

Annual report of the Medical Officer of Health / Nairobi Municipality.

Contributors

Nairobi (Kenya). Public Health Department.

Publication/Creation

[Nairobi] : Municipal Council, [1935]

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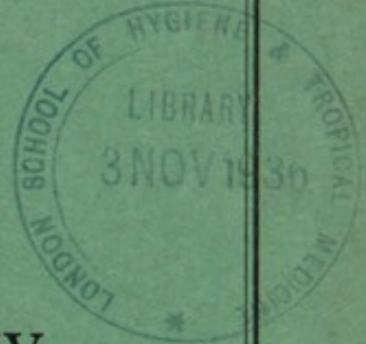
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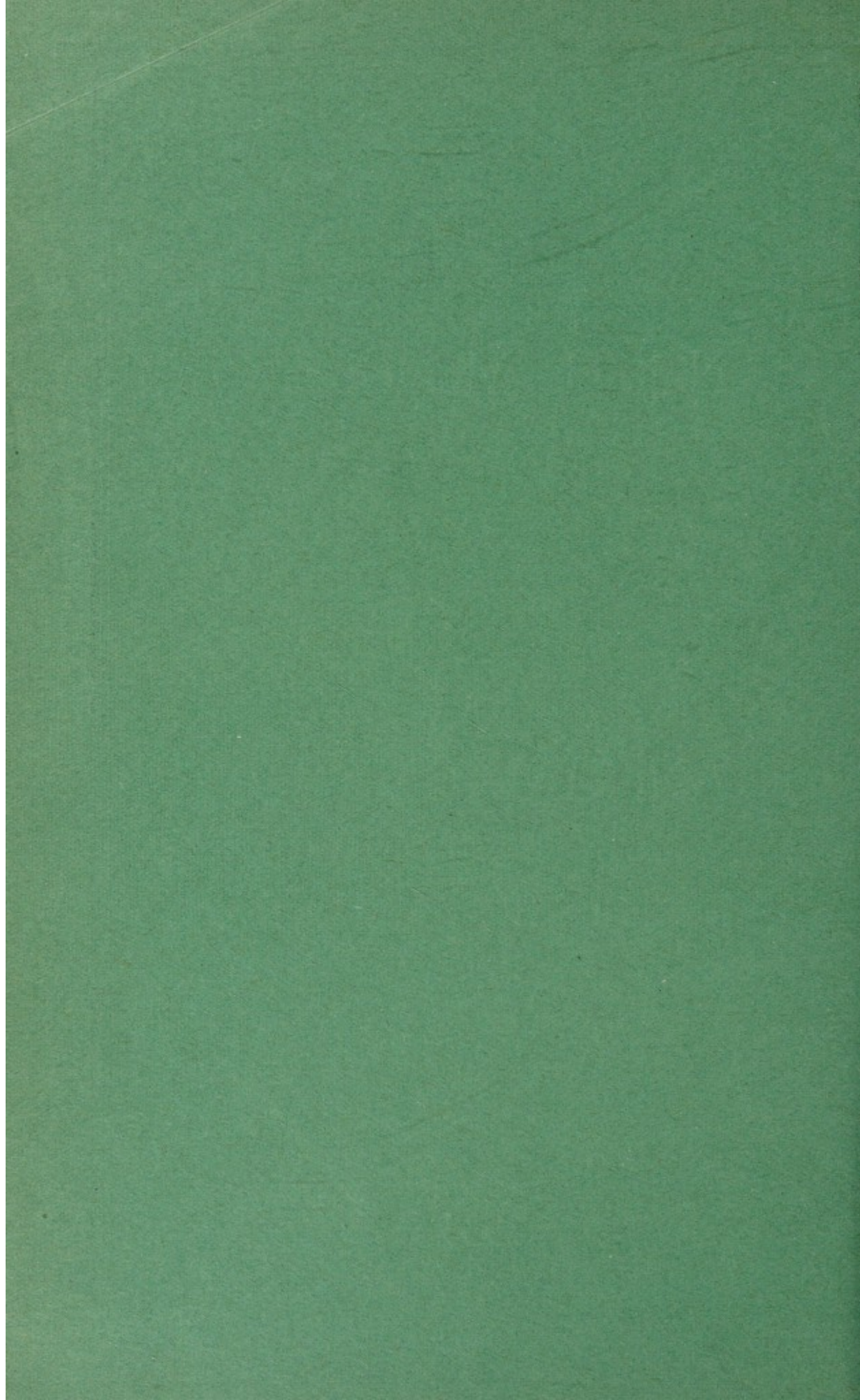
The Royal Society of Tropical Medicine
and Hygiene,

15 APR 1936

MANSON HOUSE,
26, PORTLAND PLACE
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SEVENTH
ANNUAL REPORT
OF THE
Medical Officer of Health.

1935






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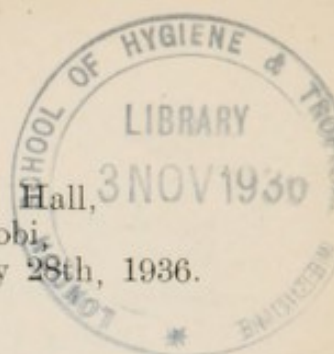
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Town Hall,
Nairobi,
February 28th, 1936.



His Worship the Mayor and Councillors of the
Municipal Council of Nairobi.

Gentlemen,

I have the honour to present to you herewith my annual report on the sanitary circumstances, sanitary administration, vital statistics and other matters of a health nature, of the Municipality of Nairobi for the year 1935, as required by "The Local Government (Municipalities) Ordinance 1928," "The Medical Officers of Health Rules, 1929," Sec. 2 (12)d.

I am, Gentlemen,

Your obedient servant,

H. W. TILLING,

M.R.C.S., L.R.C.P., D.P.H.,

Medical Officer of Health.

I. GENERAL.

The Local Government (Municipalities) Ordinance came into force as from 1929, thus this is the seventh year that the Municipal Council of Nairobi has been the public health authority for the Municipality of Nairobi.

The office of the public health department, which for the first half of the year was situated in the Rahimtulla Trust Building, Government Road, has been transferred to the new Town Hall recently built in the City Square.

The annual expenditure of the department for 1935 showed an increase of £683 over the amount expended in 1934, this increase was largely due to the expenditure of £668 on emergency measures in connection with the malaria epidemic, further, new expenditure to the extent of £581 was undertaken in connection with the taking over of the auxiliary health services for the last three months of the year.

The estimated total population of the Municipality shows an increase of 5.5% compared with that of the previous year. All races share in the increase, Europeans to the extent of 2.4%, Asiatics by 10% and Natives and others by 3.7%.

For the third consecutive year, less than the average amount of rain fell in Nairobi, the total amount for the year being 31.24 inches or 12.6% below the average of 35.77 inches.

Only three months namely, February, June and August registered an amount greater than the average, whilst for the first time on record no rain fell at all during July.

The death rate for all races for the year was 13.9 per thousand population, an encouraging decrease compared with 14.8 for the previous year. The European death rate stands at 6.1, the Asiatic at 12.2 and the Native at 16.4. The Native death rate is the only one showing an increase over the rate for 1934.

During the year a total of 563 births were notified with 53 stillbirths, compared with 469 births and 45 stillbirths notified during 1934.

The birth rate per thousand married women between the ages of 20 and 49 is estimated at 39.8 for Europeans and 124.9 for Asiatics.

The proportion of stillbirths to total births is still high among the Indian community, although lower than last year. The percentage for 1935 was 13.7 compared with 17.8 for 1934.

A severe epidemic of malaria was experienced during the year lasting about six months and having its peak in May. This epidemic necessitated a considerable expenditure on emergency work.

During 1935, 3,500 cases of malaria were notified compared with 2,102 during 1934 and 1,071 during 1933.

Infant mortality during the year was high, the percentage of infant deaths to total deaths reaching 31.1, the highest figure for nine years. The percentage for Asiatics attained the high figure of 50.9, a considerable increase over last year, whilst the Native percentage increased from 19.2 to 26.5.

Apart from malaria, the number of notifiable diseases recorded totalled 149 which is slightly in excess of last year's figure, the main cause of this excess being the increase in incidence of cerebrospinal fever and diseases of the enteric group.

Of the 84 miles of roads within the Municipality taken over by the Council, over 41 miles are now macadamised, the remainder being surfaced with murrum.

Negotiations concerning the new water supply have been continued but it is to be hoped that during the coming year a start will be made on the construction of the pipe line.

Work in connection with the inspection of meat at the abattoir is progressively increasing, the total number of carcasses inspected during the year being 50,661 compared with 47,338 during 1934.

A report by the Medical Officer in charge concerning Child Welfare and Clinics has been included in this year's report. These auxiliary health services were taken over by the Council as from the 1st October.

2. STAFF.

The establishment of the public health department includes the following staff:—

- 1 Medical Officer of Health.
- 1 Lady Medical Officer.
- 1 Chief Sanitary Inspector.
- 4 District Inspectors.
- 1 Meat and Food Inspector.
- 3 Health Visitors.
- 1 Sanitary Overseer.
- 1 Clerk.
- Native Staff.

The details of the personnel of the staff employed during the year are as under:—

MEDICAL OFFICER OF HEALTH.

Dr. H. W. Tilling continued to carry out the duties throughout the year.

LADY MEDICAL OFFICER.

This is a new appointment. Dr. E. F. Hartley was appointed from 1st June, to take charge of the Child Welfare work.

SANITARY INSPECTORS.

Mr. R. C. Forster	...	...	...	...	1-1-35	31-12-35
Mr. D. Mackintosh	...	...	...	...	1-1-35	31-12-35
Mr. S. W. White	1-1-35	31-12-35
Mr. F. G. Ward	1-1-35	19 -3-35

INSPECTOR OF MEAT AND FOOD.

Mr. A. A. Watts	1-1-35	31-12-35
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HEALTH VISITORS.

*Miss R. K. Sharp	1-10-35	31-12-35
Mrs. E. T. Dugmore	1-10-35	31-12-35
Mrs. W. Bailey	1-10-35	31-12-35

SANITARY OVERSEER.

Mr. T. Bagnall	1-1-35	31-12-35
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CLERK.

Miss A. Ritchie (part time)	1-1-35	30 -6-35
Miss W. W. Harris	1-7-35	31-12-35

*Seconded from Government.

NATIVE STAFF.

Dressers	...	...	...	...	5
Head boy and notice server	...	...	...	...	1
Messengers	...	...	...	...	2
Motor driver	...	...	...	...	1
Rat boys	...	...	...	...	6
Oiling boys	...	...	...	...	4
Food inspection	...	...	...	...	1
Anti-malarial gang	...	...	...	...	20

3. EXPENDITURE.

The expenditure of the public health department for the year 1935 amounted to £7,230 of which the Government by grants made on account of public health, contributed £3,703, leaving £3,527 to be borne by the Council.

Under the provisions of the Local Government (Municipalities) Ordinance, the Government contributes one half of the cost of the salaries of the medical officer of health and of qualified sanitary inspectors and also one half of the expenditure in connection with infectious diseases.

Details of the expenditure by the public health department are given under:—

EXPENDITURE.

ADMINISTRATION.

	£	£
Salaries: M.O.H. and Sanitary Inspectors	...	3,853
Clerk	...	165
Boys' wages, etc.	...	62
Travelling allowances	...	145
Passages	...	51
Rent and telephone	...	225
Printing, stationery, etc.	...	84
Miscellaneous	...	3
	—	4,588

INFECTIOUS DISEASES PREVENTION

Notification fees	...	...	...	...	...	204	
Hospital fees	...	...	...	...	...	420	
Overseer's salary	...	...	...	...	...	350	
Boys' wages, etc.	...	...	...	...	...	233	
Oil and stores	...	...	...	...	...	47	
Upkeep of lorry	...	...	...	...	...	109	
Emergency work	...	...	...	...	...	668	
							2,031

FOOD INSPECTION.

Boys' wages, etc.	...	...	...	...	...	30	
							30

AUXILIARY HEALTH SERVICES.

Salaries: Lady M.O.	...	...	...	...	...	312	
Health Visitors	...	...	...	...	...	150	
Native Dressers	...	...	...	...	...	25	
Infant food	...	...	...	...	...	18	
Medical stores	...	...	...	...	...	73	
Sundries	...	...	...	...	...	3	581
Total	...	...	...	...	...		7,230
Less Government grants	...	...	...	...	...		3,703

£3,527

Comparison of the expenditure with previous years is as follows:—

Year.	Expenditure.	Paid by Government.	Paid by Council.
	£	£	£
1929	7,948	6,955	993
1930	6,993	6,118	875
1931	5,978	3,736	2,242
1932	5,967	2,983	2,984
1933	6,144	3,072	3,072
1934	6,547	3,273	3,274
1935	7,230	3,703	3,527

It is noted that the expenditure for the year was £683 greater than in 1934. Extraordinary expenditure for emergency work in connection with the malaria epidemic totalled £668 and new expenditure incurred in connection with the taking over of the auxiliary health services, totalled £581.

Notification fees mainly on account of the epidemic of malaria increased to £204 compared with £151 for 1934, whereas the hospital fees remained stationary.

The boys engaged on anti-malarial work, although working under the supervision of the public health department are on the payroll of the engineering department.

4. GEOGRAPHICAL.

Nairobi, the capital of Kenya, is situated in the highlands about 250 miles from the coast and is 330 miles by rail from Mombasa and 257 miles by rail from Kisumu on Lake Victoria.

The geographical position is.—

Latitude: 1° 16' 43" South.

Longitude: 36° 50' East.

Height above sea level: From 5,452 to 5,700 feet.

Area of Municipality: 22,230 acres or approximately 34 $\frac{3}{4}$ square miles.

5. RAINFALL.

The following rainfall records are from the Hill Station at 5,700 feet.—

Month.	RAINFALL.			DAYS OF RAIN.		
	1935.	Average 29 years.		1935	Average 28 years	
	ins.	ins.				
January	0.07	1.66	...	1	...	5
February	7.40	2.26	...	14	...	5
March	1.86	4.53	...	10	...	10
April	3.60	8.07	...	10	...	17
May	4.71	5.23	...	19	...	16
June	3.54	1.57	...	13	...	8
July	0.00	0.69	...	0	...	5
August	1.46	1.01	...	6	...	6
September	0.54	1.13	...	3	...	6
October	1.85	2.13	...	14	...	8
November	3.69	4.76	...	14	...	14
December	2.52	2.73	...	13	...	10
Annual	31.24	35.77	...	117	...	110

Less than the average amount of rain fell in Nairobi during 1935, for the third consecutive year.

The total for the year amounted to 31.24 inches, the average being 35.77 inches, or a deficiency of 12.6%. The deficiency for 1934 and 1933 was 35.3% and 36.6% respectively.

The average monthly rainfall for the year was 2.60 inches compared with the average over 29 years of 2.98.

The average fall of rain per rainy day during 1935 was 0.267 inches compared with the average over 29 years of 0.325 inches.

The rainfall was distributed over the seasons of the year as follows:—

Season.	1935.	Average 29 years.
Short dry season (January, February)	7.47	3.92
Long rains (March, April, May)	10.17	17.83
Long dry season (June to September)	5.54	4.40
Short rains (October, November, December)	8.06	9.62
Annual	31.24	35.77

Taking the rainfall by seasons, it is noted that both the short dry season and the long dry season were above the average to the extent of 90.5% and 25.9% respectively whilst both the long rains and the short rains fell short of the average by 42.9% and 16.2% respectively.

January with 0.07 inches against an average of 1.66 inches constituted the sixth lowest record for the month. This is an erratic month, good rainfalls usually being associated with good rainfalls on the preceding month.

The fall during February amounted to 7.40 inches compared with an average of 2.26 inches. This is the second highest fall on record for the month, the highest being in 1912 when 13.93 inches fell. This is also an erratic month, in five years out of the past twenty-nine, no rain fell at all.

March with 1.86 inches compared with the average of 8.07 was a comparatively dry month.

April and May with 3.60 inches and 4.71 inches were below the average by 55.3% and 9.9% respectively.

The fall during June totalled 3.54 inches, over double the average amount of 1.57 inches. This is the second highest record for the month, the highest being in 1917 when 6.04 inches fell.

No rain at all fell during July, the average being 0.69. This is the first occasion no rain fell during this month.

The fall during August amounted to 1.46 inches against an average of 1.01 inches, being an excess of 44.5%.

September with 0.54 inches, represented a deficit of 52.2% compared with the average of 1.13 inches.

October, November and December were all below the average, 1.85, 3.69 and 2.52 inches falling compared with 2.13, 4.76 and 2.73 inches respectively, the deficits representing 13.1%, 22.4% and 7.6%.

There were two long spells of dry weather during the year, the longest being from early June to mid August, a period of 46 days without any rain being recorded and the next being a period of 44 days with one small fall of 0.07 inches occurring between mid December of the previous year and early February.

Although the annual rainfall was below the average, the number of days of rain exceeded the average, being 117 compared with the average of 110, thus the average fall of rain per rainy day being 0.267 fell considerably below the average of 0.325 inches.

ANNUAL RAINFALL.

Year.	Inches	Year	Inches	Year	Inches.
1897	27.5	1910	25.64	1923	56.22
1898	28.1	1911	41.49	1924	26.72
1899	27.5	1912	56.01	1925	27.83
1900	44.3	1913	31.04	1926	33.25
1901	40.7	1914	42.18	1927	24.86
1902	32.9	1915	28.88	1928	28.91
1903	40.7	1916	43.59	1929	36.50
1904	26.9	1917	51.44	1930	58.88
1905	59.3	1918	23.05	1931	39.58
1906	46.7	1919	38.74	1932	39.85
1907	41.98	1920	51.19	1933	22.68
1908	27.90	1921	18.49	1934	23.12
1909	29.02	1922	37.28	1935	31.24

Records for the years 1897 to 1906 are relatively accurate only.

6. POPULATION.

The population of the Municipality of Nairobi for 1935 has been estimated as under:—

Race	Males.	Females.	Total.
Europeans	2,900	2,630	5,530
Asiatics	10,000	6,500	16,500
Natives and others ...	23,750	4,250	28,000
All races	36,650	13,380	50,030

These figures show an increase of 5.5% for the whole population compared with the estimated population for 1934.

It is noted that all the races share in the increase, the European to the extent of 2.4%, the Asiatic by 10% and the Native by 3.7%.

7. MARRIAGES.

The following marriages were celebrated in Nairobi during 1935:—

British	71
German	1
Russian	1
Swedish	1
Dutch	2
Seychellois	2
Goan	6
Indian	2
Native	9
	—
	95
	—

These figures are not corrected for persons habitually resident in Nairobi.

8. BIRTHS.

During 1933, the Municipal Council passed by-laws entitled "The Nairobi Municipality (Notification of Births) By-laws 1933." These by-laws lay down that any birth whether alive or dead occurring within the Municipality shall be notified within 48 hours, no nationalities or races being exempt.

The statistics obtained from these notifications are set out in the following table:—

BIRTHS NOTIFIED.

RACE	RESIDENTS.					NON-RESIDENTS.					TOTAL.	
	Births.		Stillbirths.		Tot.	Births.		Stillbirths.		Tot.	Births.	Stillbirths.
	M.	F.	M.	F.		M.	F.	M.	F.			
British	33	22	2	1	3	11	22	—	—	33	—	3
German	1	—	—	—	—	1	1	—	—	2	—	—
Danish	—	—	—	—	—	1	—	—	—	1	—	—
Swedish	—	—	—	—	—	1	1	—	—	2	—	—
Norwegian	—	—	—	—	—	—	1	—	—	1	—	—
Indian	97	85	11	14	25	9	2	1	—	11	1	26
Goan	25	33	1	—	1	1	1	—	—	2	—	1
Seychellois	1	2	—	—	—	—	—	—	—	—	3	—
Mauritian	—	1	—	—	—	—	—	—	—	—	1	—
Native	124	135	8	16	24	65	62	6	3	127	9	33
Somali	—	1	—	—	—	—	—	—	—	—	—	—
Sudanese	1	1	—	—	—	1	—	1	—	1	3	1
Eurasian	1	—	—	—	—	—	—	—	—	—	1	—
Total	283	280	22	31	53	90	90	8	3	180	11	64

Twins were recorded in five instances among resident Natives, twice among resident Asiatics and twice among non-resident Natives.

Estimated on the number of women of all ages, the 56 births among European residents gives a birth rate of 2.1%, the 240 births among the Asiatic residents makes a birth rate of 3.6% and the 267 births among resident Natives and others gives a birth rate of 6.2%.

Calculated on the estimated number of married women between the ages of 20 and 49, the European birth rate works out at 39.8 per thousand and the Asiatic rate at 124.9 per thousand. As the age group distribution for the native is not known, no rate can be calculated.

STILLBIRTHS.

The proportions of stillbirths to total births for the races were as under:—

RESIDENTS.

Race.	Births.	Stillbirths	Percentage of births.
European ...	56	3	5.3
Goan ...	58	1	1.7
Indian ...	182	25	13.7
Natives ...	259	24	9.2
Others ...	8	—	—
TOTAL ...	563	53	9.4

NON-RESIDENTS.

Race.	Births.	Stillbirths	Percentage of births.
European ...	39	—	—
Goan ...	2	—	—
Indian ...	11	1	9.1
Native ...	127	9	7.1
Others ...	1	1	100.0
TOTAL ...	180	11	6.1

9. DEATHS.

Unless otherwise stated, the following statistics refer to residents of Nairobi only, but also include the prison population.

Rates have been calculated according to the estimated mid-year population for 1935.

The total number of deaths reported in Nairobi during the year was 990, equivalent to a crude death rate for all races of 19.78, compared with the figure of 18.51 for 1934.

The number of deaths from all causes among persons stated to be normally resident in Nairobi was 696, equivalent to a recorded death rate for all races of 13.90 per thousand persons, compared with 14.86 for the previous year and 14.03 for 1933.

Of the 696 deaths among residents, 476 were of males and 220 were of females.

217 deaths were of infants of one year or under.

34 deaths occurred among Europeans, 19 male and 15 female, equivalent to a rate of 6.14 per thousand.

202 deaths occurred among Asiatics, 115 male and 87 female, equivalent to a rate of 12.24 per thousand.

460 deaths occurred among Natives and other races, 342 males and 118 females, equivalent to a rate of 16.47 per thousand.

DEATHS BY RACE AND SEX.

		White	Indian	Goan	Native	Somali	Seychellois	Sudanese	Arab	Abyssinian	Nubian	Mauritian	TOTAL.
Resident	M.	19	111	4	328	8	1	—	4	1	—	—	476
	F.	15	85	2	108	6	1	—	2	—	—	1	220
Total		34	196	6	436	14	2	—	6	1	—	1	696
Non-Resident	M.	19	8	—	167	—	1	1	1	—	1	—	198
	F.	16	2	—	78	—	—	—	—	—	—	—	96
Total		35	10	—	245	—	1	1	1	—	1	—	294
TOTAL		69	206	6	681	14*	3	1	7	1	1	1	990

COMPARISON OF DEATH RATES FOR RACES FOR 10 YEARS

	European.	Asiatic.	Native.	All Races.
1926	13.5	30.3	17.3	20.5
1927	13.8	29.2	16.5	18.9
1928	12.8	23.3	16.1	17.9
1929	8.4	17.0	13.4	13.7
1930	11.8	20.7	15.2	16.2
1931	4.7	14.3	15.2	13.7
1932	5.6	13.5	10.7	11.0
1933	7.1	14.8	15.0	14.0
1934	8.5	15.1	15.9	14.8
1935	6.1	12.2	16.4	13.9

AVERAGE DEATH RATES.

Race	10 years' average 1926-35.	5 years' average 1926-30.	5 years' average 1931-35.	1935.
European	9.2	12.0	6.4	6.1
Asiatic	19.0	24.1	13.9	12.2
Native	15.1	15.7	14.6	16.4
All Races	15.4	17.4	13.4	13.9

The above tables illustrate the declining death rates for all races during the past ten years.

It is noted that the European death rate during the past five years has declined 46.6% below that for the previous five years.

Over a similar period, the Asiatic death rate has declined by 42.3%, the Native rate has declined by 8.0% and the rate for all races has decreased by 22.9%.

The European death rate for 1935 is below that of the average for the past five years to the extent of 0.3.

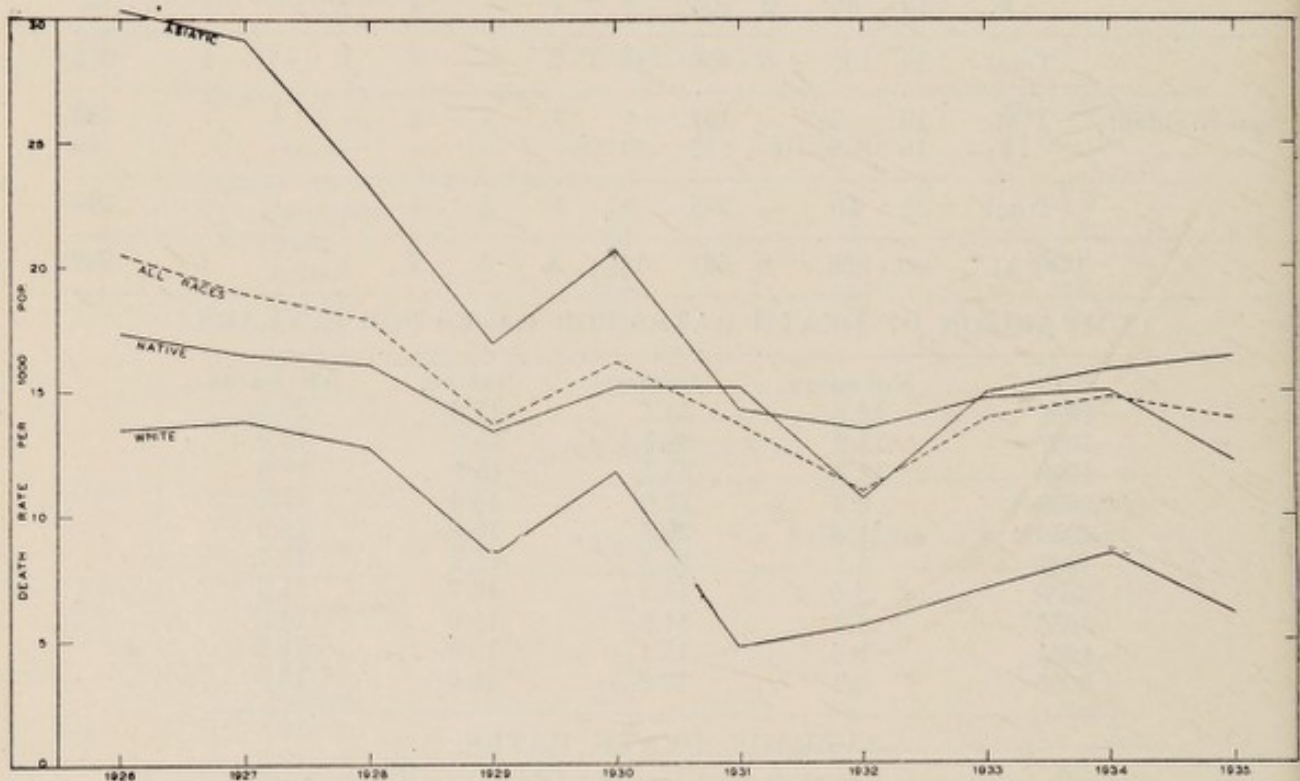
The Asiatic rate for 1935 compared with a similar period has improved by 1.7, and the Native rate is above the five years average by 1.8.

The rate for all races shows an increase over the five years average of 0.5.

Although in 1933 and 1934 there was an increase in all the death rates over the previous years, it is pleasing to note that there is a marked decrease in the European and Asiatic death rates and that for all races during 1935, but unfortunately the native rate was increased by 0.5 over that for 1934.

The following graph illustrates the death rates for the races for the past 10 years.

DEATH RATES FOR THE RACES.



MONTHLY INCIDENCE OF DEATHS BY RACE.

Month	White.	Indian.	Goan.	Native	Somali.	Other	Total.	% of Total.
January	2	15	1	49	1	1	68	9.77
February	1	6	1	27	1	—	36	5.17
March	—	19	—	19	—	1	39	5.60
April	1	16	—	34	—	2	53	7.62
May	3	16	—	40	1	1	61	8.76
June	10	18	—	44	1	2	75	10.78
July	7	31	—	45	1	1	85	12.21
August	4	19	—	50	1	1	75	10.78
September	2	10	1	34	4	1	52	7.47
October	1	13	—	30	2	—	46	6.61
November	3	19	2	32	—	—	56	8.05
December	—	14	2	32	2	—	50	7.18
Total	34	196	6	436	14	10	696	100.00

DEATHS BY QUARTERS.

				Number of deaths.		Percentage of total.
First quarter	...	...	...	143	...	20.54
Second quarter	...	...	...	189	...	27.16
Third quarter	...	...	...	212	...	30.46
Fourth quarter	...	...	...	152	...	21.84
Total	...	...	...	696	...	100.00

The most deaths occurred in July (85), June (75), August (75), and the fewest in February (36), March (39), October (46).

CAUSES OF DEATH BY GROUP AND RACE.

International causes of death.	White.	Indian.	Goon.	Native.	Somali.	Others.	Total.
1. General diseases	2	33	—	124	4	2	165
2. General diseases (not included above)	2	4	—	10	—	—	16
3. Diseases of the nervous system	6	8	—	24	—	1	39
4. Diseases of the circulatory system	6	3	—	3	2	—	14
5. Diseases of the respiratory system	5	79	1	173	5	4	267
6. Diseases of the digestive system	2	11	—	20	1	1	35
7. Non-venereal diseases of the genito-urinary system and annexa	—	4	—	7	—	—	11
8. The puerperal state	—	3	1	3	1	1	9
9. Diseases of the skin	—	—	—	1	—	—	1
10. Diseases of the bones	—	—	—	1	—	—	1
11. Congenital malformations	—	2	—	—	—	—	2
12. Diseases of early infancy	2	34	4	17	—	1	58
13. Old age	—	3	—	—	1	—	4
14. External causes	8	6	—	32	—	—	46
15. Ill defined causes	1	6	—	21	—	—	28
Total	34	196	6	436	14	10	696

CAUSES OF DEATH BY GROUP WITH THE PERCENTAGE TO TOTAL AND RATE PER 1,000 POPULATION.

International cause of death.	Number.	% of total.	Rate per 1,000 population.
1. General diseases	165	23.71	3.297
2. General diseases (not included above)	16	2.30	0.320
3. Diseases of nervous system	39	5.60	0.779
4. Diseases of the circulatory system	14	2.01	0.280
5. Diseases of the respiratory system	267	38.36	5.334
6. Diseases of the digestive system	35	5.03	0.699
7. Non-venereal diseases of the genito-urinary system and annexa	11	1.58	0.220
8. The puerperal state	9	1.29	0.180
9. Diseases of the skin	1	0.14	0.020
10. Diseases of the bones	1	0.14	0.020
11. Congenital malformations	2	0.29	0.040
12. Diseases of early infancy	58	8.34	1.159
13. Old age	4	0.58	0.080
14. External causes	46	6.61	0.919
15. Ill defined causes	28	4.02	0.559
Total	696	100.00	13.906

The groups in their order of precedence, correspond approximately with those given in last year's report.

The figures in brackets in the text relate to the returns for 1934.

As in the past, "Diseases of the Respiratory System" heads the list as being concerned with the greatest number of deaths.

This group accounted for 267 (295) deaths or 38.3% (41.8) of the total deaths, the equivalent rate per thousand of population being 5.334 (6.221).

Deaths under this heading were:—

Pneumonia	...	...	...	191 (239)
Broncho-pneumonia	...	...	...	66 (40)
Bronchitis	...	...	...	6 (5)
Asthma	...	...	...	4 (3)

"General diseases" in Group 1 comes second in point of numbers and accounted for 165 (150) deaths or 23.7% (21.2) of the total deaths, the equivalent rate per thousand of population being 3.297 (3.163).

Deaths under this group include:—

Malaria	...	...	58 (32)	Blackwater fever	...	...	3 (4)
Tuberculosis	...	...	29 (40)	Erysipelas	...	...	3 (1)
Typhoid fever	...	...	17 (7)	Diphtheria	...	...	3 (1)
Cerebrospinal men.	...	...	16 (2)	Relapsing fever	...	...	1
Syphilis	...	...	15 (10)	Whooping cough	...	...	1 (9)
Septicaemia	...	...	7 (18)	Influenza	...	...	1 (5)
Tetanus	...	...	4 (3)				

Deaths under the heading of "Diseases of early infancy" totalled 58 (51) or 8.3% (7.2) of the total deaths with an equivalent rate per thousand population of 1.159 (1.075).

The cause of death were:—

Prematurity	...	...	...	35 (28)
Marasmus	...	...	...	18 (21)
Atelectasis	...	...	...	2 (1)
Asphyxia	...	...	...	2 (2)
Collapse of lung	...	...	...	1

As noted in the report for 1934, the proportion of deaths from prematurity has appreciably increased.

The next group in point of numbers is "External causes" which accounted for 46 (38) deaths or 6.6% (5.3) of the total deaths, with an equivalent rate per thousand population of 0.919 (0.801).

Deaths under this heading include:—

Injury by vehicles	...	...	11 (8)	Fracture	...	...	3 (3)
Judicial hanging	...	...	10 (20)	Conflagration	...	...	1
Suicide	...	...	6 (2)	Suffocation	...	...	1
Burns	...	...	5 (1)	Drowning	...	...	1
Homicide	...	...	5	Injury by fall	...	...	2
				Electricity	...	...	1

An increase in the number of deaths from road accidents is again noted, the figures for the past five years being 5, 6, 5, 8 and 11 respectively.

"Diseases of the nervous system" was responsible for 39 (30) deaths or 5.6% (4.2) of the total deaths which is equivalent to a rate of 0.779 (0.632) per thousand population.

The details were:—

Meningitis	...	...	18 (13)	Insanity	...	...	1 (1)
Cerebral haemorrhage	...	...	8 (4)	Epilepsy	...	...	1 (2)
Convulsions	...	...	4 (4)	Amentia	...	...	1
Myelitis	...	...	2	Cerebral tumour	...	...	1 (2)
Encephalitis	...	...	1	Otorrhoea	...	...	1
Paraplegia	...	...	1				

" Diseases of the digestive system " accounted for 35 (35) deaths or 5.0% (4.9) of the total deaths which is equivalent to a rate of 0.699 (0.738) per thousand population.

The items were:—

Diarrhoea	...	...	18 (22)	Intestinal obstruction	...	2 (3)
Diarrhoea (over two)	...	...	3	Ascariasis	...	1
Cirrhosis liver	...	...	3	Gastric ulcer	...	1
Peritonitis	...	...	2 (4)	Haematemesis	...	1
Hepatitis	...	...	2	Tonsillitis	...	1
Hydatid of liver	...	...	1			

The group of " Ill defined causes " accounted for 28 (32) deaths or 4.0% (4.5) of the total deaths making a rate per thousand population of 0.559 (0.674).

The recorded causes under this group were:—

Unknown	...	...	20 (3)
Natural causes	...	...	3 (18)
Heart failure	...	...	3 (5)
P.U.O.	...	...	1 (1)
Asthenia	...	...	1

Group 2 of " General Diseases " is next with 16 (32) deaths or 2.3% (1.5) of the total deaths, the rate per thousand being 0.320 (0.674).

The diseases concerned were:—

Cancer	...	...	7 (13)	Anaemia	...	1 (2)
Neoplasm	...	...	1	Goitre	...	1
Rheumatic fever	...	...	1 (1)	Persistent thymus	...	1
Beri beri	...	...	1	Rupture of spleen	...	1
Diabetes	...	...	1	Leukaemia	...	1

" Diseases of the circulatory system " accounted for a total of 14 (14) deaths or 2.0% (1.9) of the total deaths at the rate of 0.280 (0.295) per thousand population.

The diseases under this heading were:—

Valvular disease	...	...	12 (3)
Endocarditis	...	...	1 (1)
Pericarditis	...	...	1 (1)

" Non-venereal diseases of the genito urinary system " accounted for 11 (15) deaths or 1.5% (2.1) of the total deaths, the rate per thousand population being 0.220 (0.316).

The causes of death were:—

Chronic nephritis	...	...	6 (14)
Pyosalpinx	...	...	2
Fibroid	...	...	1
Urethritis	...	...	1
Prostatitis	...	...	1 (1)

Nine (7) deaths occurred under the heading of " The puerperal state " or 1.2% (0.9) of the total deaths, the rate per thousand population being 0.180 (0.147).

The diseases included:—

Puerperal sepsis	...	...	...	2
Haemorrhage	...	...	...	2 (4)
Eclampsia	...	...	...	2
Puerperal embolism	...	...	...	1
Abortion	...	...	...	1
Hyperemesis	...	...	...	1

There were four deaths under the group "Old age" compared with 3 for the previous year.

Two deaths occurred under "Congenital malformations," one spina bifida and one pyloric stenosis.

One death was recorded under each of the groups, "Diseases of the skin" and "Diseases of the bones," the cause being cancerum oris in the former and osteomyelitis in the latter.

AGE GROUP DISTRIBUTION OF POPULATION AND DEATHS BY RACES.

Age group	EUROPEAN.			ASIATIC			NATIVE		
	Distribution population.	No. of deaths.	Distribution deaths.	Distribution population.	No. of deaths.	Distribution deaths.	Distribution population.	No. of deaths.	Distribution deaths.
0—1	37.865	3	88.235	62.319	103	509.892		111	241.303
2—4	55.548	—	—	93.620	15	74.257		34	73.913
5—9	81.706	3	88.235	111.620	6	29.703		11	23.913
10—14	50.914	1	29.412	79.755	5	24.753		9	19.565
15—19	45.609	2	58.823	91.716	4	19.802		21	45.652
20—24	82.743	2	58.823	135.989	7	34.653		60	130.434*
25—29	124.754	—	—	119.539	7	34.653	Not	124	269.564
30—34	126.645	3	88.235	99.941	13	64.356	known	39	84.782
35—39	117.864	2	58.823	72.306	9	44.554		27	58.695
40—44	94.633	1	29.412	52.732	5	24.753		11	23.913
45—49	66.340	2	58.823	31.982	5	24.753		6	13.043
50—54	48.962	3	88.235	20.185	6	29.703		2	4.348
55—59	29.877	3	88.235	7.402	1	4.951		3	6.522
60—64	18.597	5	147.058	9.164	7	34.653		1	2.174
65—69	9.268	2	58.823	4.935	3	14.852		—	—
70—74	5.121	1	29.412	3.313	—	—		—	—
75—79	2.560	—	—	1.504	2	9.901		—	—
80—84	0.914	1	29.412	1.363	1	4.951		—	—
85—89	0.060	—	—	0.258	—	—		1	2.174
90—94	—	—	—	0.188	1	4.951		—	—
95—99	—	—	—	0.164	2	9.901		—	—
	999.990	34	999.996	999.995	202	999.992		460	999.995

* 55 Native deaths recorded as "adults" have been included equally in the groups 20—34.

The age group distribution for Nairobi has been taken in the same proportion as the age group distribution for the whole Colony, as published in the report on non-native census taken in 1931.

CAUSES OF DEATHS.

International causes of deaths.				White.	Indian.	Goan.	Native.	Somali.	Seychellois	Arab.	Abyssinian.	Mauritian.	TOTAL.
I. GENERAL DISEASES.													
1.	Enteric fever	...	...	—	3	—	13	1	—	—	—	—	17
3.	Relapsing fever	...	...	—	1	—	—	—	—	—	—	—	1
5.	Malaria	...	...	—	11	—	44	3	—	—	—	—	58
9.	Whooping cough	...	...	—	—	—	1	—	—	—	—	—	1
10.	Diphtheria	...	...	—	3	—	—	—	—	—	—	—	3
11.	Influenza	...	...	—	1	—	—	—	—	—	—	—	1
16.	Dysentery	...	...	—	1	—	5	—	—	—	—	—	6
17.	Plague	...	...	—	—	—	1	—	—	—	—	—	1
21.	Erysipelas	...	...	—	3	—	—	—	—	—	—	—	3
24.	Cerebrospinal meningitis	...	...	—	3	—	12	—	1	—	—	—	16
25.	Blackwater fever	...	...	1	2	—	—	—	—	—	—	—	3
29.	Tetanus	...	...	—	1	—	3	—	—	—	—	—	4
31.	Tuberculosis—respiratory system	...	...	1	2	—	14	—	—	1	—	—	18
32.	do. nervous system	...	...	—	—	—	5	—	—	—	—	—	5
33.	do. intestines	...	...	—	—	—	1	—	—	—	—	—	1
36.	do. adenitis	...	...	—	—	—	1	—	—	—	—	—	1
37.	do. disseminated	...	...	—	—	—	4	—	—	—	—	—	4
38.	Syphilis	...	...	—	—	—	15	—	—	—	—	—	15
41.	Septicaemia	...	...	—	2	—	5	—	—	—	—	—	7
II. GENERAL DISEASES NOT INCLUDED ABOVE.													
43.	Cancer jaw	...	...	—	—	—	1	—	—	—	—	—	1
44.	do. stomach	...	...	—	1	—	1	—	—	—	—	—	2
47.	do. breast	...	...	1	—	—	—	—	—	—	—	—	1
49.	do. diffuse	...	...	1	—	—	—	—	—	—	—	—	1
	do. lung	...	...	—	—	—	1	—	—	—	—	—	1
	Sarcoma leg	...	...	—	—	—	1	—	—	—	—	—	1
50.	Neoplasm—lung	...	...	—	—	—	1	—	—	—	—	—	1
51.	Rheumatic fever	...	...	—	1	—	—	—	—	—	—	—	1
55.	Beri beri	...	...	—	—	—	1	—	—	—	—	—	1
57.	Diabetes	...	...	—	1	—	—	—	—	—	—	—	1
58.	Anaemia	...	...	—	1	—	—	—	—	—	—	—	1
60.	Goitre	...	...	—	—	—	1	—	—	—	—	—	1
62.	Persistent thymus	...	...	—	—	—	1	—	—	—	—	—	1
64.	Rupture of spleen	...	...	—	—	—	1	—	—	—	—	—	1
65.	Leukaemia	...	...	—	—	—	1	—	—	—	—	—	1
III. DISEASES OF THE NERVOUS SYSTEM.													
70.	Encephalitis	...	...	—	1	—	—	—	—	—	—	—	1
71.	Meningitis	...	...	—	1	—	17	—	—	—	—	—	18
73.	Myelitis	...	...	1	1	—	—	—	—	—	—	—	2
74.	Cerebral haemorrhage	...	...	3	3	—	1	—	—	1	—	—	8
75.	Paraplegia	...	...	—	1	—	—	—	—	—	—	—	1
77.	Insanity	...	...	1	—	—	—	—	—	—	—	—	1
78.	Epilepsy	...	...	—	—	—	1	—	—	—	—	—	1
80.	Convulsions	...	...	—	1	—	3	—	—	—	—	—	4
84.	Amentia	...	...	1	—	—	—	—	—	—	—	—	1
	Cerebral tumour	...	...	—	—	—	1	—	—	—	—	—	1
86.	Otorrhoea	...	...	—	—	—	1	—	—	—	—	—	1

CAUSES OF DEATHS (continued).

International causes of deaths.				White.	Indian.	Goan.	Native.	Somali.	Seychellois	Arab.	Abyssinian.	Mauritian.	TOTAL.
IV. DISEASES OF THE CIRCULATORY SYSTEM.													
87.	Pericarditis	...	...	—	1	—	—	—	—	—	—	—	1
88.	Endocarditis	...	...	1	—	—	—	—	—	—	—	—	1
90.	Heart diseases	...	...	5	2	—	3	2	—	—	—	—	12
V. DISEASES OF THE RESPIRATORY SYSTEM.													
99.	Bronchitis	...	...	—	4	—	2	—	—	—	—	—	6
100.	Broncho-pneumonia	...	...	—	30	—	35	1	—	—	—	—	66
101.	Pneumonia	...	...	5	42	1	135	4	—	3	1	—	191
105.	Asthma	...	...	—	3	—	1	—	—	—	—	—	4
VI. DISEASES OF THE DIGESTIVE SYSTEM.													
109.	Tonsillitis	...	...	—	1	—	—	—	—	—	—	—	1
112.	Haematemesis	...	...	1	—	—	—	—	—	—	—	—	1
	Gastric ulcer	...	...	—	—	—	1	—	—	—	—	—	1
113.	Diarrhoea	...	...	1	8	—	7	1	1	—	—	—	18
114.	do. (over two)	...	...	—	1	—	2	—	—	—	—	—	3
116.	Ascariasis	...	...	—	—	—	1	—	—	—	—	—	1
118.	Intestinal obstruction	...	...	—	1	—	1	—	—	—	—	—	2
121.	Hydatid of liver	...	...	—	—	—	1	—	—	—	—	—	1
122.	Cirrhosis liver	...	...	—	—	—	3	—	—	—	—	—	3
124.	Hepatitis	...	...	—	—	—	2	—	—	—	—	—	2
126.	Peritonitis	...	...	—	—	—	2	—	—	—	—	—	2
VII. NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM.													
129.	Chronic nephritis	...	...	—	1	—	5	—	—	—	—	—	6
134.	Urethritis	...	...	—	1	—	—	—	—	—	—	—	1
135.	Prostatitis	...	...	—	—	—	1	—	—	—	—	—	1
138.	Pyosalpinx	...	...	—	1	—	1	—	—	—	—	—	2
139.	Fibroid	...	...	—	1	—	—	—	—	—	—	—	1
VIII. THE PUERPERAL STATE.													
143.	Abortion	...	...	—	—	—	—	1	—	—	—	—	1
	Hyperemesis	...	...	—	—	—	—	—	—	—	—	1	1
144.	Haemorrhage	...	...	—	1	1	—	—	—	—	—	—	2
146.	Puerperal sepsis	...	...	—	—	—	2	—	—	—	—	—	2
147.	Puerperal embolism	...	...	—	—	—	1	—	—	—	—	—	1
148.	Eclampsia	...	...	—	2	—	—	—	—	—	—	—	2
IX. DISEASES OF THE SKIN AND CELLULAR TISSUE.													
151.	Cancrum oris	...	...	—	—	—	1	—	—	—	—	—	1
X. DISEASES OF THE BONES.													
155.	Osteomyelitis	...	...	—	—	—	1	—	—	—	—	—	1

CAUSES OF DEATHS (continued).

International causes of deaths.				White.	Indian.	Goan.	Native.	Somali.	Seychellois	Arab.	Abyssinian.	Mauritian.	TOTAL.
XI. CONGENITAL MALFORMATIONS.													
159.	Spina bifida, pyloric stenosis	—	2	—	—	—	—	—	—	—	—	—	2
XII. DISEASES OF EARLY INFANCY.													
160.	Marasmus	...	...	—	11	1	6	—	—	—	—	—	18
161.	Prematurity	...	...	1	19	3	11	—	—	1	—	—	35
162.	Atelectasis	...	...	1	1	—	—	—	—	—	—	—	2
	Asphyxia neonatorum	...	...	—	2	—	—	—	—	—	—	—	2
	Collapse of lung	...	...	—	1	—	—	—	—	—	—	—	1
XIII. OLD AGE.													
164.	Senility	...	...	—	3	—	—	1	—	—	—	—	4
XIV. EXTERNAL CAUSES.													
168.	Suicide, hanging	...	...	—	—	—	3	—	—	—	—	—	3
170.	do. firearms	...	...	2	—	—	—	—	—	—	—	—	2
173.	do. crushing	...	...	—	1	—	—	—	—	—	—	—	1
178.	Conflagration	...	...	—	1	—	—	—	—	—	—	—	1
179.	Burns	...	...	—	1	—	4	—	—	—	—	—	5
180.	Suffocation	...	...	—	—	—	1	—	—	—	—	—	1
182.	Drowning	...	...	—	—	—	1	—	—	—	—	—	1
185.	Injury by fall	...	...	1	—	—	1	—	—	—	—	—	2
188.	Injury by vehicles	...	...	1	3	—	7	—	—	—	—	—	11
196.	Electricity	...	...	—	—	—	1	—	—	—	—	—	1
197.	Homicide, firearms	...	...	4	—	—	—	—	—	—	—	—	4
199.	Homicide, fractured skull	...	...	—	—	—	1	—	—	—	—	—	1
201.	Fracture	...	...	—	—	—	3	—	—	—	—	—	3
202.	Judicial hanging	...	...	—	—	—	10	—	—	—	—	—	10
XV. ILL-DEFINED DISEASES.													
205.	1. Heart failure	...	...	—	3	—	—	—	—	—	—	—	3
	2. Asthenia	...	...	1	—	—	—	—	—	—	—	—	1
	Pyrexia	...	...	—	1	—	—	—	—	—	—	—	1
	Natural causes	...	...	—	2	—	1	—	—	—	—	—	3
	3. Unknown	...	...	—	—	—	20	—	—	—	—	—	20
TOTAL				34	196	6	436	14	2	6	1	1	696

10. INFANT MORTALITY.

The total number of deaths in infants of one year of age and under during 1935 was 217, or 31.17% of the total deaths.

Taking the age distribution of the 0—1 group for Europeans as 37.865, the three deaths provide a mortality rate of 88.235 per thousand.

With a distribution of the 0—1 age group for Asiatics of 62.319 per thousand, the 103 deaths equal a mortality rate of 509.892 per thousand.

The age group distribution is not known for the Native race but the death distribution of the 0—1 age group works out at 241.303 per thousand.

As in previous years infant mortality has been expressed as a percentage of total deaths, the practice will be continued for comparative purposes.

INFANT DEATHS.

Race	Infant deaths.	Total deaths.	Percentage of total deaths.
White	3	34	8.82
Asiatic	103	202	50.99
Native and other	111	460	24.13
All races	217	696	31.17

INFANT DEATHS FOR NINE YEARS.

Race	Percentage of total deaths.									Average 9 years.
	1927	1928	1929	1930	1931	1932	1933	1934	1935	
White	13.5	8.3	23.7	13.2	12.0	9.6	5.4	17.3	8.8	12.4
Asiatic	37.7	34.5	44.9	42.7	44.6	45.8	52.2	42.1	50.9	43.9
Native	5.8	13.1	15.4	10.6	20.6	17.3	21.2	19.2	24.1	16.3
All races	18.6	20.6	24.3	20.6	29.5	28.0	30.7	26.5	31.1	25.5

It will be noted that the percentage of infant deaths to total deaths for Europeans shows a considerable decrease compared with 1934, it is also less than the nine years average by over 29%.

The percentage for Asiatics stands at the high figure of 50.9, being an increase over the previous year and 16% higher than the nine years average.

The percentage for Natives and other races, namely 24.1 is the highest for the past nine years, being 25% higher than in 1934 and 48% higher than the nine years average.

The percentage for all races is also the highest for the past nine years being 24% higher than in 1934, and 34% in excess of the nine years average.

The causes of infant mortality and the seasonal incidence are shown in the tables following.

INFANT MORTALITY.

	White.	Indian.	Goan.	Native.	Seych.	Somali.	Arab.	Total
Ascariasis	—	—	—	1	1
Asphyxia neonatorum	2	—	—	—	2
Atelectasis	1	1	—	—	2
Beri beri	—	—	—	1	1
Bronchitis	3	—	—	1	4
Broncho-pneumonia	22	—	24	1	47
Cerebrospinal meningitis	2	—	—	—	2
Collapse of lung	1	—	—	—	1
Convulsions	1	—	3	—	4
Diarrhoea	1	7	5	1	15
Diphtheria	1	—	—	—	1
Dysentery	1	—	1	—	2
Erysipelas	3	—	—	—	3
Ill defined	1	—	3	—	4
Intussusception	1	—	—	—	1
Malaria	1	—	7	—	8
Marasmus	11	1	6	—	18
Meningitis	1	—	—	—	1
Pneumonia	20	—	29	1	50
Prematurity	1	18	3	11	34
Pyloric stenosis	1	—	—	—	1
Septicaemia	—	—	1	—	1
Spina bifida	1	—	—	—	1
Suffocation	—	—	1	—	1
Syphilis	—	—	11	—	11
Tetanus	—	—	1	—	1
	3	99	4	106	1	3	1	217

SEASONAL INFANT MORTALITY.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Ascariasis ...	—	—	—	—	—	1	—	—	—	—	—	—	1
Asphyxia neonatorum	—	—	—	—	1	1	—	—	—	—	—	—	2
Atelectasis ...	—	—	—	—	—	—	—	—	—	—	2	—	2
Beri beri ...	—	—	—	1	—	—	—	—	—	—	—	—	1
Bronchitis ...	—	—	—	1	—	1	2	—	—	—	—	—	4
Broncho pneumonia	4	1	2	4	2	7	1	4	5	5	6	6	47
Cerebrospinal men.	—	—	—	—	—	—	—	—	—	1	1	—	2
Collapse of lung ...	—	—	1	—	—	—	—	—	—	—	—	—	1
Convulsions ...	1	—	—	—	—	—	—	—	1	1	—	1	4
Diarrhoea ...	2	1	3	2	1	3	—	1	1	1	—	—	15
Diphtheria ...	—	—	—	—	—	—	—	—	—	—	1	—	1
Dysentery ...	—	1	—	—	—	1	—	—	—	—	—	—	2
Erysipelas ...	—	—	—	1	—	1	—	—	1	—	—	—	3
Ill defined ...	—	—	—	—	—	1	—	—	1	1	1	—	4
Intussusception ...	—	—	—	—	—	—	—	1	—	—	—	—	1
Malaria ...	—	—	—	1	1	1	2	1	—	—	—	2	8
Marasmus ...	—	—	—	4	—	1	5	2	2	3	1	—	18
Meningitis ...	—	—	—	—	—	—	—	—	1	—	—	—	1
Pneumonia ...	4	1	3	4	6	3	8	4	2	4	8	3	50
Prematurity ...	3	2	2	4	5	1	4	3	2	—	4	4	34
Pyloric stenosis ...	—	1	—	—	—	—	—	—	—	—	—	—	1
Septicaemia ...	—	1	—	—	—	—	—	—	—	—	—	—	1
Spina bifida ...	—	—	—	—	—	—	—	—	—	—	1	—	1
Suffocation ...	—	—	—	—	—	—	—	—	—	1	—	—	1
Syphilis ...	1	—	—	—	2	—	1	—	2	1	1	3	11
Tetanus ...	1	—	—	—	—	—	—	—	—	—	—	—	1
	16	8	11	22	18	22	23	16	18	18	26	19	217

SEASONAL INFANT MORTALITY FOR THE RACES.

	White.	Indian.	Goan.	Native.	Seych.	Somali.	Arab.	Total
January ...	—	7	—	8	1	—	—	16
February ...	—	4	—	4	—	—	—	8
March ...	—	8	—	3	—	—	—	11
April ...	—	11	—	10	—	—	1	22
May ...	—	7	—	10	—	1	—	18
June ...	1	11	—	10	—	—	—	22
July ...	1	12	—	10	—	—	—	23
August ...	—	11	—	5	—	—	—	16
September ...	—	6	1	10	—	1	—	18
October ...	—	6	—	12	—	—	—	18
November ...	1	12	2	11	—	—	—	26
December ...	—	4	1	13	—	1	—	19
	3	99	4	106	1	3	1	217

COMPARISON OF THE PERCENTAGE OF THE FOUR PRINCIPAL CAUSES OF INFANT MORTALITY TO TOTAL INFANT DEATHS FOR NINE YEARS.

	PERCENTAGE TO TOTAL OF INFANT DEATHS.									Average
	1927.	1928.	1929.	1930.	1931.	1932.	1933.	1934.	1935.	9 years.
Pneumonia ...	47.9	32.6	32.0	44.6	41.7	36.1	41.1	37.4	44.7	39.8
Congenital debility	15.4	10.6	11.9	10.0	15.9	12.9	14.4	9.6	8.3	12.1
Prematurity ...	6.5	11.3	13.2	15.0	7.7	17.0	8.3	12.8	15.6	11.9
Diarrhoea ...	6.5	7.8	9.4	6.9	8.7	9.5	8.8	9.0	6.9	8.1

Pneumonia still holds the premier position of the four principal causes and accounted for 44.7% of infant deaths, compared with 37.4 in 1934 and the nine years average of 39.8.

Prematurity as a cause of death has increased during the past two years and now stands at 15.6% compared with 12.8% in 1934, and the nine years average of 11.9%.

Both congenital debility and diarrhoea have decreased the past two years and both were below the nine years average in 1935.

11. NOTIFIABLE INFECTIOUS DISEASES.

No alteration to the list of notifiable infectious diseases has been made since Malaria was added in 1930.

The number of cases of infectious diseases notified during the year totalled 3,649, compared with 2,232 in 1934, the difference being mainly accounted for by the increase of malaria cases.

Excluding the 3,500 cases of malaria notified, the total of 149 may be compared with the totals for the previous eight years which were, 466, 368, 124, 249, 177, 128, 125 and 130 respectively.

The number of cases of malaria notified totalled 3,500 compared with 2,102 for the previous year.

Notifications for blackwater fever were similar in number to those for last year, namely 14.

Pulmonary tuberculosis was notified in 24 instances, against 40 for 1934 and tuberculosis other than pulmonary accounted for 14 notifications compared with 10 during the previous year.

Notifications for the enteric group were 46, being an increase over 1934 when 35 were notified.

Cerebrospinal meningitis was notified in 14 instances compared with 4 during 1934. These cases occurred during the latter half of the year, the greatest number in one month being five.

Relapsing fever occurred spasmodically throughout the year, the total number of cases being 7.

Eight cases of puerperal sepsis were notified compared with 5 during the previous year.

As in 1934, four cases of diphtheria were notified.

Tropical typhus was reported in three instances among Europeans.

Erysipelas notifications showed a slight increase, being 7 compared with 6 during the previous year.

One case of beri beri was reported, the last previous case occurring in 1928.

One case each of Encephalitis lethargica, Ophthalmia neonatorum and Scarlet fever were notified against 3, 2 and 0 respectively during the previous year.

One case of plague occurred during the year.

INFECTIOUS DISEASES NOTIFIED.

	White.	Indian.	Native.	Goan.	Seychellois	Somali.	Arab.	Total.
Malaria	147	1675	1678	—	—	—	—	3500
Anthrax	—	1	2	—	—	—	—	3
Blackwater fever	1	11	—	2	—	—	—	14
Cerebrospinal meningitis	—	3	10	—	1	—	—	14
Beri beri	—	—	1	—	—	—	—	1
Diphtheria	—	4	—	—	—	—	—	4
Encephalitis lethargica	—	1	—	—	—	—	—	1
Erysipelas	—	5	1	—	1	—	—	7
Ophthalmia neonatorum	1	—	—	—	—	—	—	1
Plague	—	—	1	—	—	—	—	1
Puerperal sepsis	1	3	4	—	—	—	—	8
Relapsing fever	—	1	6	—	—	—	—	7
Scarlet fever	—	1	—	—	—	—	—	1
Tropical typhus	3	—	—	—	—	—	—	3
Tuberculosis, pulmonary	1	8	12	—	—	2	1	24
„ meningitis	—	—	2	—	—	—	—	2
„ abdomen	2	—	2	—	—	—	—	4
„ spine	—	—	1	—	—	—	—	1
„ joints	—	1	1	—	—	—	—	2
„ adenitis	—	—	1	—	—	—	—	1
„ disseminated	—	—	4	—	—	—	—	4
Typhoid fever	9	14	21	1	—	1	—	46
Total	165	1728	1747	3	2	3	1	3649

SEASONAL INCIDENCE OF INFECTIOUS DISEASES NOTIFIED.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Malaria	119	102	142	730	905	747	420	146	68	30	41	50	3500
Anthrax	—	—	—	—	—	1	—	—	1	—	1	—	3
Blackwater fever	—	1	1	—	3	3	3	2	—	—	—	1	14
Cerebrospinal men.	2	—	—	—	—	—	1	1	5	2	2	1	14
Beri beri	—	—	—	1	—	—	—	—	—	—	—	—	1
Diphtheria	1	—	—	—	—	—	—	2	—	—	1	—	4
Enceph. leth.	—	—	—	—	—	—	1	—	—	—	—	—	1
Erysipelas	—	1	1	1	—	1	2	1	—	—	—	—	7
Ophthalmia neo.	—	1	—	—	—	—	—	—	—	—	—	—	1
Flague	—	—	—	—	—	—	—	1	—	—	—	—	1
Fuerperal sepsis	—	—	1	4	—	—	—	1	1	1	—	—	8
Relapsing fever	—	1	—	—	2	—	—	1	—	1	—	2	7
Scarlet fever	—	—	—	—	—	—	1	—	—	—	—	—	1
Tropical typhus	—	—	—	—	—	1	—	—	—	1	1	—	3
Tuberculosis, pulm.	1	3	3	3	2	1	1	—	3	4	1	2	24
„ meningitis	—	—	1	—	—	—	1	—	—	—	—	—	2
„ abdomen	—	—	—	—	—	—	1	—	2	—	1	—	4
„ spine	1	—	—	—	—	—	—	—	—	—	—	—	1
„ joints	—	—	—	—	1	—	—	—	—	1	—	—	2
„ adenitis	—	—	—	—	—	—	—	—	—	—	1	—	1
„ disseminated	—	—	1	1	—	—	1	1	—	—	—	—	4
Typhoid fever	3	5	5	3	4	7	5	2	2	4	2	4	46
TOTAL	127	114	155	743	917	761	437	158	82	44	51	60	3649

INCIDENCE AND DEATH RATES FOR NOTIFIABLE INFECTIOUS
DISEASES.

			No. of cases.	No. of deaths.	Incidence per 1000 pop.	Deaths per 1000 pop.
Malaria	...	...	3500	58	69.930	1.158
Anthrax	...	...	3	—	0.059	—
Blackwater fever	...	...	14	3	0.279	0.059
Cerebrospinal meningitis	...	...	14	16	0.279	0.319
Beri beri	...	...	1	1	0.019	0.019
Diphtheria	...	...	4	3	0.799	0.059
Encephalitis lethargica	...	...	1	1	0.019	0.019
Erysipelas	...	...	7	3	0.139	0.059
Ophthalmia neonatorum	...	...	1	—	0.019	—
Plague	...	...	1	1	0.019	0.019
Puerperal sepsis	...	...	8	2	0.159	0.039
Relapsing fever	...	...	7	1	0.139	0.019
Scarlet fever	...	...	1	—	0.019	—
Tropical typhus	...	...	3	—	0.059	—
Tuberculosis	...	...	38	29	0.759	0.579
Typhoid fever	...	...	46	17	0.939	0.339

12. INFECTIOUS AND COMMUNICABLE DISEASES.

ACUTE ANTERIOR POLIOMYELITIS.

No case was reported during the year. Only three cases have been previously reported, one in 1934 and two in 1931.

ANTHRAX.

Three non-fatal cases were notified, comprising two natives and one Asiatic. An average of 5 cases have been notified annually during the past 10 years.

BERI BERI.

One native case which was not fatal was reported. Three previous cases only have been reported, one in 1928 and two in 1925.

BLACKWATER FEVER.

During the year, the number of cases of this disease was high, fourteen being notified, comprising 1 European, 11 Indian and 2 Goans. The European case and two of the Indian cases were fatal. Since this condition was made notifiable in 1928, 45 cases have been reported, fourteen of which occurred last year.

CEREBROSPINAL MENINGITIS.

There was a mild epidemic of this disease during the latter half of the year, fourteen cases being reported, with the exception of one month, September, when 5 cases were reported, the remaining cases were evenly spread over six months.

Sixteen deaths were notified from this disease among 3 Indians, 12 Natives and 1 Seychellois, thus it is apparent that all cases were not notified, or else there was a hundred per cent. mortality, the remaining 2 natives being diagnosed on the post mortem table.

In 1927, 1928, and 1930, 16, 18 and 19 cases were notified respectively the remaining years averaged five annually.

CHICKENPOX, MEASLES, WHOOPING COUGH, MUMPS.

These non-notifiable conditions have been prevalent during the year. Judging from the admissions to hospital, chickenpox was more prevalent during the latter half of the year, there were no fatal cases.

The incidence of measles increased markedly during the last two months of the year, there were no fatal cases.

Whooping cough appeared spasmodically during March and April, June and July and November and December, there was one fatal case in a native.

Mumps had a moderate incidence which extended evenly through eleven months of the year.

CHOLERA.

There is no record that this disease has occurred in Nairobi.

DIPHTHERIA.

Diphtheria occurred in 4 instances in non-epidemic form, all four cases being Asiatics, three of the cases having a fatal termination.

The average annual number of notifications over the past 10 years has been five.

DYSENTERY.

This disease is not notifiable, so no indication can be given as to its incidence but judging from the number of deaths it may be assumed that the incidence during 1935 was considerably lower than in the previous year.

Six deaths were recorded from this disease, among one Asiatic and five natives, compared with twelve deaths during 1934.

ENCEPHALITIS LETHARGICA.

One Asiatic case only was notified during the year, which was fatal. Previous to this only six cases have been recorded, three in 1934, two in 1932 and 1 in 1931.

TYPHOID FEVER GROUP.

There was an increase in the number of cases notified for this disease during the year, 46 being reported compared with 35 during 1934. The 46 cases comprised 9 European, 14 Indian, 21 Native, 1 Goan, and 1 Somali.

Three Asiatic, 13 Native, and one Somali case were fatal.

The disease did not assume epidemic proportions but was fairly evenly distributed throughout the year.

ERYSIPELAS.

There were seven cases of erysipelas reported among five Indians, one Native and one Seychellois, 3 of the Asiatic cases were fatal.

GLANDERS, RABIES.

No case of these diseases have yet been reported in Nairobi.

LEPROSY.

No case of leprosy was notified during the year, although it should be noted that the Municipality was financially responsible for 1,747 patient days for this disease.

MALTA FEVER.

No case was reported during 1935. In 1931, 1932 and 1934 there was one case of this condition.

MALARIA.

Detailed information regarding the notification of this disease, together with other statistics are given under a separate section in this report.

OPHTHALMIA NEONATORUM.

One European case was reported against two native cases for the previous year. The average number reported during the past eight years has been one annually.

PLAGUE.

One case only of plague occurred during 1935, this was in a native who was found dead, the post mortem examination showing that he died from this disease.

The last epidemic of plague commenced in 1930 continuing to 1932, since when there has been no case until the present one.

PNEUMONIA.

This disease not being notifiable, it is only possible to judge the severity of incidence by relation to deaths.

During 1935, pneumonia was responsible for 191 deaths and broncho-pneumonia for 66 deaths, making a total of 257, slightly lower than last year when the total was 279.

The percentage of deaths from the pneumonias to total deaths during the year was 36.9 compared with 39.5 in 1934. The four years prior to this registered the figures of 34.1, 36.1, 36.3 and 40.0 respectively.

Of the 279 deaths from this condition, 97 were of infants one year of age and under.

The annual death rate for pneumonia per thousand of population for the races, during 1935, is as under:—

Race.				Death rate.
White	...	...	...	0.90
Asiatic	...	...	...	4.42
Native	...	...	...	6.39
All races	...	...	...	5.13

The death rates for all races from pneumonia for the past ten years are as under:—

1926	...	5.2	1931	...	4.9
1927	...	5.9	1932	...	3.7
1928	...	7.6	1933	...	5.1
1929	...	5.5	1934	...	5.8
1930	...	5.8	1935	...	5.1

PUERPERAL SEPSIS.

A total of eight cases namely 1 European, 3 Asiatic and 4 Native, were notified as suffering from puerperal sepsis, two of the native cases being fatal.

The number of cases reported were in excess of those recorded last year to the extent of three.

RELAPSING FEVER.

Seven cases scattered through the year were notified, composed of one Asiatic and 6 Native, one Asiatic case was fatal. The incidence of this disease has decreased considerably since 1925 and 1926 when there were 46 and 27 cases respectively.

SCARLET FEVER.

One case that of an Indian was notified, it was not fatal. Only three previous cases of this disease have been recorded, one each in 1928, 1930 and 1931.

SMALLPOX.

No case was recorded, the last cases occurred in 1928.

TROPICAL TYPHUS.

Three European, non-fatal cases were reported.

It is hoped that the enforcement of the by-laws restricting the movements and grazing of cattle has caused a decrease in the incidence of this disease.

TUBERCULOSIS.

Tuberculosis of all forms was notified in 38 instances, during the year, 24 of these referred to the pulmonary variety and the remaining 14 to forms other than pulmonary. One fatal case of pulmonary tuberculosis was recorded in a European and two non-fatal cases of peritonitis.

Eight Asiatics suffered from the pulmonary variety with two deaths, one Asiatic was recorded as having tuberculosis of a joint.

Twelve Native, two Somali and 1 Arab were notified as having pulmonary tuberculosis, and 14 Native and 1 Arab were reported as having died from this condition.

Eleven natives suffered from tuberculosis other than pulmonary, namely meningitis 2, peritonitis 2, spine 1, joint 1, adenitis 1, and disseminated 4.

Eleven native deaths are recorded from tuberculosis other than pulmonary, they comprise:—

Meningitis 5, peritonitis 1, adenitis 1 and disseminated 4.

From these figures it may be inferred that the notifications of this disease are not very accurate.

The incidence rate for all forms of tuberculosis equalled 0.75 per thousand, compared with 1.05 for 1934.

The death rate for this disease was 0.57 per thousand population, compared with 0.84 for 1934.

13. ADMISSIONS TO HOSPITAL.

The following details are of Municipal patients admitted to each of the three institutions available, namely, European Hospital, Native Hospital and Infectious Diseases Hospital, for infectious or communicable diseases requiring segregation for the public welfare.

These institutions are conducted by the Government but the Municipality is responsible for patients from the Municipality to the extent of payment for treatment.

During 1935, admissions totalled 349 which is an appreciable increase over those in 1934 which totalled 239, whilst the patient days decreased from 7,910 in 1934 to 7,882 in 1935.

The patient days on account of tuberculosis decreased from 2,901 to 1,989 compared with 1934, whilst the patient days for leprosy increased from 1,669 to 1,767.

The hospital days for chickenpox almost doubled themselves compared with the previous year, increasing from 723 to 1,413, and the days for whooping cough decreased from 226 to 192, the days for measles and mumps were 627 and 638 respectively compared with 678 and 608 for the previous year.

The total days for these four diseases totalled 2,870 compared with 2,235 for 1934.

The tables following give the details of admissions, patient days for the hospitals, the seasonal incidence of the diseases and the races affected.

EUROPEAN HOSPITAL.

Month.	Admissions.			Patient days.		
January	1	...	17	
February	1	...	14	
March	1	...	1	
April	—	...	30	
May	—	...	31	
June	3	...	44	
July	1	...	75	
August	1	...	37	
September	—	...	35	
October.	4	...	42	
November	4	...	106	
December	2	...	49	
Total	18	...	481	

NATIVE HOSPITAL.

			ASIATIC.		NATIVE.		TOTAL.			
			Admis- sions.	Patient days.	Admis- sions.	Patient days.	Admis- sions.	Patient days.		
January	...	...	1	2	6	125	7	127		
February	...	...	—	1	4	103	4	103		
March	...	...	—	—	4	120	4	120		
April	...	...	1	29	7	62	8	91		
May	...	...	2	40	10	126	12	166		
June	...	...	—	51	5	101	5	152		
July	...	...	1	6	9	74	10	80		
August	...	...	1	3	2	60	3	63		
September	...	...	1	41	8	160	9	201		
October	...	...	—	—	12	162	12	162		
November	...	...	—	—	5	128	5	128		
December	...	...	—	—	3	57	3	57		
Total	...	...	7	172	75	1278	82	1450		

INFECTIOUS DISEASES HOSPITAL.

Month.	WHITE.		ASIATIC.		NATIVE.		TOTAL.	
	Admis- sions.	Patient days.	Admis- sions.	Patient days.	Admis- sions.	Patient days.	Admis- sions.	Patient days.
January ...	—	—	—	—	14	372	14	372
February ...	—	—	—	—	2	299	2	299
March ...	—	—	—	—	11	414	11	414
April ...	—	—	—	—	9	382	9	382
May ...	—	—	—	—	20	445	20	445
June ...	—	—	—	—	18	426	18	426
July ...	—	—	—	—	22	515	22	515
August ...	—	—	1	1	8	349	9	350
September ...	—	—	1	11	17	381	18	392
October ...	—	—	1	1	24	561	25	562
November ...	1	12	1	1	43	830	45	843
December ...	—	31	—	—	56	920	56	951
Total ...	1	43	4	14	244	5,894	249	5,951

MUNICIPAL PATIENTS—SUMMARY.

Hospital	WHITE.		ASIATIC.		NATIVE.		TOTAL.	
	Admis- sions.	Patient days.	Admis- sions.	Patient days.	Admis- sions.	Patient days.	Admis- sions.	Patient days.
European ...	18	481	—	—	—	—	18	481
Native ...	—	—	7	172	75	1278	82	1450
Inf. Diseases ...	1	43	4	14	244	5894	249	5951
TOTAL ...	19	524	11	186	319	7172	349	7882

MUNICIPAL PATIENT DAYS BY DISEASES.

	White.	Asiatic.	Native.	Total.
Tuberculosis ...	116	143	1730	1989
Leprosy ...	—	—	1767	1767
Chickenpox ...	—	—	1413	1413
Typhoid fever ...	374	25	365	764
Mumps ...	—	—	638	638
Measles ...	—	—	627	627
Whooping cough ...	—	—	192	192
C.S.M. ...	—	—	169	169
Anthrax ...	—	11	102	113
Relapsing fever ...	—	2	72	74
Puerperal fever ...	—	—	54	54
Tropical typhus ...	34	—	—	34
Scabies ...	—	—	12	12
Beri beri ...	—	—	11	11
Septicaemia ...	—	—	11	11
Erysipelas ...	—	—	8	8
Blackwater fever ...	—	3	—	3
Diphtheria ...	—	2	1	3
TOTAL ...	524	186	7172	7882

MUNICIPAL PATIENT DAYS BY MONTHS.

	Jan.	Feb.	March.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Tuberculosis	124	112	124	120	124	180	155	186	139	138	210	155	1767
Leprosy	130	123	151	144	178	175	146	127	226	172	184	233	1989
Chickenpox	60	25	56	44	124	100	131	19	105	220	327	202	1413
Typhoid fever	54	45	59	57	70	83	44	31	56	102	129	34	764
Mumps	81	55	81	72	68	39	82	33	28	42	57	—	638
Measles	14	46	12	8	30	6	18	21	—	18	102	352	627
Whooping cough	—	2	44	24	—	12	36	—	—	—	31	43	192
C.S.M.	1	—	—	8	9	1	25	23	52	40	10	—	169
Anthrax	31	5	—	—	—	19	22	—	11	—	9	16	113
Relapsing fever	13	3	—	—	17	—	2	6	—	8	3	22	74
Puerperal fever	—	—	8	15	17	—	—	—	—	14	—	—	54
Tropical typhus	—	—	—	—	—	—	8	—	—	12	14	—	34
Scabies	—	—	—	—	5	7	—	—	—	—	—	—	12
Beri beri	—	—	—	11	—	—	—	—	—	—	—	—	11
Septicaemia	—	—	—	—	—	—	—	—	11	—	—	—	11
Erysipelas	8	—	—	—	—	—	—	—	—	—	—	—	8
Blackwater fever	—	—	—	—	—	—	—	3	—	—	—	—	3
Diphtheria	—	—	—	—	—	—	1	1	—	—	1	—	3
TOTAL	516	416	535	503	642	622	670	450	628	766	1077	1057	7882

14. MALARIA.

Malaria was made notifiable from February 1930. During 1935, 3,949 cases were notified as suffering from malaria, 3,500 being residents and 449 non-residents, compared with 2,394 cases notified during 1934 comprising 1,102 residents and 292 non-residents.

MALARIA NOTIFICATIONS.

Month.	Resident.				Non-Resident.				Total.
	White.	Asiatic.	Native.	Total.	White.	Asiatic.	Native.	Total.	
January	2	86	31	119	3	2	8	13	132
February	5	70	27	102	7	1	18	26	128
March	5	101	36	142	2	4	16	22	164
April	37	365	328	730	16	2	52	70	800
May	28	346	531	905	10	3	87	100	1005
June	36	297	414	747	12	4	83	99	846
July	16	218	186	420	13	5	50	68	488
August	8	78	60	146	3	1	22	26	172
September	2	36	30	68	1	1	10	12	80
October	2	14	14	30	2	2	2	6	36
November	2	33	6	41	1	—	1	2	43
December	4	31	15	50	2	2	1	5	55
TOTAL	147	1675	1678	3500	72	27	350	449	3949

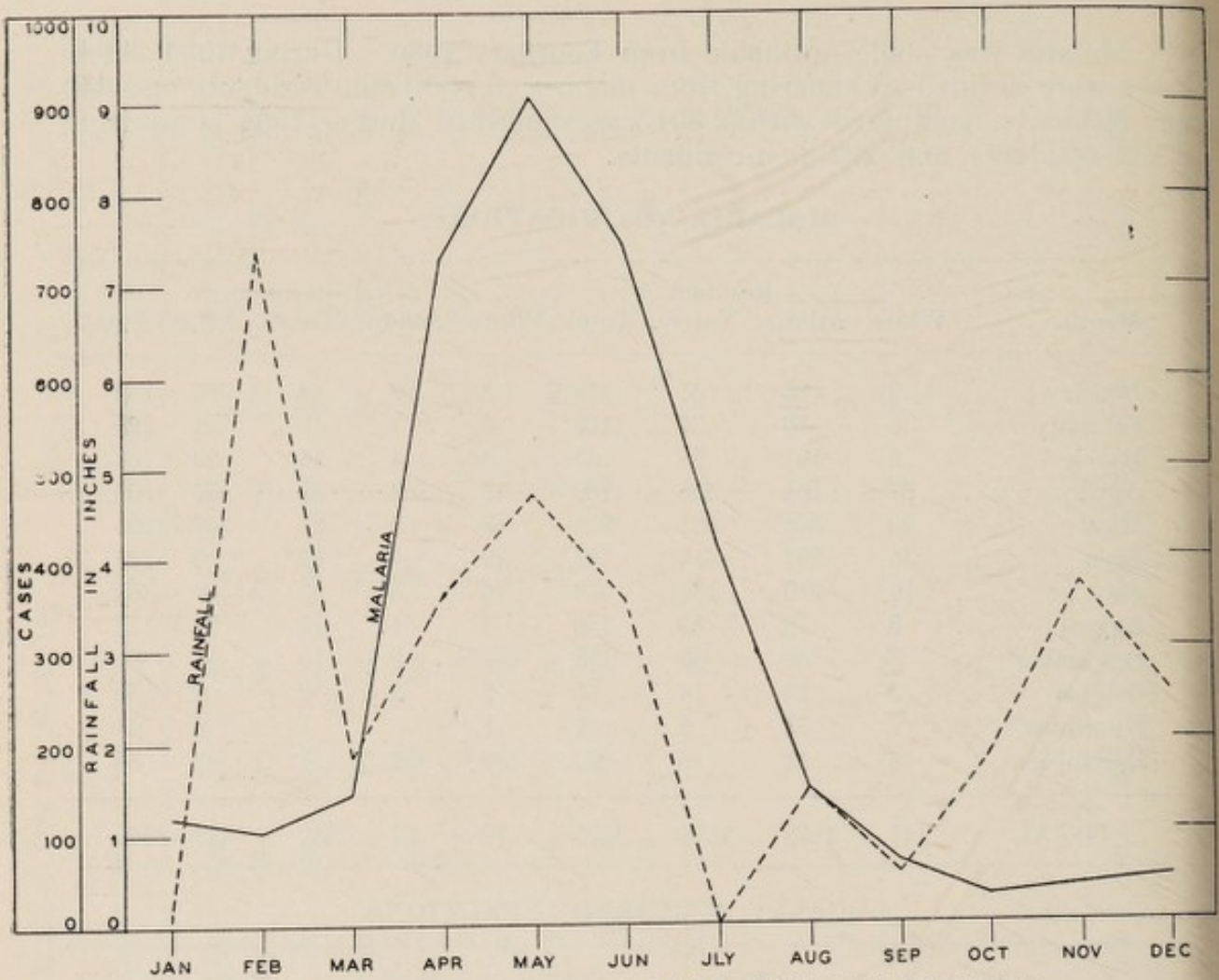
LOCALLY ACQUIRED INFECTIONS.

Month.	White.	Asiatic.	Native.	Total.
January	2	85	30	117
February	3	69	21	93
March	—	101	31	132
April	27	359	317	703
May	20	342	525	887
June	28	297	406	731
July	14	217	181	412
August	—	77	57	134
September	—	36	28	64
October	2	14	11	27
November	2	32	3	37
December	3	30	11	44
TOTAL	101	1659	1621	3381

The seasonal incidence of the locally acquired infections as shown on the accompanying graph illustrates the epidemic commencing in March reaching its peak in May and gradually decreasing in severity during the succeeding months and finally ceasing in October.

The monthly rainfall has been plotted on the graph for comparative purposes.

MALARIA AND RAINFALL.



INCIDENCE OF NOTIFIED MALARIA PER 1000 PERSONS.

Race	1930	1931	1932	1933	1934	1935
White	23.88	13.19	13.81	8.18	17.40	26.58
Asiatic	30.51	10.87	7.41	15.36	77.32	101.50
Native	10.84	6.73	24.20	29.66	24.81	59.92
All races	16.62	8.81	17.64	22.60	40.57	69.93

The following tables present an analysis of the notified resident cases of malaria.

The diagnosis of all the notified cases with the exception of those termed "Clinical" has been supported by laboratory examination.

In the case of those classified as "Clinical" the laboratory finding was either absent or negative and evidence was produced that reasonable care had been taken in diagnosis.

Endeavour has been made since the inception of the notification of malaria to classify each case according to the location of the probable source of infection.

All the cases are placed in one of the following classes:—

1. NAIROBI. More or less conclusive evidence of infection taking place within the Municipality.
2. EX-NAIROBI. Evidence of infection being contracted outside the Municipality.
3. DOUBTFUL. Cases not falling into the previous categories or in which no definite information could be obtained.

PROBABLE SOURCE OF INFECTION.

Source of infection		Number of Cases.						Percentage.					
		1930	1931	1932	1933	1934	1935	1930	1931	1932	1933	1934	1935
Nairobi	...	107	79	243	865	1924	3281	13.6	18.8	29.1	80.8	91.5	93.7
Ex-Nairobi	...	84	133	214	184	169	219	10.6	31.7	25.6	17.2	8.1	6.3
Doubtful	...	598	208	379	22	9	—	75.8	49.5	45.3	2.0	0.4	0.0
Total	...	789	420	836	1071	2102	3500	100.0	100.0	100.0	100.0	100.0	100.0

The percentage of locally acquired infections is higher than in 1934 and now reaches a considerable figure.

The percentage of infections acquired outside the Municipality has decreased considerably.

The fact of there being no doubtful cases is undoubtedly due to more accurate information being tendered on the notification form.

Classification of the reported cases according to the type of infection and the probable source of infection is indicated in the accompanying tables.

TYPE OF INFECTION AND PROBABLE SOURCE.

Probable source.	Clinical.	Benign tertian.	Quartan.	Sub-tertian.	Double infections.	Total cases.
Nairobi	41	473	66	2840	39	3381
Ex-Nairobi	11	5	2	101	—	119
Doubtful	—	—	—	—	—	—
Total Residents	52	478	68	2941	39	3500
Total Non-Residents	16	24	6	405	2	449
TOTAL	68	502	74	3346	41	3949

PERCENTAGE OF TYPES OF INFECTIONS.

Type	Nairobi.	Ex-Nairobi.	Doubtful.	Non-Residents.	Percentage total cases.
Clinical	1.2	9.2	—	3.6	1.7
Benign tertian	13.8	4.2	—	5.3	12.6
Quartan	2.0	1.7	—	1.3	1.8
Sub-tertian	83.0	84.9	—	89.9	83.9

Subtertian infection, as hitherto, represents the large proportion of the total cases. During 1935 this figure was 83.9% compared with 84.4% for the proceeding year.

Benign tertian infection showed a 27.2% rise during 1935, and the percentage to total cases of Quartan infection showed an increase of 63.6%.

For comparative purposes and for the purpose of this report, the Municipality has been divided into 10 districts, the names of these districts being sufficient to indicate their position.

The following table indicates the number of cases of malaria notified from each of the undermentioned districts:—

NAIROBI INFECTIONS.

District.	Number of cases notified.					
	1930	1931	1932	1933	1934	1935
1. Upper Parklands	—	—	1	3	4	5
2. Muthaiga	3	—	1	8	21	17
3. Westlands	1	—	1	—	3	11
4. Parklands	10	4	9	31	47	56
5. Forest Road	11	6	14	133	266	458
6. Racecourse Road	—	3	42	128	137	499
7. Eastleigh	2	—	8	30	36	108
8. Kilimani	2	2	10	19	12	24
9. Hill	5	2	23	63	113	100
10. Commercial	73	62	134	450	1285	2103
TOTAL	107	79	243	865	1924	3381

It is noted that by far the largest incidence occurs in the "Commercial," "Forest Road," and "Racecourse Road" districts.

As pointed out in previous reports, the worst areas affected are contiguous to the Nairobi swamp, which is without doubt the causative agent for the large majority of cases reported from these districts.

It is hoped that the elimination of the swamp will one day be accomplished bringing with it a decrease of the sickness rate of the inhabitants who live in contiguous areas.

DOUBLE INFECTIONS.

Source of infection	Subtertian benign tertian quartan.	Subtertian & quartan.	Subtertian benign tertian.	Quartan & benign tertian.	No. of cases notified.
Nairobi	1	3	33	1	3381
Ex-Nairobi	—	—	—	—	119
Doubtful	—	—	—	—	—
Non-Resident	—	—	2	—	449
TOTAL	1	3	35	1	3949
Percentage of total cases	0.02	0.07	0.88	0.02	...

Double infections were recorded in 40 instances or 1.01% of the total cases, compared with a percentage of 1.87 for 1934, 1.55 for 1933, 1.97 for 1932, 0.69 for 1931 and 2.3 for 1930.

There was a mortality rate of 1.64% of the total cases notified.

The mortality rate among residents amounted to 1.65% and among non-residents to 1.55%.

The mortality rate for residents for the previous five years was 3.68%, 2.62%, 2.56%, 2.24%, and 1.52% respectively.

The death rate from malaria per thousand of population during 1935 was 1.15, an increase over the previous four years when the figures were 0.35, 0.42, 0.50, and 0.67 respectively.

Three deaths from blackwater fever, comprising one European and two Asiatics, were recorded during the year.

Details of the deaths from malaria during the year will be found under :

DEATHS FROM MALARIA.

Month.	Number of cases notified.		Number of deaths.		Percentage mortality rate.	
January	...	119	...	3	...	2.52
February	...	102	...	3	...	2.94
March	...	142	...	2	...	1.40
April	...	730	...	6	...	0.82
May	...	905	...	9	...	0.99
June	...	747	...	7	...	0.93
July	...	420	...	15	...	3.57
August	...	146	...	9	...	6.16
September	...	68	...	—	...	—
October	...	30	...	2	...	6.66
November	...	41	...	—	...	—
December	...	50	...	2	...	4.00
Total	...	3500	...	58	...	1.65
Non-resident	...	449	...	7	...	1.55
TOTAL	...	3949	...	65	...	1.64

DEATHS FROM MALARIA AND RATES FOR THE RACES FOR 6 YEARS.

Race.	Number of deaths.							Rate per 1000.				
	1930	1931	1932	1933	1934	1935	1930	1931	1932	1933	1934	1935
White	...	1	—	—	1	1	—	0.22	—	—	0.18	0.18
Asiatic	...	12	12	10	6	18	11	1.09	0.76	0.66	0.39	1.19
Native	...	26	5	10	17	13	47	0.81	0.18	0.37	0.63	0.45
All races	...	39	17	20	24	32	58	0.82	0.35	0.42	0.50	0.67

DEATHS FROM MALARIA AND RATES FOR 17 YEARS.

Year.	Number of deaths.		Death rate per 1000	
1919	...	47	...	—
1920	...	37	...	—
1921	...	22	...	—
1922	...	29	...	—
1923	...	28	...	—
1924	...	32	...	—
1925	...	19	...	—
1926	...	130	...	—
1927	...	25	...	1.1
1928	...	27	...	0.60
1929	...	27	...	0.56
1930	...	39	...	0.82
1931	...	17	...	0.35
1932	...	20	...	0.42
1933	...	24	...	0.50
1934	...	32	...	0.67
1935	...	58	...	1.15

15. ANTI-MALARIAL WORK.

As a routine the whole length of the anti-malarial canals as well as newly constructed drains and streams was inspected at frequent intervals, clearing and repairing taking place where necessary.

The work of widening and straightening the Getathuru River, which was commenced in 1934, was completed, the whole length being treated.

Similar work of straightening the Nairobi River was undertaken from Plot 136 to the Eastleigh border.

Attention was also given to clearing and improving the stream from the Municipal boundary at Spring Valley Estate to Mpaka Road.

The disused quarries and pits on the south side of the stream near the Infectious Diseases Hospital, which always required a great deal of attention, were given attention, filling operations being carried on by prison labour. This entails an enormous amount of work and although the work was in progress at the end of the year, a considerable time must elapse before the work will be completed.

The malaria epidemic necessitated a considerable amount of emergency work, extra labour requiring to be employed and extra oil being used. This emergency work cost the sum of £668 in addition to the ordinary expenditure in this direction.

One of the features in connection with this epidemic was the supplying of spray pumps, either free or at a reduced cost and the supplying of pyrethrum fluid for the sprays free.

The total mileage for the lorry used for anti-malarial work totalled 9,554 miles.

During the year a total of 14,340 gallons of oil mixture was used in the endeavour to control the breeding places of mosquitoes.

16. RODENT DESTRUCTION.

Routine rat trapping was carried out as in former years, the rat gang consisting of six boys working under the direction of the sanitary inspectors.

The Railway Administration provide their own rat gang, which operates on railway premises and land.

Ten rats were sent to the laboratory for examination, but none of them proved to be positive to *B. pestis*. Nine of these were found dead, eight from the commercial area and one from the grounds of the European Hospital during intensive trapping and baiting measures.

The number of rats destroyed by the Municipal rat gang totalled 18,529 compared with 16,340 during 1934.

The Railway gang accounted for 6,418, compared with 6,585 during the previous year.

It should be noted that the following table refers to rats trapped and takes no account of the numbers destroyed by baiting.

RATS TRAPPED.

Month.	Municipal gang.	Railway gang.	TOTAL.
January	1414	555	1969
February	1319	523	1842
March	1477	508	1985
April	1407	505	1912
May	1499	597	2096
June	1559	505	1954
July	1515	485	2000
August	1553	430	1983
September	1596	562	2158
October	1855	647	2502
November	1817	535	2402
December	1628	516	2144
TOTAL	18529	6418	24947

17. SANITATION.

CONSERVANCY.

There has been no change in the method of night soil disposal. During the year approximately 3,263 buckets have been attended to daily by the Conservancy Department, compared with 3,350 during 1934.

Eleven premises with 47 closets have been connected with the sewer during 1935, making a total of 1,177 water closets in use connected to the sewerage system of the town.

New septic tanks have been installed in 49 instances, making a total of 436 in the Municipality. One conserving tank in connection with a septic tank installed on land not capable of dealing with the effluent has been installed, increasing the total to nine.

Six pits for dealing with water closet discharges were provided where the soil was particularly suitable. Ox-drawn vehicles are used exclusively for night soil collection, but it is intended to improve these carts and fit them with pneumatic tyres.

SEWERS.

Additions to the sewerage system since the last report include 3,122 feet of six inch sewer to serve Pumwani, followed by a 1,000 feet extension of six inch asbestos cement pipe in the same area.

A nine inch fireclay pipe over 4,000 feet in length has been laid on the south side of the Nairobi River on Plot 136.

Three lengths of seven inch sewer totalling 1,700 feet has been laid to serve part of the River Road area, and the conversions of latrines and other drainage works are now in progress.

Approximately 500 feet of nine inch sewer was constructed in Bazaar Lane and 220 feet in Kirparam Road, the latter short length being carried out by the Municipal Council on behalf of the owners of adjoining plots.

REFUSE COLLECTION.

The large motor freighter continued in service during the year whilst the smaller vehicle was withdrawn and ox-drawn carts were used for refuse collection. These ox carts have been greatly improved, being now fitted with pneumatic tyres.

The tractor and trailer are no longer employed for this work.

18. SANITARY INSPECTIONS.

Details of the work performed by the inspectorial staff of the Public Health Department will be found in the summary which follows.

As one inspector was away from the middle of March and his post was not replaced during the remainder of the year, the amount of work performed naturally suffered in consequence, and was less than that for 1934 when full time inspectorial services were recorded.

It will be noted that 7,906 premises were inspected for nuisances compared with 11,856 inspected during 1934, and 1,241 defects were remedied compared with 2,618 remedied during the previous year.

The number of statutory notices served was 365, the majority of these being served under the provisions of the various by-laws.

SUMMARY OF WORKS PERFORMED.

NUISANCES.

Inspections made to:—

Dwelling houses	...	...	...	...	...	2,240
Restaurants and eating houses	...	...	...	...	...	284
Laundries	...	...	...	...	...	122
Hotels and bars	...	...	...	...	...	130
Offensive trades	...	...	...	...	...	14
Stables and cattle sheds	...	...	...	...	...	20
Offices and trade premises	...	...	...	...	...	3,850
Open spaces, streets, etc.	...	...	...	...	...	1,005
Complaints registered and investigated	...	...	...	...	...	23
House to house inspections	...	...	...	...	...	Nil

Defects remedied:—

Premises dirty or verminous	...	...	...	...	...	72
Dwellings overcrowded	...	...	...	...	...	1
Dwellings without proper water supply	...	...	...	...	...	14
Dwellings unfit for habitation	...	...	...	...	...	29
Insanitary dwellings demolished	...	...	...	...	...	2
Yards unpaved	...	...	...	...	...	14
Rat infestation	...	...	...	...	...	5
Dilapidation	...	...	...	...	...	26
Latrine accommodation defective	...	...	...	...	...	28
Latrine accommodation inadequate	...	...	...	...	...	19
Drains, closed water carriage, choked	...	...	...	...	...	26
Drains, closed water carriage, defective	...	...	...	...	...	7
Drains, open, choked	...	...	...	...	...	54
Drains, open, defective	...	...	...	...	...	25
Drains absent or inadequate	...	...	...	...	...	6
Septic tanks or cesspits defective	...	...	...	...	...	12
Septic tanks or cesspits choked	...	...	...	...	...	7
Waste water disposal defective or inadequate	...	...	...	...	...	36
Soil or waste pipes choked	...	...	...	...	...	5
Soil or waste pipes defective	...	...	...	...	...	7
Accumulations of refuse	...	...	...	...	...	204
Dustbins absent or defective	...	...	...	...	...	263
Foodstuffs unprotected against rats	...	...	...	...	...	168
Sleeping in kitchens or food stores	...	...	...	...	...	8
Mosquito breeding	...	...	...	...	...	158

Animals causing nuisance	1
Miscellaneous	44
Defects remedied by verbal intimation	703
Defects remedied by written intimation	172
Defects remedied by statutory notices	365

SEWERAGE CONNECTIONS.

Premises connected to sewer	11
Pail closets, etc., converted into water closets	5
New closets installed to sewer	47

ERECTION AND ALTERATION OF BUILDINGS.

Plans dealt with	353
Inspections made	1,554
Completion certificates issued	186

LICENSING OF TRADE PREMISES.

Inspections made	907
Re-inspections made	178

INFECTIOUS DISEASES.

Cases investigated	3
Inspections made	5
Rooms disinfected	17
Articles disinfected	6

RATS.

Number destroyed	18,529
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NOTICES SERVED.

Public Health Ordinance	91
Municipal By-Laws:—	
Cleansing plots, By-law 499	46
Inadequate latrine accommodation, By-law 510	25
Others, By-laws 509, 513, 521, 495, 518	17
Refuse receptacles and removal	132
Drainage By-laws	48
Demolition Orders (Insanitary Dwellings By-laws)	2
Intimation Notices:—	
Number sent	38
Prosecutions	21

19. FOOD CONTROL.

TRADE PREMISES SUBJECT TO CONTROL UNDER SPECIAL BY-LAWS.

	1929.	1930.	1931.	1932.	1933.	1934.	1935.
Aerated water factories	5	5	4	4	5	4	5
Bakeries	13	10	13	11	10	11	12
Butchers' shops	18	17	21	21	19	13	14
Dairies and milk shops	12	20	28	26	32	24	22
Fishmongers	10	9	14	15	11	8	8
Laundries and dhobies	21	23	21	24	20	19	24
Restaurants	5	5	6	7	8	6	8
Eating houses	34	46	40	40	32	29	23
Vegetable dealers	19	17	19	22	20	16	20

These premises are exclusive of stalls in the Municipal Market.

The 22 Dairies and Milk Shops include 7 cowkeepers who retail milk, of these 6 are European and one Somali.

The remaining 15 premises are retailing milk depots, 4 being European and 11 Asiatic.

INSPECTIONS TO PREMISES UNDER SPECIAL CONTROL.

					Number of Inspections.
Aerated water factories	...	...	...	...	551
Bakeries	...	...	...	...	102
Butchers' shops	...	...	...	...	369
Dairies and Milk shops	...	...	...	...	1,199
Fishmongers	...	...	...	...	96
Laundries and dhobies	...	...	...	...	122
Restaurants	...	...	...	...	13
Eating houses	...	...	...	...	271
Vegetable dealers	...	...	...	...	130
Hotels and boarding houses	...	...	...	...	130
Markets	...	...	...	...	450
Grocers	...	...	...	...	109

FOOD INSPECTED AND CONDEMNED.

				Inspected lbs.	Condemned lbs.
Fish	...	...	...	28,130	114
Fruit	...	...	...	9,755	1,147
Provisions	...	...	...	53,864	1,587
Meat	...	...	...	64,290	5,926
Vegetables	...	...	...	20,185	210
Bottled goods	...	...	...	3,104	—

20. ABATTOIR.

The amount of work carried out at the abattoir is still progressively increasing, the total number of animals slaughtered during 1935 was 50,661 being an increase of 3,323 or 7% over the number slaughtered last year.

The total number of oxen slaughtered during the year decreased from 14,795 to 13,813 but it should be noted the number of grade oxen slaughtered increased from 4,531 to 4,806, a matter of 6%, a percentage about equal to the decrease in the number of total oxen slaughtered.

Fewer calves were slaughtered and the percentage of condemnations for these animals was decreased.

There was a large increase in the number of sheep killed, the number being 10,668 against 8,288 in 1934, an increase of 28%.

The number of goats slaughtered showed an increase of 8% being 23,417 compared with 21,594 during 1934.

There was also an increase of the number of pigs slaughtered to the extent of nearly 14%, the figure being 2,226 against 1,959 for last year.

Tables are shown giving the number of animals killed during 1935, the percentage of condemnations and the causes of condemnation. Tables are also included showing the condemnation rates for the types of oxen for a number of years.

The number of oxen condemned for all causes amounted to 2,748 or 19.8% of the total slaughtered, compared with 19.5% for 1934.

2,389 or 17.2 of the oxen were condemned for cysticercus bovis, compared with 2,420 or 16.3% for 1934.

Of the remainder, 115 were rejected for being in a fever condition, 61 for dropsy, 42 for emaciation, 53 for jaundice, 23 for bruising, 18 for redwater, 15 for sepsis, 12 for tuberculosis, 8 for heartwater, 4 for East Coast fever, 4 for anaplasmosis, 2 for rinderpest and one each for septicaemia and diffused haemorrhage.

Of the 101 calves condemned, 94 were rejected on account of cysticercus bovis, 6 for redwater and one for heartwater.

277 or 2.59% of the sheep killed were condemned, the causes being—48 fevered, 98 septic condition, 74 lymphadenitis, 22 emaciation, 17 dropsy, 17 jaundice and one bruising.

The principal causes for the rejection of goats were heartwater, fevered, dropsy and sepsis which accounted for 877 out of the 960 condemnations, the remaining conditions were, jaundice 39, emaciation 31 pleuropneumonia 7, lymphadenitis 3, bruising 2 and pneumonia 1.

The percentage of condemnations for pigs increased from 1.02 to 2.47. Of the 55 rejected, 18 were found fevered, 18 had jaundice, 11 had diffused haemorrhage, 3 had bruising, 2 were septic, one had tuberculosis, one dropsy and one rickets.

The estimated weight of total meat condemned was less than in 1934 by 2,384 lbs., the figure for 1935 being 1,206,629 against 1,209,013 in 1934.

The weight of meat condemned reached a peak figure in 1933, since then it has gradually declined.

INSPECTIONS.

1935.				Number of carcasses		Percentage	
				Inspected.	Condemned.	of carcasses	condemned.
Oxen—Grade	...	...	...	4,806	682	14.19	
Native	...	...	...	9,007	2,066	22.93	
				13,813	2,748		19.89
Calves	...	...	...	537	101	...	18.80
Sheep	...	...	...	10,668	277	...	2.59
Goats	...	...	...	23,417	960	...	4.09
Pigs	...	...	...	2,226	55	...	2.47
Total	...	...	...	50,661	4,141	...	8.17

ORGANS CONDEMNED APART FROM CARCASSES.

Lungs	...	...	...	26,388
Livers	...	...	...	17,479
Kidneys	...	...	...	9,424
Hearts	...	...	...	5,809
Stomachs	...	...	...	5,105
Spleens	...	...	...	4,851
Intestines	...	...	...	4,687
Tongues	...	...	...	4,377
Heads	...	...	...	4,359
Other	...	...	...	52
Total	...	...	...	82,531

ESTIMATED TOTAL WEIGHT OF MEAT CONDEMNED.

Beef	...	...	...	1,103,141 lb.
Veal	...	...	...	12,011 lb.
Mutton	...	...	...	19,748 lb.
Goat	...	...	...	58,785 lb.
Pork	...	...	...	12,944 lb.
Total	...	...	...	1,206,629 lb.

CONDITIONS NECESSITATING CONDEMNATIONS.

	Oxen.		Calves.	Sheep.	Goats.	Pigs.	Total.
	Grade.	Native.					
Anaplasmosis	4
Bruising	29
Cysticercus bovis	2483
Diffused haemorrhage	12
Dropsy	209
East Coast Fever	4
Emaciation	95
Fevered	436
Heartwater	368
Jaundice	127
Lymphadenitis	77
Pleuropneumonia	7
Redwater	24
Rickets	1
Rinderpest	2
Septic condition	248
Septic pneumonia	1
Septicaemia	1
Tuberculosis	13
TOTAL	4141

OXEN SLAUGHTERED AND CONDEMNED FOR ALL CAUSES.

Year.	No. killed.	Grade No. cond.	% cond.	No. killed.	Native No. cond.	% cond.	No. killed.	Total No. cond.	% cond.
1927	5,634	232	4.1	5,178	335	6.4	10,812	567	5.2
1928	4,907	290	5.9	6,827	480	7.0	11,734	770	6.5
1929	4,151	252	6.0	7,617	762	10.0	11,768	1,014	8.6
1930	4,214	313	7.4	7,243	738	10.1	11,457	1,051	9.1
1931	4,306	471	10.9	9,375	1,318	14.0	13,681	1,789	13.0
1932	3,054	363	11.8	11,044	1,757	15.9	14,098	2,120	15.0
1933	2,924	399	13.6	12,968	2,625	20.2	15,892	3,024	19.3
1934	4,531	664	14.6	10,264	2,230	21.7	14,795	2,894	19.5
1935	4,806	682	14.1	9,007	2,066	22.9	13,813	2,748	19.8

OXEN SLAUGHTERED AND CONDEMNED FOR "MEASLES."

Year.	No. killed.	Grade No. cond.	% cond.	No. killed.	Native No. cond.	% cond.	No. killed.	Total No. cond.	% cond.
1927	5,634	—	—	5,178	—	—	10,812	490	4.5
1928	4,907	—	—	6,827	—	—	11,734	740	6.3
1929	4,151	—	—	7,617	—	—	11,768	975	8.2
1930	4,214	277	6.5	7,243	683	9.4	11,457	960	8.3
1931	4,306	388	9.0	9,375	1,227	13.0	13,681	1,615	11.8
1932	3,054	321	10.5	11,044	1,568	14.1	14,098	1,889	13.3
1933	2,924	326	11.1	12,968	2,158	16.6	15,892	2,484	15.6
1934	4,531	600	13.2	10,264	1,820	17.7	14,795	2,420	16.3
1935	4,806	495	10.2	9,007	1,894	21.0	13,813	2,389	17.2

REPORT OF CHILD WELFARE, ANTE-NATAL, AND VENEREAL CLINICS, DISPENSARIES, AND HOME VISITS.

By EVELYN F. HARTLEY, M.B., CH.B.(EDIN.),

Medical Officer in Charge.

The Municipal Council officially took over these auxiliary health services from the Government Medical Department as from 1st October, although on June 1st the Council appointed Dr. Hartley as Medical Officer in charge of the department in anticipation of the take-over.

From the beginning of the year until June there was no Medical Officer in charge, the work being carried on by two Health Visitors, Miss R. K. Sharp and Miss Rice Oxley. During the absence on leave of Miss Sharp from January to April, her work was undertaken by Mrs. Bailey.

When the Council assumed control of the services in October they appointed two Health Visitors, Mrs. Dugmore and Mrs. Bailey, and in addition Miss Sharp was seconded to the Council for the sake of continuity.

During the year, the same centres as formerly have been retained, namely, Pumwani, Pangani, and the Railway Landies. Early in the coming year it is intended to establish a centre in a new building which is to be erected in the grounds of the Indian Maternity Hospital.

CHILD WELFARE CLINICS.

The work of this department has been somewhat handicapped due to the fact that for the first six months of the year there was no Medical Officer, and the work of the three clinics was maintained by two Health Visitors only.

During the year, 121 clinics were held with a total of 11,385 attendances.

The native women are beginning to understand and appreciate the necessity for the weekly weighing and inspection of their children and it is very gratifying to see mothers bringing up as many as four children every week.

Since October there has been a staff of three Health Visitors and this has enabled more house to house visiting to be done. This is considered to be the most important part of the work, as in this way the confidence of the women is gained and many who in the past have been prejudiced against the clinics have been persuaded, together with their children, into becoming regular attendants.

ANTE-NATAL CLINICS.

The Lady Grigg African Maternity Hospital is the chief centre of this work, 52 clinics being held with a total attendance of 1,423. In 1933 there were only seven beds in the hospital, but at the end of 1935 eighteen beds were in use. The number of serious abnormal cases admitted from the Reserves is gradually decreasing, as quite a number of these women attend for ante-natal treatment, and so make the hospital known to others on their return to the Reserve. The emergency work of this hospital is undertaken by the Medical Officer in charge of the Child Welfare Department.

Weekly ante-natal clinics are also held at the Lady Grigg Indian Maternity Hospital, but the members seen are not many as they consist

mainly of cases referred by the Matron as requiring further advice and treatment. Clinics are also held weekly at Pangani and the K.U.R. Landies, any abnormal cases being sent to the Pumwani Maternity Hospital for treatment. The number of attendances at these two clinics was 1,288, which is an increase of 513 over last year, and this increase is considered to be due to the greater number of home visits.

VENEREAL DISEASE CLINICS.

During the year there has been a marked increase in the attendances at the V.D. clinics, the total of 5,277 showing an increase of 1,310 over last year. This is mainly due to the work of the Health Visitors, who discover the cases in the homes and persuade them to come for treatment, impressing upon them the dangers of the disease to themselves, their children, and to others.

The attendance of children also shows a considerable increase over those of last year, the cases being mainly of yaws, and those being chiefly from the K.U.R. Landies.

Prostitution in the localities has not improved, but the definite increase in the attendance at the V.D. clinics is an indication that progress is being made towards improving the health of the native women.

DISPENSARIES.

The number of attendances at the dispensaries totalled 36,259, an increase of 7,192 over those of last year.

Whooping cough and broncho-pneumonia have been very prevalent throughout the year, and during September, October, and November there was an epidemic of measles.

During November there were two cases of cerebro-spinal meningitis sent to hospital from the K.U.R. Landies clinic.

The following tables indicate the work performed at the various clinics and also make comparison with the work of previous years.

CHILD WELFARE CLINICS.

				Pumwani.		Pangani.		K.U.R. Landies.		Total.
Clinics held	...	...	...	49	...	51	...	21	...	121
Attendances	...	...	...	4,763	...	2,489	...	4,133	...	11,385

ANTE-NATAL CLINICS.

				African Maternity Hospital.		Pangani.		K.U.R. Landies.		Total.
Clinics held	...	...	...	52	...	48	...	50	...	150
Attendances	...	...	...	1,423	...	187	...	1,101	...	2,711

V.D. CLINICS.

				Syphilis Attendances.		Yaws Attendances.		Total Attendances.
				New cases.	Old cases.	New cases.	Old cases.	
PUMWANI :	Women	...	...	1,525	201	233	48	2,007
	Children	...	...	54	6	182	55	297
	Total	...	...	1,579	207	415	103	2,304
PANGANI :	Women	...	...	884	79	128	22	1,113
	Children	...	...	24	5	49	8	86
	Total	...	...	908	84	177	30	1,199
K.U.R. LANDIES :	Women	...	...	694	115	115	31	955
	Children	...	...	51	17	610	141	819
	Total	...	...	745	132	725	172	1,774
TOTAL :	Women	...	...	3,103	395	476	101	4,075
	Children	...	...	129	28	841	204	1,202
	TOTAL	...	...	3,232	423	1,317	305	5,277

DISPENSARIES.

				ATTENDANCES.				Total.
				Pumwani.	Pangani.	K.U.R. Landies.		
Women	...	...	3,041	...	1,552	...	3,817	8,410
Children	...	...	4,541	...	2,285	...	21,023	27,849
Total	...	...	7,582	...	3,837	...	24,840	36,259

VISITS BY HEALTH VISITORS AND NATIVE STAFF.

Pumwani	...	...	...	4,711
Pangani	...	...	...	4,463
K.U.R. Landies	...	...	...	2,972
Total	...	...	...	12,146

COMPARISON OF ATTENDANCES AND VISITS.

	1931.	1932.	1933.	1934.	1935.
Child Welfare clinics	5,574	7,923	11,448	11,698	11,385
Venereal Disease clinics	3,123	4,219	3,432	3,967	6,277
Dispensaries	23,413	23,316	19,861	29,066	36,258
Ante-natal clinics	991	1,626	1,958	2,198	2,711
Total attendances	33,101	37,085	36,699	46,929	55,631
Home Visits	7,554	3,646	4,373	7,738	12,146



