

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

### **Contributors**

Nairobi (Kenya). Public Health Department.

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Nairobi Municipality

THIRD

ANNUAL REPORT

OF THE

Medical Officer of Health

1931



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Nairobi Municipality

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1931





National Municipality

THIRD

ANNUAL REPORT

OF THE

National Office of Health


1934

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## GENERAL.

This is the third year that the Municipal Council has been the Local Public Health Authority for Nairobi.

During these three years, numerous administrative difficulties, consequent to the change in constitution, have been overcome, reorganisation has taken place and a certain amount of progress has been registered.

The Auxiliary Services, including Child Welfare, Ante-natal and Venereal Clinics, Dispensaries, Venereal Diseases treatment and the provision of accommodation at the Infectious Diseases Hospital is still under the control of the Medical Department of the Government.

A Report on these auxiliary services will be found at the end of this Report.

Tenders have been received for the building of the new Municipal Offices, but the necessary loan for undertaking the work has yet to be sanctioned by Government. Should this sanction be forthcoming, the new Offices, which will be situated in the City Square, will probably be ready for occupation at the latter end of 1932.

The new Municipal Market is nearing completion and will probably be occupied in April, 1932.

The office of the Health Department has been situated, as in previous years, in Standard Buildings.

## STAFF.

The staff of the Public Health Department includes:—

- 1 Medical Officer of Health.
- 1 Chief Sanitary Inspector (vacant).
- 4 District Inspectors.
- 1 Meat and Food Inspector.
- 1 Sanitary Overseer.
- 1 Clerk.
- 16 Native Staff.

There have been very few alterations in the staff during the year.

Since the latter half of the year no member of the staff of the Health Department has been seconded from Government.

Owing to the Chief Sanitary Inspector, who was seconded from Government, not being re-seconded after taking his overseas leave, the post of Chief Sanitary Inspector is at present vacant. The duties are being undertaken by one of the District Inspectors, thus reducing the number of District Inspectors to three, which is one under the establishment.

In the Annual Report of last year, it was mentioned that the Council had decided to make the appointment of Sanitary Inspector more attractive, in order to induce suitable candidates to apply for the position, however, the slight improvements did not receive the sanction of Government.

As the Government was considering the reduction in number of their Sanitary Inspectors, the Council in July, invited applications for two Inspectors under the former conditions, and was fortunate enough to fill one of the positions from the ranks of the Government inspectors.



Thus the Department is still understaffed to the extent of, at least, one inspector and the routine work, which has increased during the year, and as far as can be ascertained, will continue to increase, taxes the capacity of the inspectors to such a degree that important non-routine work unavoidably has to be put on one side.

The details of the personnel of the staff employed during the year is given under:—

#### MEDICAL OFFICER OF HEALTH.

Dr. H. W. Tilling carried out the duties throughout the year.

#### CHIEF SANITARY INSPECTOR.

Mr. A. Bunker, seconded from Government, performed these duties until taking his overseas leave at the beginning of June. He was not re-seconded on his return from leave.

This post is now vacant, but the duties have been carried out from June to the end of the year by Mr. R. C. Forster.

#### INSPECTOR OF FOOD AND DRUGS.

Mr. A. A. Watts performed these duties throughout the year. This position is becoming more onerous owing to the increase in the Slaughter House work and the administration of the Milk and Dairy Regulations.

Sunday duty at the Slaughter house is undertaken by the inspectors by roster.

#### SANITARY INSPECTORS.

Mr. R. C. Forster during the latter half of the year has undertaken the duties of Chief Sanitary Inspector.

Mr. R. A. Mackintosh and Mr. F. G. Ward have carried out their duties throughout the year.

Mr. D. Mackintosh (late Government service) appointed by the Council on September 15th, assumed his duties from that date and continued during the year.

#### SANITARY OVERSEER.

Mr. T. Bagnall has been employed throughout the year on anti-malarial and other work.

#### CLERK.

Miss B. Howarth has been employed throughout the year.

#### NATIVE STAFF.

Sixteen boys have been employed continually throughout the year. One to assist in Food Inspection, one Motor Driver, one Notice server, three Office boys and Messengers, four as Disinfection and Anti-malarial gang, and six as Rat gang.

Ten extra boys augmented the rat gang during January and February on account of anti-plague work.



## PERSONNEL OF HEALTH DEPARTMENT DURING 1931.

		From.	To.
MEDICAL OFFICER OF HEALTH.	Dr. H. W. Tilling.	1/1/31	31/12/31
CHIEF SANITARY INSPECTOR.	*Mr. A. Bunker.	1/1/31	31/ 5/31
INSPECTOR OF MEAT AND FOOD.	Mr. A. A. Watts.	1/1/31	31/12/31
SANITARY INSPECTORS.	Mr. R. C. Forster	1/1/31	31/12/31
	Mr. R. A. Mackintosh.	1/1/31	31/12/31
	Mr. F. G. Ward	1/1/31	31/12/31
	Mr. D. Mackintosh.	15/9/31	31/12/31
SANITARY OVERSEER.	Mr. T. Bagnall.	1/1/31	31/12/31
CLERK.	Miss B. Howarth.	1/1/31	31/12/31

\* Seconded from Government.

NATIVE STAFF.	Average.
Food and Drugs Inspection ...	1
Motor Driver ...	1
Disinfection and Anti-malarial gang.	4
Rat gang ... ..	6
Notice Server ... ..	1
Office Boys and Messengers ...	3
Total ...	<u>16</u>

**EXPENDITURE.**

The cost of the Public Health Department for the year 1931 amounted to £5,978, of which the Government, by grants made on account of public health, contributed £3,736, leaving £2,242 to be borne by the Council.

Comparison with previous years is shown under:

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

It will be noted that there has been a continued decrease in the amount expended since the Council became the Health Authority although the amount of work performed, as shown by the Annual Reports, has increased.

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 disease. In



addition, there is a diminishing grant paid by the Government in regard to the balance of all monies expended by the Council on behalf of its Public Health Services.

During 1930, this diminishing grant equalled three quarters. During 1931 it was one quarter. In 1932, it will cease.

Details of expenditure by the Public Health Department are given under:

### EXPENDITURE.

ADMINISTRATION.						£	£
Salaries: M.O.H. and Sanitary Inspectors.	...	...	...	...	...	3,703	
Office Clerk	...	...	...	...	...	240	
Boys' Wages, etc.	...	...	...	...	...	87	
Travelling Allowances	...	...	...	...	...	302	
Passages	...	...	...	...	...	—	
Rent and Telephone	...	...	...	...	...	258	
Printing, Stationery, etc.	...	...	...	...	...	59	
Miscellaneous	...	...	...	...	...	4	4,653
						<hr/>	
INFECTIOUS DISEASES PREVENTION.							
Notification Fees	...	...	...	...	...	32	
Hospital Fees	...	...	...	...	...	409	
Overseer's salary	...	...	...	...	...	350	
Boys' Wages, etc.	...	...	...	...	...	286	
Oil and Stores	...	...	...	...	...	88	
Upkeep of Lorry	...	...	...	...	...	98	1,263
						<hr/>	
FOOD AND DRUG INSPECTION.							
Food Analysis	...	...	...	...	...	...	62
						<hr/>	
Total	...	...	...	...	...	5,978	
Less Government Grants	...	...	...	...	...	3,736	
						<hr/>	
Cost borne by the Council.						2,242	
						<hr/>	

### METEOROLOGICAL.

#### GEOGRAPHICAL POSITION :—

Latitude 1° 16' 43" South.

Longitude 36° 50' East.

#### HEIGHT ABOVE SEA LEVEL :—

From 5,700 to 5,452 feet.

## METEOROLOGICAL.

Month.	Barometer corrected to 32 F. at station level.	DRY BULB.			WET BULB.			SHADE TEMPERATURE.			
		Mean.	Ext. Max.	Ext. Min.	Mean.	Ext. Max.	Ext. Min.	Mean Max.	Mean Min.	Ext. Max.	Ext. Min.
January	24.241	73.5	74	70	62.0	63	61	79	54	82	56
February	24.232	72.2	84	62	62.7	67	53	80	57	86	51
March	24.262	71.5	82	62	64.2	67	60	78	58	83	52
April	24.250	69.7	84	62	63.6	68	60	76	58	80	53
May	24.268	67.3	77	59	61.5	66	58	73	57	76	51
June	24.315	65.9	78	55	58.5	62	53	72	52	78	46
July	24.283	66.3	78	58	58.3	61	54	74	53	79	48
August	24.297	63.8	75	56	56.9	61	53	73	52	79	45
September	24.262	67.3	78	56	58.5	65	51	76	54	83	48
October	24.274	69.8	81	58	59.2	64	55	78	56	83	52
November	24.235	67.8	80	56	60.8	64	56	75	57	82	54
December	24.247	67.7	76	60	59.9	64	51	74	54	77	47
Mean.	24.264	68.5	84	55	60.5	68	51	75	55	86	45

## RAINFALL.

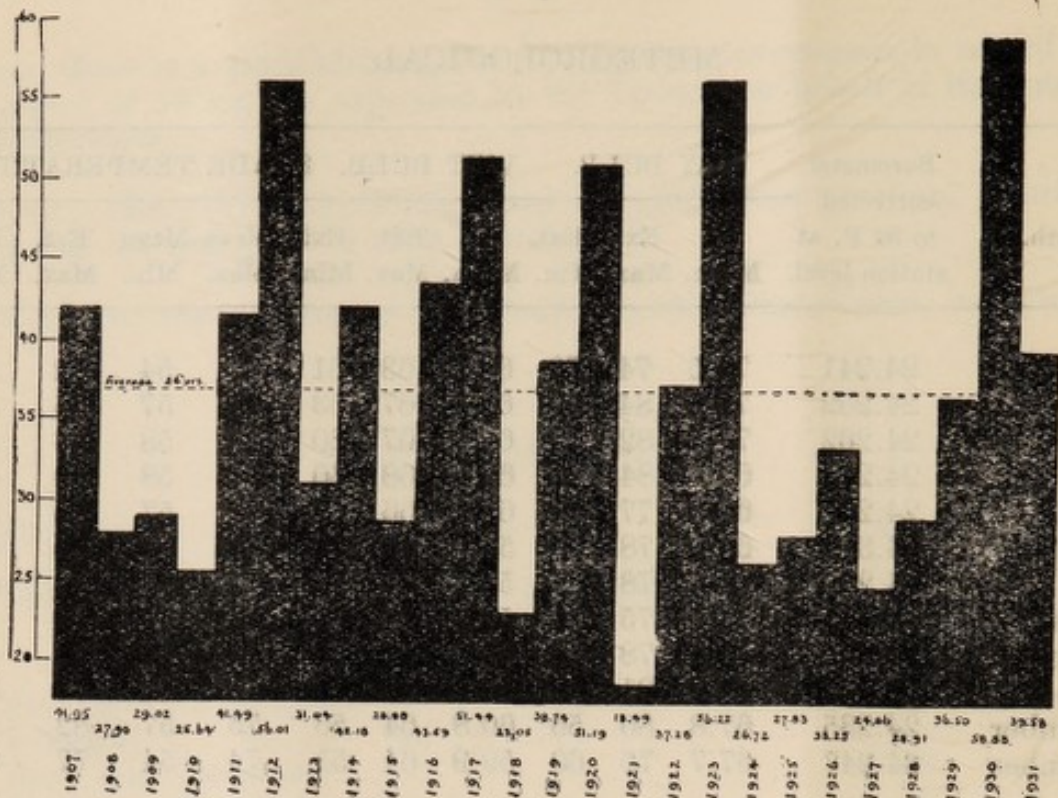
Month.	RAINFALL.		DAYS OF RAIN.	
	Total.	Average 24 years.	Number.	Average 24 years.
January.	... 1.21	1.63	2	4.9
February	... 1.95	2.16	6	5.0
March	... 6.38	4.66	13	10.4
April	... 10.54	8.70	18	18.2
May	... 3.00	5.48	16	15.2
June	... 1.16	1.52	6	7.9
July	... 0.70	0.65	6	5.0
August	... 0.83	1.02	6	6.1
September	... 3.88	1.16	12	6.1
October	... 1.80	2.10	7	7.6
November	... 5.82	4.92	17	14.5
December	... 2.31	2.60	12	10.6
Total	... 39.58	36.72	121	111.5

Barometer readings from Kabete Station, 5873 feet.

Humidity and Temperature figures from Government Laboratories.

Rainfall figures from Hill Station.





## VITAL STATISTICS.

### POPULATION.

A census was taken on March 6th, 1931.

The following figures apply to the Municipality of Nairobi:—

			Males.	Females.	Total.
Europeans	...	...	2,748	2,447	5,195
Indians	...	...	9,156	4,402	13,558
Goans	...	...	1,292	524	1,816
Arabs	...	...	119	63	182
Natives	...	...	22,979	3,782	26,761
* Coloured Races	...	...	161	172	333
† Others	...	...	22	13	35
Half Castes	...	...	19	20	39
All Races	...	...	36,496	11,423	47,919

\* Include Seychellois, Mauritians, etc.

† Include Cingalese, Afghans, Chinese, Japanese, Somalis, etc.

These figures are preliminary and may need minor adjustments.

### MARRIAGES.

The following marriages were celebrated in Nairobi during 1931:—

Europeans	...	...	...	96
Asiatic	...	...	...	9
Others	...	...	...	2

## BIRTHS.

The following births were registered during the year:—

			Male.	Female.	Total.
British	...	...	72	77	149
South African	...	...	1	—	1
French	...	...	3	4	7
Dutch	...	...	3	—	3
Swedish	...	...	—	1	1
Italian	...	...	—	1	1
Danish	...	...	1	—	1
Polish	...	...	1	—	1
Seychellois	...	...	5	4	9
Indian	...	...	74	30	104
Goan	...	...	21	15	36
Cingalese	...	...	1	1	2
Syrian	...	...	1	3	4
All Races	...	...	183	136	319

Only British births are notifiable compulsorily.

## DEATHS.

The year 1931 may be considered a healthy one, the death rate for all races showing a decrease of 2.42 compared with the previous year.

The total number of deaths reported in Nairobi during the year was 773, equivalent to a crude death rate for all races of 16.21 per thousand population.

The number of deaths from all causes among persons stated to be normally resident in Nairobi was 657, equivalent to a recorded death rate for all races of 13.78 per thousand population. Of the 657 deaths among residents, 25 occurred among Europeans, equivalent to a rate of 4.78 per thousand.

225 occurred among Asiatics, equivalent to a rate of 14.31 per thousand.

407 occurred among Natives, equivalent to a rate of 15.23 per thousand.

Of the 657 deaths, 450 were of males and 207 of females.

## DEATHS BY RACE AND SEX.

		White.	Indian.	Goan.	Native.	Somali.	Seychel- lois.	Abyssinian.	Arab.	Syrian.	Sudanese.	Chinese.	Total.
Resident.	M	17	114	11	289	12	1	3	1	—	1	1	450
	F.	8	91	8	93	4	—	1	1	1	—	—	207
Total.	...	25	205	19	382	16	1	4	2	1	1	1	657
Non-Resident	M.	9	8	1	68	1	—	—	—	—	—	—	87
	F.	5	—	—	23	—	1	—	—	—	—	—	29
Total.	...	14	8	1	91	1	1	—	—	—	—	—	116
Total.	...	39	213	20	473	17	2	4	2	1	1	1	773



## COMPARATIVE DEATH RATES FOR 5 YEARS.

Year.		Crude Rate.	Recorded Rate.
1927	...	21.66	18.90
1928	...	25.11	17.94
1929	...	17.91	13.77
1930	...	20.79	16.20
1931	...	16.21	13.78

## COMPARISON OF DEATH RATES FOR RACES FOR 10 YEARS.

Race.	* 1922.	* 1923.	* 1924.	* 1925.	1926.	1927.	1928.	1929.	1930.	1931.
European	12.4	8.4	18.4	10.3	13.5	13.8	12.8	8.4	11.8	4.7
Asiatic	15.6	16.5	16.0	16.1	30.3	29.2	23.3	17.0	20.7	14.3
Native	27.9	33.5	29.9	18.3	17.3	16.5	16.1	13.4	15.2	15.2
All Races	21.0	23.3	22.9	16.6	20.5	18.9	17.9	13.7	16.2	13.7

\* Crude Rates.

## AVERAGES OF DEATH RATES.

Race.		10 years Average 1922-1931.	5 years Average 1922-1926.	5 years Average 1927-1931.
European	...	11.4	12.6	10.3
Asiatic	...	19.9	18.9	20.9
Native	...	20.3	25.3	15.2
All Races	...	18.5	21.0	16.1

It will be noted that whilst the ten yearly average of the European Death Rates is not unduly high, it is perhaps higher than it should be taking into consideration the big proportion of selected lives and favourable age group concerned, although it should be remarked that the last quinquennial average indicates an 18% reduction.

The ten yearly averages of the Rates for the Asiatic and Native populations are practically the same, but whereas the last quinquennial average for the Natives shows a considerable decrease the similar average for the Asiatics indicates an appreciable rise.



## CAUSES OF DEATH BY GROUP AND RACE.

		White.	Indian.	Goan.	Native.	Somali.	Other.	Total.
1. General Diseases	1—42	5	8	1	110	3	4	151
2. General Diseases not Included Above	43—69	4	11	—	11	1	1	28
3. Diseases of Nervous System, etc.	70—86	1	7	—	10	—	—	18
4. Diseases of Circulatory System	87—96	—	7	1	12	—	—	20
5. Diseases of Respiratory System	97—107	4	71	5	154	9	5	248
6. Diseases of Digestive System	108—127	1	10	1	16	1	—	29
7. Diseases Non-Venereal, etc.	128—142	1	7	—	7	—	—	15
8. Puerperal State	143—150	1	9	1	7	1	—	19
9. Diseases of the Skin, etc.	151—154	—	—	1	—	—	—	1
10. Diseases of Bones, etc.	155—158	—	—	—	2	—	—	2
11. Congenital Malformation	159	1	1	—	—	—	—	2
12. Early Infancy	160—163	2	38	4	15	—	—	59
13. Old Age	164	1	—	—	3	—	—	4
14. External Causes	165—203	3	7	4	18	1	—	33
15. Ill-Defined	204—205	1	9	1	17	—	—	28
Total	...	25	205	19	382	16	10	657

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

	No.	% of Total.	Rate/1000.
5. Diseases of Respiratory System	248	37.75	5.203
1. General Diseases	151	22.98	3.167
12. Early Infancy	59	8.98	1.237
14. External Causes	33	5.02	0.692
6. Diseases of Digestive System	29	4.42	0.608
15. Ill-Defined	28	4.26	0.587
2. General Diseases not Included Above	28	4.26	0.587
4. Diseases of Circulatory System	20	3.05	0.419
8. Puerperal State	19	2.89	0.398
3. Diseases of Nervous System	18	2.74	0.377
7. Diseases Non-Venereal, etc.	15	2.28	0.314
13. Old Age	4	0.61	0.083
10. Diseases of Bones, etc.	2	0.30	0.041
11. Congenital Malformations	2	0.30	0.041
9. Diseases of the Skin	1	0.15	0.020
	657	100.00	

Diseases of the Respiratory System is by far the largest group of the series and accounts for over one third of the total deaths, the chief diseases and the number of deaths under that group being:—

Pneumonia	...	180
Broncho-pneumonia	...	58
Bronchitis	...	5
Pleurisy	...	3

General diseases accounted for 27% of the total deaths.

The principal diseases and deaths were:—

Plague	...	37	Syphilis	...	...	7
Tuberculosis	...	32	Rickets	...	...	7
Septicaemia	...	20	Anaemia	...	...	7
Malaria	...	16	Cerebro-spinal Meningitis	...	...	6
Enteric Fever	...	12	Ruptured Spleen	...	...	4
Dysentery	...	11				

Diseases of Early Infancy were responsible for nearly 9% of the total deaths, these include:

Congenital Debility	...	...	...	31
Premature Birth	...	...	...	15
Other diseases	...	...	...	13

The next group in size is that of External Causes which accounted for 33 deaths.

Accidental Injuries and Fractures	...	...	12
Judicial Hanging	...	...	7
Conflagrations and Electricity	...	...	6
Homicide	...	...	3
Suicide	...	...	2

In Group VI the total was 29 of which 20 were of Infant Diarrhoea and Enteritis.

Group IV accounted for 20 deaths of which 16 came under the heading of Heart Disease.

Group VIII totalled 19 deaths of which Accidents of Child-birth accounted for 8, Puerperal Sepsis 4 and Eclampsia 3.

The 18 deaths under Group III include Cerebral haemorrhage 5, Insanity 4 and Infantile convulsions 3.

Under the heading of Group VII there were 10 cases of Nephritis.



## CAUSES OF DEATH.

(Numbers not included indicate no deaths from that disease).

International Causes of Death.				White.	Indian.	Goan.	Native.	Somali.	Other.	Total.	Other includes.
<b>I. GENERAL DISEASES.</b>											
1.	Enteric Fever Group	...	...	1	3	—	8	—	—	12	
3.	Relapsing Fever	...	...	—	—	—	1	—	—	1	
4.	Malta Fever	...	...	—	—	—	1	—	—	1	
5.	Malaria	...	...	1	7	—	6	1	1	16	1 Chinese.
7.	Measles	...	...	—	—	—	1	—	—	1	
11.	Influenza	...	...	—	1	—	—	—	1	2	1 Abyssinian.
16.	Dysentery	...	...	—	2	—	8	1	—	11	
17.	Plague	...	...	—	10	—	27	—	—	37	
23.	Encephalitis Lethargica	...	...	1	—	—	—	—	—	1	
24.	Cerebro-Spinal Meningitis	...	...	—	—	—	5	—	1	6	1 Arab.
25.	Blackwater Fever	...	...	—	—	1	—	—	—	1	
27.	Anthrax	...	...	—	—	—	2	—	—	2	
29.	Tetanus	...	...	—	—	—	1	—	—	1	
31.	Tuberculosis, Pulmonary	...	...	2	4	—	14	1	1	22	1 Abyssinian.
32.	Tuberculosis, Nervous System	...	...	—	—	—	2	—	—	2	
37.	Tuberculosis Disseminated	...	...	—	—	—	8	—	—	8	
38.	Syphilis	...	...	—	1	—	6	—	—	7	
41.	Septicaemia	...	...	—	—	—	20	—	—	20	
<b>II. GENERAL DISEASES NOT INCLUDED ABOVE.</b>											
43.	Cancer of Buccal Cavity	...	...	—	—	—	1	—	—	1	
44.	Cancer of Liver, Stomach, etc.	...	...	1	—	—	—	—	1	2	1 Syrian.
45.	Cancer of Intestines, etc.	...	...	—	1	—	—	—	—	1	
49.	Cancer of Other Organs	...	...	—	—	—	2	—	—	2	
52.	Rheumatism	...	...	—	1	—	—	—	—	1	
56.	Rickets	...	...	—	6	—	—	1	—	7	
57.	Diabetes	...	...	1	1	—	—	—	—	2	
58.	Anaemia	...	...	2	1	—	4	—	—	7	
64.	Rupture of Spleen	...	...	—	—	—	4	—	—	4	
65.	Leukaemia	...	...	—	1	—	—	—	—	1	
<b>III. DISEASES OF NERVOUS SYSTEM.</b>											
71.	Menengitis	...	...	—	—	—	1	—	—	1	
74.	Cerebral Haemorrhage	...	...	1	2	—	2	—	—	5	
75.	Paralysis	...	...	—	2	—	—	—	—	2	
77.	Insanity	...	...	—	—	—	4	—	—	4	
78.	Epilepsy	...	...	—	1	—	—	—	—	1	
79.	Convulsions	...	...	—	1	—	2	—	—	3	
80.	Infantile Convulsions	...	...	—	1	—	—	—	—	1	
86.	Diseases of the Ear	...	...	—	—	—	1	—	—	1	
<b>IV. DISEASES OF CIRCULATORY SYSTEM.</b>											
90.	Diseases of the Heart	...	...	—	6	1	9	—	—	16	
91.	Diseases of the Arteries	...	...	—	—	—	2	—	—	2	
92.	Embolism and Thrombosis	...	...	—	1	—	—	—	—	1	
95.	Haemorrhage	...	...	—	—	—	1	—	—	1	
<b>V. DISEASES OF THE RESPIRATORY SYSTEM.</b>											
99.	Bronchitis	...	...	—	4	—	1	—	—	5	
100.	Broncho-Pneumonia	...	...	—	24	3	30	—	1	58	1 Arab.
101.	Pneumonia	...	...	4	42	2	119	9	4	180	1 Sudan., 1 Seych. 2 Abyss.
102.	Pleurisy	...	...	—	1	—	2	—	—	3	
104.	Gangrene of Lung	...	...	—	—	—	1	—	—	1	
107.	Other Respiratory Diseases	...	...	—	—	—	1	—	—	1	

## CAUSES OF DEATH—(Cont.).

International Causes of Death.				White.	Indian.	Goan.	Native.	Somali.	Other.	Total.	Other Includes.
VI. DISEASES OF DIGESTIVE SYSTEM.											
111.	Ulcer of Duodenum	...	...	1	—	—	—	—	—	1	
113.	Diarrhoea and Enteritis	...	...	—	8	1	12	—	—	21	
117.	Appendicitis	...	...	—	—	—	1	—	—	1	
118.	Hernia, Intestinal Obstruction	...	...	—	2	—	2	1	—	5	
126.	Peritonitis	...	...	—	—	—	1	—	—	1	
VII. NON-VEREAL DISEASES OF GENITO-URINARY SYSTEM.											
128.	Acute Nephritis	...	...	—	4	—	2	—	—	6	
129.	Chronic Nephritis	...	...	1	1	—	2	—	—	4	
131.	Pyelonephritis	...	...	—	—	—	1	—	—	1	
133.	Cystitis	...	...	—	1	—	—	—	—	1	
134.	Vesico-Vaginal Fistula	...	...	—	—	—	2	—	—	2	
138.	Salpingitis	...	...	—	1	—	—	—	—	1	
VIII. THE PUERPERAL STATE.											
143.	Accidents of Pregnancy	...	...	1	1	—	—	—	—	2	
144.	Puerperal Haemorrhage	...	...	—	1	—	—	1	—	2	
145.	Other Accidents of Childbirth	...	...	—	1	1	6	—	—	8	
146.	Puerperal Sepsis	...	...	—	3	—	1	—	—	4	
148.	Eclampsia	...	...	—	3	—	—	—	—	3	
IX. DISEASES OF THE SKIN.											
154.	Dermatitis	...	...	—	—	1	—	—	—	1	
X. DISEASES OF THE BONES.											
155.	Osteomyelitis	...	...	—	—	—	2	—	—	2	
XI. CONGENITAL MALFORMATIONS.											
159.	Congenital Malformations	...	...	1	1	—	—	—	—	2	
XII. DISEASES OF EARLY INFANCY.											
160.	Congenital Debility	...	...	1	22	—	8	—	—	31	
161.	Premature Birth	...	...	—	7	3	5	—	—	15	
162.	Other Diseases Peculiar to Early Infancy	...	...	1	9	1	2	—	—	13	
XIII. OLD AGE.											
164.	Old Age	...	...	1	—	—	3	—	—	4	
XIV. EXTERNAL CAUSES.											
165.	Suicide by Liquid Poison	...	...	1	—	—	—	—	—	1	
168.	Suicide by Hanging	...	...	—	—	—	1	—	—	1	
178.	Conflagration	...	...	—	1	—	2	1	—	4	
179.	Accidental Burns	...	...	—	—	—	1	—	—	1	
182.	Accidental Drowning	...	...	—	—	—	1	—	—	1	
185.	Accidental Injury by Fall	...	...	1	—	—	—	—	—	1	
188.	Accidental Injury by Crushing	...	...	1	1	1	2	—	—	5	
196.	Electricity	...	...	—	—	—	2	—	—	2	
199.	Homicide	...	...	—	—	3	—	—	—	3	
201.	Fracture	...	...	—	5	—	2	—	—	7	
202.	Execution	...	...	—	—	—	7	—	—	7	
XV. ILL-DEFINED DISEASES.											
205.	Cause of Death Unstated or Ill-Defined	...	...	1	9	1	17	—	—	28	
				25	205	19	382	16	10	657	



### INFANT MORTALITY.

The total number of deaths in Infants under one year of age during 1931 was 194 or 29.52% of the total deaths.

As only European births are notifiable compulsorily and there is no means of ascertaining the number of births of other races, it is impossible to compile any Infant Mortality Rate or Birth Rate.

This state of affairs is unfortunate as it is not possible to determine whether progress has been made in this direction or not.

The only rate that can be given with any degree of accuracy is the percentage of infant deaths to the total deaths and as the statistics for previous years have been compiled under similar conditions, a relative comparison can be made.

#### INFANT DEATHS.

Race.	No. of Deaths.		Percentage of total.
	Infants.	Total.	
European	3	25	12.0
Asiatic	107	226	44.6
Native	84	406	20.6
All Races	194	657	29.52

#### INFANT DEATHS FOR 5 YEARS.

Race.	Percentage of total deaths.					Average 5 years.
	1927.	1928.	1929.	1930.	1931.	
White	13.5	8.3	23.7	13.2	12.0	14.1
Asiatic	37.7	34.5	44.9	42.7	44.6	40.8
Native	5.8	13.1	15.4	10.6	20.6	13.1
All Races	18.6	20.6	24.3	20.6	29.5	22.7

Attention is directed to the high mortality among Asiatic infants. The average over 5 years of 40.8% of the total Asiatic deaths should be a clear indication to the Indian communities that this subject is not receiving the attention that it warrants.

## CAUSES OF DEATH IN INFANTS UNDER ONE YEAR OF AGE.

Cause of Death.					White.	Indian.	Goan.	Native.	Other.	Total.	Other includes.	
5.	Malaria,	...	...	...	—	3	—	2	1	6	1 Chinese.	
24.	Cerebro-spinal Meningitis	...	...	...	—	—	—	—	1	1	1 Arab.	
37.	Tuberculosis Disseminated	...	...	...	—	—	—	1	—	1		
38.	Syphilis	...	...	...	—	1	—	4	—	5		
41.	Septicaemia	...	...	...	—	—	—	1	—	1		
56.	Rickets	...	...	...	—	5	—	—	1	6	1 Somali.	
58.	Anaemia	...	...	...	—	—	—	1	—	1		
80.	Infantile Convulsions	...	...	...	—	—	—	2	—	2		
86.	Diseases of the Ear	...	...	...	—	1	—	—	—	1		
99.	Bronchitis	...	...	...	—	2	—	1	—	3		
100.	Broncho-Pneumonia	...	...	...	—	19	2	21	—	42		
101.	Pneumonia	...	...	...	—	14	2	18	2	36	1 Som.	1 Abyss.
113.	Diarrhoea and Enteritis	...	...	...	—	8	1	8	—	17		
118.	Hernia, Intestinal Obstruction	...	...	...	—	2	—	—	—	2		
154.	Dermatitis	...	...	...	—	—	1	—	—	1		
159.	Congenital Malformations	...	...	...	1	1	—	—	—	2		
160.	Congenital Debility	...	...	...	1	22	—	8	—	31		
161.	Premature Birth	...	...	...	—	7	3	5	—	15		
162.	Other Diseases Peculiar to Early Infancy	...	...	...	1	8	1	2	—	12		
179.	Accidental Burns	...	...	...	—	—	—	1	—	1		
205.	Cause of Death Unstated or Ill-Defined	...	...	...	—	2	1	5	—	8		
					3	95	11	80	5	194		

Four principal causes of Infant Mortality, comparison of percentage to total infant deaths for 5 years.

Percentage of Infant Deaths.								Average
			1927.	1928.	1929.	1930.	1931.	5 years.
Pneumonia	...	...	47.9	32.6	32.0	44.6	41.75	39.7
Prematurity	...	...	6.5	11.3	13.2	15.0	7.73	9.3
Congenital Debility	...	...	15.4	10.6	11.9	10.0	15.97	12.7
Diarrhoea and Enteritis	...	...	6.5	7.8	9.4	6.9	8.76	7.8

It will be noted that once again Pneumonia accounted for more than the 5 yearly average of infant deaths from that cause. Congenital Debility and Diarrhoea also caused a greater percentage of deaths than the average.

## NOTIFIABLE INFECTIOUS DISEASES.

No alteration to the list of Notifiable Infectious Diseases has been made since Malaria was made notifiable in February 1930.

The total number of cases notified during the year was 596.

Excluding the 419 cases of Malaria, the total was 177 which compares very favourably with the totals for 1927, 1928, 1929, 1930 which were 466, 368, 124, 249 respectively.

The number of cases of Malaria reported was only 53% of that of the previous year.

The plague epidemic of 1930 was continued into the first two months of the year.

Two cases of Blackwater Fever were reported compared with five for 1930.



There was an increase in the number of Typhus cases from six to eleven.

One case of Malta Fever was notified, the last case of that disease being reported in 1927.

Two cases of Acute Anterior Poliomyelitis and one case of Encephalitis lethargica were reported. This is apparently the first time these diseases have made their appearance in Nairobi.

The individual diseases are discussed in the next Section.

CASES OF INFECTIOUS DISEASES NOTIFIED UNDER SECTION 18,  
PUBLIC HEALTH ORDINANCE.

Disease.	White.	Asiatic.	Native.	Total.
Malaria	69	170	180	419
Plague	—	13	38	51
Tuberculosis Pulmonary	5	16	15	36
Tuberculosis Other	—	—	18	18
Enteric Fever Group	2	10	11	23
Typhus	10	—	1	11
Anthrax	—	—	7	7
Cerebro-Spinal Meningitis	—	—	7	7
Puerperal Sepsis	1	4	1	6
Leprosy	—	—	4	4
Relapsing Fever	—	—	3	3
Ophthalmia Neonatorum	—	1	1	2
Blackwater Fever	—	1	1	2
Diphtheria	—	2	—	2
Anterior Poliomyelitis	—	2	—	2
Scarlet Fever	1	—	—	1
Malta Fever	—	—	1	1
Encephalitis Lethargica	1	—	—	1
	89	219	288	596

SEASONAL INCIDENCE OF INFECTIOUS DISEASES NOTIFIED.

Disease.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Malaria	18	21	17	34	27	50	45	48	66	42	29	22	419
Plague	33	6	—	—	1	—	1	8	—	—	2	—	51
Tuberculosis Pulmonary	3	2	1	5	—	4	5	2	4	5	4	1	36
Tuberculosis Other	—	2	1	2	2	4	4	2	2	1	1	1	18
Enteric Fever Group	3	—	1	1	3	3	1	1	6	—	1	3	23
Typhus	3	—	2	1	—	1	1	1	2	—	—	—	11
Anthrax	—	1	3	1	—	1	—	1	—	—	—	—	7
Cerebro-Spinal Meningitis	—	—	1	—	1	1	1	2	—	1	—	—	7
Puerperal Sepsis	—	1	—	1	—	—	—	—	1	—	2	1	6
Leprosy	—	—	—	1	1	—	—	—	1	1	—	—	4
Relapsing Fever	1	—	—	—	—	1	—	—	—	1	—	—	3
Ophthalmia Neonatorum	—	1	—	—	—	—	—	—	—	—	—	1	2
Blackwater Fever	—	—	—	—	1	—	—	—	—	1	—	—	2
Diphtheria	—	—	—	—	—	—	1	—	—	—	1	—	2
Anterior Poliomyelitis	—	—	—	—	—	—	1	1	—	—	—	—	2
Scarlet Fever	—	—	—	—	—	1	—	—	—	—	—	—	1
Malta Fever	—	—	—	—	—	—	—	1	—	—	—	—	1
Encephalitis Lethargica	—	—	—	—	—	—	—	—	—	1	—	—	1
Total	61	34	26	46	36	66	60	65	82	53	39	28	596



## COMPARISON OF NOTIFICATIONS OF INFECTIOUS DISEASES FOR 9 YEARS.

1923. 1924. 1925. 1926. 1927. 1928. 1929. 1930. 1931.														
Malaria	...	...	...	...	...	(Notifiable February 1930)						789	419	
Plague	...	...	...	...	...	—	23	8	43	70	26	—	112	51
Tuberculosis	...	...	...	...	...	23	19	44	47	44	61	48	50	54
Enteric Fever Group	...	...	...	...	...	15	12	15	28	29	128	27	26	23
Typhus Fever	...	...	...	...	...	3	6	7	2	3	2	4	6	11
Anthrax	...	...	...	...	...	29	6	5	3	5	8	3	5	7
Cerebro-Spinal Meningitis	...	...	...	...	...	18	9	8	7	16	18	6	19	7
Puerperal Sepsis	...	...	...	...	...	1	4	—	—	3	8	16	10	6
Leprosy	...	...	...	...	...	4	4	9	14	6	5	1	4	4
Relapsing Fever	...	...	...	...	...	2	20	46	27	9	4	9	3	3
Ophthalmia Neonatorum	...	...	...	...	...	—	—	—	—	—	—	1	1	2
Blackwater Fever	...	...	...	...	...	(Notifiable Nov. 1928)						—	5	2
Diphtheria	...	...	...	...	...	—	6	1	5	4	7	4	4	2
Scarlet Fever	...	...	...	...	...	—	—	—	—	—	1	—	1	1
Malta Fever	...	...	...	...	...	3	5	3	3	5	—	—	—	1
Beri-Beri	...	...	...	...	...	—	—	2	—	—	1	—	—	—
Erysipelas	...	...	...	...	...	—	3	—	1	—	—	2	2	—
Smallpox	...	...	...	...	...	1	—	1	1	6	3	—	—	—
Trypanosomiasis	...	...	...	...	...	—	—	—	1	—	1	2	1	—
Acute Anterior Poliomyelitis	...	...	...	...	...	—	—	—	—	—	—	—	—	2
Encephalitis Lethargica	...	...	...	...	...	—	—	—	—	—	—	—	—	1
Glanders	...	...	...	...	...	—	—	—	—	—	—	—	—	—
Rabies	...	...	...	...	...	—	—	—	—	—	—	—	—	—
Cholera	...	...	...	...	...	—	—	—	—	—	—	—	—	—

## INFECTIOUS &amp; COMMUNICABLE DISEASES.

## ACUTE ANTERIOR POLIOMYELITIS.

Two cases of this disease occurred, both among Asiatic children, one in July and one in August. Neither case was fatal. Ordinary precautions were taken and the condition did not become epidemic. Apparently this is the first time that this disease has been reported in Nairobi.

## ANTHRAX.

Seven cases, all Natives, were reported with two deaths

The infection in all the cases was traced to the handling and consumption of infected meat.

The number of cases during 1928, 1929 and 1930 was 8, 3, and 5 respectively.

## BLACKWATER FEVER.

Two cases only were notified, one Asiatic in May and one Native in October. One case was fatal.

During 1928, 1929 and 1930, there were 4, 0 and 5 cases notified.

## CEREBRO-SPINAL MENINGITIS.

This disease did not assume epidemic proportions during the year.

There were seven cases, 6 among Natives with 5 deaths and one fatal case in an Arab.

The cases were spread evenly over the middle months of the year.

18, 6 and 19 cases were reported in 1928, 1929 and 1930 respectively.

## CHOLERA.

There were no cases of this condition and there are no records to show that this disease has occurred in Nairobi.



**DYSENTERY.**

Eleven deaths were recorded, including 2 Asiatics, 8 Natives, and 1 Somali. These did not occur in epidemic form but evenly throughout the year.

One death in January, April, June, October and November and two deaths in March, July and August.

**ENCEPHALITIS LETHARGICA.**

One case was reported in a European child. It had a fatal termination. The child who had come from England became ill whilst on board ship and the symptoms developed shortly after arrival. No case of this disease has previously been reported in Nairobi.

**GLANDERS RABIES.**

No cases of these conditions have yet been reported from Nairobi.

**BERI-BERI.**

No case was notified during the year.

Two cases occurred in 1925 and one in 1928.

**SMALLPOX.**

No case was reported during 1931. The last case occurred in 1928.

**MALTA FEVER.**

One fatal case in a Native was notified in August.

The last case occurred during 1927.

**DIPHTHERIA.**

Two cases, both among Asiatic children were reported, one in July and one in November. Neither case was fatal.

This disease has appeared in a minor degree for the past eight years, during which period there have been 33 cases spread fairly evenly over that time.

There has been no epidemic and there is no indication of the numbers increasing.

**ENTERIC FEVER GROUP.**

23 cases were notified during the year, 2 White, 10 Asiatics, and 11 Natives. There were 12 deaths among 1 White, 3 Asiatics and 8 Natives.

These cases did not appear in epidemic form but were spread fairly evenly over the year, 4 cases occurring during the 1st quarter. 7 during the 2nd, 8 during the 3rd, and 4 during the 4th.

**CHICKENPOX, MEASLES, WHOOPING COUGH, MUMPS.**

These conditions are not notifiable. They occurred frequently throughout the year, one fatal case was reported from Measles.

**ERYSIPELAS.**

This is not a prevalent condition. No case was notified during the year.

**LEPROSY.**

Four cases, all Natives, with one death, were reported.

The number of cases notified during 1928, 1929 and 1930 was 7, 4 and 4 respectively.

**OPHTHALMIA NEONATORUM.**

Two cases, one Asiatic and one Native were notified as suffering from this disease. Neither case was fatal.

One case was reported during 1929 and one during 1930.



**PUERPERAL SEPSIS.**

Although only 6 cases, 1 White, 4 Asiatic, and 1 Native were reported, 4 deaths were recorded, 3 Asiatic and 1 Native. The number of notifications must of necessity be regarded as too low.

8 cases were notified in 1928, 16 during 1929 and 10 during 1930.

**RELAPSING FEVER.**

Three Natives were notified as suffering from this disease, one each in January, June and October. One of the cases was fatal. The incidence of this disease appears to be rapidly diminishing, whereas during 1924, 1925 and 1926, there were 20, 46 and 27 cases respectively, during 1929, 1930 and 1931, there were 9, 3 and 3.

**SCARLET FEVER.**

One case, a European child, was notified during June, it was not fatal. The infection could not be traced. During 5 years, only 3 cases have been recorded, one each during 1928, 1930 and 1931.

**TRYPANOSOMIASIS.**

No case was reported during 1931.

During 5 years only 3 cases have been recorded, one during 1928, two in 1929 and one in 1930.

**TYPHUS FEVER.**

Eleven cases, 10 White, and 1 Seychellois, as compared with 2, 4 and 6 during 1928, 1929 and 1930, were reported during the year. There were no fatal cases.

**TUBERCULOSIS.**

A total of 54 cases were notified, 5 White, 16 Asiatics and 33 Natives. There were 32 deaths, 2 White, 4 Asiatics, 24 Natives, 1 Somali and 1 Abyssinian.

Of the total cases, 36 were pulmonary including 5 White, 16 Asiatics and 15 Natives, with 22 deaths, 2 White, 4 Asiatics, 14 Natives, 1 Somali and 1 Abyssinian.

The remaining 18 cases were "other than pulmonary," all among Natives and were classified as:

Generalised	...	...	...	4
Joints	...	...	...	6
Intestines	...	...	...	3
Meningitis	...	...	...	1
Glands	...	...	...	4

There were 10 deaths from tuberculosis "other than pulmonary."

**PLAGUE, MALARIA.**

Particulars of these diseases will be found in the following Sections.

**PNEUMONIA.**

During 1931, pneumonia was responsible for 180 deaths and broncho-pneumonia for 58, making a total of 238 or 36.1% of the total deaths in the Municipality for the year.

The percentage of deaths from pneumonia to total deaths in 1929 and 1930 were 40 and 36.3 respectively.



The death rates from pneumonia per 1,000 of all races, for the past 6 years are as under:—

1926	5.2	1929	5.5
1927	5.9	1930	5.8
1928	7.6	1931	4.9

In the Annual Report for 1930, the large and uniform death rate from pneumonia was stressed with a suggestion that an investigation into the subject with a view to lessening the mortality, would be welcome.

In that Report, a table was included showing the relation of the number of deaths from pneumonia to the deaths from certain other diseases.

In order to emphasise the matter, the table is continued under:—

#### DEATHS FROM

Year.	Pneumonia.	Smallpox
		Malaria. Plague, Tuberculosis.
1925	121	46
1926	171	36
1927	240	151
1928	292	56
1929	262	58
1930	290	164
1931	238	85
Total	1,614	596
Average	230	85

It will be noted that during the above years, pneumonia has been responsible for more than  $2\frac{1}{2}$  times the number of combined deaths from Malaria, Plague, Tuberculosis and Smallpox.

#### PLAGUE.

The plague epidemic of 1930 was continued during the first two months of 1931.

One isolated case occurred in May and another in July, in neither case could the infection be traced.

During October, there were 5 cases of the pneumonic type and 3 of the septicaemic. These cases were obviously related to a series of cases originating in the Thika District.

Two of these pneumonic type cases came directly from the outside infected area.

One case was the wife of one of the fatal cases.

Two cases were from houses visited by the fatal cases. ...

Of the 3 cases of the septicaemic type, 2 were from houses visited by the pneumonic type cases and in one case the infection was of unknown origin.

In the latter end of November, there were two bubonic cases from different localities, the source of infection in both cases was problematical.

During the whole year, there were 51 cases of plague of which 36 had a fatal termination.

38 cases with 26 deaths occurred among Natives and 13 cases with 10 deaths among Asiatics.

There were no European cases.

All the cases were confined to Native and Asiatic locations.

There was a total of 36 deaths from this disease, giving a death rate per 1,000 all races of 0.75.



The case mortality for the year was 70% which compares favourably with 78% for 1930.

The percentage of deaths from plague to the total deaths was 5.4.

The following table gives the seasonal incidence and deaths for the races together with the case mortality for the year:

Month.	Race.	Number Cases. Died.		Case Mortality.	Total Case Mortality.
January.	Indian	2	1	50%	66%
	Native	31	21	67%	
February	Indian	1	—	—	50%
	Native	5	3	60%	
March	Indian	—	—	—	
	Native	—	—	—	
April	Indian	—	—	—	
	Native	—	—	—	
May	Indian	—	—	—	100%
	Native	1	1	100%	
June	Indian	—	—	—	
	Native	—	—	—	
July	Indian	1	—	—	
	Native	—	—	—	
August	Indian	—	—	—	
	Native	—	—	—	
September	Indian	—	—	—	
	Native	—	—	—	
October	Indian	7	7	100%	100%
	Native	1	1	100%	
November	Indian	2	2	100%	100%
	Native	—	—	—	
December	Indian	—	—	—	
	Native	—	—	—	
Total	Indian	13	10	77%	
	Native	38	26	68%	
All Races.		51	36	70%	

The locations concerned, with the seasonal incidence, is given in the accompanying Table.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
River Road Area.	—	—	—	—	—	—	1	—	—	4	1	—	6
Bazaar	—	1	—	—	—	—	—	—	—	3	1	—	5
Pangani	2	1	—	—	—	—	—	—	—	1	—	—	4
Pumwani	21	3	—	—	—	—	—	—	—	—	—	—	24
Railway Landies.	—	1	—	—	—	—	—	—	—	—	—	—	1
African Housing.	2	—	—	—	—	—	—	—	—	—	—	—	2
Municipal Housing.	1	—	—	—	—	—	—	—	—	—	—	—	1
Eastleigh	5	—	—	—	1	—	—	—	—	—	—	—	6
Unknown	2	—	—	—	—	—	—	—	—	—	—	—	2
Total	33	6	—	—	1	—	1	—	—	8	2	—	51



As the Municipality has definite records of the plague cases within its boundaries, only since its formation in 1928, it is not possible to construct any tables showing the intensity of the incidence over the whole area during the earlier years, but the following table and graph give the comparative figures for five Native and Asiatic locations, namely the Bazaar, River Road Area, Pangani, Pumwani, and the Railway Landies for the past 16 years.

Year.	Bazaar.	River Road Area.	Pangani.	Pumwani.	Railway Landies.	Total.
1916	18	15	4	—	14	51
1917	3	5	11	—	2	21
1918	—	—	—	—	—	—
1919	—	—	—	—	—	—
1920	3	4	1	—	3	11
1921	2	5	9	—	7	23
1922	—	—	—	—	—	—
1923	—	15	30	6	15	66
1924	1	8	2	2	1	14
1925	3	—	—	—	—	3
1926	2	9	2	2	23	38
1927	1	2	10	25	7	45
1928	3	12	6	1	—	22
1929	—	—	—	—	—	—
1930	3	21	6	24	17	71
1931	5	6	4	24	1	40



Plague in five Nairobi locations for 16 Years.

### RATS.

Routine trapping was carried out during the year and as the same number of boys were employed, the monthly catches may be some indication of the fluctuations in the rat population.

Very few dead rats were found during the year, even during the plague periods, there being only 120, all negative.

During January, extra boys were employed grass and bush cutting in the Hill district. The total catch from this operation was 2,238.

## ROUTINE RAT TRAPPING.

Month.	Rats Destroyed.		No. Positive.
January	...	1,571	4
February	...	2,171	1
March	...	2,140	—
April	...	1,978	—
May	...	2,125	—
June	...	2,090	—
July	...	1,897	12
August	...	1,700	1
September	...	1,668	—
October	...	1,876	4
November	...	1,679	5
December	...	1,874	1
Total	...	22,769	28
Not Routine	...	2,238	1
Total	...	25,007	29

## MALARIA.

Malaria was made notifiable from February, 1930.

During 1931, 724 cases were notified, 420 being Residents and 304 Non-Residents, compared with 1,031 cases during the eleven months of 1930, comprising 789 Residents and 232 Non-Residents.

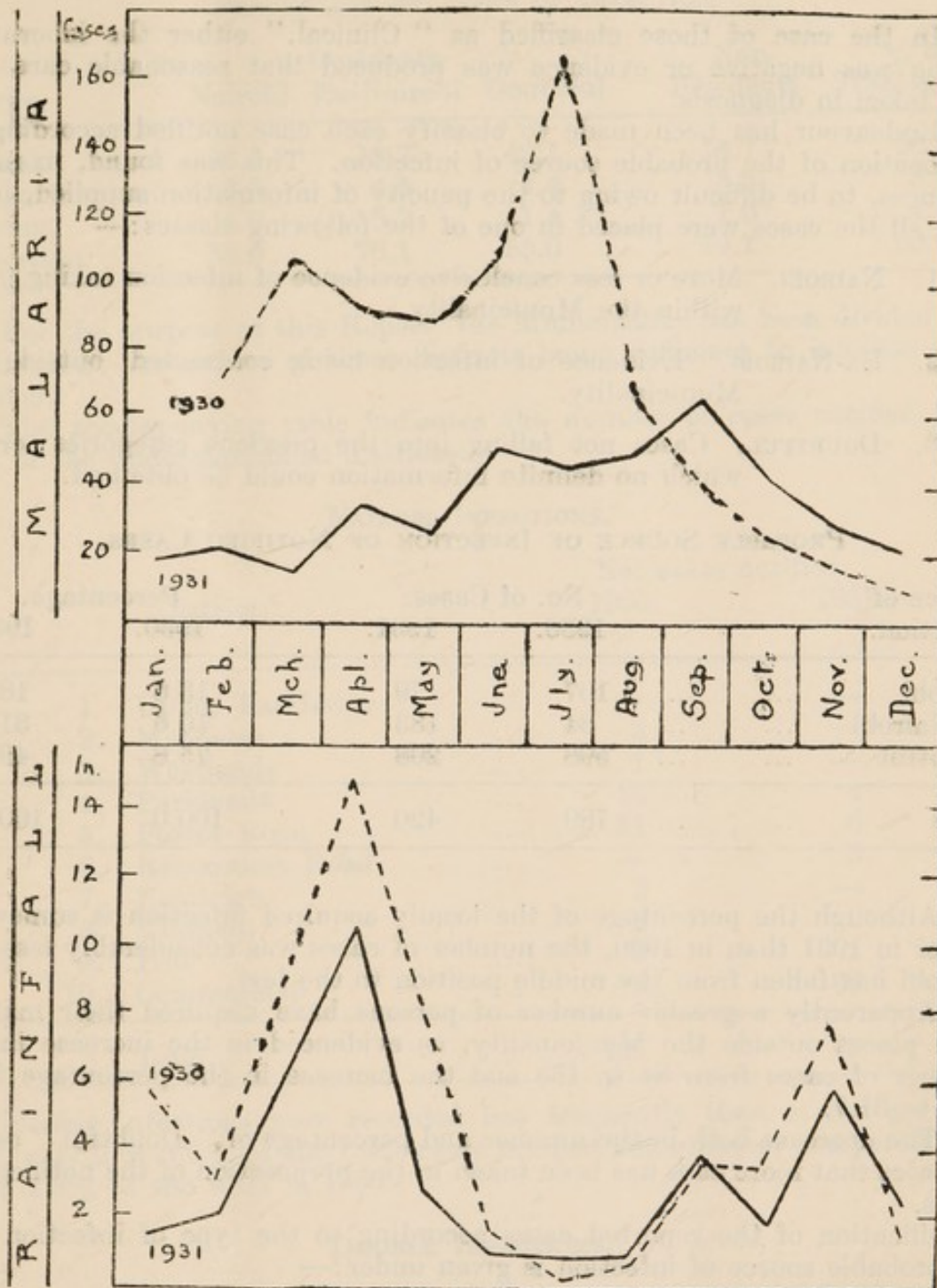
Particulars of the notifications for 1931 relating to seasonal incidence and Race are given in the following Table:—

## MALARIA NOTIFICATIONS.

Month.	Resident.				Non-Resident.				
	White.	Asiatic.	Native.	Total.	White.	Asiatic.	Native.	Total.	Total.
January.	5	9	4	18	1	—	—	1	19
February.	2	12	7	21	1	2	3	6	27
March	3	10	4	17	1	1	12	14	31
April.	10	17	7	34	8	3	19	30	64
May.	8	13	6	27	3	—	11	14	41
June.	11	28	11	50	2	8	25	35	85
July.	12	18	15	45	3	3	30	36	81
August.	4	28	17	49	5	5	27	37	86
September.	4	6	56	66	1	2	31	34	100
October.	4	10	28	42	3	3	17	23	65
November.	3	11	15	29	1	2	39	42	71
December.	3	9	10	22	—	4	28	32	54
Total.	69	171	180	420	29	33	242	304	724

The seasonal incidence, as shown in the following graph, indicates a gradual rise from about April culminating in a small peak in September. For comparative purposes, the curve for 1930 is also shown. Underneath, is shown the rainfall for the two years under discussion.





INCIDENCE OF NOTIFIED MALARIA PER 1,000 POPULATION.

Race.				1930.	1931.
White.	...	...		23.88	13.19
Asiatic	...	...		30.51	10.87
Native	...	...		10.84	6.73
All Races	...	...		16.62	8.81

The following Tables are an analysis of the notified cases.

It should be noted that the diagnosis of all the notified cases with the exception of those termed "Clinical" was supported by laboratory examination.

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

Endeavour has been made to classify each case notified according to the location of the probable source of infection. This was found, in many instances, to be difficult owing to the paucity of information supplied, however, all the cases were 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 OF NOTIFIED CASES.

Source of Infection.	No. of Cases.		Percentage.	
	1930.	1931.	1930.	1931.
Nairobi. ... ..	107	79	13.6	18.8
Ex-Nairobi ... ..	84	133	10.6	31.7
Doubtful ... ..	598	208	75.8	49.5
Total ... ..	789	420	100.0	100.0

Although the percentage of the locally acquired infection is somewhat higher in 1931 than in 1930, the number of cases was considerably less and Nairobi has fallen from the middle position to the last.

Apparently a greater number of persons have acquired their malaria from places outside the Municipality, as evidenced in the increase in the number of cases from 84 to 133 and the increase in the percentage from 10.6 to 31.7.

The decrease both in the number and percentage of "Doubtful" cases, indicates that more care has been taken in the preparation of the notification forms.

Classification of the reported cases according to the type of infection and the probable source of infection is given under:—

#### TYPE OF INFECTION AND PROBABLE SOURCE.

Probable Source.	Benign			Sub-Tertian.	Total.	Double Infection.
	Clinical.	Tertian.	Quartan.			
Nairobi.	26	6	4	44	79	1
Ex-Nairobi.	25	6	1	102	133	1
Doubtful.	88	3	3	115	208	1
Total Residents.	139	15	8	261	420	3
„ Non-Residents.	51	10	3	242	304	2
Total.	190	25	11	503	724	5



## PERCENTAGE OF TYPES OF INFECTION.

Type.	Residents.			Non-Residents.	% of Total cases.
	Nairobi.	Ex-Nairobi.	Doubtful.		
Clinical.	32.5	18.7	42.1	16.7	26.1
Benign Tertian.	7.5	4.5	1.4	3.2	3.4
Quartan.	5.0	0.7	1.4	1.0	1.5
Subtertian.	55.0	76.1	55.0	79.1	69.0

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 accompanying table indicates the number of cases notified from each of the undermentioned districts:—

## NAIROBI INFECTIONS.

District.	No. cases notified.	
	1930.	1931.
1. Upper Parklands	—	—
2. Muthaiga	3	—
3. Westlands	1	—
4. Parklands	10	4
5. Forest Road	11	6
6. Racecourse Road	—	3
7. Eastleigh	2	—
8. Kilimani	2	2
9. Hill	5	2
10. Commercial	73	62
Total	107	79

\* Double infections were recorded less frequently than in the previous year, only 5 or 0.6% of the total cases notified being noted, compared with 25 or 2.3% of the total in 1930.

## DOUBLE INFECTIONS.

Source of Infection.	Subtertian and Quartan.	Subtertian and Benign T.	Quartan and Benign T.	No. Cases Notified.
Nairobi.	1	—	—	79
Ex-Nairobi.	1	—	—	133
Doubtful.	—	1	—	208
Non-Resident.	1	1	—	304
Total.	3	2	—	724
Percentage of Total cases.	0.41	0.27	—	

The total of 5 double infections being 0.69% of the cases notified.

## DEATHS FROM MALARIA.

There was a mortality of 2.62% of the cases notified compared with 3.68% in 1930.

The death rate per 1,000 of population was 0.35, a considerable decrease from 0.82 in 1930.

Details of the deaths from Malaria will be found under:—

## DEATHS FROM MALARIA.

Month.	No. Cases Notified.	No. Deaths.	% Mortality.
January.	19	—	—
February.	27	2	7.40
March	31	1	3.22
April	64	3	4.68
May.	41	*3	7.31
June.	85	2	2.35
July.	81	2	2.46
August.	86	—	—
September.	100	1	1.00
October.	65	1	1.53
November.	71	—	—
December	54	4	7.40
Total.	724	19	2.62

\* Includes 1 Goan from Blackwater Fever.

## DEATH RATE PER 1,000 POPULATION FOR THE RACES.

Race.	No. Deaths.		Rate per 1,000.	
	1930.	1931.	1930.	1931.
White.	1	—	0.22	—
Asiatic.	12	12	1.09	0.76
Native.	26	5	0.81	0.18
All Races.	39	17	0.82	0.35

There were two deaths among Non-Residents, including one European and one Native.

## DEATHS AND DEATH RATES FOR 12 YEARS.

Year.	No. Deaths.	Death Rate per 1,000.
1919	47	—
1920	37	—
1921	22	—
1922	29	—
1923	28	—
1924	32	—
1925	19	—
1926	130	—
1927	25	1.1
1928	27	0.6
1929	27	0.56
1930	39	0.82
1931	17	0.35



## ANTI-MALARIAL WORKS AND MEASURES.

Since September, the maintainance and cleaning of the existing anti-malarial systems, have been placed in charge of this Department. Ten boys have been employed under the supervision of our Sanitary Overseer.

The whole length of the canals has been inspected and cleaned each week. The sides of the embankment have been filled and consolidated where necessary. The Desai Road section has been repaired for 392 feet. In the terminal section of the southern system, the old river bed has been filled and french drained.

Routine oiling has been carried out systematically, although draining and oiling has caused a notable decrease in the amount of oil used. 1,352 gallons of oil mixture were used in dealing with 703 breeding places as against 8,992 gallons for 3,321 places during 1930. The average amount of oil per breeding place has been 1.9 galls. 3,922 miles were travelled by the oiling gang in carrying out the above work.

### ANTI-MALARIAL OILING WORK.

1931.	Galls. Oil Mixture.	Places Attended.	Mileage.	Average galls. per place.
January.	—	—	622	—
February.	16	6	366	2.66
March.	—	—	400	—
April.	112	54	190	2.07
May.	160	120	204	1.33
June.	216	130	358	1.66
July.	272	123	281	2.21
August.	192	90	311	2.13
September.	152	45	276	3.37
October.	88	43	396	2.04
November.	—	—	268	—
December.	144	98	250	1.46
Total.	1,352	709	3,922	1.90

### SANITATION.

It has been decided that in keeping with the procedure now adopted in England that a full report will only be submitted every fifth year. Thus a detailed sanitary report will be issued with the 1933 Annual Report, the intervening reports being in the nature of a summary.

During the year approval was given to permit the installation of impervious conserving tanks to be used in connection with septic tanks erected on land not capable of dealing with the effluent.

Approximately 3,829 buckets were conserved daily throughout the Municipality.

There are 849 water closets connected to the sewer and about 205 septic tanks in operation.

Two new sewers were completed, one in the sanitary lane to the north and behind River Road and one in Stewart Street from Bazaar Lane to Portal Street.

There was no alteration in the number of public latrines as detailed in the previous report.



## SANITARY INSPECTIONS.

Details of the work performed by the Health Department will be found in the summary which follows:—

Attention may be called to the large number of plans submitted and also to the large number of inspections involved in seeing that the sanitary works were correct and satisfactory. More than half an inspector's time is given to this work to the exclusion of other important duties.

Unfortunately, owing to shortage of staff, no house to house inspections could be carried out.

It will be noted that a considerable number of nuisance abatements were accomplished, 4,318 defects being remedied.

Special attention has continued to be paid to dirty premises, 1,202 of such nuisances being removed.

Fewer statutory notices were served than in 1930, 39 as against 48, and fewer intimation letters, 122 as against 190, but a greater number of defects were remedied by verbal intimation, 3,906 against 3,829.

### SUMMARY OF SANITARY WORKS PERFORMED.

#### NUISANCES.

Inspections made to:—

Dwelling Houses	...	...	...	...	...	4,681
Restaurants	...	...	...	...	...	1,606
Laundries	...	...	...	...	...	287
Hotels and Bars	...	...	...	...	...	269
Offensive Trades	...	...	...	...	...	67
Stables and Cattle Sheds	...	...	...	...	...	118
Offices and other trade premises	...	...	...	...	...	5,743
Public Buildings	...	...	...	...	...	238
Open spaces, streets, etc.	...	...	...	...	...	1,330
Complaints registered and investigated	...	...	...	...	...	32

Defects remedied:—

Premises dirty or verminous	...	...	...	...	1,202
Premises inadequately lighted or ventilated	...	...	...	...	86
Dwellings without proper water supply	...	...	...	...	15
Dwellings overcrowded	...	...	...	...	3
Dwellings damp	...	...	...	...	3
Dwellings unfit for habitation	...	...	...	...	17
Yards unpaved	...	...	...	...	37
Rat infested	...	...	...	...	58
Dilapidation	...	...	...	...	19
Latrine accommodation defective	...	...	...	...	178
Latrine accommodation inadequate	...	...	...	...	3
Drains (closed water carriage, i.e. in connection with sewer or septic tank) choked	...	...	...	...	179
Drains —do.— —do.— defective	...	...	...	...	43
Drains (Open) choked	...	...	...	...	510
Drains (Open) defective	...	...	...	...	66
Drains absent or inadequate	...	...	...	...	34



Septic tank or cesspools defective	...	...	...	2
Septic tank or cesspools choked	...	...	...	4
Waste water disposal defective or inadequate	...	...	...	101
Soil or waste pipes choked	...	...	...	42
Soil or waste pipes defective	...	...	...	35
Accumulation of refuse or foul matter	...	...	...	568
Dustbin absent or defective	...	...	...	107
Foodstuffs unprotected against rats	...	...	...	548
Sleeping in kitchens or food stores	...	...	...	88
Mosquito breeding	...	...	...	262
Animals causing nuisance	...	...	...	4
Miscellaneous	...	...	...	103

Defects remedied by verbal intimation	...	...	...	3,906
" " " written intimation	...	...	...	355
" " " Statutory notice	...	...	...	57

## SEWERAGE CONNECTIONS.

Premises connected to sewer	...	...	...	71
Pail closets, etc., converted into water closets	...	...	...	117
New closets installed to sewer	...	...	...	27

## ERECTION AND ALTERATION OF BUILDINGS.

Plans dealt with	...	...	...	...	...	496
Inspections made	...	...	...	...	...	3,325

## LICENCING OF TRADE PREMISES.

Inspections made	...	...	...	...	...	962
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## INFECTIOUS DISEASES.

Cases investigated	...	...	...	...	...	67
Inspections made	...	...	...	...	...	156
Rooms disinfected	...	...	...	...	...	158
Articles disinfected	...	...	...	...	...	632
Second hand clothing inspected	...	...	...	...	...	264

## RATS.

Number destroyed	...	...	...	...	...	25,007
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## STATUTORY NOTICES SERVED.

## PUBLIC HEALTH ORDINANCES.

Nuisances Section 119	...	...	...	...	...	2
Cleansing and disinfecting Section 23	...	...	...	...	...	2

## MUNICIPAL BY-LAWS.

Insanitary Huts, By-law 509	...	...	...	...	5
Cleansing Plots, By-law 499	...	...	...	...	28
Temporary latrines for workmen, By-law 518	...	...	...	...	2
Intimation Notices sent	...	...	...	...	122



**FOOD CONTROL.****GENERAL OBSERVATIONS.****MARKETS.**

The Jeevanjee Market has been maintained in as good a state as possible, the cleanliness being improved by more frequent removals of garbage.

The building of the new Municipal Market is progressing and it is anticipated that it will be ready for occupation in March next.

The opening of this up-to-date and sanitary building will mark a decided forward step in the progress of the town.

The Native Market is visited daily and has been kept in a very satisfactory state.

**BUTCHERS SHOPS.**

During the year 21 premises were registered, 5 European, 15 Indian and 1 Native. These are inspected daily and found to be kept in a satisfactory state of cleanliness.

**BAKERIES.**

Four European and nine Indian premises were licensed.

**FISHMONGERS.**

These premises are inspected daily and have been kept up to a good standard. Six European and eight Indian licenses were issued.

Most of these premises now have cooling chambers and are thus able to hold larger stocks and sell the produce in a fresher condition.

Larger stocks of fish have been received in the town.

**VEGETABLE SELLERS.**

19 premises were licensed during the year, 2 European and 17 Indian. Trouble is still caused by the placing of goods on the footpath.

**AERATED WATER FACTORIES.**

One European and three Indian factories were licensed and were maintained in a satisfactory state of cleanliness.

**LAUNDRIES AND DHOBIES.**

Of the 21 licenses issued three were European and eighteen Indian.

**MILK SHOPS AND DAIRIES.**

28 Registration certificates were issued under the Milk and Dairy Regulations, 1925, 11 being European, 12 Indian and 5 Somali.

An increasing number of these dairies are kept in a good sanitary condition owing to tiling being used.

All the milk sellers at Eastleigh have carried out sufficient improvements to enable them to be registered.

507 Milk Vendors were examined and licensed during the year.

**SLAUGHTER HOUSE.**

Increased difficulties have been experienced at these old premises during the year, on account of the larger number of beasts slaughtered, especially as the lighting is not sufficient for efficient examination.

The building of the new slaughter house is progressing and it is hoped that it will be ready for occupation in the latter part of the coming year.



## TRADE PREMISES SUBJECT TO CONTROL UNDER SPECIAL BY-LAWS.

	1927	1928	1929	1930	1931
Aerated Water Factories ...	3	4	5	5	4
Bakeries ...	9	11	13	10	13
Butchers Shops ...	26	13	18	17	21
Dairies and Milk Shops ...	6	9	12	20	28
Fishmongers ...	7	6	10	9	14
Laundries and Dhobies ...	25	18	21	23	21
Restaurants ...	45	30	34	48	40
Vegetable Dealers ...	19	13	19	17	19

## GENERAL INSPECTIONS IN REGARD TO CONTROL OF FOOD SUPPLIES.

Aerated Water Factories	...	...	976
Bakeries	...	...	303
Butcheries	...	...	567
Dairies and Milk Shops	...	...	2,335
Fishmongers	...	...	305
Markets	...	...	573
Vegetable Dealers	...	...	526

Total. ... 5,585

## UN SOUND FOOD CONDEMNED.

Fish	...	...	5,412 lb.
Fruit	...	...	170 lb.
Groceries, etc.	...	...	2,435 lb.
Meat	...	...	6,069 lb.
Posho	...	...	540 lb.
Vinegar	...	...	58 pints.

## SAMPLING.

Food.	Samples taken.	Not Analysed.	Genuine.	Doubtful.	Not Genuine.
Milk ...	16	1	5	7	3
Aerated Water ...	1	1	—	—	—

## SLAUGHTER HOUSE.

## INSPECTIONS AND CONDEMNATIONS.

	Number of carcasses Inspected	Number of carcasses Condemned.	Percentage carcasses condemned.
Oxen ...	13,663	1,789	13.09
Calves ...	416	71	17.06
Sheep ...	8,133	30	0.36
Goats ...	19,920	762	3.82
Pigs ...	1,960	9	0.45
Total. ...	44,092	2,661	6.03

## ORGANS CONDEMNED APART FROM CARCASSES.

Hearts	...	...	...	...	2,849
Tongues	...	...	...	...	2,313
Kidneys	...	...	...	...	4,952
Livers	...	...	...	...	10,207
Other	...	...	...	...	20,133
Total					40,454

## TOTAL WEIGHT OF MEAT CONDEMNED.

Beef	...	...	...	...	898,512 lb.
Veal	...	...	...	...	5,480 lb.
Mutton	...	...	...	...	6,041 lb.
Goat	...	...	...	...	26,491 lb.
Pork	...	...	...	...	3,232 lb.
Total					939,756 lb.

## CONDITIONS NECESSITATING CONDEMNATION.

			Calves.	Oxen.	Sheep.	Goats.	Pigs.	Total.
Abscess	...	...	—	6	12	28	1	47
Cysticercus bovis	...	...	71	1,615	—	—	—	1,686
Cysticercus cellulosae	...	...	—	—	—	—	1	1
Dropsy	...	...	—	60	1	—	—	61
Emaciation	...	...	—	2	—	—	—	2
East Coast Fever	...	...	—	4	—	—	—	4
Jaundice	...	...	—	9	5	8	2	24
Lymphadenitis	...	...	—	2	—	—	—	2
Pleuro-pneumonia	...	...	—	5	—	25	—	30
Tuberculosis	...	...	—	8	—	—	2	10
Anaplasmosis	...	...	—	57	—	—	—	57
Fevered	...	...	—	5	12	—	2	19
Red Water	...	...	—	8	—	—	—	8
Rinderpest	...	...	—	4	—	—	—	4
Septicaemia	...	...	—	1	—	—	—	1
Blackquarter Fever	...	...	—	2	—	—	—	2
Heart Water	...	...	—	1	—	701	—	702
Osteomyelitis	...	...	—	—	—	—	1	1
<hr/>								
Total	...	...	71	1,789	30	762	9	2,661
Percentage of carcasses inspected	...	...	17.06	13.09	0.36	3.82	0.45	6.03



## TYPE OF OXEN SLAUGHTERED AND CONDEMNED.

Year.	GRADE.			MASAI.		
	Inspected.	Condemned.	% Condemned.	Inspected.	Condemned.	% Condemned.
1928.	4,907	290	5.9	6,827	480	7.0
1929.	4,231	252	5.9	7,436	764	10.2
1930.	4,214	310	7.3	7,243	738	10.1
1931.	4,313	471	10.9	9,350	1,318	14.1

As *Cysticercus bovis* is responsible for over 90% of the condemnations of oxen, the above figures may be taken as a rate for that condition.

## REPORT ON CHILD WELFARE, ANTE-NATAL AND VENEREAL CLINICS.

by Dr. M. M. Shaw, Medical Officer-in-Charge.

### CHILD WELFARE WORK.

Total number of Clinics held	...	151
Total attendances	...	5,574
Average attendance per clinic	...	36.9

Comparing these figures with those of 1930, Pumwani shows an increase of 803 attendances or 257%, Pangani an increase of 243 or 15% and the Railway Landies 706 or 36%.

The total increase over 1930 was 1752 or 45%.

During the past year, this branch of the work, together with the associated home visiting, was carried out on the lines laid down at the end of 1929. An increase is reported both in the total attendances and in the number of home visits, details of which are attached.

#### STAFF.

The staff remains numerically the same, i.e.

- 1 Medical Officer.
- 2 Health Visitors.
- 2 Female African Dressers.
- 1 Male African Dresser.

At the Railway Landies the health visitor was changed no less than four times. Such changes, though in this case ultimately for the best, are invariably accompanied by a certain amount of disorganisation and the natives are rather inclined to hold aloof until the new arrival manages to gain their confidence and approval.

#### PREMISES.

No alterations are reported concerning Pangani or the Railway Landies premises. The outstanding event of the year was the opening of the new clinic building at Pumwani. This was erected and in great part furnished by the Municipality of Nairobi. The building is excellently adapted for the work carried on there, not only at present but in the future when the work is, as I am certain it can be, doubled.

#### GENERAL PROGRESS.

The location where most progress has been made is undoubtedly that of the Railway Landies and is explained by the fact that it has the full-time services of a health visitor.

In August 1928 in a memorandum on Infant Welfare work in Nairobi I wrote with reference to the Railway Landies—"The difficulty in this area is the complete ignorance and apparent indifference of the native and, to overcome this, personal contact with the mothers by home visiting and instruction is absolutely necessary." The complete ignorance and apparent indifference are no longer the outstanding features of this location. Ignorance and indifference still exist but are slowly but surely giving place to a desire for knowledge and to a slow growth of an appreciation of responsibility towards the young child.

Stupid things are still done here such as one never finds in the other two locations, e.g., the mother who lit a fire and cooked a meal on it in her house and then, having removed the glowing embers, laid her four months



old baby on the hot concrete floor; but such things are by no means so frequent as even two or three years ago and when they do occur immediate help is usually sought.

In this location too is the most flourishing ante-natal clinic—again a definite result of personal contact with the people on the part of the health visitor. Pumwani and Pangani suffer by contrast—one health visitor has to divide her time between these two locations.

Considering the rapid growth of Pumwani and the fact that it is designed to be the main native location, the half-time services of a health visitor are inadequate. Such services are also inadequate in Pangani, not because of the size of the location but because of the poverty, squalor and vice of a large number of the inhabitants.

In spite of this, distinct advances have been made but I feel the work is likely to show no great progress during the next year unless one health visitor can be employed in each location.

The figures of dispensary attendances in Pumwani during May and June show the necessity of European supervision in these locations. During these two months there was employed in the new clinic building a Uganda native, intelligent and immensely popular since he was in the habit of issuing sick certificates to male members of the population—no doubt for a consideration. Caught red-handed he was dismissed and the figures for male attendances promptly fell after the employment of a Kikuyu who, though not conspicuous for grey matter, is at present believed to be reasonably honest.

An effort appears to be on foot to induce inhabitants of Pangani to move their abode to the Municipal Landies near the native market; in my opinion this is only moving a "black spot" from one part of the map to another and already in these pitifully inadequate quarters are collected a heterogeneous mass of natives of every tribe providing all the necessary conditions for the quick breeding of dirt, vice, disease and crime. This collection alone could occupy the full-time services of a health visitor.

With regard to the children of these locations the past year was marked by a mild epidemic of measles and whooping cough.

Reports of all children attending since 1929 have been kept; during the first eight or nine months, as a rule, these children do fairly well, i.e. during the period of breast feeding. From the age of 1—2 years their diet in most cases is inadequate to meet the needs of the growing child and appreciable numbers lose ground. An attempt is being made at the Railway Landies to collect information on the health of children of this age and to contrast results of various additions to their diets.

On the whole the standard of cleanliness and general care is definitely on the up-grade.

#### ANTE-NATAL CLINICS.

The attendances at these clinics totalled 991 and the number of persons who attended was 206.

Compared with 1930, there was an increase of 88 or 74% in the number of patients attending.

As stated before, the most successful ante-natal clinic is that held at the Railway Landies.

In Pumwani the inhabitants remain confused by the opening of the new clinic building and, in spite of efforts made to persuade them to attend for examination at the African Maternity Home, numbers persist in attending the dispensary. Many of these are patients who do not wish to go into the hospital for the actual confinement and find difficulty in believing that if they attend there for ante-natal care they will not necessarily be expected to become in-patients.



In Pangani the pregnancy is often such that attendance at an ante-natal clinic is avoided the condition being hidden as long as possible.

These facts again point to the desirability of the employment of a full-time health visitor in each location.

Very few morbid conditions are found in these patients and such as are found are, in the main, associated with pregnancy and not consequent upon it.

### DISPENSARY.

The total dispensary attendances during the year numbered 23,413, of which 5,963 were at Pumwani, 6,161 at Pangani and 11,280 at the Railway Landies.

#### DISPENSARY ATTENDANCES.

These for the most part are women and children who attend for the treatment of minor ailments. The work, though so closely associated with other activities, is only related to them by virtue of its beneficial results which undoubtedly play a large part in gaining the confidence of the native.

### HOME VISITS BY HEALTH VISITORS.

The number of visits paid by Health Visitors totalled 7,554, being an increase of 1,705 over those in 1930.

Of this total, 4,059 were in connection with Child Welfare, 1,701 with Venereal disease, 985 in connection with Ante-natal work and 809 were sick visits.

On this work, in my opinion, depends the whole fabric of successful ante-natal and child welfare measures and I would bring forward the evidence of Sir George Newman who has said that the provision of trained health visitors and of clinics is, without doubt, the most profitable form expenditure can take. It is only by a sympathetic and intimate knowledge that domestic reforms can be set in motion; but on these individual reforms is based to a great extent the health of a community. The personal factor is perhaps greater with the African than in England; the results of ill-advised teaching are apt to lead to more disastrous results than with our own people for there is not the trained reasoning power to combat such results.

The practical consequences of employing one fully trained health visitor at the Railway Landies has fully justified the expenditure involved and one can only hope that the practice will shortly be able to be repeated in each of the other locations.

#### FUTURE ACTIVITIES.

An educational centre for female dressers is being inaugurated early in 1932. This has been made possible through the willingness of some of the staff of the Jeanes School to help in the preliminary teaching. By permission of the Education Department, lessons will be given to the dressers employed under this department and at the Infectious Diseases Hospital. Three of the senior nurses from the African Maternity Home will also attend and possibly the female dressers from the General Dispensary.

The object aimed at is to produce, not a poor imitation of a European nurse, but an African dresser with some understanding of her work and, still more important, some appreciation of responsibility. The results cannot be anticipated but if one has no faith one has no progress!



## SUMMARY AND RECOMMENDATIONS.

I have tried to show the profitable and practical increase in the work since the employment of two trained health visitors and to demonstrate the urgent need of the employment of one trained health visitor in each location. Remembering the numbers of the population in these areas and the ignorance of the great majority of the women the request for an extra health visitor cannot be considered extravagant and while realising that at present it is likely to go unfulfilled, I would earnestly request that it may be borne in mind until more prosperous times permit an expansion of this service.

I have stressed always the fully trained health visitor because I believe that the best procurable is only good enough to overcome the difficulties of this work or, to quote Dudley Kidd "The problem is the progress of a backward race, and we allow inefficient teachers, whose only qualification for the difficult work is their own kind hearts, to form the character of the rising generation and to complicate our difficulties—has any state the right to allow unqualified people to intensify national problems in this gratuitous fashion?"

## VENEREAL DISEASE CLINICS.

## CLINICS HELD.

During the past year weekly clinics for the treatment of venereal diseases in women and children were held at each of the four centres:—

District Health Office	...	49 clinics.
Pumwani	...	52 clinics.
Pangani	...	52 clinics.
Railway Landies	...	51 clinics.

This gives a total of 204 clinics.

THE TOTAL ATTENDANCES at all clinics was 3,123 or an average attendance per clinic of 15.3.

Syphilis	...	2,509
Yaws	...	603
Gonorrhoea	...	2
Non V.D.	...	9
Total	...	3,123

Comparing these figures with those of 1930 there is found to be an increase of 398 or 14.5%.

## GENERAL REMARKS.

On the whole attendances have been satisfactory; it is becoming progressively less difficult to get native women to come regularly for comparatively prolonged treatment. Cases of gonorrhoea are the exception in that there appears to be established a belief that treatment by vaginal irrigation causes sterility. Cases of gonorrhoea are, whenever possible, admitted to the Infectious Diseases Hospital.

Bismuth is used generally, the need for economy limiting the use of arsenical preparations to those cases of acute primary or secondary syphilis and to some cases during pregnancy where the past history and the results of blood examination indicate the advisability of the use of arsenic.

The majority of cases presenting themselves for treatment are cases giving a history of old infection but in whom no lesion can be detected clinically; blood examinations are made for every patient before a course of



treatment is begun. According to some authorities the exclusive use of Bismuth in such cases is advocated but during the past year repeat blood examinations from patients who have had two, three or more courses of Bismuth injections has only confirmed me in the belief I formed in England when many of the Bismuth preparations, for which extravagant claims were made, were being "tried out," i.e. that Bismuth while constituting an excellent substitute for mercury in the treatment of syphilis can never replace arsenic. One is driven either to this conclusion or to the fact that little reliance can be placed on the various serum reactions and, while not regarding the Wassermann or the Kahn tests as infallible, clinical experience is in favour of accepting the former conclusion re- Bismuth. It is hoped during the coming year to analyse the results of treatment in many of these cases and to publish the conclusions of such an analysis.

#### PROSTITUTION IN NATIVE LOCATIONS.

During the course of some public lectures given in Nairobi the speaker stressed the gravity of the spread of venereal disease in native reserves, such disease being carried back by natives from prostitutes in the native locations—particularly Pangani and Pumwani.

There would appear to be no diminution in prostitution in Nairobi; rather the reverse, although this statement does not depend on any figures from venereal disease clinics. Professional prostitutes here do not attend Venereal Disease clinics any more than they do at home; they are too suspicious of being "pressed" into hospital and thereby losing some of their clientele by an enforced absence. Much more commonly they attend a private doctor and being able to pay for only two or three injections like to regard themselves as cured.

Prostitution is like any other commodity of trade; if there is no demand, there is no supply; conversely when the demand is great the supply rises to meet it. Human nature, in particular African human nature, being what it is and conditions in Nairobi being as they are i.e. the employment of large numbers of adult male natives with no facilities to have their own womenfolk with them (even if the latter would come) create the demand which, on the face of it, is not likely to lessen for many years. Small wonder then that the numbers of unattached women in Nairobi make their living in the only way known to them and are added to by others from the reserves who are attracted by the delights of a town life and who chafe under tribal law and discipline.

A serious side of the problem is the number of children and young girls growing up in these locations to become nothing but the next generation of prostitutes. The need for a non-sectarian school to serve the needs of girls in these locations seems to me to be urgent. It would constitute the first step towards training them, not only for some useful occupation but towards some ideals of conduct, making them useful members of the community instead of potential dangers.



