**Annual report on the health of Gibraltar.**

# City Council of Gibraltar.

## ANNUAL REPORT

ON THE

# HEALTH OF GIBRALTAR

FOR THE YEAR

# 1936.

BY

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

**with which is included**
**the Report of the City Analyst and Bacteriologist,**
**and the Report of the Veterinary Adviser.**

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Gibraltar Garrison Library Printing Establishment,
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The Medical Officer of Health.

The Chairman, City Council.

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# PREFACE.

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*The City of Gibraltar has been fortunate in the absence of epidemic disease in serious form during* 1936, *in spite of the conditions which resulted from the political disturbances in Spain.*

*The death rate for the total population remains at practically the same level as in* 1935—15.47 *per thousand: the birth rate has risen from* 16.9 *to* 19.3*: the infant mortality rate has dropped from* 67.7 *to* 62.09*: the zymotic mortality rate, at* 0.77, *is more than double that of* 1935, *and is the highest recorded since* 1932*: deaths from pulmonary tuberculosis again provide a rate of* 1.20 *per thousand of the population.*

*The definite commencement of anti-tuberculosis work by the Government is recorded in this Report with very great satisfaction. Herein also is briefly recorded what I hope may be the beginning of a real attack on the slums and of the provision, eventually, of proper housing for our working classes according to modern standards of hygiene which they are entitled to expect.*

*I wish to record my appreciation of the services and assistance of those who have helped both in the compilation of this Report and in the carrying out of the work which is recorded in it; also of the support which the Press has given in matters relating to the public health.*

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

*R. A. MANSELL,*

*Major, R.A.M.C.,*

*Medical Officer of Health.*

*Public Health Department,*

*Gibraltar, 3rd May,* 1937.

# CITY COUNCIL OF GIBRALTAR.

## PUBLIC HEALTH DEPARTMENT.

### SUMMARY OF VITAL STATISTICS FOR 1936.

| | |
|---|---|
| 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 | 19,194 persons. |
| Estimated Fixed Civil Population of Gibraltar | 16,875 persons. |
| Births in Fixed Civil Population ... ... | 159 Males. 145 Females. |
| Total Births ... ... ... ... ... ... ... ... | 414. |
| Birth rate per 1,000 of Fixed Civil Population | 19·30. |
| Deaths in Fixed Civil Population ... ... | 110 Males. 151 Females. |
| Total Deaths... ... ... ... ... ... ... ... | 335. |
| Crude death rate per 1,000 of Total Civil Population... ... ... ... ... ... ... | 15·47. |
| Average crude death rate for previous ten years ... ... ... ... ... ... ... ... | 15·6. |
| Death rate from Pulmonary Tuberculosis ... | 1·2 per 1,000. |
| Infantile Mortality rate ... ... ... ... ... | 62·09 per 1,000 births. |

# METEOROLOGICAL OBSERVATIONS FOR THE YEAR 1936.

Latitute 36° 6′ N. Longitude 5° 21′ W.

The main recordings for the year are summarised below and shown in detail in the tables which follow.

| | |
|---|---|
| Rain season 1935-36 | 47.24 inches |
| Rain during calendar year 1936 | 46.85 ,, |
| Number of days with 0.1 m.m. of rain or more | 126 |
| Number of days with 1.0 m.m. of rain or more | 95 |
| Wettest day | Feb. 14th 76.2 m.m. |
| Highest recorded shade temperature | June 28th 89°F. |
| Lowest recorded temperature ...25th Feb. / 2nd Mar. / 3rd Mar. | 43°F. |
| Mean temperature for the year | 61.4°F. |
| Number of days of clear sky | 79 |
| Number of days of overcast sky | 64 |
| Number of days of thunderstorm | 23 |
| Number of days with fog | 37 |
| Number of days with frost | Nil |
| Number of occasions when hail fell | 2 |
| Number of gale or gale gusts | 8 |
| Mean corrected barometric reading | 30.026 inches |
| Highest corrected barometric reading | 30.440 inches Decr. 31st. |
| Lowest corrected barometric reading | 29.380 inches March 2nd. |

The rainfall for the year exceeded the expected average by over 13 inches and in January, February, April, May and November the wettest day of the month exceeded the wettest day of the whole of the preceding year.

Temperatures, on the whole, were more moderate than in 1935, but the number of thunderstorms was considerably increased, also the number of days with fog. July provided thirteen of the latter and September nine, out of a total of thirty-seven.

# ABSTRACT OF MEANS YEAR 1936. HOURS 7-1-9

| | TEMPERATURE. | | | | | | | RAINFALL | | | | | NUMBER OF DAYS OF | | | | | | | | | RADIATION | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean Max: °F | Mean Min: °F | Mean of Max: & Min: °F | Abs: Max: °F | Date | Abs: Min. °F | Date | Total Fall Inches. | Total Fall Millimetres | Deviation from Normal | Most in a day Millimetres | Date | Precipitation O'1 M.M. or more | Precipitation 1. M. M. or more | Clear Sky less than 2/10 | Overcast More than 8/10 | Hail | Thunderstorm | Frost | Gale Gusts | Fog | Grass Min: Mean: | Abs: Min: | Date | Solar Max: Min: | Abs: Max: | Date | Highest corrected Barometer and Date Inches | Lowest corrected Barometer and Date Inches | Number of Obs: per Month |
| JAN..... | 58·5 | 53·3 | 55·9 | 67 | 22nd | 48 | 26th | 8·18 | 207·9 | + 3·09 | 57 | 19th | 20 | 15 | 0 | 17 | 0 | 3 | 0 | 2 | 3 | 50·7 | 44 | 5th | | | | 30·416<br>1030·0 10th | 29·584<br>1001·8 26th | 93 |
| FEB .... | 58·0 | 53·0 | 55·5 | 67 | 21st | 43 | 25th | 10·88 | 276·6 | + 6·60 | 76·2 | 14th | 20 | 16 | 0 | 9 | 0 | 1 | 0 | 1 | 1 | 49·0 | 37 | 26th | | | | 30·196<br>1022·5 24th | 29·598<br>1002·3 14th | 87 |
| MAR ... | 58·3 | 51·8 | 55·0 | 73 | 31st | 43 | 2nd<br>3rd | 5·23 | 132·8 | —2·55 | 25·4 | 1st | 17 | 13 | 1 | 10 | 0 | 4 | 0 | 3 | 0 | 47·4 | 39 | 3rd<br>5th<br>12th | | | | 30·220<br>1023·3 5th | 29·380<br>994·9 2nd | 93 |
| APL.... | 61·6 | 55·1 | 58·3 | 68 | 2nd | 46 | 16th | 5·67 | 144·1 | + 0·78 | 42·2 | 10th | 12 | 8 | 4 | 7 | 0 | 4 | 0 | 2 | 0 | 51·5 | 44 | 17th<br>18th | | | | 30·290<br>1025·7 17th | 29·584<br>1001·8 14th | 90 |
| MAY .... | 62·2 | 55·4 | 58·8 | 68 | 31st | 47 | 8th | 5·42 | 137·8 | + 2·72 | 45·2 | 4th | 15 | 11 | 4 | 10 | 0 | 2 | 0 | 0 | 0 | 52·9 | 43 | 8th | | | | 30.096<br>1019.1 27th | 29·674<br>1004·8 8th | 93 |
| JUN .... | 68·7 | 60·3 | 64·5 | 89 | 28th | 52 | 7th | 0·14 | 3·5 | —1·26 | 3·5 | 6th | 1 | 1 | 15 | 1 | 0 | 0 | 0 | 0 | 4 | 58·6 | 51 | 4th | | | | 30·192<br>1022·4 8th | 29·916<br>1013·0 19th | 90 |
| JUL.... | 75·3 | 65·8 | 70·5 | 84 | 29th | 63 | 2nd-3rd-6th<br>7th-14th | 0·07 | 1·8 | —0·33 | 1·8 | 30th | 1 | 1 | 23 | 0 | 0 | 0 | 0 | 0 | 13 | 64·3 | 60 | 30th | 132 | 140 | 17th | 30·172<br>1021·8 3rd | 29·880<br>1011.8 21st | 93 |
| AUG.... | 74·9 | 69·7 | 72·3 | 80 | 10th | 65 | 1st-10th | trace | trace | —1·7 | trace | 11th | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 6 | 68·1 | 63 | 2nd | 126 | 137 | 26th | 30·234<br>1023·8 29th | 29·906<br>1012·7 9th | 93 |
| SEP .... | 75·8 | 68·4 | 72·1 | 85 | 25th | 60 | 20th | 0·10 | 2·7 | —5·6 | 2·1 | 18th | 2 | 1 | 8 | 0 | 0 | 1 | 0 | 0 | 9 | 67·6 | 59 | 20th | 128 | 135 | 3rd<br>11th<br>14th | 30·364<br>1028·2 21st | 29.858<br>1011·1 18th | 90 |
| OCT .... | 66·4 | 60·1 | 63·2 | 74 | 28th | 53 | 14th | 1·90 | 48·3 | —1·2 | 21·2 | 11th | 11 | 6 | 4 | 2 | 1 | 2 | 0 | 0 | 1 | 59·9 | 51 | 14th | 110 | 121 | 3rd<br>17th | 30·328<br>1027·0 27th | 29·804<br>1009·2 5th | 93 |
| NOV.... | 60·0 | 53·3 | 56·6 | 67 | 1st | 47 | 21st-22nd | 6·65 | 169·0 | + ·15 | 44·1 | 21st | 14 | 13 | 7 | 3 | 0 | 5 | 0 | 0 | 0 | 49·9 | 44 | 21st | 96 | 112 | 3rd | 30·363<br>1028·2 16th | 29·490<br>998·6 26th | 90 |
| DEC .... | 56·6 | 51·4 | 54·0 | 62 | 4th | 45 | 9th-14th | 2·61 | 68·4 | —4·29 | 29·5 | 12th | 13 | 10 | 7 | 4 | 1 | 1 | 0 | 0 | 0 | 47·8 | 42 | 14th<br>17th | 90 | 111 | 6th | 30·440<br>1030·8 31st | 29·866<br>1011·4 11th | 93 |
| YEAR . | 64·7 | 58·1 | 61·4 | 89 | 28th<br>June | 43 | 25th Feb.<br>2nd Mar.<br>3rd Mar. | 46·85 | 1192·9 | —2·45 | 76·2<br>14th<br>Feb. | 14th<br>Feb. | 126 | 95 | 79 | 64 | 2 | 23 | 0 | 8 | 37 | 55·6 | 37 | 26th<br>Feb. | 113 | 140 | 17th<br>July | 1030·8<br>30·440<br>31st Dec. | 994·9<br>29·380<br>2nd March | 1095 |

† YEAR

## ABSTRACT OF MEANS YEAR 1936. HOURS 7-1-9.

| | Mean Bar: as read | Mean Bar: corrected | Mean Bar: corrected | HYGROMETER ETC. | | | | | | | | | | | | Cloud 0-10 | | | WIND | | | | | | | | | | | | Number of Obs: per Month |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Dry Bulb °F | | | Dep. of Wet °F | | | Vapour Pressure M' Bars | | | Humidity °/o | | | Mean Amount | | | Forces | | | 1095. Observations | | | | | | | | Gales | ODD POINTS | |
| | | | | Hours | | | Hours | | | Hours | | | Hours | | | Hours | | | 0-12 Beaufort | | | DIRECTION | | | | | | | | | |
| | Inches | Inches | M'Bars | 7 | 1 | 9 | 7 | 1 | 9 | 7 | 1 | 9 | 7 | 1 | 9 | 7 | 1 | 9 | 4-7 | 1-3 | Calm | N | NE | E | SE | S | SW | W | NW | | | |
| JAN.... | | 30·066 | 1018·1 | 55·1 | 57·5 | 56·2 | 2·0 | 3·0 | 2·3 | 12·8 | 13·1 | 13·1 | 87 | 82 | 85 | 7·7 | 8·0 | 5·4 | 44 | 36 | 13 | 1 | 6 | 12 | 1 | 0 | 7 | 39 | 14 | 2 | | 93 |
| FEB.... | | 29·894 | 1012·3 | 54·8 | 57·9 | 55·8 | 1·7 | 2·6 | 1·9 | 13·2 | 13·9 | 13·5 | 88 | 84 | 87 | 6·3 | 6·5 | 5·5 | 42 | 36 | 8 | 5 | 9 | 8 | 1 | 2 | 10 | 33 | 11 | 1 | | 87 |
| MAR.... | | 29·934 | 1013·6 | 53·3 | 57·6 | 55·3 | 2·4 | 2·4 | 1·7 | 12·7 | 13·9 | 13·6 | 90 | 85 | 89 | 6·3 | 7·0 | 4·8 | 36 | 55 | 2 | 2 | 1 | 16 | 4 | 3 | 9 | 34 | 22 | 3 | | 93 |
| APL.... | | 29·968 | 1014·8 | 56·9 | 60·5 | 58·3 | 2·5 | 4·1 | 3·1 | 13·3 | 13·8 | 13·5 | 84 | 77 | 81 | 6·3 | 6·2 | 4·5 | 50 | 38 | 0 | 0 | 11 | 21 | 2 | 0 | 4 | 30 | 22 | 2 | | 90 |
| MAY.... | | 29·926 | 1013·4 | 56·9 | 60·9 | 60·7 | 2·6 | 4·6 | 3·4 | 13·2 | 13·5 | 13·4 | 83 | 74 | 79 | 6·5 | 6·3 | 4·9 | 52 | 38 | 3 | 1 | 4 | 9 | 1 | 1 | 7 | 49 | 18 | 0 | | 93 |
| JUN .... | | 30·062 | 1018·0 | 61·7 | 67·0 | 62·7 | 3·9 | 6·1 | 3·6 | 14·6 | 15·6 | 15·6 | 78 | 69 | 80 | 3·9 | 3·3 | 2·3 | 33 | 54 | 3 | 1 | 12 | 15 | 0 | 0 | 6 | 40 | 13 | 0 | | 90 |
| JUL.... | | 30·034 | 1017·0 | 67·8 | 72·7 | 69·4 | 4·2 | 6·9 | 5·1 | 18·2 | 18·8 | 18·4 | 79 | 69 | 75 | 2·0 | 0·9 | 0·9 | 41 | 43 | 9 | 0 | 13 | 15 | 3 | 0 | 14 | 24 | 15 | 0 | | 93 |
| AUG .... | | 30·038 | 1017·2 | 70·5 | 74·9 | 71·0 | 2·4 | 5·2 | 2·4 | 22·4 | 22·5 | 22·9 | 87 | 76 | 88 | 6·2 | 4·0 | 3·0 | 44 | 47 | 2 | 0 | 35 | 48 | 0 | 1 | 0 | 7 | 0 | 0 | | 93 |
| SEP .... | | 30·040 | 1017·3 | 69·5 | 75·6 | 71·0 | 3·6 | 7·2 | 3·5 | 20·4 | 20·5 | 21·6 | 82 | 68 | 83 | 5·1 | 3·7 | 3·1 | 29 | 56 | 5 | 0 | 25 | 22 | 2 | 0 | 4 | 21 | 11 | 0 | | 90 |
| OCT.... | | 30·094 | 1019·0 | 61·2 | 66·7 | 63·2 | 3·0 | 6·0 | 3·8 | 15·4 | 15·5 | 15·7 | 83 | 69 | 80 | 5·0 | 3·8 | 3·1 | 30 | 57 | 6 | 4 | 21 | 21 | 3 | 0 | 3 | 11 | 24 | 0 | | 93 |
| NOV .... | | 30·036 | 1017·1 | 54·6 | 60·0 | 56·7 | 3·3 | 5·4 | 3·7 | 11·6 | 12·2 | 12·2 | 79 | 69 | 77 | 4·8 | 5·3 | 3·9 | 19 | 66 | 5 | 8 | 7 | 12 | 3 | 0 | 2 | 19 | 34 | 0 | | 90 |
| DEC.... | | 30·236 | 1023·9 | 52·7 | 56·2 | 53·9 | 3·0 | 4·1 | 3·5 | 10·9 | 11·6 | 10·9 | 80 | 75 | 77 | 5·9 | 5·5 | 3·4 | 28 | 61 | 4 | 11 | 7 | 26 | 14 | 1 | 0 | 10 | 20 | 0 | | 93 |
| YEAR.. | | 30·026 | 1016·8 | 59·6 | 64·0 | 61·2 | 2·9 | 4·8 | 3·2 | 14·9 | 15·4 | 16·4 | 83 | 75 | 82 | 5·5 | 5·0 | 3·7 | 448 | 587 | 60 | 33 | 151 | 225 | 34 | 8 | 66 | 317 | 204 | 8 | | 1098 |

## VITAL STATISTICS.

The rates given below are based on the population figures of 1935—i.e., a total population of 16,865 and a fixed, or British, population of 15,735. The actual resident population at the end of 1936 as estimated by the police was:—

| | |
|---|---|
| British Subjects— | |
| Other than Maltese ..... | 16,809 |
| Maltese ..... | 66 |
| Aliens— | |
| Resident in the City ..... | 1,980 |
| Resident in the Bay ..... | 339 |
| Total ... | 19,194 |

The excess, 1,152 British and 1,184 aliens, over the previous year's figures is the residue of "refugees" still remaining in Gibraltar. It is impossible to say what numbers of refugees the Rock has sheltered during the latter half of 1936; but I think that for a short time after the 18th July the excess population was not far short of ten thousand, and there still remain at the end of the year two and one-third thousand, at least. So far as statistics are concerned occurrences in the extra population have been separated and those now to be discussed deal with the normally resident population only.

The main occurrences in relation to this "refugee" question and something of the influence of political events in Spain will be commented on in a later section of this Report.

The fluctuations of the population during recent years are shewn below.

| How estimated. | British Subjects Fixed Population. | Alien Subjects Floating Population. | Total Population. |
|---|---|---|---|
| Census June, 1921 ..... | 16,753 | 1,787 | 18,540 |
| Police Estimate at end of 1922 ..... | 16,182 | 1,145 | 17,327 |
| Police Estimate at end of 1923 ..... | 16,165 | 1,181 | 17,346 |
| Police Estimate at end of 1924 ..... | 16,177 | 1,147 | 17,324 |
| Police Estimate at end of 1925 ..... | 16,127 | 1,161 | 17,288 |
| Police Estimate at end of 1926 ..... | 16,150 | 1,013 | 17,163 |
| Police Estimate at end of 1927..... | 16,120 | 1,076 | 17,196 |
| Police Estimate at end of 1928 ..... | 15,719 | 1,112 | 16,831 |
| Police Estimate at end of 1929 ..... | 15,647 | 1,052 | 16,699 |
| Police Estimate at end of 1930..... | 15,526 | 922 | 16,448 |
| Census April 1931 ..... | 16,188 | 1,425 | 17,613 |
| Police Estimate at end of 1932 ..... | 15,143 | 1,466 | 16,609 |
| Police Estimate at end of 1933 ..... | 15,071 | 1,326 | 16,397 |
| Police Estimate at end of 1934 ..... | 14,790 | 1,057 | 15,847 |
| Police Estimate at end of 1935 ..... | 15,735 | 1,130 | 16,865 |
| Police Estimate at end of 1936 ..... | 16,875 | 2,319 | 19,194 |

# VITAL STATISTICS DURING 1936 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 births. | No. | Birth rate per 1,000 living of Fixed population | No. | Rate per 1,000 living of Fixed population |
| | | | | | | Fixed population. | Total population. | | | | | | |
| 1926 | 16150 | 17163 | Police Estimate | 271 | 276 | 16·78 | 16·08 | 46 | 107·0 | 427 | 25·0 | 20 | 1·2 |
| 1927 | 16120 | 17196 | | 291 | 297 | 18·05 | 17·27 | 36 | 99·1 | 363 | 22·0 | 13 | ·8 |
| 1928 | 15719 | 16831 | | 286 | 293 | 18·19 | 17·40 | 45 | 122·9 | 366 | 23·2 | 30 | 1·7 |
| 1929 | 15647 | 16699 | | 254 | 262 | 16·36 | 15·68 | 18 | 46·6 | 358 | 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 | 61·0 | 377 | 23·28 | 4 | ·24 |
| 1932 | 15143 | 16609 | Police Estimate | 245 | 259 | 16·17 | 15·59 | 21 | 60·69 | 346 | 22·84 | 16 | ·96 |
| 1933 | 15071 | 16397 | | 241 | 245 | 15·99 | 14·94 | 14 | 39·2 | 357 | 23·68 | 3 | ·18 |
| 1934 | 14790 | 15847 | | 225 | 230 | 15·21 | 14·51 | 21 | 54·8 | 383 | 25·8 | 6 | ·37 |
| 1935 | 15735 | 16865 | | 255 | 265 | 16·20 | 15·71 | 18 | 67·4 | 267 | 16·9 | 6 | ·35 |
| 1936 | 15735 | 16865 | ** | 249 | 261 | 15·82 | 15·47 | 19 | 62·09 | 304 | 19·30 | 13 | ·77 |

**Normally resident population—see remarks on page 5

DEATHS.

The resident British population provided 249 deaths—a rate of 15.82 per 1,000; resident aliens provided 12 deaths so that the rate per thousand for the total civil population was 15.47. Both these rates are less than in 1935, but I noted in last year's report that the death rates had recently been tending to oscillate regularly and this year, on that assumption, was one in which a low rate would have been predicted.

The principal causes of death, in order, were :—

(1) Heart diseases.

(2) Other (unclassified) diseases.

(3) Cancer and malignant tumours.

(4) Hæmorrhage, apoplexy and softening of the brain.

(5) Old age.

(6) Tuberculosis of the respiratory system.

Group No. 2 contains a large number of different causes, each of insignificant value in itself; and group No. 5 is, after all, but the natural course of events. A cynic might direct attention to the fact that this latter group contains twenty females but only one male. Omitting these two groups we are left with cancer as the second greatest cause of death, and pulmonary tuberculosis as the fourth. The comparatively high incidence of cancer was noted last year, and though not this year quite so marked it calls for special record here in that, in the matter of mere continuance of existence of the individual, as in anything else, an enemy in the dark, unknown and unseen, cannot be combatted or armed against as one seen and known. As the cause of cancer is undiscovered, so is its certain cure unknown; but modern methods of treatment, *if undertaken sufficiently early*, are becoming each year increasingly successful in the preservation and prolongation of life. With this scourge — as with the next mentioned — tuberculosis, it is the patient who seeks medical attention early for the treatment of the unusual swelling, the obstinate indigestion, the unexplained bleeding—all of them in the early stages usually painless and therefore neglected—who receives cure as the result of treatment; as does the sufferer from the chronic cough, the too often recurring "colds," and the loss of general health and interest in life in the case of the tuberculous. When the patient still has his own constitutional strength, and the physician or surgeon is offered the opportunity of making his attack in the early stages, these diseases can be beaten and the patient can be restored to health and saved the months and years of suffering which otherwise inevitably follow.

The crude death rate for the last ten years has been :—

| Year | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 |
|---|---|---|---|---|---|---|---|---|---|---|
| Fixed Population | 19·05 | 18·19 | 16·36 | 15·60 | 15·40 | 16·17 | 15·99 | 15·21 | 16·20 | 15·82 |
| Total Population | 17·27 | 17·40 | 15·68 | 14·50 | 14·40 | 15·59 | 14·94 | 14·51 | 15·71 | 15·47 |

MONTHLY AND QUARTERLY MORTALITY.

The highest number of deaths was recorded in March, and the lowest in July. The death rate during the last quarter of the year was the highest and that during the third quarter the lowest.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| January | 18 | April | 18 | July | 16 | October | 20 |
| February | 23 | May | 26 | August | 20 | Nov. | 27 |
| March | 28 | June | 21 | Sept. | 17 | Dec. | 27 |
| | 69 | | 65 | | 53 | | 74 |

## Causes of deaths in 1936 in Civil population, according to the International Abbreviated List, with Age and Sex incidence.

| | Cause of Death. | All Ages | | | Under 1 year. | | 1 year and under 2. | | 2 years and under 5. | | 5 years and under 15 | | 15 years and under 25 | | 25 years and under 45 | | 45 years and under 55 | | 55 years and under 65 | | 65 years and over | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| 1 | Enteric Fever ... | 2 | — | — | — | — | — | — | — | — | — | — | — | — | 1 | 1 | — | — | — | — | — | — |
| 7 | Whooping Cough | 1 | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 8 | Diphtheria ... | 2 | — | 1 | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 12 | Other epidemic diseases ... | 4 | — | — | — | — | — | — | — | — | — | 1 | 1 | — | — | — | — | — | — | 1 | — | 1 |
| 13 | Tuberculosis of respiratory system.. ... | 19 | — | — | — | — | — | — | — | — | — | 1 | 2 | 1 | 4 | 3 | — | 1 | 1 | 4 | 1 | 1 |
| 16 | Cancer, Malignant tumours... | 28 | — | — | — | — | — | — | — | — | — | — | 1 | — | — | 2 | 1 | 1 | 5 | 2 | 8 | 8 |
| 17 | Meningitis ... | 1 | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 18 | Haemorrhage, apoplexy, and softening of brain ... ... | 25 | — | — | — | — | — | — | — | — | 1 | — | 1 | — | — | — | — | 2 | — | 5 | 4 | 12 |
| 19 | Heart diseases | 42 | — | — | — | — | — | — | — | — | — | — | — | — | 1 | 1 | 3 | 3 | 3 | 5 | 11 | 15 |
| 20 | Acute bronchitis | 5 | 1 | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | 1 | 2 |
| 22 | Pneumonia ... | 15 | 2 | 1 | 1 | 1 | 1 | — | 1 | — | — | — | — | 3 | — | — | — | — | — | — | 2 | 3 |
| 23 | Other diseases of the respiratory system ... | 7 | — | — | — | — | — | — | — | — | — | — | 1 | — | — | 1 | 1 | 1 | — | — | 2 | 1 |
| 25 | Diarrhœa and Enteritis ... | 9 | 1 | 4 | 1 | 2 | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — |
| 27 | Hernia, intestinal obstruction | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2 |
| 28 | Cirrhosis of liver | 4 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | 1 | 2 | — | — | — |
| 29 | Acute and chronic nephritis... | 17 | — | — | — | — | — | — | — | — | — | — | — | — | 2 | 1 | 2 | 4 | 2 | 2 | 4 | |
| 30 | Diseases of female genital organs.. | 2 | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | 1 | — | — | — | — | — |
| 32 | Other diseases of pregnancy and parturition ... | 3 | — | 1 | — | — | — | — | — | — | — | — | — | — | 2 | — | — | — | — | — | — | — |
| 33 | Congenital debility and malformations ... | 6 | 4 | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 34 | Old Age... ... | 21 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | 20 |
| 35 | Violent deaths (suicide excluded) | 6 | — | — | — | — | — | — | 1 | — | — | — | — | 3 | — | — | — | 1 | — | 1 | — | — |
| 36 | Suicide ... ... | 3 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2 | — | — | 1 | — | — |
| 37 | Other diseases... | 32 | — | — | — | 1 | — | 1 | 1 | — | — | — | 1 | 2 | 1 | 2 | 2 | 4 | 4 | 6 | 7 | |
| 38 | Diseases not stated or ill-defined ... | 5 | — | — | — | — | — | — | — | — | — | — | — | 1 | — | 1 | — | — | — | — | 3 | |
| | Totals... ... | 261 | 9 | 10 | 3 | 4 | 1 | 1 | 4 | 3 | 6 | 2 | 15 | 14 | 13 | 14 | 20 | 24 | 39 | 79 | | |

## Maternity and Child Welfare.

Three hundred and four births proper to the resident population occurred during the year (159 males and 145 females), providing a birth rate of 19.30 per 1,000 of the population.

Nineteen infants died under 12 months of age; the infantile mortality rate per 1,000 births was, therefore, 62.09.

The accompanying table shews the causes of death of these infants.

Twenty-three still-births were recorded.

In addition, fourteen infants' deaths were recorded in the city of those who were either brought in from Spain for treatment when ill or who were living here as refugees within the first few months of their lives.

An enquiry was made during the year into the general circumstances of the families in which these unfortunate tragedies occurred. The total numbers are so small, statistically, that no generalised statement of any value from the preventive point of view can be made. Twelve of the families were living under what in England are recognised as definitely overcrowded conditions. For two of these families the total earnings were not properly ascertainable; in one the earnings appeared more than adequate according to accepted standard; in the remaining nine the average monthly rent paid was £1 5 0 and the average monthly earning £5 10 0.

### CAUSES OF INFANT DEATHS.

| 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. |
|---|---|---|---|---|---|---|---|---|---|---|
| Pneumonia | — | — | — | — | — | 2 | 1 | — | — | 3 |
| Congenital Debility and Malformations | 6 | 1 | — | — | 7 | — | — | — | — | 7 |
| Diarrhoea and Enteritis | — | — | 1 | — | 1 | 1 | 1 | 1 | 1 | 5 |
| Meningitis | 1 | — | — | — | 1 | — | — | — | — | 1 |
| Bronchitis | — | — | — | — | — | 1 | — | — | — | 1 |
| Diphtheria | — | — | — | — | — | — | — | — | 1 | 1 |
| Whooping Cough | — | — | — | — | — | — | — | 1 | — | 1 |
| Totals ... ... | 7 | 1 | 1 | — | 9 | 4 | 2 | 2 | 2 | 19 |

MATERNITY SERVICES.

Two hundred and eighty three women were treated in the Maternity Ward at the Colonial Hospital; 176 of the resident population and 107 from those residing in La Linea or refugees. These admissions provided 115 and 113 births respectively: in the case of the resident population, thus, over one-third of the total births now take place in the hospital and this accommodation is being increased. It is interesting to recall the opposition and prophecies of failure which attended the initiation of this service only some fifteen years ago.

One hundred and forty-three live births (47.66 per cent. of the total) were attended by midwives. Amongst these no case of puerperal pyrexia or sepsis occurred.

Thirteen cases were provided with free attention by the midwife from the funds provided by the Government.

CHILD WELFARE.

During the year there was an average of 88 infants attending the Centre.

The nurse, in addition, made 420 visits to homes during the year.

The quantity of milk distributed free and at reduced prices reached the record of 6,136 tins.

School medical inspection, etc., is in the hands of the staff of the Colonial Hospital.

Mr. Garesse continues to carry out the duties of school dentist.

Two hundred and twenty-five children were treated in the Children's Ward at the Colonial Hospital during the year.

## PREVALENCE AND CONTROL OF INFECTIVE DISEASE.

One hundred and seventy-seven cases of infective disease were recorded, in comparison with 241 in 1935. The absence of measles in epidemic form is responsible for the decrease as all other important diseases have shewn an increase, thus:—

| | 1935 | 1936 |
|---|---|---|
| Diphtheria | 28 | 44 |
| Enteric Fever | 9 | 17 |
| Pulmonary Tuberculosis | 23 | 30 |
| Scarlet Fever | 24 | 31 |

Omitting measles, the increased incidence generally is recorded in the first three quarters of the year, but not in the last.

Thirteen deaths occurred from the eight principal zymotic diseases giving a zymotic death rate of .77 per 1,000 of population.

QUARTERLY INCIDENCE OF NOTIFIABLE INFECTIOUS DISEASES CIVIL POPULATION.

| Disease | 1st Qr. | 2nd Qr. | 3rd Qr. | 4th Qr. | Total | Deaths. |
|---|---|---|---|---|---|---|
| Measles | 20 | 1 | 3 | — | 24 | — |
| Pulmonary Tuberculosis | 9 | 10 | 7 | 4 | 30 | 19 |
| Scarlet Fever | 11 | 3 | 11 | 6 | 31 | — |
| Ophthalmia Neonatorum | 1 | — | — | — | 1 | — |
| Diphtheria | 8 | 8 | 10 | 18 | 44 | 2 |
| Cerebro-Spinal Meningitis | 1 | — | — | — | 1 | 1 |
| Encephalitis Lethargica | 1 | — | — | — | 1 | 1 |
| Enteric Fever | 1 | 6 | 4 | 6 | 17 | 2 |
| Chicken Pox | 4 | 12 | 7 | — | 23 | — |
| Dysentery | — | 1 | 2 | — | 3 | — |
| Undulant Fever | — | — | 1 | — | 1 | — |
| Rubella | — | — | 1 | — | 1 | — |
| Totals | 56 | 41 | 46 | 34 | 177 | 25 |

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

| Disease | 1st Qr. | 2nd Qr. | 3rd Qr. | 4th Qr. | Total | Deaths |
|---|---|---|---|---|---|---|
| Scarlet Fever | — | 1 | — | — | 1 | — |
| Enteric Fever | — | 1 | — | 1 | 2 | 1 |
| Pulmonary Tuberculosis | — | 1 | — | — | 1 | 1 |
| Totals | — | 3 | — | 1 | 4 | 2 |

In spite of the invasion by refugees and the conditions under which many of them have lived, and do now continue to live, and of the consequent gross overcrowding which still exists in many quarters, it would be gratifying to oneself to feel able to record that the absence of any marked rise, at least of its non-continuance, was in some way due to one's own efforts and those of one's Department; but I must honestly attribute a considerable share of the credit to pure good luck. For the latter half of the year we have had no reliable information regarding the health situation in Spain; we have had, practically speaking, free intercourse with Andalusia especially, and we have had refugees crowding into our already overcrowded city; and yet the incidence of infective disease has fallen. The city owes a great debt to the services which cleanse it and supervise its health; but citizens must remember that such luck as has hitherto assisted these services cannot hold for ever. Nothing is more to be dreaded than the appearance of virulent infective disease in the city as it is now at the time of writing, March 1937.

## Age and Sex incidence of Notifiable Infectious Diseases amongst Civil Population during 1936.

| Notifiable Disease. | NUMBER OF CASES NOTIFIED. | | | | | | | | | | | | | | | Districts. | | | Total cases removed 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. | M. | F. | | | | | |
| Measles ... ... ... ... | 24 | 1 | 1 | 6 | 4 | 5 | 6 | 1 | — | — | — | — | — | — | — | — | 23 | 1 | — | — |
| Pulmonary Tuberculosis ... | 30 | — | — | — | — | 1 | 2 | 5 | 4 | 7 | 3 | 2 | 5 | — | 1 | — | 26 | 4 | 2 | 1 |
| Scarlet Fever .. .. ... | 31 | 1 | — | 4 | 10 | 7 | 4 | 1 | 1 | 1 | 1 | — | 1 | — | — | 1 | 24 | 6 | — | 1 |
| Ophthalmia Neonatorum ..... | 1 | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — |
| Diphtheria ... ... ... ... | 44 | — | 1 | 13 | 9 | 11 | 8 | — | 1 | 1 | — | — | — | — | — | — | 40 | 4 | 11 | — |
| Cerebro-Spina Meningitis | 1 | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | 1 | — | — | — |
| Encephalitis Lethargica.. .... | 1 | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | 1 | — | — |
| Enteric Fever ... ... .. | 17 | — | — | — | — | 2 | — | 2 | 2 | 7 | 3 | 1 | — | — | — | — | 17 | — | 13 | 2 |
| Chicken Pox .. ... ... ... | 23 | — | — | 4 | 2 | 9 | 5 | — | 3 | — | — | — | — | — | — | — | 10 | 13 | — | — |
| Dysentery .. ... ... .. | 3 | — | — | — | — | — | — | — | — | — | 1 | 1 | — | 1 | — | 1 | 1 | 1 | 2 | — |
| Undulant Fever ... ... .. | 1 | — | — | — | — | — | 1 | — | - | — | — | — | — | — | — | — | — | 1 | 1 | — |
| Rubella ... ... ... .. | 1 | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — |
| Totals ... ... ... | 77 | 3 | 2 | 27 | 26 | 35 | 27 | 10 | 11 | 16 | 8 | 4 | 6 | 1 | 1 | 2 | 143 | 32 | 29 | 4 |

## Monthly Notifications of Notifiable Infectious Diseases during 1936.—Civil Population.

| Months. | DISEASES. | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Measles | | Tuberculosis Respiratory System | | Scarlet Fever | | Ophthalmia Neonatorum | | Diphtheria | | Cerebro-Spinal Meningitis | | Chicken Pox | | Enteric Fever | | Rubella | | Dysentery | | Encephalitis Lethargica | | Undulant Fever | |
| | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases | Deaths |
| January ... | 14 | — | 7 | 1 | 3 | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| February ... | 5 | — | 1 | 1 | 4 | — | — | — | 5 | — | 1 | 1 | — | — | 1 | — | — | — | — | — | 1 | 1 | — | — |
| March ... | 1 | — | 1 | 1 | 4 | — | — | — | 3 | — | — | — | 4 | — | — | — | — | — | — | — | — | — | — | — |
| April ... ... | 1 | — | 1 | — | 1 | — | — | — | 4 | — | — | — | 3 | — | 6 | 1 | — | — | — | — | — | — | — | — |
| May ... ... | — | — | 7 | 3 | 2 | — | — | — | 3 | — | — | — | 7 | — | — | — | — | — | — | — | — | — | — | — |
| June ... ... | — | — | 2 | 1 | — | — | — | — | 1 | — | — | — | 2 | — | — | — | — | — | 1 | — | — | — | — | — |
| July ... ... | 2 | — | 2 | 1 | 2 | — | — | — | 3 | — | — | — | 2 | — | — | — | — | — | — | — | — | — | — | — |
| August ... | 1 | — | 3 | 6 | 4 | — | — | — | 2 | — | — | — | 3 | — | — | — | 1 | — | 1 | 1 | — | — | — | — |
| September ... | — | — | 2 | 3 | 5 | — | — | — | 5 | — | — | — | 2 | — | 4 | — | — | — | 1 | — | — | — | 1 | — |
| October ... | — | — | 2 | — | 2 | — | — | — | 5 | — | — | — | — | — | 2 | 1 | — | — | — | — | — | — | — | — |
| November ... | — | — | 1 | 1 | 1 | — | — | — | 10 | 2 | — | — | — | — | 2 | — | — | — | — | — | — | — | — | — |
| December ... | — | — | 1 | 1 | 3 | — | — | — | 3 | — | — | — | — | — | 2 | — | — | — | — | — | — | — | — | — |
| Totals... | 24 | — | 30 | 19 | 31 | — | 1 | — | 44 | 2 | 1 | 1 | 23 | — | 17 | 2 | 1 | — | 3 | 1 | 1 | 1 | 1 | — |

MEASLES.

The absence of an epidemic was expected after the small outbreak of last year. The size of the next epidemic will depend, I think, very largely on whether it occurs in 1937 or 1938, and if the present overcrowded conditions in the City continue it is not an event to look forward to with any equanimity.

PULMONARY TUBERCULOSIS.

Thirty cases and nineteen deaths provide an incidence rate of 1.90 and a death rate of 1.20 per 1,000 of the population. Eight of the deaths occurred in the same year as the original notification, and five other cases were notified in the death certificate only. Of the cases notified sixteen were below the age of 35 years.

During the year an additional medical officer has been appointed to the staff of the Colonial Hospital with special experience in the treatment of the disease. The Colony is, therefore, now definitely committed to an active part in the world-wide fight against its ravages. That this fight can be a winning one, not only from the point of view of the individual but also of the state, is amply attested by the experience of other countries. I remarked on this particularly in my Report last year. An out-patient clinic for consultation, treatment and advice is to be opened early in 1937, and this is to be followed by a hospital for in-patient treatment. It is to be remembered that both the clinic and the hospital will not necessarily be restricted to cases of tuberculosis, there are many chronic diseases of the lungs, and acute ones also, for which expert treatment and advice will be available as well as that due to infection with the tubercle bacillus.

It is particularly gratifying to be able to record this advance. Too much must not be expected of it in its early days; but with the intelligent support of the whole community, not merely the sufferers alone, this service may confidently be expected to produce the same satisfactory results as in other countries.

DIPHTHERIA.

It will be seen by reference to the Table on page 12 that the last quarter of the year provided 18 out of the total 44 cases of this infection, the maximum being 10 in the month of November. Only two of the whole number of these cases were severe, and these patients died. A number of laryngeal infections occurred at the end of the year, and it was feared at one time that the hitherto mild type of the disease was changing to a more virulent form. This is, of course, always a possibility with this, as with other infectious diseases. When this does

happen the public may be more prepared to pay attention to the question of active immunisation against the disease than they appear to be at present. The importance of the nose as a seat of infection has been emphasised in the investigations of possible 'carriers' of the infecting organism both in the case of the actual patients and of persons in contact with them.

### Enteric Fever.

Seventeen cases, with two deaths, were reported; and here again, the last quarter of the year stands out with six cases. The month of April provided six cases, most of whom lived in a particular quarter of the City. Extensive investigations were carried out to try to trace the source of infection in these cases. Articles of food and drink supplied to the families in question and to the neighbourhood were examined bacteriologically over a period of time, as were the vendors who sold these articles from door to door. The results were, as so often happens, disappointing, and no definite source of infection was traced. One patient remained an active 'carrier' of the organisms for some considerable time after recovery from the disease and was retained in hospital for a prolonged period. She was eventually allowed to go home under supervision and periodic examinations were carried out. After the end of seven months the infecting organism was no longer found, and during the whole time no other case was able to be associated with this 'carrier.' Later in the year a series of three cases occurred in one household which were assumed to be due to the presence of a 'carrier,' but many and careful bacteriological investigations failed to reveal who this person might be, and the outbreak ceased, apparently automatically.

### Venereal Disease.

Forty-seven cases were treated at the Colonial Hospital, of whom 6 were merchant seamen.

The number of intravenous injections given was 184.

Laboratory work in connection with these cases is recorded in the report of the City Analyst and Bacteriologist which is printed following this.

### Vaccination.

Three hundred and sixty-five primary and three hundred and ten re-vaccinations were performed during the year. Of the latter two hundred and seventy were on children attaining the age of 12 years. Out of the total the Public Vaccinator performed 338 vaccinations and 292 re-vaccinations.

The following figures shew the vaccinations performed in relation to births during the year :—

| | |
|---|---|
| Number of children born | 414 |
| Died before vaccination | 16 |
| Left Gibraltar | 72 |
| Certified as insusceptible to vaccination | Nil |
| Vaccination postponed on medical grounds | 31 |
| Number successfully vaccinated | 223 |
| Objectors to vaccination | Nil |
| Outstanding (under 3 months of age) | 72 |

## DESTITUTE SICK AND TUBERCULOSIS SCHEME.

With the advance already recorded towards the proper treatment of pulmonary disease as a real public health measure this is the last year in which the above heading will appear in this report, and it is hoped that the idea that the two conditions are necessarily associated will disappear with it. Though the battle against consumption is as yet only being joined, as it were, in the form of an affair of outposts, an encounter between scouts, it must never again be admitted that the only place for a sufferer is the workhouse; nor, indeed, that such a sufferer cannot, if he seeks treatment early in his infection, be restored to a useful and comfortable working life.

Outdoor Relief—

The number of persons in receipt of outdoor relief on an average during the past five years has been :—

| | |
|---|---|
| 1932 | 71 |
| 1933 | 86 |
| 1934 | 109 |
| 1935 | 131 |
| 1936 | 131 |

During 1936 the following quantities of foodstuffs were issued to these persons; in addition, in a few special cases small monetary grants were given.

| | |
|---|---|
| Meat | 15,330 lbs. |
| Milk (fresh) | 10,657 pints. |
| Milk (condensed) | 10,320 tins. |

It will be seen that something only just short of one per cent. of the total British population normally resident has been in receipt of assistance from this source during the year. This is not the place in which to enter into a discussion of the meaning of this figure, but for a population with, virtually, no unemployment and an amount of foreign (Spanish) labour employed in addition, the figure is, to my mind, significantly high, especially when it is remembered that there are other charities which deal largely with the same problem in the City.

INDOOR RELIEF—

The average number of inmates of the Gibraltar Home for Sick and Aged was 38 males and 17 females; 4 of the former and two of the latter were notified cases of pulmonary tuberculosis.

The average cost of feeding has risen to 1s. 0½d. per head per day, and the total all-in cost to 2s. 0¾d. This rise is associated with the general slight rise in the cost of living which has resulted from the collapse of the peseta exchange rate following the political disturbances in Spain, the consequent conversion of the great majority of payments to a sterling basis, and the rather natural rise in the cost of foodstuffs normally derived from Spain.

The average daily all-in cost per head in this Home over a period of years cannot properly be used as a basis for computing the cost of living to persons of the poorer classes living independently because it includes a number of items which are paid by them in part only, if at all, in their normal budgets; but the daily cost of feeding may be considered a fair standard by which to judge that part, at least, of their necessary expenses. This cost has been as follows:—

| | |
|---|---|
| 1932 ..... | -/11¼d. |
| 1933 ..... | -/11 d. |
| 1934 ..... | -/10½d. |
| 1935 ..... | -/11¾d. |
| 1936 ..... | 1/0½ d. |

During the year H.E. the Governor paid a special visit to the Home to discuss the question of its continuance or abolition. The latter was definitely negatived, and further, it was considered to be highly desirable that the whole place be rebuilt so as to provide not only a "workhouse" on modern lines but also a small "infirmary" wherein both sick inmates not requiring so much as admission to hospital might receive some additional attention and comfort and also where poor persons afflicted by chronic disabling and incurable complaints might be properly housed and cared for: there is at present no place in the Colony where these latter persons can live and be treated in comfort if their means are insufficient to provide the necessary amenities in their own homes. Such a provision is, I suggest, a very real need.

Plans for the reconstruction of the present Home on these lines were prepared by the City Engineer in collaboration with me, were considered and criticised and discussed. Shortly it will undoubtedly be necessary to spend considerable sums on the present building merely to maintain it in a reasonably habitable condition.

# SUMMARY OF INDOOR AND OUTDOOR EXPENDITURE FOR THE YEAR 1936.

INDOOR RELIEF—

| | | | | | |
|---|---|---|---|---|---|
| Provisions | £1,062 | 8 | 6 | | |
| *Miscellaneous | 438 | 17 | 6 | | |
| Maintenance of Buildings | 80 | 16 | 6 | | |
| Rent | 295 | 13 | 6 | | |
| Clothing | 63 | 1 | 4 | | |
| Light | 43 | 15 | 11 | | |
| Water | 66 | 8 | 2 | | |
| Funeral expenses | 4 | 8 | 9 | | |
| Hire of Telephone | 12 | 0 | 0 | | |
| Printing | 7 | 18 | 0 | | |
| Insurance | 1 | 10 | 0 | | |
| | | | | £2,076 | 18 2 |
| Days of subsistence | 20,075 | | | | |
| Average No. of inmates | 55 | | | | |
| Cost of feeding per head per day | 1/0½d. | | | | |
| Cost of feeding per head per year | £19 | 6 | 4 | | |
| Total all-in cost per head per day | 2/0¾d. | | | | |
| Total all-in cost per head per year | £37 | 15 | 2¾ | | |
| Calories per head per day | 3,978 | | | | |

OUTDOOR RELIEF—

| | | | | | |
|---|---|---|---|---|---|
| Meat (15,330 lbs.) | £383 | 5 | 0 | | |
| Milk, fresh (10,657 pts.) | 94 | 14 | 9 | | |
| Milk, condensed (10,320 tins) | 177 | 7 | 6 | | |
| Money Grants | 217 | 3 | 6 | | |
| | | | | 872 | 10 9 |
| Salaries | | | | 385 | 0 0 |
| Total expenditure on Indoor and Outdoor Relief | | | | £3,334 | 8 11 |

* Includes washing, cleaning, cooking, coal, charcoal, boot repairs, utensils, ice, medicines, tobacco for inmates, &c.

## INVESTIGATION AND PREVENTION OF OTHER DISEASES.

There is nothing new to report of the several insect and other pests of Gibraltar during the past year. The political troubles in Spain resulted, in the middle of the year, in the closure of the frontier to the normal export of horse manure, with the result that its disposal had suddenly to be arranged locally—and that at the worst time of the year from the point of view of fly breeding. Particular attention was paid to the regular removal of manure from stables and to the cleansing and disinfection of these, and arrangements were made for the burning of the manure on the ground near the refuse destructor. For a time these worked well, but, for one reason and another, they later broke down so that the fly plague became a serious menace. Energetic action by my deputy (when I was on leave) dealt with the matter at the time. Export still being barred the matter of disposal is receiving careful attention in preparation for the coming hot weather. The burning of manure, though not essentially difficult, especially in dry weather, is a tedious process which seems to require a special type of mentality for its successful performance, and this is not too commonly found; it is, too, a wasteful process. On the other hand it is the only sure way of preventing the breeding of flies, particularly where the demand for rotted manure for agricultural purposes is limited as here. As an experiment a couple of Baber's fly-larval-traps were constructed at the Alameda Gardens for the rotting down of manure for use in the gardens in conditions inimical to the breeding of flies. These have proved remarkably successful, and large quantities of manure have been safely stored and used there. It has, however, been found that the peat moss litter, which is used generally in military stables, and to some extent in civilian ones also, is a most difficult substance to deal with in this way. It retains its attraction to the fly and its capability of providing a suitable breeding place for long after the ordinary manure has become harmless in this respect. It is hoped that it may be possible to abolish its use, though the difficulty of obtaining other bedding in sufficient quantities and at economic rates is considerable.

Records of the anti-mosquito work and of the rat destruction campaign throughout the year are contained in the tables which follow.

# MOSQUITO CAMPAIGN RETURN FOR 1936

| Week ending | Visits paid to Premises | Town—Lower | | | | Town—Middle | | | | Town—Upper | | | | South | | | | North | | | | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Tubs | Barrels | Earthenware Vessels | Others | Tubs | Barrels | Earthenware Vessels | Others | Tubs | Barrels | Earthenware Vessels | Others | Tubs | Barrels | Earthenware Vessels | Others | Tubs | Barrels | Earthenware Vessels | Others | |
| Jan. 4 | 398 | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | 1 | ... | ... | . | ... | 1 |
| 11 | 416 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | .. | ... | ... | ... | ... | ... |
| 18 | 425 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| 25 | 408 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Feb. 1 | 411 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... |
| 8 | 405 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | 2 |
| 15 | 416 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... |
| 22 | 423 | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 29 | 412 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Mar. 7 | 420 | ... | ... | ... | 1 | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| 14 | 403 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... |
| 21 | 479 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 28 | 409 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | .. | ... | 2 |
| April 4 | 414 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 4 | ... | 1 | ... | 1 | 8 |
| 11 | 360 | ... | ... | .. | ... | ... | ... | ... | ... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 | 9 |
| 18 | 413 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 |
| 25 | 402 | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 3 | ... | ... | 5 |
| May 2 | 414 | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | 1 | ... | ... | 4 | ... | 1 | ... | 4 | 10 |
| 9 | 410 | ... | ... | ... | ... | ... | ... | ... | ... | 3 | .. | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | 5 |
| 16 | 404 | ... | ... | ... | ... | ... | ... | ... | ... | 6 | .. | .. | ... | ... | ... | ... | 13 | 1 | 1 | ... | | 21 |
| 23 | 415 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 4 |
| 30 | 423 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | 5 | 8 |
| June 6 | 434 | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 2 | ... | ... | 4 |
| 13 | 531 | ... | ... | ... | 4 | ... | ... | ... | 1 | 1 | ... | ... | 1 | ... | 1 | ... | 8 | 1 | 1 | .. | 1 | 19 |
| 20 | 793 | ... | ... | ... | 2 | 2 | ... | ... | ... | 1 | 1 | ... | ... | ... | 1 | .. | 3 | ... | 1 | ... | ... | 11 |
| 27 | 834 | ... | ... | ... | ... | 4 | 1 | ... | ... | 4 | ... | ... | ... | ... | ... | ... | 2 | ... | .. | ... | 2 | 13 |
| July 4 | 839 | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | 2 | ... | ... | ... | 4 | 10 |
| 11 | 794 | 1 | ... | ... | ... | 3 | ... | ... | ... | ... | ... | ... | 1 | 1 | 2 | ... | 2 | 1 | ... | ... | 5 | 16 |
| 18 | 714 | ... | ... | ... | 1 | 2 | .. | ... | ... | 2 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 3 | 9 |
| 25 | 782 | ... | ... | ... | ... | 2 | ... | 1 | ... | 5 | ... | ... | ... | ... | 1 | ... | 6 | ... | ... | ... | ... | 15 |
| Aug. 1 | 750 | ... | ... | ... | ... | 2 | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| 8 | 798 | 1 | ... | ... | ... | 1 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | 3 | ... | .. | ... | 2 | 9 |
| 15 | 827 | ... | ... | ... | ... | 3 | ... | ... | ... | 7 | 2 | ... | 1 | ... | ... | ... | 7 | ... | ... | ... | ... | 20 |
| 22 | 852 | 1 | ... | ... | ... | 2 | ... | .. | ... | 2 | 1 | 1 | ... | ... | ... | ... | 6 | ... | ... | ... | 3 | 16 |
| 29 | 840 | ... | ... | ... | ... | 2 | ... | ... | ... | 3 | ... | ... | ... | .. | ... | ... | 7 | 1 | ... | ... | 1 | 14 |
| Sept. 5 | 850 | . | ... | ... | ... | | .. | 1 | ... | 2 | ... | ... | ... | 1 | ... | ... | 6 | ... | ... | ... | ... | 10 |
| 12 | 837 | ... | ... | ... | ... | 2 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | 5 | 1 | ... | ... | 1 | 11 |
| 19 | 845 | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | .. | 3 |
| 26 | 854 | ... | ... | ... | ... | 2 | ... | 2 | ... | ... | ... | ... | ... | ... | 1 | ... | 2 | ... | ... | ... | ... | 7 |
| Oct. 3 | 867 | ... | ... | .. | 1 | ... | .. | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | 6 | ... | ... | ... | ... | 9 |
| 10 | 833 | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... |
| 17 | 840 | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | .. | 2 |
| 24 | 836 | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 31 | 912 | ... | ... | ... | ... | .. | .. | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | 2 |
| Nov. 7 | 824 | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | 1 | ... | .. | ... | ... | 4 |
| 14 | 837 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 3 |
| 21 | 826 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 28 | 373 | ... | ... | ... | ... | ... | ... | ... | ... | . | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Dec. 5 | 403 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 12 | 373 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | 2 |
| 19 | 365 | ... | . | ... | ... | .. | ... | ... | .. | ... | ... | ... | .. | ... | ... | ... | ... | .. | ... | ... | ... | ... |
| 26 | 282 | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... |
| 31 | 359 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | 3 | . | ... | ... | ... | ... | ... | 3 |
| Totals ..... | 31,114 | 3 | 1 | ... | 12 | 31 | 1 | 4 | 2 | 48 | 4 | 1 | 4 | 4 | 18 | ... | 101 | 5 | 17 | ... | 37 | 293 |

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

## SUMMARY.

| | | | |
|---|---|---|---|
| Tubs ... ... ... ... ... | 91 | 1st Offences ... ... ... ... | 212 |
| Barrels ... ... ... ... ... | 41 | 2nd ,, ... ... ... ... | 5 |
| Earthenware Vessels ... ... | 5 | 3rd ,, ... ... ... ... | 1 |
| Others ... ... ... ... ... | 156 | | |
| Total ... ... ... | 293 | | |

## Rats destroyed during 1936, by Districts (not including H.M. Dockyard).

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept | Oct. | Nov. | Dec. | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Town District ..... | 281 | 260 | 271 | 260 | 269 | 266 | 268 | 235 | 284 | 297 | 258 | 240 | 3,189 |
| South ,, ..... | 302 | 245 | 264 | 262 | 248 | 289 | 297 | 267 | 296 | 272 | 260 | 302 | 3,304 |
| North ,, ..... | 52 | 52 | 51 | 55 | 54 | 74 | 113 | 118 | 72 | 87 | 82 | 87 | 897 |
| Sheds and Warehouses Waterport Wharf and Commercial Mole ..... | 8 | 7 | 7 | 4 | 15 | 10 | 14 | 11 | 23 | 9 | 17 | 4 | 129 |
| Total..... | 643 | 564 | 593 | 581 | 586 | 639 | 692 | 631 | 675 | 665 | 617 | 633 | 7,519 |

## Rats examined at City Laboratories during 1936.

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept | Oct. | Nov. | Dec. | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Non-Infected ..... ... | 11 | 6 | 12 | 6 | 6 | 7 | 7 | 6 | 6 | 11 | 8 | 10 | 96 |
| Infected ..... | — | — | — | — | — | — | — | — | — | — | — | — | Nil |

## Number of poisoned baits laid by Rat Catchers during 1936.

| Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept | Oct. | Nov. | Dec. | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3,571 | 3,040 | 3,584 | 3,517 | 3,314 | 3,794 | 3,541 | 3,257 | 3,018 | 3,326 | 3,632 | 2,681 | 40,275 |

## Total number of Rats destroyed during 1936.

| | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept | Oct. | Nov. | Dec. | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Civil and Colonial Property | Trapped ... | 643 | 564 | 593 | 581 | 586 | 639 | 692 | 631 | 675 | 665 | 617 | 633 | 7,519 |
| | Poisoned... | — | — | — | — | — | — | — | — | — | — | — | — | Nil. |
| H.M. Dockyard | Trapped ... | 87 | 77 | 74 | 63 | 67 | 65 | 76 | 68 | 68 | 60 | 64 | 62 | 831 |
| | Poisoned... | 6 | 8 | 11 | 6 | 5 | 7 | 4 | 5 | 9 | 11 | 6 | 10 | 88 |
| Total..... | | 736 | 649 | 678 | 650 | 658 | 711 | 772 | 704 | 752 | 736 | 687 | 705 | 8,438 |

## MEDICAL WORK FOR THE COUNCIL.

The following numbers of men have been examined prior to their employment by the Council :—

| | |
|---|---|
| January | 5 |
| February | 10 |
| March | 26 |
| April | 16 |
| May | 12 |
| June | 10 |
| July | 5 |
| August | 5 |
| September | 3 |
| October | 4 |
| November | 2 |
| December | 1 |
| Total | 99 |

## SERA AND VACCINES.

Stocks of the following sera and vaccines are maintained :—
Anti-Streptococcus Serum.
Anti-Anthrax Serum.
Anti-Meningococcus Serum.
Anti-Dysentery Serum.
Diphtheria Antitoxin.
Tetanus Antitoxin.
Anti-Rabic Vaccine.
Calf Lymph.
Tuberculin (veterinary uses).

## DISINFECTION.

The following numbers of articles were dealt with at the Council's Disinfecting Station during the year :—

| Month | Beds and Mattresses | Bolsters and Pillows | Blankets and Quilts. | Sheets | Sundries. | Totals. |
|---|---|---|---|---|---|---|
| January | 27 | 32 | 37 | 28 | 86 | 210 |
| February | 69 | 45 | 54 | 48 | 116 | 332 |
| March | 93 | 72 | 37 | 39 | 98 | 339 |
| April | 126 | 127 | 47 | 14 | 64 | 378 |
| May | 65 | 118 | 111 | 97 | 113 | 504 |
| June | 96 | 58 | 47 | 40 | 132 | 373 |
| July | 53 | 40 | 28 | 35 | 86 | 242 |
| August | 52 | 28 | 21 | 27 | 54 | 182 |
| September | 282 | 232 | 115 | 77 | 87 | 793 |
| October | 73 | 46 | 43 | 29 | 54 | 245 |
| November | 52 | 42 | 52 | 33 | 54 | 233 |
| December | 65 | 38 | 32 | 26 | 34 | 195 |
| Totals | 1,053 | 878 | 624 | 493 | 978 | 4,026 |

One hundred and eighty-three premises were disinfected on account of the occurrence therein of cases of infective disease or for the destruction of vermin.

Routine disinfection of all stables was carried out during the summer months.

## AMBULANCE SERVICE.

The following cases were conveyed by ambulance during the year :—

| | Local cases | Bay cases |
|---|---|---|
| Pneumonia | 5 | 5 |
| Diphtheria | 5 | — |
| Enteric Fever | 10 | 4 |
| Appendicitis | 4 | 6 |
| Malaria | — | 1 |
| Tuberculosis | 1 | 2 |
| Erysipelas | 1 | — |
| Injuries | 6 | 11 |
| Hæmorrhage | 2 | — |
| Pleurisy | 1 | 2 |
| Rheumatism | — | 1 |
| Influenza | 1 | — |
| Chicken Pox | — | 1 |
| Intestinal obstruction | — | 1 |
| Abdominal pains | 2 | 3 |
| Scarlet fever | — | 1 |
| Dysentery | — | 1 |
| Paralysis | 1 | — |
| Miscellaneous | 9 | 7 |
| Totals | 48 | 46 |

## SANITARY CIRCUMSTANCES OF THE DISTRICT.

I am indebted to the City and Water Engineer Mr. W. H. Pearce, O.B.E., M.C., M.Inst.C.E., F.S.I., etc., for assistance in the preparation of this section of the report.

### Water Supply.

(a) Potable—

The construction of reservoir No. 8 of one million gallons storage capacity, was completed and it was brought into use during October. The total reservoir storage capacity is now 11½ million gallons.

The amount of rain water collected from the catchments into the reservoirs during the year was 16,718,230 gallons, and the following quantities were issued:—

To shipping..... 8,060,310 gallons.
To the City .....14,414,803 ,,

Extensive repairs and renewals costing over £2,500 were carried out on the galvanized iron catchment areas on the east side of the Rock. Pressed steel piles in place of timber are now being successfully used in order to limit the damage caused by white ants.

Water from the new potable water wells, Nos. 8 and 9, was pumped to Moorish Castle Reservoir for supply to the public: the total quantity so pumped during the year was 3,954,178 gallons. Direct supply from the same source was also made to shipping, the ice factory, etc., as follows:—

To shipping ..... 460,370 gallons.
For other purposes ..... 384,959 ,,

(b) Brackish—

During 1936, the supply of brackish water pumped from the wells at North Front amounted to 271,651,400 gallons.

A portion of the delivery main from Windmill Hill reservoir in front of the Military Hospital was relaid, and the supply main to Buena Vista Barracks was enlarged.

### Sewerage and Drainage.

The whole of the sewage of Gibraltar discharges at Europa Point into the sea. The main gravitating sewer is flat in gradient and collects silt in small quantities especially at high tides: its length is about 2½ miles and its size at the outfall is six by four and a half feet: it carries both storm water and sewage. An area to the north of the Colony which lies low is drained to various ejectors operated by compressed air which lift the sewage to the head of the main outfall sewer. During 1936, the quantity of sewage and storm water so lifted amounted to some 92 million gallons. Storm overflows discharging into

the sea are provided on the line of the main sewer at such levels that they come into operation only at times of heavy floods when the quantity of storm water sufficiently dilutes the sewage to prevent nuisance. Certain areas are also provided with independent storm water relief drains laid in recent years to minimise the risk of flooding in the City. An old drain from Hesse's Pumping Station was renewed during the year.

### Refuse Collection and Disposal.

The average daily collection and disposal of domestic refuse was some 15½ tons.

### Public Highways.

The total length of the public highways maintained by the City Council is approximately 21 miles. Various improvements were effected during the year, i.e.—

Reconstruction of Rosia Road from Kingsway to old Empire Theatre;

Straightening of the carriageway near Bayside;
Reconstruction of Library Ramp;
Reconstruction of Castle Street;
Resurfacing of a portion of Devil's Tower Road;
Widening opposite the Bristol Hotel and at the east and west ends of the Cathedral garden.

A night street cleansing service was commenced during the summer months, and was of undoubted value.

### Public Baths.

The public bathing establishment in Irish Town is maintained up to standard.

The sea bathing facilities are being improved by the reconstruction of the Calpe and Tarik bathing sheds.

## HOUSING.

On the 11th of August a Commission of Inquiry on Housing, Rent Restriction, etc., was appointed by H.E. the Governor. The Commission issued its report early in 1937. It is impossible here to give even a summary of the findings and recommendations, but it is, I think, legitimate to say that these march closely with the recommendations which have been made in these reports over a long period of years. It is to be hoped that the public as a whole will take a direct interest in the Commission's report, and that this one will not be allowed to suffer the relegation to comparative oblivion which has been the fate of so many of its predecessors.

During the period of the sitting of the Commission an opportunity arose for putting into practical effect the recommendations which they were about to make in regard to one aspect of the housing of the working classes. The Government had undertaken the reconstruction of a derelict building on Lopez's Ramp and in consultation with my Department designed and erected a block of tenements for the working classes containing 10 flats of two rooms with a combined living room and kitchen, 3 of three rooms and kitchen and two of one room and kitchen. The kitchen-living room in each case is of such size as to be, in reality, a parlour: in addition to a charcoal cooking stove there is also a wash-up sink with running brackish water laid on, and each tenement has its own private water closet. Access is by an external staircase so that each tenement again has its own piece of outside landing or verandah. A fresh water tank below the block contains 14,250 gallons. It so happened that a Crown property in bad repair, sublet as one-roomed tenements, was available for use as an experiment for "decanting" and contained the correct number of families of about the right size for the occupation of the new block. The Commission recommended that these families should be offered tenancies in the Lopez's Ramp building, and though in most cases the rentals to be paid were slightly in excess of those which had been required of them for their single rooms, they willingly accepted the exchange. Allotment was made according to the size of family, the condition of no sub-letting being imposed. If anyone doubts the value to the individual or to the community of such a move, or the rightness of the recommendations of the Commission and the earnestness with which this Department has for years been pressing for the general adoption of these measures, let him recollect the conditions under which these families now in the Lopez's Ramp building existed and then ask them what they, as the subjects of the experiment, think; or let him visit them in their homes and see what can be done to improve the health and happiness of the working man and his family. It is not pretended that these tenements represent the last word in the housing of the working classes in Gibraltar, but they are a very good start on which improvements may be based.

## SUMMARY OF WORK DONE BY SANITARY INSPECTOR DURING 1936.

| | |
|---|---|
| Complaints received | 348 |
| Premises inspected— | |
| General inspection | 7 |
| Casual inspection | 16 |
| Number of Statutory Notices served | 7 |
| Number of Informal Notices served | 272 |
| Nuisances found— | |
| Minor defects in drains | 149 |
| Obstructed drains | 319 |
| Minor defects in water closets | 283 |
| Defective water closet fittings | 359 |
| Defective water fittings | 317 |
| Defective rainwater pipes | 103 |
| Defective eavesgutters | 127 |
| Defective roofs | 73 |
| Defective yard paving | 56 |
| Dampness | 53 |
| Premises dirty | 163 |
| Defective or no dustbin | 238 |
| Other minor defects | 1748 |
| Suspected pollution of water in underground tank | 25 |
| Underground tanks not insect proof | 11 |
| Brackish water tank not insect proof or no cover | 18 |
| Brackish water running to waste | 249 |
| Miscellaneous services— | |
| Samples of Food and Drugs taken for analysis | 68 |
| Premises disinfected for infectious disease | 161 |
| Premises disinfected for vermin, etc | 22 |
| Stables disinfected | 706 |
| Articles disinfected at North Front Disinfecting Station | 4026 |
| Visits of enquiry re infectious disease | 153 |
| Visits paid to milk shops | 299 |
| ,, ,, ,, eating houses | 303 |
| ,, ,, ,, mineral water factories | 254 |
| ,, ,, ,, common lodging houses | 39 |
| ,, ,, ,, premises on which notice for abatement of nuisance has been served and are revisited for the purpose of ascertaining if requirements have been complied with | 2138 |

Cases removed in Ambulance—

| | |
|---|---|
| Local | 78 |
| Bay, etc. | 49 |
| Vaccination notices served | 616 |
| Legal proceedings instituted | 5 |

## COMMON LODGING HOUSES.

The only Common Lodging House at present existing in Gibraltar was visited at intervals and in no instance was an infringement of the Bye Laws noted. No case of disease of an infective nature occurred in it during the year.

## REFUGEES.

This report would not be complete without some record of the unusual situation which has confronted both the Government and the Council authorities during the latter half of the year; and which, indeed, to some extent still continues. The following notes are necessarily brief; must, I think, omit many points which are or were perhaps of importance; and are, of course, but the expression of my personal experiences: they have no other significance whatever.

In order properly to appreciate the situation which had to be met in the latter half of July, 1936, it is necessary, first of all, to realise that, following on the Spanish general elections in March of that year, Gibraltar was already full of refugees: I use the word "full" in its literal sense; there was, so far as I could ascertain, no vacant accommodation available in the City.

On the morning of July 18th information was received that telephonic and telegraphic communication had been cut with a large part of Spain. At the Fair which opened at La Linea that evening there was considerable disturbance and some shooting. The bull-fight due on the Sunday following—19th—was postponed for a week—and has not yet been held. On that Sunday morning shots were fired into the barracks at La Linea by a rebel gunboat steaming round the Bay against the troops therein who had, apparently, affirmed their loyalty to the Government. At the same time Moorish troops were landed at Algeciras and later moved on La Linea where the utmost panic, naturally, prevailed. British subjects, those who claimed British nationality, Spanish subjects with either no interest in the struggle or interests apparently opposed to those who appeared to be gaining power, and other nationals hoping to escape from the turmoil and risks all made for the gates at Four Corners. Considerable efforts were made to exercise some measure of control over this mass immigration, but by early Monday morning — the 20th — the pressure against the barrier fence was so great that there was immediate danger of the fence being swept away. The gates were, therefore, opened unreservedly and before that night the already full City contained, if not sheltered, anything up to 10,000 souls additional to the fullness to which it had become accustomed during the previous three months. Those who know Gibraltar will realise what this meant: for those who do not, I fear that, without unduly prolonging this description, I can give no picture in the slightest degree adequate.

By Tuesday afternoon—the 21st—a camp was pitched at North Front with water, light and sanitary arrangements; the

Council authorities and the military co-operating with the Government, and the charitable services of the Gibraltar Soup Kitchen providing food. Into this camp were transported, stage by stage, the refugees from the most grossly overcrowded parts, and simultaneously those having no reasonable right or need of refuge were transported back to their own frontier. After the first rush it was again possible to hold the land entrance to the Fortress against those having no right of entry; but very considerable numbers continued to land by various sea routes, and indeed at one time certain persons appear to have made a business of ferrying people around the eastern end of the barrier fence.

The City, in fact the Colony as a whole, owes, I feel, a very definite debt to the personnel of the cleansing services who had an enormous burden suddenly put upon them in the hottest time of the year, and I should like to express my own indebtedness to the staff of my Department who worked, and have continued to do so, against considerable and unusual handicaps to maintain the health and cleanliness of the City. This may, perhaps, not be considered the proper place but I, who saw them there day by day, cannot forebear from adding my tribute to the ladies who gave their time and energies in the camp kitchen to the feeding of the refugees, and to the District Medical Officers who attended the sick there and their lady helpers who twice daily dispensed medicines and dressings to those in need. Only those who have had to deal with similar refugee problems in which the vigilance of the public health services has broken down or been overcome can appreciate the seriousness of the situation as it was and the enormous responsibility which lay on the shoulders of those in authority.

An interesting fact in connection with the feeding of the inmates of the camp was that it was possible to provide for all the children there a good drink of milk, in addition to their ordinary food, in the middle of each morning. Naturally no figures or measurements are available, but it was abundantly clear to those who saw them that, as is now well known in England, this is a measure of real value towards the health of the young child.

By the middle of September the camp had not only outlived its real purpose as a temporary refuge for those persons who were absolutely unable to go elsewhere, but its sanitary control had become so difficult in comparison with the need of its existence, that it was decided to close it. It must be remembered that there are no drains which could be tapped into in that part, and that the possibility of disposing of sullage water by means of soak pits is there definitely limited, not only by the nature of the ground but also by the fact that water

supplies are derived from the same area at not too great a distance. By this time, also, the neighbourhood of Spain had become reasonably settled under the new regime. Some exception was taken to the decision to close the camp by the refugees themselves, and for a time a situation both difficult and dangerous to the health of the remainder of the community arose through the fact that some 300 of them took up their residence in the atrium of the Exchange Buildings in Commercial Square, where there is no provision of any kind for civilised living save only the roof over their heads. Later these moved to the old derelict buildings of the Council's Stonecrushing Station on Willis's Road. The roofs of this building had for some time been in a dangerous condition so that, when people undertook to live in it, such covering as they provided had to be removed, whereon the refugees themselves dispersed throughout the City.

By the end of the year, as can be seen at the beginning of this Report, the population was still over two thousand in excess of normal. It is not my place to comment on this fact here, but there is no doubt that the forebearance which has, up to the time of writing, been shewn in regard to the gross overcrowding of habitable dwellings, the occupation as living premises of buildings totally unsuited to such purpose, and like contraventions of all the elementary laws of hygiene and sanitation must give way to strong action in defence of the public health. The population which normally and legitimately resides in Gibraltar must realize that their amazing fortune in escaping serious epidemic disease under the circumstances which I have just so briefly and inadequately decribed cannot persist. Nor can the public health or cleansing services, or indeed any other services, continue to protect them. If conditions cannot be brought back to normal Nature herself will exact toll for the breaking of her laws, and the consequences in a City crowded like this are too horrible to contemplate.

POSTSCRIPT.

The figures quoted above and at the beginning of this Report are those officially recorded by the police. It has to be admitted that, under conditions such as these, the obtaining of accurate records is far from easy—if not impossible short of house-to-house searches carried out at night. Whilst this Report has been going through the press, however, circumstances have arisen which permit of a revision of these figures. I do not think the case would be understated if the excess population at the beginning of the year had been estimated at a good five thousand.

## FOOD.

In no instance was legal action necessary in respect of the exposure or offer of unsound food for sale. The following articles were destroyed as unsound at the request of their owners :—

| | |
|---|---|
| German Sausage ..... | 72 lbs. |
| Swiss Gruyere Cheese ..... | 3 cases containing 80 pieces each. |
| Salami ..... | 7 cases containing about 140 lbs. |

A quantity of Kosher preserves.

Reports on the samples taken for analysis are included in the report of the City Analyst which follows. It is disappointing to note that the percentage of samples which fell below the legal standards has increased from 10 in 1935 to 20 in 1936.

Throughout the whole of the trouble in Spain, from whence are derived the great majority of the fresh foodstuffs on which Gibraltar depends, there has been no appreciable shortage of essential foods. The shortage of charcoal was very marked at the beginning of the period, and its price naturally rose very considerably. Many persons then found that they were able to substitute coke for this fuel, and though the situation was difficult the emergency was able to be tided over till supplies and prices came nearer to normal. Olive oil has also been scarcer and dearer, and this has led, undoubtedly, to a definite increase in the cost of living in most households. The actual prices of most vegetables has risen slightly, but it has to be remembered that the value of the peseta, in which most market produce vendors naturally dealt, has been, and still is, a most uncertain quantity. A careful investigation into prices carried out in the Markets revealed that although these general small rises had taken place there was justifiable reason for them, and no accusation of attempting to profiteer could be upheld.

### Milk Supply.

In normal years nearly ~~one seventh~~ 4/5th of the total fresh milk supply is directly imported from Spain. This trade suffered great dislocation as the result of the revolution and has not yet completely recovered. In spite of the acute shortage experienced at the end of July a sufficiency was always obtainable for hospitals.

The improvements in the private dairy farm at North Front which were noted as being started in last year's Report have been completed and the farm is structurally well up to modern dairy requirements.

MARKETS AND SLAUGHTERHOUSES.

These continue to be maintained in good conditions. Improvements are continually being effected in both in order to keep them up to the requirements of modern hygiene in relation to the sale of food.

The condition of cattle slaughtered locally has improved in comparison with last year according to the record of condemnations which it was necessary to make. The improvements as regards the infection of Moorish cattle with *Cysticercus bovis* which was noted last year has been maintained, though the situation as regards tuberculosis in pigs has not been so good. The former improvement is a reflection of a general raising of sanitary standards in the country of origin. The outbreak of Foot and Mouth disease which was imported at the end of 1935, continued in mild force for some time and accounted for the condemnation of the heads, feet and paunches of 31 cattle before it was finally stamped out.

Importations of frozen meat continue to increase though this year there is also an increase in the quantity of meat slaughtered locally. The largely increased population and the considerable numbers of vessels of the Royal Navy which have been in port during the year account, I think, for these increases; there is not any reason at present to suppose that individuals are eating more meat per head.

Number of Animals Slaughtered—

| | 1932 | 1933 | 1934 | 1935 | 1936 |
|---|---|---|---|---|---|
| Cattle ..... | 2,273 | 1,892 | 1,512 | 1,446 | 1,926 |
| Sheep ..... | 2,498 | 1,491 | 1,287 | 1,154 | 1,121 |
| Pigs ..... | 1,270 | 786 | 759 | 676 | 746 |

Imports of Frozen Meat—(in pounds)

| | Beef | Mutton | Pork |
|---|---|---|---|
| 1932 ..... | 228,072 | 116,099 | 37,584 |
| 1933 ..... | 377,235 | 156,030 | 61,482 |
| 1934 ..... | 436,666 | 181,839 | 92,261 |
| 1935 ..... | 678,264 | 178,761 | 128,564 |
| 1936 ..... | 996,799 | 207,791 | 138,923 |

The total quantity of frozen meat, including edible offal, (not recorded above) imported during 1936 was 1,441,462 pounds.

The following condemnations of locally slaughtered cattle, etc., were made during the year:—

Cattle—

| | In whole | In part |
|---|---|---|
| Cysticercus bovis | 4 | 40 |
| Tuberculosis | 10 | 22 |
| Fever (acute) | 3 | — |
| Fever (mild) | — | 1 |
| Fever and Jaundice | 1 | — |
| Jaundice | 1 | — |
| Broncho pneumonia | — | 1 |
| Lymphadenitis (generalised) | 1 | — |
| Navel ill | — | 1 |
| Pericarditis | — | 1 |

Sheep—

| | | |
|---|---|---|
| Emaciation | 1 | — |
| Sarcocysts | — | 1 |

Pigs—

| | | |
|---|---|---|
| Tuberculosis | — | 27 |
| Erysipelas | — | 11 |
| Bruising | — | 9 |
| Abscess (localized) | — | 1 |
| Peritonitis (septic) | 3 | — |
| Swine Fever | 1 | — |

# AMOUNT OF SHIPPING ENTERING THE PORT OF GIBRALTAR DURING THE YEAR 1936.

| | | Vessels entered in 1936* | Net Tonnage. | Number inspected. | Left in quarantine | Admitted to Pratique |
|---|---|---|---|---|---|---|
| British | Steam | 1,725 | 4,970,671 | 2 | — | 2 |
| | Sailing | 14 | 125 | — | — | — |
| | Total British | 1,739 | 4,970 796 | 2 | — | 2 |
| Foreign | Steam | 1,873 | 5,887,580 | — | — | — |
| | Sailing | 1,359 | 33,849 | — | — | — |
| | Total Foreign | 3,232 | 5,921,432 | — | — | — |
| | Total British and Foreign | 4,971 | 10,892,228 | 2 | — | 2 |

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

# REPORT OF THE CITY ANALYST AND BACTERIOLOGIST FOR THE YEAR, 1936.

The total number of specimens and samples of all classes examined and reported on at the Public Health Laboratories during the year 1936 was 6,150. This is more than last year's figure by 880 and the laboratory work has increased during the past two years by 1,561 samples.

The activities of the laboratory comprise pathological specimens from (1) Colonial Hospital, (2) Military Hospital and Veterinary department, (3) R. Navy, (4) medical practitioners of Gibraltar, Public Health specimens (including samples taken under the "Food and Drugs (adulteration) Ordinance"), miscellaneous samples from City Council and general public, toxicological and forensic examinations for H.M. Coroner and Police, and the testing of tankers, etc., for inflammable gas.

Much extra work was done for the Military Hospital in connection with an outbreak of bacillary dysentery, and of mild fever among the troops.

The bulk of the work was directly connected with the health of the people.

My research dealing with a possible preventive (dipping) of Canine Leishmania among the hounds of the Royal Calpe Hunt was successfully concluded. The work was started in 1933 and my final report is included.

The annual report is divided into four parts:—

Part I—Food and drugs, Public Health Ordinance.
Part II—Miscellaneous.
Part III—Bacteriology, chemical pathology and public health work.
Part IV—Testing of ships for inflammable gases.

## PART I.—FOOD AND DRUGS.

*"The Public Health Ordinance."*

The number of samples taken officially by the sampling officers was 61. The rate of sampling per 1,000 inhabitants is 3.2 samples. This slightly exceeds the figure of 3 samples recommended by the Ministry of Health for Great Britain. Samples included goat's milk, cows' milk, ice cream, various tinned goods, general groceries and various drugs. Of the twenty-three samples of milk examined four were below the statutory limit in fat or non-fatty solids. In connection with a cows' milk sample having fat abstracted "appeal to cow" samples were taken from six cows separately. All were above the legal standard for fat and a conviction with fine followed. One

sample of lard was adulterated with cotton seed oil, two samples of tincture of iodine were deficient in iodine, and four samples of margarine contained water over and above the statutory limit of 16 per cent. One sample of margarine was not contained by a wrapper bearing the word "Margarine." This sample also contained 6.4 per cent. of extraneous water. Fines and costs for adulterated samples amounted to £19 7 0. In all cases where the City Council deemed it advisable legal action was instituted.

Details of adulterated samples.

| *Lab. No.* | *Sample* | *Adulteration* | *Remarks* |
|---|---|---|---|
| 49 | Goats' milk | 8% deficient in fat | declared skimmed |
| 50 | ,, ,, | ,, ,, ,, ,, | ,, ,, |
| *82 | Cows' milk | 11% deficient in fat | Fined £1 and costs £1.3.0 |
| 109 | Cows' milk | added water 3.5% | No action |
| 601 | Lard | cotton seed oil 33.3% | Fined £1 and costs £2.4.0 |
| 237 | Margarine | excess water 3.5% | Cautioned & costs £2.4.0 |
| 243 | Margarine | excess water 3.6% | Cautioned & costs £2.4.0 |
| 245 | Margarine | excess water 3.6% | Cautioned & costs £2.4.0 |
| 604 | Margarine | excess water 6.4% | Cautioned & costs £2.4.0 |
| 604 | Margarine | no label | Fined £4 and costs £1.4.0 |
| 246 | Tinct. Iodi. | Iodine deficient 2.3% | No action |
| 247 | Tinct. Iodi. | Iodine deficient 1.5% | No action |

* Result of analysis of "appeal to cow" samples in connection with sample 82 as follows:—

| *Cow* | *Fat* % | *Non-fatty solids* % |
|---|---|---|
| 1 | 3.1 | 8.75 |
| 2 | 3.3 | 8.95 |
| 3 | 3.4 | 8.95 |
| 4 | 3.5 | 8.95 |
| 5 | 3.3 | 8.90 |
| 6 | 3.2 | 8.20 |

The rate of adulteration was 20 per cent. For comparison the percentage below the standards set out in the "Food and Drugs (adulteration) Ordinance" for the previous year was 10.

No sample of goats' imported milk was found to be wholly unboiled or contained even a small proportion of unboiled milk. This is satisfactory and milk vendors are exercising greater care to avoid inadequate sterilisation. No sample of milk examined contained preservative.

*Average Composition of Milks.*

For goats:—

| | | |
|---|---|---|
| Milk-fat ..... | 3.76 | per cent. |
| Non-fatty solids... | 8.66 | ,, ,, |

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

For cows:—

| | | |
|---|---|---|
| Milk-fat ..... | 3.45 | per cent. |
| Non-fatty solids... | 8.82 | ,, ,, |

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

Milk in Cartons.

Permission was sought from the health authorities to import cows' milk contained in a carton and kept sweet by cold. Analysis showed that the milk was of good quality, contained fat 3.4% and non-fatty solids 9.1%, but that it had not been pasteurised or sterilised. The Public Health Ordinance demands that all imported milk must be pasteurised or boiled in Gibraltar before offering for sale.

Olive Oil.

The highest percentage of acidity obtained in samples was 1.91 per cent. The improvement in the quality of olive oils reported last year has been maintained. No olive oil should have more than two per cent. of acidity and if five per cent. or more the oil should be condemned as deleterious to health.

Groceries.

Although five samples of margarine contained excess water over and above the 16 per cent. allowed by law the amount was not excessive. Two samples however contained 6 per cent. of excess water. Vendors should buy this article on a guarantee to safeguard a repetition of this form of adulteration. This is the first year that water in samples of margarine has exceeded 16 per cent. Salt content came within reasonable limits and in no instance exceeded 3.3 per cent. Other samples included tea, coffee, sugar, marmalade, corned beef, condensed milk, lard, tinned sardines and other fish. All were genuine with the exception of one sample of lard which had been adulterated with cotton seed oil, as previously stated.

ICE CREAM.

Three samples were examined and the fat content was as follows:—

| *Sample* | *Fat* per cent. |
|---|---|
| 1 | 4.6 |
| 2 | 4.3 |
| 3 | 9.3 |

CONDENSED MILK.

Numerous samples of condensed milk both sweetened and unsweetened and comprising most of the brands sold in Gibraltar were analysed to determine whether they conformed to the law as regards composition and labelling of tin. Labels shall contain in words and figures the equivalent in pints of milk contained by each tin. All samples examined conformed to the regulations.

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## PART II—MISCELLANEOUS.

Samples received for analysis and report under this heading numbered 143 and were as follows:—

9 samples of coal—for analysis and calorific power from City Electrical Engineer.
3 samples of butter—examination for purity.
2 olive oil—examination for purity.
3 suspected narcotics sent by Chief of Police—for identification.
5 samples of water—for detection and estimation of lead.
11 samples of condensed milk—for complete analysis.
1 egg yolk—for sugar content.
8 tankers—examination of tankers, summertanks and cofferdams for inflammable gas.
1 paint—from City Engineer for analysis.
2 cartons of milk—analysis and examination for pasteurisation.
1 liquid in bottle—identification of poison—toxicological.
1 liquid in glass—toxicological analysis.
1 stomach, 1 intestines, 1 liver } toxicological and bacteriological examination.
1 vomit, 2 urines, 3 faeces } for evidence of presence of iodine.
32 samples of lettuces—bacteriological analysis.
4 cows' milk—analysis.

1 vomit
1 stomach washout } toxicological examination.

1 stomach
1 intestines } toxicological examination.

1 stomach washout
1 vomit
1 urine } toxicological examination.

1 sample sugar—for purity.
1 water—for mineral content.
3 margarines—for analysis and report.
1 Bay Rum—for estimation of alcohol.
22 cows' milk—bacteriological for tubercle bacilli.
1 cows' milk—for analysis.
2 sterilizing powders—for analysis.
1 powder—for identification.
10 samples dipping fluid—estimation of arsenic.
1 Yoghourt—analysis and bacteriological report.
1 suspected poison—from H.M. Coroner for identification.
12 condensed milks—for complete analysis.
1 hair wash—for analysis.
2 bottles of liquid—from Chief of Police for identification.
1 rat—bacteriological examination for dysentery bacilli.

## Deteriorated Condensed Milk.

A sample of unsweetened condensed milk was submitted privately for an explanation of the unsatisfactory condition of the sample. On opening the tin the milk was found to be congealed and there was a slight foreign odour when compared with a sound sample of the same brand. By analysis the component parts of the two samples were the same within very small limits and there was no fermentation of the normal lactose causing acidity. Acidity of both samples was 0.49% lactic acid. No living micro organism were found bacteriologically. The physical change in the protein content (soluble caseinogen to insoluble casein) has been reported to take place with age, or by attack with proteolytic organisms or other sources of ferment. The sample was obviously unfit for human consumption.

## Toxicological and Forensic Examinations.

(1) A suspected poison submitted by H.M. Coroner was proved to be borax.
(2) A suspected narcotic submitted by Chief of Police was novocaine.

(3) Quarter grain of morphine hydrochloride dissolved in 1.3 m. 1. of water was contained in an ampoule sent by Chief of Police.

(4) Hydrocyanic acid was detected and 0.42 grain recovered from viscera of a suicide, two drops of liquid in medicinal glass was also hydrocyanic acid.

(5) A white powder received from Chief of Police proved to be novocaine.

(6) Vomit and urine both contained iodines but not free iodine, and faeces contained neither free or combined iodine, liquid in bottle was liquor iodimitis.

(7) In human viscera (stomach, intestines and liver) arsenic and food poisoning bacilli were not found.

(8) Stomach washout and vomit contained aspirin, also a trace of iodate but no free iodine, salicylates were present in urine but no free or combined iodine.

(9) Another patients's vomit contained free iodine and iodates.

# HOUNDS, ROYAL CALPE HUNT.

## (Canine Leishmania and Preventive Measures).

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The following has been abstracted from my final report of investigation and research dealing with the nature and possible prevention of the disease which annually caused the death of many hounds of the Royal Calpe Hunt. The work has now been successfully completed. I first started this enquiry after being approached by the Veterinary Officer in 1933, when I found Leishman—Donovan bodies in liver smears of a dead hound. This finding clinched the diagnosis of Canine Kala-Azar. The chief symptoms of the disease were loss of appetite, with sometimes hysteria resembling Rabies, and extreme emaciation. Death resulted either directly from the disease or secondarily from pneumonia. The latter was the commoner after the introduction of injections of Tryparsamide to arrest the disease. No skin ulcers (Oriental sore) as in L. Tropica were noticed. I could find no evidence of Piroplasmosis in blood smears of dead and sick hounds. This disease was at first suspected. Kala-Azar attacked the hounds about May of each year and it was during the period of April to August that they were completely immersed in an arsenical dipping bath containing 0.100 per cent. of Arsenious Oxide. Cooper's Cattle dip was diluted to the required arsenical strength care being taken that the bath contained not more or less than 0.100 per cent. of Arsenious Oxide ($As_2O_3$). This control was only possible by chemical analysis just before each fortnightly dipping day. It is with pleasure I am able to report that the two successive years 1935 and 1936, when I first introduced systematic dipping, mark the absence of the disease among the hounds numbering thirty couples, for the first time in the history of the Hunt as far back as can be remembered. In some years all hounds have been known to succumb. The incubation period of Canine Leishmania is not known with precision. Dipping starting in June 1934 was not early enough to prevent the death of ten hounds which were already incubating the disease. To avoid this hounds were dipped the following two years beginning one and a half months earlier. Investigators strongly suspect the sand fly (genus-phlebotomus) as the vehicle of infection of Kala-Azar in dogs. The presence of these small bitting flies in Gibraltar has been reported by the Medical Officer of Health. Other suspected agents are lice, ticks, and fleas. Dipping as I expected entirely eradicated these pests which previously were numerous on the bodies of the hounds, and they

were happier and healthier without them. Hounds stood the arsenical bath well and their coats improved. Fortnightly immersion was found to be as effectual as weekly dipping which was at first practised. The change was decided on to avoid an occasional small area of skin erosion which occurred towards the end of the season, usually on the scrotum. These quickly healed under treatment. Major E. S. W. Peatt, O.B.E., F.R.C.V.S., R.A.V.C., kindly provided the facilities for carrying out this work, but for his help no effort on my part to tackle the problem would have been possible.

## PART III—BACTERIOLOGICAL, PATHOLOGICAL AND PUBLIC HEALTH WORK.

| | *No. of specimens.* |
|---|---|
| Drinking waters and others ..... | 367 |
| Swabs: C. diphtheriae, Vincent's organisms, &c. | 883 |
| Sputa: tubercle bacilli and causative organism | 125 |
| Blood: Widal—T.A.B. and Br. Melitensis ..... | 331 |
| Blood: goats, Widal for undulant fever ..... | 115 |
| Blood: total count ..... | 96 |
| Blood: smears for malaria, anthrax, &c. ..... | 15 |
| Blood: cultures for enteric, streptococci, &c.... | 64 |
| Blood: sugar estimations, sugar tolerance tests | 331 |
| Blod: Wassermann reaction ..... | 753 |
| Blood: urea estimations, urea concentration factor ..... | 56 |
| Blood: Van den Bergh, sedimentation rate, icterus index, and calcium estimations | 12 |
| Naso-pharyngeal swabs: meningococcus ..... | 20 |
| Cerebro-spinal fluid: cytology, protein, sugar, wassermann and bacteriological exam. | 52 |
| Pleural fluid: cytology, culture, &c. ..... | 11 |
| Urine: analysis and bacteriological examination | 1,636 |
| Urine: urea estimations, urea concentration test | 52 |
| Pus: gonococcus and other causative organisms | 137 |
| Sera: from V.S. for Tr. pallida (dark grunod) | 12 |
| Faeces: bacteriological for enteric, dysentery, &c. ..... | 469 |
| Breast milk: chemical analysis ..... | 20 |
| Rats: examination for plague ..... | 96 |
| Histological sections ..... | 1 |
| Gastric contents: including fractional test meals | 170 |

| | |
|---|---|
| Guinea pig innoculations: virulence K.L.B. and T.B. ..... | 10 |
| Vaccines: autogenous and stock ..... | 75 |
| Miscellaneous ..... | 21 |
| Total ..... | 5,930 |

*Dysentery.*

Many stools were examined for bacteriological evidence and identification of the type of organism causing the disease. Cases of bacillary dysentery were due chiefly to B. dysenteriae Flexner and the types encountered were "polyvalent" and "Sonne." Morgan's bacillus was isolated from six stools, B. strong from one, B. ambiguus from six, B. alcalescens from one, B. Flexner (polyvalent) from eighteen and B. Flexner (sonne) from four. The amoebic form of dysentery was not met with during the year. The increase in the number of true dysentery patients was due to a small outbreak among the troops stationed in Gibraltar and these were mostly of the Flexner (polyvalent) type. A large number of stools examined in connection with this outbreak and included repeated examinations for possible "carriers," and those of convalescent patients to determine if free from the infective organism. A negative blood agglutination test was of value in deciding cases suffering from diarrhœic symptoms, but in whose stools dysentery bacilli could not be found. The widal test was done about the fifteenth day. All stools received are microscopically examined for blood and pus.

*Enteric and undulant fevers.*

All human blood specimens which require agglutination tests were examined for typhoid ("O" and "H") fever, paratyphoid A, paratyphoid B. fevers, and undulant fever. The formolised standard suspensions and agglutinating sera prepared at Oxford University are found to be satisfactory and are specially useful when an increase in agglutinins is sought when examining bloods of innoculated soldiers and others. Of the numerous bloods examined 22 agglutinated for B. typhosus "H," 3 for paratyphosus B. and 1 for Br. Melitensis. In connection with these diseases, stools, bloods, and urines were examined culturally for the presence of the causative organism. B. typhosus was isolated from eleven stools, and one urine. The convalescent patients' stools are again examined to ensure he is not a "carrier" of these germs. The blood of all those about to be employed in trades dealing with food and drink such as vendors of milk, waiters, etc., is also examined serologically to eliminate a possible carrier of enteric.

*Diphtheria.*

In the examination of throat swabs only the Klebs-Loeffler bacillus is considered. Of the large number of swabs examined 39 were new positive cases. C. diphtheriae was also found in 12 contacts. Virulence tests by guineapig innoculation were resorted to when patients persist in carrying the organism in spite of treatment. In six of such cultures taken from the throat, ear, or nose. Three were virulent. A pure culture of C. diphtheriae obtained from a leg ulcer was also fully virulent. Swabs of convalescents are repeatedly examined until absence of the organism is reported in three consecutive swabs.

*Tuberculosis.*

Various specimens were received for detection of the tubercle bacillus, sputa, cerebro-spinal fluid, pleural fluid, urine, faeces, pus and cows' milk. Of the 125 sputa examined 16 per cent. contained the organisms. The milk from cows living on the "Rock" was systematically examined. Four contained the tubercle bacillus.

*Venereal disease.*

The usual examinations of blood and cerebro-spinal fluids for Wassermann reaction, sera from primary sores for the presence of Tr. Pallida by dark ground illumination and pus smears for gonococci were undertaken. Of 753 Wasermann results 98 were positive. Gonococci was found in 34 urethal smears.

*Malaria.*

The malaria parasite was found in 3 blood smears out of 15 examined for this disease.

*Meningitis.*

The results of examination of 52 cerebro-spinal fluids was reported on during the year. The examination comprised cytology, protein content, sugar content and evidence of causative organism. In some instances a Wassermann test was necessary. Tubercle bacillus was found in one specimen while others showed cytological evidence of tubercular infection. Encephalitis lethargica was not met with. Twenty naso-pharyngeal contact swabs from two positive cases were negative for the meningococcus.

*Blood examinations, &c.*

A variety of examinations come under this heading and include renal efficiency tests, sugar tolerance tests, blood counts, examination of fractional test meals, cytology, chemical and bacteriological examination of pleural and cerebro-spinal fluids, estimations of urea and calcium in blood, Van den Bergh's test and rate of sedimentation of red cells, and analyses of urines, etc., etc.

As a guide and control in insulin treatment patients visit the laboratory for blood sugar estimations. Seventeen patients presented themselves at the laboratories for the complete sugar tolerance test, and the total number of blood sugar estimations done was 331.

In connection with renal efficiency tests 38 patients were examined for the urea concentration factor, and eleven for the urea concentration test. In all the total blood urea estimations performed were 56.

*Gastric disorders and fractional test meals.*

"Fractional test meals" entail the estimation of free hydrochloric acid, and total acidity, and the detection of blood, pus, bile, mucus, and starch in each gastric contents. Thirteen gastric contents are taken from each patient at ¼ hr. intervals after receiving test meal. Gastric contents of 13 patients were examined in this way for evidence of gastric or duodenal ulcer, hypersecretion, etc. The total number of vomits and gastric contents examined was 170.

*Distribution of specimens.*

Specimens submitted were derived as follows:—

From Colonial Hospital 1,065, from Military Authorities 1,576, from Naval Authorities 238, and from City Council and general public 3,271—Total 6,150.

*Autogenous vaccines.*

These are prepared chiefly in cases of cystitis, eczema and nasal and bronchial catarrh at the request of medical practitioners for their private patients.

*Drinking water.*

Constant supervision of Gibraltar diettetic waters necessitates the bacteriological examination of numerous samples. The City's public supply is tested monthly, each reservoir separately. It remained unpolluted during the year. Many houses collect their own supply of water in underground tanks. These are at times liable to pollution. When contamination is suspected a sample is referred for a laboratory report. All military tanks (153) are systematically examined yearly. The number of private tanks waters reported on during the year was 213.

*Animal inoculations.*

These were chiefly confined to determining the virulence of cultures of diphtheria bacilli (vide-diphtheria). One sample of pus was shown to be of tubercular origin by this method.

*Notifiable diseases.*

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

| | Total | Positive |
|---|---|---|
| Blood—Wasserman reaction | 753 | 98 |
| Blood—Widal | | |
| B. typhosus "H" | 331 | 23 |
| B. para typhoid A | | — |
| B. typhosus "O" | | — |
| B. para typhoid B. | | 7 |
| Br. Melitensis | | 2 |
| Blood for malaria | 15 | 3 |
| Sputum—tubercle bacillus | 125 | 22 |
| Pus—gonococci | 137 | 34 |
| Serum—Tr. pallida | 12 | 3 |
| Swabs for diphtheria | 883 | 137 |
| Cerebro-spinal fluid | | |
| Meningococcus | 52 | 2 |
| Tubercle B. | | 2 |
| Faeces | | |
| B. typhosus | 469 | 12 |
| B. dysenteriae Flexner polyvalent) | | 22 |
| B. dysenteriae Sonne | | 5 |
| B. Ambiguus | | 7 |
| B. Morgan's No. 1 | | 9 |
| B. Strong | | 1 |
| B. Alkalescens | | 1 |

## PART IV.—TESTING OF SHIPS.

The City Analyst is responsible for the testing of compartments of oil carrying tankers and others for inflammable vapours. Gas free certificates are necessary before ships of this class enter dry dock for repairs. Eight tankers were examined.

A. Geo. Holborow, F.I.C.,

City Analyst and Bacteriologist.

# REPORT OF VETERINARY ADVISER, 1936.

The only contagious disease which occurred in Gibraltar during the year under review was a mild outbreak of Foot and Mouth disease amongst slaughter cattle imported from Morocco. The disease was confined to these cattle and did not spread to other animals in Gibraltar. Details of the number of cases are included in the text of this report. Since May, 1936, no further cases have occurred.

HORSES, MULES, AND DONKEYS.

| | | |
|---|---|---|
| Imports:—Horses | From Tangier | 5 |
| | ,, England | 3 |
| | ,, Ireland | 2 |
| | ,, Casablanca | 3 |
| Donkeys | ,, Tangier | 1 |
| Exports:—Horses | To England | 9 |
| Mules. | ,, Tangier | 8 |
| Donkeys | ,, England | 1 |
| Donkeys | ,, Tangier | 26 |

In addition to the above a number of horses, mules, and donkeys, were imported from Spain, but no accurate records have been kept of these imports.

All imported horses, mules, and donkeys are examined by the Veterinary Adviser as to their freedom from contagious and infectious diseases before they are allowed to occupy stables in Gibraltar.

All exported horses, mules, and donkeys are examined by the Veterinary Adviser before shipment and the necessary Veterinary Certificates rendered as to their freedom from contagious or infectious diseases. No infectious or contagious diseases occurred amongst the horses, mules, or donkeys in Gibraltar during the year.

Gharry horses plying for hire between Gibraltar and La-Linea are periodically inspected for the presence of Glanders, or other infectious diseases.

SLAUGHTER CATTLE AND PIGS.

1. Imported:—

| | Spain. | Morrocco. | Ireland. |
|---|---|---|---|
| Cattle | 180 | 1661 | 75 |
| Sheep | 1104 | 50 | — |
| Pigs | 667 | 55 | — |

2. No. of cattle destroyed on quayside owing to injury on sea-route, Nil.

3. The small outbreak of Foot and Mouth disease reported last year continued sporadically up to the end of May and accounted for the condemnation of the following parts of carcasses :—

| | |
|---|---|
| Heads ..... | 31 |
| Feet ..... | 124 |
| Paunches ..... | 31 |

The disease was mild throughout.

All slaughter cattle were inspected by the Veterinary Adviser on admittance to the slaughter house. Moroccan cattle were generally poor and unthrifty in appearance but the meat turned out well. Irish cattle were in excellent condition. The care and feeding of animals prior to slaughter is satisfactory. The cattle Byres and Piggery are kept in a satisfactory sanitary condition.

EXPORT.

| | |
|---|---|
| Cattle ..... | 1 (to shipping). |
| Sheep ..... | 34 (to shipping). |

MILCH CATTLE AND GOATS.

No imports or exports.

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

Eleven cows and two bulls were tested for Tuberculosis during the year, and three of the cows reacted and both bulls. Of the reactors two cows and the two bulls showed definite tuberculous lesions on post-mortem.

It is recommended that all milch cattle in Gibraltar be subjected annually to the Tuberculosis Test, and that no fee be charged to the owners of the cattle.

DOGS AND CATS.

| | | | |
|---|---|---|---|
| Imported :—Dogs ..... | From England ..... | 16 |
| ,, ..... | From Malaga ..... | 1 |
| Exported :- Dogs ..... | To England ..... | 4 |
| ,, ..... | To Corsica ..... | 5 |
| ,, ..... | To West Africa ..... | 1 |
| ,, ..... | To Malta ..... | 1 |
| Cats ..... | To England ..... | 1 |
| Cuti-Mundi | To England ..... | 1 |

No cases of rabies occurred during the year

The policy of keeping under observation all dogs and cats biting or scratching people was continued during the year and the record of these dogs and cats is contained below.

The Muzzling Order was continued in force throughout the year and there is no doubt that this acts as a deterrent against the spread of rabies in Gibraltar.

All dogs imported from countries other than the U.K. were quarantined at the Isolation Kennels at Rosia for the minimum period of three months. Owing to the Spanish Civil War an unprecedented number of dogs were quarantined which threw a strain on the staff of the Veterinary Hospital. The rabies Isolation Kennels at Rosia had to be utilised for the housing of these dogs as there is only kennel accommodation for four dogs in the Quarantine Kennels.

| | |
|---|---|
| Number of dogs that underwent quarantine of six months or less | 34 |
| Dogs detained at the Market Kennels after biting human beings | 28 |
| Cats detained at Market Kennels after biting or scratching human beings | 5 |
| Dogs destroyed in Lethal Chamber in Market Kennels | 58 |
| Cats destroyed in Lethal Chamber at Market Kennels | 227 |

The Medical Officer of Health and the Veterinary Adviser have advised the removal of the Market Kennels to the Sick Lines Rosia. It is unsatisfactory to maintain two places in Gibraltar which look after dogs and cats, and the staff at the Sick Lines Rosia is trained in the care and feeding of dogs and cats.

There is also a well equipped small animal hospital at Rosia to treat dogs and cats which are sick. Negotiations are taking place to effect this centralisation and a suitable site for the construction of additional kennels at Rosia has been selected.

It is also recommended that the Lethal Chamber at the Market kennels be re-erected at Rosia so that the euthanasia of small animals can be carried out under expert supervision.

The Veterinary Inspection Room and small animal hospital at the sick lines, Rosia, continues to be of good service to poor owners of animals in Gibraltar.

The Pound situated in Withams Road has now been placed entirely under the supervision of the police.

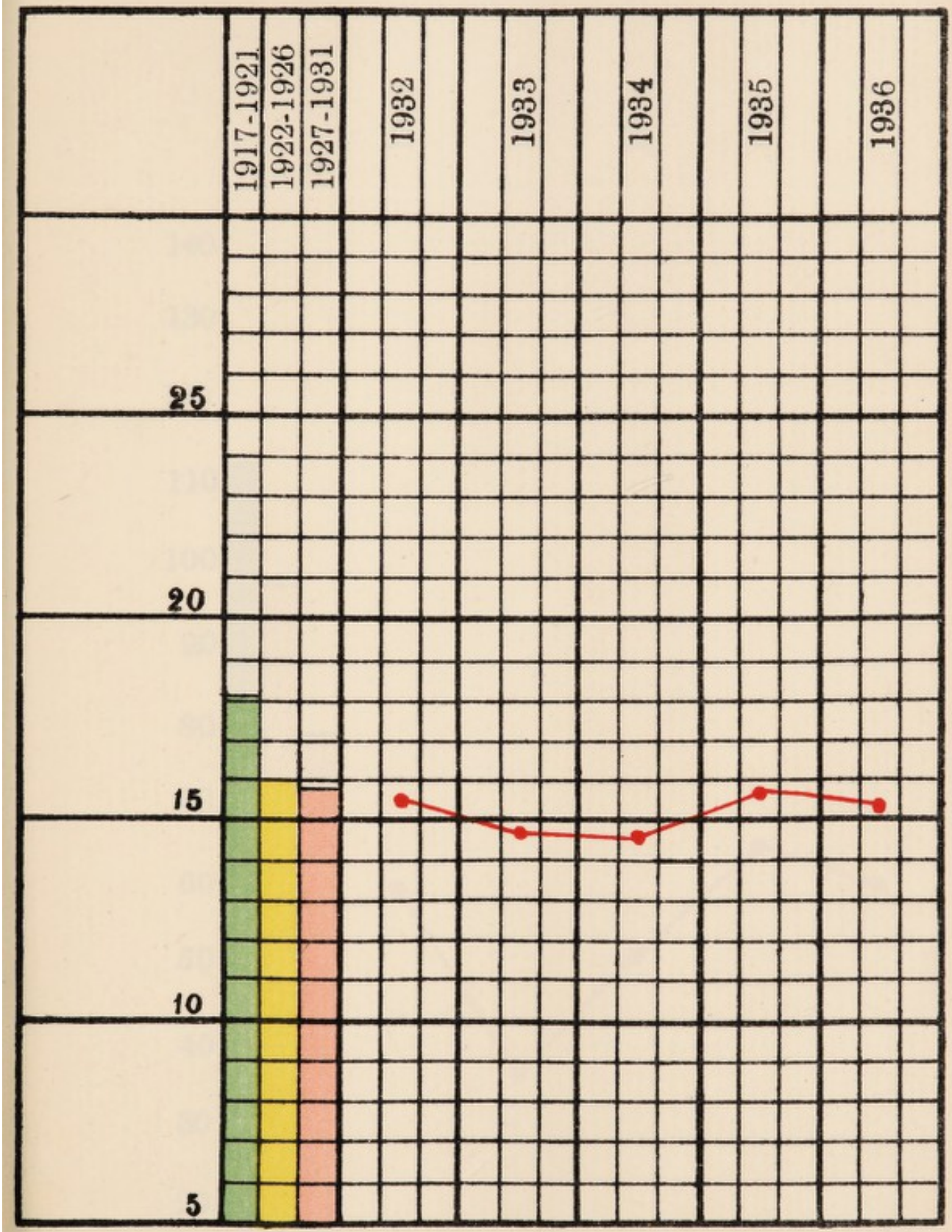
Gibraltar, 1st April, 1937.

GLYN LLOYD,

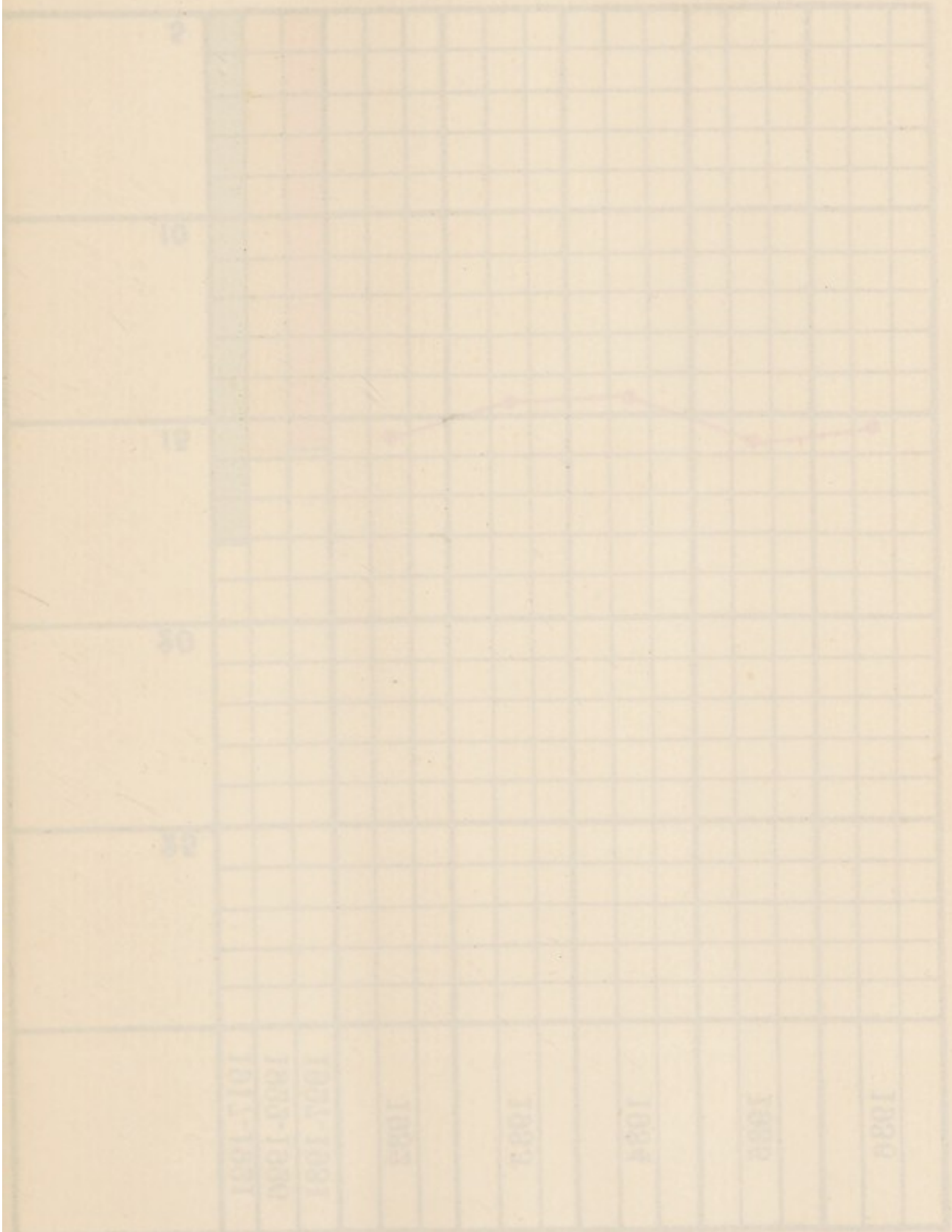
Major, R.A.V.C.,

Veterinary Adviser.

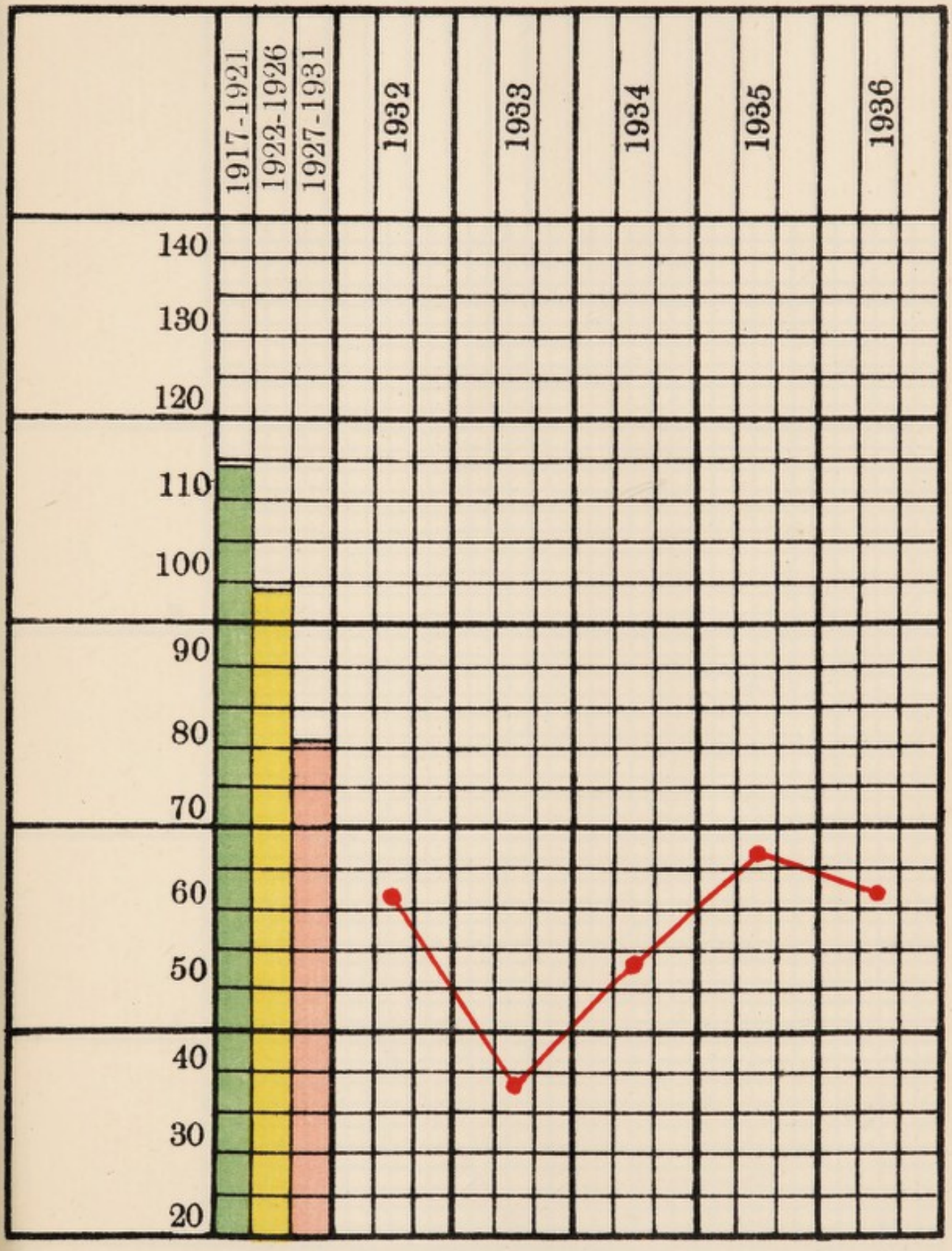
General Death Rate per 1,000 of Population (Total Civil)
Gibraltar, for the Decennial Periods
1917 - 1926 and 1927 - 1936.



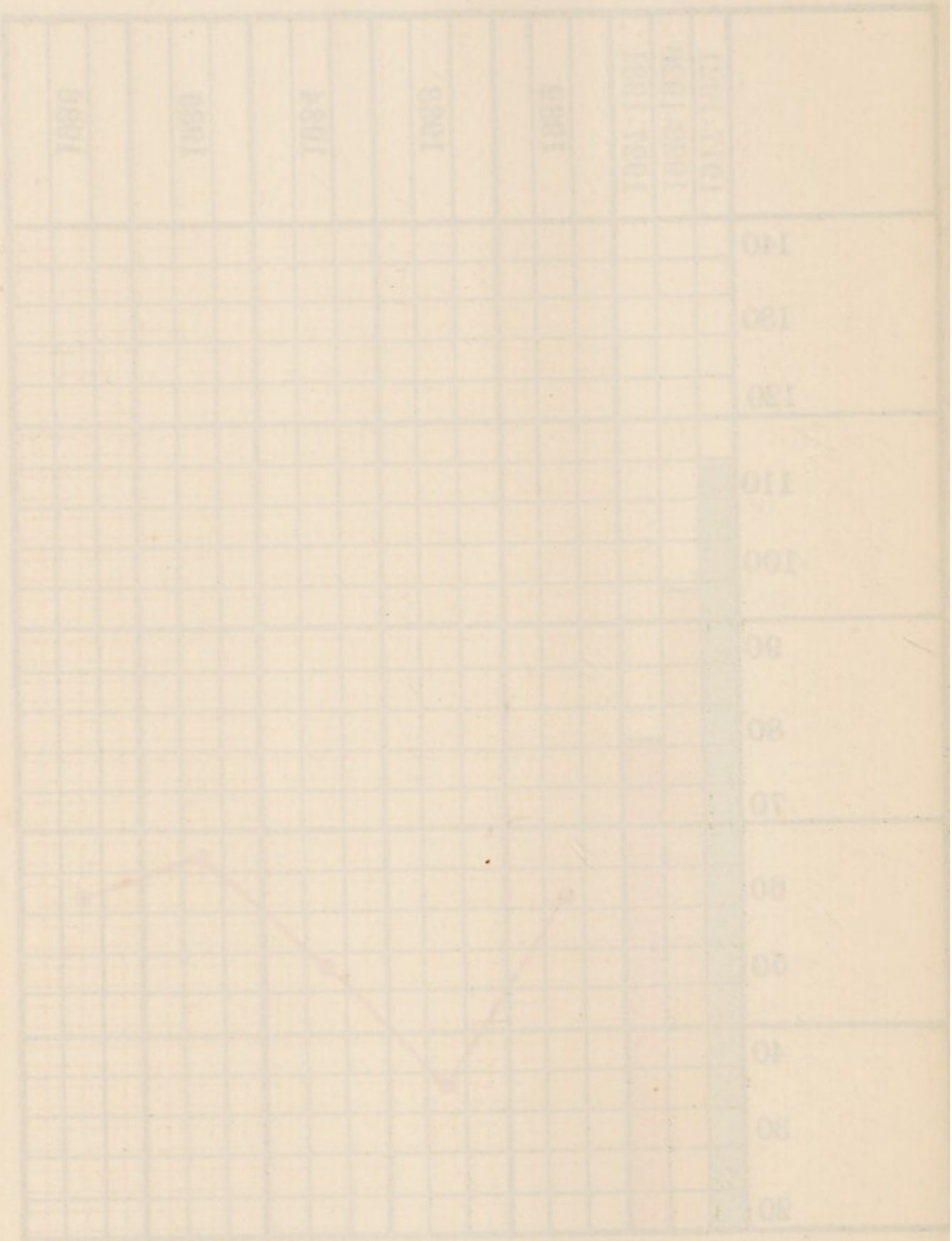

| | | | | | | |
|---|---|---|---|---|---|---|
| Average | 1917-1921 .... | 18.05 | | 1927-1931 .... | 15.80 | |
| | 1922-1926 .... | 16.00 | | 1932-1936 .... | 15.24 | |
| | 1917-1926 .... | 17.00 | | 1927-1936 .... | 15 50 | |



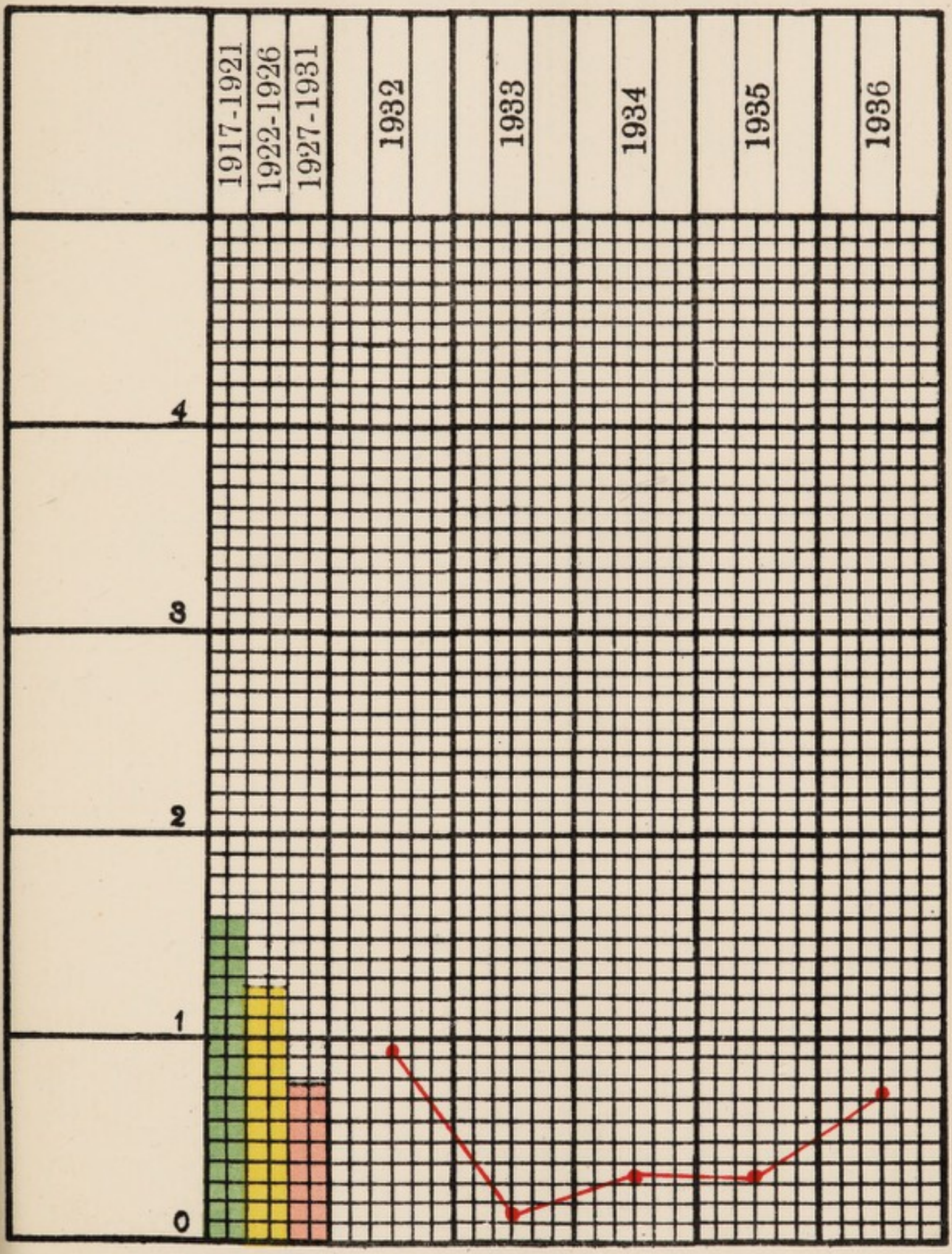
## Infantile Mortality per 1,000 Births, Gibraltar, for the Decennial Periods 1917 - 1926 and 1927 - 1936.




| | | | | | | |
|---|---|---|---|---|---|---|
| Average | 1917-1921 | .... | 113.25 | 1927-1931 | .... | 80.20 |
| | 1922-1926 | .... | 98.98 | 1932-1936 | .... | 56.80 |
| | 1917-1926 | .... | 107.10 | 1927-1936 | .... | 68.50 |



# Zymotic Mortality per 1,000 of Total Civil Population Gibraltar, for the Decennial Periods 1917 - 1926 and 1927 - 1936.




| | | | | | |
|---|---|---|---|---|---|
| Average | 1917-1921 .... | 1.60 | 1927-1931 .... | .77 |
| | 1922-1926 .... | 1.23 | 1932-1936 .... | .52 |
| | 1917-1926 .... | 1.14 | 1927-1936 .... | .65 |