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Contributors

Gibraltar. Public Health Department.

Publication/Creation

Gibraltar : Govt. Printer, [1932]

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City Council of Gibraltar.

ANNUAL REPORT

ON THE

HEALTH OF GIBRALTAR

FOR THE YEAR

1932,

BY

Major G. D. JAMESON, D.P.H., R.A.M.C.,
Medical Officer of Health.

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

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

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† Major J. V. McNALLY, R.A.M.C.

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

† Allowance paid to an Officer of the R.A.M.C. for medical services at North Front District.

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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.



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PREFACE.

The General Health of Gibraltar has been satisfactory during the year under review.

The total number of infectious diseases notified was higher than in the previous year, but this rise is accounted for by an epidemic of measles of a mild type which occurred during the earlier part of the year.

The zymotic death rate, though somewhat higher than last year, shows no undue rise as compared with the general average for the previous twenty years.

The infantile mortality rate remains satisfactorily low.

Thanks are due to those who have contributed to the preparation of this Report, and to the Local Press for their continued assistance.

*G. D. Jameson, Major R.A.M.C.,
Medical Officer of Health.*

Gibraltar, April, 1933.

CITY COUNCIL OF GIBRALTAR.

PUBLIC HEALTH DEPARTMENT.

SUMMARY OF VITAL STATISTICS FOR 1932.

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	16,609 persons.	
Estimated Fixed Civil Population of Gibraltar	15,143 persons.	
Births in Fixed Civil Population	... ..	{ 175 Males. 171 Females.
Total Births	... ..	346.
Birth rate per 1,000 of Fixed Civil Population		22.84.
Deaths in Fixed Civil Population	... ..	{ 131 Males. 128 Females
Total Deaths	... ..	259.
Crude death rate per 1,000 of Total Civil Population	... ..	{ 15.59.
Average crude death rate for previous ten years	... ..	{ 15.9.
Death rate from Pulmonary Tuberculosis	... ..	1.2 per 1,000.
Infantile Mortality rate	... ..	60.69 per 1,000 births.

METEOROLOGICAL OBSERVATIONS FOR THE YEAR 1932.

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 1931-32	39.33 inches.
Rainfall for the year 1932... ..	37.84 „
Number of days with 0.1 inch of rain or more	103
Number of days with 0.4 inch of rain or more	73
Wettest day.....	3rd April, 2.93 ins.
Highest recorded temperature in the screen.....	91° F.—31st Aug.
Lowest recorded temperature in the screen.. . . .	38° F.—2nd Jan.

Mean temperature for the year	64.1° F.
Mean Humidity for the year	74°
Lowest temperature on the grass	33° F.—2nd Jan.
Mean amount of cloud for the year ...	4.3
Number of days of clear sky	89
Number of days of overcast sky	51
Number of days with thunderstorm ...	11
Number of occasions when hail fell ...	Nil.
Number of gales and gale gusts..	4
Number of days with fog	4
Number of days with frost	Nil.

BAROMETER. The mean Barometric Reading for the year was 30.059 ins. when reduced to mean sea level and to a temperature of 32° F. The highest corrected reading of the year was 30.484 ins. on December 24th, and the highest corrected monthly mean 30.334 ins.—January. The lowest corrected reading of the year was 29.542 ins. on February 29th, and the lowest corrected monthly mean 29.951 ins.—March.

TEMPERATURE. The mean temperature for the year was 64.1° F. which was 0.2° F. below the average. The highest shade temperature recorded was 91° on the 31st August. January and November were fine and dry and March warmer than usual.

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

RAINFALL. The rainfall for the year was 2.12 inches above the average. February being the wettest month with 10.82 inches. January and November were much drier than usual. No rain fell in July or August.

HUMIDITY. Normal.

The details and comparative tables of the Meteorology of Gibraltar are given in the Annual Meteorological Report of Gibraltar by Mr. Henry Bentley, Public Works Department, Meteorological Observer.

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.	30.334	61.3	51.0	56.2	+ 1.3	68—5th	38—2nd
Feb.	30.024	58.5	49.2	53.9	+ 2.0	64—9 h 27th	39—15th
Mar.	29.951	67.2	52.3	59.8	+ 2.2	7—28th	46—5th
April	30.037	68.4	52.1	60.3	— 0.7	77—11th	46—6th
May	30.040	74.4	56.4	65.4	— 0.1	85—24th	5—8th
June	30.030	76.4	61.8	69.1	— 1.4	82—21st 29th	57—7th
July	29.983	80.5	65.5	73.0	1.8	86—1st 11th	58—20th
Aug.	30.022	82.8	67.5	75.1	— 0.9	91—31st	63—14th 30th
Sept.	30.003	79.8	65.8	72.8	+ 0.3	89—4th	54—30th
Oct.	30.037	74.3	58.1	66.2	+ 0.1	80—19th	52—19th 31st
Nov.	30.102	66.6	55.0	60.8	+ 0.3	7—1st	4—29th
Dec.	30.120	62.3	51.2	56.8	+ 0.8	70—6th	44—2nd
Year...	30.059	71.0	57.2	64.1	— 0.2	9—31st Aug.	38—2nd J n.

TABLE II.

Month.	Shade Temperature—°F.			Humidity %		
	7th hour.	13th hour.	21st hour.	7th hour.	13th hour.	21st hour.
January	52.1	59.4	54.0	81	68	78
February...	50.6	56.1	52.4	83	71	80
March ...	53.7	64.2	56.3	82	63	79
April	53.8	65.2	56.7	83	58	77
May	57.8	71.6	61.7	78	48	72
June	62.8	72.9	62.1	81	56	75
July	67.0	76.1	69.1	79	59	77
August	68.6	78.9	71.2	82	61	77
September	67.1	76.4	68.8	83	64	81
October	59.5	71.5	62.8	82	59	78
November ..	56.2	64.7	58.0	85	68	82
December..	53.2	59.9	55.1	87	74	86
Year	58.5	68.1	60.9	81	62	79

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 ...	47.9	33	2nd	88	115	4th
February...	46.8	35	15th	84	122	12th
March ...	49.1	42	6th 9th	106	134	31st
April.....	48.9	41	6th	117	134	1st
May.....	53.7	46	8th	121	140	24th
June.....	58.2	54	7th	122	135	15th, 22nd
July.....	63.7	55	20th	122	138	11th
August....	64.8	60	14th, 30th	123	140	10th, 30th
September	61.2	49	30th	119	138	4th
October...	54.6	46	31st	115	131	23rd
November..	51.8	37	29th	97	122	11th
December..	48.3	39	2nd	88	115	25th
Year	54.3	33	2nd Jan.	109	140	24th May 10th-30th Aug.

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...	6.5	6.1	4.7	5	5
February...	6.7	7.1	6.5	1	11
March.....	5.8	5.1	4.4	3	7
April.....	4.4	4.1	2.6	5	1
May.....	4.3	3.8	3.5	9	5
June.....	3.3	3.3	1.9	11	2
July.....	3.6	2.3	2.3	11	—
August...	3.4	2.7	2.3	14	1
September	4.3	4.1	2.2	10	1
October...	3.5	3.6	2.5	9	—
November	4.7	5.4	4.8	8	8
December..	5.9	6.6	6.1	2	15
Year	4.7	4.5	3.7	89	51

TABLE V.

Month.	Rainfall 1932.		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.	Inches.	Date.			1931-32	
							Month.	Total inches.
Jan. . . .	2'74	—2'32	1'08	10th	10	6	Aug. . .	—
Feb. . . .	10'82	+6'61	2'11	10th	19	16	Sept. . .	1'46
March . .	4'76	—0'04	1'26	16th	13	10	Oct. . .	5'99
April . .	4'04	+1'38	2'93	3 d	9	5	Nov. . .	3'84
May	0'61	—1'10	0'31	6 h	4	3	Dec. . .	4'51
June . . .	0'56	+0'08	0'49	13th	4	2	Jan. . .	2'74
July	—	—0'04	—	—	—	—	Feb. . .	10'82
August . .	—	—0'12	—	—	—	—	Mar. . .	4'76
Sept. . .	1'30	—0'08	0'75	9th	6	4	April . .	4'04
October..	2'42	—0'87	1'71	12th	9	4	May . . .	0'6
Nov. . . .	1'35	—3'03	1'45	8th	10	7	June . .	0'56
Dec. . . .	7'24	+1'66	1'17	7th	19	16	July . .	—
Year	37'84	+2'12	2'93	3rd Apl.	103	73	Rain Season	39'33

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	2	35	11	—	3	15	14	1	32	60	—
February . . .	1	2	36	13	—	13	9	11	2	33	52	—
March	1	—	9	10	3	23	28	11	8	64	21	—
April	—	1	13	5	1	17	31	18	4	42	44	—
May	1	6	13	12	4	18	19	15	5	59	29	—
June	—	1	9	12	2	36	21	4	5	60	25	—
July	—	1	34	6	2	16	19	5	10	59	24	—
August	—	1	28	11	2	23	12	2	14	50	29	—
September . .	1	1	24	6	—	21	13	9	15	63	12	—
October	3	4	8	1	1	25	23	17	11	70	12	—
November . . .	5	1	29	5	—	10	22	10	8	53	29	—
December . . .	1	5	18	1	2	36	12	11	7	56	30	—
Year	15	25	256	103	17	24	221	117	90	641	367	—

VITAL STATISTICS.

An estimate by the Police Authorities at the end of 1932 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 16,609 persons, of which number 15,071 are British subjects other than Maltese, 72 British subjects born in Malta, 1,303 aliens residing in the Town, and 163 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

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 1932 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 b. chs.	No.	Birth rate per 1,000 living of Fixed population.	No.	Rate per 1,000 living of Fixed population.
						Fixed population.	Total population.						
1922	16182	17327	Police Estimate	298	304	18.40	17.54	38	103.8	366	22.6	27	1.56
1923	16165	17346		285	294	17.63	16.95	40	109.5	365	22.5	32	1.84
1924	16177	17324		250	254	15.45	14.66	33	91	360	22.2	18	1.05
1925	16127	17288		249	256	15.44	14.80	31	83	372	23	10	.52
1926	16150	17163		271	276	16.78	16.08	46	107	427	25	20	1.2
1927	16120	17196		291	297	18.05	17.27	86	99.1	363	22	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	Census	250	254	15.4	14.4	23	61	377	23.28	4	.24
1932	15143	16609	Police Estimate	245	259	16.17	15.59	21	60.69	346	22.84	16	.96

The age and sex incidence of the population of Gibraltar in 1932, is as follows:—

	Persons of ten years of age and over.		Persons under 10 years of age.	
	Males.	Females.	Males.	Females.
British Subjects	4,931	6,095	2,024	2,021
Maltese	60	12		
Aliens in the Bay	163			
Aliens in the Town	403	900		
Totals	5,557	7,007	2,024	2,021

Total Males 7,581; Females 9,028.

2. DEATHS.

The number of deaths registered for the resident Civil population was two hundred and forty-five. Fourteen deaths occurred in resident aliens, and of the patients brought in expressly for treatment, thirty-eight died.

The following table shows the crude death rate for the past 10 years:—

Year	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Fixed Population	17·63	15·45	15·44	16·78	18·05	18·19	16·36	15·6	15·4	16·17
Total Population	16·95	14·66	14·80	16·08	17·27	17·40	15·68	14·5	14·4	15·59

3. MONTHLY AND QUARTERLY MORTALITY.

The highest number of deaths occurred in January and March, and the lowest in October.

The death rate during the first quarter of the year was the highest, and that of the third the lowest.

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

January ... 35	April... .. 21	July 18	October ... 17
February... 34	May 29	August ... 18	November... 20
March ... 35	June... .. 26	September... 18	December... 26
—	—	—	—
104	76	54	63
—	—	—	—

These figures include cases landed from the Bay or brought into the town expressly for treatment.

Causes of death in Civil population in 1932, 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		
1. Typhoid Fever	2	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	1
5. Measles	4	—	—	1	2	1	—	—	—	—	—	—	—	—	—	—	—	1
8. Diphtheria	4	—	—	—	1	1	2	—	—	—	—	—	—	—	—	—	—	2
9. Influenza	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	3	—
12. Other epidemic diseases ..	2	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	1
13. Tuberculosis of respira- tory system	20	—	—	—	—	—	—	1	—	2	1	5	—	4	2	5	—	7
14. Tuberculosis of nervous system	2	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—
16. Cancer, Malignant tumours	18	—	—	—	—	—	—	—	—	—	—	1	1	4	3	4	5	5
17. Meningitis	3	—	1	—	—	—	1	—	—	1	—	—	—	—	—	—	—	2
18. Hæmorrhage, apoplexy and softening of brain ...	18	—	—	—	—	—	—	1	—	—	—	1	—	4	3	2	7	3
19. Heart diseases	25	—	—	—	—	—	—	—	—	—	—	1	1	5	1	5	12	7
21. Chronic bronchitis	11	—	—	—	—	—	—	—	—	—	—	—	—	3	1	4	3	1
22. Pneumonia	18	—	2	1	1	—	2	—	—	—	—	—	—	3	1	3	5	3
23. Other diseases of res- piratory system	4	—	—	—	—	1	—	—	—	—	—	—	—	1	—	1	1	1
24. Diseases of the stomach ...	4	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	1	3
25. Diarrhoea and enteritis (under 2 years)	6	3	2	—	1	—	—	—	—	—	—	—	—	—	—	—	—	3
27. Hernia, Intestinal obstruction	3	—	—	—	—	—	—	—	—	—	—	—	—	1	—	2	—	2
28. Cirrhosis of liver	3	—	—	—	—	—	—	—	—	—	—	—	—	2	—	1	—	3
29. Acute and chronic nephritis	17	—	—	—	—	—	—	1	1	—	1	2	3	4	2	3	—	7
32. Other accidents of preg- nancy and parturition ...	3	—	—	—	—	—	—	—	—	1	—	2	—	—	—	—	—	2
33. Congenital debility and malformations	6	2	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
34. Old age... ..	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	16	15
35. Violent deaths (suicide excepted)	3	—	—	—	—	—	—	1	1	—	1	—	—	—	—	—	—	3
37. Other diseases	53	4	2	—	1	1	2	—	1	—	—	3	3	9	3	13	11	25
38. Diseases not stated or ill-defined	4	1	—	—	—	—	—	—	—	—	—	—	—	1	1	1	—	—
Totals	259	10	11	2	6	5	7	3	4	4	3	15	9	44	19	48	69	100

MATERNITY AND CHILD WELFARE.

The Welfare Centre continues to be well attended.

The Maternity and Child Welfare Scheme is subsidised by a yearly grant from the Colonial Government.

Milk and other infant foods are retailed at a reduced price or are issued free to cases which are known to be necessitous.

The services of a nurse are retained and paid for out of the Government subsidy. The nurse attends all meetings of the Welfare Centre, and also visits children in their homes. The services of a midwife are supplied free to expectant mothers in poor circumstances who cannot enter the Maternity Ward of the Colonial Hospital. The midwife's fee is paid out of the Government grant.

The number of confinements attended by the midwife and paid for out of the funds of the Child Welfare Scheme during the year was 26.

Maternity and Children's Ward, Colonial Hospital—

The admittance of women to the Maternity Ward at the Colonial Hospital during the year was 159, and 161 children were admitted to the Children's Ward during the same period.

STATISTICS.

One hundred and seventy-five males and one hundred and seventy-one females making a total of three hundred and forty-six children, were born during the year giving a birth rate of 22·84 per 1,000 of population.

The following is the birth rate of Gibraltar compared with that of England and Wales and Malta, for the past 10 years :—

Year	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
England and Wales	19·7	18·8	18·3	17·8	16·6	16·7	16·3	16·3	15·8	—
Malta	34·5	34·6	33·3	32·9	32·6	31·7	33·2	34·1	33·2	—
Gibraltar...	22·5	22·2	23	25·2	22·5	23·2	24·7	22·4	23·2	22·8

INFANTILE MORTALITY.

The low infantile mortality rate has been maintained, the figures for 1932 being slightly under that for the previous year.

A rate of 60·69 deaths of infants under one year of age was recorded, and the following table is given for comparison with recent years :—

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			60

WELFARE CENTRE.

The activities of the Welfare Centre have continued to increase. The average number of children brought to each meeting was 83, as compared with 75 for last year.

The amount of milk and other infant foods issued also show a considerable increase over the previous year.

The total amounts issued during the year under review were :—

Milk	5,207 tins
Glaxo	103 „
Virol	85 pots
Feeders	89 No.

The nurse paid 477 visits to the homes of children during the year.

The Nestlé and Anglo-Swiss Condensed Milk Company has continued to supply the Centre with milk at a reduced rate.

MIDWIVES.

Eight midwives are registered under "The Midwives Ordinance, 1907."

The number of live births attended by registered midwives during the year was 177 or 51·1 per cent. of the total births, as compared with 50·1 per cent. in the previous year.

The number of still-births for the year was 17.

The inspection of midwives, carried out at intervals during the year, proved satisfactory.

SCHOOL CLINIC.

The school clinic has been carried on by members of the medical and nursing staff of the Colonial Hospital.

The duties of school dentist have been carried out by Mr. Garesse.

CAUSES OF, AND AGES AT, DEATH OF INFANTS UNDER ONE YEAR
OF AGE IN GIBRALTAR DURING 1932.

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.
Enteritis	1	—	—	—	1	1	2	1	—	5
Congenital debility and malformations	3	1	1	—	5	—	1	—	—	6
Pneumonia	—	—	—	—	—	—	—	1	1	2
Convulsions	1	—	1	—	2	—	—	—	—	2
Meningitis	—	—	—	—	—	—	—	2	—	2
Other causes	2	—	—	—	2	—	1	—	1	4
Totals	7	1	2	—	10	1	4	4	2	21
Death rate in each age period per 1,000 births	20·2	2·8	5·7	—	28·9	2·8	11·5	11·5	5·7	60·69
Percentage of total infant deaths occurring in each age period	33·3	4·7	9·5	—	47·5	4·7	19	19	9·5	—

PREVALENCE AND CONTROL OF INFECTIOUS DISEASES.

The number of cases of notifiable infectious diseases reported during the year, exclusive of Naval and Military cases and cases landed from Shipping in the Bay or brought into the Town for treatment, was 1,144.

Of this number, 777 were cases of measles, which disease occurred in epidemic form during the year. Of the remaining 367 cases, the disease showing the highest incidence was pneumonia—157 cases. There were 59 cases of German measles reported, and 45 cases of pulmonary tuberculosis. No other infectious disease showed any undue prevalence over recent years. Sixteen deaths were attributed to one or other of the eight principal infectious diseases (4 measles, 4 diphtheria, 2 enteric fever and 6 diarrhoea & enteritis) giving a zymotic death rate of .96 per 1,000 of population.

One case of small pox was landed from the Bay for treatment.

The main features of the year were:—

- (i) An epidemic of measles in the earlier part of the year;
- (ii) Continued absence of undulant fever and small pox among the local population.

QUARTERLY INCIDENCE OF NOTIFIABLE INFECTIOUS DISEASES.
CIVIL POPULATION.

Disease	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total	Deaths
Influenzal Pneumonia	4	2	1	—	7	—
Scarlet Fever	2	3	—	7	12	—
German Measles	50	9	—	—	59	—
Pneumonia	38	90	17	12	157	18
Erysipelas	12	7	3	2	24	1
Gastro-Enteritis	2	4	1	3	10	6
Diphtheria	3	1	3	—	9	4
Measles	307	462	5	3	777	4
Cerebro-Spinal Meningitis	1	—	—	—	1	1
Pulmonary Tuberculosis ...	18	12	9	6	45	20
Chicken Pox	3	—	4	7	14	—
Venereal Diseases	1	6	4	2	13	—
Enteric Fever	1	1	6	4	12	2
Encephalitis Lethargica ...	—	1	—	—	1	—
Acute Poliomyelitis	—	1	—	—	1	—
Mumps	—	2	—	—	2	—
Totals	442	601	53	48	1144	56

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

Disease	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total	Deaths
Pneumonia	1	2	1	—	4	2
Pulmonary Tuberculosis ...	1	—	2	1	4	1
Enteric Fever	—	3	—	—	3	—
Measles	—	2	—	—	2	—
Erysipelas	—	—	1	—	1	—
Small Pox	—	—	—	1	1	—
Chicken Pox	—	—	—	1	1	—
Totals	2	7	4	3	16	3

Age and Sex incidence of notifiable Infectious Diseases amongst Civil Population during 1932.

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.									
Influenzal Pneumonia ...	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Pneumonia ...	157	17	12	34	25	16	12	1	1	2	9	6	8	12	1	5	141	11	4	4		
Scarlet Fever ...	12	—	—	—	—	3	8	—	—	—	—	—	—	—	—	—	11	1	1	—		
Rubella ...	59	1	1	12	3	19	17	1	3	1	—	—	—	—	—	—	51	8	1	—		
Measles ...	777	12	14	180	176	181	179	9	16	3	3	5	2	10	—	—	664	68	3	2		
Erysipelas ...	24	—	—	—	—	—	—	—	—	2	—	4	—	—	—	—	23	1	1	1		
Gastro-Enteritis ...	10	3	2	2	3	—	—	—	—	—	—	—	—	—	—	—	9	1	2	—		
Diphtheria ...	9	—	—	2	3	—	3	—	—	—	—	—	—	—	—	—	7	2	1	—		
Cerebro-Spinal Meningitis ...	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	1	—		
Pulmonary Tuberculosis ...	45	—	—	—	—	2	2	8	8	9	—	5	—	3	—	2	37	6	2	4		
Chicken Pox ...	14	—	—	3	2	1	7	1	—	—	—	—	1	—	—	—	12	1	—	1		
Veneral Diseases ...	13	—	—	—	—	—	—	4	—	6	—	—	—	—	—	—	12	—	—	—		
Enteric Fever ...	12	—	—	—	—	1	4	2	3	1	—	—	—	—	—	—	12	—	—	3		
Encephalitis Lethargica ...	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—		
Acute Poliomyelitis ...	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—		
Mumps ...	2	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	2	—	—	—		
Totals ...	1144	33	29	236	213	225	232	26	31	35	22	21	29	6	8	52	990	102	20	15		

Monthly notifications of notifiable Infectious Diseases during 1932.—Civil Population.

Months.	DISEASES.															
	Measles		Pneumonia		Rubella		Pulmonary Tuberculosis		Scarlet Fever		Erysipelas		Gastro-Enteritis		Chicken Pox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
January ...	3	—	8	2	10	—	2	—	1	—	4	—	1	—	1	—
February ...	101	—	13	2	28	—	12	—	1	—	1	—	1	—	1	—
March ...	203	—	17	4	12	—	4	—	—	—	7	—	—	—	—	—
April ...	290	—	31	4	3	—	4	—	—	—	1	—	—	—	—	—
May ...	141	—	44	5	4	—	6	—	1	—	3	—	2	—	—	—
June ...	31	2	15	—	3	—	2	—	2	—	3	—	2	—	—	—
July ...	5	—	8	1	—	—	1	—	—	—	1	—	—	—	—	—
August ...	—	—	6	—	—	—	2	—	—	—	—	—	1	—	—	—
September ...	—	—	3	—	—	—	6	—	—	—	2	—	—	—	—	—
October ...	—	—	2	—	—	—	2	—	1	—	—	—	2	—	—	—
November ...	2	—	4	—	—	—	3	—	2	—	1	—	1	—	—	—
December...	1	—	6	2	—	—	1	—	4	—	1	—	—	—	—	—
Totals	777	4	157	18	59	—	45	20	12	—	24	1	10	6	14	—

ENTERIC FEVER.

There were eleven cases of typhoid and one case of paratyphoid notified during the year. Of these, two cases occurred in one family and were traced to a "carrier" in the household. In five of the remaining cases, the onset of the disease occurred either shortly before or shortly after the patient's return from a stay in Spain, and the infection can be attributed to a source outside Gibraltar.

In the remaining cases the source of infection was never definitely ascertained. Investigations were carried out in each case but no evidence of any local source of infection was discovered.

There is always the possibility of infection from the consumption of uncooked or improperly washed vegetables and fruit, which are imported daily, and, although there is no positive evidence that any of these cases were infected from this source, it is impossible to exclude this factor.

There were two deaths from this disease.

SEASONAL PREVALENCY OF ENTERIC FEVER IN GIBRALTAR
DURING 1932.

	Jan	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov	Dec.	Total
Local cases ...	—	—	1	1	—	—	3	—	3	2	2	—	12
Imported cases	—	—	—	—	2	1	—	—	—	—	—	—	3

AGE AND SEX DISTRIBUTION.

Age	Under 5		5 to 10		10 to 15		15 to 20		20 to 25		25 to 45		45 to 65		65 & over		Total.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Cases	—	—	1	2	—	2	—	3	2	—	1	1	—	—	—	—	4 8
Deaths	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	2 —

DIPHTHERIA.

There were nine cases notified during the year. The cases occurred sporadically throughout the year. There were four deaths.

Diphtheria Antitoxin—

The amount of anti-diphtheritic serum issued to the Colonial Hospital and to private practitioners by the Public Health Department during the year was 140,000 units.

**SEASONAL PREVALENCY OF DIPHTHERIA
IN GIBRALTAR DURING 1932.**

Month	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Local Cases	1	1	1	1	—	—	2	1	—	—	1	1	9
Imported Cases...	—	—	—	—	—	—	—	—	—	—	—	—	Nil

AGE AND SEX DISTRIBUTION.

Age	Under 3		3 to 5		5 to 10		10 to 15		15 to 20		20 to 25		25 to 45		45 to 65		65 & over		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Cases	2	1	—	2	—	2	—	1	—	—	—	—	—	—	1	—	—	—	2 7
Deaths	1	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1 3

MEASLES.

An epidemic of measles occurred during the year. This disease tends to recur cyclically at intervals with considerable regularity in thickly populated communities, the last epidemic occurring in Gibraltar in 1928.

The periodicity of measles in Gibraltar during the last 34 years is shown on the attached chart.

In the year under review, seven hundred and seventy-seven cases were reported.

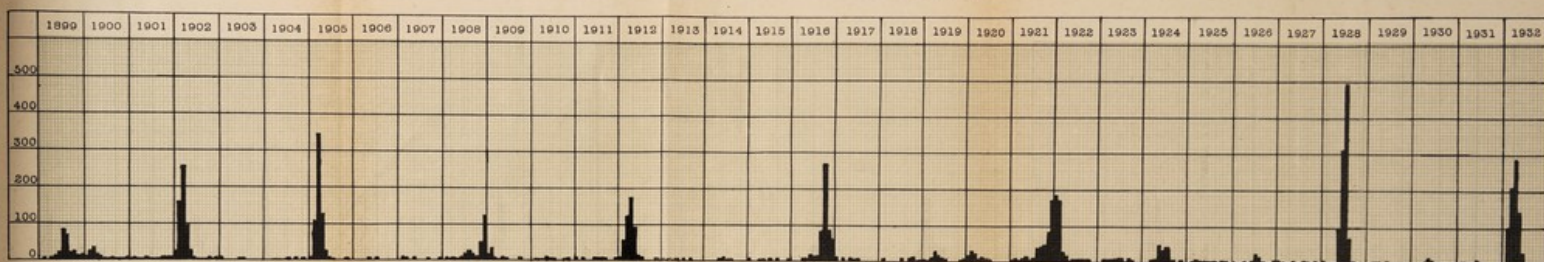
Statistics of the epidemic are given below.

Cases notified—

North District	45
Central District	664
South District	68
	777

Case rate per 1,000 of population	51.3
Deaths	4
Death rate per 1,000 of population	0.26
Proportion of deaths to cases (fatality rate) ...	0.51 per cent.

MONTHLY INCIDENCE OF MEASLES IN GIBRALTAR—1899-1932



MONTHLY



SEASONAL PREVALENCY OF MEASLES IN
GIBRALTAR DURING 1932.

Month	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Local Cases	3	101	203	290	141	31	5	—	—	—	2	1	777
Imported Cases ..	—	—	—	—	—	2	—	—	—	—	—	—	2

AGE AND SEX DISTRIBUTION.

Age	Under 1		1 to 3		3 to 5		5 to 10		10 to 15		15 to 20		20 to 25		25 to 45		45 & over		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Cases	12	14	73	80	107	96	145	134	36	45	7	8	2	8	3	5	2	—	387	390
Deaths	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2

Notification is compulsory, but, owing to the fact that in mild cases a doctor is not called in always, it is probable that a certain number of cases were never reported.

Sanitary Inspectors visited every notified case making full inquiries regarding the household and completing an infectious disease card.

All children who were known to be absent from school during the epidemic (whether reported as ill or not) were also visited by an Inspector. Owing to the fact, however, that the office of School Attendance Officer had been abolished the previous year, a complete list of absentees was not always readily available.

All cases and contacts were excluded from attending school until 21 days from the date of onset of illness of the last patient in the home. Parents and schools were warned of the restrictions placed on school attendance by the usual notices.

All efforts were made to ensure isolation of patients, but owing to the crowded nature of some houses, proper isolation in a certain number of cases was a practical impossibility.

School closure was not resorted to as there is a general consensus of opinion that the measure is useless in checking the spread of the disease except perhaps in a scattered rural population, and, in a densely populated area like Gibraltar it was considered that it would be of no value.

Disinfection was carried out in all cases.

The epidemic was generally of a mild nature, only 4 deaths being attributed to this disease.

UNDULANT FEVER.

No case of this disease was notified during the year.

SMALL POX.

It is satisfactory to be able to state that Gibraltar has continued to be free from this disease.

One case, however, was landed for treatment from a vessel homeward bound from the east. The case was isolated and treated in the Isolation Hospital. All other members of the crew were vaccinated. All members of the staff of the Isolation Hospital and all persons who came in contact with the patient during removal from the ship were vaccinated and no case appeared among the resident population. The patient, who had been previously vaccinated, recovered.

VACCINATION.

The number of vaccinations performed during the year was 683. Of these, 261 were revaccinations on children who had attained the age of 12 years. The Public Vaccinator carried out 571 vaccinations and revaccinations during the year.

The following statistics show the state of vaccination for births during 1932 :—

Number of children born	346
Died before vaccination	10
Left Gibraltar	51
Certified as insusceptible to vaccination	Nil
Vaccination postponed on medical grounds	33
Number successfully vaccinated	205
Objectors to vaccination	Nil
Outstanding (under 3 months of age)	47

VENEREAL DISEASE.

The treatment centre is established at the Colonial Hospital and here free treatment is given to both in and out-patients.

The Public Health Laboratories undertake all investigations in connection with venereal disease, and in the case of Gibraltar residents, Gibraltarians resident in the neighbourhood and Port cases, these investigations are carried out free of charge.

Forty-six patients were treated in the Male Venereal Ward, Colonial Hospital, during the year, five of these being mercantile seamen.

The number of intravenous injections was 249.

PULMONARY TUBERCULOSIS.

The number of cases of pulmonary tuberculosis notified during the year was 45, giving a case rate of 2.7 per 1,000 of population.

The disease accounted for 20 deaths, equivalent to a death rate of 1.2 per 1,000 of population.

The number of cases of this disease accommodated during the year in the Gibraltar Home for Sick and Destitute, was 10.

AGE AND SEX DISTRIBUTION OF CASES AND DEATHS FROM PULMONARY TUBERCULOSIS IN GIBRALTAR DURING 1932.

Age	5 to 10 years		10 to 15 years		15 to 20 years		20 to 25 years		25 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	M	F		
Cases.....	2	—	—	—	2	3	3	5	5	3	2	4	4	3	—	4	2	3	—	27 18
Deaths	1	—	—	—	—	1	3	—	1	—	3	—	1	—	3	1	5	1	17	3

DESTITUTE SICK AND TUBERCULOSIS SCHEME.

This is maintained by an annual grant from the Colonial Government which is administered by the City Council.

The money was expended (as in former years) on :—

(a) Outdoor Relief.

(b) In-door Relief.

(a) Outdoor Relief—

The Council continued their policy of granting outdoor relief only to British subjects resident in Gibraltar who through sickness, old age or some other good and sufficient reason were considered unable to earn a living. Relief is generally given in the form of meat and milk and pecuniary relief is only given in very exceptional circumstances. All cases are investigated by the Medical Officer of Health and his recommendations submitted to a Standing Committee. Special attention is paid to cases of tuberculosis and extra food given in those instances where the family are unable to provide extra nourishment themselves.

The number of persons in receipt of outdoor relief during the year was as follows :—

January	63
February	62
March	64
April	67
May	75
June	77
July	72
August	74
September	77
October	75
November	80
December	71

The total amount of relief issued during the year was :—

Meat	6,319 lbs.
Milk (fresh)	2,987 pints.
Milk (condensed)	4,286 tins.

The total amount expended on Outdoor Relief during the year was approximately £560.

(b) Indoor Relief—

The Gibraltar Home for Sick and Aged provides accommodation for destitute persons and for cases of tuberculosis, for whom a portion of the building is specially set apart.

During the year certain structural alterations were undertaken with a view to increasing the accommodation of the Home and providing improved accommodation for the female inmates. A new quarter was built on the roof for the Lady Superintendent and her old quarters on the ground floor reconstructed and re-appropriated for the use of the inmates. The work was carried out by the City Engineer and has resulted in the erection of a very comfortable, bright and healthy quarter for the Lady Superintendent, enlargement of the small bedrooms on the ground floor, and the provision of an extra sitting room. It is now possible to accommodate all the female inmates on one floor. They have also now an extra sitting room available for their use instead of being compelled by lack of space to use one room as a combined sitting and dining room. There is thus additional accommodation available for male inmates, and it is also now possible to allot extra cubic space per head for tuberculous patients.

The Home now has available accommodation for 51 men and 23 women.

During the year the average number accommodated in the Home was 60, including 10 cases of pulmonary tuberculosis.

The cost of feeding has averaged 11½d. per head per day which provides a sufficient dietary and allows for the purchase of special food for cases of pulmonary tuberculosis.

The all-in cost per head per day was 2s. 5¾d. This figure is higher than last year but in it is included the cost of the repairs and alterations mentioned above which proved more expensive than was originally estimated, owing to circumstances which could not be foreseen.

The total expenditure on Indoor Relief was approximately £2,732.

The total expenditure on Outdoor and Indoor Relief during the year was £3,676 5 2.

DESTITUTE SICK AND TUBERCULOSIS SCHEME.

SUMMARY OF INDOOR AND OUTDOOR EXPENDITURE FOR THE YEAR 1932.

INDOOR RELIEF.

	£	s.	d.	£	s.	d.
Provisions	1,035	19	3			
*Miscellaneous	205	2	3			
Maintenance of Buildings	83	4	2			
Re-conditioning of Buildings	963	9	8			
Rent	294	5	10			
Light	35	11	9			
Water... ..	69	8	2			
Telephone	10	9	9			
Clothing	22	10	0			
Printing	-	19	0			
Insurance	1	10	0			
Funeral Expenses	9	1	0			
				£2,731	10	10

Days of subsistence	22,018
Average number of inmates	60
Cost of feeding per head per day	11¼d.
Cost of feeding per head per year... ..	£17 5 3¾
Total all-in cost per head per day... ..	2/5¾
Total all-in cost per head per year	£45 10 6
Calories per head per day	2,994

OUTDOOR RELIEF.

	£	s.	d.			
Meat—6,319 lbs.	216	7	9			
Milk (Fresh)—2,987 pints	48	14	5			
Milk (Condensed)—4,286 tins	104	13	3			
Money grants	186	2	5			
Printing	-	13	0			
Funeral expenses	3	1	6			
				559	14	4
Salaries				385	0	0
Total expenditure on Indoor and Outdoor Relief for 1932... ..				£3,676	5	2

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

INVESTIGATION AND PREVENTION OF OTHER DISEASES.

MOSQUITOES.

A small permanent anti-mosquito staff is employed throughout the year. This is augmented during the summer months by personnel engaged solely for this service.

During the year under review the Sanitary Inspector in charge of each district was made responsible for the proper supervision of anti-mosquito measures in his particular district, and the personnel engaged specially for this work was distributed among the sanitary inspectors in accordance with the size and needs of the district.

A large number of mosquitoes were examined during the year but no species other than the three usually found in Gibraltar was discovered.

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	242	22
Brackish water tanks	204	23
Totals	446	45

The number of premises visited and mosquito breeding places discovered is shown in the attached summary.

The number of men employed during the year on anti-mosquito work was as follows:—

- 2 men from 1st January to 17th May.
- 4 men from 18th May to 20th June.
- 6 men from 21st June to 6 July.
- 7 men from 7th July to 30th August.
- 6 men from 1st September to 30th October.
- 2 men from 21st October to 31st December.

28

[illegible]

Others include—Galvanized tin, fresh water tanks, gills, boats, iron air, galvanized iron tanks, stumps, galvanized iron b-b's, Eucalyptus, underground tanks drinking troughs, sinks, grinsteinones, wells, channels, fire buckets, &c., &c.

SUMMARY.

Tubs	...	...	...	...	439	...	...	...	633
Bathtubs	...	...	...	...	40	...	...	...	88
Bathware	...	...	...	...	93	...	...	...	14
Vessels	...	...	...	...	278	...	...	...	3
Others	...	...	...	...	...	...	...	...	...
Total	...	...	...	...	810	...	...	...	6

Total number of premises in which breeding places were found: 603

FLIES.

The prevention of flies is a most important problem in Gibraltar and one which requires constant attention.

Flies breed in manure, dustbin garbage, and any filthy decaying matter.

The fly carries germs of disease in its stomach and on its legs to our food, and is responsible for numbers of cases of diarrhoea and other intestinal diseases, especially among young children, which occur in the summer and autumn months.

During the summer all stables were visited regularly by a Sanitary Inspector to ensure that manure was being properly removed, and all stables were disinfected once a week.

Flies were specially prevalent during late autumn and extra personnel was engaged by the Council to carry out anti-fly measures.

Householders can materially assist by taking care that all household refuse is kept, pending removal, in properly constructed fly-proof bins and that no refuse is left lying about which might become a breeding place for flies.

The removal of household refuse is carried out by the City Council once daily in winter and twice daily in summer.

Refuse bins and other receptacles should be emptied daily and the bin thoroughly cleaned after emptying.

The number of disinfections carried out in stables during the year was 616.

RATS.

The rat campaign was carried out on the same lines as last year, trapping and poisoning with barium carbonate and Liverpool virus being the methods employed.

Two rat catchers are employed by the City Council throughout the year.

A percentage of the rats collected are sent weekly to the City Analyst for examination. No plague infected rats were discovered during the year.

The following tables summarise the results for the year.

Rats destroyed during 1932, by Districts.
(not including H.M. Dockyard).

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
South District	246	210	282	226	168	216	212	247	203	220	210	216	2,686
Town „	253	247	213	223	262	236	233	207	198	202	216	201	2,691
North „	58	39	47	36	36	26	27	40	58	40	33	48	488
Sheds and Warehouses Waterport Wharf and Commercial Mole	8	19	9	15	28	3	11	6	1	1	6	6	113
Total	565	515	551	500	494	511	483	500	460	463	465	471	5,978

Rats examined during 1932.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Infected	—	—	—	—	—	—	—	—	—	—	—	—	—
Uninfected	6	3	9	15	6	15	12	12	16	16	9	15	134

Number of poisoned baits laid by Rat Catchers during 1932.

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
7,198	7,253	7,982	7,503	7,933	8,829	9,319	8,561	8,868	8,641	8,809	7,306	98,402

Rats destroyed during 1932.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Civil and Colonial Property } Trapped ...	57	507	544	495	484	503	476	496	453	458	462	468	5,903
} Poisoned...	8	8	7	5	10	8	7	4	7	5	3	3	75
H.M. } Trapped ...	134	119	167	171	187	186	194	204	161	186	167	179	2,055
Dockyard } Poisoned...	32	28	16	44	20	26	30	44	50	31	29	63	413
Total	73	662	734	715	701	723	707	748	671	680	661	713	8,446

MEDICAL WORK OF THE COUNCIL.

All workmen are medically examined by the Medical Officer of Health prior to employment with the City Council.

The number examined during the year under review was as follows :—

January	4
February	7
March	4
April	11
May	13
June	3
July	2
August	22
September	5
October	—
November	2
December	1
	—
Total	74
	—

In cases of sickness injury pay is allowed if the disablement is attributable to the nature of work.

The Medical Officer of Health examines all injured men and these are treated at the Colonial Hospital the expense being borne by the City Council.

The number of in-patients treated during the year amounted to 6, and the total number of days in which men were absent from work due to disability was 644.

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

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

Diphtheria Antitoxin.
 Anti-Meningococcus Serum (polyvalent and monovalent).
 Anti-Streptococcus Serum.
 Tetanus Antitoxin.
 Anti-Dysentery Serum.
 Anti-Anthrax Serum.
 Cholera Vaccine.
 Anti-Plague Serum.
 Anti-Plague Vaccine.
 Compound Catarrhal Vaccine.
 Scarlet Fever Streptococcus Antitoxin.
 Tetanus Antitoxin.
 Calf lymph.

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

DISINFECTION.

The disinfection of all premises in which infectious disease had occurred was carried out during the year.

A trained staff under the direct supervision of a Sanitary Inspector undertakes this service which is carried out by vapour or spraying, formaldehyde and cresol solution being employed in the process.

All articles of bedding, clothing, etc., are removed to the Disinfecting Station for steam disinfection, and all bedding and clothing is returned on the same day it is removed to subject the householder to the minimum of inconvenience. The apparatus used is a Washington Lyons.

Stables are disinfected weekly during the fly-breeding season.

The following tables give the details of disinfections carried out during the year :—

Number of premises disinfected for infectious diseases...607

Number of premises disinfected for vermin 6

Number of disinfections carried out in stables616

Number of articles disinfected at North Front Disinfecting Station6,222

DETAILS OF ARTICLES DISINFECTED BY MONTHS.

Month	Beds and Mattresses	Bolsters and Pillows.	Blankets and Quilts.	Sheets.	Counterpanes.	Sundries.	Totals.
January	50	57	28	19	1	32	187
February	81	87	104	71	14	191	548
March	201	193	208	119	1	183	905
April	258	253	241	190	11	205	1,158
May	222	209	207	128	—	119	885
June	137	115	80	61	4	69	465
July	55	49	22	25	—	39	190
August	80	70	25	15	7	38	235
September	172	167	72	26	3	68	508
October	161	137	116	24	—	58	496
November	96	87	61	16	23	96	379
December	77	43	47	18	3	78	266
Totals.....	1,590	1,467	1,211	712	67	1,175	6,222

AMBULANCE FACILITIES.

The same arrangements as explained in previous reports have continued to operate during the year under review, two ambulances being available for the removal of cases, and a qualified driver being always on duty. Three of the Sanitary Inspectors also are qualified drivers.

Details of cases conveyed in the ambulances during 1932, are as follows:—

	<i>Local Cases</i>	<i>Bay Cases</i>
Pulmonary Tuberculosis	10	1
Diphtheria	1	—
Pneumonia	1	2
Dysentery	—	1
Appendicitis	—	5
Enteric Fever	3	3
Scarlet Fever	2	—
Cerebro-Spinal Fever	1	—
Measles	1	—
Malaria	—	1
Miscellaneous	33	47
	—	—
Totals	52	60
	—	—

REPORT OF THE CITY ANALYST AND BACTERIOLOGIST.

The total number of specimens and samples of all classes examined during the year 1932, was 4,261.

The activities of the City Laboratories have been maintained.

The number of samples taken under the Food and Drugs Ordinance again shows an increase. A new "Food and Drugs (Adulteration) Ordinance" came into operation in January. Bye Laws dealing with the sale of milk in Gibraltar have also been drafted and should become operative shortly. An investigation into the possible harmful bacterial contamination of strawberries and grapes was undertaken and results reported. The early "weathering" of headstones and other memorials was investigated.

The report is divided into four parts, as follows:—

Part I—Foods 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.

P A R T I .

<i>Article</i>	<i>Number examined</i>
Cows' Milk	12
Goats' Milk	117
Butter and Margarine	10
Cream	12
Lard	1
Spirits (Whisky, Rum, Gin, Brandy)	34
Tea and Cocoa	2
Olive Oil	4
Cereals	3
Tinned Products	10
Mineral Drinks	2
Drugs	20
Total	228

ADULTERATED SAMPLES.

The number of samples found to be below the standards set out in The Public Health Ordinance was 43, or 18.8 per cent. For comparison, the number below the standard for 1931 was 5 per cent. One milk vendor was convicted for obstructing a Sanitary Inspector in the execution of his duties by refusing to sell milk. He was fined £5 and 3/- costs.

In all cases where the City Council considered it advisable legal action was instituted. Eight convictions were obtained. Fines amounting to £52 and costs £8 4 0. Four licences were cancelled for repeated adulteration.

PARTICULARS OF ADULTERATED SAMPLES.

GOAT'S MILK CONTAINING ADDED WATER.

Lab. No.	Fat	Non-fatty Solids.	Added Water per cent.	Remarks.
2107	2.59	5.62	29	Fined £10 + costs £1-3-0.
2627	2.68	5.60	30	Fined £5 + costs £1-3-0.
2628	2.84	6.06	24	Fined £7 + costs £1-3-0.

The statutory limit for non-fatty solids is 8 per cent.

COW'S MILK DEFICIENT IN NON-FATTY SOLIDS.

Lab. No.	Fat	Non-fatty Solids.	Added water per cent.	Remarks.
2282	3.85	8.34	1.9	No action taken.

The statutory limit for Non-fatty Solids is 8.5 per cent.

GOAT'S MILKS SHOWING ADDED WATER AND FAT DEFICIENCY.

Lab. No.	Fat	Non-fatty	Added water per cent.	Fat Deficiency per cent.	Remarks.
2073	1.60	5.42	33.9	32.4	Fined £5 + costs £1-3-0.
2469	2.28	6.17	24	13	Fined £5 + costs £1-3-0.

GOAT'S MILKS SHOWING FAT DEFICIENCY.

Lab. No.	Fat %	Non-fatty Solids %	Fat deficiency %	Remarks.
391	2.91	8.58	16	Fined £8 + costs £1 3 0
2283	2.66	8.50	24	Fined £7 + costs £1 3 0
2074	3.20	9.4	8	Declared skimmed.
2076	2.50	8.42	28	do. do.
2077	3.20	9.55	8	do. do.
2078	2.60	9.43	25	do. do.
2269	2.30	8.12	34	do. do.
2272	2.75	9.00	21	do. do.
2285	3.40	9.65	2	do. do.
2286	2.60	9.2	26	do. do.
2287	2.50	9.45	28	do. do.
2336	3.35	8.55	4	do. do.
2337	2.75	9.25	21	do. do.
2338	3.35	9.35	4	do. do.
2339	3.35	9.35	4	do. do.
2416	2.75	9.25	21	do. do.
2417	1.55	8.75	48	do. do.
(cow's)				
2419	3.35	9.1	4	do. do.
2420	2.70	9.2	22	do. do.
2498	3.0	8.75	14	do. do.
4499	3.1	8.75	11	do. do.
2500	3.3	9.05	5	do. do.
2501	3.25	9.00	7	do. do.
2502	2.95	8.75	15	do. do.
2503	3.00	9.00	14	do. do.
2522	3.20	8.70	8	do. do.
2524	3.20	8.5	8	do. do.
2526	3.05	9.2	14	do. do.
2527	3.05	9.2	14	do. do.
2528	3.05	8.9	14	do. do.
2510	3.30	8.6	5	do. do.
2511	3.3	9.0	5	do. do.
2515	3.4	9.25	2.8	do. do.
2517	3.0	9.2	14	do. do.
2518	3.0	8.9	14	do. do.

AVERAGE COMPOSITION OF MILKS.

The average composition of Goat's Milk was:—

Milk fat 4.32 per cent.

Non-fatty Solids 10.03 per cent.

The average composition of Cow's Milk was:—

Milk fat 3.72 per cent.

Non-fatty Solids 9.01 per cent.

DRUGS.

All of the drug samples purchased from pharmacists in Gibraltar were found to be genuine, and prescriptions accurately dispensed.

SPIRITS.

The thirty-four samples examined contained the necessary proportion of alcohol, and were found in other respects to be genuine. The statutory limit for whisky, brandy, rum and gin is 35 degrees underproof.

OLIVE OIL.

Fewer samples were examined than in previous years. Vendors are selling olive oil of a higher quality than previously when the acidity was excessive. The four samples examined were genuine.

GOATS' BOILED MILK.

The reduction in the number of samples having a part of the fat extracted noticed last year has not been maintained. The number of milks deficient in fat has risen from six in 1931 to thirty-five for 1932, and means that some 30 per cent. of the samples had been depleted of some of the fat. The skimming of boiled goats' milk has been practiced by vendors for years and the amount of fat abstracted has amounted at times, to over 45 per cent. The skimmed product can be bought at the milk shops as cream, which by analysis has been shown to contain an average of 36 per cent. of milk fat. Vendors have learnt to evade the law by habitually declaring the milk to be skimmed when the Sanitary Inspector's purchase samples for analysis. No such declaration of skimming is made to the buying public, and full retail price is paid for an impoverished article. A test case in the high courts some years ago went in favour of the vendor. This practice of daily depleting milk of part of its valuable fat, so necessary to children and invalids, has received the attention of the Medical Officer of Health and bye laws have been framed with a view of having some control over the quality of milk exposed for sale.

CONDENSED MILKS.

Two samples of sweetened condensed milk imported and sold in Gibraltar gave the following figures of analysis in percentages—

No.	Water.	Fat.	Lactose.	Cane Sugar.	Protein.	All Milk Solids
1	24.80	8.41	11.26	42.41	13.12	32.79
2	—	9.59	—	—	—	31.47

British regulations for condensed milk demand 9.0 per cent. of Fat and 31.0 per cent. of all Milk Solids. Sample No. 1 is seen to be somewhat below these standards in milk fat, while sample No. 2 is considered quite satisfactory.

FOOD AND DRUGS (ADULTERATION) ORDINANCE

This new Ordinance is dated 30th December, 1931, its object being the control of the sale of Foods and Drugs in Gibraltar. It is based on the latest English Legislation on this subject and it rescinds certain sections of "The Public Health Ordinance, 1907."

CREAM.

The fat contents of five samples of Cream obtained from goat's milk and sold in Gibraltar, and seven samples of tinned cream (proprietary brands) was estimated. These are compared in the following results obtained:—

<i>Goats' Cream.</i>					<i>Tinned Cream.</i>				
Sample No.				Fat %	Sample No.				Fat. %
1	...	...	...	31.35	1	...	...	...	19.7
2	...	...	...	38.50	2	...	...	...	28.5
3	...	...	...	40.15	3	...	...	...	22.35
4	...	...	...	41.80	4	...	...	...	20.85
5	...	...	...	39.05	5	...	...	...	23.20
					6	...	...	...	24.10
					7	...	...	...	24.60
Average ..				38.17	Average ...				23.34

STERILISATION OF IMPORTED MILK.

All of the samples of goat's milk (117) were tested for evidence of the presence of unboiled milk. It is satisfactory to report that no samples was offered for sale to the public unboiled.

PART II.—MISCELLANEOUS.

Samples under this heading which were analysed during the year numbered 93, and are as follows:—

- 8 samples of Sugar to determine extent of damage and whether wetted with sea water or rain.
- 2 samples of Tobacco to determine extent of damage and whether wetted with sea water or rain.
- 2 samples of Photographic Print Paper for report on acidity and identification of acids.
- 3 samples of Tombstone
- 2 samples of Earth
- 2 samples of Cross of Sacrifice
- 1 sample of Copper Piping from Crown Surveyor to determine cause of corrosion.
- 2 samples of powder to report on possible presence of blood, wine extract, or leavening substance.
- 1 sample of Sugar to determine if farinaceous or leavening substances were present.

} Investigation as to cause
of deterioration of stone.

- 1 sample of Ice from Medical Officer of Health for complete bacteriological examination as to purity for dietetic purposes.
- 1 sample of Salt for chemical and bacteriological examinations for presence of harmful substances or organisms.
- 1 sample of Matches
- 2 samples of Vomit
- 2 samples of Faeces
- 1 sample of Liquid on cotton wool for identification of liquid.
- 1 sample of Caches—for analysis.
- 1 bottle of Medicine—for analysis.
- 1 Stomach
- 1 Duodenum
- 1 Intestines
- 1 phial of Tablets
- 1 bottle of Liquid
- 1 sample of Water Steriliser from Medical Officer of Health for estimation of available chlorine.
- 8 Skin Scrapings of horses for detection of presence of *Sarcoptes scabiei*.
- 2 samples of White Lead from Crown Surveyor for analysis and report.
- 1 sample Green Tea from Medical Officer of Health for analysis and examination for Arsenic.
- 2 samples of Water from Veterinary Surgeon for presence of poisonous metals.
- 1 sample of Disinfectant for complete assay as to germicidal power—submitted by Medical Officer of Health.
- 1 sample of Faeces for examination for powdered glass—case of alleged attempted suicide.
- 30 Weights (grains, drachms, ozs.) for standardisation and correction.
- 4 samples of Coal for analysis and calorific power.
- 2 samples Strawberries
- 2 samples Grapes
- 1 deposit from Sewage Trap for evidence of refuse from Gasworks.

DISINFECTANT, GERMICIDAL COEFFICIENT.

This assay was undertaken on a sample tin of liquid disinfectant. The label declared its co-efficient to be between 18 and 20. The sample was tested against *B. Typhosus* and

compared with a standard carbolic acid in dilution of 1 in 80 of water. The Rideal-Walker method was used, and the results are tabulated below:—

Disinfectant dilutions.	Co-efficient.	Minutes.					
		2½	5	7½	10	12½	15
1 in 1440	18	+	—	—	—	—	—
1 in 1350	17	+	—	—	—	—	—
1 in 1300	16	+	—	—	—	—	—
1 in 1200	15	+	—	—	—	—	—
Carbolic 1 in 80		+	+	—	—	—	—

The above results show that the germicidal co-efficient of the sample is more than 18 and agrees with the declaration on the tin. It is noticed that even with the stronger solution (1 in 1200) disinfectants take time to act, *i.e.* 2½ minutes at least.

ICE.

The importance of investigating the purity of ice intended for importation to Gibraltar and manufactured in Spain is borne out in the present case. The bacteriological figures of this sample show that the water used in its manufacture had been subject to faecal pollution.

The sample was condemned, and the ice refused admittance.

B. Coli present in 0·1 c.c.

Chlorine = 19·4 parts per 100,000.

Organisms (37° C) = 1256 per c.c.

STRAWBERRIES AND GRAPES.

Large quantities of strawberries and grapes are consumed by the inhabitants of Gibraltar. The conditions under which strawberries are grown at La Linea (the beds are manured with deposit from cesspools) cause uneasiness with the more enlightened inhabitants lest enteric or dysentery be introduced by this medium. Bacteriological investigations were carried out as far as it was possible to find evidence of human faecal contamination. Total organisms (37° C) per strawberry averaged 50,000, of which between 2,000 and 10,000 were B. Coli. Spores of B. Welchii and B. Subtilis, and also the fungus Penicillium were present. An attempt to sterilise strawberries with chlorine water (10 parts per million for 15 minutes) met with only partial success. Inter alia, it was found that the natural acidity of the strawberry inhibited bacterial growth but was not germi-

cidal. No gross contamination of this fruit with enteric or dysentery bacilli is therefore likely but this does not altogether exclude their possible presence. It is thought that adhering dust in which *B. Coli* and other organisms abound would account for much of the bacterial contamination of the strawberry. These are not necessarily harmful organisms. It is of interest to note that during the quinquennial period 1928-1932, only nine cases of enteric out of the fifty-eight cases reported to the Medical Officer of Health occurred during the strawberry season of four months. The records of these particular 9 cases show that 3 contracted the disease in Spain or elsewhere leaving 6 cases unaccounted for. It is also noticed that the case rate for enteric in Gibraltar is less during the strawberry season than for the rest of the year. The conclusion drawn is that inherent danger in the imported strawberry is not as great as was previously suspected. Strawberries should be well washed in running water.

Year.	Enteric cases during strawberry season — May, June, July, Aug.	Total Enteric cases reported during the year.	Enteric cases not accounted for during strawberry season.
1928	2	6	2
1929	2	25	1
1930	1	5	1
1931	1	10	1
1932	3	12	1

GRAPES.

Only between 1 and 5 *B. Coli* were found on each grape with 340 total organisms growing at 37° C. No importance is attached to their presence but washing is desirable. Unlike strawberries, grapes could be sterilised if suspended in water containing 10 parts of chlorine per million for 15 minutes.

PART III.—BACTERIOLOGICAL—CHEMICAL PATHOLOGY AND PUBLIC HEALTH WORK.

	<i>No of Specimens.</i>
Drinking waters and others.....	290
Swabs— <i>B. Diphtheriæ</i> — <i>Vincent's</i> organisms, etc.	420
Sputa— <i>Tubercle Bacillus</i> and other causative organisms	256

Bloods—Widal, T.A.B. and Br. Melitensis	156
Bloods—Goats', Widal for Uduant Fever	95
Bloods—Counts, Hb, red and white cells and differential	42
Bloods—Smears for Malaria, Piroplasmosis, Anthrax, etc.	15
Bloods—Cultures and identification of organism	17
Bloods—Sugar estimations, sugar tolerance tests	154
Bloods—Urea estimations, including urea concentration factor	53
Bloods—Wassermann reaction	473
Bloods—Calcium estimations	5
Naso-pharyngeal swabs — Meningococcus culturally	59
Cerebro-Spinal fluids—Cytology, globulin, sugar, etc., Wassermann and Bacterio- logically	19
Pleural, Hydrocele and Peritoneal fluids...	13
Urines—Analysis and bacteriological	1273
Urines—Urea concentration tests and urea estimations	73
Pus—Gonococcus and other causative organisms	79
Serum—from V.S. for Tr. Pallidum (dark ground)	16
Fæces—Bacteriological for enteric, dysen- tery and food poisoning organisms.....	125
Breast Milk—Chemical analysis	21
Rats—Examination for Plague	134
Histological—Cutting, fixing and staining sections	4
Gastric Contents—including Fractional test meals	50
Guineapig inoculations—Virulence tests on K.L.B. and T.B.	5
Autogenous vaccines	49
Stock vaccines diluted	23
Miscellaneous (foods, skin scrapings, tape- worm, ringworm hairs, etc.)	20
Total	3939

TOXICOLOGICAL AND FORENSIC.

A. The following specimens were received from the Port Surgeon by order of H.M. Coroner :—

- (i) Viscera (stomach, intestines with contents); (ii) One phial marked "Quadro-nox" containing Tabloids;
- (iii) One bottle containing a liquid.

The Quadro-nox tablets were found to consist chiefly of Veronal with smaller amounts of phenacetin and antipyrin. Each tablet weighed 0.6 grams.

The liquid in the bottle was found to be pure ether.

A complete examination of all poisons was made on the viscera, and 1.7 grains of Quadro-nox was isolated from the stomach and duodenum. Symptoms of drowsiness with coma and death pointed to narcotic poisoning.

- B. Specimens of faeces and gastric contents were examined on two occasions for evidence of the presence of phosphorus. Phosphorus was not detected at any time but matches said to have been taken were made of yellow phosphorus. This was a case of alleged attempted suicide. There were no symptoms of phosphorus poisoning.
- C. In another case of alleged attempted suicide faeces were examined for powdered glass with positive results. Small pieces of glass were isolated and exhibited at the trial, conviction followed.
- D. In a sample of green tea arsenic was found to be present in obnoxious quantities.
- E. Two samples of drinking water used by animals contained no poisonous metals. Samples were sent by the Veterinary Surgeon in connection with illness of cattle.

ANIMAL INOCULATIONS.

The inoculation of Guineapigs to determine the virulence of B. Diphtheriae obtained from swabs was conducted on five occasions. Of these, three were fully virulent and were from throats of new cases of diphtheria. In another patient the organism found was not virulent and the patient's contact swab was also non-virulent.

TUBERCLE BACILLUS.

Specimens examined for tubercle bacillus were as follows :—

Sputum—193 specimens, with tubercle bacillus found in 34.

Urine—Tubercle bacillus found in one specimen.

Pus from Abscesses—Tubercle bacillus found in two specimens.

Pleural Fluids—Thirteen were examined but tubercle bacillus not found.

Nine cytological examinations pointed to tubercular infection.

Cerebro-Spinal Fluids—Nineteen were examined. Tubercle bacillus was not found but two cytological results pointed to tubercular infection.

VINCENT'S ANGINA.

Numerous swabs were examined for Vincent's organisms. The number of positives was five. These organisms were found in one swab the previous year.

ANTHRAX.

Seven blood smears were taken from dead cattle. Anthrax bacillus was not found.

MALARIA.

Eight blood smears were examined for the malaria parasite. It was not found during the year.

MENINGOCOCCUS.

The meningococcus was isolated from the cerebro-spinal fluids of two patients. Contact naso-pharyngeal swabs of these patients numbered fifty-nine and were all culturally negative for the meningococcus.

DIPHThERIA.

In the examination of throat swabs for B. Diphtheriæ only Klebs-Loeffler organism was considered, the Hoffman bacillus being disregarded as not virulent. Altogether 420 swabs were examined and 14 new cases of diphtheria were diagnosed. In connection with these new diphtheria cases, 165 contact swabs were taken and of these, 8 were positive—a percentage of 4.8. In one instance both the patient and the positive contact were non-virulent.

DYSENTERY.

Many stools were bacteriologically examined for the causative organism, including microscopical examinations for Amœbæ, blood and pus cells. Of the true dysentery cases having blood and pus in the faeces, B. Dysenteriæ Flexner was isolated from the two. In both cases the organism was agglutinated with "Sonne" serum. Shiga bacillus and Amœbæ were not met with during the year.

ENTERIC FEVER.

Bacillus typhosus was isolated from the stools of eight patients (of which one was a 'carrier') and *B. paratyphosus* 'B' from one patient. These organisms gave their true cultural, fermentation, and serological reactions.

Widal.

The number of Widal blood tests done during the year was 156 of which 37 were positive for typhoid and 8 for paratyphoid.

Every specimen of blood submitted for serological tests is examined with *B. typhosus*/H, *B. typhosus*/O, Para. 'A', Para. 'B', and Br. *Melitensis*. The standardised suspensions of these organisms, obtained from the Pathological Laboratories at Oxford University, have proved quite satisfactory. The constant "strength" of these suspensions now make it possible to compare results with the results of previous tests, and allow the increase of agglutins to be registered with a greater degree of accuracy. This is always necessary with inoculated patients. Again, there is now also in use the new suspension of non-flagellated *B. typhosus* (T/O). Previously when the motile bacillus (T/H) only was used it was not infrequent to obtain no evidence of agglutination when clinically enteric fever was suspected. I have also found by experience (confirming the findings of other workers) that the T/O agglutins are often the first to appear in a typhoid patient's blood. The Widal tests have therefore been placed on a more satisfactory basis, and the irregular findings experienced in the past have mostly been eliminated. A positive agglutination that has a "reduced titre" of less than 10 should not be taken as diagnostic of enteric for I have observed in several instances that either no agglutination or no increase, occurs at the second test some four or five days later. Publications on this subject issued by the Medical Research Council have been closely followed and have been most useful in the Widal test and with the identification of bacilli isolated from stools, etc. A whole series of the standardised suspensions and agglutinating serums are now kept in the laboratory and are chiefly needed in enteric, undulant fever, and food poisoning cases.

UNDULANT FEVER.

In the routine examination of 156 bloods by the serological methods, four showed diagnostic agglutination for this disease.

VENEREAL DISEASES.

Intracellular gram-negative diplococci were found in twenty-one of the seventy-nine specimens examined. Sixteen sera were also examined for the presence of *Tr. Pallidum* by the dark ground illumination method. It was found on three occasions. Most of the specimens are taken in the laboratory.

Wassermann.

Four hundred and seventy-three bloods were tested, with 66 positive cases. These include specimens from the visiting fleet. No cerebro-spinal fluid gave a positive reaction.

RATS.

One hundred and thirty-four rats, which were caught in Gibraltar or on the quays, were examined for the bacillus of Plague. All were free.

GOATS.

The serological agglutination test was carried out on the 95 goats living on the "Rock." All were found free from Undulant fever.

AUTOGENOUS VACCINES.

The number of autogenous vaccines prepared from cases of boils, eczema, cystitis, nasal and bronchial catarrh was 49. Stock vaccines numbering 23 were also diluted and dispensed in ampoules in series of increasing doses. The stock vaccines used were pure acne, gonococcal, and coryza.

CEREBRO-SPINAL FLUIDS.

Cytology, globulin, sugar test, and bacteriological examinations were carried out on the 19 specimens received. When specially indicated the amounts of sugar, urea and sodium chloride were determined and the Wassermann reaction done.

Results of findings were as follows:—

Normal fluids	4
Meningococcus	2
Streptococcus	Nil
Tubercle B.	Nil
Wassermann negative	3
Fluids pointing to tubercular infection.....	2
Encephalitis Lethargica	Nil
Fluids obviously pathogenic but without organisms	4

PLEURAL FLUIDS.

Cytological and bacteriological examinations were conducted on sixteen specimens.

Pneumococci present in two.

No micro-organisms were found in two though polymorphs were numerous.

Twelve were probably tubercular, indicated by the presence of numerous small lymphocytes.

GASTRIC DISORDERS AND FRACTIONAL TEST MEALS.

The analyses of gastric contents in the laboratory diagnosis of gastric ulcer, carcinoma, hypersecretion, etc., were undertaken for three patients, representing 37 specimens of stomach contents.

These laboratory examinations entailed the estimation of free hydrochloric acid and total acidity, and the detection of blood, pus, bile, starch and mucus in each specimen before and every 15 minutes after taking the test meal. In each case a curve is plotted showing the percentages of free hydrochloric acid, and total acidity in relation to the 15 minutes intervals until the stomach has emptied.

RENAL EFFICIENCY TESTS.

In connection with kidney diseases, the degree of efficiency of these organisms in eliminating the waste nitrogenous products (urea) of the body is determined in two ways, (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 in the blood. The normal factor of this is about 70 times or even more.

The Urea Concentration Factor was carried out on 50 patients.

Three results of four tests are shown here, showing differences between diseased kidneys and efficient ones.

<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 (Mclean).</i>
1	376	2100	5.6—Very bad
2	56	1650	29.4—Medium
3	12.5	2200	175.0—Very good
4	27	2500	92.5—Efficient

Urea Concentration Test.

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

This test was carried out on eleven patients. Three of these are given showing differences between diseased and healthy kidneys.

	Case 1.	Case 2.	Case 3.
Urea in urine—1st hour	1.0	1.2	0.9
Urea in urine—2nd hour	1.0	1.6	3.0
	Very poor	Inefficient	Efficient

BLOOD SUGAR ESTIMATIONS AND SUGAR TOLERANCE TESTS.

During the year, 154 estimations of blood sugar were done.

These were individual tests made on diabetic patients, periodically, for guidance in Insulin treatment. Three complete sugar tolerance tests for the diagnosis of diabetes were also undertaken on patients who attended the laboratories. The results of these are reported in detail and are of interest.

Patient	Blood Sugar before giving 50 gms. glucose	Blood Sugar (%) after taking sugar.				
		$\frac{1}{2}$ hr.	1 hr.	1 $\frac{1}{2}$ hrs.	2 hrs.	2 $\frac{1}{2}$ hrs.
1	0.298	0.358	0.416	0.392	0.292	0.215
2	0.090	0.112	0.105	0.120	0.102	0.085
3	0.380	0.396	0.532	0.580	0.486	0.466

Patient No. 1.—Had 10 gms. of sugar per litre of urine before the test and 20 gms. per litre after the test. He nevertheless shows no indication of defective sugar storage in 2 hours. It is thought that the original high sugar content of the blood is due to defective endocrine glands and not to a diseased Pancreas.

Patient No. 2.—Had no urine sugar during the test and showed no defect in sugar storage. In this patient the blood sugar did not rise above 0.12 per cent., and this may be accounted for by slow absorption with an equal rate of deposition.

Patient No. 3.—Had a high urine sugar content with the defective sugar storage of the true diabetic.

A high blood sugar—

The following high blood sugar findings in a diabetic with recovery, are of professional interest.—

Patient was a girl age 11 years, and an old diabetic.

Comatose at 9.30 a.m.—Blood sugar = 0.824 per cent.

One hour later —Blood sugar = 0.816 per cent. (no Insulin)

Next morning (after

Insulin) (conscious)—Blood sugar = 0.380 per cent.

Later, hypoglycaemic

symptoms. —Blood sugar = 0.219 per cent.

NOTIFIABLE DISEASES.

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

	<i>Total.</i>	<i>Positive,</i>
Blood, Wassermann	473	66
Pus for Gonococci	79	21
Sputum for Tubercle bacilli	256	63
Swabs for B. Diphtheria }	420	37
„ „ Vincent's organisms }		5
Serum for Tr. Pallidum	16	3
Cerebro-spinal Fluids for		
Meningococcus	19	5
Guineapig inoculation (virulence K.L.B.).	5	3
Widal reaction for Enteric, Melitensis :		
B. Typhosus		37
B. Paratyphosus 'A' }		Nil
B. Paratyphosus 'B' }	156	8
Br. Melitensis		4
Fæces for Enteric and Dysentery :		
B. Typhosus		8
B. Paratyphosus 'A' }		Nil
B. Paratyphosus 'B' }	125	1
B. Dysenteriae Flexner		2

DRINKING WATERS AND OTHERS.

Constant supervision of Gibraltar's dietetic waters necessitates numerous bacteriological examinations, the City's public supply being tested monthly. A large number of houses have their own underground tanks. In any suspected contamination a sample is referred to the laboratories. The 290 samples exa-

mined are listed as follows:—Willis's Road reservoirs 50; Governor's Parade fountain 11; Brackish water 11, Sea water 11; Underground tanks and wells 157; North Front wells 15; Watering Jetty 11; Catalan Bay wells 24.

DISTRIBUTION OF SPECIMENS.

For record purposes all specimens and samples examined during the year can be allocated as follows:— From Military Authorities 399; from Naval Authorities 115; from Colonial Hospital 777; from Spain 98; and from Civil (which includes the City Council and general public) 2872—Total 4261.

INSTRUCTION, EQUIPMENT, &c.

Instruction—Pte. Wilcox R.A.M.C. attended the laboratories for four months for instruction in practical work in preparation for the Military examination in hygiene and pathology for Laboratory Assistants Class I.

Library—Monthly publications of "The Analyst" for the past eight years have been bound. These eight volumes of reference make a valuable addition to the laboratory library.

Loss of Laboratory Animals—Great mortality occurred among the Guineapigs during June, nearly depleting the entire stock of some 50 animals. All cages were thoroughly cleaned, disinfected, and whitewashed thereby saving the remaining few. Post mortem examinations pointed to a pseudo tubercular condition.

Distilled Water—All distilled water which was previously made in the laboratories is now supplied by the Colonial Hospital. A condenser has been placed to trap the steam from the boilers. This means a saving in the laboratory gas account and distilled water can be sold to the public at a reduced rate. Three hundred and thirty-six gallons were sold during 1932.

PART IV.—TESTING OF SHIPS.

Inflammable and Poisonous Vapours—The City Analyst is entrusted with the testing of compartments in oil-carrying ships and others. Gas free certificates are necessary before ships of this class enter dry dock for repairs.

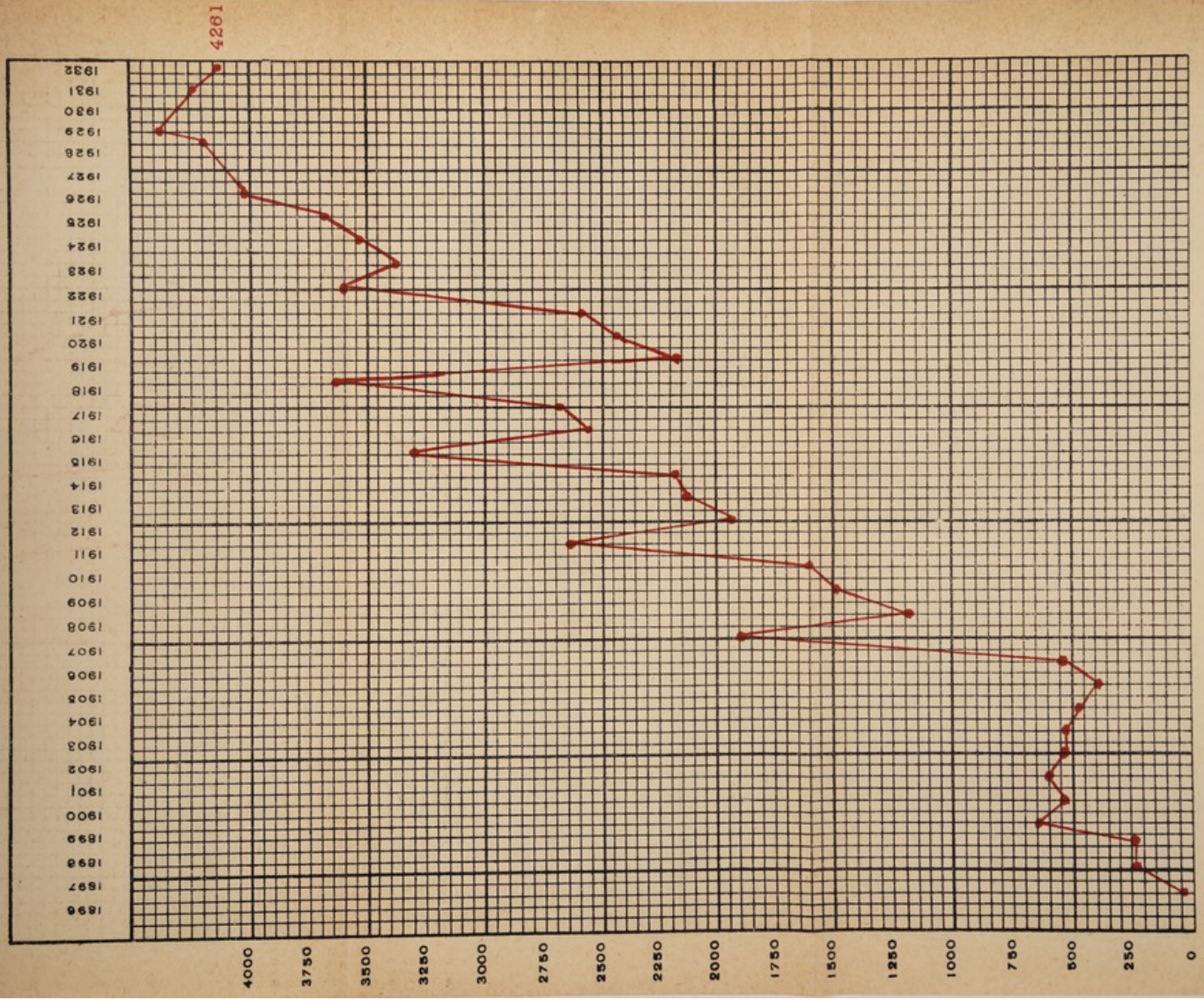
A gas free certificate was given in the case of one tanker. Tanks 1, 2, 3 & 4 with bunkers (port and starboard) and cofferdams (fore and aft) were each tested.

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

City Analyst and Bacteriologist.

CITY COUNCIL OF GIBRALTAR.

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



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1911
1912

CITY COUNCIL OF NEW YORK

DISTRIBUTION OF SPECIMENS.

Nature of Specimen.	Civil.	Spain.	Military.	Navy Received from Military Hospital.	Navy.	Colonial Hospital.	Total.
Blood, Wassermann ...	250	15	10	3	37	158	473
Blood, Widal ...	91	2	18	1	...	44	156
Blood, Count ...	21	2	4	...	3	12	42
Blood, Smears ...	10	...	...	...	3	2	15
Blood, Sugar ...	32	1	...	7	...	114	154
Blood, Urea ...	38	2	...	...	...	13	53
Blood, Culture ...	3	...	13	1	...	...	17
Blood, % Calcium ...	1	...	...	...	...	4	5
Blood goats' for Mic. Mel- tensis ...	90	3	2	...	...	...	95
Urine ...	973	63	15	5	4	213	1,273
Sputum ...	196	4	2	...	2	52	256
Fæces ...	47	...	30	1	1	46	125
Cerebro-Spinal Fluid ...	2	...	7	2	...	8	19
Pleural fluids ...	2	...	5	3	...	3	13
Serum for V.S. ...	...	...	...	...	16	...	16
Swabs for K.L.B., &c. ...	266	2	61	3	19	69	420
Stock Vaccines ...	22	1	...	...	...	...	23
Auto-Vaccines ...	34	...	10	...	...	5	49
Gastric contents ...	11	...	25	12	...	2	50
Puss... ...	39	1	8	1	15	15	79
Waters ...	174	1	106	...	9	...	290
Guineapig Inoculations ...	3	...	1	...	1	...	5
Rats for Plague ...	134	...	...	...	...	...	134
Food and Drugs Act ...	228	...	...	...	...	...	228
Other Food, Drinks, &c. ...	34	...	6	...	...	1	41
Urea Concentration Test ...	60	...	...	...	...	13	73
Coal ...	4	...	...	...	...	...	4
Naso-pharyngeal swabs... ...	46	...	12	1	...	...	59
Human Milk ...	20	1	...	...	...	...	21
Histological ...	4	...	...	...	...	...	4
Miscellaneous ...	37	...	24	...	5	3	69
Total ...	2,872	98	359	40	115	777	4,261

RESULTS OF MONTHLY ANALYSES OF
GIBRALTAR DRINKING WATER—1932.

Date	Chlorine (parts per 100,000).	B. Coli
Feb. 9	2·0	Not found in 25 c.c.
Mar. 11	2·9	do. do.
Apr. 23	3·0	do. do.
May 30	4·0	do. do.
Jul. 6	2·2	do. do.
„ 27	3·0	do. do.
Aug. 27	3·0	do. do.
Sept. 27	2·2	do. do.
Nov. 1	2·1	do. do.
„ 28	1·0	Present in 10 c.c.
Dec. 31	2·0	do. do.
Average ...	2·4	

RESULTS OF MONTHLY ANALYSES OF WELL WATER—1932.

SAMPLES TAKEN AT NO. 5 WELL, NORTH FRONT.

Date	Chlorine (parts per 100,000).	B. Coli
Feb. 9	10·0	Present in 2 c.c.
Mar. 11	20·0	Present in 0·1 c.c.
Apr. 23	9·2	do. do.
May 30	6·0	do. do.
Jul. 6	50·0	do. do.
„ 26	48·0	Present in 1 c.c.
Aug. 27	12·4	Present in 0·1 c.c.
Sep. 27	35·0	Present in 10 c.c.
Nov. 1	87·0	Present in 0·1 c.c.
„ 28	62·0	do. do.
Dec. 31	15·0	do. do.
Average ...	33·1	

RESULTS OF MONTHLY ANALYSES OF SEA WATER—1932.

Date.	Chlorine (parts per 100,000).	B. Coli.
Feb. 9	1,950·0	Present in 1 c.c.
Mar. 11	1,950·0	Present in 10 c.c.
Apr. 23	1 950·0	Present in 1 c.c.
May 30	2,100·0	do. do
Jul. 6	2,100·0	do. do.
„ 26	2,100·0	do. do.
Aug. 27	2,010·0	do. do.
Sep. 27	2,100·0	do. do.
Nov. 1	2,100·0	do. do.
„ 28	2,100·0	Present in 0·1 c.c.
Dec. 31	1,990·0	do. do.
Average ...	2,040·9	

RESULTS OF MONTHLY ANALYSES OF BRACKISH WATER—1932.

SAMPLES OBTAINED FROM MAIN IN GOVERNOR'S STREET.

Date	Chlorine (parts per 100,000).	B. Coli
Feb. 9	710·0	Present in 1 c.c.
Mar. 11	700·0	do. do.
Apr. 23	600·0	Present in 2 c.c.
May 30	690·0	Present in 1 c.c.
Jul. 6	700·0	do. do.
„ 26	700·0	do. do.
Aug. 27	820·0	do. do.
Sep. 27	780·0	Present in 0·1 c.c.
Nov. 1	800·0	Present in 1 c.c.
„ 28	810·0	do. do.
Dec. 31	850·0	Present in 0·1 c.c.
Average ...	741·8	

RESULT OF ANALYSES OF BOILER WATER—1932.
 SAMPLES TAKEN AT WATERING JETTY.

Date	Chlorine (parts per 100,000).	B. Coli
Feb. 9	23.0	Present in 5 c.c.
Mar. 11	24.0	Present in 1 c.c.
Apr. 23	22.8	Present in 5 c.c.
May 30	20.8	do. do.
Jul 6	20.0	Present in 2 c.c.
„ 26	20.0	do. do.
Aug. 27	18.5	Present in 1 c.c.
Sep. 27	23.0	Present in 5 c.c.
Nov. 1	20.0	Present in 2 c.c.
„ 28	20.0	Present in 1 c.c.
Dec. 31	20.0	do. do.
Average ...	21.1	

SANITARY CIRCUMSTANCES OF THE DISTRICT.

Much of the information given 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, and the section on Housing is compiled from notes kindly supplied by Captain H. St. C. Garrod, M.C., L.R.I.B.A., Crown Surveyor and Engineer.

WATER SUPPLY.

Three classes of water are supplied by the City Council of Gibraltar, viz. :—(a) Potable Water; (b) Brackish Water; and (c) Boiler Water.

(a) POTABLE WATER.

This water is caught directly from the rainfall upon specially prepared catchment areas some 35 acres in extent, and stored in 5 large reservoirs constructed in excavations in the heart of the Rock, and in a reservoir near Moorish Castle, constructed in the open.

A system of pipes conveys the water from the reservoirs to the houses, wharves and public points of supply.

The roof of Moorish Castle reservoir was reconstructed during the year 1932, and certain alterations and improvements effected thereto which increased its storage capacity by about 200,000 gallons.

The total storage accommodation for potable water is now 8,400,000 gallons.

A new reservoir in the heart of the Rock to hold 1,100,000 gallons is at present under construction and will be completed in 1933. Alterations to one of the existing reservoirs are contemplated which will increase its storage capacity by about 300,000 gallons. It is therefore anticipated that the Council's total storage accommodation for potable water at the end of 1933 will approximate 9,700,000 gallons.

During the dry season of the year 1932, further repairs were effected to the concrete filling of the natural rock collecting areas on the western side of the Rock, and repairs were also carried out to the catchment area on the eastern side which is constructed of corrugated iron sheets on timber framing.

The network of supply mains in the City was extended during the year, new mains have been laid in Irish Town, Tuckey's Lane and Devil's Tower Road.

An additional fountain or supply point was also erected at Richardson's Passage and several new services to private residences were laid.

The quantity of water collected in the Potable Water reservoirs during 1932 was 10,101,460 gallons.

In addition, an estimated quantity of 5,936,835 gallons was run into the Brackish Water reservoirs and to waste during the rainy season when the Potable Water reservoirs were all filled.

During the year the supply was as follows:—

To the Shipping1,305,860 gallons.

To the Town11,574,156 gallons.

(b) BRACKISH WATER.

This water is obtained from a number of wells situated at the North Front, and is elevated by pumping machinery to several service reservoirs situated in various parts of the City. An intercommunicating system of distributing pipes conveys the water by gravitation to every house, and the supply is constant. The Council also pumps Brackish Water for War Department purposes to reservoirs near the top of the Rock approximately 1,390 feet above sea level.

The water is somewhat saline, the amount of salinity varying with the seasons, and is used for baths, fire fighting, road watering, flushing and general sanitary purposes.

The total quantity of brackish water pumped and distributed during the year 1932, amounted to 262,369,600 gallons.

The water levels in the supply wells at North Front have recently become lower particularly during dry periods. This is now the subject of close observation and investigation, and may lead to boring operations being undertaken.

In 1932, the supply reservoirs at Europa Road was emptied and cleansed, and the main outlet valves reconditioned. In carrying out this work special arrangements had to be made (including the laying of a new interconnecting main) to maintain the supply to the large district fed from this reservoir.

In the early part of the year a series of tests were carried out at all the Fire Hydrants maintained by the Council and a complete record of the static pressures and rates of flow obtained. The improvements effected to the brackish water supply system during recent years and the points at which further improvements were indicated or desirable were made evident by these tests.

Improvements to the supply system were effected during the year by the renewal of the old and defective mains in Crutchett's Ramp, Demaya's Ramp, Lynch's Lane and Buena Vista Road.

(c) BOILER WATER.

This water is pumped from shallow wells at North Front to water towers from which it is supplied to the Shipping for non-dietetic purposes.

During the year 1932, the quantity thus supplied was 446,000 gallons.

SEWAGE DISPOSAL AND DRAINAGE

The whole of the sewage of Gibraltar eventually discharges at Europa Point where the prevailing strong currents speedily carry it out to the sea. The main gravitating trunk sewer is about $2\frac{1}{2}$ miles in length and its size at the outfall is 6 ft. x 4 ft. 6 ins. It takes both sewage and storm water.

The sewage from the low lying northern district is lifted to the main gravitating sewer by a series of ejectors operated by compressed air.

During the year 1932, the quantity of sewage and storm water so lifted amounted to 70,000,870 gallons.

Storm overflows discharging into the sea are provided on the line of the main sewer at such levels that they only come into operation in times of heavy floods when the sewer is running to nearly full capacity.

Certain districts are also provided with independent storm water relief drains.

The configuration of the Rock is such that very large volumes of water very quickly reach the lower levels and the sewers are taxed to the utmost, and the rate of run-off is abnormal.

SCAVENGING AND REFUSE DISPOSAL.

Household refuse is collected once a day in winter and twice a day in summer and conveyed for incineration to the Council's Destructor in petrol driven Freighter Cars. The Refuse Destructor is situated away from the Town at the North front and is an efficient modern installation comprising two complete duplicate continuous grate incinerating units with subsidiary plant, buildings, etc.

During 1932, the roof of one of the boiler houses was reconstructed, new ablution rooms for the workmen engaged at the Destructor were built and approval was obtained for the construction of a new rain water storage tank.

The average daily collection and disposal of refuse was about 15 tons.

Steam generated in incinerating the refuse is utilized for disinfecting purposes at the Council's Disinfecting Station adjacent to the Destructor Buildings.

STREET CLEANING AND SANITATION.

All the Public Highways of Gibraltar are provided with non-absorbent waterproof surfaces and are well cared for and maintained.

During the year 1932, a portion of Crutchett's Ramp was widened and a much needed turning point for vehicles in this narrow highway was thus provided.

Fish Market Road was entirely reconstructed during the year and a portion of Road to Spain was rechannelled and resurfaced and the road camber altered to meet modern traffic requirements.

Improvements were also effected to the steps at Centre Pavilion Road.

Street sweeping and cleansing is well organized, the whole City being divided into sweeping districts and a sweeper detailed for each section. Street orderly bins are provided at strategic points and these are regularly emptied by motor driven dust carts.

Travelling gangs wash down the streets and public steps with brackish water from watering hydrants by means of hoses and spreaders, and occasionally a little disinfectant is added.

PUBLIC BATHS.

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

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

During the year 1932, the sea wall at the Sea Bathing Pavilion was extended, new sun bathing paved platforms were provided on the sea front, and twenty additional dressing cubicles for the Ladies' Section were constructed.

SANITARY CONVENIENCES.

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

HOUSING.

A number of private houses have been reconstructed and remodelled.

Progress is also being made under the Progressive Housing Scheme especially in respect of certain Crown Properties.

Some of these are very old and the only economic thing to do is to demolish, remodel and rebuild on modern lines. It was considered by the Government that this work should be undertaken by private enterprise and with this end in view, authority was obtained for at least two properties to be let on 99 years leases. No applications, however, were forthcoming and the Government have now decided to undertake the work and have now in hand due for completion in 1933, Crown Properties Nos. 162, 876 and 926. These three properties were in a ruinous state calling for almost complete demolition. The standard aimed at was two rooms and a kitchen with independent water closets and a common washhouse outside the building complete with an adequate fresh water tank.

Crown Property No. 162 was 120 years old. It was one of the worst slum buildings in the City, each family having in most cases only one room 8 ft. high. The reconstruction of this property will provide 4 flats, each containing two good rooms and a kitchen, all light and well ventilated with modern conveniences.

Crown Property No. 876 was also in a ruinous state. When completed it will contain 6 flats of two rooms and a kitchen, and one of three rooms and a kitchen, separate water closet to each flat with communal washhouse and fresh water tank.

Crown Property 926 has been an eyesore for some years and was the subject of a special sanitary report during the course of the year. The building when reconditioned will have 5 flats of two rooms and a kitchen and 1 of three rooms and a kitchen complete with independent water closets, a communal washhouse and fresh water tank.

Summarised, in 1933 there will be ready for occupation, 14 flats of two rooms and kitchen, and 2 flats of three rooms and kitchen.

SUMMARY OF WORK DONE BY SANITARY INSPECTORS DURING THE YEAR 1932.

COMPLAINTS RECEIVED.

Written	2
Verbal	190

PREMISES INSPECTED.

General inspection	3
Casual inspection	58

NUISANCES FOUND.

Defective drains	136
Obstructed drains	286
Defective water closets	305
Defective water closet fittings	390
Defective water fittings	378
Defective rainwater pipes	145
Defective eavesgutters	192
Defective roofs	70
Defective yard paving	26
Dampness	44
Premises dirty	91
Defective or no dustbin	194
Suspected pollution of water in underground tank	37
Underground tank not insect proof	49
Brackish water tank not insect proof	74
Brackish water running to waste	312
Other minor defects	1827

MISCELLANEOUS SERVICES.

Samples of Food and Drugs taken for analysis	169
Premises disinfected for infectious disease	607
Premises disinfected for vermin, etc.	6
Stables disinfected	616
Articles disinfected at North Front Disinfecting Station...	6222
Visits of enquiry re infectious disease	915

Cases removed in Ambulances—

Local	52
Bay	60
Visits to Milk-Shops	282
Visits to Eating Houses	247
Visits to Mineral Water Factories	205
Visits to Common Lodging Houses	6

MISCELLANEOUS SERVICES—(Contd.)

Visits to premises on which notice for abatement of nuisances have been served and are revisited for the purpose of ascertaining whether requirements have been complied with	1814
Notices served in accordance with "The Vaccination Ordinance, 1887"	277
Legal Proceedings instituted	11
Street water fittings found defective	155
Defects found	4711
Defects remedied	4689
Pending on 31st December, 1932	22

COMMON LODGING HOUSES.

There are two Common Lodging Houses at present in Gibraltar.

These were inspected at intervals, and the conditions generally were found to be satisfactory.

**LIST OF ORDINANCES, BYE LAWS AND REGULATIONS
RELATING TO THE PUBLIC HEALTH ENACTED IN
GIBRALTAR DURING 1932.**

No legislation affecting Public Health matters or Food and Drugs was enacted during 1932.

REPORT OF THE VETERINARY ADVISER.

The general health of all animals in the Colony remains good, and there have been no serious outbreaks of infectious or contagious disease during the year under review.

HORSES AND MULES.

Thirty-five were imported by sea into the Colony during the year and were examined on landing and found free from disease. Their countries of origin were:—

England	13
Casablanca	4
Malta	2
Tangier	16

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 destination were:—

England	3
Malta	3
Tangier	21

One case of Sarcoptic Mange occurred in a horse (civilian) and one case of Strangles in an Army horse.

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

A census of all horses and mules stabled in Gibraltar was taken on 1st September, 1932, with the following result:—

	<i>Horses</i>	<i>Mules</i>	<i>Donkeys</i>
Civilian	180	73	13
Government	39	46	1
Naval and Military Officers	147	1	7
Total	366	120	21

CATTLE.

The numbers imported and their country of origin were:—

	<i>Spain</i>	<i>Morocco</i>	<i>Portugal</i>	<i>Argentina</i>
Cattle	270	1855	64	200
Sheep	2457	30	—	91
Pigs	1273	—	—	—
Total	4000	1885	64	291

These were examined on landing and generally were in good condition.

Only two bullocks had to be destroyed on the quay on arrival due to injuries en route which must be considered very satisfactory.

There were no cases of Foot and Mouth Disease during the year under review.

Exports of cattle during the year were :—

	<i>Bullocks</i>	<i>Sheep</i>
To Tangier	40	60
Ceuta	1	—
Casablanca	110	51
Total	151	111

MILCH COWS AND GOATS.

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

All deaths occurring in milch cows were investigated and Post Mortem examinations were made on five occasions.

DOGS, CATS, &C.

There were no cases of rabies during the year, and I consider the stringent regulations (permanent muzzling and strict quarantine of imported dogs) to have been fully justified by results.

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

	<i>Dogs.</i>	<i>Cats.</i>
(a) Number detained for isolation owing to having bitten persons or animals	17	2
(b) Number destroyed	38	246
(c) Number imported from the United Kingdom without undergoing quarantine... ..	33	1
(d) Number imported from other countries which underwent quarantine of six months or less	6	—

C. H. S. TOWNSEND,

Major, R.A.V.C.,

Veterinary Adviser to the City Council.

F O O D .

SUPERVISION OF FOOD SUPPLIES.

General supervision of restaurants, cafes, eating houses, and places where food is sold or prepared, is carried out by the City Council Sanitary Inspectors who also act as sampling officers.

Details of the samples taken during the year are given in the City Analyst's section of this report.

Market produce imported daily from Spain, fresh meat and imported frozen meat, are under the control of the staff of the Public Markets.

GIBRALTAR MILK SUPPLY.

The majority of the fresh milk consumed in Gibraltar is imported from Spain. All imported milk is required to be boiled pasteurized or sterilized before sale, and samples are tested at intervals to ensure that this process is being properly carried out.

The average amount of fresh milk imported daily from Spain and that produced locally is shown below.

It is noticeable that the amount of fresh cow's milk produced locally shows a considerable increase over last year.

	<i>Cows'</i>	<i>Goats'</i>
Locally produced	560 pints.	230 pints.
Imported	222 „	3844 „
Total	782 pints.	4074 pints.

Condensed milk is consumed to the extent of over 1,200 tins a day.

All goats in Gibraltar are examined serologically for undulant fever twice yearly, and all cows are submitted to the Tuberculin Test by the Veterinary Adviser.

All goats proved free from infection.

Eight vendors were prosecuted for selling adulterated milk, and substantial fines were imposed in each case where a conviction was obtained. As is pointed out by the City Analyst in his report, the number of samples of goat's milk found on analysis to be deficient in fat but "declared skimmed" to the sampling officer at the time of purchase shows a considerable increase over last year. As he further points out such milk is deprived of a valuable constituent so necessary to infants and invalids, and though it is not considered desirable to make the sale of

skimmed milk illegal, bye laws have been drafted and are now awaiting official sanction which, it is hoped, will ensure that a customer wishing to purchase full cream milk does not unwittingly buy milk deficient of its natural fat content.

There are seven registered milkshops in Gibraltar besides two milk stalls in the Markets.

There were 57 milk vendors registered with the City Council during the year.

BAKEHOUSES.

There are 8 bakehouses in Gibraltar.

These were inspected at regular intervals and found satisfactory. In addition, a certain amount of Spanish bread is imported for sale in the City.

Although the bakehouses in the City are generally clean and well conducted, the methods of delivery of bread have, in many instances, left a good deal to be desired. This matter was taken up with several of the leading bakers, who expressed their willingness to co-operate, and certain improvements have already been effected.

BUTCHER'S SHOP.

In addition to the butcher's stalls in the Markets, there are four butcher's shops in Gibraltar and one shop which deals entirely in imported frozen meat.

The fresh meat is slaughtered and dressed at the Government Slaughterhouse under the supervision of a qualified inspector.

Imported frozen meat is accompanied by a certificate of fitness from the country of origin and is subject to inspection on importation by the Markets staff.

ICE CREAM.

The manufacture of ice cream in Gibraltar is limited to such places as are approved by the Council.

MARKETS AND SLAUGHTERHOUSES.

By the end of 1931, the extensive alterations and repairs in connection with the Markets were completed and the premises are now reasonably convenient and up-to-date.

During the year under review, only minor repairs and painting have been carried out as necessary.

At the Slaughterhouse, the roof has been patched in places and electric light has been installed in the quarters of the Inspector in charge, and of the cleaners.

As the figures below will show, there has been a very large increase in the amount of frozen meat imported into Gibraltar. This meat is of excellent quality and can be retailed at a reasonable price. It is evident from the figures that the local population is rapidly acquiring a preference for frozen meat to the exclusion of the fresh, locally slaughtered, variety as the increase in imports cannot be accounted for solely by sales to the shipping. In fact, so much so is this taking place that butchers in the Markets who deal solely in fresh meat slaughtered in Gibraltar are beginning to find their sales very seriously affected.

The amount of frozen meat imported during the past 4 years is shown below :—

	<i>Beef.</i>	<i>Mutton.</i>	<i>Pork.</i>
1929	11,713	2 885	2,366
1930	54,741	25,880	6,374
1931	96 157	69,926	16,923
1932	228,072	116,099	37,584

The Government Slaughterhouse has been kept in good condition. The number of animals slaughtered during the year were as follows :—

Cattle	2,273
Sheep and Lambs...	2,498
Pigs	1,270

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

	<i>In whole</i>	<i>In part</i>
CATTLE—		
Cysticercus Bovis	3	67
Tuberculosis	9	14
Pleurisy	—	1
Pleurisy (septic).....	1	—
Pericarditis	—	2
Pyemia and Septicæmia	1	—
Bruising	—	3
Infection (localized)	—	2
Fever	1	—
Necrosis (liver)	—	1

SHEEP—

	<i>In whole.</i>	<i>In part.</i>
Emaciation	1	—
Pyonephrosis	1	—
Fever	1	—
Abscess (generalized)	1	—
Lymphadenitis (caseous)	—	2
Bruising	—	2
Pyemia	1	—
Sarcocysts	—	3
Pleurisy	—	2
Liver Flukes	—	6

PIGS —

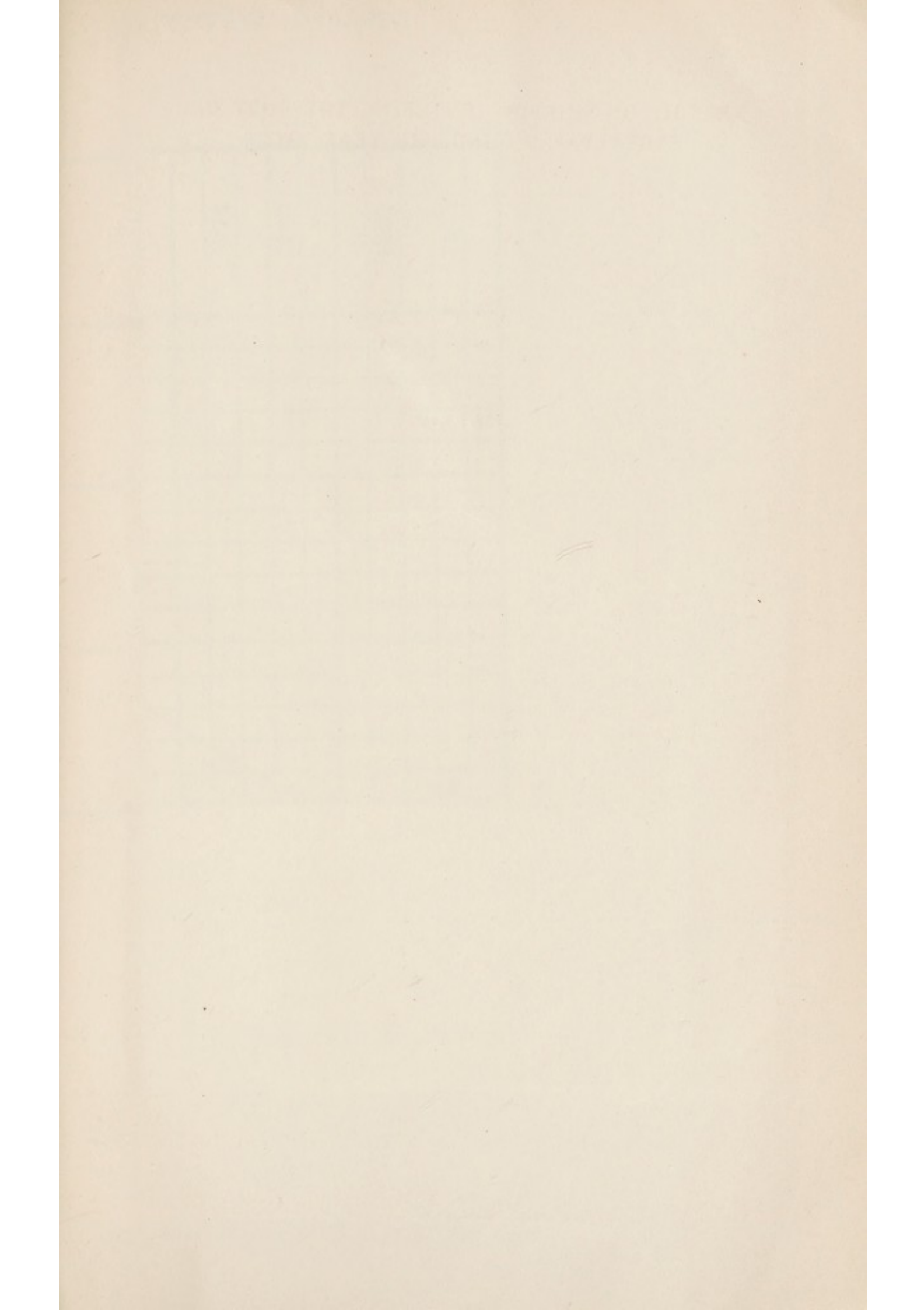
Tuberculosis	1	64
Jaundice	1	—
Discoloration of Liver	—	1
Peritonitis (septic)	2	—
Peritonitis	—	5
Swine Fever	1	—
Discoloration of Skin	—	5
Urticaria	—	2
Pericarditis	—	1
Swine Erysipelas	1	—
Staphylococcal Infection (generalized)	1	—
Staphylococcal Infection (localized)	—	6
Enlarged Spleen (cause unknown)	—	1

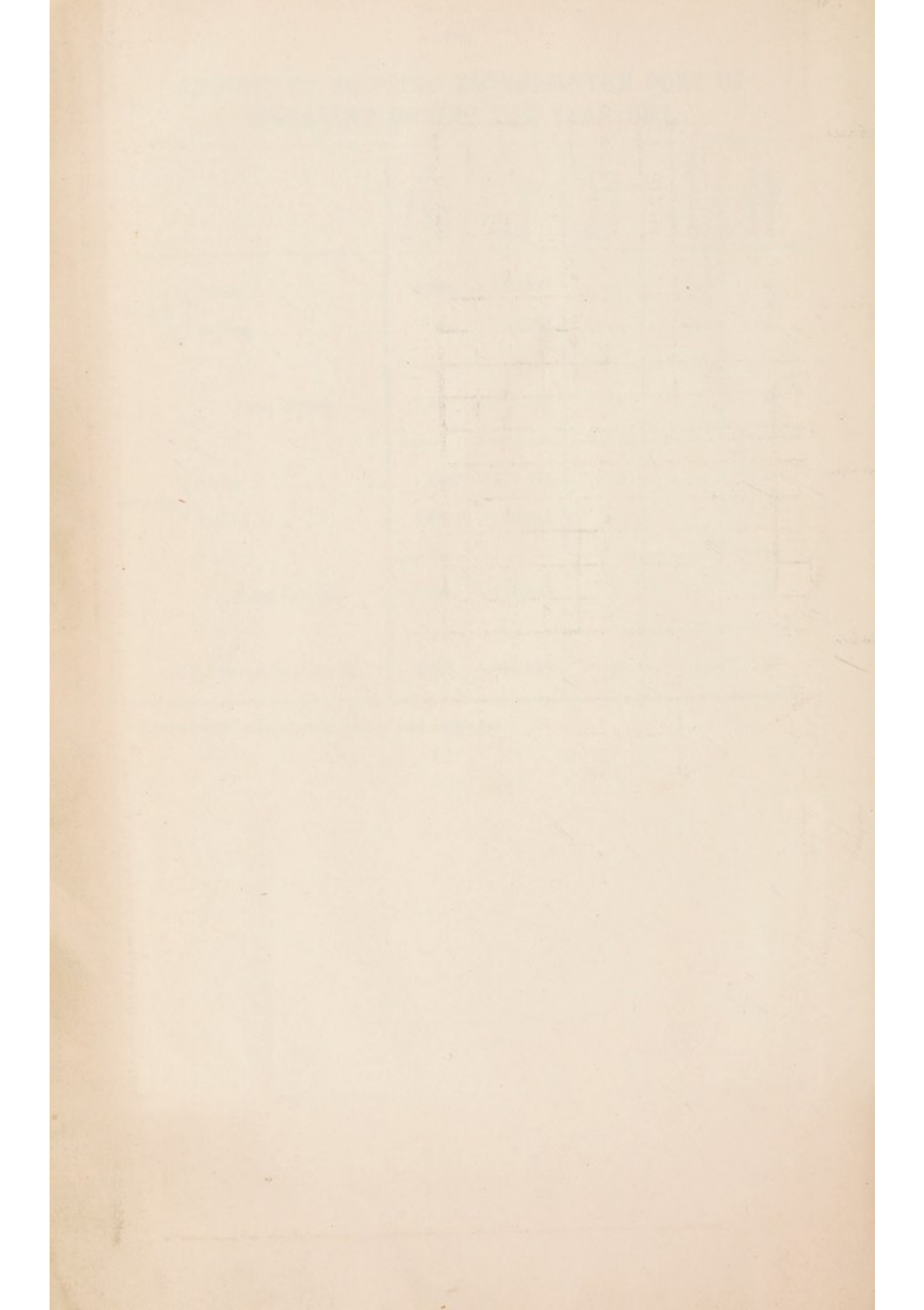
There were no cases of Foot and Mouth Disease.

**AMOUNT OF SHIPPING ENTERING THE PORT OF
GIBRALTAR DURING THE YEAR 1932.**

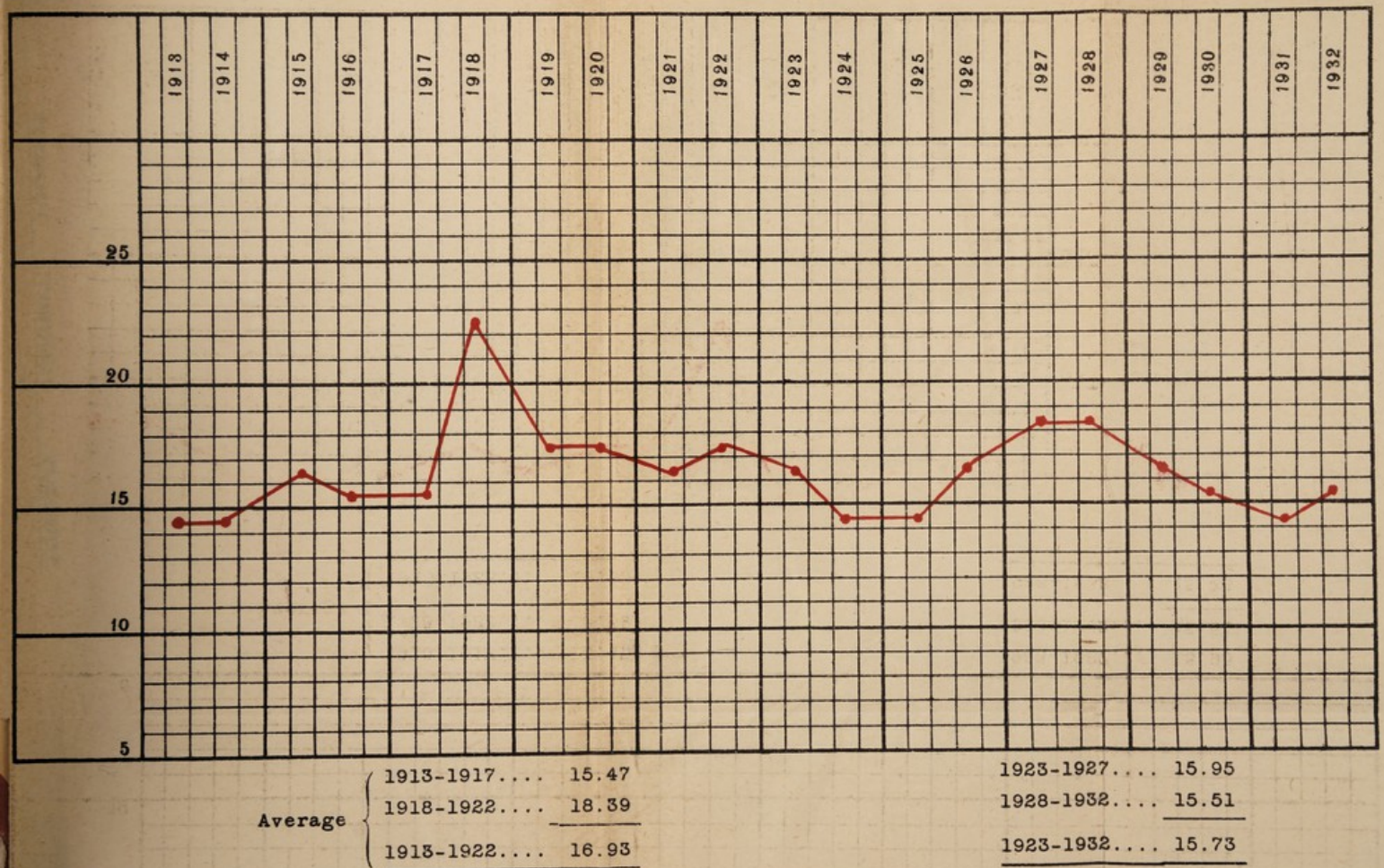
		Vessels entered in 1932*	Net Tonnage.	Number inspected.	Left in quarantine.	Admitted to Pratique
British	Steam	1,232	4,560,781	4	1	3
	Sailing	20	2,344	—	—	—
Total British		1,252	4,563,125	4	1	3
Foreign	Steam	1,558	3,072,478	2	—	2
	Sailing	1,281	38,955	—	—	—
Total Foreign		2,839	4,111,433	2	—	2
Total British and Foreign .		4,091	8,674,558	6	1	5

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

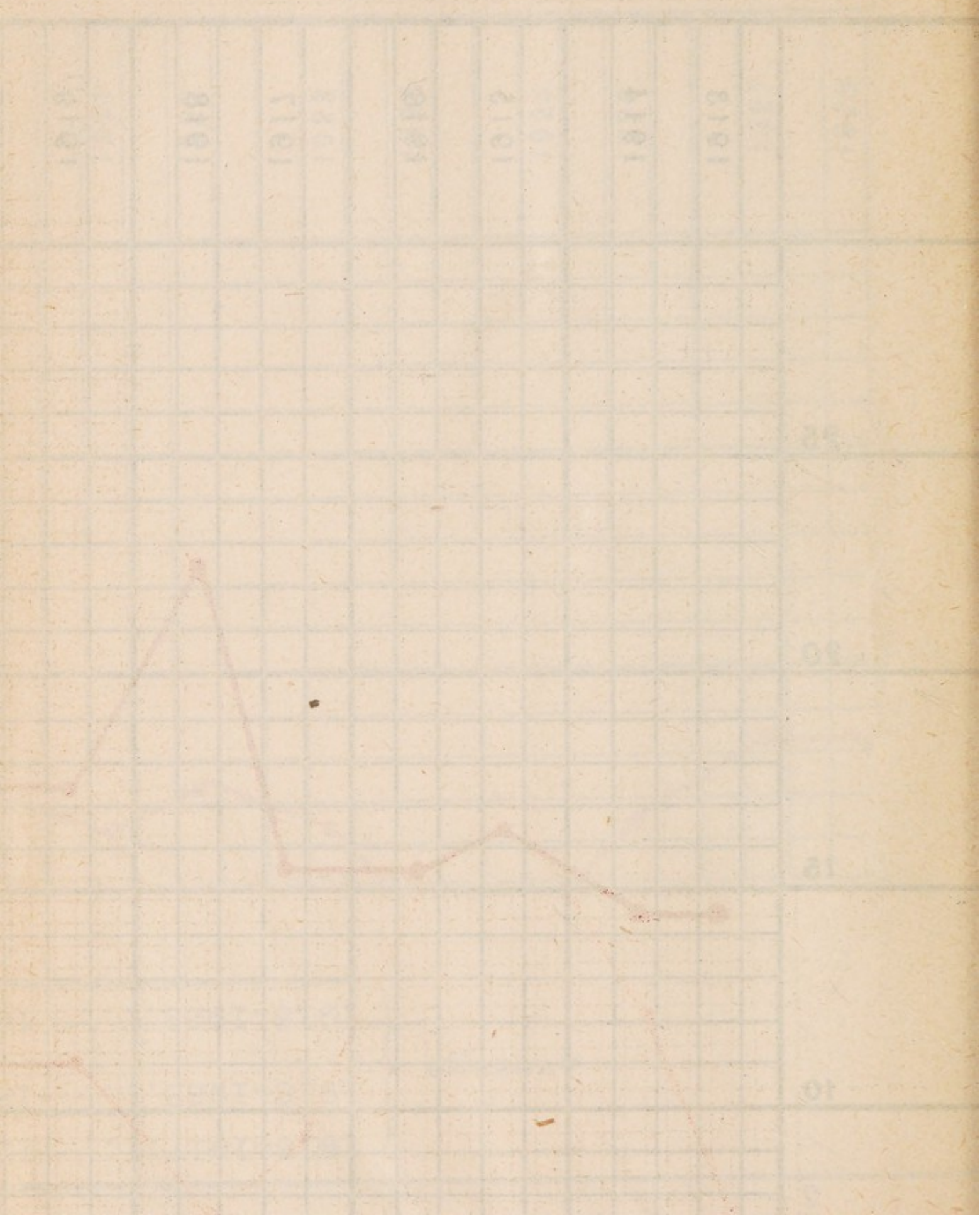




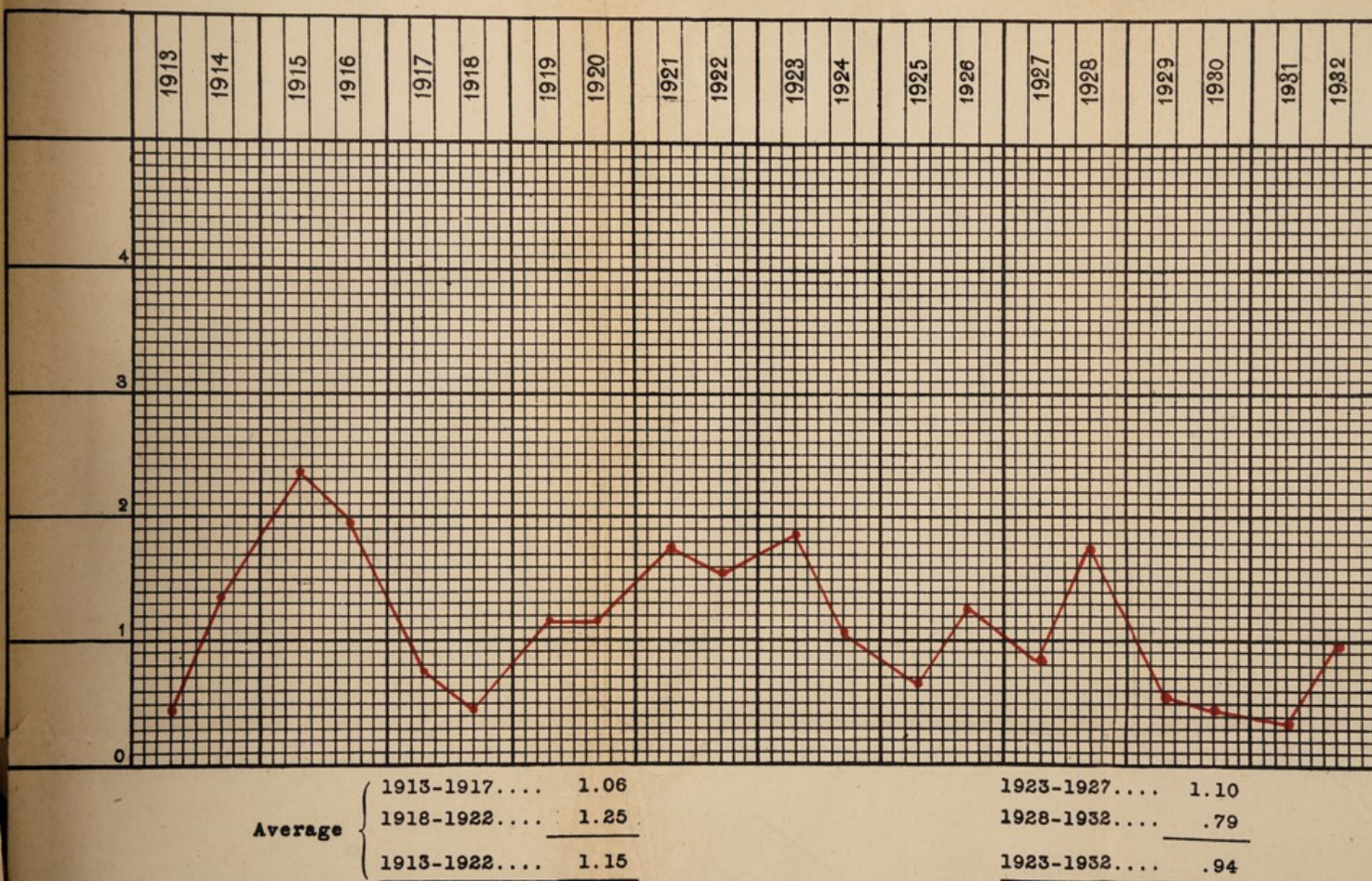
GENERAL DEATH RATE PER 1,000 OF POPULATION (TOTAL CIVIL), GIBRALTAR, FOR THE DECENNIAL PERIODS
1913-1922 and 1923-1932

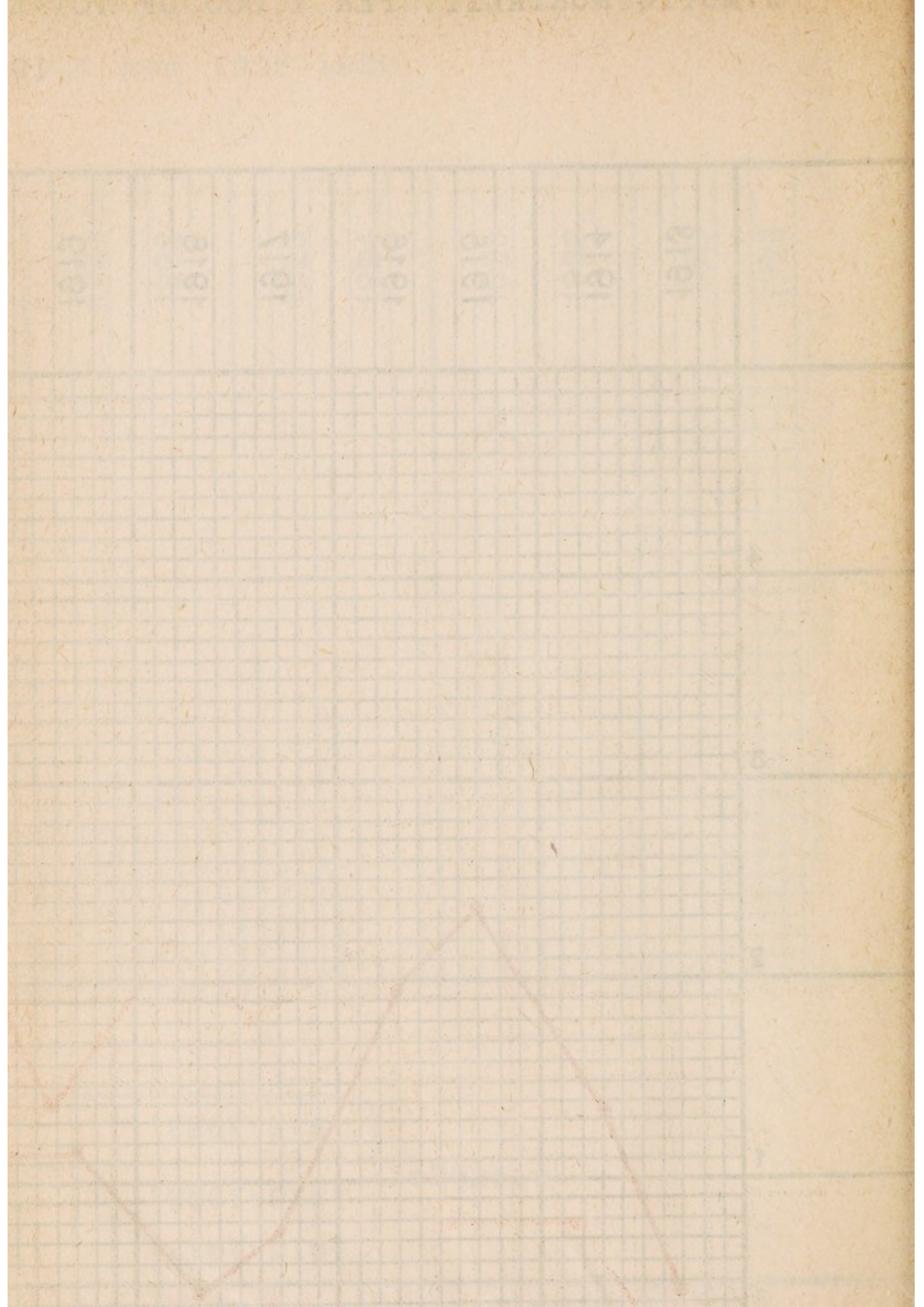


GENERAL DEATH RATE PER 1,000 OF POPULATION
1910-1914

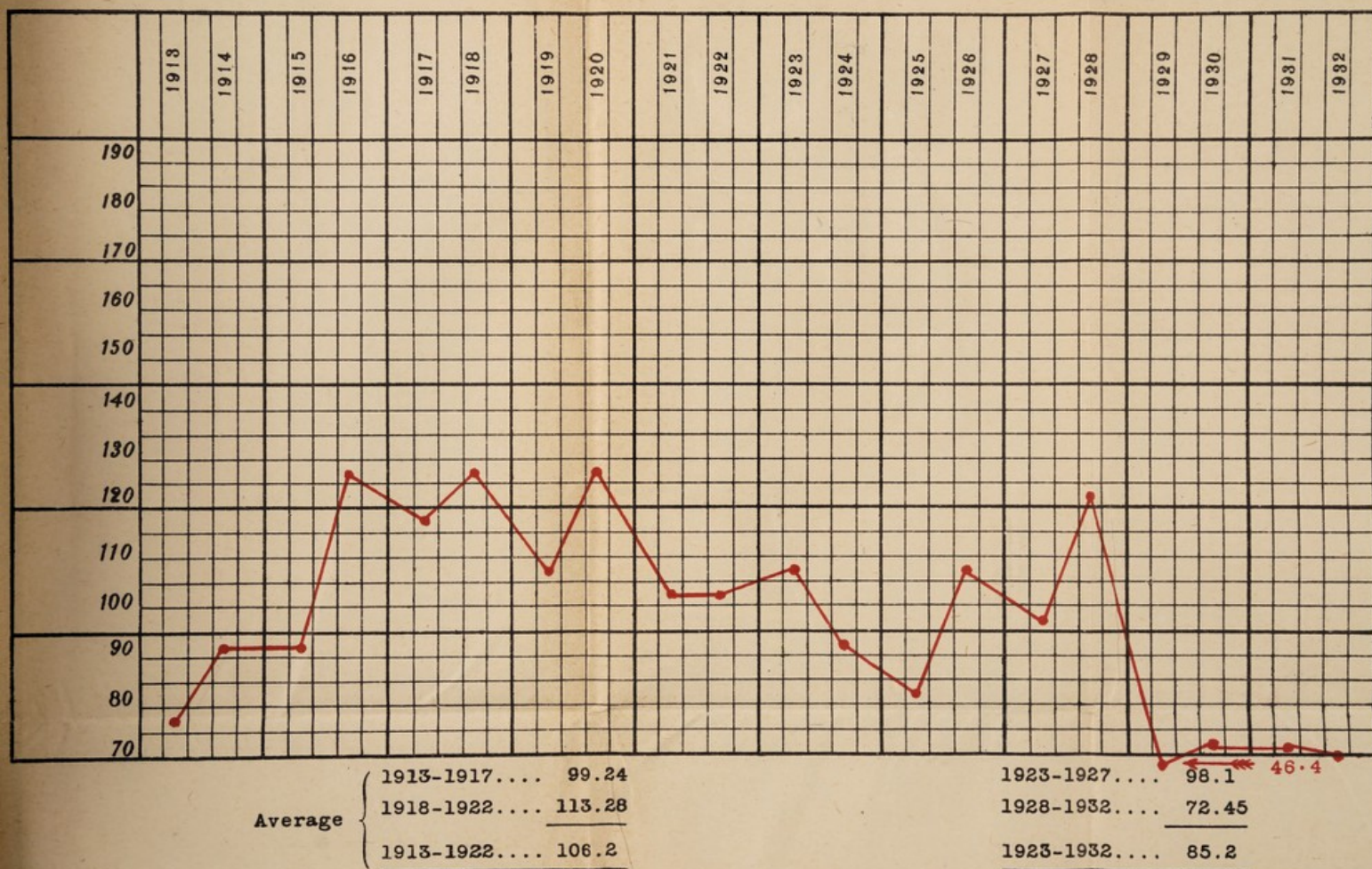


ZYMOTIC MORTALITY PER 1,000 OF TOTAL CIVIL POPULATION, GIBRALTAR, FOR THE DECENNIAL PERIODS
1913-1922 and 1923-1932





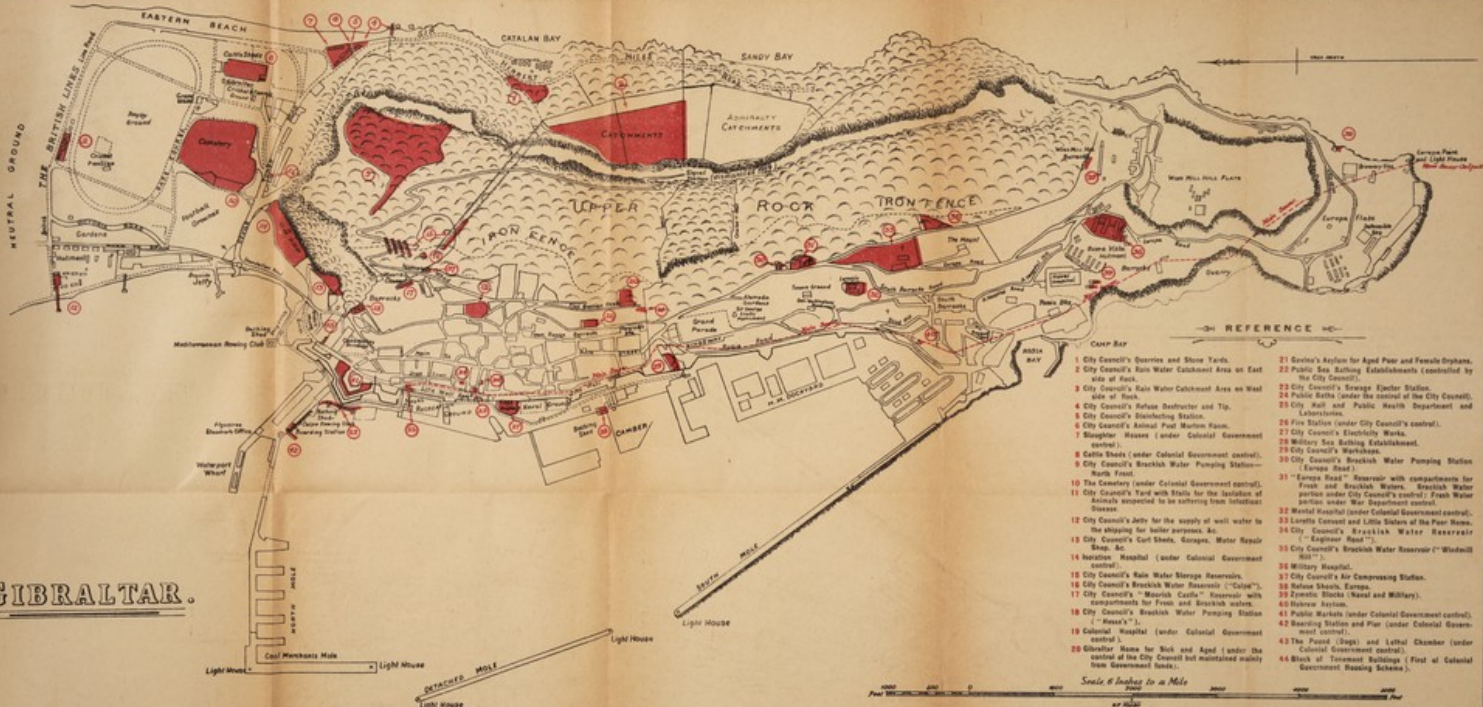
INFANTILE MORTALITY PER 1,000 BIRTHS, GIBRALTAR, FOR THE DECENNIAL PERIODS
1913-1922 and 1923-1932



THE LITTLE MONASTERY FEB 2 1912

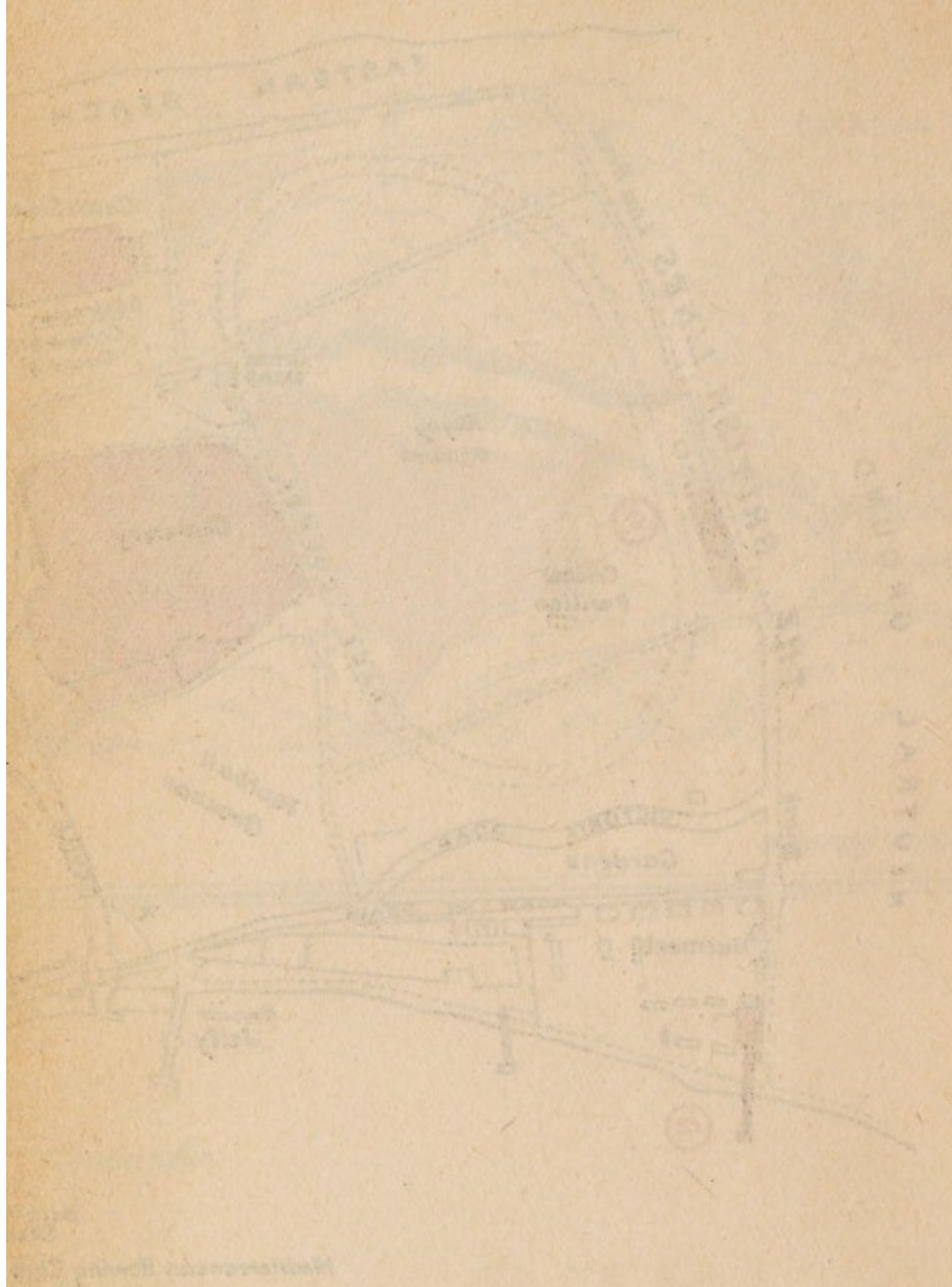


GIBRALTAR.



- 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 Slaughtering Station.
 - 6 City Council's Animal Post Mortem Room.
 - 7 Slaughter House (under Colonial Government control).
 - 8 Galley House (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 sale of Animals suspended to be suffering from infectious diseases.
 - 12 City Council's Jetty for the supply of well water to the shipping for ballast purposes, &c.
 - 13 City Council's Coal Store, Garage, Water Supply Shop, &c.
 - 14 Isolation Hospital (under Colonial Government control).
 - 15 City Council's Rain Water Storage Reservoir.
 - 16 City Council's Brackish Water Reservoir ("Camp").
 - 17 City Council's "Moorish Castle" Reservoir with compartments for Fresh and Brackish water.
 - 18 City Council's Brackish Water Pumping Station ("Rocks").
 - 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 Carcin'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 Water, Brackish Water portion under City Council's control; Fresh Water portion under War Department control.
 - 32 Mental Hospital (under Colonial Government control).
 - 33 Lunatic Asylum and Little Station of the Poor House.
 - 34 City Council's Brackish Water Reservoir ("Engineer Road").
 - 35 City Council's Brackish Water Reservoir ("Windmill Bay").
 - 36 Military Hospital.
 - 37 City Council's Air Compressing Station.
 - 38 Police Station, Garage.
 - 39 Zoroaster Block (Naval and Military).
 - 40 Police Station.
 - 41 Police Station (under Colonial Government control).
 - 42 Boarding Station and Pier (under Colonial Government control).
 - 43 The Pond (Dogs) and Lethal Chamber (under Colonial Government control).
 - 44 Block of Tronche Buildings (First of Colonial Government Housing Scheme).

Scale 6 inches to a Mile
 0 1 2 3 4 5 6 Miles



GENERAL PLAN

