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City Council of Gibraltar.

ANNUAL REPORT

ON THE

HEALTH OF GIBRALTAR

FOR THE YEAR

1934,

BY

Major R. A. MANSELL, M.B.E., M.B., D.P.H., D.T.M. & H.,
Royal Army Medical Corps.
Medical Officer of Health.

Gibraltar Garrison Library Printing Establishment,
Government Printers for Gibraltar.

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City Analyst and Bacteriologist.

A. G. HOLBOROW, F.I.C.

** Veterinary Adviser.*

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Senior Sanitary Inspector.

§ † C. E. NORTON, M.R. San. I.

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 † H. W. MCINTOSH, A.R. San. I.
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 § † J. SUAREZ, A.R. San. I.
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† Destitute Sick and Tuberculosis Scheme.

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† Maternity and Child Welfare.

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* Occasional.

† Cert. Royal Sanitary Institute.

§ Cert. Inspector of Meat and Other Foods.

‡ Mainly maintained by Government Grants.

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COLONIAL HOSPITAL.

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B.Sc., F.R.C.S., (Edin.).

Assistant Surgeons.

J. E. DEALE, Esq., M.B., Ch.B., B.A.O., F.R.C.S.I.
H. F. HUSTLER, Esq., M.B., B.Sc., (Melb.).

Extra Assistant Surgeon.

L. H. GILL, Esq., L.R.C.P., L.R.C.S. (Edin.).

Public Vaccinator.

* L. H. GILL, Esq., L.R.C.P., L.R.C.S. (Edin.).

Port Surgeon.

* A. A. RUSSO, Esq., L.R.C.S.I., L.R.C.P.I.

Deputy Port Surgeon.

J. J. GIRALDI, Esq., M.D.

Surgeon Isolation Hospital.

* J. A. DURANTE, Esq., M.R.C.S., L.R.C.P.

Inspector of Food.

The Medical Officer of Health.

Medical Inspector of Schools.

The Surgeon, Colonial Hospital.

School Dentist.

J. GARESSE, Esq.

District Medical Officers.

* H. G. TRIAY, Esq., M.B., Ch.B.

* J. DOTTO, Esq., M.R.C.S., L.R.C.P.

* Allowance paid to private medical practitioners as a retaining fee for their services.

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H.E. the Governor.

The Hon. Colonial Secretary.

The Deputy Director of Medical Services, Gibraltar
Command.

The Senior Naval Medical Officer, Gibraltar Command.

The Captain of the Port.

The Port Surgeon.

The Colonial Surgeon.

The Medical Officer of Health.

The Chairman, City Council.

The President, Exchange Committee.

The President, Chamber of Commerce.

Secretary—H. J. S. NORTON, Esq., M.B.E.



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PREFACE.

The general health of Gibraltar during the year under review has been good.

A small outbreak of diphtheria at Catalan Bay in the autumn is the most notable feature in connection with infectious disease. This, and the few cases occurring in the City, was of a mild type.

The infantile mortality rate, though considerably higher than the low record recorded for 1933, is below the average for the past five years, and compares favourably with that of England and Wales.

The death rate is the lowest recorded for more than 50 years; and the birth rate is the highest for 30 years.

The water supply from the new well at North Front has continued to be of most satisfactory quality, and has proved an enormous asset to the water resources of the City.

This report records the work of my predecessor, Major G. D. Jameson, R.A.M.C., who vacated the appointment on the 4th December, 1934, though it does not necessarily, of course, express his views.

The reports of the City Analyst and Bacteriologist and of the Veterinary Adviser are appended.

My thanks are due to those who have contributed to the preparation of this Report, and especially to Mr. C. E. Norton, M.R. San. I., Senior Sanitary Inspector, and also to the local press for their continued support and assistance.

*R. A. Mansell, Major, R.A.M.C.,
Medical Officer of Health.*

*Public Health Department,
Gibraltar, May, 1935.*

CITY COUNCIL OF GIBRALTAR.

PUBLIC HEALTH DEPARTMENT.

SUMMARY OF VITAL STATISTICS FOR 1934.

Total area of Gibraltar Territory	... ..	{ 1,387 acres, 2 roods, 3 poles
Area of the City	... ..	{ 104 acres, 3 roods, 33 poles.
Estimated Total Civil Population of Gibraltar	15,847 persons.	
Estimated Fixed Civil Population of Gibraltar	14,790 persons.	
Births in Fixed Civil Population	... ..	{ 196 Males. 187 Females.
Total Births	... ..	383.
Birth rate per 1,000 of Fixed Civil Population	25.8.	
Deaths in Fixed Civil Population	... ..	{ 117 Males. 113 Females.
Total Deaths...	... ..	230.
Crude death rate per 1,000 of Total Civil Population...	... ..	{ 14.51.
Average crude death rate for previous ten years	... ..	{ 15.5.
Death rate from Pulmonary Tuberculosis	... ..	1.28 per 1,000.
Infantile Mortality rate	... ..	54.8 per 1,000 births.

METEOROLOGICAL OBSERVATIONS FOR THE YEAR 1934.

Latitude 36° 6' N. Longitude 5° 21' W.

Instruments verified at the National Physical
Laboratory, Kew.

The Meteorological Station is situated in the Alameda Gardens on the south-west side of the "Rock." Barometer 90 ft. above mean sea level. Thermometers and Rain gauge 102 ft. above mean sea level.

The shade thermometers, kept in a Stevenson screen are: one self-recording maximum, one self-recording minimum, a dry and wet bulb. A self-recording grass thermometer is used for registering the temperature on the grass.

The rain gauge is an 8 inch copper meteorological pattern.

The anemometer is fixed in Victoria Gardens, North Front on the isthmus which joins Gibraltar to the mainland, and clear of the Rock to avoid eddies.

A report is sent twice daily to the Meteorological Office, London, and daily to the *Gibraltar Chronicle* for general information. A complete monthly report is also sent to the Meteorological Office, London, for publication in their journals.

The report contains statistics showing the means for the year in barometric pressure, air, temperature, rainfall, humidity, cloud and wind, compared with the averages for a series of years, number of days of clear sky, overcast days, and days on which rain fell during the year. Readings are taken every day throughout the year at the 7th, 13th, 18th, and 21st hour, but the following tables are compiled from the readings at the 7th, 13th, and 21st hours only.

WEATHER.

Rain Season 1933-34	34.07 inches.
Rainfall for the year 1934.....	26.11 ,,
Number of days with 0.1 inch of rain or more	81
Number of days with 0.4 inch of rain or more	68
Wettest day.....	6th April, 2.15 ins.
Highest recorded temperature in the screen.....	91° F.—20th June and 2nd Aug.
Lowest recorded temperature in the screen.. . . .	36° F.—3rd Feb.

Mean temperature for the year	64.5° F.
Mean Humidity for the year	72%
Lowest temperature on the grass	27° F.—2nd & 4th Jan.
Mean amount of cloud for the year ...	4.0
Number of days of clear sky	72
Number of days of overcast sky	36
Number of days with thunderstorm ...	4
Number of occasions when hail fell ...	1
Number of gales and gale gusts.....	4
Number of days with fog	8
Number of days with frost	4

BAROMETER. The mean Barometric reading for the year was 30.062 ins. when reduced to mean sea level and to a temperature of 32° F. The highest corrected reading of the year was 30.504 ins. on January 27th, and the highest corrected monthly mean 30.320 in January. The lowest corrected reading of the year was 29.465 ins. on 15th November, and the lowest corrected monthly mean 29.960 in April.

TEMPERATURE. The mean temperature for the year was 64.5° F. which was 0.2° F. above the average. The highest shade temperature recorded was 91° F. on 20th June & 2nd August.

WIND. The winds during the year were mostly from the East and of a light nature.

RAINFALL. The rainfall for the year was 26.11 inches, being 9.56 inches under the average; the heaviest fall for one day being 2.15 ins. on the 6th April. There were three months, i.e., June, July and August in which no rain was recorded. The fall in May and September was extremely small.

HUMIDITY. Normal.

TABLE I.

Month	Barometric pressure reduced to sea level & 32° Fahr. Inches.	Maximum and Minimum Temperatures.			Difference from average for 40 years. °F.	Maximum date.	Minimum date.
		Maximum °F.	Minimum °F.	Mean °F.			
Jan.	30.326	61.6	46.9	54.3	- 1.1	69- 28th	40-2nd & 22nd
Feb.	30.168	60.3	49.4	54.9	+ 3.0	65- 21st, & 25th	36-3rd
Mar.	29.991	62.6	48.8	55.7	- 2.2	70-7th,	39-1st
April	29.960	66.9	52.2	59.5	- 1.2	73-17th	46-24th
May	30.020	73.1	58.7	65.9	+ 0.5	83-26th	50-2nd
June	30.003	81.1	64.2	72.7	+ 2.6	91-20th	57-8th
July	29.986	83.5	68.6	76.1	+ 1.4	89-28th	63- 6 h
Aug.	29.988	83.5	67.4	75.5	- 0.8	91-2nd	63-10th
Sept.	30.033	80.7	67.0	73.9	+ 1.0	87- 4th	60-21st
Oct.	30.095	73.7	62.2	67.9	- 0.2	82-2nd	53-23rd
Nov.	30.007	62.9	53.6	58.3	- 2.0	78-1st	47-16th, 17th & 18th
Dec.	30.168	64.4	53.4	59.0	+ 2.1	69- 4th	45-30th,
Year...	30.062	71.2	57.7	64.5	+ 0.2	91-20th June & 2nd Aug.	36-3rd Feb.

TABLE II.

Month.	Shade Temperature--°F.			Humidity %		
	7th hour.	13th hour.	21st hour.	7th hour.	13th hour.	21st hour.
January	49.0	59.4	51.5	80	59	75
February...	49.4	57.0	52.7	79	64	74
March ...	50.0	59.3	55.1	79	62	69
April	53.7	63.9	57.4	83	59	73
May	60.5	69.5	63.7	79	58	72
June ...	65.9	77.1	69.6	80	55	71
July	69.9	79.6	72.8	78	58	71
August	68.6	79.0	72.3	79	58	71
September	68.2	77.5	70.5	82	62	78
October...	63.5	71.1	65.5	83	66	78
November.	55.2	60.7	55.9	83	71	80
December..	55.0	63.2	56.8	86	68	82
Year	59.1	68.1	62.0	81	62	75

TABLE III.

Month	Terrestrial Radiation.			Solar Radiation.		
	Temperature on the grass.			Black bulb in vacuum.		
	Mean °F.	Min. °F.	Date.	Mean °F.	Max. °F.	Date.
January ...	36.0	27	2nd & 4th	103	125	28th
February...	46.0	32	4th	90	116	21st
March	45.8	36	1st & 2nd	96	125	19th
April	49.8	43	24th	113	130	18th
May	56.2	46	2nd	117	133	25th
June	61.7	54	8th	124	142	20th
July	65.3	60	6th, 9th & 13th	126	138	13th
August.	64.2	60	6th, 10th & 25th	127	139	4th
September	64.5	57	21st	116	139	1st
October ...	60.0	50	23rd	106	131	5th, & 9th
November..	50.8	42	16th	87	125	1st
December..	49.2	41	30th	97	125	5th
Year	54.1	27	2nd & 4th Jan.	109	142	20th June

TABLE IV.

Month.	Cloud amount 0-10.			Clear sky days.	Overcast days.
	7th hour.	13th hour.	21st hour.	Less than 0.2 cloud.	More than 0.8 cloud.
January ...	4.4	3.7	3.4	12	7
February...	6.2	6.2	4.5	3	5
March	4.7	5.6	3.4	4	2
April	5.2	5.0	4.0	2	3
May	4.0	4.2	3.2	5	1
June	3.8	2.4	1.4	9	—
July	3.0	2.1	0.9	15	2
August ..	2.3	1.9	1.1	15	—
September	5.0	4.3	2.8	2	1
October ...	5.3	4.0	3.2	3	5
November	6.7	6.8	6.7	1	5
December..	4.9	6.0	4.1	1	5
Year	4.6	4.4	3.2	72	36

TABLE V.

Month.	Rainfall 1934.		Greatest fall in 24 hours beginning at 7 a.m.		Number of days with .01 inches or more.	Number of days with .04 inches or more.	Rain Season.	
	Total inches.	Deviation from average inches.					1933-34	
			Inches.	Date.			Month.	Total inches.
Jan.	0.12	-4.96	0.08	13th	2	2	Aug. ...	—
Feb.	1.46	-2.76	0.63	12th	5	6	Sept. ...	—
March ...	5.07	+0.28	1.18	31st	15	14	Oct. ...	4.94
April ...	5.31	+2.64	2.15	6th	14	13	Nov ...	8.48
May	0.13	-1.61	0.05	3rd	3	2	Dec. ...	8.56
June	—	-0.47	—	—	—	—	Jan. ...	0.12
July.	—	-0.04	—	—	—	—	Feb. ...	1.46
August...	—	-0.12	—	—	—	—	Mar. ...	5.07
Sept. ...	0.01	-1.38	0.01	10th	1	0	April ...	5.31
October..	1.27	-2.00	1.14	17th	5	3	May ...	0.13
Nov.....	9.30	+2.91	2.05	4th	21	18	June ...	—
Dec.....	3.44	-2.13	0.97	13th	14	10	July ...	—
Year	26.11	-9.56	2.15	6th April	81	68	Rain Season	34.07

TABLE VI.

Month.	Winds obs. at 7-13-21 hr. 1098=year.								Calm.	Forces 1-3	Forces 4-7	Forces 8 or more
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.				
January ..	2	—	29	—	6	5	31	14	8	64	21	—
February...	—	—	46	—	—	2	11	10	10	49	25	—
March ...	1	—	9	—	1	16	28	24	13	67	12	—
April	—	—	12	—	4	15	34	13	12	59	19	—
May	—	—	36	1	9	4	30	—	13	69	11	—
June	—	—	38	—	5	8	24	2	13	61	16	—
July	—	—	37	2	10	18	16	2	8	70	15	—
August	—	—	23	—	10	15	24	3	18	71	4	—
September.	—	—	47	3	6	9	12	4	9	78	3	—
October ...	—	1	54	1	4	5	15	4	9	59	25	—
November	—	—	42	2	—	13	14	17	2	60	25	—
December ..	—	—	15	—	3	19	19	29	7	55	31	—
Year	3	1	388	9	58	129	258	122	122	762	207	—

VITAL STATISTICS.

An estimate by the Police Authorities at the end of 1934, forms the basis on which the various rates connected with the vital statistics have been calculated in this report.

Data concerning the Naval and Military population are not included in these figures.

1. POPULATION.

The total Civil population is estimated at 15,847 persons, of which number 14,715 are British subjects other than Maltese, 75 British subjects born in Malta, 947 aliens residing in the Town, and 110 aliens resident in the Bay.

The following table shows the fluctuation in population of Gibraltar during recent years:—

How estimated.	British Subjects Fixed Population.	Alien Subjects Floating Population.	Total Population.
Census June, 1921	16,753	1,787	18,540
Police Estimate at end of 1922	16,182	1,145	17,327
Police Estimate at end of 1923	16,165	1,181	17,346
Police Estimate at end of 1924	16,177	1,147	17,324
Police Estimate at end of 1925	16,127	1,161	17,288
Police Estimate at end of 1926	16,150	1,013	17,163
Police Estimate at end of 1927	16,120	1,076	17,196
Police Estimate at end of 1928	15,719	1,112	16,831
Police Estimate at end of 1929	15,647	1,052	16,699
Police Estimate at end of 1930	15,526	922	16,448
Census April 1931	16,188	1,425	17,613
Police Estimate at end of 1932	15,143	1,466	16,609
Police Estimate at end of 1933	15,071	1,326	16,397
Police Estimate at end of 1934	14,790	1,057	15,847

These figures represent the population of Gibraltar between the hours of 10 p.m. and 5.30 a.m. To calculate the daily population it will be necessary to add some 5,000 aliens and 1,500 British subjects residing in La Linea, who come into Gibraltar daily.

VITAL STATISTICS DURING 1934 AND PREVIOUS TEN YEARS.

Year	Population.			Deaths				Infantile Mortality.		Births.		Zymotic Mortality.	
	Fixed.	Total.	How Estimated.	Fixed population. No.	Total population. No.	Rate per 1,000 of population.		No.	Rate per 1,000 birth.	No.	Birth rate per 1,000 living of fixed population	No.	Rate per 1,000 living of fixed population.
						Fixed population.	Total population.						
1924	16177	17324		250	254	15.45	14.66	33	91.0	360	22.2	18	1.05
1925	16127	17288		249	256	15.44	14.80	31	83.0	372	23.0	10	.52
1926	16150	17163		271	276	16.78	16.03	46	107.0	427	25.0	20	1.2
1927	16120	17196	Police Estimate	291	297	18.05	17.27	36	99.1	363	22.0	13	.8
1928	15719	16831		286	293	18.19	17.40	45	122.9	366	23.2	30	1.7
1929	15647	16699		254	262	16.36	15.68	18	46.6	388	24.7	10	.63
1930	15526	16448		240	240	15.6	14.5	25	71.3	349	22.4	8	.51
1931	16188	17613		250	254	15.4	14.4	23	61.0	377	23.28	4	.24
1932	15143	16609	Census	245	259	16.17	15.59	21	60.69	346	22.84	16	.96
1933	15071	16397		241	245	15.99	14.94	14	39.2	357	23.68	3	.18
1934	14790	15847	Police Estimate	225	230	15.21	14.51	21	54.8	383	25.8	6	.37

The age and sex distribution of the population in 1934, was as follows :—

	Persons of 10 years of age and over.		Persons under 10 years of age.	
	Males.	Females.	Males.	Females.
British Subjects	4,959	5,984	1,913	1,859
Maltese	58	17		
Aliens in the Town	245	702		
Aliens in the Bay	110			
Totals	5,372	6,703	1,913	1,859

Total Males 7,285; Females 8,562.

2. DEATHS.

The number of deaths registered for the resident Civil population was 225. Five deaths occurred in resident aliens, and of the patients brought in expressly for treatment, 15 died.

The following table shows the crude death rate for the past ten years :—

Year	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
Fixed Population	15.44	16.78	19.05	18.19	16.36	15.60	15.40	16.17	15.99	15.21
Total Population	14.80	16.08	17.27	17.40	15.68	14.50	14.40	15.59	14.94	14.51

3. MONTHLY AND QUARTERLY MORTALITY.

The highest number of deaths occurred in July, and the lowest in August

There is small variation in the quarterly death rates, 66 in the first and last quarters being the lowest, and 68 for the third quarter being the highest.

The number of deaths registered each month was as follows :—

January ... 27	April... .. 27	July 33	October ... 20
February ... 18	May 22	August ... 17	November... 19
March ... 21	June... .. 18	September... 18	December... 27
—	—	—	—
66	67	68	66
—	—	—	—

Causes of deaths in 1934 in Civil population, according
to the International Abbreviated List, with
Age and Sex incidence.

Cause of Death.		All Ages	Under 1 year.		1 year and under 2.		2 years and under 5.		5 years and under 15		15 years and under 25		25 years and under 45		45 years and under 65.		65 years and over.		Deaths in Institutions.
			M F		M F		M F		M F		M F		M F		M F		M F		
			M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
1	Typhoid Fever ...	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
7	Whooping Cough ...	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	Diphtheria ...	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
9	Influenza ...	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
13	Tuberculosis of respiratory system ...	19	—	—	—	—	—	—	—	—	1	3	2	4	5	1	2	1	3
14	Tuberculosis of nervous system ...	3	1	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	1
15	Other Tuberculous diseases ...	2	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—
16	Cancer, Malignant tumours ...	14	—	—	—	1	—	—	—	—	—	—	—	—	3	3	2	5	4
17	Meningitis ...	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
18	Haemorrhage, apoplexy, and softening of brain ...	29	—	—	—	—	—	—	—	—	—	—	1	1	5	5	3	14	10
19	Heart diseases ...	39	—	1	—	—	—	1	—	—	—	—	—	1	11	3	7	15	14
20	Acute bronchitis ...	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1
21	Chronic bronchitis ...	5	—	—	—	—	—	—	—	—	—	1	—	2	—	—	1	1	2
22	Pneumonia ...	19	2	2	2	—	1	1	—	—	1	1	1	2	—	—	6	—	2
23	Other diseases of the respiratory system...	4	—	—	—	—	—	—	—	—	—	—	1	—	2	—	—	1	1
24	Diseases of the stomach ...	3	—	—	—	—	—	—	—	—	—	—	—	—	1	—	2	—	2
25	Diarrhoea and Enteritis (under 2 years) ...	3	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
27	Hernia, intestinal obstruction ...	2	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	1
28	Cirrhosis of liver ...	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
29	Acute and chronic nephritis ...	9	—	—	—	—	—	—	—	—	—	—	—	—	3	3	2	1	2
32	Other accidents of pregnancy and parturition ...	3	—	—	—	—	—	—	—	—	2	—	1	—	—	—	—	—	3
33	Congenital debility and malformations ...	6	4	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	3
34	Old Age ...	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	9	6
35	Violent deaths (suicide excluded) ...	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	1
37	Other diseases ...	43	4	1	—	—	—	—	—	—	1	2	3	2	12	2	6	10	17
38	Diseases not stated or ill-defined ...	3	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	1	1
Totals ...		230	15	6	2	1	2	2	1	1	4	9	10	10	50	18	33	66	77

MATERNITY AND CHILD WELFARE.

Three hundred and eighty-three children were born during the year under review, the highest number since 1929. One hundred and ninety-six were males and one hundred and eighty-seven females. The birth rate was 25.8 per 1,000 of population, the highest recorded since 1905.

The following table, shewing the birth rate for several years past of Gibraltar, England and Wales and Malta, is given for comparison.

Year	England & Wales	Malta	Gibraltar
1924.....	18.8	34.6	22.2
1925.....	18.3	33.3	23.0
1926.....	17.8	32.9	25.2
1927.....	16.6	32.6	22.5
1928.....	16.7	31.7	23.2
1929	16.3	33.2	24.7
1930.....	16.3	34.1	22.4
1931.....	15.8	33.2	23.2
1932	15.3	32.3	22.8
1933.....	14.4	33.4	23.6
1934			25.8

The infantile mortality rate has been maintained low and compares very favourably with that of England and Wales as will be seen from the following table :

Year	England & Wales	Malta	Gibraltar
1922	77	261	103
1923	69	280	109
1924	75	268	91
1925	75	271	83
1926	70	260	107
1927	69	301	99
1928	69	267	121
1929	74	260	46
1930	60	296	71
1931	66	306	61
1932	65	257	60
1933	64	258	39
1934			54

The nurse employed in connection with this service attended at seventeen confinements of persons who were unable to meet the expenses entailed thereby and whose circumstances, in the opinion of the Medical Officer of Health, precluded them from entering the Colonial Hospital. She also visited all cases in the poorer quarters of the Town after childbirth to inquire into the conditions prevailing and to give advice.

The services of this midwife are paid out of a grant made by the Colonial Government—and administered by the Medical Officer of Health—and her duties entail attending on cases of childbirth on the requirement of the Medical Officer of Health, home visiting, and attending at the Welfare Centre for the purpose of weighing, etc., children, giving advice to mothers and issuing milk and other milk foods.

One case of puerperal sepsis was recorded; the patient being removed to hospital where she recovered.

MATERNITY AND CHILDRENS' WARD—COLONIAL HOSPITAL.

One hundred and eighty-eight women were admitted to the ward of the Colonial Hospital during the year, and the number of confinements occurring there amounted to one hundred and seventy-seven.

One hundred and forty-six children were admitted to the Childrens' Ward.

WELFARE CENTRE.

The activities of this Centre have been well maintained, and its popularity is evidenced by the average monthly attendance which has risen from 50 in 1929 to 84 in 1934.

Fortnightly meetings were held throughout the year and in all these children were weighed and their weight recorded; and, in addition, mothers were supplied with milk and food preparations as required, free of charge or at a reduced rate depending on the circumstances of the case, and were given advice as to the care of their infants. Feeding bottles were similarly supplied.

The following table shows the number of attendances, and the milk etc., supplied:—

Average number of children attending	84
Average number of mothers attending	108
Milk issued	5,293 tins.
Food preparations issued (Virol), Glaxo and Lactogen)	82 pots.
Feeders	92

The Welfare Nurse paid 472 visits to the homes of children.

The Nestle and Anglo-Swiss Condensed Milk Company has again supplied milk and certain infant foods, also feeders, at a reduced rate; this assistance is greatly appreciated as the extern maternity, home visiting and welfare centre work depend on a grant from the Colonial Government assisted by the small contributions by mothers for milk, etc., supplied at the Welfare Centre. The possible usefulness of these services, is, therefore not able to be fully developed or explored on account of financial limitations.

MIDWIVES.

The control of midwives is governed by "The Midwives' Ordinance, 1907," and bye-laws made thereunder.

Eight midwives were on the register during the year and all carried out their duties in a satisfactory manner. On no occasion did the necessity for suspension arise.

Inspection of midwives was carried out periodically throughout the year and on all occasions proved satisfactory.

One hundred and seventy-four live births were attended by these midwives, a percentage of 46.2 of the total births.

The number of still-births for the year amounted to thirteen.

SCHOOL CLINIC.

This service is carried out by members of the medical and nursing staff of the Colonial Hospital.

The duties of School Dentist were again undertaken by Mr. Garesse.

**CAUSES OF, AND AGES AT, DEATH OF INFANTS
UNDER ONE YEAR OF AGE IN GIBRALTAR
DURING 1934.**

Cause of Death.	Under 1 week.	1 week and under 2.	2 weeks and under 3.	3 weeks and under 4.	Total under 4 weeks.	1 month and under 3.	3 months and under 6.	6 months and under 9.	9 months and under 12.	Total under 1 year.
Congenital Debility and Malformations	4	—	—	—	4	1	—	—	—	5
Bronchitis	1	—	—	—	1	—	—	—	—	1
Pneumonia	—	—	—	—	—	—	—	2	2	4
Tubercular meningitis	—	—	—	—	—	—	—	—	1	1
Diarrhoea and Enteritis..	—	—	1	—	1	1	—	1	—	3
Whooping Cough... ..	—	—	—	—	—	1	—	—	—	1
Heart Disease	—	—	—	—	—	—	1	—	—	1
Other causes	4	—	—	—	4	—	1	—	—	5
Totals	9	—	1	—	10	3	2	3	3	21

PREVALENCE AND CONTROL OF INFECTIOUS DISEASES.

Three hundred and ninety-four cases of notifiable infectious diseases were reported during the year, of which number 119 were chicken pox and 86 pneumonia.

Consideration was given during the year to a revision of the list of infectious diseases required to be notified in accordance with the Public Health Ordinance, 1907.

In reviewing this question it was decided that the basis on which revision should be made would be—other things being equal—the practicability of control of the particular diseases coupled with the desirability of such from the point of view of public health. After considerable discussion with the various authorities concerned it was decided to omit the following from the list: influenzal pneumonia, pneumonia, gastro-enteritis, and mumps; and to add leprosy, a disease which in the past five years has produced 5 cases.

These amendments came into operation on the 15th October, and the numbers recorded for these diseases in the various tables in this report have been computed to this date.

Six deaths were attributed to one or other of the eight principal infectious diseases giving a zymotic death rate of 37 per 1,000 of population.

The principal points recorded for the year were:—

- (i) The absence of small pox.
- (ii) A small epidemic of diphtheria during the latter part of the year at Catalan Bay. This is commented on fully in the appropriate section of the report.
- (iii) The low incidence of disease over which sanitary control is possible.

QUARTERLY INCIDENCE OF NOTIFIABLE INFECTIOUS DISEASES.
CIVIL POPULATION.

Disease	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total	Deaths
Pneumonia	30	47	7	2	86	19
Enteric Fever	1	1	4	2	8	1
Chicken Pox	78	40	—	1	119	—
Pulmonary Tuberculosis ..	6	8	5	3	22	19
Diphtheria	—	1	—	20	21	1
Poliomyelitis	1	—	—	—	1	—
Mumps	16	50	11	1	78	—
Erysipelas	3	6	8	4	21	—
Measles	1	2	3	—	6	—
Scarlet Fever	1	5	—	11	17	—
Influenzal Pneumonia	—	2	—	—	2	—
Puerperal Sepsis	—	1	—	—	1	—
Gastro-Enteritis	—	2	3	—	5	3
Undulant Fever	—	—	1	—	1	—
Rubella	—	—	1	—	1	—
Disentery	—	—	—	1	1	—
Venereal Diseases	—	—	—	4	4	—
Totals...	137	165	43	49	394	44

CASES LANDED FROM THE BAY OR BROUGHT INTO
THE TOWN FOR TREATMENT.

Disease	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total	Deaths
Pneumonia	3	—	1	—	4	4
Measles	1	—	—	—	1	—
Gastro Enteritis	—	1	1	—	2	2
Enteric Fever	—	—	—	3	3	—
Venereal Diseases	—	—	—	1	1	—
Erysipelas	—	—	—	1	1	—
Totals	4	1	2	5	12	6

Age and Sex incidence of Notifiable Infectious Diseases amongst Civil Population during 1934.

Notifiable Disease.	NUMBER OF CASES NOTIFIED.														Districts.			Total cases re-moved to Hospital		
	At all Ages	Under 1.		1 and under 5.		5 and under 15.		15 and under 25.		25 and under 45.		45 and under 65.		65 and Over.		North.	Central.	South.	Residents.	Non-Residents.
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.							
Pneumonia	86	3	5	14	12	14	12	2	3	7	1	5	3	1	4	7	73	6	—	4
Chicken Pox...	119	—	1	23	12	33	46	2	2	—	—	—	—	—	—	—	109	10	—	—
Mump	78	—	—	7	3	29	28	1	1	4	2	1	—	—	—	3	64	14	—	—
Pulmonary Tuberculosis	22	—	—	5	1	—	1	1	—	2	5	4	6	—	2	13	17	2	—	—
Diphtheria	21	—	—	—	3	—	—	—	1	—	—	—	—	—	—	—	7	1	10	—
Enteric Fever	8	—	—	—	—	—	2	—	3	—	—	—	—	—	—	—	8	—	—	—
Polio-myelitis	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—
Erysipelas	21	—	—	1	—	—	—	—	1	2	—	1	10	2	3	—	19	1	—	—
Measles	6	—	1	—	3	1	—	—	—	1	—	—	—	—	—	—	4	2	1	—
Scarlet Fever	17	1	—	1	8	4	7	—	—	1	—	—	—	—	—	—	15	2	—	—
Influenza Pneumonia	2	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	2	—	—	—
Puerperal Sepsis	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—
Gastro-Enteritis ...	5	2	—	1	—	1	1	—	—	—	—	—	1	—	—	—	5	—	—	—
Undulant Fever ...	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
Rubella	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
Dysentery	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Veneral Diseases	4	—	—	—	—	—	—	1	—	3	—	—	—	—	—	—	3	1	—	—
Totals	394	6	8	52	37	90	102	8	13	20	14	12	20	3	9	24	33	40	12	12

ENTERIC FEVER.

Eight cases occurred during the year, one of which proved fatal.

The cases, with the exception of 3 occurring in September, were distributed throughout the year and, as far as could be ascertained, none was connected with another.

The infection in 5 of the cases was traced to sources outside Gibraltar.

In addition to the above cases, 3 cases were brought into Gibraltar for treatment.

The seasonal prevalency was as follows:—

Month	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Local Cases	1	—	—	—	—	1	—	1	3	1	1	—	8
Imported Cases...	—	—	—	—	—	—	—	—	—	2	—	1	3

DIPHTHERIA.

Twenty-one cases of this disease occurred during the year. One proved fatal.

One case occurred in April and 20 in the last quarter of the year. Of this latter number, 14 occurred at Catalan Bay Village, and one other was a direct contact of a case occurring there.

Following the usual routine all members of the patients' families were examined bacteriologically, and as a result it was found that 19 other children were 'carriers' of the disease. The congested condition of the houses and the free intercommunication between all the inhabitants of this Village made control difficult.

From experience it would appear that in instances of this nature the most effective means of stopping an epidemic would be to remove to hospital the initial case or cases.

The Infants' School at the Village was closed. All elder children attending school at Gibraltar were prohibited from doing so.

Propaganda as to prevention was carried out verbally and by means of pamphlets printed both in English and Spanish pointing out simple preventative measures.

With the exception of a case which was diagnosed late, all the patients responded well to antitoxin treatment.

The Colonial Hospital undertook the treatment of 'carriers.' Unfortunately the limited accommodation at the hospital did not allow of all 'carriers' being retained there, but every effort was made to ensure that these did not come in close contact with other children.

It was not possible to trace the initial source of infection, but judging from subsequent investigation there is little doubt that an undetected 'carrier' among the children can be held responsible for this.

The question of immunising all children against diphtheria in Gibraltar is being considered, and it is hoped that it may be possible eventually to create a general demand for this valuable method of preventing disease. The matter is not so simple as might appear. For many years past the disease has been particularly mild in character, and outbreaks have been small and localised; so that public opinion, as a whole, has not been greatly interested.

DIPHTHERIA ANTITOXIN.

Some 400,000 units of anti-diphtheritic serum were issued by the Public Health Department to the Colonial Hospital and to private medical practitioners during the year.

SEASONAL PREVALENCY

	Jan	Feb.	Mar	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov	Dec.	Total
Local cases ...	—	—	—	1	—	—	—	—	—	9	6	5	21
Imported cases	—	—	—	—	—	—	—	—	—	—	—	—	Nil.

AGE AND SEX DISTRIBUTION.

									Under 5		5 to 15		15 to 25		Total.	
Age	...	...	...	...	...	...	...	...	M	F	M	F	M	F	M	F
Cases	...	...	...	...	...	...	...	...	5	3	7	5	—	1	12	9
Deaths	...	...	...	...	...	...	...	...	—	—	—	1	—	—	—	1

UNDULANT FEVER.

One case of this disease, the first since 1927, occurred during the year. The infection was traced to Spain.

The patient recovered.

SMALL POX.

No cases occurred during the year.

VACCINATION.

The number of vaccinations performed during the year was 551. Of these, 258 were revaccinations on children who had attained the age of 12 years. The Public Vaccinator carried out 526 vaccinations and revaccinations during the year.

The following statistics shew the state of vaccination for births during 1934 :—

Number of children born	383
Died before vaccination	11
Left Gibraltar	53
Certified as insusceptible to vaccination	Nil
Vaccination postponed on medical grounds...	42
Number successfully vaccinated	201
Objectors to vaccination	Nil
Outstanding (under 3 months)	75

— VENEREAL DISEASE.

The treatment centre at the Colonial Hospital continues to deal with cases of this disease, and 47 patients (including 10 mercantile seamen) availed themselves of the facilities offered. Two hundred and eleven intravenous injections were given.

Treatment is give free of charge, and all laboratory investigations are carried out gratis at the City Council Public Health Laboratories.

Venereal disease, though included in the list of notifiable diseases, is not compulsorily notifiable provided the patients are under specific and adequate treatment. The numbers given in the general table of infectious diseases cannot, therefore, be taken as an index of the incidence of diseases of this group.

PULMONARY TUBERCULOSIS.

Twenty-two fresh cases of pulmonary tuberculosis were reported during the year, and this disease accounted for 19 deaths.

The case rate of 1.48 per 1,000 of population is slightly lower than the previous year, but the death rate remains at 1.25.

This disease stands fifth on the list of causes of death even including 'old age,' and there can be little doubt that the number of cases notified does not give a full picture of the extent to which tubercular infection is prevalent.

AGE AND SEX DISTRIBUTION

Age	Under 10 years		10 to 20 years		20 to 30 years		30 to 40 years		40 to 50 years		50 to 60 years		60 years and over		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Cases.....	—	1	—	1	1	3	2	2	1	—	1	4	2	4	7	15
Deaths	—	—	—	1	1	5	1	1	2	—	3	1	3	1	10	9

RABIES.

This subject is treated in the Veterinary Adviser's Report.

ANTHRAX.

A case of anthrax in an employee of H.M. Dockyard on leave in England was reported by the Medical Officer of Health of the Borough of Finchley, and attributed to a cheap shaving brush of Japanese origin purchased in this City.

The whole supply of such brushes in the hands of wholesale and retail tradesmen was traced. Bacteriological examination of samples revealed the presence of *B. anthracis* in a proportion. The public were warned by advertisement, and the dealers agreed to withdraw the supply from the market. A law was also passed prohibiting the importation into Gibraltar of shaving brushes of Japanese manufacture.

No other cases of this infection were reported.

DESTITUTE SICK AND TUBERCULOSIS SCHEME.

The same procedure as outlined in previous reports has been followed during the year, both Outdoor and Indoor relief expenditure being met out of a grant made by the Colonial Government and administered by the City Council under the direct supervision of the Medical Officer of Health.

The forms of relief are the same as in previous years, i.e., Outdoor and Indoor.

OUTDOOR RELIEF.

This provides for cases of tuberculosis who are in poor circumstances and unwilling to enter the Home; for destitute sick, and for necessitous cases generally.

The relief is limited to British subjects resident in the Colony, though cases of sickness and destitution among British subjects resident elsewhere are given the opportunity of entering the Home.

Pecuniary relief, though not encouraged, is given in cases of extreme necessity.

All cases of relief come under the direct scrutiny of the Medical Officer of Health, and his recommendations are considered by the Council before any relief is granted; all cases are reviewed periodically to ensure that the causes warranting the grant continue to exist.

The number of cases, by months, receiving Outdoor Relief during the year was as follows:—

January	94
February	95
March	104
April	102
May	104
June	106
July	115
August	117
September	119
October	117
November	116
December	119

For the past three years the number of families in receipt of Outdoor Relief has risen steadily.

The total amount of relief given in kind was :—

Meat	12,124 lbs.
Milk (Fresh)	9,709 pints.
Milk (Condensed)	7,537 tins.

INDOOR RELIEF.

Accommodation for both sexes is provided in the Home to the extent of Males 53; Females 21. A section of the premises is set apart for cases of tuberculosis.

The Home serves a useful purpose and is the only one of its kind in Gibraltar, other institutions being restricted by religious or other specific regulations which preclude them in many instances from dealing with the type of cases admitted to the Home.

The average number of persons accommodated during the year was 54, of which 6 were cases of tuberculosis.

Special attention is given to the food provided, and although strict economy is exercised, it is ensured that an adequate and substantial diet is served. No complaints were forthcoming from any of the inmates in this regard during the year. A special diet is provided for tuberculosis cases.

The average cost of feeding per head per day was 10½d.

The total all-in cost is calculated at 2s. 0d. per head per day.

The expenditure on Indoor Relief amounted to £1,984 16 9, and the total expenditure on the whole scheme (given in detail below) was £3,178 16 8.

The approximate distribution of relief for the past three years has been :—

	<i>Indoor</i>	<i>Outdoor</i>	<i>Total</i>
1932	£2,732	£944	£3,676
1933	£2,024	£1,017	£3,041
1934	£1,984	£1,194	£3,178

SUMMARY OF INDOOR AND OUTDOOR EXPENDITURE FOR THE YEAR 1934.

INDOOR RELIEF.

	£	s.	d.	£	s.	d.
Provisions	864	3	0			
*Miscellaneous	448	2	2			
Maintenance of Buildings	33	3	10			
Rent	312	19	11			
Light	60	0	1			
Water... ..	66	9	10			
Telephone	12	0	0			
Clothing	180	9	11			
Funeral Expenses	5	18	0			
Insurance	1	10	0			
				£1,984	16	9

Days of subsistence	19,918
Average number of inmates	54
Cost of feeding per head per day	-/10½d.
Cost of feeding per head per year... ..	£16 0 0½
Total all-in cost per head per day... ..	2s. 0d.
Total all-in cost per head per year	£36 15 1½
Calories per head per day	3,254

OUTDOOR RELIEF.

	£	s.	d.			
Meat—12,124 lbs.	353	12	4			
Milk (Fresh)—9,709 pints	120	7	8			
Milk (Condensed)—7,537 tins	127	7	5			
Money grants	198	8	4			
Funeral expenses	2	19	6			
Printing	6	4	8			
				808	19	11
Salaries				385	0	0
Total expenditure on Indoor and Outdoor Relief				£3,178	16	8

* Includes washing, cleansing, coal, charcoal, boot repairs, utensils, ice, medicines, tobacco for inmates, etc., etc.

INVESTIGATION AND PREVENTION OF OTHER DISEASES.

MOSQUITOES.

Mosquitoes were moderately prevalent, especially during the warm season, notwithstanding the continued efforts made for their eradication.

Especially in the tenements of the poorer classes, the storage of fresh water in tubs and barrels for a number of days is a practical necessity; the supervision of these adds to the difficulties of the situation.

It is, however, gratifying to be able to record that improvement, though slow, is certainly apparent, and that a more general interest in this matter is being taken by all members of the community.

In no instance was legal action necessary during the year under review to enforce the measures undertaken.

As in previous years, a small permanent staff was employed on this service throughout the year, this being augmented, as shewn in the following list, during the mosquito breeding season.

- 4 men from 1st January to 31st May.
- 5 men from 1st June to 1st July.
- 9 men from 2nd July to 10th October.
- 3 men from 11th October to 31st December.

The number of tanks inspected during the year to ascertain whether they were properly mosquito proof, was as follows:—

	<i>Inspected</i>	<i>Found defective</i>
Fresh water tanks	408	34
Brackish water tanks	171	15
	—	—
Totals	579	49
	—	—

No species, other than those mentioned in previous reports, were identified during the year.

A summary of the activities in connection with mosquito control during the year is given in attached table.

MOSQUITO CAMPAIGN RETURN FOR 1934

[illegible]

Others include—Pits, gasometer, drinking troughs, washing troughs, catchpits, wells, gullies, fresh water tanks, fire-buckets, galvanized iron baths, old tins, flower pots, vases, bottles, grindstones receptacles, flushing tanks, under-ground tanks, wash-boilers, &c., &c., &c.

SUMMARY.

[illegible]

Total number of premises in which breeding places were found... 240

FLIES.

The weekly disinfection of stables, supervision over early removal of manure, and the double collection of house refuse by the Council during the summer months did much to prevent the undue prevalence of this pest during the years under review.

RATS.

Trapping and poisoning were continued for the extermination of rats, and a detailed account of the results is shewn in the accompanying table. The two rat-catchers employed by the Council continued to attend all complaints, and both rat traps and poisons were supplied free of charge on application.

The usual percentage of rats caught was sent weekly to the City Analyst for examination; in no case was a plague infected rat detected.

Rats destroyed during 1934, by Districts
(not including H.M. Dockyard).

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Town District	236	201	199	201	219	209	223	238	247	237	217	168	2,595
South „	165	131	128	128	142	160	254	241	211	224	194	170	2,148
North „	46	40	37	34	77	71	54	52	81	60	36	40	628
Sheds and Warehouses Waterport Wharf and Commercial Mole	18	3	6	6	8	19	6	8	5	8	3	7	97
Total.....	465	375	370	369	446	459	537	539	544	529	450	385	5,468

Rats examined at City Laboratories during 1934.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Non-Infected	11	9	7	7	9	11	9	9	3	9	8	1	93
Infected	—	—	—	—	—	—	—	—	—	—	—	—	Nil

Number of poisoned baits laid by Rat Catchers during 1934.

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
3,831	3,352	3,606	3,324	3,339	3,205	3,482	3,749	3,654	4,064	3,451	3,139	42,196

Total number of Rats destroyed during 1934.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Civil and Colonial Property } Trapped ...	465	375	370	369	446	459	537	539	544	529	450	335	5,468
} Poisoned...	—	—	—	—	—	—	—	—	—	—	—	—	—
H.M. } Trapped ...	163	145	85	92	82	89	98	115	102	105	87	93	1,256
Dockyard } Poisoned ..	33	15	24	14	28	33	11	12	14	7	17	17	225
Total.....	661	535	479	475	556	581	646	666	660	641	551	495	6,949

MEDICAL WORK OF THE COUNCIL.

The following table shows the number of examinations of workmen, by months, carried out during the year.

January	1
February	3
March	11
April	6
May	9
June	11
July	6
August	5
September	8
October	9
November	6
December	13
	—
	88
	—

As has been stated in previous reports, all prospective employees of the Council are medically examined prior to employment, and a detailed account of any physical defects is attached to the employment sheet.

Workmen injured whilst on duty receive medical treatment at the Colonial Hospital, and the total number of working days lost on this account was 701.

The number of workmen requiring in-patient treatment during the year was 10.

SERA, VACCINES, &c., KEPT IN STOCK.

The following vaccines and sera are kept in stock for issue to the Hospital and to private medical practitioners:—

- Anti-Streptococcus Serum.
- Anti-Anthrax Serum.
- Anti-Meningococcus Serum.
- Anti-Dysentery Serum.
- Diphtheria Antitoxin.
- Anti-Plague Serum.
- Tetanus Antitoxin.
- Cholera Vaccine.
- Anti-Plague Vaccine.
- Compound Catarrhal Vaccine.
- Scarlet Fever Streptococcus Antitoxin.
- Calf Vaccine.

A quantity of Tuberculin (intradermal and subcutaneous) is also kept in stock for issue to the Veterinary Adviser.

DISINFECTION.

The arrangements mentioned in previous reports have been continued during the year, premises and bedding, etc., being disinfected after the occurrence of infectious disease under the supervision of a Sanitary Inspector.

Stables were disinfected weekly during the summer for the prevention of fly breeding.

Bedding introduced into Gibraltar is disinfected prior to entry.

The following table gives in detail the articles disinfected during the year.

Month	Beds and Mattresses	Bolsters and Pillows	Blankets.	Sheets.	Counterpanes	Sundries.	Totals.
January	32	32	26	24	—	63	177
February	46	30	26	19	—	41	162
March	70	78	64	48	1	90	351
April	100	112	91	56	2	93	454
May	95	85	61	52	—	60	353
June ...	41	23	17	3	—	30	114
July	48	23	28	4	—	56	159
August	54	16	6	6	—	56	138
September	90	18	4	8	—	29	149
October ...	92	60	53	31	—	103	339
November	98	72	72	36	—	180	458
December	77	35	31	14	—	60	217
Totals.....	843	584	479	301	3	861	3,071

AMBULANCE SERVICE.

During the year the ambulance service was extended to meet cases of street accidents, conveyance of lunatics and also of persons dying suddenly in the streets, etc.

This necessitated the re-organisation of the duties of motor drivers, and although the present scheme cannot be called ideal it has proved adequate to meet the situation. Telephones have been installed in the premises of both ambulance drivers one of whom is on duty at all hours so that the ambulance is available after working hours on application to the Police.

The number of cases conveyed during the year was as follows :—

	<i>Local Cases</i>	<i>Bay Cases</i>
Pulmonary Tuberculosis	2	—
Leprosy	2	—
Diphtheria	24	—
Pneumonia	2	7
Scarlet Fever	1	—
Enteric Fever	2	1
Erysipelas	1	1
Measles	—	2
Appendicitis	1	2
Street accidents	20	—
Miscellaneous	69	46
	—	—
Total	125	59
	—	—

SANITARY CIRCUMSTANCES OF THE DISTRICT.

Much of the information contained in this section of the Report has been kindly supplied by Mr. W. H. Pearce, M. Inst. C.E., F.S.I., M. Inst. W.E., City and Water Engineer.

WATER SUPPLY.

The supplies and the methods of collection, storage and distribution are as described in previous years with the exception of the important developments noted below.

(a) POTABLE WATER.

The construction of Reservoir No. 7, of one million gallons capacity was completed and the reservoir put in use in December 1934; the storage accommodation has, therefore, been increased from $9\frac{1}{2}$ to $10\frac{1}{2}$ million gallons.

The total quantity of water collected in the Rain Water Reservoirs during 1934 was 12,450,703 gallons, and the supply for the year was as follows:—

To the Shipping	1,407,180 gallons
To the Town, etc.	13,394,250 „

During the dry season further renewals were carried out to the catchment areas on the eastern side of the Rock. These areas are constructed of corrugated iron sheets on timber framing covering a sandslope, and the woodwork has of late years been attacked by white ants (termites) making renewals necessary.

Repairs were also effected to a portion of these areas which had been displaced, and a scheme is being prepared for extensive reconstruction and improvements thereto.

The investigations, borings, and experimental works undertaken by the City Engineer's Department culminated in the year 1934 in the discovery and utilisation of a new underground source of potable water at North Front. The importance of this will be readily realised having in view the difficulties of the water supply problem in Gibraltar and the dependence hitherto on the amount of rain and catchment yield.

In this connection the following works were carried out:—

- (a) A well was sunk tapping the new source of supply.
- (b) A new pump house was constructed, and pumping

and sterilising plant was acquired and erected thereat.

- (c) A shipping reservoir of approximately 40,000 gallons capacity was constructed near Smith Dorrien Avenue, and delivery mains laid therefrom.

These works are designed to cover a testing period of a year or so.

The results of periodical analyses show this water to be fit for dietetic purposes, but as a precautionary measure the water pumped is sterilised by chloramine.

This new source of supply was inaugurated in October 1934, and up to the end of the year the total quantity supplied was as follows:—

To Shipping	607,500 gallons
For other purposes	409,314 „

Further developments are under consideration. The full yield of this new potable water well, No. 8, has not yet been tested; but pumping at the rate of 5,000 gallons per hour has been maintained for considerable periods.

(b) BRACKISH WATER.

During the year 1934, the total quantity of brackish water pumped amounted to 289,743,900 gallons.

The pumping main from Europa Road Pumping Station to Engineer Road reservoir, which was old and had become defective, was renewed.

The gradual renewal of old supply mains and incidental improvements to the supply system continue; a new 9" trunk main from Europa Road Reservoir was laid during the latter part of the year.

(c) BOILER WATER.

The supply during 1934 amounted to 1,392,775 gallons.

Since the discovery and development of the new source of potable water at North Front, the supply of 'Boiler Water' has been discontinued, and water from Well No. 8 is supplied to the shipping for all purposes.

SEWERAGE AND DRAINAGE—SCAVENGING AND REFUSE DISPOSAL.

These systems and their organisation remain as previously recorded.

Repairs and renewals keep them up-to-date, and they function with efficient regularity.

HIGHWAYS.

An improvement was effected in 1934 to the northern portion of Catalan Bay Road between the Refuse Destructor and Sir Herbert Miles Road. The road was widened over a length of 350 yards, and the work involved cutting back the sliding sand bank on the west side and constructing new retaining walls.

PUBLIC BATHS.

The Council maintains a bathing establishment centrally situated in Irish Town containing hot and cold slipper baths, douches, etc.

A sea bathing pavilion is also maintained, and there are in addition two small second class sea bathing establishments.

SANITARY CONVENIENCES.

The Council maintains many public sanitary conveniences in various parts of the City all of which are fitted on modern lines.

HOUSING.

A number of Crown Properties have been remodelled, reconditioned and brought in line with modern conditions, and a block of buildings consisting of three flats was built in the South District.

The work of remodelling and adding to houses by private enterprise, initiated several years ago when improved facilities for reconstruction were given, was actively pursued during the year; and increased and improved accommodation has been provided in many houses. There is, however, a tendency to convert premises which previously consisted of small tenements into residential flats. From one aspect this must be viewed with some concern as it decreases the number of houses available for the working class.

The existence of a considerable Gibraltarian population in La Linea—immediately across the frontier in Spain—(vide page

7 Vital Statistics), a proportion of whom are desirous of returning to reside in the Colony, creates a situation in which flats and tenements of every description are eagerly occupied. It is reasonable to suppose that better class property is more attractive to private enterprise as a business proposition; but it has to be borne in mind that however much the City as a whole, and private enterprise in particular, may benefit by the improvements which are in progress, there still remains a very considerable "slum" population; and there is apparent a definitely urgent need for the rehousing of this population in conditions consistent with modern standards of hygiene at rents possible to their means.

There is in Gibraltar every bit as much necessity for the tackling of this problem as there has been in England; and it cannot be denied that this fact has been recognised for many years.

SUMMARY OF WORK DONE BY SANITARY INSPECTORS DURING THE YEAR 1934.

Complaints received.

Written	2
Verbal	349

Premises inspected.

General inspection	3
Casual inspection	70

Nuisances found.

Defective drains	156
Obstructed drains	321
Defective water closets	281
Defective water closet fittings	390
„ water fittings	346
„ rainwater pipes	112
„ eavesgutters	116
„ roofs	85
„ yard paving	43
Dampness	39
Premises dirty	139
Defective or no dustbin	272
Other minor defects	2,004
Suspected pollution of water in underground tank...	23

Underground tank not insect proof	18
Brackish water tank not insect proof	56
Brackish water running to waste	277
Miscellaneous Services.	
Samples of food and drugs taken for analysis	87
Premises disinfected for infectious disease	160
Premises disinfected for vermin	22
Stables disinfected	613
Articles disinfected at North Front Disinfecting Station	3,071
Visits of enquiry re Infectious Disease	254
Cases removed in Ambulances :	
Local	125
Bay	59
Visits paid to Milk Shops	174
Visits paid to Eating Houses	216
Visits paid to Mineral Water Factories	221
Visits paid to Common Lodging Houses	8
Visits paid to Premises on which notice for abatement of nuisances have been served and are revisited for the purpose of ascertaining if requirements are being complied with	2,062
Notices served in accordance with the Vaccination Ordin- ance, 1887,	397
Legal Proceedings instituted	10

Defects found	4,678
Defects remedied	4,660
Pending on 31/12/1934	18

COMMON LODGING HOUSES.

There is at present one common lodging house in Gibraltar.

Inspections were carried out at intervals and the conditions generally were satisfactory.

No case of infectious disease occurred during the year.

F O O D .

SUPERVISION OF FOOD SUPPLIES.

The routine supervision of restaurants, cafes, eating houses and places where food is sold was carried out by the Council's Sanitary Inspectors, who also undertake the taking of samples of all foods for analysis.

These latter are given in detail in the City Analyst's report which is attached hereto.

The inspection of Market Produce, imported daily from Spain, fish, frozen and fresh meats, etc., is controlled by the staff of the Public Markets.

In no instance was legal action necessary in respect of exposure for sale of unsound food, but the following articles were inspected at the request of owners and destroyed as unfit for human consumption:—

- 70 sacks Onions.
- 5 barrels Olives.
- 20 cases Sausages
- 6,336 tins Condensed Milk.
- 19 lbs. Codfish.
- 1,489 tins Smoked Salmon.
- 217 crates Eggs (156,240 No.).
- 144 lbs. Cheese.

Fish and vegetables were plentiful throughout the year, and the consumption of frozen meats is still on the increase, the quality being far superior to that of the live stock imported from Morocco. A considerable increase is recorded also in the imports of cattle from the Irish Free State and Denmark; these have been, on the whole, of most satisfactory quality.

GIBRALTAR MILK SUPPLY.

The supply of fresh milk is largely dependent on Spain, the amount produced locally being negligible in comparison to the consumption. The price of local milk is also somewhat above that of imported milk due to the poor pasturing places available and, much as this matter has been gone into, the problem of ensuring a local supply to meet demands is still unsolved.

Every effort is made to protect the public from milk which is not of a satisfactory bacteriological standard, the law requiring all imported milk to be boiled in Gibraltar before sale to the public being strictly enforced; and although a number of instances were brought to notice and legal action taken in respect of milks containing a percentage of unboiled milk (in no instance did this exceed 8 per cent.), in no case was the sale of totally raw milk detected. But in this regard it must be remembered that the smallest degree of adulteration is attended with as much possible danger to the consumer as would be complete disregard of the law.

As in former years the examination of all local goats serologically was carried out twice during the year.

The Veterinary Adviser visits all cowsheds and goatsheds at intervals in addition to the periodical inspections carried out by the Sanitary Inspectors.

All milch cows introduced into Gibraltar are inspected and tuberculin tested prior to the milk being made available to the public.

There are now eight milk-shops in Gibraltar the supply of which is mainly imported, and five dealers who supply locally produced milk.

The average amount of milk disposed of daily was as follows:—

	Cows.	Goats.
Imported	338 pints	3,862 pints
Local produce	747 pints	130 pints

About 1,200 tins of condensed milk is the calculated daily consumption in addition to the above.

Bakehouses.

These have continued to operate satisfactorily and have been kept under surveillance by the Sanitary Inspectors.

Delivery by covered handcarts has become the practice in the lower district of the town, but the amount of steps and ramps in the upper portions has rendered this impracticable and there appears to be no alternative to the former method of delivery in baskets. It should, however, be recorded that bakers are eager to fall in with any suggestions made to ensure that the bread is not exposed to contamination.

It is gratifying to note that all bakehouses in Gibraltar now possess modern machinery, and that handling of the unbaked produce has been reduced to the minimum.

There are at present eight bakehouses in Gibraltar, and a certain amount of Spanish bread is also imported for sale.

Ice Cream.

Since the ice cream bye-laws came into operation no disease has been attributable to this cause. These bye-laws prohibit sale in the streets and empower the Medical Officer of Health to limit its manufacture and sale to such places as in his opinion are suited to the purpose. It is now made a condition *sine qua non* that a room must be set apart for the preparation of ices, and that all persons handling them undergo a medical test.

Bacteriological tests were carried out during the year and the results are recorded in the report of the City Analyst.

Markets and Slaughterhouses.

The Public Markets have been maintained in good condition, and the following major improvement has been completed during the year:

The construction of a permanent roof over the flower stalls and main entrance way to the Market hall.

At the Slaughterhouse the surface of the sheep yard has been relaid with tar macadam; the buildings generally have been kept in good condition and repair.

The imports of frozen meat continue to increase, but, with the continued popularity of imported Irish and Danish cattle the actual weight of beef slaughtered during the year was some 78,000 lbs. in excess of 1933, though the number of animals was 380 less.

The amount of frozen meat imported during the past few years is as follows:—

	Beef.	Mutton.	Pork.
1929	11,713	2,885	2,366
1930	54,741	25,380	6,374
1931	96,157	69,926	16,923
1932	228,072	116,099	37,584
1933	377,235	156,030	61,482
1934	436,666	181,839	92,261

The number of animals slaughtered during the year was as follows :—

Cattle	1,512
Sheep	1,278
Pigs	759

The following shows the causes for which carcasses or portions of carcasses were condemned as unfit for human consumption and ordered to be destroyed :—

CATTLE—

	In whole	In part
Cysticercus bovis	3	31
Tuberculosis	6	57
Pericarditis	—	1
Jaundice	3	—
Necrosis (liver)	—	1

SHEEP—

Nil Nil

PIGS—

Tuberculosis	1	71
Pleurisy	—	1

PORT SANITARY ADMINISTRATION.

At the end of October the occurrence of bubonic plague was reported in Tangier. The outbreak was a small one and was evidently dealt with energetically by the authorities. The close trading relations which exist between Tangier and this Colony coupled with the peculiar local conditions here made the event a source of very considerable anxiety.

A large number of persons arrive here from Tangier in transit for other countries. Those intending to reside here for a short time were placed under medical surveillance for six days; the names and destinations of those proceeding direct were notified to the respective Consuls General, and the Ministry of Health in London was kept informed of the situation by telegram and air mail.

The surveillance of travellers in transit from Tangier via Algeciras — which is but half an hour by road and by ferry steamer across the Bay—was made possible in a similar manner by the direct co-operation of the Health Authorities of the latter port which was freely accorded in a most helpful spirit.

Though tourist passenger traffic by the larger shipping lines was temporarily diverted from Tangier, the normal daily communication by a local line was maintained. The assistance of the firm itself, the Chief of Police and H.B.M. Consul at Tangier enabled the Port Health authorities to be completely informed of all movements and to be in control of the situation.

The outbreak was fortunately small and of short duration, and no infection either human or rodent entered the Colony.

AMOUNT OF SHIPPING ENTERING THE PORT OF GIBRALTAR DURING THE YEAR 1934.

		Vessels entered in 1934*	Net Tonnage.	Number inspected.	Left in quarantine	Admitted to Pratique.
British	{ Steam	1,680	5,378,112	14	—	14
	{ Sailing	18	1,219	—	—	—
Total British		1,698	5,379,331	14	—	14
Foreign	{ Steam	2,486	6,115,411	3	—	3
	{ Sailing	2,132	68,856	5	—	5
Total Foreign		4,618	6,184,267	8	—	8
Total British and Foreign...		6,316	11,563,598	22	—	22

* Exclusive of men-of-war, yachts and seaplanes.

REPORT OF THE CITY ANALYST AND BACTERIOLOGIST.

The total number of specimens and samples of all classes submitted to the Public Health Laboratories during the year 1934 was 4,589.

The activities of the laboratories have been maintained and comprised pathological specimens from (1) Colonial Hospital, (2) Military Hospital and Veterinary Department, (3) Navy, (4) General practitioners of Gibraltar, public health specimens (including samples taken under the "Food and Drugs Ordinance" and miscellaneous samples from the City Council, police and the business community.

The number of samples examined and reported on nearly reached the high level of 1930.

A small outbreak of diphtheria at Catalan Bay necessitated the bacteriological examination of numerous swabs, as well as guineapig inoculations for virulency.

The laboratory diagnosis of Leishmania among the hounds of the Royal Calpe Hunt is reported for the first time.

Contagious abortion, a disease of cattle, is reported for the first time in Gibraltar. Br. abortus was isolated from one cow, and two other cows gave positive serological tests for this disease.

The chlorination of water from No. 8 Well by the City Engineer was controlled by repeated bacteriological examinations and estimations of free chlorine.

Experimental work in connection with boiled imported milk was undertaken.

The bacteriological testing of shaving and tooth brushes for anthrax revealed that one cheap variety of shaving brush was contaminated.

Diabetes accounted for a greatly increased number of blood sugar estimations during the year.

The report is divided into four parts as follows:—

Part I—Food and Drugs, Public Health Ordinance.

Part II—Miscellaneous.

Part III—Bacteriology, Chemical Pathology and Public Health Work.

Part IV—Testing of ships for inflammable gas.

PART I.—FOOD AND DRUGS.

The number of samples submitted under this heading was 102.

Of the forty-eight samples of milk which were taken by the Sanitary Inspectors forty were goats' milk and eight were cows' milk. The number of milk samples found to be below the standards set out in the Public Health Ordinance was eleven or twenty-three per cent. For comparison the number below the standard for 1933 was twenty-two or fifty-five per cent.

These include five samples of goats' milk found to contain less than the statutory limit of milk-fat. In these cases the receptacle was marked "skimmed milk" in compliance with the new ordinance, and they cannot therefore be strictly classed as adulterated. One vendor was convicted by Magistrates for addition of water and fat abstraction. Four samples of milk contained 3, 3, 4 and 8 per cent of unboiled milk respectively. Judging by the large proportion of samples which were genuine I consider the standard of vended milk was higher than in previous years.

No sample of milk contained preservative.

In cases where the City Council considered it advisable legal action was instituted.

AVERAGE COMPOSITION OF MILKS.

The average composition of Goats' milk was:—

Milk fat	4.34 per cent.
Non-fatty solids	8.83 per cent.

The statutory limits for goats' milk are, fat—3.5 % ; non-fatty solids—8.0 %

The average composition of Cows' milk was:—

Milk fat 3.48 per cent.

Non-fatty solids 8.56 per cent.

The statutory limits for cows' milk are, fat—3.0 % ; non-fatty solids—8.5 %.

IMPORTED UNBOILED MILK.

No sample of imported milk was found to be wholly unboiled.

In previous reports attention has been drawn to the fact that an occasional sample submitted officially for analysis in the usual way has been found to contain a small proportion of milk which had not been "boiled, pasteurised, or sterilised." Of the twenty-eight samples examined four contained 8, 4, 3 and 3 per cent. of unboiled milk respectively.

It is very desirable that there shall be no addition to boiled milk of even small amounts of unboiled milk. Imported milk is liable to contain the micro-organisms of enteric and Undulant fevers, tuberculosis and dysentery and small amounts of milk containing these organisms would quickly contaminate the whole bulk. The Public Health Ordinance wisely demands that all imported milk shall be "boiled, pasteurised, or sterilised." This matter is under careful consideration with a view of producing conditions under which a more definite control of the milk supply will be possible.

THE ORTOL TEST FOR UNBOILED MILK.

Further experimental work on the Ortol test for the detection and estimation of small quantities of unboiled (raw) milk in boiled milk was done. Varying degrees of red-brick colour are obtained according to the amount of unboiled milk present. The degree of depth of colour obtained when a boiled milk contains from 1 per cent up to 20 per cent can readily be matched if the control admixtures (i.e., boiled milk plus raw milk) are made previously and are ready to receive the Ortol and Hydrogen peroxide at the same time as the sample is tested. It was wondered whether, by heating a raw unboiled milk at any possible temperature and varying the length of time of heating the enzymes (responsible for the deep red-brick colour given by raw milk) could be partially destroyed. This would mean that only a partial red colour would be obtained and mislead the analyst to assume that a percentage of raw milk was present. As applied to Gibraltar conditions where "boiling, pasteurisation, or sterilisation" of imported milk is demanded by law it may be necessary to give evidence on this point in court. I tried to match

the depth of colour given by a boiled milk containing 8 per cent. of unboiled raw milk and found that this was possible by heating raw milk to 73° C. for 10 minutes.

Below are given the results obtained by heating raw milk at different temperatures for varying lengths of time and quickly cooling before adding Ortol and hydrogen peroxide.

Temperature degrees Centigrade	Time of heating Minutes.	Coloured obtained with Ortol and H ₂ O ₂ .
70	30	full, as for raw milk
72	15	full, as for raw milk
72	30	half as for 50% raw milk (approx.)
73	10	partial, as for 8% raw milk
73	20	slight, as for 1% raw milk
73	30	none as for boiled milk
75, 76, 77	25	none, as for boiled milk
75, 76, 77	20	some, as for 2% raw milk
80, 82, 83	10	none, as for boiled milk
80, 82, 83	5	slight, as for 1% raw milk
84	5	none, as for boiled milk
85	1	none, as for boiled milk

The Ortol test does not show whether a milk has been pasteurised (62.8°—65.5° C. for $\frac{1}{2}$ hr. and quickly cooling), and the lowest temperature with 30 minutes heating which gave no colour with Ortol was 73° C.

In conducting these tests 10 c.c. of milk was contained in a test tube and heating took place in a water bath. It was quickly cooled before adding the Ortol ($\frac{1}{2}$ c.c. of 5% solution) and hydrogen peroxide (1-5 drops of 10 vols.). Three minutes were given for colour to develop. Too much H₂ O₂ tends to destroy the colour.

MILKS DEFICIENT IN FAT—SKIMMED.

Of the forty samples of goats' milk received for analysis ten per cent. were below the statutory limit of 3.5 per cent. This is a marked improvement on the figure for the previous year which was 50 per cent. Cases occurred in which seventeen per cent. of milk-fat had been skimmed off. Vendors are now compelled by law to have receptacles, used for the conveyance of skimmed milk, marked in large and legible type with the words "Skimmed milk."

The skimming of milk although now permitted by law is still unsatisfactory in so far as full price is charged to the public for a milk from which the valuable fat content has been partly extracted. Cases have occurred in which milk has been depleted of as much as 50 per cent. of fat. The public should assure themselves that the milk they buy shall be at least up to the statutory limit in fat of 3.5 per cent.

ICE CREAM.

Inspection of the ice creams sold in Gibraltar was undertaken, and four different supplies were bacteriologically examined. The number of bacteria and those of special kinds give an indication of the sanitary conditions and cleanliness precautions observed in their manufacture.

It is not at present practicable to lay down definite bacteriological standards but as a rough guide Buchan has suggested that ice creams made under clean conditions shall

- (1) not contain more than 1,000,000 organisms per c.c. growing at 73° C.
- (2) not contain *B. coli* in less quantity than 0.1 c.c.
- (3) not contain streptococci in less quantity than 0.001 c.c.
- (4) not contain *B. enteritidis sporogenes* in less than 10 c.c.

The results obtained from the four samples of ice cream examined gave the following results:—

	Ice cream No. 1	Ice cream No. 2	Ice cream No. 3	Ice cream No. 4
Total organisms growing at 37° C. per c.c.	41610	110400	2110000	4992000
<i>B. coli</i> .	in 0.1 c.c.	in 0.1 c.c.	in 0.000001 c.c.	in 0.00001 c.c.
Streptococci.	in 0.01 c.c.	in 0.1 c.c.	in 0.1 c.c.	in 0.1 c.c.
<i>B. enteritidis sporogenes</i> .	not in 30 c.c.	not in 30 c.c.	not in 30 c.c.	not in 30 c.c.

Ice creams Nos. 1 and 2 were considered satisfactory but it is seen that samples Nos. 3 and 4 are not up to the desired bacteriological standards.

SPIRITS.

Samples of whiskey, rum, brandy and gin were received and examined. None were found to be diluted below the statutory limit.

OLIVE OILS.

Six samples were analysed and all were found to be genuine. The highest percentage of acidity was 2.82 per cent. and the lowest 0.84 per cent.

GROCERIES.

Samples included tea, coffee, butter, sugar, cheese, lard, chocolate powder, etc. All were genuine.

CONDENSED MILK.

Numerous samples of condensed milk both sweetened and unsweetened and comprising most of the different brands sold in Gibraltar were completely analysed to determine whether they conformed to the new legislation as regards suitable labelling and composition. The labels shall contain, among other things, the appropriate number in words and figures that represents the equivalent in pints of milk contained by each tin.

The second schedule of the condensed milk bye-laws contains the appropriate percentage of fat and milk-solids as specified in the following table.

Description of Condensed Milk.	Percentage of Milk-fat.	Percentage of all milk solids including milk-fat.
1. Full cream, unsweetened.	9.0	31.0
2. Full cream, sweetened.	9.0	31.0
3. Skimmed, unsweetened.	—	20.0
4. Skimmed, sweetened.	—	26.0

Below are results of different brands of condensed milk examined during the year.

	1	2	3	4	5	6	7	8	9	10	11	12	13
Water	23.75	24.87	68.04	24.08	25.87	25.09	24.70	68.85	67.66	68.08	67.22	68.39	74.31
Milk-fat	9.87	9.48	9.24	9.28	9.10	10.16	9.69	9.01	9.51	9.23	9.08	9.84	7.80
Proteins	9.64	9.29	8.75	9.57	9.63	10.36	10.18						
Lactose	12.80	12.81	12.35	11.86	11.45	11.08	11.26						
Cane Sugar	42.07	41.69	—	43.59	42.29	41.55	42.55	—	—	—	—	—	—
Ash	1.87	1.86	1.62	1.62	1.66	1.76	1.62						
All milk solids	34.38	33.44	32.33	32.33	31.84	33.36	32.75	31.15	32.34	31.92	32.78	31.61	25.69
Equivalent pints of milk in tin	—	—	2.04	1.8	1.75	1.9	1.75	2.04	2.10	2.05	2.02	2.03	1.70

No. 13 only is seen to be below the statutory limits in milk-fat and all milk solids.

MARGARINE.

Thirty-seven samples of margarine were examined as to percentages of water, salt, preservative and the melting point of the fat. Below are some of the results obtained:—

Margarine Sample.	Water per cent.	Salt per cent.	Boric Acid per cent.	M.P. of fat.
1	12.34	2.52	0.24	34°C.
2	13.70	2.85	0.21	34°C.
3	12.62	2.80	0.14	34°C.
4	12.08	4.00	0.20	34°C.
5	13.56	8.04	0.32	34°C.
6	13.10	2.68	0.14	34.5°C.
7	12.90	9.24	0.12	34.5°C.
8	12.24	4.02	0.16	34.0°C.
9	13.04	8.08	0.58	34.5°C.
10	12.40	3.12	0.12	34.0°C.
11	14.77	2.86	0.23	26.0°C.
12	15.14	3.22	none	30.0°C.
13	13.00	3.02	0.33	32.0°C.
14	13.42	2.95	0.54	31.5°C.

Of the seventeen samples of margarine which were taken under the Public Health Ordinance, all were genuine in composition, and in no case did the water exceed 16 per cent. One sample was wrapped in paper not marked with the word MARGARINE. The vendor was cautioned by the Magistrates and ordered to pay £1 Solicitors' fees and 3/- costs. In four other samples although they were labelled "margarine" the lettering was smaller than that demanded by the Ordinance.

PART II.—MISCELLANEOUS.

Samples received for analysis and report under this heading numbered 153 and were as follows :—

- 5 Samples of Coal—for analysis and estimation of calorific power from City Electrical Engineer.
- 1 Sample of water—if suitable for boilers from E.E.
- 11 Samples of condensed milks—analysis for R.A.S.C.
- 1 Sample of drugs—suspected narcotic for identification, for Chief of Police.
- 1 Sample of calculus—nature of
- 1 Sample of tooth—identification of material attached.
- 1 Sample of dentifrice—for analysis, private sample.
- 1 Sample of Sugar—for analysis and purity, private sample.
- 1 Sample of boiler water—for hardness, from Crown Surveyor.
- 24 Samples of cows' milk—some for presence of tubercle bacilli, and others for cause of mastitis from Veterinary Surgeon and M.O.H.
- 6 Samples of Tooth brushes } bacteriological tests and for
- 3 Samples of shaving brushes } presence of anthrax bacilli.
- 1 Sample of Petrol—examination (chemical)
- 1 Sample of knife } to detect presence of blood,
- 6 Samples of articles of clothing } from Chief of Police
- 1 Sample of wood shaving—to determine if damaged by sea water or rain.
- 2 Samples of First Field dressing—bacteriological examination for sterility.
- 5 Samples of spleen
- 5 Samples of Liver } of hounds—bacteriological
- 1 Sample of bone marrow } examination.
- 1 Sample of drum of dressings—for sterility.
- 8 Samples of extract of malt—bacteriological investigation of each.
- 12 Samples of dipping fluid—for estimation of arsenical content.
- 1 Sample of standard sulphuric acid prepared.
- 8 Samples of milk—for experimental work.
- 8 Samples of milk—to determine the percentage of raw milk present.
- 20 Samples of Margarine—for analysis, for military authorities.
- 8 Samples of cows' blood—serological tests for Br. abortus infection.
- 8 Samples of cows' milk—bacteriological, for Br. abortus.
- 1 Sample of urine—detection and estimation of morphine.

CHLORINATED WATER NO. 8 WELL, N.F.

Experimental chlorination of this water supply was brought to a successful conclusion, and was undertaken by the City Engineer. During the trials numerous analyses of the chlorinated water, both bacteriological and for the estimation of free chlorine, were undertaken as a guide and control. The object of chlorination is to kill all existing micro-organisms with the least possible effectual amount of chlorine. The resulting water should contain so little free chlorine that it neither tastes or smells of this element. The process of chlorination is not a new discovery. It has been in general use, having been thoroughly tested and approved, throughout the world. An analysis of this water as supplied for drinking purposes (13-2-35) is given below. The supply will be tested periodically just as is the case with the other public supplies of the "Rock".

B. coli not present in 50 c.c.

*Total organisms growing at 37° C.....	20 per c.c.
Total chlorine	14.2 parts per 100,000
Free chlorine	0.44 parts per million
Total solid residue	36.7 parts per 100,000
Lime in terms of calcium carbonate	12.7 parts per 100,000
Magnesia in terms of magnesium carbonate ...	4.4 parts per 100,000

*Harmless organisms having gained access since chlorination. They have no significance. The sample received had no smell or taste was clear and bright and may be considered bacteriologically pure suitable for drinking and all domestic purposes. The mineral salts are liable to vary a little from time to time.

HOUNDS OF THE ROYAL CALPE HUNT.

Of professional interest this year is the laboratory diagnosis of Leishmania (canine Kala Azar) which annually attacks the hounds with high mortality. The general symptoms are extreme emaciation with sometimes hysteria resembling rabies. There were no skin ulcers (oriental sore) as in *L. tropica*. The absence of these has made clinical diagnosis uncertain. Death results either directly from the disease, or secondarily, from pneumonia. The latter was the commonest as most of the hounds had received injections of Tryparsamide to arrest the disease. In previous

years piroplasmosis, a blood disease, was suspected but repeated blood examinations invariably proved negative. The *Leishmania* parasite in the present form of the disease is only rarely found in the blood but is chiefly situated in the liver, spleen, and bone marrow. The examination of a spleen smear of a dead hound which had not received Tryparsamide revealed *Leishman* Donovan bodies. These were confirmed at Dublin Veterinary College.

It is of interest to note that spleen smears of hounds that had received Tryparsamide failed to show the parasite, and it is not unreasonable to suppose that this drug kills the parasite which becomes disintegrated and lost to the microscope (c.f. malaria and quinine). With regard to the vehicle of infection investigators have produced strong evidence that the disease is conveyed by the Sandfly (genus, *Phlebotomus*) for Oriental sore. Other insects have also been suspected such as ticks, lice, fleas and other flies. Just how the hounds contract the disease in Gibraltar is still unrevealed. Working independently by elimination it seems that ticks, fleas, and lice are not responsible. I am able to say that the hounds have received systematic weekly dipping in a bath of sodium arsenite containing 0.10 per cent. of arsenious oxide, during the summer months. Although many ticks, fleas, and lice were found on them in previous years there were none as the result of dipping yet the disease occurred as usual, and then hounds succumbed. The kennels are in close proximity to the cattle sheds where flies are very numerous and in the absence of the sandfly it is reasonable to suspect some variety of fly.

The beagles are kennelled elsewhere in Gibraltar and remain free from the disease. It would be of interest to learn the result of moving the hounds to a healthier place during the disease season. A note on the effect of arsenical dipping is here recorded. The hounds for a time stood the dip well. Ticks, fleas and lice were not found on them and they were healthier and happier on this account. After weekly immersion for 2½ months one or two small areas of skin corrosion appeared, which quickly yielded to treatment. The commonest site was the scrotum. The bath was kept at constant strength of 0.10 per cent. of Arsenious oxide, regulated by weekly analysis. *Leishmania* in dogs, i.e., the canine Kala Azar of Mediterranean countries, is thought to be distinct from the *Leishmania tropica* (Oriental sore) of man.

Faeces; bacteriological, for Enteric and Dysentery organisms, etc.	120
Breast milks; chemical analysis	28
Rats; examination for Plague	91
Histological; cutting, fixing & staining sections	4
Gastric contents; including fractional test meals	56
Guinea pig inoculations; virulence test of K.L.B., T.B., etc.	15
Autogenous vaccines; prepared	32
Stock vaccines; diluted	22
Miscellaneous specimens; ring worm, calculus, tape-worms, etc.	18
Total	4,330

ANIMAL INOCULATIONS.

These were chiefly confined to determining the virulence of diphtheria germs. Twelve cultures were tested. Two specimens of urine were examined by this method for the presence of tubercle bacilli. One culture of *Enterococcus*, which was present in large numbers in the stools of a case of enteritis in a child had no effect on the guinea pig.

TUBERCLE BACILLUS.

A variety of specimens were submitted for examination for tubercle bacilli—sputa, cerebro-spinal fluids, pleural fluids, urine, faeces, pus and cows' milk. Of the 128 specimens of sputum examined 27 contained this organism. These include the re-examination of treated cases.

The milk of cows on the "Rock" was tested periodically for tubercle bacilli with negative results.

VENEREAL DISEASE.

The usual routine examinations of blood and cerebro-spinal fluids by Wassermann reaction, sera from primary sores for the presence of *Treponema pallidum* by the dark ground illumination method, and pus smears for gonococci were undertaken. Of the 429 bloods for Wassermann reaction 66 were positive, and of 51 smears examined for gonococci 14 were positive.

Urine specimens and smears obtained after prostatic massage were also examined for gonococci in some instances. The Wassermann reaction, in preference to the Sigma test, is practised as it is more universally understood when interpreting results.

DIPHTHERIA.

In the examination of throat swabs only the true Klebs-Loeffler bacillus is considered. Of the large number of swabs (638) examined twenty-one were new positive cases occurring chiefly at Catalan Bay. *C. diphtheriae* was also found in thirteen contact swabs. Beaded, barred, and the minuta forms of the organism were met with. Eight of the twelve cultures from throat swabs were found to be fully virulent, of these, six were contact swabs. The guinea pig inoculation virulence test is resorted to when patients persist in carrying the germ in spite of treatment.

MALARIA.

Blood smears of twenty patients were examined for malarial parasites. Eight were reported positive. These were chiefly imported cases from shipping.

DYSENTERY.

Many stools were submitted for bacteriological evidence of the type of organism causing this condition. Cases of bacillary dysentery were due to *B. dysenteriae* Flexner, and the types encountered were "Sonne," "Polyvalent," "Strong" and "Schmitz" (*B. ambiguus*). The amoebic form of dysentery was not met with during the year. All stools were microscopically examined for the presence of pus and blood. Most of the stools received were diarrhoeal in character in contrast to the true dysentery stool containing blood and pus.

ENTERIC AND UNDULANT FEVERS.

All human blood specimens which required agglutination tests were examined for typhoid ("O" and "H"), the paratyphoids "A" and "B" and for *Br. melitensis*. The formolised standard emulsions of these organisms continue to give satisfaction and can be relied upon. Standardised emulsions are particularly useful for inoculated patients, when, repeating the test later, an increase of blood agglutinins is depended on for a diagnosis. The inclusion of the non flagellated typhoid "O" type has resulted in detecting a form of enteric fever which otherwise would have been missed. Of the numerous bloods examined 16 agglutinated for *B. typhosus* "H"; 6 for *B. typhosus* "O"; 16 for *B. para-typhosus* "B" and 4 for undulant fever. The stools and urines of convalescent patients are examined as a precautionary measure to determine whether they have become "carriers" of the organism. The widal agglutination test is also undertaken on persons about to be employed in handling food such as milk vendors, water sellers, cooks, etc., as an indicator of the "carrier" state in enteric fever.

BLOOD SUGAR ESTIMATIONS AND SUGAR TOLERANCE TESTS.

During the year 314 estimations of blood sugar were done. These were chiefly individual tests made on diabetic patients periodically for guidance in Insulin treatment. Complete sugar tolerance tests were done on 3 patients for the diagnosis of diabetes. All patients attend the laboratory. The results of these three patients are given below in detail. Maclean's method has been found very satisfactory.

Patient	Blood Sugar before giving 50 gms. glucose %	Blood Sugar (%) after taking sugar.				
		$\frac{1}{2}$ hr.	1 hr.	1½ hrs.	2 hrs.	2½ hrs.
1	0.109	0.141	0.140	0.115	0.109	
2	0.100	0.231	0.241	0.246	0.187	0.165
3	0.100	0.193	0.196	0.102	0.081	

Patient 1. No urine sugar before or after the test—no evidence of diabetes.

Patient 2. Sugar in urine before the test was 10.3 gms. per litre, and 35.7 grams per litre after the test. This patient showed the poor sugar storage of a true diabetic.

Patient 3. No sugar in urine before or after the test, normal rate of storage of sugar, no evidence of a diabetic condition.

RATS.

Ninety-one of the rats which were trapped on the quayside were examined for plague. All were free.

GOATS.

The serological agglutination test was carried out as usual on the 103 goats living on the "Rock." All gave negative results for undulant fever.

RENAL EFFICIENCY TESTS.

In connection with kidney diseases the efficiency of the kidneys in eliminating the waste nitrogenous products (urea) of the body is gauged by two methods (i) Urea concentration factor, (ii) Urea concentration test.

UREA CONCENTRATION FACTOR.

Estimations of blood urea and urine urea are done at the same time. The ratio of one to the other gives the number of times the kidneys are able to concentrate in the urine the urea of the blood. The normal concentration is about 70 times or even more.

This test for kidney efficiency was conducted on 34 patients.

Four of the results are given below showing variations observed in different patients.

<i>Case.</i>	<i>Blood Urea (mgms. in 100 c.c.)</i>	<i>Urine Urea (mgms. in 100 c.c.)</i>	<i>Urea concentration factor (Macleay).</i>
1	28.5	3200	112.0—very efficient
2	115	450	3.9—Very poor
3	29	1900	65.5—slightly below normal
4	41	2200	53.6—medium effi- ciency - just below normal

Urea Concentration Test.

The amount of urea in the urine is determined one hour and again two hours after the patient has taken 15 grams of urea dissolved in a half tumbler of water. In normal conditions 2.5 per cent. or over is to be expected.

The test was carried out on 9 patients

MENINGITIS.

There was only one case of this condition due to the meningococcus. All of the nineteen post-nasal contact swabs which were examined bacteriologically for this organism were negative.

The tubercle bacillus was also found in the cerebro-spinal fluid of another case of meningitis and two others pointed strongly to a tubercular condition.

On each specimen of cerebro-spinal fluid received enumeration of white cells, with estimations of sugar, globulin and the bacteriological examination for organisms, is conducted. In no instance was the C.S.F. positive for the Wassermann reaction.

PLEURAL FLUIDS.

Of the three pleuritic fluids received one contained pneumococci. Another patient's fluid with numerous small lymphocytes pointed to a tubercular infection. The third contained 2,937 white cells per c.c. of which 60 per cent. were polymorphonuclear cells, 25 per cent. were small lymphocytes, and 15 per cent. were eosinophiles. Amoebæ, T.B. and actinomycosis were not found. Micro-organisms by culture were absent.

Cytological, and bacteriological examinations are carried out on all pleural fluids received.

ANTHRAX.

Smears of blood were taken from horses, mules and cattle which had died suddenly showed no anthrax bacilli.

Samples of tooth brushes purchased from shops contained no anthrax bacilli and were found to be sterile.

Shaving brushes were also examined for *B. anthracis*. One sample was found to be infected and the consignment was withdrawn from sale.

VINCENT'S ANGINA.

This ulcerative condition of the throat was not prevalent, but all swabs of suspicious throats which were negative for diphtheria were systematically examined for Vincent's organisms.

GASTRIC DISORDERS, AND FRACTIONAL TEST MEALS.

The analysis of gastric contents in the laboratory diagnosis of gastric ulcer, carcinoma, hypersecretion, etc., were undertaken. This examination entails the estimation of free hydrochloric acid, and total acidity, and the detection of blood, pus cells, bile, starch and mucus in each specimen before and every fifteen minutes after taking the meal. From each patient 13 specimens are taken. In each case a curve is plotted showing the percentages of free hydrochloric acid and total acidity in relation to the fifteen minutes interval.

In all 56 gastric contents were examined.

DRINKING WATERS AND OTHERS.

Constant supervision of Gibraltar's dietetic waters necessitates numerous bacteriological examinations. The City's public supply was tested monthly (each reservoir separately). It

remained unpolluted during the year. A large number of houses collect rain water in their own private underground tanks. If contamination be suspected a sample is referred to the laboratories, military private tanks are systematically examined yearly. The 351 samples received were as follows:—Willis's Road Reservoirs 48; Governor's Parade Fountain 9; Brackish Water 9; Sea Water 9; Well at North Front 68; Watering Jetty water 31; Catalan Bay Well water 18; Private tanks 159.

DISTILLED WATER.

Distilled water received from Colonial Hospital—	720 galls.
Distilled water sold to the public	—534 galls.
Distilled water used in the laboratories	—186 galls.

VACCINES.

Autogenous Vaccines—These were prepared chiefly in cases of cystitis, eczema, and nasal and bronchial catarrh at the request of medical practitioners for their private patients. Thirty-two of these were prepared and dispensed in ampoules containing varying increasing doses.

Stock Vaccines—Twenty-two were diluted according to the desire of doctors.

DISTRIBUTION OF SPECIMENS.

From the Colonial Hospital 948; from Military Authorities 590; from Naval Authorities 186; from Spain 70; and from Civil, i.e., general public and City Council 2,795. Total 4,589.

NOTIFIABLE DISEASES.

The table given below shows the nature and number of specimens examined and results obtained in connection with notifiable, and venereal diseases.

	<i>Total</i>	<i>Positive</i>
Blood, Wassermann reaction	429	66
Pus for Gonococci	51	14
Sputum for Tubercle bacillus	128	27
Swabs for Diphtheria	638	109
Serum, for Tr. pallidum	7	3
Cerebro-spinal fluid (Meningococcus)	13	1
Smears for Malaria	20	7
Blood Widal—for Enteric & Undulant fevers:—		
B. typhosus "O"		6
B. typhosus "H"		16
Para-typhosus A	193	0
Para-typhosus B		16
Br. melitensis		4

Faeces—for Dysentery		
B. dysenteriae Flexner Polyvalent		2
B. dysenteriae Flexner Sonne	12	2
B. dysenteriae Flexner Ambiguus		1
tubercle bacillus		1

PART IV.—TESTING OF SHIPS.

The City Analyst is entrusted with the testing of compartments of oil carrying tankers and others for inflammable and poisonous vapours. Gas free certificates are necessary before ships of this class enter dry dock for repairs. The main tanks, engine room, cofferdams, and summertanks are tested. Two ships were examined.

A. GEO. HOLBOROW, F.I.C.

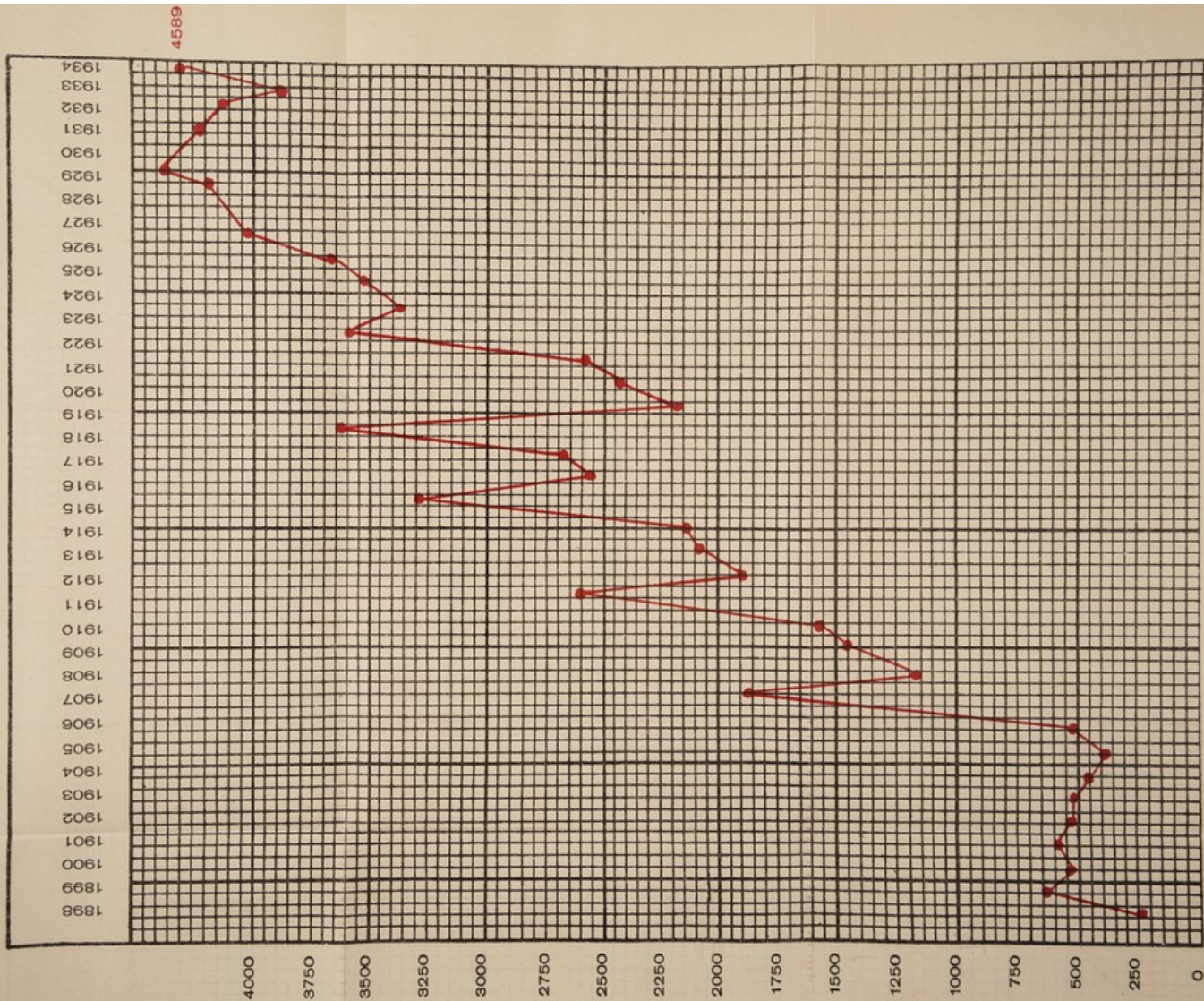
City Analyst and Bacteriologist.

DISTRIBUTION OF SPECIMENS.

Nature of Specimen.	Civil.	Spain	Military.	Navy from Military Hospital.	Navy.	Colonial Hospital.	Total.
Blood, Wassermann ...	163	5	32	7	74	143	429
Blood, Widal ...	111	...	48	10	...	24	193
Blood, Count ...	48	2	1	...	1	13	65
Blood Smears ...	10	1	1	...	1	7	20
Blood Sugar ...	92	3	5	...	...	214	314
Blood Urea ...	20	...	4	4	...	9	37
Blood Culture ...	2	...	16	8	...	2	28
Blood calcium ...	1	...	1	...	...	...	2
Blood, Van den Bergh ...	...	...	1	...	1	2	4
Blood Goats' for Br. M. ...	103	...	...	...	...	...	103
Fæces ...	40	2	40	20	...	18	120
Urine Concentration test ...	30	...	...	1	...	13	44
Urine analysis ...	1039	49	55	26	11	290	1470
Sputum ...	69	...	3	1	3	52	128
Cerebro-spinal fluid ...	...	...	1	4	...	8	13
Pleural fluid ...	1	...	...	...	...	3	4
Serum from V.S. ...	1	...	...	...	6	...	7
Swabs for K.L.B. &c ...	444	3	28	9	20	134	638
Stock Vaccine ...	13	...	1	...	7	1	22
Autogenous vaccines ...	19	2	9	...	2	...	32
Gastric contents ...	4	...	26	26	...	...	56
Pus ...	39	...	8	1	7	12	67
Coal ...	5	...	...	...	...	...	5
Waters ...	215	3	108	...	22	3	351
Guinea pig inoculation ...	10	...	2	2	1	...	15
Rats for Plague... ..	91	...	...	...	...	...	91
Food and Drugs Act ...	102	...	...	...	...	...	102
Other foods, & drinks, ...	59	...	43	...	2	...	104
Breast milk ...	28	...	...	...	...	...	28
Histological ...	1	...	3	...	...	...	4
Post-nasal Swabs ...	...	...	...	7	20	...	27
Miscellaneous ...	30	...	27	1	8	...	65
Total ...	2,795	70	463	127	186	948	4589

CITY COUNCIL OF GIBRALTAR.

CHART SHOWING NUMBER OF SAMPLES ANALYSED PER ANNUM SINCE THE YEAR 1896.



RESULTS OF MONTHLY ANALYSES OF
GIBRALTAR DRINKING WATER—1934.

Date	Chlorine (parts per 100,000).	B. Coli
Jan. 31	1.0	B. coli not found in 25 c.c.
Feb. 20	1.0	B. coli present in 2. c.c.
Mar. 29	3.3	B. coli not found in 25 c.c.
May 1	3.4	B. coli present in 10 c.c.
June 1	2.6	B. coli present in 10 c.c.
July 2	3.0	B. coli not found in 25 c.c.
Aug. 17	2.0	B. coli not found in 25 c.c.
Sept. 24	3.8	B. coli not found in 25 c.c.
Dec. 4	1.4	B. coli present in 10 c.c.
Average ..	2.3	

RESULTS OF MONTHLY ANALYSES OF BRACKISH WATER, 1934

Samples obtained from main in Governor's Street

Date	Chlorine (parts per 100,000).	B. Coli
Jan. 31	650.0	B. coli present in 0.1 c.c.
Feb. 20	680.0	B. coli present in 0.1 c.c.
Mar. 29	600.0	B. coli present in 0.1 c.c.
May 1	650.0	B. coli present in 1 c.c.
June 1	630.0	B. coli present in 0.1 c.c.
July 2	690.0	B. coli present in 0.1 c.c.
Aug. 17	670.0	B. coli present in 0.1 c.c.
Sept. 24	800.0	B. coli not found in 25 c.c.
Dec. 4	730.0	B. coli present in 0.1 c.c.
Average ...	677.0	

RESULTS OF MONTHLY ANALYSES OF SEA WATER—1934.

Date.	Chlorine (parts per 100,000).	B. Coli.
Jan. 31	2,220.0	B. coli not found in 25 c.c.
Feb. 20	1,870.0	B. coli present in 2 c.c.
Mar. 29	1,890.0	B. coli present in 0.1 c.c.
May 1	2,070.0	B. coli present in 1 c.c.
June 1	2,010.0	B. coli present in 0.1 c.c.
July 2	1,910.0	B. coli present in 0.1 c.c.
Aug. 17	2,010.0	B. coli present in 0.1 c.c.
Sep. 24	2,080.0	B. coli present in 2 c.c.
Dec. 4	1,990.0	B. coli present in 0.1 c.c.
Average ...	2,005.0	

RESULTS OF MONTHLY ANALYSES OF WELL WATER—1934.

SAMPLES TAKEN AT NO. 5 WELL, NORTH FRONT.

Date	Chlorine (parts per 100,000).	B. Coli
Jan. 31	8.0	B. coli present in 0.1 c.c.
Feb. 20	7.6	B. coli present in 0.1 c.c.
Mar. 29	4.0	B. coli present in 0.1 c.c.
May 1	4.0	B. coli present in 0.1 c.c.
June 1	4.4	B. coli present in 0.1 c.c.
July 2	4.0	B. coli present in 0.1 c.c.
Aug. 17	4.0	B. coli present in 0.1 c.c.
Sept. 24	3.8	B. coli present in 5 c.c.
Dec. 4	3.1	B. coli present in 0.1 c.c.
Average ...	4.7	

REPORT OF THE VETERINARY ADVISER.

The only contagious diseases occurring amongst the animals of the Colony during the year under review were three cases of rabies and one case of contagious abortion.

Details of these cases are embodied in the Report.

Horses and Mules.

Fourteen horses were imported into the Colony during the year and were examined on landing and found free from disease. Their countries of origin were :—

Tangier	10
England	2
Casablanca	2

There were, in addition, a number of horses and mules imported by land from Spain, but no records are kept of these imports.

Horses examined prior to export and their destinations were :—

England	6
Tangier	3

In addition, two donkeys were exported, one to England and one to South Africa.

There were no cases of contagious disease in civilian or military animals.

Cattle.

The number imported and their country of origin were :—

	Spain	Morocco	Denmark	Ireland
Cattle	84	845	399	374
Sheep	1,243	6	—	87
Pigs	153	666	—	20

These animals were inspected on landing and were generally in good condition. One consignment of Irish cattle, however, which encountered rough weather on the voyage had a number of animals suffering from minor injuries.

No cases of foot and mouth disease occurred during the year.

Exports of cattle during the year were :—

	To Morocco	To Shipping
Cattle	153	—
Sheep	—	43
Pigs	—	5

Milch Cows and Goats.

All milch cows and goats were inspected during the year and found in a satisfactory state of health.

Newly imported milch cows and any cows showing clinical symptoms or species of tuberculosis were tested with tuberculin. Eight positive cases were slaughtered during the year and the diagnosis confirmed by post mortem examination.

One case of contagious abortion in a cow occurred during the year, the disease being confirmed by serological test. The owner was instructed to boil all milk from the affected animal before sale and periodical tests were made until the milk was found to be free from *B. abortus*.

Dogs, Cats, etc.

Three cases of rabies were recorded during the year, two dogs and one cat. The cases occurred at intervals in January, July and September, and were confirmed by pathological examination of the brain at the Institut Pasteur du Maroc, Tangier.

The policy of keeping under observation all dogs and cats biting or scratching persons was continued during the year and on this account 29 dogs and 30 cats were detained at the observation kennels for periods varying up to 15 days according to the recommendations of the Veterinary Adviser.

The Muzzling Order was continued in force throughout the year and is no doubt the chief deterrent to the spread of rabies in the Colony.

Details of the dogs and cats undergoing isolation, etc., were :—

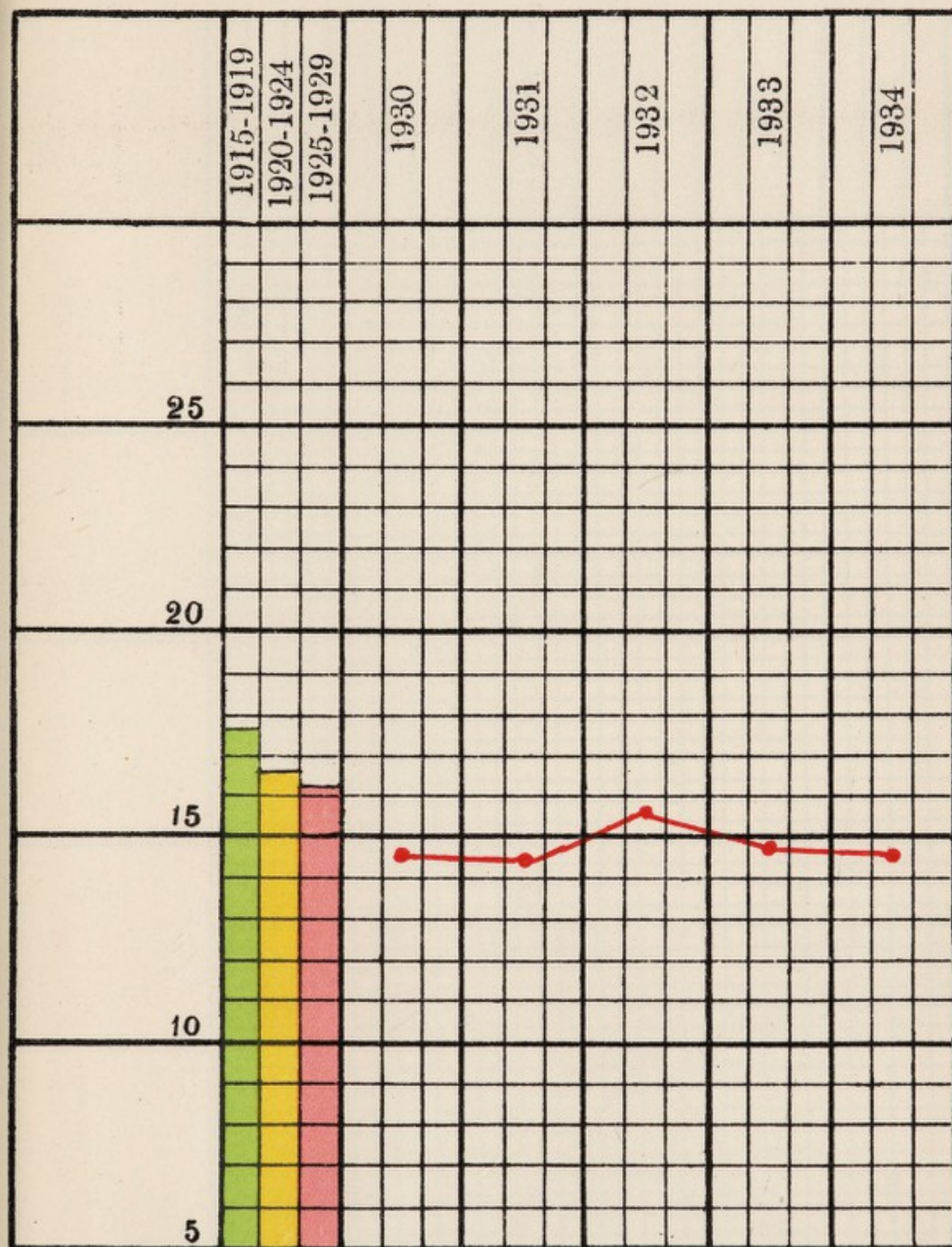
	Dogs	Cats
(a) Number detained for isolation owing to having bitten persons or animals	29	30
(b) Number destroyed	62	351
(c) Number imported from the United Kingdom without undergoing quarantine.....	11	Nil
(d) Number imported from other countries which underwent quarantine of six months or less	6	Nil

E. S. W. PEATT,

Major, R.A.V.C.

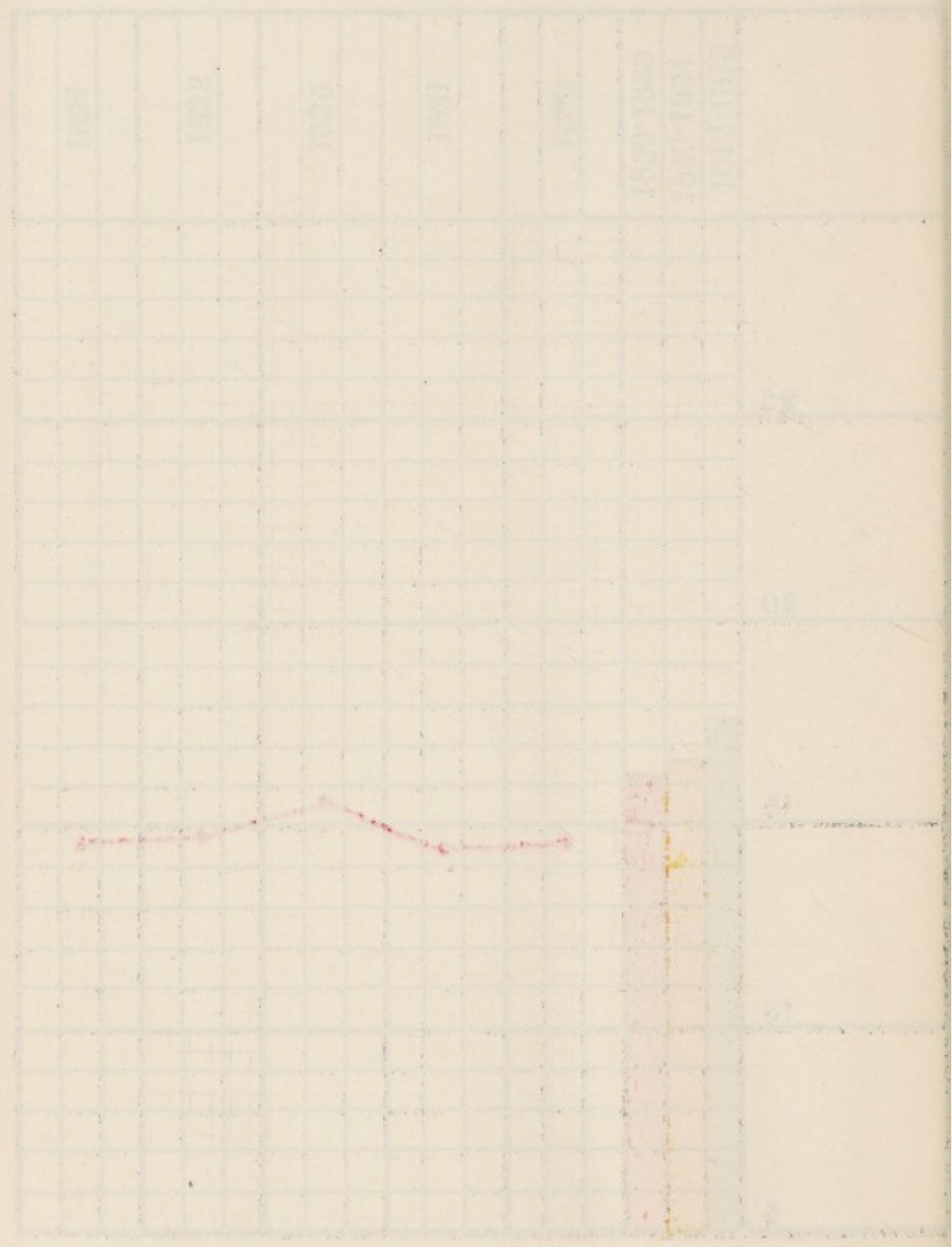
Veterinary Adviser to the City Council.

General Death Rate per 1,000 of Population (Total Civil)
Gibraltar, for the Decennial Periods
1915-1924 and 1925-1934



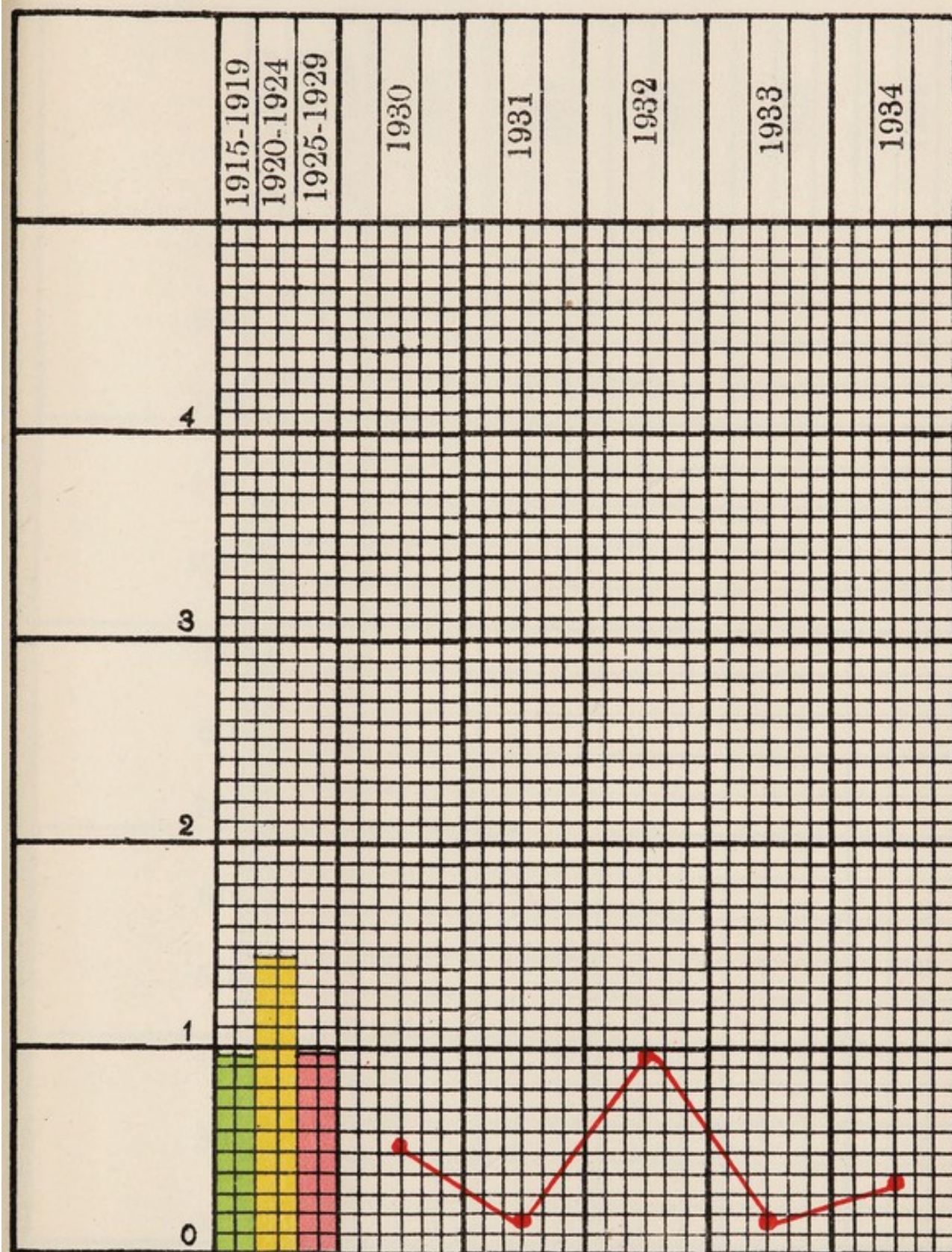
Average {	1915-1919	....	17.59	1925-1929	....	16.24
	1920-1924	....	<u>16.68</u>	1930-1934	....	<u>14.79</u>
	1915-1924	....	<u>17. 1</u>	1925-1934	....	<u>15. 5</u>

Figure 2 Death Rate per 1,000 of Population (Total Crude)
 Graphical for the Biennial Periods
 1915-1934 and 1935-1934



1915-1916	14.5	1917-1918	15.5	1919-1920	14.5	1921-1922	13.5	1923-1924	12.5	1925-1926	11.5	1927-1928	10.5	1929-1930	9.5	1931-1932	8.5	1933-1934	7.5
1915-1916	14.5	1917-1918	15.5	1919-1920	14.5	1921-1922	13.5	1923-1924	12.5	1925-1926	11.5	1927-1928	10.5	1929-1930	9.5	1931-1932	8.5	1933-1934	7.5

Zymotic Mortality per 1,000 of Total Civil Population,
Gibraltar, for the Decennial Periods
1915-1924 and 1925-1934



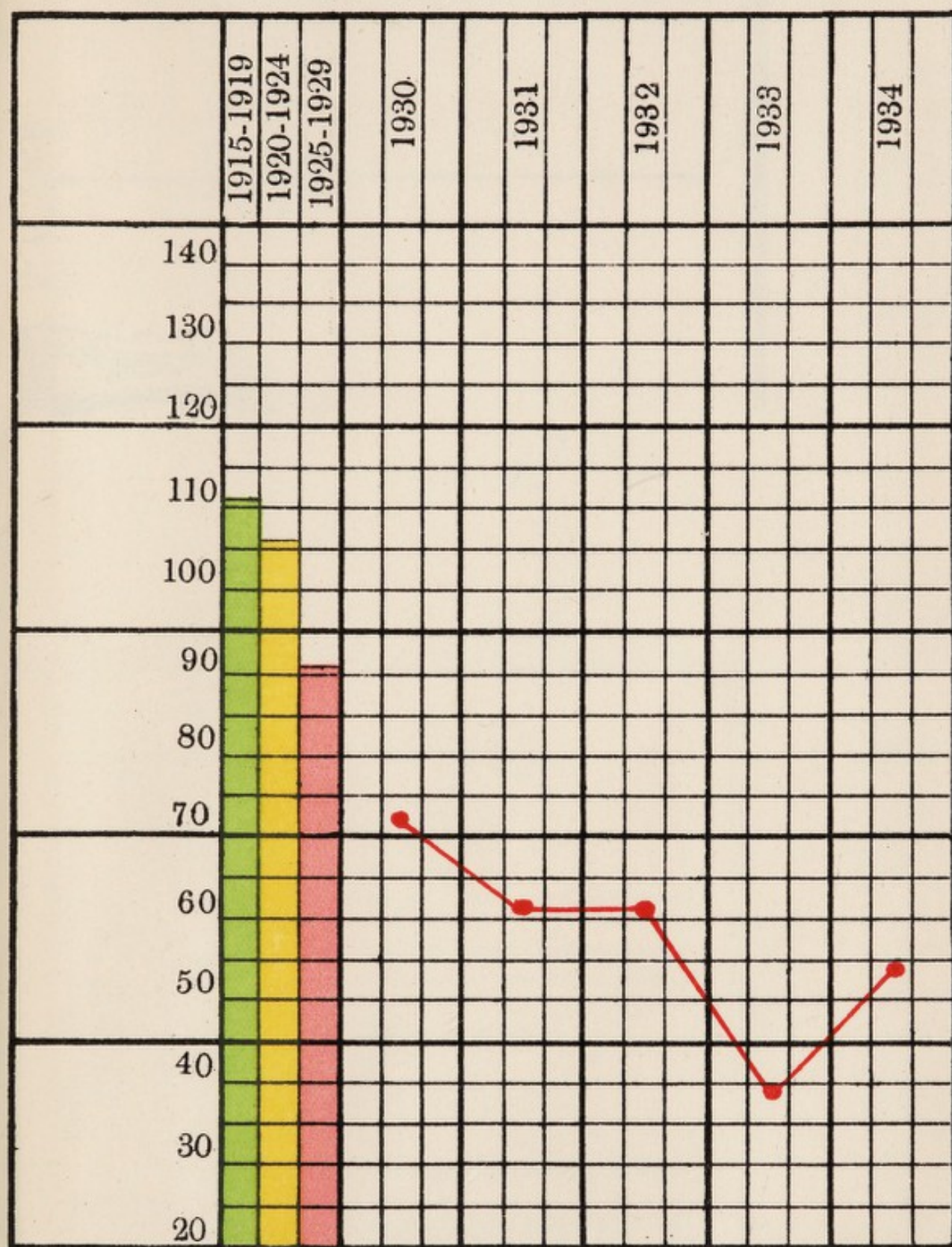
Average	{	1915-1919	....	.95	1925-1929	....	.99
		1920-1924	....	<u>1.47</u>	1930-1934	....	<u>.44</u>
		<u>1915-1924</u>	....	<u>1. 2</u>	<u>1925-1934</u>	....	<u>.71</u>

1955-1959 and 1960-1964
 1965-1969 and 1970-1974
 1975-1979 and 1980-1984
 1985-1989 and 1990-1994
 1995-1999 and 2000-2004
 2005-2009 and 2010-2014
 2015-2019 and 2020-2024
 2025-2029 and 2030-2034
 2035-2039 and 2040-2044
 2045-2049 and 2050-2054
 2055-2059 and 2060-2064
 2065-2069 and 2070-2074
 2075-2079 and 2080-2084
 2085-2089 and 2090-2094
 2095-2099 and 2100-2104



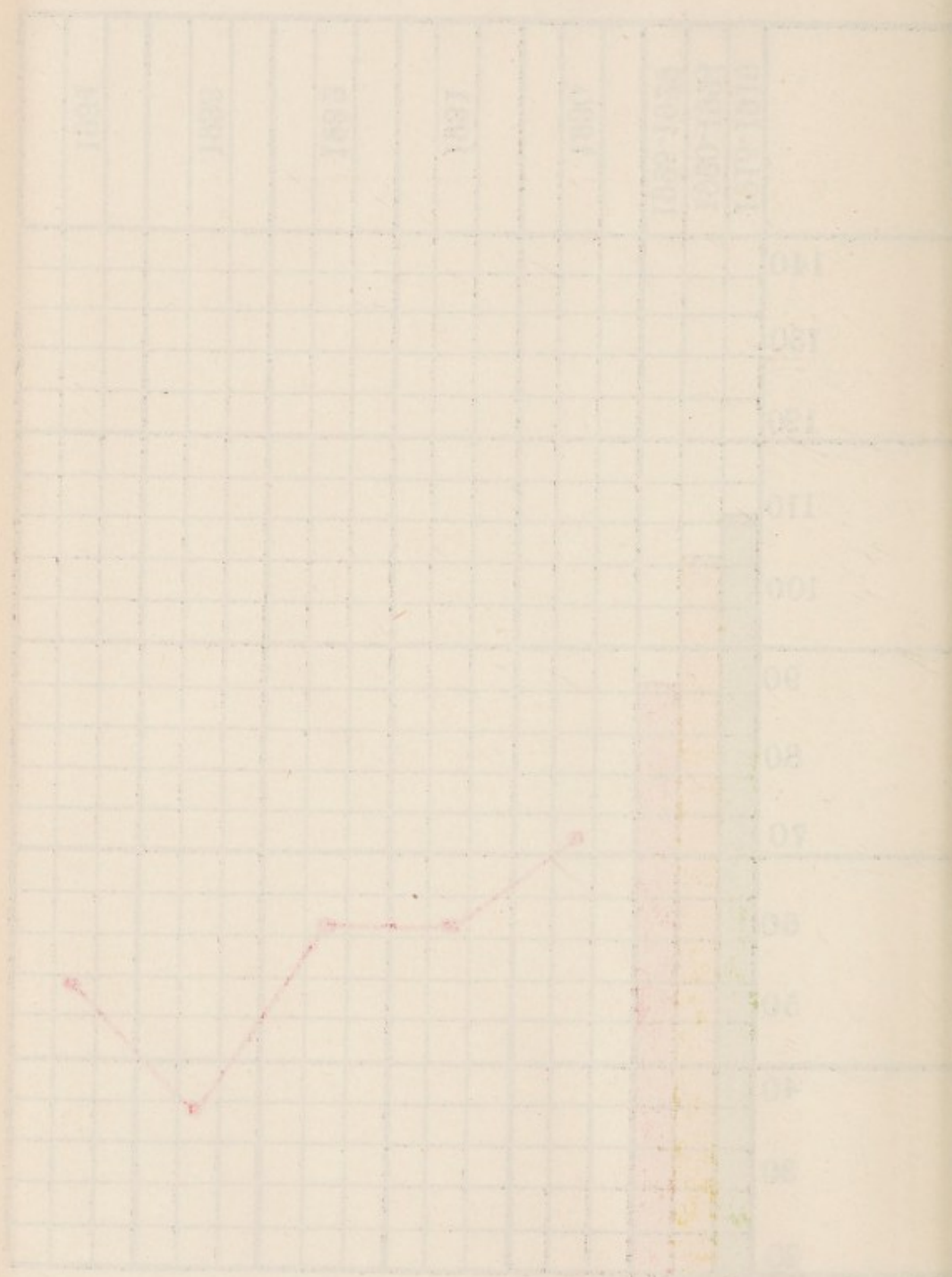
1955-1959 10
 1960-1964 15
 1965-1969 25
 1970-1974 35
 1975-1979 45
 1980-1984 55
 1985-1989 65
 1990-1994 75
 1995-1999 85
 2000-2004 95
 2005-2009 105
 2010-2014 115
 2015-2019 125
 2020-2024 135
 2025-2029 145
 2030-2034 155
 2035-2039 165
 2040-2044 175
 2045-2049 185
 2050-2054 195
 2055-2059 205
 2060-2064 215
 2065-2069 225
 2070-2074 235
 2075-2079 245
 2080-2084 255
 2085-2089 265
 2090-2094 275
 2095-2099 285
 2100-2104 295

Infantile Mortality per 1,000 Births, Gibraltar,
for the Decennial Periods
1915-1924 and 1925-1934



Average	{	1915-1919	....	111.86	1925-1929	....	91.8
		1920-1924	....	<u>106.9</u>	1930-1934	....	<u>57.39</u>
		<u>1915-1924</u>	....	<u>109.4</u>	<u>1925-1934</u>	....	<u>74.6</u>

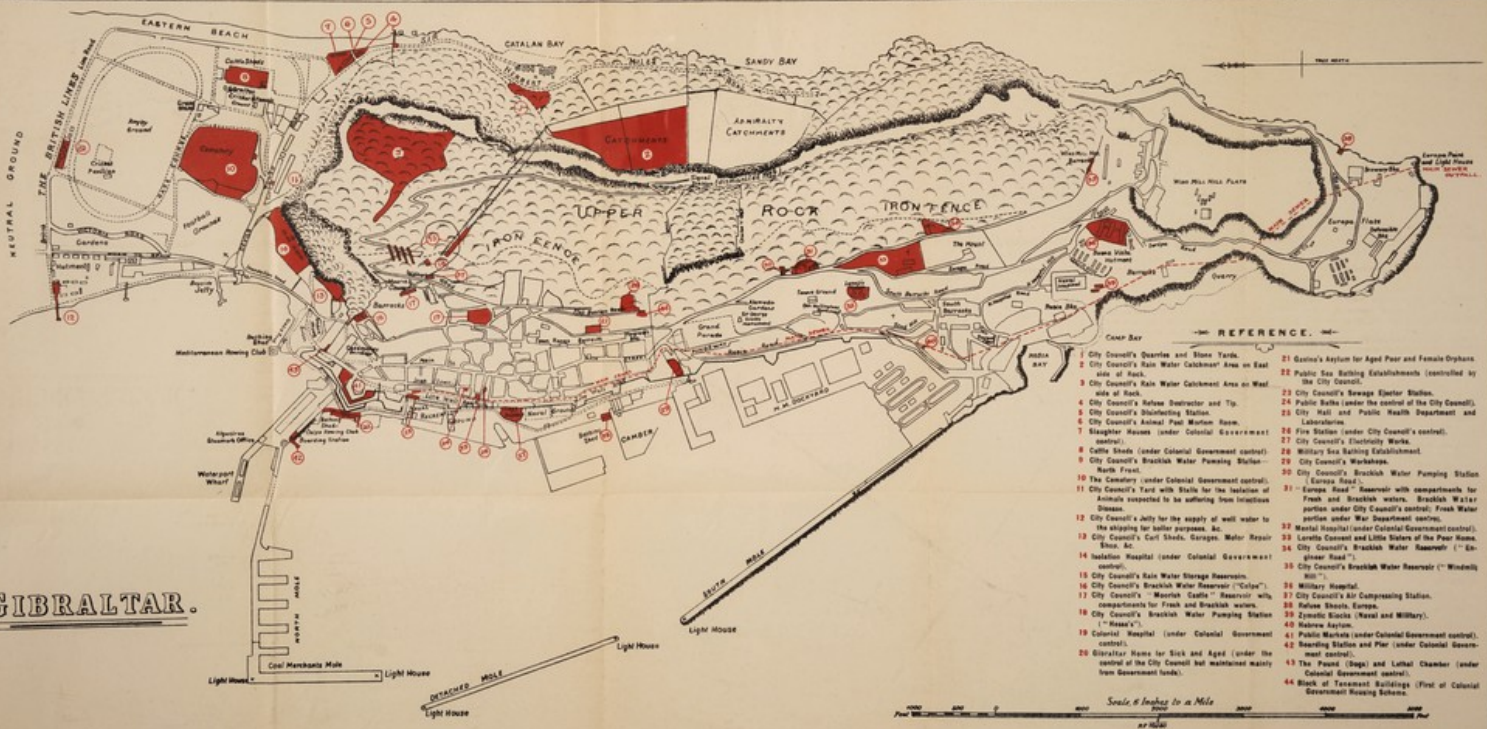
for the Decennial Periods
1970-1974 and 1975-1979



1970-1974 ... 51.2
1975-1979 ... 47.5
1970-1979 ... 49.4

Average

GIBRALTAR.



- REFERENCE.**
- 1 City Council's Quarters and Store Yards.
 - 2 City Council's Rain Water Catchment Area on East side of Rock.
 - 3 City Council's Rain Water Catchment Area on West side of Rock.
 - 4 City Council's Refuse Destructor and Tip.
 - 5 City Council's Disinfecting Station.
 - 6 City Council's Animal Fuel Market Room.
 - 7 Nautical Houses (under Colonial Government control).
 - 8 Coffee Shade (under Colonial Government control).
 - 9 City Council's Brackish Water Pumping Station - North Front.
 - 10 The Cemetery (under Colonial Government control).
 - 11 City Council's Yard with Stalls for the isolation of Animals suspected to be suffering from infectious diseases.
 - 12 City Council's Jetty for the supply of well water to the shipping for boiler purposes, &c.
 - 13 City Council's Coal Sheds, George's, Major Ross, &c.
 - 14 Isolation Hospital (under Colonial Government control).
 - 15 City Council's Rain Water Storage Reservoir.
 - 16 City Council's Brackish Water Reservoir ("Color").
 - 17 City Council's "Moorish Castle" Reservoir with compartments for Fresh and Brackish waters.
 - 18 City Council's Brackish Water Pumping Station ("House").
 - 19 Colonial Hospital (under Colonial Government control).
 - 20 Gibraltar House for Sick and Aged (under the control of the City Council, but maintained mainly from Government funds).
 - 21 General's Asylum for Aged Poor and Female Orphans.
 - 22 Public Sea Bathing Establishments (controlled by the City Council).
 - 23 City Council's Sewage Ejector Station.
 - 24 Public Baths (under the control of the City Council).
 - 25 City Hall and Public Health Department and Laboratories.
 - 26 Fire Station (under City Council's control).
 - 27 City Council's Electricity Works.
 - 28 Military Sea Bathing Establishment.
 - 29 City Council's Workshops.
 - 30 City Council's Brackish Water Pumping Station (Europe Road).
 - 31 "Europe Road" Reservoir with compartments for Fresh and Brackish waters. Brackish Water portion under City Council's control; Fresh Water portion under War Department control.
 - 32 Naval Hospital (under Colonial Government control).
 - 33 Landis Cottage and Little Sisters of the Poor Home.
 - 34 City Council's Brackish Water Reservoir ("Engineer Road").
 - 35 City Council's Brackish Water Reservoir ("Windmill Hill").
 - 36 Military Hospital.
 - 37 City Council's Air Compressing Station.
 - 38 Public Baths, Europe.
 - 39 Zenobia House (Naval and Military).
 - 40 Redoubt Station.
 - 41 Public Markets (under Colonial Government control).
 - 42 Reading Station and Pier (under Colonial Government control).
 - 43 The Powder (Shops) and Lethal Chamber (under Colonial Government control).
 - 44 Block of Townsmen Buildings (First of Colonial Government Housing Scheme).

Map Reproduced from The Gibraltar Directory.

