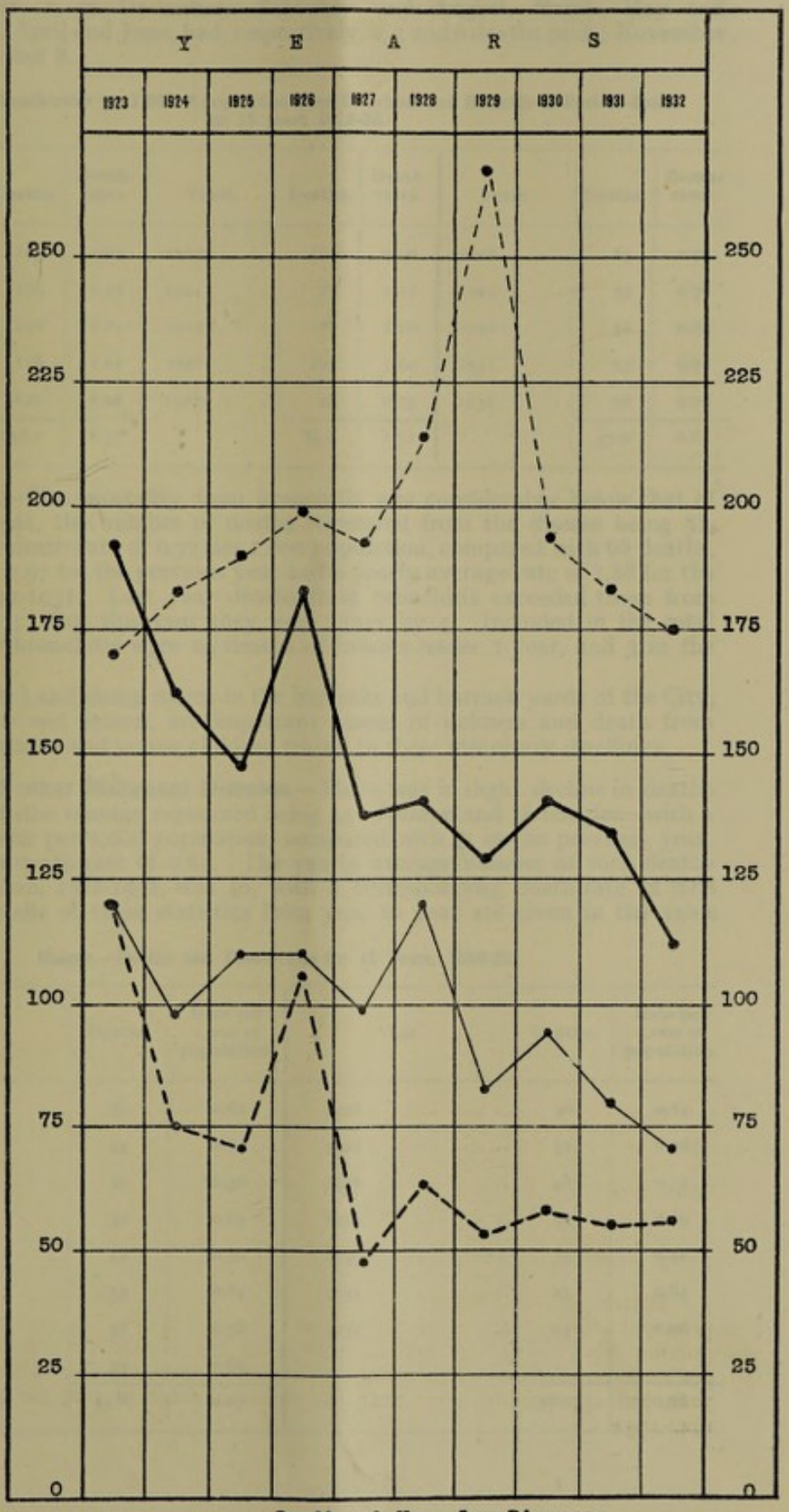
The Curves of the four principal killing diseases in the City, namely cardiac and vascular diseases, pulmonary tuberculosis, Bright's disease and nephritis, and diarrhoea and enteritis are contrasted in Chart G.

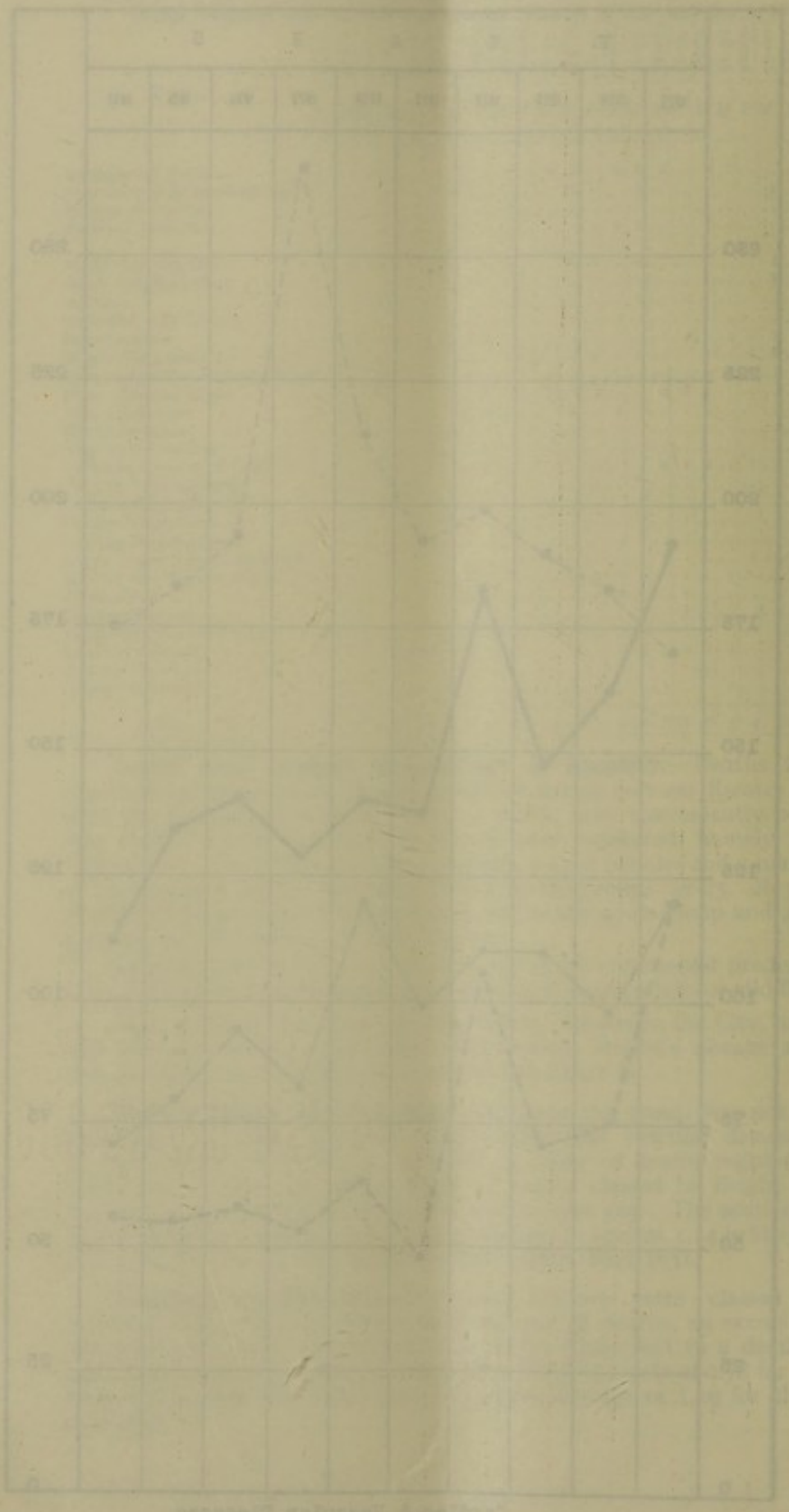
Bright's Disease and Nephritis.—Deaths in this group were next in numerical importance to those registered from cardiac and vascular diseases. In many instances kidney disease is a contributory cause of deaths registered under the latter head. This year the number of deaths classed to Bright's disease and nephritis was 71, or nine fewer than in the previous year. The death-rate calculated from this figure was 1.00 per 1,000 population, as against 1.14 in the previous year and a yearly average of 1.59 for the decennium, 1922-1931.

Diarrhoea and Enteritis.—Diarrhoeal diseases were classed among the principal killing diseases during the year, and 56 deaths, an excess of 1 over the previous year, were registered in this group, equivalent to a death-rate of 0.79 per 1,000 population—slightly higher than the death-rate of 0.78 for the preceding year, but appreciably lower than the yearly average of 1.19 for the decennium, 1922-1931.

CHART G

Deaths from PULMONARY TUBERCULOSIS, CARDIAC & VASCULAR DISEASES, BRIGHT'S DISEASE & NEPHRITIS and DIARRHOEA & ENTERITIS contrasted. Port-of-Spain 1918—1932.





Of the 56 deaths under this head, 19, or 33.93 per cent., occurred in the dry season, January to May ; and 37, or 66.07 per cent., in the wet season, June to December. The highest number of deaths, namely, 10, was registered in July, and the lowest, 1, in December. February and August, March, May and September, and April and June, had, respectively, 2, 3 and 6 deaths each ; November had 7 and October 8.

Deaths and Death-rates per 1,000 of population from Diarrhoea and Enteritis in Port-of-Spain for 15 years 1918-32.

Years.	Deaths.	Death-rates.	Years.	Deaths.	Death-rates.	Years.	Deaths.	Death-rates.
1918 ..	193	2.84	1923 ..	120	1.90	1928 ..	63	0.95
1919 ..	162	2.35	1924 ..	75	1.17	1929 ..	53	0.79
1920 ..	196	2.81	1925 ..	71	1.10	1930 ..	58	0.84
1921 ..	118	1.91	1926 ..	107	1.64	1931 ..	55	0.78
1922 ..	122	1.95	1927 ..	48	0.73	1932 ..	56	0.79
Yearly average	158.2	2.37		84.2	1.31		37.0	0.83

Bronchitis.—The mortality from bronchitis was considerably below that of the previous year, the number of deaths registered from the disease being 51, equivalent to a death-rate of 0.72 per 1,000 population, compared with 68 deaths, a death-rate of 0.97 for the previous year and a yearly average rate of 1.18 for the decennium, 1922-1931. Last year deaths from bronchitis exceeded those from pneumonia by 3 ; but this year they were fewer by 4. Included in the total mortality from bronchitis were 19 deaths of infants under 1 year, and 3 in the 1-5 group.

Overcrowded and damp rooms in the barracks and barrack yards of the City, especially in the wet season, are important causes of sickness and death from bronchitis in infants and young children reared in these insanitary dwellings.

Cancer and other Malignant Diseases.—There was a slight decline in deaths under this head, the number registered being 44—8 males and 36 females—with a death rate of 0.62 per 1,000 population, compared with 45 in the previous year, equivalent to a death-rate of 0.62. The yearly average number of such deaths for the decennium, 1922-1931, was 46, with a corresponding death-rate of 0.68 per 1,000. Details of these statistics from year to year are given in the table below :—

Cancer.—Deaths and Death-rates for 15 years, 1918-32.

Year.	Deaths.	Rate per 1,000 of population.	Year.	Deaths.	Rate per 1,000 of population.
1918	56	0.82	1926	48	0.74
1919	44	0.64	1927	51	0.78
1920	39	0.56	1928	48	0.72
1921	39	0.63	1929	53	0.79
1922	44	0.70	1930	33	0.48
1923	53	0.84	1931	45	0.64
1924	37	0.58	1932	44	0.62
1925	39	0.60		..	..
Yearly average ..	43.8	0.67		46.0	0.68

From the table below showing the incidence of cancer mortality according to age and sex, it is seen that no males died of the disease under the age of 45, nor between 65 and under 75; but except in the 15 and under 25 group, deaths of females occurred at all the different ages and were most numerous at the periods of 45 and under 55, 55 and under 65, and 65 and under 75.

Cancer.—Ages at Death.

	15 and under 25.	25 and under 35.	35 and under 45.	45 and under 55.	55 and under 65.	65 and under 75.	75 and over.	Total.
Males.. ..	..	..	..	3	3	..	2	8
Females ..	..	3	4	8	10	7	4	36
Total ..	..	3	4	11	13	7	6	44

Of the 8 male deaths from cancer, among the parts affected were the stomach in 5 cases, and the mouth, larynx and jaw in one case each.

Among the female deaths the disease also affected the stomach in 5, or the same number of cases as the males; the uterus in 8 cases; the breast in 5; the liver in 4; the rectum in 3 and once each in the tongue, lungs, brain, throat, ovaries and a mass of undefined glands. These details are tabulated in the statement below.

Cancer.—Forms, Sites and Deaths.

Site.	Carcinoma.			Glioma.			Sarcoma.			Undefined.		
	Deaths.			Deaths.			Deaths.			Deaths.		
	Males.	Females.	Total	Males.	Females.	Total	Males.	Females.	Total	Males.	Females.	Total
Stomach.. ..	5	5	10	..	..	..	..	..	..	..	..	..
Uterus	..	8	8	..	..	..	..	..	..	..	1	1
Breast	..	5	5	..	..	..	..	..	..	..	..	..
Liver	..	4	4	..	..	..	..	..	..	..	..	..
Liver and Pancreas	..	1	1	..	..	..	..	..	..	..	..	..
Cervix	..	3	3	..	..	..	..	..	..	..	..	..
Rectum	..	3	3	..	..		..	..	..	..	..	..
Tongue	..	1	1	..	..	..	..	..	..	..	..	..
Lungs	..	1	1	..	..	..	..	..	..	..	..	..
Brain	..	..	..	..	1	1	..	..	..	..	..	..
Jaw	..	..	..	..	..	..	1	..	1	..	..	..
Throat	..	..	..	..	..	..	..	..	..	..	1	1
Ovaries	..	..	..	..	..	..	..	..	..	..	1	1
Larynx	1	..	1	..	..	..	..	..	..	..	..	..
Mouth	1	..	1	..	..	..	..	..	..	..	..	..
Undefined Glands	..	1	1	..	..	..	..	..	..	..	..	..
Total ..	7	32	39	..	1	1	1	..	1	..	3	3

Appended to this section of the report are the following tables:—

(i) a monthly classification of the causes of death for the present year,

(ii) a comparative summary of statistics, including marriages, births and deaths with the yearly averages for the decennium 1922-31 and the corresponding figures for 1932.

Year 1932.—Monthly classification of Deaths from All Causes.

Causes of Death.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
I.—General Diseases.													
(a) *Notifiable Infectious Diseases.*													
Enteric Fever	1	2	..	..	..	..	..	..	..	..	1	..	4
Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..	..
Membranous Croup	..	..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis	8	4	9	6	8	13	12	6	7	13	18	8	112
Tuberculosis (other forms)	2	..	1	..	..	..	1	1	1	1	1	2	10
Pneumonia and Broncho-Pneumonia	4	8	3	3	4	4	3	5	5	5	8	3	55
Chicken Pox	..	..	..	..	..	..	..	..	..	..	..	..	..
Ophthalmia Neonatorum	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..
Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Encephalitis Lethargica	..	..	..	1	..	..	..	..	..	..	..	..	1
Acute Poliomyelitis	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebro-Spinal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..
Acute Ascending Myelitis	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) *Non-Notifiable Infectious Diseases.*													
Malaria	2	3	3	3	4	3	4	1	4	6	3	..	36
Whooping Cough	..	..	..	..	..	..	..	..	..	..	..	1	1
Influenza	..	2	..	..	..	..	..	..	..	1	..	..	3
Dysentery	1	2	..	1	..	2	2		2	1	1	..	12
Blackwater Fever	1	..	..	..	..	..	..	..	..	..	..	..	1
Ankylostomiasis	..	..	..	..	..	..	..	..	1	..	..	..	1
Syphilis	1	4	2	1	1	2	3	1	5	3	2	1	26
Other Venereal Diseases	..	..	..	1	1	..	3	..	1	..	..	..	6
Puerperal Fever	..	..	..	1	..	1	..	1	..	..	..	1	4
II.—Other Diseases.													
(a) *General Diseases not included above.*													
Cancer and other Malignant Diseases	2	6	2	3	1	2	5	6	4	5	5	3	44
Beri-Beri	..		..	..	..	..	..	..	..	..	..	..	..
Leprosy *	..	..	..	..	..	..	..	..	..	..	..	..	..
Other General Diseases	2	4	1	3	7	2	3	3	2	1	2	3	33
(b) *Diseases of the Nervous System and Organs of Special Sense.*													
Simple Meningitis	..	..	..	..	..	..	1	..	..	..	..	..	1
Cerebral Haemorrhage	2	5	6	4	7	2	3	3	1	2	3	3	41
Apoplexy	1	..	2	1	..	..	..	2	..	1	..	..	7
Convulsions of Children under 5 years	2	..	..	..	..	..	..	..	..	..	..	1	3
Other diseases of the Nervous System	1	..	5	2	1	1	..	5	3	4	5	3	30
(c) *Diseases of the Circulatory System.*													
Cardiac and Vascular Diseases	20	16	9	21	12	13	14	18	10	13	13	16	175
(d) *Diseases of the Respiratory System.*													
Bronchitis	5	3	8	6	..	6	7	4	3	2	5	2	51
Other diseases of the Respiratory System	1	..	..	..	2	..	3	..	3	..	..	..	9
(e) *Diseases of the Digestive System.*													
Diarrhoea and Enteritis	5	2	3	6	3	6	10	2	3	8	7	1	56
Cirrhosis of Liver	..	..	1	..	..	..	1	..	..	..	..	..	2
Other diseases of the Digestive System	7	3	1	2	4	5	8	4	7	3	6	3	53
(f) *Non-Venereal Diseases of the Genito Urinary System.*													
Bright's Disease	1	..	2	1	..	1	..	1	2	2	1	1	12
Nephritis	4	4	4	4	6	6	8	7	5	3	3	5	59
Other Non-Venereal Diseases	7	3	3	2	4	2	2	9	2	6	4	3	47
(g) *Diseases of the Puerperal State.* (Other than Puerperal Fever) :													
Puerperal Eclampsia	1	1	1	2	..	1	..	1	..	..	..	1	8
Puerperal Haemorrhage	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Puerperal Diseases	..	..	1	1	2	1	1	1	..	..	..	..	7
(h) *Diseases of Early Infancy*	13	8	7	8	7	13	10	9	8	7	11	8	109
(i) *Old Age*	8	5	5	6	11	4	8	11	2	3	8	6	77
(j) *Affections produced by External Causes.*													
Burns and Scalds	..	..	..	..	..	..	1	1	..	..	..	1	3
Accidents and Injuries	1	1	3	..	..	1	1	..	..	..	..	..	7
(k) *Other Causes of Death*	3	1	1	1	1	1	4	4	..	1	1	1	19
Total	106	87	83	90	86	92	118	106	81	91	108	77	1,125

* Notifiable under the Lepers Ordinance, Cap. 100.

Comparative Summary of Vital Statistics

Port-of-Spain	1922. Population 62,453		1923. Population 63,106		1924 Population 63,954		1925. Population 64,535		1926. Population 65,016		1927. Population 65,573	
	Number.	Rate per 1,000 population	Number.	Rate per 1,000 population	Number.	Rate per 1,000 population	Number.	Rate per 1,000 population	Number.	Rate per 1,000 population	Number.	Rate per 1,000 population
Total Births	1,881	30.12	2,013	31.90	1,890	29.55	1,820	28.20	1,833	28.20	1,753	26.73
Total Deaths	1,642	26.29	1,521	24.10	1,493	23.34	1,492	23.12	1,568	24.12	1,433	21.85
Marriages	591	9.46	486	7.70	493	7.71	541	8.38	489	7.52	594	9.06
Natural increase or decrease	+239	..	+492	..	+397	..	+328	..	+265	..	+320	..
		Per 1,000 Births		Per 1,000 Births.		Per 1,000 Births.		Per 1,000 Births.		Per 1,000 Births.		Per 1,000 Births.
Deaths of Infants under 1 year	297	157.89	285	141.58	278	147·09	282	154.95	287	156.57	236	134.63
Deaths from Notifiable Infectious Diseases	370	5.92	338	5.36	288	4.50	250	3.87	289	4.45	207	3.16
Do. Enteric Fever	53	0.85	43	0.68	49	0.77	20	0.31	26	0.40	17	0.26
Do. Pulmonary Tuberculosis ..	149	2.39	192	3.04	162	2.53	148	2.29	183	2.81	138	2.10
Do. Tuberculosis (other forms) ..	26	0.42	25	0.40	25	0.39	17	0.26	17	0.26	9	0.14
Do. Pneumonia (all forms) ..	140	2.24	75	1.19	50	0.78	63	0.98	62	0.95	41	0.63
Do. Diphtheria	2	0.03	3	0.05	2	0.03	2	0.03	1	0.02	2	0.03
Do. Encephalitis Lethargica ..	..	..	..	..	..	..	..	..	..	..	..	..
Do. Acute Poliomyelitis ..	..	..	..	..	..	..	..	..	..	..	..	..
Do. Malaria	48	0.77	30	0.48	42	0.66	53	0.82	67	1.03	46	0.70
Do. Dysentery	24	0.38	25	0.40	42	0.66	31	0.48	31	0.47	27	0.41
Do. Ankylostomiasis	8	0.13	14	0.22	15	0.23	7	0.11	15	0.23	8	0.12
Do. Syphilis	22	0.35	34	0.54	55	0.86	80	1.24	65	0.99	50	0.76
Do. Influenza	5	0.08	5	0.08	..	..	2	0.03	..	..	6	0.09
Do. Diarrhoea and Enteritis ..	122	1.95	120	1.90	75	1.17	71	1.10	107	1.64	48	0.73
Do. Bronchitis	77	1.23	84	1.33	61	0.95	83	1.29	79	1.21	109	1.66
Do. Cancer and other Malignant Diseases	44	0.70	53	0.84	37	0.58	39	0.60	48	0.73	51	0.78
Do. Cardiac and Vascular Diseases	189	3.03	170	2.69	183	2.86	190	2.94	199	3.06	193	2.94
Do. Bright's Disease and Nephritis	125	2.00	120	1.90	98	1.53	111	1.72	111	1.70	99	1.51
Do. Diseases of the Nervous System including Cerebral Haemorrhage ..	116	1.86	120	1.90	123	1.92	107	1.66	113	1.74	148	2.26
		Per 100 Live Births		Per 100 Live Births		Per 100 Live Births		Per 100 Live Births		Per 100 Live Births		Per 100 Live Births
Still Births	172	9.14	177	8.79	182	9.63	153	8.41	144	7.85	134	7.64

for the years 1922 to 1932.

1928. Population 66,383		1929. Population 67,356		1930. Population 68,703		1931. Population 70,462.		1932. Population 71,066		Average number for preceding 10 years 1922-1931.	Average rate per 1,000 population for preceding 10 years 1922-1931.
Number.	Rate per 1,000 population.	Number.	Rate per 1,000 population.	Number.	Rate per 1,000 population.	Number.	Rate per 1,000 population.	Number.	Rate per 1,000 population.		
1,868	28.14	1,895	28.13	1,935	28.16	1,956	27.76	2,021	28.44	1,884.4	28.69
1,476	22.23	1,503	22.31	1,308	19.04	1,223	17.36	1,125	15.83	1,465.9	22.38
636	9.58	670	9.95	610	8.88	622	8.83	660	9.29	573.2	8.71
+392	..	+392	..	+627	..	+733	..	+896	..	+418	..
	Per 1,000 Births.		Per 1,000 Births.		Per 1,000 Births.		Per 1,000 Births.		Per 1,000 Births.		Per 1,000 Births.
238	127.41	250	131.93	233	120.41	222	113.50	207	102.42	260.8	138.60
228	3.43	223	3.31	231	3.36	221	3.14	182	2.56	264.5	4.05
14	0.21	13	0.19	16	0.23	11	0.16	4	0.06	26.2	0.41
141	2.12	129	1.82	141	2.05	134	1.90	112	1.58	151.7	2.32
19	0.29	25	0.37	16	0.23	7	0.10	10	0·14	18.6	0.29
51	0.77	56	0.83	55	0.80	65	0.92	55	0.77	65.8	1.01
3	0.05	..	..	1	0.01	2	0.03	..	..	1.8	0.03
..	..	..	..	1	0.01	..	..	1	0.01	..	..
..	..	..	..	1	0.01	..	..	2	0.03	..	..
57	0.86	38	0.56	40	0.58	38	0.54	36	0.51	45.9	0.70
29	0.44	23	0.34	11	0.16	18	0.26	12	0.17	26.1	0.40
11	0.17	4	0.06	1	0.01	2	0.03	1	0.01	8.5	0.13
31	0.47	36	0.53	30	0.44	18	0.26	26	0.37	42.1	0.64
4	0.06	8	0.12	9	0.13	4	0.06	3	0.04	4.3	0.07
63	0.95	53	0·79	58	0.84	55	0.78	56	0.79	77.2	1.19
71	1.07	77	1.14	67	0.98	68	0.97	51	0.72	77.6	1.18
48	0.72	53	0.79	33	0.48	45	0.64	44	0.62	45.1	0.61
214	3.22	267	3.96	194	2.82	183	2.60	175	2.46	198.2	3.01
120	1.81	82	1.22	94	1.37	80	1.14	71	1.00	104.0	1.59
112	1.69	136	2.02	99	1.44	81	1.15	82	1.15	115.5	1.76
	Per 100 Live Births		Per 100 Live Births		Per 100 Live Births		Per 100 Live Births		Per 100 Live Births		Per 100 Live Births
158	8.46	158	8.34	138	7.13	139	7.11	100	7.92	155.5	8.25

II.—SANITARY CONDITIONS.

Rainfall.—This was an extremely wet year. The total average rainfall gauged at the St. Clair, Colonial Hospital and Constabulary Stations was 76.78 inches, an excess of 24.31 inches on the previous year, when the record was 52.57 inches.

21.58 inches fell in the dry season months, January to May, compared with 3.14 inches in the corresponding period of the preceding year, and 55.20 inches in the wet season months, June to December. The latter record exceeded the total rainfall for the whole of 1931 by 2.63 inches, an amount which was less than the entire dry season rainfall of the latter year by 0.51 inches.

The driest month during the year was February with 1.29 inches of rainfall; the wettest, August, with 16.61 inches. The tables given below show the rainfall from month to month, as gauged at each of the three meteorological stations during this and the previous year.

Monthly Rainfall from three Stations in Port-of-Spain, with average for 1932.

Stations.	Jan.	Feb.	Mar.	April	May	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for year.
St. Clair ..	5.61	1.72	4.33	3.99	9.25	10.53	5.80	16.04	3.85	4.60	10.23	8.01	83.96
Colonial Hospital	4.86	0.72	3.43	4.73	7.80	9.73	2.70	18.82	3.76	3.85	7.66	9.21	77.27
Constabulary Headquarters	4.03	1.44	3.61	2.74	6.50	8.24	4.67	14.98	3.29	3.99	8.41	7.22	69.12
Average Rainfall	4.83	1.29	3.79	3.82	7.85	9.50	4.39	16.61	3.63	4.15	8.77	8.15	76.78

Monthly Rainfall from three Stations in Port-of-Spain, with average for 1931.

Stations.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for year.
St. Clair ..	1.68	1.11	0.07	0.29	1.12	6.94	10.96	8.89	4.85	6.59	7.94	5.77	56.21
Colonial Hospital	0.23	0.98	0.00	0.07	0.56	7.12	10.16	7.25	5.04	5.82	5.59	4.33	47.15
Constabulary Headquarters	1.50	0.98	0.08	0.16	0.61	8.09	11.19	7.32	5.58	6.50	7.59	4.75	54.35
Average Rainfall	1.14	1.02	0.05	0.17	0.76	7.38	10.77	7.82	5.16	6.30	7.04	4.95	52.57

Below is given a comparative statement showing the average rainfall, the prevalence of notifiable infectious diseases, as indicated by the notifications received, deaths registered from such diseases and, also, from all causes in each quarter of this and the previous year.

Quarterly Rainfall, Notifications of Infectious Diseases, with deaths therefrom and Deaths from All Causes.

	Year 1932.					Year 1931.				
	March quarter.	June quarter.	September quarter.	December quarter.	Total.	March quarter.	June quarter.	September quarter.	December quarter.	Total.
Rainfall ..	9.91	21.17	24.63	21.07	76.78	2.21	8.31	23.75	18.29	52.57
Notifications—Infectious Diseases ..	67	119	83	82	351	97	103	85	68	353
Deaths—Infectious Diseases ..	42	39	41	60	182	53	51	63	54	221
Deaths—All Causes ..	276	268	305	276	1,125	280	305	356	276	1,223

WATER SUPPLY.

During the year the control of the purity of the water supply was rendered difficult on account of the torrential rains and the frequency, sometimes the suddenness, with which the Maraval River—the City's principal source of supply—was flooded. This observation also applies to the St. Ann's River. Great care, therefore, had to be exercised in regulating the dosage of chlorine to cope with the frequent and rapid changes in the organic content of the river waters.

Notwithstanding these disadvantages a constant and ample supply of pure potable water was delivered to the consumers in the City Corporation's Water District free from B. coli on 351, or 95.9 per cent., of the 366 days on which mixed samples of the water supply were examined by the Government Bacteriologist.

Dr. Pawan's services in this connection are of great value to the Local Authority in controlling the purity of the water supply, and the writer is happy to take this opportunity of again thanking him for his friendly co-operation with the Public Health Department in this and many other useful ways kindly approved by the Surgeon-General.

The further safeguarding of the purity of the Maraval water supply by increasing the capacity of the filtration plant at St. Clair, so often advocated in these reports, is still a pressing necessity which the writer again begs to urge the Local Authority to provide for.

The question of removing the intake of the Maraval River water to a safe point beyond the village is one which the Corporation has been advised to defer until the City water supply is augmented by the Colony Water Scheme, so that the loss of water which would be entailed by the proposed transfer could be made good.

Sale of Milk.—Dairyman's licences, which include licences for milk shops, increased to 33 from 30 last year. Milk vendor's licences have to be taken out by all vendors or hawkers of milk about the streets, whether the supply originates from within or without the City. The number issued was 236, as against 229 in the previous year, an increase of 7, which seems to indicate that the " Drink more Milk " slogan of successive Health Week Observances is bearing some little fruit. The number of badges supplied to persons actually hawking or delivering milk was 273, which was one less than last year.

The table below names the districts in respect of which licences and badges were issued and the numbers respectively assigned to each during the year.

Sale of Milk.—Distribution of Licences and Badges issued.

	Cowshed Licences.	Dairyman's Licences.	Milk Vendor's Licences.	Badges.
Port-of-Spain	24	33	32	43
San Juan and Santa Cruz	..	..	140	156
Maraval and Diblé	..	..	26	30
St. James	..	..	24	27
Laventille	..	..	6	6
Diego Martin	..	..	3	3
Cascade	..	..	1	2
Long Circular Road	..	..	1	2
Four Roads	..	..	1	2
St. Joseph	..	..	1	1
St. Ann's	..	..	1	1
Total	24	33	236	273

While within recent years there has been a great improvement in the sanitation of dairies, and the quality of the milk supply from the City and outdistricts, mainly as a result of demonstrations of clean milk production at the Government Farm, St. Augustine, and, also, at Health Week Exhibitions in Port-of-Spain, aided by a general tightening up of the administration of the Sale of Milk bye-laws, nevertheless the vital statistics relating to the prevalence of and deaths from the non-pulmonary forms of tuberculosis attributable to bovine infection do not, in the writer's opinion, support the view commonly held that tuberculosis of dairy cattle is not a serious health problem in the Colony.

Notifications of pulmonary tuberculosis in the quinquennium, 1928-1932, which totalled 685, have declined by 438, or 39 per cent. of the number, namely, 1,123, for the quinquennium 1918-1922. On the other hand non-pulmonary forms of the disease have shown great stubbornness in resisting the measures of control instituted against their spread.

The subjoined tabular statement, prepared from carefully revised statistics of the mortality from all forms of tuberculosis, shows the progress of mortality from pulmonary and non-pulmonary forms of tuberculosis for the 15 years, 1918-1932. The substantial reduction in the total number and yearly average of deaths from pulmonary tuberculosis in the successive quinquennia included in the fifteen year period is seen at a glance, and the rate of decline in these deaths between the first and third quinquennia works out at 29.3 per cent. But in the case of the non-pulmonary forms of tuberculosis, that is to say, tuberculosis of bovine origin, the difference between the figures in the first and second quinquennia is only slight, and absolutely **nil** between the first and the third.

Progress of Mortality from Pulmonary and Non-Pulmonary Tuberculosis for 15 years, 1918-1932.

Deaths from Pulmonary Tuberculosis.						Deaths from Non-Pulmonary Tuberculosis.					
Quinquennium 1918-22.		Quinquennium 1923-27.		Quinquennium 1928-32.		Quinquennium 1918-22.		Quinquennium 1923-27.		Quinquennium 1928-32.	
1918	247	1923	192	1928	141	1918	15	1923	17	1928	19
1919	194	1924	162	1929	129	1919	17	1924	22	1929	24
1920	185	1925	148	1930	141	1920	8	1925	13	1930	14
1921	155	1926	183	1931	134	1921	16	1926	14	1931	7
1922	149	1927	138	1932	112	1922	18	1927	7	1932	10
Total ..	930	..	823	..	657	..	74	..	73	..	74
Yearly Average	186	..	164.6	..	131.4	..	14.8	..	14.6	..	14.8

It follows, therefore, from the facts revealed in this table, that either tuberculosis in cattle is more widespread in the milk producing districts of the Colony than is generally supposed, or the existing measures of control are insufficient to make an impression on its spread among human beings. If either of these views be correct, not only should the tuberculin test applicable to dairy cattle under the 1931 amendment of the Local Authority's Sale of Milk bye-laws be rigidly carried out with a view to the elimination of all such animals from milk producing herds or the byres of small owners, but it is also advisable that the provision of the 1929 Tuberculosis in Cattle Regulations, which empowers the Government Veterinary Surgeon or any other Surgeon authorized by him to enter any premises where cattle are kept and apply the tuberculin test, whether such cattle show or do not show signs from which tuberculosis may be suspected, should be regularly and systematically carried out, not experimentally, at long intervals, but as frequently as the underlying importance of this measure may require, both within and outside the City limits.

The same remarks apply to the bacteriological examination of samples of milk sold from day to day in the City. In order to be effective it is advisable that this necessary public service should also be systematically carried out as a regular routine check on the freedom from udder tuberculosis of dairy cows which, according to some authorities, may, without showing definite clinical signs, contaminate the milk with tubercle bacilli. For this reason I respectfully suggest that the Government be approached by the Local Authority on this important subject.

In a discussion of the question of the Prevention of Human Tuberculosis of Bovine origin at a Sessional Meeting of the Royal Sanitary Institute recently held at Weston-super-Mare, great stress was laid by one of the members present on the grave danger of delay in dealing vigorously with tuberculosis in cattle from the time of its first appearance in any county or district. Deploring the widespread prevalence of the disease in England he went on to say " Dr. Savage (M.O.H.

of Somerset and one of the foremost authorities on the subject of bovine tuberculosis in Britain) had stated that the incidence of tuberculosis in milch herds was as high as 50 per cent. He fully endorsed that statement, and would have done so if he (Dr. Savage) had placed it higher. The delay in action had brought about this deplorable state of affairs. Had action been promptly taken thirty-five to forty years ago when the subject was being discussed seriously, they would at that period have found an incidence of only 5 per cent. to 7 per cent. of cows affected with tuberculosis.

Tuberculosis being a highly contagious disease the longer action was delayed the more serious would become the problem of eradication."

This is a plain warning the importance of which should not be overlooked by the Local Authority, more especially as the writer, from his experience at the Tuberculosis Dispensary, has good reason to believe that human tuberculosis of bovine origin occurs far more frequently in the City than the notifications of the various forms of this disease would appear to indicate, since only advanced or pronounced cases are notified as a rule, and not the early victims who so regularly form part of the attendance at the Dispensary.

It is evident from the foregoing that all the existing legal provisions for controlling this dangerous form of infection should be vigorously enforced, especially at this comparatively early stage of its progress when the prospects of stamping it out from the Colony are good. Meanwhile, as a further measure of protection to the public from the danger and injury to health of consuming milk contaminated with tubercle bacilli and other living germs of disease, I also beg to recommend that early consideration be given by the Local Authority to the question of appointing a Committee, with which the co-operation of some of the technical officers of the Government would be invaluable, to inquire into the question of the pasteurisation of all raw milk marketed in the City, and the provision of a suitable Municipal plant for that purpose in connection with the Trinidad Electric Power Station and Ice Factory when the Corporation enters into possession of that undertaking.

FOOD.

The prohibition against the use of the insanitary type of aerated water bottles known as " patent " bottles came into force on the 1st of April, and these bottles have definitely been withdrawn from the trade.

Every effort was made during the year to carry out the provision of the bye-laws relating to the inspection of hotels, restaurants and shops, to their cleanliness and to the protection of all articles of food traded in these places from contamination by flies, dust and otherwise. Under the bye-laws made with respect to hucksters, similar attention was given to foodstuffs exposed for sale outside of buildings, in streets, squares and other public places, and it has become the rule, rather than, the exception, not to find any receptacle used out of doors for selling bread, cakes confectionery and similar foodstuffs, unprovided with an efficient cover to protect these articles from street contamination.

But the Department is greatly hampered in its activities in these directions by the continued shelving in Committee of the proposed Sale of Food bye-laws, whereby power is sought for the regulation of retail shops and other places where foodstuffs are sold for human consumption, and the control of the personal cleanliness of bread and cake sellers, ice cream, ' palet ', sweet drink and confectionery vendors, and other persons handling, delivering or selling food intended for human consumption without previous cooking, in shops or on the streets.

The draft bye-laws have been before the Local Authority since June, 1930, and every attempt made from time to time to get them considered has met with failure, as the following extracts from the Proceedings of the Local Authority show :—

1. Sale of Food Bye-laws.

Memorandum from the Medical Officer of Health, dated 14th March, 1932, suggesting that the consideration of the bye-laws relating to the Sale of Food in the City by a Special Committee of the Local Authority be not further postponed.

RESOLVED :—That a meeting of the Committee referred to be called as soon as possible.—(*Min. Proc. L. A.* 17-3-32, *Item* 9.)

2.—Sale of Foodstuffs Bye-laws.

Memorandum from the Medical Officer of Health, dated 18th July, 1932, orwarding an anonymous complaint with regard to the sale of refreshments in the City, and suggesting that the question of passing bye-laws with regard to the registration of persons employed in the sale of foodstuffs in the City be considered.

RESOLVED :—That the complaint being an anonymous one the matter be not considered.—(*Min. Proc. L. A.* 21-7-32, *Item* 5.)

3.—Bye-laws with regard to the Sale of Foodstuffs.

Memorandum from the Medical Officer of Health, dated 16th August, 1932, forwarding a list showing the conveniences used for cleansing drinking utensils in 304 refreshment parlours in the City, and suggesting that the consideration of the draft bye-laws relating to the sale of foodstuffs be proceeded with, as resolved at the meeting of the Local Authority on the 17th March last.

RESOLVED :—That a Committee of the whole Local Authority be appointed to consider the draft bye-laws relating to the sale of foodstuffs.

Since then nothing has been done and the writer is reluctantly compelled to repeat the remarks which he made on the subject in his Annual Report for 1931, as follows :—

The shelving in committee of the draft of the Sale of Foodstuffs Bye-laws prepared by the writer under the provisions of sub-sections 7-14 of section 156 of the Public Health Ordinance, and submitted for the consideration of the Local Authority in June, 1930, is a great disappointment. The want of some such bye-laws makes itself felt every day, and is a source of weakness in the Local Authority's control of communicable diseases in the City.

The writer pleads, as his excuse for this further reminder to the Special Committee appointed to consider and report upon the draft bye-laws, the fact that unless the necessary bye-laws, for which statutory power is given in the Ordinance, are made, the Public Health Department is powerless to prevent many glaring, insanitary practices, which are injurious to health, in places where food is prepared or sold for human consumption, and which, also, form the subject of frequent verbal and written complaints to the Department.

HOUSING.

This important sanitary question is unfortunately in abeyance for the time being. The final Report of the Joint Housing Committee, referred to in the writer's Administration Report for the previous year, was altered by the introduction of certain Government amendments, mainly of a financial character, and sent back to the Council for their consideration. The Council felt unable to accept the amendments as they stood and the matter has been referred to a new Joint Committee of members appointed by the Government and the City Council for final adjustment.

Meanwhile, owing mainly to the increasing migration of unemployed persons from the rural districts of the Colony to the City, as a consequence of the continued agricultural depression, the overcrowding of the barrack yards and other insanitary conditions existing in these appalling places are being sorely aggravated.

Not the least of the dangers to health caused by this state of things is the serious impairment of the defence of the City against the spread of infectious disease. Admitting that, with modern public health methods, epidemic outbreaks are more amenable to control than in the past, yet the policy of not leaving too much to chance, in such vital considerations as the health of the people, is one which, if constantly borne in mind, might help to expedite action in this most urgent and important matter of slum clearance and the provision of improved and increased housing accommodation for the poorer working classes.

Drainage.—The work of paving the bed of the Dry River has made rapid progress and is expected to be completed early in 1934 from the sea outlet to Chaytor's Causeway, at a total estimated cost of 307,090 dollars to which the Government is expected to contribute its share of about 117,500 dollars. When completed this channel will be the finest concrete drain in the West Indies and a great credit to the Government and the City of Port-of-Spain.

The drainage of Woodbrook West is insufficient and a good deal of flooding is in evidence there during the wet season. It is also evident that the Maraval River, in its passage through St. Clair and Woodbrook, will sooner or later have to be dealt with in the same manner as the Dry River.

Numerous complaints were received of the inadequate drainage of North Belmont, and a comprehensive scheme for dealing with this nuisance is awaiting the provision of necessary funds. There can be no doubt of the urgency of this matter, and the danger to health to which persons resident in the district are exposed by reason of the swampy condition of their homes in wet weather.

The swampy lands on the foreshore East of the Abattoir, which were prolific breeding places of anopheles mosquitoes, are being gradually reclaimed, and a great deal of reclamation with City refuse has also taken place under the direction of Dr. de Verteuil on adjoining Government lands.

Similar action is contemplated in respect to the swamps lying on either side of the lowest reaches of the Dry River, and it may safely be predicted that all of these dangerous mosquito breeding places will be abolished in the near future.

Sewerage and Sewage Disposal.—There was no interruption in the City water supply during the year for any domestic purpose and the sewerage system functioned satisfactorily. All the arguments that have been used in and out of season in favour of the necessity for connecting up the suburbs of Belmont, East Dry River and Woodbrook with the City sewerage system grow stronger with the constant increase of the population and the number of houses in these places. As it has been definitely decided that this much needed improvement in the sanitary condition and amenities of the City cannot be carried out until an increased water supply becomes available from the Colony Water Scheme, the spade work for which has already commenced, nothing more needs to be said on this subject for the present.

The oiling of cesspits in the unsewered districts was regularly carried out as an effective measure of control of the breeding of mosquitoes and the spread of enteric fever and diarrhoeal diseases.

Removal and Disposal of House Refuse.—The scavenging of the City was carried out satisfactorily during the year, except on the northern and eastern outskirts where it is often difficult to correlate the arrival of the dust carts with that of rubbish headed from adjoining hillsides and dumped on the roadway. Stationary dust bins have been installed in many of these places, but such receptacles are not always an unmixed sanitary blessing.

The writer must confess to some considerable disappointment at his continued failure to persuade the Local Authority that the sanitary disposal of house and street refuse on dumping grounds in the close vicinity of a town requires skilled supervision for its success from a health point of view. The Department often has to tell off a sanitary inspector from other pressing duties to supervise the dumps : but that is not enough. These places should be under the control of an officer having special knowledge of the science of dumping and whose constant attention, the writer again ventures to suggest, is essential to prevent the dumping grounds from becoming fly farms, as they otherwise must, especially in the wet season.

III.—SANITARY ADMINISTRATION.

Sanitary Work.—The following is a summary of the principal items of sanitary work executed under the writer's direction and immediate supervision of the Chief Sanitary Inspector, J. E. Ferreira, CERT.R.SAN.I.

House to House Inspection.—91,528 visits of inspection, equivalent to an average of 7,627 per month, were made to premises in the City, including barrack yards, private dwelling houses, shops, factories, workshops, vacant lots and places where offensive trades are carried on. In the preceding year the total number of visits was 96,195 and the monthly average 8,016. (Table A.)

Results of Notices and Verbal Directions.—The requirements of notices and verbal directions were complied with in 22,423 instances, the principal results including 4,701 yards, 2,771 drains, 897 sewer basins, 1,631 dustbins, 1,466 cesspits, 664 sinks, 371 washing platforms and troughs, 208 gullies and 79 urinals and lavatories cleaned ; 273 damp or swampy yards filled with earth ; 24 yards paved ; 118 yard pavements, 368 drains, 94 sinks, 7 sewer basins, 580 privies, 336 cesspits,

62 sewerage flush tanks, 322 dustbins, 79 barracks and 56 kitchens repaired; 1,117 sanitary dustbins provided; 767 uncovered dustbins provided with covers; 131 new drains, 61 sinks, 184 new privies and 151 new cesspits constructed; 358 privies made fly-proof; 1,221 paid for cesspits oiled; 9 new sewer basins and 22 new flush tanks installed; 271 accumulations of manure removed; 712 premises cleared of bush; 789 trees trimmed or cut down on account of excessive shade and dampness; 265 rat holes stopped; 22 houses ventilated; 9 roofs close-boarded; 51 retail shops, 39 barracks, 28 refreshment parlours, 5 restaurants and 6 spirit shops painted; 246 retail shops, 116 barracks, 33 bakehouses, 120 parlours, 21 cowsheds, 15 cookshops and 22 spirit shops cobwebbed; 99 retail shops, 125 parlours, 47 cowsheds and 53 bakehouses scrubbed. (Table B.)

Disinfection.—357 premises were disinfected for infectious diseases, including tuberculosis, enteric fever, pneumonia, diphtheria, leprosy, chicken pox, ophthalmia neonatorum, encephalitis lethargica and poliomyelitis. 596 premises, including 27 common lodging houses, were sprayed with insecticide for vermin; 1,292 premises including 919 privies, 48 bakehouses, 11 stables, 39 cowsheds, 48 kitchens, 133 barracks, 34 retail shops, 6 aerated water factories, 7 cookshops and restaurants 13 tanneries, 2 garages, 2 common lodging houses and 2 fry shops were limewashed; 12,402 cesspits were oiled free of charge for enteric fever, and 36 railway coaches disinfected for leprosy. (Tables C, D, E, F.)

ANTI-PLAGUE MEASURES.

Destruction of Rats and Mice.—Four sets of rat trappers, each comprising three men and an overseer, were employed throughout the year. The rat trappers operate as a regular routine measure on the quays, at the Customs warehouses, the Railway Goods Shed, provision stores, groceries, cold storage depots, hotels and restaurants, barrack yards and other likely places. In private houses, traps are set or poison baits laid on the complaint of the occupiers or their neighbours. Rats are also bought at the rate of five cents for adults and three cents for immature specimens.

The rat trappers operate with " snap " traps in preference to cage traps which have for some time past been discarded as unsatisfactory.

The baits usually employed are bread, smoked herrings and bananas. Bait poisoned with a trade preparation of phosphorous is also laid in suitable places. Each set of trappers is equipped with a portable Clayton gassing machine for asphyxiating young rats in their holes, and driving out adults which are clubbed by the trappers.

The keeping of cats at the Customs warehouses and provision stores is encouraged with good effect.

During the year 11,943 rats were caught by the trappers and 1,893 bought, making a total of 13,836 rats collected and destroyed. Of these 13,706 were examined by the Government Bacteriologist for plague bacilli with negative results. The remaining 130 were immature rats and not examined.

Besides rats, 1,692 mice were trapped and destroyed.

Monthly records of rats and mice destroyed are given in Table H, and of rats examined at the Bacteriological Laboratory in Table J.

Anti-Mosquito Measures.—During the wet season four sets of ladder men, each consisting of three operators were exclusively employed in anti-mosquito work. Each unit is equipped with an extension ladder and a supply of larvicide oil. The men work from house to house inspecting eaves gutters and downpipes for stagmant water, or water containing mosquito larvae. Holes in trees liable to hold water and breed mosquitoes also have their attention. Special visits are paid to places from which complaints of mosquitoes have been received; a mosquito survey of the premises, and those round about, usually follows and, in practically every instance, the source of the nuisance is discovered and abolished.

By the prepayment of one shilling to the Local Authority any person may have his eaves gutters or downpipes freed from accumulations of leaves and other obstructions to the free flow of storm water.

In the dry season the ladder men are reduced from four to two sets.

At all times reports of the presence of mosquitoes or flies on any premises are welcomed by the Department and receive prompt attention.

It is part of the routine duty of every sanitary inspector to enforce the anti-mosquito bye-laws in his district and, for that purpose, to report the presence of stagnant water, or receptacles capable of holding stagnant water liable to breed mosquitoes, on any premises. In bad cases, or where previous warning has been given, the offender is summoned before the City Magistrate.

Besides district sanitary inspectors and ladder men, special anti-mosquito inspectors operate throughout the year around the poorer quarters of the City. They make house to house inspections, searching the yards for empty milk and sardine tins, broken crockery, coconut shells and other likely breeding places of mosquitoes. If any such receptacles are found the occupier is invited to " clean up " there and then, the inspector lending a helping hand in the process. This measure worked admirably, and has gone a long way towards abolishing the unsightly and insanitary dumps in City backyards.

The ladder men paid 19,973 visits to premises. Defective eaves gutters were found on 1,214 occasions; defective eaves gutters containing water on 332 occasions, and defective eaves gutters containing water with mosquito larvae on 343 occasions. Mosquito larvae were found in 784 instances on occupied premises in tubs, antiformicas, empty milk or sardine tins, &c., and the nuisance abated there and then. 13 defective eaves gutters were removed. Mosquito breeding in disused cement barrels and paint pots was a fairly common nuisance in places where building operations were going on.

On 28 occasions mosquito larvae were found in sewer basins and sewerage flush tanks in unoccupied houses and the nuisance abated. Householders temporarily leaving their homes should always make reliable arrangements for having their sewer basins and all open gullies on the premises flushed once a week.

13,064 gallons of crude, and 4,000 gallons of distillate, oil were used during the year in spraying pools, drains and swampy lands in Woodbrook, East Dry River, Belmont and the City foreshore to check the breeding of mosquities in these places.

Reports to Water and Sewerage Department.—Table L shows from month to month the number of leaks, defective taps, chokes and other defects noticed by Sanitary Inspectors in the course of their daily rounds and reported to the Water and Sewerage Department. These reports, aggregating 531, were equivalent to an average of 44 per month.

Sanitation of Eastern Market.—The scavenging and cleansing of the Eastern Market was efficiently carried out daily under the personal supervision of the Chief Sanitary Inspector.

Unsound Food.—Under the provisions of Part X (*a*) of the Public Health Ordinance relating to unsound food the following articles were seized and destroyed, viz.: milk, 48 tins; sardines, 43 tins; sausages, 2 tins; salmon, 17 tins; liver paste, 227 tins; biscuits, 12 tins; hams, 65; plantains, 530; beans, 50 pounds; bread, 48 loaves.—(Table G.)

Prosecutions.—63 informations for various breaches of the Public Health Ordinance and bye-laws made thereunder were laid, and fines amounting to £12 15s. od., imposed by the City Magistrate in respect of 61 convictions.—(Table M.)

The Tables relating to this part of the Report appear in the Appendix.

Observance of Health Week.—Health Week was observed between the 1st and the 7th of October. The following is a copy of the Special Committee's Report thereon :—

REPORT ON THE OBSERVANCE OF HEALTH WEEK IN THE CITY.

12TH OCTOBER, 1932.

1.—At the meeting of the Council sitting as the Local Authority for the City of Port-of-Spain, held on the 19th May, 1932, the Mayor, in accordance with a suggestion contained in a communication from the Royal Sanitary Institute, London, appointed a Committee to arrange for the organisation of Health Week on lines similar to those approved in previous years. The following comprised the Committee :— His Worship the Mayor (Alderman the Honourable A. A. Cipriani), Chairman ; Alderman H. A. de Freitas (Deputy-Mayor) ; Councillor T. P. Achong ; the Town Clerk ; the City Engineer ; the Medical Officer of Health ; and the following persons :—the Surgeon-General, the Deputy Surgeon-General, the President of the Dental Association, Dr. V. M. Metivier, the President of the Child Welfare League, the President of the Association for the prevention and treatment of Tuberculosis, the President of the Medical Board, the Honourable the Acting Director of Education, the President of the Coterie of Social Workers, with Mr. Power of the Town Clerk's Office as Secretary.

2.—The Committee held their first meeting on the 10th June, 1932, when it was agreed, as follows :—

(*a*) That Health Week, 1932, be observed during the week commencing on Saturday the 1st October, 1932, and that the observance be inaugurated by the holding of a health exhibition at the Princes Building to be opened on Saturday, 1st October.

(*b*) That the following members be constituted an Exhibition Committee with authority to carry out the observance of Health Week, including the organisation and holding of an Exhibition in the Princes Building along similar lines to what was done in previous years :— Dr. G. H. Masson, Medical Officer of Health (Chairman) ; His Worship the Mayor (Alderman the Honourable A. A. Cipriani) ; Capt. Cutteridge, Dr. Lassalle, Councillor Achong, and the City Engineer.

(*c*) That the Mayor, the Deputy-Mayor and the Town Clerk be constituted an Executive Committee with authority to incur out of the vote in the approved estimates for Health Week all such customary expenditure as might be necessary for the observance of Health Week.

(*d*) That His Excellency the Governor be invited to open the Health Week Exhibition.

(*e*) That arrangements be made for addresses by Medical Practitioners and others on suitable subjects during Health Week at the Victoria Institute and the several schools and colleges as in former years : and that to this end, Dr. Masson's offer to call a meeting of members of the Medical Board for the purpose of obtaining the services of lecturers be accepted.

(*f*) That Dr. V. M. Metivier's offer to deliver an address to school teachers and others during Health Week on the subject of the growing tendency to blindness in Trinidad be accepted and that he be informed accordingly.

(*g*) That arrangements be made for the exhibition of suitable Health Week films in the Squares and if possible at the Theatres, in the City.

(*h*) That the offer of the Coterie of Social Workers to arrange a Mothers' Meeting in connection with Health Week be accepted.

It was also agreed that, as usual leaflets for distribution in connection with the prevention of typhoid fever, tuberculosis and other diseases should be prepared and issued throughout the City, and particularly in the schools ; and that the usual "Cleaning Up" of yards be encouraged.

3.—The Exhibition sub-Committee met on the 13th September, when the Chairman (Dr. G. H. Masson, Medical Officer of Health of the City), presented the draft programme of lectures and addresses to be given by Medical Practitioners at various colleges and schools, association halls, and other places in the City during Health Week ; and also the draft programme of Sections in the Health Week Exhibition to be held at the Princes Building.

The Chairman also mentioned that it had been suggested that Dr. Castelli an Italian medical practitioner now on a visit to Trinidad should be invited to give a lecture on the subject of Blood Transfusion during Health Week at which the Acting Surgeon-General would be asked to take the Chair.

The Acting Surgeon-General proposed that Dr. E. N. Darwent, President of the Trinidad Branch of the British Medical Association should be asked to preside.

This was agreed to and Dr. Masson stated that arrangements for the lecture would be made at the Royal College if possible, in the event of the Victoria Institute not being available.

It was decided to accede to the application of the Literary Club (by whom a Health Week Lecture was being organised at the Victoria Institute) to instal a section at the Health Week Museum for the purpose of illustrating the best way of keeping and preserving books.

An application from Mr. C. W. Patrick to be allowed to give an exhibition of Physical Culture exercises at the Museum on the opening day for which a small charge would be made by him was not entertained.

As it was reported that on previous occasions orchestral music interfered with the explanations and demonstrations given at the different stalls it was decided to omit it from the programme this year, except such music as might be required for physical drill exercises by Boy Scouts and students of St. Mary's College.

At the request of the Committee the Acting Surgeon-General undertook to make arrangements with Mr. Tucker for the showing of Health Week films in Woodford Square and on the grounds east of the Princes Building ; and Dr. Achong promised that if the films which he was expecting from New York arrived in time he would lend them to the Committee for this purpose.

Dr. Achong presented to the Committee a number of useful posters relating to Health Week which he had received from New York.

4.—The Health Week Museum of Hygiene and Public Health at the Princes Building was formally opened on Saturday afternoon the 1st October at 4.30 p.m. by His Excellency the Honourable S. M. Grier, C.M.G., the Acting Governor, in the presence of a large gathering which included representatives of all sections of the community. In the absence of His Worship the Mayor, the Governor was received by the Deputy-Mayor, Alderman H. A. de Freitas, by whom he was cordially welcomed. The Chairman of the Museum Committee, Dr. G. H. Masson, in his address to the Acting Governor, renewed his plea for a permanent museum in place of the temporary Health Week Exhibition usually held, and, as on a previous occasion, this plea was sympathetically received.

5.—His Excellency took a keen interest in the Museum and went carefully around the sections, studying the various exhibits and making inquiries of those in charge of each section.

6.—Throughout the week from the 1st to the 7th October, the Museum remained open from 4 to 6 p.m. and from 8 to 10 p.m. and was visited every day by large crowds of persons from all classes in the City. Admission was of course, free.

7.—As customary, through the kind co-operation of the heads of several religious denominations in the City, appropriate reference to the objects of Health Week was made in the course of the sermons delivered in the different churches on the Sunday, the 2nd October, and suitable instruction on the same subject was included in the teaching given in the Sunday Schools on that day.

8.—The Director of Education again this year kindly issued instructions to the head teachers of all elementary schools in the City to devote special attention to lessons on hygiene and public health during the week : and leaflets on various health subjects were distributed to the schools.

9.—Attention may be drawn to several novel features in connection with the observance of Health Week, 1932, which tended very greatly to its success, and were much appreciated by all who visited the Museum. Among these were :—

(*a*) The inclusion in the Museum of sections dealing with the care of the eyes, at which Dr. V. M. Metivier very kindly attended every evening to answer questions and give information to visitors regarding the exhibits.

(*b*) A dental section managed by the Trinidad Dentists' Association, where some very interesting exhibits (including some kindly lent by the Government) were on show, and where a dentist attended every evening to give information to visitors.

(*c*) A meteorological section, under the direction of the Honourable E. J. Wortley, Director of Agriculture, and Mr. Almandos of the same department.

(*d*) A section arranged by the Joint Committees of the Royal Victoria Institute and the Trinidad Field Naturalists' Club, of which Mr. T. I. Potter is the President ; this section was extremely interesting and attracted large numbers of visitors to whom the specimens exhibited were explained by attendants in charge.

(*e*) A very interesting section dealing with Food and Vitamins arranged by Miss Clarke of the Government Training College, Tranquillity, and Miss Bentley and Miss Asbell of the Archibald Institute, St. Augustine, where practical demonstrations were given daily with regard to the preparation of properly balanced diets.

(*f*) A working model of a sand filter and a Paterson Chloronome actually working and showing how the City water supply is purified by liquid chlorine were installed by the City Engineer's Department.

(*g*) The section dealing with the diseases of the nose, ear and throat where Dr. Mackechnie explained a number of charts and diagrams and pictures relating to the subject.

(*h*) A section on radiology which drew large numbers of interested visitors, where Dr. Arthur Reid, Radiologist at the Colonial Hospital, was in attendance and explained his subject.

(*i*) A section of social diseases was introduced for the first time. It was limited to men only and created a great deal of interest both in the exhibits shown and the leaflets distributed by the medical lecturer in charge of the section.

(*j*) Another new section was one for women devoted to instruction on the Hygiene of pregnancy. It was entrusted to the Medical Officer in charge of the Ante-natal Clinic of the Colonial Hospital and proved a very valuable addition to this year's museum.

10.—Though not represented at the Museum itself, the Coterie of Social Workers also this year took a prominent part in the work of the observance of Health Week, and under their auspices a very interesting Mothers Evening was arranged at the Royal Victoria Institute on Friday the 7th October, in the course of which an instructive address was delivered to a large gathering by Dr. W. E. Chinasing.

11.—Another interesting feature was provided by the Boy Scouts, who pitched a camp of a dozen tents on the grass enclosure east of the Princes Building, where on several afternoons they went through various exercises and displays illustrative of scout life in camp ; and those displays were watched with interest by numbers of visitors to the Exhibition. An ambulance tent equipped with all the necessities for "First Aid" was an interesting feature of the camp.

12.—Mention should also be made of a very attractive display of physical drill by students of St. Mary's College under the direction of the Rev. Father Kennedy.

13.—Considerable improvement was effected in the scope of the lectures and addresses given by medical practitioners during Health Week. In addition to the usual lectures to the senior students at the Queen's Royal and St. Mary's Colleges, and St. Joseph's and Holy Name Convent Schools and the Bishop's High School, addresses were also given at the Intermediate Schools of the City, as well as to the Senior Students of the two elementary Government (boys and girls) Schools at Nelson Street.

14.—On two evenings during the week lectures were arranged at the Royal Victoria Institute for Teachers and their friends: the first on Saturday the 1st October by Dr. Patrick, and the other on Wednesday the 5th by Dr. V. M. Metivier, on the subject of the prevention of blindness.

15.—Another lecture at the Victoria Institute which drew a large audience was that organised for the Committee by the Trinidad and Tobago Literary Clubs Association. The lecture was delivered by the Honourable Dr. C. F. Lassalle, Acting Surgeon-General.

16.—On Thursday evening the 6th, a very interesting address was delivered by Dr. E. Castelli, of Bologna, on the subject of Blood Transfusion; at this lecture in the unavoidable absence of Dr. E. N. Darwent, President of the Trinidad Branch of the British Medical Association, and at the request of the Deputy-Mayor (Alderman H. A. de Freitas), the Chair was taken by Dr. G. H. Masson, Medical Officer of Health of Port-of-Spain, and President of the Medical Board of Trinidad and Tobago.

17.—A feature of great value was the giving of two exhibitions of health films under the direction of Dr. T. P. Achong—one at Greyfriars Hall (very kindly lent free of charge for the occasion by the Committee of Greyfriars Presbyterian Church) on Monday, 3rd October and the other, the next evening at the Chinese Association Hall, 19, Charlotte Street. At both exhibitions the principal pictures screened were two one-reel films on tuberculosis loaned to Dr. T. P. Achong by the New York Tuberculosis and Health Association, Inc., a voluntary health organization of New York City, for our Health Week observance. Both shows were attended by full houses. The audiences were appreciative.

At Greyfriars Hall, the Honourable Dr. C. F. Lassalle, Acting Surgeon-General, who occupied the Chair, commented appreciatively on the films, and also spoke on the public health aspect of leprosy. At the meeting held at the Chinese Association Hall, Dr. Achong addressed the audience on tuberculosis and hookworm disease.

18.—Subsequent to these special exhibitions, open-air cinema shows, including the imported tuberculosis films, were given, for three consecutive nights at Woodford Square. At the close of the Port-of-Spain observance, the tuberculosis films were lent to the Acting Surgeon-General in order that they might be exhibited at San Fernando before being returned to New York.

19.—At the Liberty Hall, Prince Street, an address was delivered to members of the Workingmen's Association and the general public, by Dr. Patrick, Captain A. A. Cipriani, Mayor of Port-of-Spain presiding.

20.—At the Portuguese Association in Richmond Street, an address was given by Dr. Caldeira; it was attended by a number of members of the Association and their friends.

21.—The Committee desire to place on record their appreciation of the assistance generously received from all quarters in the organisation of what has been generally admitted to have been one of the most successful observances of Health Week yet held; and in particular they would express their gratitude to all the medical men who assisted by giving lectures and addresses at the colleges, schools, club halls and at the Royal Victoria Institute; as well as to all who rendered assistance in connection with the various sections at the Exhibition.

22.—We append newspaper reports of the ceremonial opening of the Exhibition, and of the various lectures and addresses delivered.

23.—The following was the programme of the week's observance:—

Addresses and Lectures.

Royal Victoria Institute.

Blood transfusion—Lecture by Dr. E. Castelli.—Thursday, 6th October, 8.30 p.m.
Conserving the sight of the school child.—Address to school teachers by Dr. V. M. Metivier—Wednesday, 5th October, 8.30 p.m.
Address to elementary teachers (Men only)—Dr. F. L. Patrick—Saturday, 1st October, 8.30 p.m.
Address to Trinidad and Tobago Literary Club Council—Honourable Dr. C. F. Lassalle—Tuesday, 4th October, 8.30 p.m.
Address to Coterie of Social Workers—Dr. W. E. Chinasing—Friday, 7th October, 8 p.m.

Colleges and High Schools.

Queen's Royal College—Dr. J. L. Ritchie—Monday, 3rd October, 3 p.m.
St. Mary's College—Honourable Dr. C. F. Lassalle—Wednesday, 5th October, 3 p.m.
St. Joseph's Convent—Dr. G. H. Masson—Wednesday, 5th October, 3 p.m.
Bishop's High School—Dr. H. Bishop—Tuesday, 4th October, 2 p.m., at the Royal Victoria Institute.
Holy Name Convent—Dr. J. E. Boucaud—Thursday, 6th October, 2.30 p.m.
Pamphylian High School—Dr. J. H. Pierre—Friday, 7th October, 2 p.m.

Intermediate Schools.

Tranquillity Boys' School—Dr. W. T. Pearce—Tuesday, 4th October, 2 p.m.
Tranquillity Girls' School—Dr. E. de Verteuil—Tuesday, 4th October, 2 p.m.
Belmont R.C. Intermediate School—Dr. M. A. Forrester—Wednesday, 5th October, 2 p.m.
St. Rose's Intermediate School—Dr. J. Camps-Campins—Monday, 3rd October, 2 p.m.
St. Teresa Intermediate School—Dr. P. Lai-Fook—Wednesday, 5th October, 2 p.m.
St. Thomas Intermediate School—Dr. J. E. Brown—Friday, 7th October, 2 p.m.
Pembroke Street Intermediate R.C. School—Dr. J. A. Tsoi-a-Sue—Thursday, 6th October, 2.30 p.m.

Government Schools.

Eastern Boys'—Dr. W. T. Pearce—Monday, 3rd October, 2 p.m.
Eastern Girls'—Dr. W. E. Chinasing—Thursday, 6th October, 2 p.m.

Associations, &c.

Portuguese Association—Dr. A. D. Caldeira.
Chinese Association—Dr. T. P. Achong—Tuesday, 4th October, 8 p.m.
Salvation Army—Dr. S. A. Hayes—Wednesday, 5th October, 8 p.m.
Workingmen's Association (Liberty Hall, Prince Street)—Dr. F. L. Patrick—Thursday, 6th October 8.30 p.m.
Trinidad Constabulary—Lecture by Dr. Francis—Wednesday, 5th October, 4 p.m.

HYGIENE AND PUBLIC HEALTH MUSEUM, PRINCES BUILDING.

List of Sections.

1.—Child Welfare	..Hon. Dr. C. F. Lassalle and Dr. J. R. Dickson.
2.—Tuberculosis	..Dr. G. H. Masson, Trinidad Association for the Prevention and Treatment of Tuberculosis.
3.—Social Diseases..	..Dr. V. Moralejo.
4.—Throat, Nose and Ear	..Dr. W. G. Mackechnie.
5.—Teeth	..The Dental Association.
6.—Eyes	..Dr. V. Metivier.
7.—Malaria	..Dr. E. de Verteuil.
8.—Smallpox, yellow fever and plague	..Hon. Dr. C. F. Lassalle.
9.—Cancer	..Dr. E. Castelli.
9A—Blood Transfusion	..Dr. E. Castelli.
10.—Hookworm	..Dr. H. Bishop.
11.—Bacteriology—Germs, Vaccines Pathological Specimens, Preparation and staining of specimens ..	..Drs. J. L. Pawan, P. C. Campariole and J. Camps-Campins.
12.—Hygiene of Pregnancy	..Dr. M. V. Boucaud.
13.—Radiology	..Drs. A. Reid and E. P. Masson.
14.—Meteorology	..The Department of Agriculture.
15.—Housing and house furnishing ..	..Dr. G. H. Masson, Trinidad Association for the Prevention and Treatment of Tuberculosis.
16.—Sanitary dustbins, privies, food protection from flies, &c.	Public Health Department
17.—Bats and other blood sucking animals, noxious vermin, snakes, poisonous fish, &c,	..Joint Museum Committee of the Royal Victoria Institute, and Field Naturalists' Club.
18.—Foods and Vitamins and Diets ..	..Miss Clarke, Government Training School, Tranquillity, and the Misses Bentley and Asbell, the Archibald Institute, St. Augustine.
19.—Clean Milk and Dairy products ..	..Trinidad Dairies.
20.—Purification of Water Supplies ..	..City Engineer's Department.
21.—Sewerage Appliances	..City Engineer's Department.
22.—Baths, Lavatories and Toilets ..	..Committee of Merchants.
23.—Training of the Blind—Braille Reading, Basket making, &c.	..Committee of the Institute for the Blind.
24.—Hygienic cooking appliances and kitchen requisites	..Committee of Merchants.
25.—Camps and Camp Hygiene ..	..Boy Scouts.
26.—Physical Exercises	..St. Mary's College, Wednesday, 5th October, 1932, at 5 p.m.
27.—Bookstall (Hygiene, &c.) ..	..Trinidad and Tobago Literary Club.

Health Films.

Under the direction of the Honourable Dr. C. F. Lassalle, Mr. Louis Tucker will give an open air exhibition of Health Films in Woodford Square and on the Princes Building Grounds (west of the building), as follows :—

Woodford Square	Wednesday and Friday at 8 p.m.
Princes Building	Tuesday and Thursday at 8 p.m.

There will also be an Exhibition of specially imported Health Week Films at Greyfriars Hall, under the direction of Dr. T. P. Achong on Monday, 3rd October, at 8.30 p.m. and at the Chinese Association Hall on a day to be fixed during the week.

REPORTS, 1932.

The following is a list of the principal reports submitted by the Medical Officer of Health during the year :—

1. *Regular Reports.*

(*a*) Weekly.—Consular Sanitary Reports (U.S. Consulate)	52
(*b*) Monthly.—On the Health of Port-of-Spain and the work of the Sanitary Staff	12
(*c*) Quarterly.—On the Classification of Causes of Deaths in Port-of-Spain.	4
(*d*) Progress.—On the Health of the City for 9 months to 30th September, 1932	1
(*e*) Annual.—On the Vital Statistics, Sanitary Condition and Sanitary Administration of the City of Port-of-Spain for the year 1931	1

2. *Special Reports.*

i. On the drainage of Plaisance Road and vicinity	1
ii. On the filling of swampy lands on foreshore south of Wrightson Road	1
iii. On the assistance in repairing building at No. 23A, Clifton Hill	1
iv. On the work of the Government Analyst in connection with food and drugs	2
v. On the establishment of Soap Factories	9
vi. On the flooding of yards in Woodbrook	1
vii. On the barrack at No. 103, Laventille Road	1
viii. On the filtration of the Maraval Water Supply	1
ix. On the privies at No. 86, Piccadilly Street	1
x. On the absence of privy accommodation at No. 33, Argyle Street	1
xi. On the breeding of mosquitoes on lands south of Wrightson Road	1
xii. On an insanitary ravine at Sea Lots	1
xiii. On a notice to construct privy cesspit at No. 42, Observatory Street	1
xiv. On the overcrowding of barracks in the South-Eastern District	1
xv. On the sale of fish in Cadiz Road	1
xvi. On a leaflet on Diphtheria and its Prevention	1
xvii. On the prevalence of Diphtheria in the City	2
xviii. On a barrack at No. 136, Roberts Street	2
xix. On the keeping of stock on lands south of Wrightson Road	1
xx. On the insanitary condition of No. 35, Lodge Place	1
xxi. On a lime crushing plant at No. 30, St. Joseph Road	1
xxii. On flies and offensive smells in De Verteuil and O'Connor Streets	1
xxiii. On a dilapidated privy at No. 25, Clifford Street	1
xxiv. On the insanitary condition of the Ground Provision Market	1
xxv. On the construction of drains at Nos. 5, 7 and 9, Observatory Street	1
xxvi. On the breeding of mosquitoes to the East of the City	1
xxvii. On the extension of time to comply with Nuisance Notices	6

3. *Leases in Woodbrook.*

Reports on applications for leases of land in Woodbrook	48

4. *New Building Plans.*

Reports on plans for New Buildings	203

5. *Building alterations and Repairs.*

Reports on notices of alterations and repairs to buildings	21
Total	385

MEETINGS.

The writer attended all the regular and special meetings of the Council, and, also, a number of Committee meetings.

FINANCIAL.

The Revenue collected by the Public Health Department amounted to $740.75, compared with $1,234.70, in the preceding year.

A full statement of Income and Expenditure is given below :—

INCOME.

Contribution from Government	$16,080.00
Contribution from General Purposes	15,048.49
Sale of Disinfectants	96.15
Disinfecting Cesspits	345.36
Cleansing Eaves Gutters	13.50
Sale of Milk Badges	65.32
Dairymen's Licences	19.80
Milk Vendors' Licences	56.64
Fines	131.40
Miscellaneous Receipts	9.50
From Woodbrook Estate and General Purposes for oiling pools and drains	1,233.43
Vendors' Licences—Sale of Oysters and other Shell Fish	2.88
	$33,102.67

EXPENDITURE.

Staff	$21,681.72
Anti-Rat Measures.	
Trapping and destroying rats	2,693.53
Purchase of materials	234.64
Purchase of rats	90.00
Anti-mosquito Measures.	
Inspecting eaves gutters	1,692.95
Oiling of pools and drains	1,173.43
Disinfection.	
Oiling cesspits	2,524.09
Spraying premises with chemicals	1,065.40
Purchase of disinfectants for sale to public	55.20
Other Expenditure.	
Purchase of Milk Badges	30.58
Furniture	32.50
Stationery, Books, &c.	225.39
Printing	908.32
Contingencies	218.65
Telephones	161.00
Notifications of Infectious Diseases	96.24
Messenger's Uniform	56.28
Postage	11.75
Dissecting Rats (Medical Department)	91.00
Purchase of Bicycle	60.00
	$33,102.67

LEAVE OF ABSENCE.

Vacation or Sick Leave was granted by the Council to members of the Staff of the Public Health Department as follows :—

Vacation Leave.

F. A. Howard—Sanitary Inspector—1st February to 5th June.
J. W. Parris—Sanitary Inspector—1st April to 12th May.
W. R. Smith—Clerk to Medical Officer of Health—20th April to 31st May.
J. B. Taylor—Assistant Sanitary Inspector—17th May to 13th June.
H. St. Cyr—Sanitary Inspector—20th June to 17th July.
H. Thorne—Sanitary Inspector—1st July to 11th August.
F. Babb—Sanitary Inspector—15th August to 11th September.
G. Charles—Sanitary Inspector—1st September to 12th October.
A. Romain—Assistant Sanitary Inspector—19th September to 16th October.
T. Mitchell—Sanitary Inspector—14th November to 23rd December.

Sick Leave.

J. B. Taylor—Assistant Sanitary Inspector—2nd January to 24th January.
J. E. Ferreira—Sanitary Inspector—2nd March to 11th March.
G. Charles—Sanitary Inspector—31st March to 15th April and 6th July to 31st August.
N. E. Guppy—Sanitary Inspector—10th August to 19th August
G. Ashe—Sanitary Inspector—19th October to 25th October.
J. W. Parris—Sanitary Inspector—5th November to 1st December.
J. A. Wood—Sanitary Inspector—15th November to 4th December.

OBITUARY.

By the death at the late Chief Sanitary Inspector, Captain Edwin West Lack, V.D., which came suddenly in his office of the Public Health Department on the 13th September, 1932, the City lost the services of a loyal and efficient officer. His urbanity and singular devotion to his work, which he loved, made his name synonymous with public sanitation in the community and won for him the respect and confidence of all classes. He will long be missed, and by none more so than the writer.

ACKNOWLEDGMENTS.

The writer is happy to take this opportunity of thanking the Worshipful Mayor, Aldermen and Councillors for the support given to his administration of the Public Health Department during the year. He also wishes to record his appreciation of the valuable assistance given him in the discharge of his responsibilities by the clerical and outdoor sanitary staff, respectively, under Mr. W. R. Smith, and Mr. J. E. Ferreira, CERT.R.SAN.I., the new Chief Sanitary Inspector whose all round efficiency is a great asset to the Department.

I have the honour to be,

Sir,

Your obedient Servant,

GEORGE H. MASSON,
Medical Officer of Health.

Port-of-Spain, Trinidad, B.W.I.,
Public Health Department,
Town Hall,
December, 1933.

APPENDIX—SANITARY WORK.

Table A.—Inspection of Premises, &c., by Sanitary Inspectors.

Months.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Visits to dwelling houses and other premises ..	8,418	8,143	8,031	6,706	6,452	7,467	7,120	7,231	8,383	7,945	7,541	8,091	91,528
No. of Shops, Stores, Bakehouses &c., inspected ..	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Average per month.
Provision and Meat Shops	116	177	126	217	147	136	191	164	152	165	236	198	169
Provision Stores ..	24	24	21	14	29	12	17	13	14	9	14	4	16
Restaurants and Cookshops ..	13	19	11	38	23	30	18	14	14	21	34	29	22
Common Lodging Houses	8	18	8	17	14	27	20	18	18	13	19	15	16
Dairies and Cowsheds	29	28	28	25	27	24	20	17	15	16	28	34	24
Stables	31	38	37	35	26	31	36	33	27	31	52	40	35
Schools	18	19	33	16	15	29	15	14	28	14	25	30	21
Dyeworks	2	4	2	..	2	5	2	3	3	4	5	7	3
Barber Shops ..	25	24	16	16	14	16	18	9	18	16	18	21	18
Aerated Water Factories	7	8	11	10	8	8	10	8	11	10	12	6	9
Other Factories ..	9	8	15	12	6	10	10	8	6	5	15	9	9
Cake and Ice Cream Shops	120	142	128	120	104	151	279	166	134	158	163	158	152
Fish Hawkers' Trays ..	166	139	100	102	121	147	143	129	100	109	133	134	127
Bakehouses	29	33	29	27	20	20	43	20	26	27	51	43	31
Bread Depots ..	3	5	3	10	3	3	5	5	4	7	9	11	6
Ice Cream Carts and Pails	77	37	26	23	37	50	38	47	57	38	44	43	43
Cake and other Food Hucksters' Trays ..	80	61	44	28	40	87	97	79	85	87	67	88	70
Provision Trays and Baskets	40	22	38	11	20	42	52	42	22	47	42	35	34
Oyster Vendors' baskets	..	11	8	4	1	3	2	7	11	8	10	6	6
Soap Factories ..	1	1	1	2	3	2	..	2	4	4	6	7	3
Goat Pens	46	45	38	33	39	35	39	33	29	31	33	41	37
Plantain Carts ..	43	21	29	19	33	43	94	67	43	50	54	48	45
Bread Carts and Baskets	49	36	38	26	34	44	52	39	38	48	48	58	43
Boats	16	18	46	53	17	29	43	40	42	48	46	14	34
Spirit Shops	26	35	28	35	30	25	37	19	21	32	32	34	30
Fry Shops	6	8	11	5	5	2	7	8	9	4	13	11	7
Hotels	9	15	5	9	4	5	7	..	4	2	4	7	6
Markets	4	5	3	3	2	4	3	6	5	4	5	4	4
Laundries	9	10	9	11	7	10	8	7	12	13	18	16	11
Tanneries	3	5	4	3	3	3	1	4	5	5	13	11	5
Garages	24	15	22	24	19	22	12	23	19	23	24	25	21
Sweet Drinks Carts ..	45	26	29	16	19	25	49	26	24	36	47	31	31
Public Urinals ..	2	5	6	5	4	5	3	3	4	3	5	3	4

TABLE B.—Results of Notices and Verbal Directions.

Yards paved	24	Roofs close-boarded	9
Yard pavements repaired	118	Retail Shops painted	51
Damp or swampy yards filled in	273	Restaurants painted	5
Yards cleaned	4,701	Parlours painted	28
Drains constructed	131	Spirit Shops painted	6
Drains repaired	368	Barracks painted	39
Drains cleaned	2,771	Barber Shops painted	3
Washing Troughs cleaned	44	Fry Shops painted	2
Sinks repaired	94	Bread Carts painted	17
Sinks cleaned	664	Concrete floors of Retail Shops repaired	39
Sinks constructed	61	Concrete floors of Kitchens repaired	1
Gullies cleaned	208	Concrete floors of Parlours repaired	6
Lavatories cleaned	9	Concrete floors of Cowsheds repaired	22
Washing Platforms cleaned	327	Concrete floors of Stables repaired	2
Sewer Basins cleaned	897	Concrete floors of Bakehouses repaired	6
Sewer Basins installed	9	Concrete floors of bath rooms repaired	2
Sewer Basins repaired	7	Shops cobwebbed	246
New Privies built	184	Provision Stores cobwebbed	1
Privies repaired	580	Cookshops cobwebbed	15
Privies made fly-proof	358	Hotels cobwebbed	1
New Cesspits constructed	151	Parlours cobwebbed	120
Cesspits repaired	336	Stables cobwebbed	17
Urinals cleaned	70	Barracks cobwebbed	116
Accumulations of manure removed	271	Bakehouses cobwebbed	33
Cesspits emptied	1,466	Spirit Shops cobwebbed	22
Cesspits oiled (paid for)	1,221	Common Lodging Houses cobwebbed	12
Rat holes stopped	265	Cowsheds cobwebbed	21
Barracks repaired	79	Bakehouses scrubbed	53
Kitchens repaired	56	Shops scrubbed	99
Kitchens built	1	Cookshops scrubbed	13
Flush Tanks installed	22	Restaurants scrubbed	2
Flush Tanks repaired	62	Parlours scrubbed	125
Sanitary Dustbins provided	1,117	Spirit Shops scrubbed	14
Dustbins repaired	322	Stables scrubbed	27
Dustbins cleaned and disinfected	1,631	Cowsheds scrubbed	47
Uncovered Dustbins covered	767	Common Lodging Houses scrubbed	3
Premises cleared of bush	712	Aerated Water Factories scrubbed	3
Trees trimmed or cut down	607	Barber Shops scrubbed	5
Houses ventilated	22	Parapet Walls built	2
		Total	22,423

DISINFECTION.

TABLE C.—Premises disinfected for Infectious Diseases and Vermin.

Diseases.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total.
Tuberculosis	12	7	13	13	13	17	17	13	13	12	13	17	160
Enteric Fever	2	5	1	2	..	..	1	6	..	1	4	..	22
Pneumonia	4	5	5	4	3	5	7	6	6	9	9	6	69
Diphtheria	1	2	5	3	16	15	3	..	3	8	4	4	64
Leprosy	1	..	..	..	..	..	..	..	..	..	..	..	1
Chicken Pox	2	..	4	4	6	2	2	2	..	1	..	1	24
Ophthalmia Neonatorum	3	1	..	1	2	3	..	1	..	1	1	1	14
Encephalitis Lethargica	..	..	..	1	..	..	..	..	..	..	..	..	1
Acute Poliomyelitis	..	1	..	..	1	..	..	..	..	..	..	..	2
Total	25	21	28	28	41	42	30	28	22	32	31	29	357
Vermin	45	47	50	52	45	51	53	46	54	48	54	51	596

DISINFECTION.—CONTINUED.

TABLE D.—Railway Coaches Disinfected.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	Septembe	October.	November.	December.	Total.
Yaws	..	..	..	..	..	..	..	..	..	..	..	..	..
Leprosy	3	2	1	1	2	5	2	4	4	3	5	4	36
Tuberculosis	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE E.—Cesspits sprayed with Crude and Distillate Oils (Free for Infectious Disease).

Disease.	January.	February.	March.	April.	May.	June.	July.	August	September	October.	November	December.	Total.
Enteric Fever	644	712	780	1,075	492	811	1,665	1,655	1,683	1,427	1,055	403	12,402

TABLE F.—Limewashing.

Premises and Places limewashed.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Total.
Common Lodging Houses	..	..	..	1	..	1	..	..	..	..	..	..	2
Privies	77	67	83	66	118	76	68	52	45	68	70	129	919
Cookshops	..	..	1	..	..	..	..	..	..	..	2	..	3
Tanneries	..	..	2	..	..	..	..	..	1	..	4	6	13
Cowsheds	..	4	4	9	2	..	..	..	..	2	9	9	39
Bakehouses	4	1	1	4	..	..	1	2	2	6	13	14	48
Kitchens	..	6	4	5	..	4	6	2	3	3	10	5	48
Barracks	6	6	9	18	3	4	9	3	..	1	26	48	133
Retail Shops	..	..	6	..	..	..	..	3	..	..	5	20	34
Parlours	..	..	..	1	..	1	..	4	..	..	9	13	28
Aerated Water Factories	..	..	..	..	..	..	..	..	..	1	1	4	6
Stables	..	..	..	..	..	1	..	..	..	1	1	8	11
Garages	..	..	1	..	..	..	..	..	1	..	..	..	2
Restaurants	..	..	..	..	..	..	..	..	..	..	2	2	4
Fry Shops	..	..	..	..	..	..	..	..	..	..	2	..	2
Totals	87	84	111	104	123	87	84	66	52	82	154	258	1,292

UNSOUND FOOD.

TABLE G.—Foodstuffs seized and destroyed under Part X. (a) of the Public Health Ordinance, Cap. 98.

Articles.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Hams	19	7	..	..	..	..	..	..	..	39	..	..	65
Sardines —Tins	32	..	..	..	..	..	11	..	..	..	..	..	43
Sausages —Tins	2	..	..	..	..	..	..	..	..	..	..	..	2
Plantains	..	..	..	..	530	..	..	..	..	..	..	..	530
Beans —Pounds	..	..	..	..	50	..	..	..	..	..	..	..	50
Salmon —Tins	..	..	..	..	..	..	17	..	..	..	..	..	17
Bread —Loaves	..	..	..	..	..	..	..	15	..	..	..	33	48
Liver Paste—Tins	..	..	..	..	..	..	..	..	..	227	..	..	227
Milk —Tins	..	..	..	..	..	..	..	..	..	..	48	..	48
Biscuit —Tins	..	..	..	..	..	..	..	..	..	..	12	..	12

ANTI-PLAGUE MEASURES.

TABLE H.—Destruction of Rats and Mice.

	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Rats caught by trappers	791	679	869	970	945	961	1,075	1,168	1,181	1,180	1,144	980	11,943
Rats bought ..	192	250	207	165	99	144	172	134	159	122	135	114	1,893
Total Rats destroyed	983	929	1,076	1,135	1,044	1,105	1,247	1,302	1,340	1,302	1,279	1,094	13,836
Mice caught and destroyed	182	127	113	110	109	73	121	149	94	131	235	248	1,692

TABLE J.—Examination of Rats by Government Bacteriologist.

	Jan.	Feb.	Mar.	Apr.	May	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Rats examined for Plague	979	903	1,067	1,105	1,038	1,086	1,236	1,293	1,338	1,302	1,272	1,087	13,706
Rats found infected with Plague ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Immature rats not examined ..	1	26	9	30	6	19	11	9	2	..	7	7	130

ANTI-MOSQUITO MEASURES.

Table K.—Inspection of Eaves Gutters, &c.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Number of inspections and re-inspections of premises ..	3,046	2,665	1,563	1,498	1,219	1,331	1,462	1,384	1,431	1,451	1,595	1,328	19,973
Occasions found in good order	2,793	2,516	1,491	1,429	1,171	1,230	1,374	1,264	1,349	1,366	1,530	1,246	18,759
Defective Eaves Gutters	253	149	72	69	48	101	88	120	82	85	65	82	1,214
Defective Eaves Gutters containing water	55	33	20	16	19	40	22	39	19	20	24	25	332
Defective Eaves Gutters containing water with larvae ..	39	15	17	8	3	38	47	57	44	39	13	23	343
Occasions on which mosquito larvae were found in tubs, antiformicas, tin cans, &c.	81	66	56	40	43	71	58	58	45	61	100	105	784
Eaves Gutters removed	2	..	..	..	..	11	..	..	..	..	..	..	13
Eaves Gutters repaired	9	..	..	..	..	..	5	..	2	..	..	3	19
Eaves Gutters cleaned and regraded	4	..	..	..	..	5	7	..	2	..	..	..	18
Holes in trees filled with cement	..	..	..	..	..	..	..	..	..	..	..	1	1

Table L.—Reports to Water and Sewerage Department.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Leaks, defective taps, chokes, &c., reported ..	49	51	64	40	43	35	37	40	18	25	84	45	531

PROSECUTIONS.

TABLE M.—Cases determined by the City Magistrate and penalties imposed.

Offences.	January.		February.		March.		April.		May.		June.		July.		August.		September		October.		November.		December.		Totals.	
	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Cases.	Fines. £ s. d.	Total Cases.	Total Fines. £ s. d.
Keeping stagnant water in anti-formicas, &c...	1	5 0	3	15 0	2	10 0	1 2	5 0 Repri-manded	4 1	1 0 0 Repri-manded	2	12 6	2	10 0	7 1	2 2 6 Repri-manded	1	7 6	..	..	..	..	..	..	27	6 7 6
Failing to comply with notices requiring abatement of nuisances	1	Repri-manded	1	10 0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	10 0
Hawking milk without carrying badges	1	2 6	..	..	..	..	..	..	3	7 6	..	..	5 3	17 6 Repri-manded	2	Repri-manded	..	..	..	..	..	..	..	..	14	1 7 6
Failing to provide proper dustbins	..	..	1	5 0	..	..	..	..	1	2 6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	7 6
Failing to keep yards free from tins, bottles, &c.	..	..	..	..	1 2	10 0 Repri-manded	2	12 6	1	5 0	..	..	..	..	..	..	1	7 6	..	..	..	..	..	..	7	1 15 0
Failing to maintain sewer basins clean	..	..	..	..	..	..	1	5 0	1	10 0	..	..	1	5 0	..	..	..	..	..	..	..	..	..	..	3	1 0 0
Exposing foodstuffs for sale without protection from contamination ..	..	..	..	..	1	Dis-missed	..	..	..	..	5 1	1 2 6 Dis-missed	..	..	..	..	..	..	..	..	..	..	..	..	7	1 2 6
Failing to maintain floor of retail shops clean	..	..	..	..	..	..	..	..	..	..	1	5 0	..	..	..	..	..	..	..	..	..	..	..	..	1	5 0
Total	3	7 6	5	1 10 0	6	1 0 0	6	1 2 6	11	2 5 0	9	2 0 0	11	1 12 6	10	2 2 6	2	15 0	..	..	..	..	..	..	63	£12 15 0