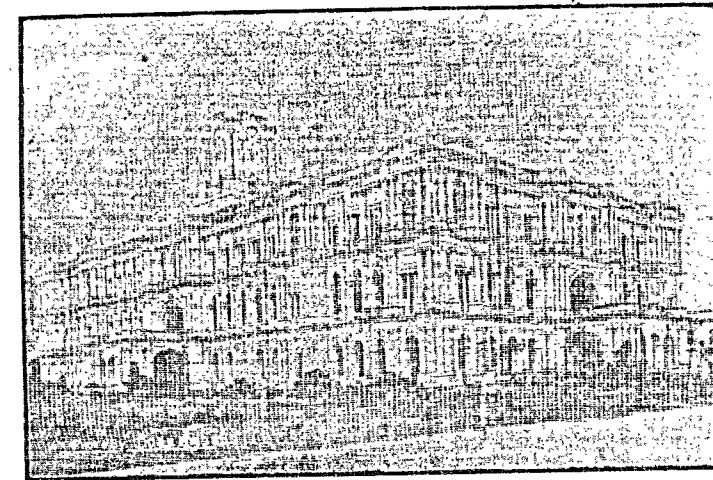


Corporation of Madras  
Annual Report of the Health  
Officer of the City of Madras  
1929  
      
    

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CORPORATION OF MADRAS.



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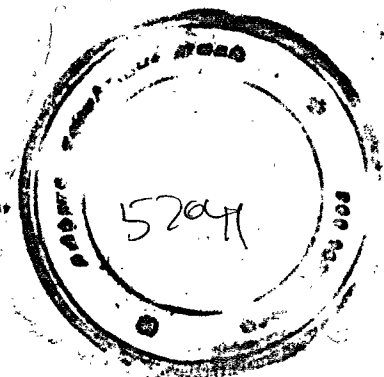
# ANNUAL REPORT

OF THE  
HEALTH OFFICER  
OF THE CITY OF MADRAS  
FOR THE YEAR  
**1929.**

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MADRAS:  
PRINTED BY S. MURTHY & CO.,  
AT THE "KAPALEE PRESS,"  
305, THAMBU CHETTY STREET.

1930.



R  
VOLUME 11  
1920

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M E N D I N G S L I P

Author : Corporation of Madras Annual  
Report of Health 1929

Title :  
Accession 57041

Year of Publication: 1929

Edition: 1 to 4 = 2 sheets

Title Page 1 to 4 = 2 sheets

Preliminary Pages: 1 to 4 = 2 sheets

Main Book : 1 to 96 = 48 sheets

Supplementary pages : to =

Total Pages 104 = 52 sheets

Missing Pages : =

Net No. of Pages 104 = 52 sheets

Date sent for Mending:

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செப்பனியுலர் காக எடுத்த  
கொள்ளப்பட்ட நாள்  
20/10/1929  
செப்பனியுலர் எடுத்த நாள்  
20/10/1929  
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INTRODUCTION.

REVIEW OF THE YEAR.

To

THE COMMISSIONER.

CORPORATION OF MADRAS.

Sir,

The records of the health of the City set out in the following pages show considerable progress in all branches of the administration.

The outstanding feature of the Vital Statistics is the fall in the general death rate to 42.4 from 50.5 in the previous year. Infantile mortality fell from 286.8 to 256.6. The reduction in mortality noticeable under most of the zymotic diseases is to some extent coloured by the prevalence of small-pox in an epidemic form during February, March and April. The country as a whole seems to have been affected and the disease was much in evidence in all the larger Cities of India.

The causes that lend Madras periodically to epidemics of small-pox have been fully discussed in previous reports. Overcrowding, poverty, ignorance and superstition have been the chief obstacles in the prevention of this disease. Vaccination affords the surest shield of protection against the disease. The immunity conferred seems to wear away with the lapse of time thus necessitating re-vaccination at regular intervals of 5 to 7 years. 50 per cent of the total cases occurred amongst persons above 10 years of age who had been successfully vaccinated in their infancy. Unless a community takes to vaccination wholeheartedly, the disease cannot be eradicated. Over 500 houses are inspected daily by the vaccination staff to detect and vaccinate unprotected children born outside the City limits. In his own interest as well as in the interest of others, every citizen is expected to co-operate with this department in the eradication of this scourge.

The number of deaths under Malaria has come down from 1599 in the previous year to 682, the lowest figure recorded since 1922. The loss to a community where Malaria prevails cannot be gauged by the mortality alone. On account of the persisting sickness, disablement, pain and loss of money caused, the disease affects the social and economic welfare of the community more vitally than any other disease. Anti-Malarial operations re-started in 1927 have been continued and much valuable work done. I must once again plead that the activities of this Department should be brought under a separate Officer. The success noticed during the year under review ought to prove an incentive to redouble our efforts in the conquest of one of the most preventable of preventable diseases.

While the mortality from Malaria decreased, has the mosquito nuisance correspondingly abated? This has not been so. There still exist all over the City hundreds of places where, due to the carelessness of the citizens, mosquitoes can find safe breeding grounds. In the back-yards of many houses and Bungalows the sullage is allowed to stagnate for irrigating plants and trees. It is imperative that no water should be allowed to stagnate anywhere. The Cooum still remains a source of perpetual mosquito nuisance. Unless the condition of this river is improved, mosquito nuisance will not appreciably abate in the City.

In my report for 1928 I have dealt at some length with the urgent necessity of tackling the housing problem in Madras. The City abounds in numerous insanitary areas and dwelling houses which afford great opportunities for the spread of communicable diseases. Intimately connected with this is the question of prevention of tuberculosis and respiratory diseases, the mortality from which remains stationary despite all efforts. To improve the 140 slums in the City is a stupendous task. Progress here has to be necessarily slow in view of the large funds needed and the legal difficulties involved. With the funds now available as a result of the recently sanctioned loan, a *via media* is being found and steps taken to set right some of the worst localities in the city. Grace Garden, without exaggeration a hot bed of cholera, has been greatly improved, sewerage extended getting rid of all insanitary cesspools, tank

filled up and roads laid. The Bogipalayam Housing Scheme is now under progress which when completed will greatly improve the health of East Perambur.

The question of improving the water-supply is pending disposal by the Filtration Committee. The urgent necessity of putting up percolating filters early and replacing all rotten pipes cannot be over-emphasised.

The success of Public Health Administration depends largely on the amount of co-operation the individual citizen exhibits in his daily actions to the administration. Complaints are received by dozens daily on the intolerable street nuisance. The widespread prevalence of dysentery and typhoid, in the dissemination of which carriers play a prominent part, is due to this insanitary practice. In the absence of Police powers, Corporation can do very little to stop it. The complainants forget that this is a nuisance in the prevention of which they themselves can play a noble part.

As will be found elsewhere in the report, the year under review saw many improvements. Mechanisation of conservancy has been introduced in many busy areas in the City for the removal of rubbish and filth from the main thoroughfares. Although this method of removal may prove slightly costly;—in areas where it has been tried, conservancy has been greatly improved. The system of night conservancy introduced in Kothwal area has been extended to some parts of Triplicane also. Introduction of flush-out latrines in all dwelling houses by advancing loans where necessary, as advocated in my previous report, is now in progress in Chintadripet. This should be extended to all other divisions where suitable sewers exist.

In Royapuram, Washermanpet, Choolai, Pudupakam, Perambur and Puraswalkum, Registration work has been separated from Vaccination. This has enabled the staff to verify every case of death and to ascertain the correct cause thereof.

The condition of Eating Houses, Lodging Houses, Private Markets etc., has been greatly improved. A poultry market and restaurant have been constructed within Moore Market premises. A new Model Cattle Yard has been construct-

ed at Purasawalkum and the one at Chintadripet was extended. In order to have a more effective control of food-supply in the City, it is necessary to acquire some of the worst private markets. The enforcement of the Madras Prevention of Adulteration Act is bound to stop the gross adulteration of food stuff that exists in the City. Details of the working of the act will be furnished in the next report. At the time of writing, the by-laws regarding Weights and Measures have also been brought into operation.

I have the honour to be,

Sir,

Your most obedient servant,

C. S. GOVINDA PILLAI,

M.B., Ch.B., L.R.C.P. & S., D.P.H. (Edin.),  
Health Officer.

Madras,

4—10—1930.

## VITAL STATISTICS.

### SUMMARY.

|                                                                      |                                       |
|----------------------------------------------------------------------|---------------------------------------|
| Area of the city                                                     | ... 19,728 acres or                   |
|                                                                      | 29.41 sq. miles                       |
| Population (Census of 1921)                                          | ... 5,26,911.                         |
| Population of Mambalam Extension                                     | ... 1,880.                            |
| Total Population                                                     | ... 5,28,791.                         |
| Average Density                                                      | ... 22.2 per acre.                    |
| Density of division (10-15)                                          | ... 91.1 per acre.                    |
| Inhabited houses (census of 1921)                                    | ... 65,048.                           |
| Total births registered in 1929 excluding still births               | ... 23,124 as against 23,729 in 1928. |
| Still births                                                         | ... 1287 as against 1321 in 1928.     |
| Illegitimate births                                                  | ... 638 as against 597 in 1928.       |
| Birth rate                                                           | ... 43.7 as against 44.9 in 1928.     |
| Total deaths registered excluding still births                       | ... 22,415 as against 26,715 in 1928. |
| Death rate                                                           | ... 42.4 as against 50.5 in 1928.     |
| Infantile mortality                                                  | ... 5,933 as against 6,806 in 1928.   |
| Infantile mortality rate                                             | ... 256.6 as against 286.8 in 1928.   |
| Death rate from infectious diseases                                  | ... 9.3 as against 13.8 in 1928.      |
| Estimated population in the middle of the year 1929                  | ... 5,37,149.                         |
| Birth rate based upon the estimated population in the middle of 1929 | ... 43.1                              |
| Death rate based upon the estimated population in the middle of 1929 | ... 41.7.                             |
| Percentage of infant deaths to total mortality                       | ... 26.5.                             |

## VITAL STATISTICS.

The state of public health in this city judged from the birth and death returns as recorded, shows :—

1. The birth rate fell from 44.9 in 1928 to 43.7 in 1929.
2. The death rate also declined from 50.5 in 1928 to 42.4 in 1929, and
3. The infantile death rate similarly fell from 286.8 in 1928 to 256.6 in 1929.

### RAINFALL AND WEATHER.

The total rainfall during the year under report was 52.42 inches as against 51.47 in 1928, the quinquennial average being 46.91. The highest rainfall was recorded in November as 14.92 inches; and in the last quarter of the year it was 27.64 inches. The atmospheric conditions as recorded by the Madras Observatory, is furnished in Annual Form A and Table B, pages 82 and 119. The average maximum temperature varied from 100° in June to 83.9° in December. The mean minimum temperature varied from 68.6 in January to 81.8 in May. As regards humidity, the lowest was recorded in June (57 degrees) and the highest in November (81 degrees). The barometer fell steadily from 29.941 in January to 29.679 in June. It then rose slowly to 29.943 inches in December.

### AREA AND POPULATION.

The area of the city is 29.41 sq. miles and the population 5,28,791 (1921 census). The estimated population in the middle of the year 1929 was 5,37,149. The weekly and annual statistics continued to be based on the census figures of 1921.

### REGISTRATION OF STATISTICS.

The registration of births and deaths was done as in previous years by the 13 Licensed Medical Practitioners styled as Registrar-Vaccinators assisted by 31 Assistant Vaccinators and 2 Female Vaccinators. During the course of the year, 5 additional Sub-Assistant Surgeons were entertained so as to relieve a few of the Registrars from the vaccination work.

### BIRTHS.

23,124 births were registered as against 23,729 in 1928, the birth rate being 43.7 as against 44.9 in 1928, and 44.2 the mean of the previous five years. Of these, 11,875 were males and 11,249 females, the ratio of males to 100 females being 105.5. The largest number of births was recorded during November (2366) and the lowest in February (1361). Births registered by divisions and sexes during the year are shown in Annual Form No. 1 page 83.

The comparative statement for 1928 and 1929 showing the birth and death rates and the infantile deaths are detailed in Table E, page 122.

### BIRTHS BY COMMUNITIES.

The birth rates for different communities and the principal subdivisions of the Hindu community are given in Tables C and D, pages 120 and 121. The Mussalmans still continue to top the list in the returns of births (50.5).

### ILLEGITIMATE BIRTHS.

The number of illegitimate births recorded this year was 638 as against 597 in 1928.

### STILL BIRTHS.

1287 still births were registered as against 1321 in 1928. The following statement indicates the figures in detail according to communities.

| Community.        | No. of still births. |
|-------------------|----------------------|
| Europeans         | 1                    |
| Anglo-Indians     | 12                   |
| Indian Christians | 47                   |
| Hindus            | 1078                 |
| Mussalmans        | 149                  |
| Total             | 1287                 |

## DEATHS.

The total number of deaths in the city of Madras during the year under review was 22,415 giving a death rate of 42.4 as against 26,715 and 50.5 in 1928, the mean ratio for the quinquennium being 45.3.

### CAUSE OF DEATH.

Deaths under various causes are detailed in Annual Form No. XX pages 101-117.

**Mortality by Age.**—Reference to the Annual Form No. IV, page 86 will reveal that deaths among children under 1 year was higher than for any other age group. Next in order comes the group 1 to 5 years, and the lowest between 10 to 15 years. This statement also sets forth details of deaths according to age by divisions.

While reviewing the Administration Report for the years 1927 and 1928, Government were pleased to make the following observations:—

1. The conditions in the city are inimical to females in the early reproductive ages. There are certain features which distinguish Madras City from other towns in the Presidency in respect of deaths according to sex distribution, the excess of deaths among females over those among males persisting up to the age of 40—(G. O. No. 5060 L & M dated 20-12-28).

2. The prevailing conditions in the city appear to be inimical to the health of the population in certain age periods viz., 1 to 10 years and above 60 years.

With regard to No. 1, the Director of Public Health was requested to furnish the data on which his observations were based. Investigation was not possible without comparing the figures relating to other towns in the Presidency. In spite of several reminders, the Director of Public Health has not furnished the information or data on which he based his observation. The statistics of the city for the past several years appear to reveal no abnormal or significant change with regard to the rate of mortality among females as compared with that among males. My own impression is that the excess of female deaths between 15 and 40 over male deaths during the same age period is not

an exclusive feature of the City of Madras. Deaths due to child birth form a constant factor for the increase in female mortality. Added to this, there is the economic strain which affects the female sex in a larger measure. These conditions will be found to be the same throughout the country.

As regards No. 2, death-rate is naturally high at the two extremes of life in any community, more so in a community of poor vitality. As a result of economic distress the death-rate at these age groups becomes very much greater. In 1928 with the general rise in the death-rate at all ages, population in these two age groups suffered most. The fall in the death-rate in these age-groups in 1929 shows that the causes that operated in 1928 were only temporary in character.

**Mortality by Community.**—The table below furnishes the mortality among the communities:—

| Community:        | Males. | Females. | No. of total deaths. | Death-rate. |
|-------------------|--------|----------|----------------------|-------------|
| Hindus            | 9,302  | 9,173    | 18,475               | 43.0        |
| Mussulmans        | 1,321  | 1,333    | 2,654                | 49.5        |
| Indian Christians | 489    | 505      | 994                  | 30.9        |
| Anglo-Indians     | 134    | 133      | 267                  | 29.7        |
| Europeans         | 18     | 7        | 25                   | 8.5         |
|                   | 11,264 | 11,151   | 22,415               | 42.4        |

It may be noticed that Europeans recorded the lowest rate and the Mussulmans the highest.

Annual form No. V, page 87 gives the deaths according to religion by divisions.

**Mortality by sex.**—Of the total number of 22,415 deaths registered during the year, 11,264 were among males and 11,151 among females, the ratio being 101.01 males to every 100 females. Death-rate is greater in females between the ages of 10 and 40 due to the risks of pregnancy involved and the conditions of homelife.

**Mortality by districts.**—Annual form No. II, page 84 shows details in regard to the deaths according to each division of the city and by sex during the year.

Divisions 2, 3, 4, 10, 12, 16, 17, 18, 24, 27 and 28 show a higher death-rate than the average for the whole city. Tondiarpet Division (2) recorded the highest rate. This division is occupied mostly by the lower classes of Hindu Community, who are all labouring classes. The standard of life is very poor and housing conditions are extremely unsatisfactory. The same thing can be said about divisions 3, 4, 16, 17 and 18. The increase in the case of 10th division is not large. 12th Division contains a mixed population with a large proportion of the poorer classes of Hindu Community. Here again, housing conditions and overcrowding are the primary causes. Divisions 24, 27 and 28 contain a large proportion of Muslim Community which records the highest death-rate in the city. Muthialpet, 6th division, records the lowest death-rate, as housing conditions are satisfactory and this division is inhabited by a large proportion of Brahmins and well-to-do Hindus.

**Infant Mortality.**—The number of deaths among infants under one year of age was 5933 or 256.6 per 1000 live births as against 6806 or 286.8 in 1928, the quinquennial average being 268.9. Tables F G and H pages 123, 124 & 125 provide an analysis of deaths among children division wise, by months and under various causes and age periods respectively.

Of the total deaths, 1376 took place in the first week of life, and 800 in the age period of 1 to 4 weeks. The mortality among infants who had not completed the first month of life was thus 2176. The number of deaths in the age groups of 1 to 6 months was 2015 and 6 to 12 months 1742.

**Infant Mortality by months.**—Table on page 8 shows the number of deaths among infants in each month of the year. For a comparative study the monthly total number of deaths at the ages of 1 year and upwards is also furnished.

**Infant Mortality by community.**—Mortality rates among infants according to each community is given in the following statement. The rates for the sub-castes of the Hindu community are also furnished.

| Race or caste.    | Deaths under one year. | No. of births registered. | Infant mortality per 1000 births registered. |
|-------------------|------------------------|---------------------------|----------------------------------------------|
| Europeans         | 1                      | 48                        | 20.8                                         |
| Anglo-Indians     | 48                     | 378                       | 127.0                                        |
| Indian Christians | 237                    | 1269                      | 186.8                                        |
| Mussulmans        | 745                    | 2706                      | 275.3                                        |
| Hindus            | 4902                   | 18721                     | 261.8                                        |
| Others            | —                      | 2                         | —                                            |

| Race or caste.                 | Deaths under one year. | No. of births registered. | Infant mortality per 1000 births registered. |
|--------------------------------|------------------------|---------------------------|----------------------------------------------|
| Brahmin                        | 327                    | 1689                      | 193.8                                        |
| Chetty                         | 502                    | 1342                      | 374.1                                        |
| Vellala or Mudaliar            | 685                    | 2751                      | 249.0                                        |
| Balijah or Naidu               | 470                    | 1787                      | 263.0                                        |
| Vanniah or Naicker             | 787                    | 2777                      | 283.4                                        |
| Adi-Dravida                    | 808                    | 2896                      | 279.0                                        |
| Patnavar                       | 49                     | 265                       | 184.9                                        |
| Yadaval or Edayar              | 187                    | 669                       | 279.5                                        |
| Viswakarma Brahmin or Kammalar | 214                    | 599                       | 357.3                                        |
| Other Hindus                   | 873                    | 3946                      | 221.2                                        |

## CHOLERA.

33 attacks and 16 deaths were reported during the year as against 1342 attacks and 708 deaths in the previous year, the ratio of deaths being 0·03 in 1929 as against 1·3 in 1928. The mean ratio for the previous five years was 0.6. 520 anti-cholera inoculations were performed during the year.

## DIARRHOEA &amp; DYSENTERY.

The total number of deaths from Diarrhoea was 1501. Of these 741 were amongst males and 760 among females. Dysentery accounts for 1626 deaths, (775 males and 851 females).

## ENTERIC FEVER.

130 deaths were reported under this cause giving a rate of 0·2 per mille as against 177 and 0·3 respectively in 1928, the mean ratio for the quinquennium being 0·2. Of these 91 were males and 39 females. Annual form No. XI furnishes details by months and divisions. Anti Typhoid inoculations were availed of by contacts of infected cases. 380 persons were inoculated against Typhoid.

SMALL POX.

Small pox was prevalent in an epidemic form during the months of February, March and April. Of the 2019 attacks, 506 proved fatal as against 1066 attacks and 251 deaths in 1928. Annual form No. VII page 87 furnishes details of deaths by divisions in each month of the year. The deaths work out a ratio of 1.0 per mille as against 0.5 in 1928 and 0.5 the average of the last five years.

Analysing the above figures, it has been found that out of 2019 cases notified during the year, 833 were not vaccinated, and again out of 506 deaths, 313 were likewise among unvaccinated persons. A statement of attacks and deaths by communities is furnished below:—

| 1929              | Population. | Small-pox. |        |
|-------------------|-------------|------------|--------|
|                   |             | Attacks.   | Deaths |
| Europeans         | 2942        | 2          | 0      |
| Anglo-Indians     | 9002        | 21         | 4      |
| Indian Christians | 32216       | 98         | 20     |
| Hindus            | 429155      | 1831       | 468    |
| Mohammedans       | 53586       | 67         | 14     |
| Others            | 1890        | ...        | ...    |
|                   | 528791      | 2019       | 506    |

| AGE PERIOD.            | NUMBER OF DEATHS. |           |        |        |      |       |       |         |            |          |           |           |        |
|------------------------|-------------------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------|
|                        | January.          | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Total. |
| Under 1 year ...       | 514               | 467       | 479    | 474    | 454  | 421   | 494   | 440     | 452        | 493      | 624       | 621       | 5933   |
| 1 year and upwards ... | 1568              | 1388      | 1493   | 1514   | 1507 | 1140  | 1220  | 1179    | 1310       | 1448     | 1560      | 1555      | 16482  |
| Total ...              | 2082              | 1855      | 1972   | 1788   | 1761 | 1561  | 1714  | 1619    | 1762       | 1941     | 2184      | 2176      | 22415  |

It is noticed that out of 506 deaths, 247 were amongst males and 259 among females. Of the above, 80 were among infants under one year of age.

The largest number of attacks (432) was reported in March and the lowest (67) in October. The causes that lend the city to constant outbreaks of small pox can be summarised under poverty, over-crowding, a feeling of fatalism at the occurrence of the disease in a household and incomplete protection by periodic re-vaccination.

Of the 2019 cases notified, 1726 were admitted and treated in the Isolation Hospitals. In all cases prophylactic measures were adopted such as isolation, disinfection and re-vaccination.

Vaccination is being popularised by every means at our disposal but on account of apathy and a feeling of indifference, the public do not secure early the only effective protection against small pox in spite of the fact that domiciliary vaccination has been made free, years ago.

Of the 1186 cases in the vaccinated list 971 have occurred among persons above the age of 10. This makes out a strong case for the introduction of compulsory re-vaccination at least in the face of an epidemic.

The total number of primary and re-vaccinations performed during the year under report was 23,250 and 43,356 respectively.

#### MEASLES.

68 deaths were recorded as against 59 in 1928. The annual death-rate was 0.1 per mille as in the previous year, while the mean ratio for the quinquennium was 0.08. Of these 68 deaths, 33 were males and 35 females, and analysing, further, it is found that 23 occurred amongst infants under one year of age. The largest number of deaths (12) occurred in April.

#### MALARIA.

The number of deaths from Malarial Fever was 681 amounting to 1.3 per mille against 1,599 or 3.0 per mille in 1928 and 2.5 the mean ratio for the previous five years. Analysing the figures it is seen that 326 males and 355 females succumbed to this disease. Annual Form No X page 91 gives the deaths by divisions and months. It will be noticed therein that the largest number of deaths (137) took place in

January and thereafter declined gradually. A perusal of Table XIX page 100 will indicate that the deaths on this account have shown a decline this year as compared with 1928.

A small establishment for anti-malarial operations was working during the year and their activities are summarised separately.

#### GENERAL RESPIRATORY DISEASES.

5324 deaths or 10.1 per mille were recorded under this head against 6879 or 13.0 in 1928 and 5153 or 9.8 the mean for the last five years. Of these, 2657 were males and 2667 were females. Of these again, 1976 were infants under one year of age. Annual Form No XV page 96 furnishes details by months and divisions.

Diseases grouped under this heading are Acute Bronchitis, Chronic Bronchitis, Broncho Pneumonia, Lobar Pneumonia, etc.

#### TUBERCULOSIS.

There were 1354 deaths under pulmonary tuberculosis and 17 under the other forms of the disease. There was also a decline in the deaths under this head as compared with 1928 when it was 1649 and 163 respectively. Analysing the figures it will be found that 738 deaths occurred among males and 633 among females. (Table XIX page 100 and Table XIV page 95.)

Elimination of poverty and over-crowding, improvements of slums; provision of more houses, parks and playgrounds and above all mass education are urgently called for to eliminate this dire disease.

#### KALA-AZAR.

39 deaths were registered from this cause, the corresponding figures being 38 in 1928, 28 in 1927 and 38 in 1926. Table XX page 102.)

#### OTHER FEVERS.

Other Fevers accounted for 1731 deaths, yielding a ratio of 3.3 per mille, the mean of the last 5 years being 2.0 per mille. (Table XII)

#### DISEASES OF THE NERVOUS SYSTEM.

937 deaths were registered. Of these 521 were amongst children. (Table XX page 105 and Table G page 124.)

#### CERTIFIED DEATHS.

Out of 22415 deaths notified during the year under report, 472 were reported by qualified medical practitioners and 2564 by the hospitals, thus representing 13.5% of the total deaths.

### BURIAL AND BURNING GROUNDS.

These places were supervised by the Sanitary Inspectors. Out of 22,415 deaths registered excluding 1,287 still births, 17,178 were buried and 5237 were burnt. Grave diggers licensed annually by this department to work in each place number 95. Plots of land for erection of tombs overed graves were granted to 257 applicants, the amount realised therefrom being Rs. 1,319-14-0. Copies of extracts relating to births and deaths were applied for by 636 individuals of which 510 were granted. The fee realised in this behalf was Rs. 968-6-0. In the other cases either the extracts were not available or the applicants failed to pay the charges.

### REPORT OF THE PORT HEALTH OFFICER, MADRAS FOR 1929.

1. In-coming vessels :—826 Steamers arrived here during the year from different ports with 76,189 crew and 97,137 passengers against 824 vessels of the previous year with 75,887 crew, and 1,12,171 passengers.

2. Out-going vessels:—342 Vessels with 37,816 crew and 34,683 passengers were inspected and granted Bills of Health during the year against 340 vessels with 30,946 crew and 13,929 passengers of the previous year.

3. Epidemic and Infectious Diseases:—3 cases of chickenpox, 4 cases of Mild Influenza, 1 case of Suspected Cholera, 3 cases of Cholera, 1 case of Measles, 1 case of Mumps and 2 cases of Smallpox were found among the passengers and crew of the steamers that entered the harbour during the year, and they were sent to the Infectious Disease Hospital for treatment.

4. Disinfection of bedding and clothing of deck passengers and crew larding and embarking here is carried on at the discretion of the Health Officer as usual. The disinfection shed is in charge of a Sub-Assistant Surgeon and a Nurse is employed to assist in examining the female passengers.

5. Rats on Steamers:—No unusual mortality was found on any of the vessels that entered the harbour during the year under report.

6. A Clayton Apparatus is maintained in the port, but it is not in working order.

### VACCINATION.

Vaccination work was carried out with increased vigour during the year under report.

STAFF:—The staff was the same as that deputed for registration of births and deaths excepting that during the year under report 5 more Sub-Assistant Surgeons were recruited to its ranks. In four areas vaccination work was separated from registration work. 29th division was given a separate Medical Registrar Vaccinator. This scheme has materially improved Registration and vaccination work in these areas. The Medical Registers relieved of vaccination duties were able to verify deaths in every case.

LYMPH:—As in previous years, the glycerine lymph required for the operation was obtained from the King Institute of Preventive Medicine, Guindy. The Medical Registrar Vaccinator of the Chintadripet depot continued to receive and distribute the vaccine from Guindy to all the depots in the City.

OPERATIONS:—During the year under report 1200 tubes (of 10 c.c. each) and 9255 tubes (of 5 c.c. each) of lymph were obtained from Guindy and the total number of vaccinations performed was 66606. Of these, 40901 were males and 25705 females. Analysing further it will be noticed that 23250 were primary and 43356 revaccinations. Besides the above, 766 re-vaccinations were reported as performed in the Madras Penitentiary of which 302 were successful and 464 failures. (Statement No. III page 129—30).

Out of 23250 primary cases performed by the staff, 12934 were done at the depots and 10316 at the residences of the citizens or in the divisions.

PERCENTAGE OF SUCCESS:—The results of vaccination were verified as a routine course by the Medical Registrar Vaccinators, the Asst. Health Officers and the Health Officer. Out of the total 23250 primary vaccinations performed, 22322 were examined at the depots. Of all cases verified the percentage of success in primary and re-vaccinations was 98.5 and 30.1 respectively against 99.7 and 36.3 in 1928. 18062 cases of primary vaccination resulted in 4 or more cicatrices.

VERIFICATION OF BIRTHS:—16352 births were verified in the year against 17650 in 1928. 3408 infants died before attain-

ing the age of one year and 2823 were reported to have been removed out of the City. Of the remaining 10121 cases, 8617 or 52.7 per cent. of births verified were vaccinated in the City. (Statement No. II page 128).

6399 Hospital births were verified during the year of which 806 were reported to have died and 1445 removed out of the City and thus 4148 were alone available for vaccination of whom 2040 have been protected. Details of the above will be found in the appended statement No. II page 128.

**VACCINATION BY COMMUNITIES:**—The number of primary vaccination performed in each community is detailed below:

|                              | Population. | Primary vaccination. | Re-vaccination. |
|------------------------------|-------------|----------------------|-----------------|
| Europeans and Anglo Indians. | 11944       | 271                  | 1438            |
| Muslims                      | 53586       | 2226                 | 2415            |
| Indian christians            | 32216       | 1241                 | 3737            |
| Hindus                       | 429155      | 19512                | 35766           |
| Others                       | 1890        | ...                  | ...             |
| Total                        | 528791      | 23250                | 43356           |

**VACCINATION OF CHILDREN UNDER ONE YEAR:**

16420 primary vaccinations were performed in the year as against 15648 in 1928. Of the above 13078 children were born in Madras and 3342 in the Mofussil.

**POSTPONEMENT OF VACCINATION IN CHILDREN:**

During the year 927 certificates were received for postponement of vaccination from the Medical Practitioners as against 1123 in 1928.

**PROSECUTIONS:**—16 prosecutions were launched during the year under report for failure to effect vaccination.

**TRAINING OF VACCINATOR PUPILS:**—117 students were trained in the vaccination depots as against 65 in 1928.

**COST OF VACCINATION:**—The cost of each successful vaccination was Re. 1-2-5.

**SANITATION.**

The administration of the Health Department was carried on by the Health Officer assisted by two Assistant Health Officers in charge of North and South Ranges, the Lady Superintendent, Child Welfare Scheme, and the Drainage Superintendent who was in charge of conservancy.

One of the recommendations of the Adhoc Committee on the City High Mortality Committee's Report adopted by the Council was that the Assistant Health Officers should have their combined residences and offices in the respective ranges under their charge. This was given effect to in the South Range on 12-7-29 when, the Office of the Assistant Health Officer, South Range, was opened in premises No. 272-274 Pycrofts Road, Pudupakkam, 27th division. The scheme is being given a thorough trial, and the results are being watched. Similar change could not be effected in the North Range owing to the absence of suitable premises in a central place. The matter is receiving attention.

**DRAINAGE:**—The extension of the underground drainage scheme has been in progress. The statement in page 131 shows the total length of sewers (28,956 feet) laid during the year under report. It is hoped that before long, this scheme will be completed, when, some of the important problems of Public Health will have been solved.

**WATER SUPPLY:**—The water supplied was tested daily at the Kilpauk laboratory. Samples were taken from different parts of the City and tested and the dosage of chlorine to the water was regulated according to the daily results of analysis. A separate and detailed report on this is appended hereto.

**LATRINES:**—In all the sewered portions of the City the conversion of the existing dry latrines into flush-out ones is receiving attention. 369 flush-out latrines have been constructed, during the year. Recourse is taken to the provisions of the Act for compulsory conversion of dry latrines into flush-out ones. But difficulties are met with in this direction owing to the poverty of the people and their inability to comply with the requisitions. A scheme is now in progress to introduce flush-out latrines in all dwelling houses in

Chintadripet by advancing small loans to the owners, as has been detailed in my last report.

**DUST NUISANCE:**—Owing to the inadequacy of water supply, dust nuisance cannot be completely abated in the city. A few of the public streets are being watered. Action will have to be taken to tap a water source that could be utilised for this purpose. 92 streets have been tarred during the year under report making a total length of 20½ miles.

**BUILDING REGULATIONS** (Sections 230-257):—As usual all building applications were scrutinised by this Department as regards the sanitary requirements thereof. During the year under report 2268 applications were received for scrutiny as against 2406 received during last year.

**CONTROL OVER WATER** (Sections 262-268):—This Department has been carrying on anti-malarial measures such as cleaning and oiling of tanks, pools and ponds and filling up of low lands etc. A special report on the work done, is furnished separately.

**HOUSING** (Sections 272-277):—Despite Mambalam extension which has been in progress, the congestion in the City shows little improvement. A systematic house to house inspection has been conducted throughout the year. 13477 dwelling houses have been thus inspected. The Sanitary Inspectors note down the defects and steps are taken to remedy the same on pain of prosecution when persuasions fail. As many as 3479 dwelling houses were repaired and set right as a result of the action taken by this Department. It is gratifying to note that the Government have sanctioned a free grant of Rs. 2,51,000 for effecting improvements in this direction and the Bogipalayam Hutting Ground has been selected for the construction of model houses. It is hoped that when Corporation finances improve, the problem of housing will be taken on hand and the congestion which is the root cause of several diseases in the city will be removed. (See pages 134 to 137 for statement.)

**INDUSTRIES & FACTORIES:**—The inspection of factories has been carried on as usual and defects noted have been communicated to the Chief Inspector of Factories. In 14 factories flush-out latrines have been installed during the year.

**LICENSABLE PLACES.**—Sanitary control is being exercised over places where dangerous and offensive trades are carried on. By-laws regulating such trades are under consideration before the Standing Committee (Health), and, when they are passed, considerable improvement is bound to result. During the year under report, 4115 applications were received for grant of licenses of which 3749 were sanctioned, 155 refused, and the rest were pending at the end of the year, as against 3791 applications received, 3433 sanctioned, and 111 refused during the previous year. In 1439 cases improvements were found necessary. It is satisfactory to note that as a result of the vigorous steps taken, improvements were effected in as many as 1374 cases. This department launched 517 prosecutions in this behalf of which, 242 were for breach of conditions. (See page 132).

**LETHAL CHAMBERS:**—There are 2 Lethal Chambers in the City, one at the Basin Road and the other at Krishnampet, for the destruction of dogs to prevent rabies in the city. The satisfactory working has attracted the attention of several Municipalities in this Province. There had been requests from the neighbouring Municipalities to destroy their dogs in our Chambers, which could not be complied with owing to financial stringency. The electrocuting chamber specially designed to destroy dogs with the least suffering possible, is under construction. During the year under report, 4464 dogs, bitches and pups were destroyed, and 153 were reclaimed by the owners on payment of fees.

**CATTLE-YARDS AND HACK STABLES** (Section 282): Not a little difficulty is experienced in the exercise of sanitary control over these places. The owners who are mostly illiterate cannot be persuaded to keep the places clean, unless they are prosecuted and fined. The Corporation maintained two Model Cattle-Yards, one at the Basin Road and the other at Chintadripet. The construction of a cattle-yard at Purasawalkam is in progress. It is necessary to construct many more cattle-yards in areas occupied by cattle owners so that the present nuisance can be brought under control.

During the year under review, the number of cattle housed in the Chintadripet and Basin Road cattle-yard, was 24 and 250 respectively as against 24 and 174 for the previous year.

The Corporation maintained two cartstands. The one situated in Elephant Gate Road is under the control of this department and

is leased out to a contractor along with the bazaars adjacent thereto for a sum of Rs. 8,150 for 1929—30 as in 1928—29.

**MILK TRADE (Section 299):**—The question of milk supply in the City has not yet been satisfactorily solved. It may be mentioned that when the Madras Prevention of Adulteration Act is enforced in the City, more effective action can be taken to check the supply of adulterated milk and milk-products to the citizens.

**WASHING AND BATHING PLACES AND DHOBIKHANAS:**—The Corporation maintains 2 Dhobikhanas, one at Robinson Park and the other at Chetpet. These are not enough for the City. The need for opening more such model institutions is keenly felt. It is hoped that when the finances of the Corporation improve better attention will be paid to this.

As has been mentioned before, the over-crowding in private tenements and the inadequacy of water-supply in such houses lead to public ill-health. To alleviate this distress, it is necessary that there should be a large number of public bathing fountains in the City for the benefit of the poor and the homeless who unfortunately form a large portion of the population. Some improvement has been made in this direction.

**SLAUGHTER HOUSES:**—The Corporation maintains the Slaughter Houses at Perambore where, cattle, sheep and pigs are slaughtered. The question of adopting improved and humane methods of slaughter is under consideration. But the illiteracy and the bigotry of the butchers stand as a serious handicap in the way of effecting any improvement in this direction. Owing to financial stringency several useful schemes of this nature had to be dropped.

The right of collecting rents and fees from the Slaughter Houses for cattle and sheep has been sold in auction for Rs. 22,500 and Rs. 60,750 respectively as against Rs. 22,120 and Rs. 62,600 in 1928—29. There was no change in the contract for the Pig Slaughter Houses as the period of the contract was 3 years.

The number of animals slaughtered during the year under report was 16,320 cattle, 4,44,332 sheep & goats; and 1861 pigs as against

16,803 cattle, 4,02,418 sheep and goats and 1,833 pigs in the previous year.

The right of collecting blood from the Slaughter Houses was leased out to a contractor for 3 years for Rs. 1,600 per annum from 10—2—30.

**SLAUGHTER OF ANIMALS IN PRIVATE HOUSES (Section 296—298):**—The Corporation has been permitting the slaughter of animals in private houses either free or on payment of fees for religious purposes, due care being taken to see that the slaughter is conducted under conditions of proper sanitation. The fees so collected for the year amounted to Rs. 127—4—0 for 1016 sheep and goats and 2 pigs as against Rs. 133—2—0 for 1345 sheep and goats and 8 pigs in 1928. Free licenses for slaughtering 3 cows and 105 sheep and goats, were granted during the year as against 7 cows and 268 sheep and goats, in the previous year.

**MARKETS (PUBLIC):**—This department continued to exercise sanitary control over the two markets, the Moore Market and the Smithfield Market, maintained by the Corporation. Various improvements including the construction of a new poultry market and a restaurant are under progress. Rents for the stalls in the Moore Market were collected by the Revenue Department as in the previous years. The right of collecting rents and fees from the Smithfield Market was leased out for a period of three years from, 1st April 1928 at Rs. 2,000 per annum.

The need for more public markets has been stressed in successive reports and it is earnestly hoped that, ere long, more markets will be opened by the Corporation in localities where their absence is keenly felt. A few of the private markets can be acquired, and municipalised.

**MARKETS (PRIVATE):**—Marked improvements were effected in all the private markets. Water carriage system for the removal of the filth from the latrines, has been introduced in almost all the markets in sewered areas. As many as 32 markets have been so provided with flush-out latrines. The conditions of licences are being strictly enforced in all these places.

**SALE OF ARTICLES OF FOOD:**—Special attention continued to be paid to enforce sanitary regulations in all the Coffee Hotels, restaurants, eating houses, boarding houses, lodging houses, rest houses, choultries etc., as they form no negligible factor in the spread of disease. (See page 133 for statement of the unwholesome articles of food destroyed by the sanitary staff). The provisions of the Madras Prevention of Adulteration Act could not be enforced during the year under report by the Corporation as the proposals regarding the provision of funds and the necessary staff were pending before the Council at the time.

**DISINFECTANTS:**—Hycol was the chief disinfectant used during the year. About 366 gallons of hycol, 32 gallons of phenyle, 10 gallons of phenoid, 1 drum and 4 cwts & 2½ lbs. of bleaching powder, 110½ paras of chunam and 4 lbs. and 1 oz. of potassium permanganate, were used for purposes of disinfection. The total number of houses disinfected was 2991.

**MENAGERIE:**—Various improvements have been carried out and are under progress with regard to the better housing of the animals. More animals have been added during the year. A fuller report about this, will be found in the Commissioner's report.

**WEIGHTS & MEASURES:**—The bylaws relating to the enforcement of the standard weights, scales and measures could not be given effect to during the year under report for want of the necessary staff. The Council, however, provided for the staff in the Budget for 1930—31 and the work has been started.

## DISPENSARIES & HOSPITALS.

**DISPENSARIES.**—The year opened with 16 dispensaries and two infectious diseases hospital. Three new dispensaries were started in July 1929 at Harbour Division, Vyasarpady and Kosapet respectively. The increasing popularity of these institutions and their usefulness to the public cannot easily be over emphasised. All classes of people are freely availing themselves of the facilities for medical aid provided for them. A statement of the cases treated in the dispensaries during 1928 and 1929 is given in page 21.

Statement showing the number of cases treated in the Corporation dispensaries during 1928 and 1929.

| Serial num-ber. | Dispensaries.    | Date on which the institu-tion was opened. | Total number of cases treated. |          | Number of minor opera-tions performed. |       |
|-----------------|------------------|--------------------------------------------|--------------------------------|----------|----------------------------------------|-------|
|                 |                  |                                            | 1928.                          | 1929.    | 1928.                                  | 1929. |
| 1.              | Royapuram        | 1st July 1924                              | 64,339                         | 64,180   | 400                                    | 350   |
| 2.              | Washermanpet     | 1913                                       | 81,812                         | 87,430   | 960                                    | 881   |
| 3.              | Harbour Division | 1929                                       | ...                            | 26,250   | ...                                    | 31    |
| 4.              | Mannady          | 12th September 1923                        | 79,656                         | 76,251   | 641                                    | 635   |
| 5.              | Mafushan Garden  | 2nd September 1923                         | 93,670                         | 88,013   | 493                                    | 493   |
| 6.              | George Town      | October 1919                               | 1,01,006                       | 1,08,133 | 497                                    | 608   |
| 7.              | Mint Street      | 2nd September 1923                         | 1,02,266                       | 93,806   | 1486                                   | 1480  |
| 8.              | Pulianthope      | 14th June 1922                             | 65,663                         | 64,937   | 779                                    | 903   |
| 9.              | Perambore        | 27th January 1928                          | 32,772                         | 35,896   | 362                                    | 470   |
| 10.             | Vyasarpady       | 17th July 1929                             | ...                            | 10,416   | ...                                    | 101   |
| 11.             | Baliah Naidu     | 10th April 1899                            | 80,240                         | 91,130   | 2326                                   | 2448  |
| 12.             | Kosapet          | 11th July 1929                             | ...                            | 10,653   | ...                                    | 49    |
| 13.             | Kilpauk          | 21st November 1919                         | 38,256                         | 37,151   | 380                                    | 42    |
| 14.             | Nungambalam      | 24th October 1923                          | 49,006                         | 65,137   | 284                                    | 356   |
| 15.             | Chintadripet     | 1st May 1909                               | 1,07,263                       | 1,03,896 | 779                                    | 723   |
| 16.             | Triplacane       | 1918                                       | 1,13,114                       | 1,16,604 | 351                                    | 378   |
| 17.             | Pudupakkam       | 1st July 1924                              | 88,539                         | 10,742   | 793                                    | 1022  |
| 18.             | Teynampet        | 10th June 1921                             | 28,792                         | 28,842   | 287                                    | 365   |
| 19.             | Mylapore         | 1st July 1924                              | 90,899                         | 74,607   | 442                                    | 511   |

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1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

1. *Journal of the American Medical Association*, 1997; 277: 1033-1038.

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Admission, discharge and death under various diseases during the year.

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TABLE No. II.

No. of cases admitted classified according to various diseases during different months.

|           | Small Pox. | Chicken Pox. | Measles. | Cholera. | Dysentery. | Diarrhoea. | Mumps. | Whooping Cough. | Pneumonia. | Enteric fever. | Malaria. | Pyrexia of unknown origin. | Kala-Azar. | Pulmonary Tuberculosis. | Secondary Syphilis. | Other diseases. | Contacts. | Total. | Daily average. |
|-----------|------------|--------------|----------|----------|------------|------------|--------|-----------------|------------|----------------|----------|----------------------------|------------|-------------------------|---------------------|-----------------|-----------|--------|----------------|
| January   | 152        | 28           | 4        |          | 1          | 6          | 2      | 3               |            |                |          | 1                          |            | 1                       |                     | 5               | 90        | 293    | 103            |
| February  | 129        | 19           | 6        |          | 1          | 5          |        |                 |            |                |          | 2                          |            | 2                       |                     | 5               | 106       | 275    | 125            |
| March     | 209        | 18           | 9        |          | 2          | 10         |        | 2               |            |                | 2        | 1                          |            |                         |                     | 4               | 137       | 394    | 139            |
| April     | 151        | 14           | 15       |          |            | 6          | 4      | 1               |            |                | 2        | 3                          |            |                         |                     | 2               | 104       | 302    | 166            |
| May       | 99         | 4            | 20       | 6        |            | 4          | 3      | 1               |            |                | 3        | 4                          |            |                         |                     | 2               | 81        | 227    | 99             |
| June      | 46         | 1            | 8        |          |            | 6          | 1      |                 |            |                |          | 1                          |            |                         | 1                   | 2               | 51        | 117    | 53             |
| July      | 63         | 7            | 3        |          |            | 2          |        |                 |            | 2              |          | 1                          |            |                         |                     | 3               | 44        | 126    | 50             |
| August    | 40         | 7            | 1        |          |            | 7          |        | 8               | 1          | 1              | 2        | 1                          |            | 1                       |                     | 1               | 62        | 132    | 67             |
| September | 44         | 7            | 2        |          | 1          | 5          | 1      | 1               |            |                | 3        | 1                          |            |                         | 1                   | 2               | 46        | 113    | 55             |
| October   | 47         | 8            | 3        |          |            | 5          | 2      |                 |            |                |          | 3                          |            |                         |                     | 5               | 47        | 123    | 78             |
| November  | 47         | 2            |          | 2        |            | 6          |        |                 |            |                | 4        |                            |            |                         |                     | 10              | 35        | 106    | 58             |
| December  | 35         | 10           |          | 1        |            | 3          |        |                 |            |                | 1        | 3                          |            |                         |                     | 10              | 27        | 90     | 53             |
| Total     | 1062       | 125          | 71       | 10       | 6          | 65         | 13     | 16              | 1          | 3              | 17       | 21                         |            | 5                       | 2                   | 51              | 830       | 2298   | 87.1           |

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TABLE No. III

Admissions according to nationality, age and sex.

|                                 | Adults. |         | Children. |         | Total. |
|---------------------------------|---------|---------|-----------|---------|--------|
|                                 | Male.   | Female. | Male.     | Female. |        |
| Europeans and Anglo Indians ... | 12      | 17      | 23        | 16      | 68     |
| Hindus ...                      | 491     | 226     | 84        | 95      | 896    |
| Mahomadans ...                  | 35      | 4       | 3         | 2       | 44     |
| Others ...                      | 203     | 132     | 58        | 67      | 460    |
| Total ...                       | 741     | 379     | 168       | 180     | 1,468  |

TABLE No. IV

No. of beds available in the hospital and their distribution.

| Sections.    | Number of wards. | Beds per ward. | Total Beds. |
|--------------|------------------|----------------|-------------|
| Indian ...   | 2                | 24             | 48          |
| Do. ...      | 1                | 20             | 20          |
| Do. ...      | 7                | 4              | 28          |
| European ... | 4                | 2              | 8           |
| Total ...    | 14               |                | 104         |

TABLE No. V.  
Vaccinal condition of patients admitted during the year.

| Period.        | Vaccinated. |         |            |                        | Unvaccinated. |         |            |                        |
|----------------|-------------|---------|------------|------------------------|---------------|---------|------------|------------------------|
|                | Admissions. | Deaths. | Recovered. | Mortality per-centage. | Admissions.   | Deaths. | Recovered. | Mortality per-centage. |
| 0 to 1 year    | 12          | 6       | 6          | 50                     | 27            | 15      | 12         | 55.5                   |
| 1 to 2 years   | 11          | 4       | 7          | 36.3                   | 12            | 5       | 7          | 41.6                   |
| 2 to 3 "       | 12          | 2       | 10         | 16.6                   | 9             | 3       | 6          | 33.3                   |
| 3 to 4 "       | 9           | 1       | 8          | 11.1                   | 11            | 3       | 8          | 27.2                   |
| 4 to 5 "       | 19          | 4       | 15         | 21.05                  | 2             | 2       |            | 100                    |
| 5 to 10 "      | 56          | 2       | 54         | 3.5                    | 56            | 3       | 53         | 5.3                    |
| 10 to 20 "     | 117         | 6       | 111        | 5.1                    | 123           | 13      | 110        | 10.5                   |
| 20 to 40 "     | 363         | 30      | 333        | 8.2                    | 135           | 27      | 108        | 20                     |
| 40 to 60 "     | 36          | 9       | 27         | 25                     | 45            | 11      | 34         | 24.4                   |
| 60 and upwards | 6           | 4       | 2          | 66.6                   | 1             | 1       |            | 100                    |
| Total          | 641         | 68      | 573        | 10.6                   | 421           | 83      | 338        | 19.7                   |

### THE KRISHNAMPET ISOLATION HOSPITAL.

1. STAFF:—The permanent staff of the Hospital consists of one Medical Officer, two Nurses, two Male—Ward Attendants, two Female—Ward attendants, one peon and one Motor Ambulance Car Driver.

2. STATISTICS:—The total number of admissions during the year was 866, of whom 112 died, and the total daily average number of patients was 36, and the total mortality rate for all diseases was 9.5 per cent.

3. ACCOMMODATION :—There are six wards fitted with electric installation. The two big wards, male and female ward, are in addition provided with electric fans.

4. AMBULANCE:—The Hospital is fitted with Telephone connections and one Ambulance Car is permanently stationed for conveying cases of Infectious Diseases to the Hospital at all hours, day and night, gratis.

Table I on page 28 deals with admissions, discharges and deaths under various diseases during the year.

Table II on page 29 deals with distribution of admissions throughout the year.

Table III on page 30 deals with admissions according to nationality, sex and age.

Table IV on page 30 number of wards and beds available in each ward.

Table V on page 31 deals with vaccinal condition of small pox cases admitted during the year.

TABLE No. I.

Admissions, discharges and deaths under various diseases during the year.

|                                                           | Small Pox. | Chicken Pox. | Measles. | Cholera. | Dysentery. | Diarrhoea. | Mumps. | Whooping cough. | Pneumonia. | Enteric Fever. | Malaria. | Pyrexia of unknown origin. | Kala-Azar. | Pulmonary Tuberculosis. | Secondary Syphilis. | Influenza. | Influenzal Pneumonia. | Skin Diseases. | Other Diseases. | Contacts. | Total. |
|-----------------------------------------------------------|------------|--------------|----------|----------|------------|------------|--------|-----------------|------------|----------------|----------|----------------------------|------------|-------------------------|---------------------|------------|-----------------------|----------------|-----------------|-----------|--------|
| Patients remaining in the Hospital on 31st December, 1928 | 8          |              |          | 1        |            |            |        |                 |            |                |          |                            |            |                         |                     |            |                       |                |                 | 2         | 11     |
| " Admitted from 1st January, 1929 to 31st December, 1929  | 664        | 196          | 16       | 18       | 4          | 37         | 2      |                 |            |                |          | 3                          |            |                         | 1                   |            |                       |                | 25              | 303       | 1169   |
| Total No. treated                                         | 672        | 96           | 16       | 19       | 4          | 37         | 2      |                 |            |                |          | 3                          |            |                         | 1                   |            |                       |                | 25              | 305       | 1180   |
| No. Discharged                                            | 562        | 88           | 16       | 11       | 3          | 26         | 2      |                 |            |                |          | 3                          |            |                         | 1                   |            |                       |                | 22              | 30        | 1034   |
| " Died                                                    | 90         |              |          | 8        | 1          | 11         |        |                 |            |                |          |                            |            |                         |                     |            |                       |                | 2               |           | 112    |
| Mortality rate per cent.                                  | 13.4       |              |          | 42.1     | 25         | 30         |        |                 |            |                |          |                            |            |                         |                     |            |                       |                | 8               |           | 9.5    |
| Patients remaining in the Hospital on 31st December, 1929 | 20         | 8            |          |          |            |            |        |                 |            |                |          |                            |            |                         |                     |            |                       |                | 1               | 5         | 34     |

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TABLE No. II.

Distribution of admissions throughout the year 1929 in the Krishnampet Isolation Hospital.

8

1929.

|           | Small Pox. | Chicken Pox. | Measles. | Cholera. | Dysentery. | Diarrhoea. | Mumps. | Pneumonia. | Enteric fever. | Malaria. | Pyrexia of unknown origin. | Kala-Azar. | Pulmonary Tuberculosis. | Secondary Syphilis. | Influenza. | Influenzal Pneumonia. | Skin Diseases. | Other Diseases. | Whooping Cough. | Contacts. | Total. | Daily average. |    |
|-----------|------------|--------------|----------|----------|------------|------------|--------|------------|----------------|----------|----------------------------|------------|-------------------------|---------------------|------------|-----------------------|----------------|-----------------|-----------------|-----------|--------|----------------|----|
| January   | 40         | 8            | 1        | 10       |            | 8          | 1      |            |                |          |                            |            |                         |                     |            |                       |                |                 | 1               |           | 12     | 81             | 20 |
| February  | 67         | 14           | 1        | 6        |            | 3          |        |            |                |          |                            |            |                         |                     |            |                       |                |                 |                 |           | 30     | 121            | 42 |
| March     | 121        | 38           | 2        |          |            |            | 1      |            |                |          |                            |            |                         |                     |            |                       |                |                 | 2               |           | 46     | 207            | 71 |
| April     | 124        | 7            |          |          | 1          | 2          |        |            |                |          | 1                          |            |                         |                     |            |                       |                |                 | 2               |           | 58     | 195            | 76 |
| May       | 69         | 4            |          |          |            |            |        |            |                |          |                            |            |                         |                     |            |                       |                |                 | 2               |           | 37     | 116            | 47 |
| June      | 26         | 1            |          |          |            | 1          |        |            |                |          |                            |            |                         |                     |            |                       |                |                 | 2               |           | 13     | 43             | 20 |
| July      | 52         |              | 1        |          |            | 3          |        |            |                |          |                            |            |                         |                     |            |                       |                |                 | 4               |           | 31     | 91             | 30 |
| August    | 41         | 1            | 1        |          | 2          | 3          |        |            |                |          |                            |            |                         |                     |            |                       |                |                 | 1               |           | 14     | 63             | 20 |
| September | 50         |              | 2        | 2        | 1          | 6          |        |            |                |          |                            |            |                         |                     |            |                       |                |                 | 2               |           | 28     | 89             | 36 |
| October   | 16         | 3            | 1        |          |            | 5          |        |            |                |          |                            |            |                         | 1                   |            |                       |                |                 | 1               |           | 11     | 39             | 26 |
| November  | 27         | 8            | 3        |          |            | 3          |        |            |                |          |                            |            |                         |                     |            |                       |                |                 | 4               |           | 13     | 59             | 20 |
| December  | 31         | 12           | 4        |          |            | 3          |        |            |                |          | 1                          |            |                         |                     |            |                       |                |                 | 4               |           | 10     | 65             | 23 |
| Total     | 664        | 96           | 16       | 18       | 4          | 37         | 2      |            |                |          | 3                          |            |                         | 1                   |            |                       |                | 25              |                 |           | 303    | 1169           | 36 |

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TABLE No. III.

Admissions according to Nationality, Sex, and Age excluding Contacts  
for the Year 1929.

| Nationality.                  | Adults. |         | Children. |         | Total. |
|-------------------------------|---------|---------|-----------|---------|--------|
|                               | Male.   | Female. | Male.     | Female. |        |
| Europeans & Anglo-Indians ... | 20      | 10      | 18        | 3       | 51     |
| Hindus ...                    | 227     | 127     | 36        | 43      | 433    |
| Mahomedans ...                | 11      | 6       | 6         | 5       | 28     |
| Others ...                    | 164     | 109     | 34        | 47      | 354    |
| Total ...                     | 422     | 252     | 94        | 98      | 866    |

TABLE No. IV.

Number of Wards, and of Beds available in each Ward

| Name.            | Number of Beds. | Total. |
|------------------|-----------------|--------|
| Special Ward ... | 3               | 3      |
| General Ward ... | 14              | 14     |
| Male Ward ...    | 16              | 16     |
| Female Ward ...  | 16              | 16     |
| Block No. I ...  | 4               | 4      |
| Block No. II ... | 4               | 4      |
| Total ...        | 57              | 57     |

TABLE No. V.  
Vaccinal condition of Small pox cases admitted during 1929.

| Period.        | Vaccinated. |         |            |                          | Unvaccinated. |         |            |                          | Revaccinated. |         |            |                          |
|----------------|-------------|---------|------------|--------------------------|---------------|---------|------------|--------------------------|---------------|---------|------------|--------------------------|
|                | Admissions. | Deaths. | Recovered. | Mortality rate per cent. | Admissions.   | Deaths. | Recovered. | Mortality rate per cent. | Admissions.   | Deaths. | Recovered. | Mortality rate per cent. |
| 0 to 1 year    | 7           | 2       | 5          | 28.6                     | 28            | 9       | 19         | 32.1                     |               |         |            |                          |
| 1 to 2 years   | 3           |         | 3          |                          | 12            | 6       | 6          | 50                       |               |         |            |                          |
| 2 to 3         |             |         |            |                          | 5             | 4       | 1          | 80                       |               |         |            |                          |
| 3 to 4         | 5           |         | 5          |                          | 9             | 1       | 8          | 11.1                     |               |         |            |                          |
| 4 to 5         | 2           |         | 2          |                          | 9             |         | 9          |                          |               |         |            |                          |
| 5 to 6         | 4           |         |            |                          | 7             | 1       | 6          | 14.3                     |               |         |            |                          |
| 6 to 7         | 4           |         | 4          |                          | 10            | 3       | 7          | 30                       |               |         |            |                          |
| 7 to 8         | 11          | 1       | 10         | 9.1                      | 8             |         | 8          |                          |               |         |            |                          |
| 8 to 9         | 3           |         | 3          |                          | 9             | 1       | 8          | 11.1                     |               |         |            |                          |
| 9 to 10        | 11          |         | 11         |                          | 11            | 2       | 9          | 18.1                     |               |         |            |                          |
| Above 10 years | 334         | 19      | 315        | 57                       | 170           | 30      | 140        | 18.9                     | 2             |         | 2          |                          |
| Total          | 384         | 22      | 362        | 5.8                      | 278           | 57      | 221        | 20.5                     | 2             |         | 2          |                          |

## GENERAL IMPROVEMENTS.

List of minor improvements of a sanitary nature effected during the year :—

1. The premises of Rajah Sir Ramaswami Mudaliar's Lying-in-hospital have been repaired.
2. Whitewashing and repairs to the Krishnampet Isolation Hospital.
3. Repairs to Pudupakkam Dispensary.
4. Repairs to Chintadripet Dispensary.
5. Whitewashing the Infectious Diseases Hospital, Tondiarpet.
6. Drainage connection to the new Lethal Chamber, Basin Road.
7. Extensions to the Lethal Chambers at Krishnampet and Basin Road.
8. Construction of veterinary shed in the Zoo.
9. Putting up partition wall in the latrine in the Burial Ground in DeMellows Road, 16th Division.
10. Installing water closets in Corporation Dispensary, Triplicane.
11. Repairing the existing well and constructing the platform in Halls Road Burial Ground 21st Division.
12. Reforming the Burial Ground from Halls Road to end.
13. Repairs to the Rest House in the Burial Ground, DeMellows Road.

## PROPAGANDA.

The education of the citizens in matters relating to personal and public health has engaged the attention of this department throughout the year. The methods employed included lectures, lantern demonstrations, informal and friendly talks, cinema shows and exhibitions. A large amount of printed literature on matters relating to health in Tamil, Telugu, Hindustani and English was distributed broadcast. An Exhibition on a large scale was organised and conducted at the S.I.A.A. Grounds during the Pongal Week (12th to 18th January 1929) and an itinerant exhibition was held at Triplicane from 11th to 13th October 1929. During the year under report, 940 open air lectures, 757 magic lantern demonstrations, 6 cinema shows and 1838 talks were conducted by the Health and Child Welfare Staff to a total audience of 131,424.

A cinema machine was purchased during the year and films have been ordered from America. Meanwhile films from other bodies were obtained on loan and screened.

## HEALTH EXHIBITION AND BABY WEEK 1929.

The Sixth National Health and Baby Week celebrations were conducted in the South Indian Athletic Association grounds and premises, Peoples Park, from the 12th to the 18th January 1929. A sum of Rs.800 was allotted to the Lady Superintendent for exhibiting the Child Welfare work done by the Corporation, which she undertook to do.

The Health Exhibition and the Baby Show were announced to the public by big posters placarded prominently throughout the City in advance by the Honorary Secretary.

Picture posters in English, Tamil and Telugu on Mosquitoes, Malaria, Small-pox, Vaccination, flies, Plague, relapsing fever and lice supplied by the Health Propaganda Board were put up in the Exhibition booth.

A number of leaflets relating to matters connected with personal and public health were distributed to the public during the whole period of Exhibition.

The models and exhibits of this department were arranged in a series of pandals on the grounds in such a way as to avoid overcrowding in any one particular place. The interesting exhibits and models were displayed in a number of spacious sheds while a great number of the charts rendered in Tamil were similarly fixed up in serial order according to a particular subject or disease.

They were intended to show up in a manner that could be easily understood even by the lay people, the various insanitary and unwholesome conditions which bring about the spread of specific diseases or infections amongst human beings and the most important methods of preventing the same. Each set of charts dealing with one disease or subject was made as complete by itself as possible; and almost all the charts and pictures were illustrated and self explanatory containing explanations both in English and in Tamil. We had thus in all more than one thousand such posters, specimens and models.

In addition, the Sanitary Inspectors, the Medical Inspectors of Schools, the Medical Registrar Vaccinators and a few Medical Officers of dispensaries were put in charge of each sub-section and they explained the several charts, exhibits etc., to the visitors.

The exhibits were arranged as follows.—

PHYSIOLOGY—(a) a series of diagrams showing the human body, the different organs, their structure etc.,

INTESTINAL PARASITES.—Actual specimen of round worms, hook-worms, tape-worms, thread-worms, whip-worms &c.,

Pictures showing various stages of small-pox, chicken-pox, measles and the progress of a case of vaccination.

DISEASE CARRYING INSECTS.—Mosquitoes conveying Malaria, Filaria, Yellow Fever, Dengue &c.

FLEAS.—Rat and human.

LICE AND BUGS.

FLIES.

WATER.—Model of the Madras Water Supply and its distribution, domestic filters and other mechanical filters, well protected tanks and wells &c., and treatment of Analysis of Madras Water Supply.

DWELLINGS.—There were very many models representing good and bad dwelling houses showing arrangements for lighting and ventilation.

DRAINAGE.—Several types of water closets, underground drainage system, septic tanks, drainage connections, modern water carriage fittings, and a model of the Madras Drainage system &c.,

REFUSE DISPOSAL.—Rubbish carts, night soil carts, rubbish bins, (domestic and public) Hand-carts, Incinerators, Pail Depots, Sewage Farms, conservancy depots etc, ordinary and Electrocuting lethal chamber (Stationery), electrocuting Motor car.

LATRINES.—Various types of latrines ordinary two seated type, pail flush-out type, public latrines, combined with septic tank system &c.,

COW HOUSES AND DAIRY FARM, VETERINARY HOSPITAL.

MARKETS.—Sanitary and insanitary types of markets of various designs showing those intended purely as vegetable and mixed ones.

SWEET-MEAT STALLS, COFFEE HOTELS, BAKE-HOUSES, HOPPER BAZAARS &c., showing the good and bad type.

HOSPITALS AND CENTRES.—Model showing the newly constructed fever hospital at Tondiarpet. A Municipal Health Centre containing all the activities of the Health Department, a Small pox Ward &c.,

GENERAL SANITATION.—Knights models.

SLAUGHTER HOUSE.—A model showing a simple type with a sanitary mutton van.

DISINFECTION.—Practical disinfection and disinfectants.

SANITARY FITTINGS.—Latest sanitary fittings, domestic and general.

CREMATORIUMS.—Models explaining the relative advantages of covered and open ones especially the types in use in the western countries.

Models to explain the utilization of local tank water for public purposes.

Day nursery model showing the need for such an institution in this City.

POSTER SECTION.

AIR.—Ventilation, natural and artificial.

WATER.—Source of water supply, selection, storage and distribution. Impurities of water, the ways and means of pollution, effect of drinking impure water, purification of water, filters etc.,

FOOD.—The nature and use of food stuffs.

SOIL SITES AND BUILDINGS.—Dwelling houses, sanitary and insanitary.

DISPOSAL OF REFUSE AND EXCRETA.—Several models in use at Madras and improved types.

DENTAL HYGIENE.—Care of teeth, artificial teeth etc.,

CHILD WELFARE.—Care of child from birth to school age.

SCHOOL HYGIENE.—Care of child at school and medical inspection.

PERSONAL HYGIENE.—Drinking, sleeping, washing, bathing exercises etc.,

INFECTION.—Cholera, Malaria, Filaria, Plague, Small-pox, Vaccination, Tuberculosis, Mosquitoes, Flies, Fleas, Lice—their life history and their modes of propagating disease.

INTESTINAL PARASITES.—Ankylostoma, thread worm, round worm, tape worm, whip worm, their life history and modes of propagating infection.

VITAL STATISTICS.—Comparative charts of various countries and Madras City.

FIRST AID.—Charts detailing all features of work.

TEMPERANCE.—Evils of drink, with comparative statistics.

The Health Exhibition was open daily from 8 a.m. to 8 p.m. on all days commencing from the 12th till the 18th January 1929.

Including Their Excellencies who took a keen interest in the Exhibition as a whole, the visitors attended by thousands, from morning to evening, the stalls of this department and showed a very lively and enthusiastic interest. The rush of people was not only from this city but even from the outlying mofussil stations who came all the way to have a look round the exhibition and study what is being done in the premier city. This was very gratifying. There is no doubt that the public for whose benefit the celebrations were organised, benefitted a great deal by visiting the show. The crowd in the evening was so great that in spite of the help rendered by the police and the Boy Scouts, our staff found it difficult to control.

The poster procession (in which the children of the Corporation Schools took part) which heralded the opening of the Health Exhibition, the decorated car, with health placards, was much appreciated.

With the experience gained during the previous five years, a decided advance was made this time whereby all the show was conducted in the numerous stalls arranged in order to accommodate the various spheres of activity in regard to health, so that the public were less inconvenienced unlike in previous years. In fact, the Corporation conducted the show separately while the Government and other institutions co-operated with the Committee by coming in large numbers but each taking a separate stall and every one of their exhibits drew a large crowd of spectators. As usual commercial firms began to evince a keener interest in putting on show their materials and advertising their value in relation to health.

The Health Officer was like last year the Joint Secretary of the Committee, and this was of great advantage to the Corporation in all ways. I am thankful to the Committee for the help rendered by them in helping us to put up an extensive and a grander show than in previous years in this behalf such as Madras has not had before.

The Child Welfare work done by the Corporation was exhibited in separate stalls by the Lady Superintendent and this attracted deserving attention from the public.

This department secured the following medals from the Committee for their exhibits.

- 1 Gold medal for the best set of diagrams, pictures and charts.
- 1 Gold medal for the best locally made model.
- 1 Silver medal for the second best locally made model.
- 1 Silver medal for the best cartoons on health.

1 Bronze medal for the best set of diagrams, pictures, and Charts (Cholera Section).

Apart from the above, Mr. K. Srinivasan of this department was the recipient of 4 silver and 1 bronze medal and a silver cup separately for his essay competition, cartoons exhibited and services rendered to the Committee.

In addition to the above, the Corporation for their part awarded silver cups for the staff who contributed largely to the success of the Exhibition by displaying their charts and models etc.

The following are the winners :—

- I. Best Model, V. B. Natarajan, Silver Cup, Rs. 25.
- II. „ Parankusam „ Rs. 15.
- I. Best Chart, J. Muthiah „ Rs. 15.
- II. „ K. Srinivasan „ Rs. 10.
- I. Stall (Malaria), N. Varadarajulu „ Rs. 15.
- II. Vital Statistics, J. Muthiah „ Rs. 10.

I am obliged to the Committee for all their help and I am very much indebted to my staff for the invaluable services they have rendered in running a record show.

#### CORPORATION POOR HOUSE.

The Poor House at Tondiarpet continued to be maintained by the Corporation. During the year under report, there were 129 admissions, 107 discharges, and 36 deaths leaving 101 inmates at the House on 31-12-29. The Institution has been working satisfactorily and many distinguished visitors have recorded favourable remarks on the same. Treats were as usual given to the inmates, the cost thereof being met from the interest accruing on the endowment by Dewan Bahadur C. V. Viswanatha Sastriar, and the Government Officials' Party. It is gratifying to report that the Government Officials' Party have kindly donated a further sum of Rs. 3,000. This amount has been invested and the interest thereon is being added to the feeding charges budgetted for by the Corporation so that almost all festive occasions had been provided for, (for giving treats.) Besides this, several gentlemen have been pleased to send occasional contributions for giving treats to the inmates. Such treats have been given as desired and the gentlemen have been thanked for the same. An attempt has been made

Monthly statement of Feeding charges in the Poor House from January 1929 to December 1929.

| 1929      | Total No. of Persons Fed. | Total Quantity of Gingelly Oil. |           | Total Quantity of Fire wood. | Total cost of Gingelly Oil. |      | Total cost of Fire wood. |       | Total cost of articles supplied by contractors. |       | Total cost of Vegetables, Fish, etc. bought from P. H. contractor. |      | Total cost of Sick Diet.                             |       | Total cost of Betels. |      | Grand Total. |
|-----------|---------------------------|---------------------------------|-----------|------------------------------|-----------------------------|------|--------------------------|-------|-------------------------------------------------|-------|--------------------------------------------------------------------|------|------------------------------------------------------|-------|-----------------------|------|--------------|
|           |                           | Gal. Ozs.                       | Tons lbs. |                              | Rs.                         | A.P. | Rs.                      | A.P.  | Rs.                                             | A.P.  | Rs.                                                                | A.P. | Rs.                                                  | A.P.  | Rs.                   | A.P. |              |
| January   | 2392                      | 4 19                            | 1 1171    |                              | 11                          | 6 0  | 34                       | 4 0   | 355                                             | 3 6   | 35                                                                 | 1 0  | 26                                                   | 0 11  | 36                    | 6 0  | 498 15 5     |
| February  | 2003                      | 3 103                           | 1 634     |                              | 6                           | 8 6  | 28                       | 14 0  | 312                                             | 8 2   | 33                                                                 | 10 3 | 19                                                   | 13 11 | 27                    | 15 3 | 429 6 1      |
| March     | 2291                      | 4 33                            | 1 1079    |                              | 11                          | 0 3  | 33                       | 5 0   | 352                                             | 10 2  | 39                                                                 | 6 0  | 18                                                   | 0 8   | 33                    | 2 9  | 487 8 10     |
| April     | 2010                      | 4 72                            | 1 1130    |                              | 12                          | 4 10 | 36                       | 13 10 | 303                                             | 0 0   | 39                                                                 | 6    | Sick diet included in contractor's bill from 1-4-29. |       | 16                    | 8 3  | 408 1 5      |
| May       | 2330                      | 4 19                            | 1 1186    |                              | 11                          | 5 0  | 37                       | 7 6   | 363                                             | 0 0   | 37                                                                 | 10 9 |                                                      |       | 15                    | 10 0 | 465 1 3      |
| June      | 2363                      | 4 86                            | 1 1246    |                              | 12                          | 9 9  | 38                       | 2 0   | 385                                             | 0 0   | 42                                                                 | 13 3 | 28                                                   | 2 0   | 28                    | 2 0  | 506 11 0     |
| July      | 2506                      | 4 50                            | 1 1517    |                              | 11                          | 14 2 | 41                       | 1 9   | 405                                             | 0 0   | 45                                                                 | 7 3  | 31                                                   | 7 9   | 31                    | 7 9  | 534 14 11    |
| August    | 2613                      | 4 89                            | 1 1547    |                              | 11                          | 13 4 | 41                       | 6 10  | 417                                             | 3 7   | 43                                                                 | 13 3 | 31                                                   | 7 9   | 31                    | 7 9  | 545 12 9     |
| September | 2508                      | 4 69                            | 1 1520    |                              | 11                          | 7 9  | 41                       | 2 1   | 407                                             | 8 0   | 42                                                                 | 9 1  | 32                                                   | 13 0  | 32                    | 13 0 | 535 7 11     |
| October   | 2651                      | 4 35                            | 1 1736    |                              | 10                          | 12 9 | 43                       | 7 9   | 416                                             | 15 10 | 46                                                                 | 3 0  | 33                                                   | 14 6  | 33                    | 14 6 | 551 5 10     |
| November  | 2686                      | 4 37                            | 1 1789    |                              | 10                          | 14 8 | 44                       | 1 1   | 417                                             | 7 10  | 47                                                                 | 1 3  | 32                                                   | 13 0  | 32                    | 13 0 | 552 5 10     |
| December  | 2867                      | 5 66                            | 1 2360    |                              | 13                          | 6 0  | 47                       | 0 7   | 461                                             | 13 9  | 48                                                                 | 0 0  | 36                                                   | 5 3   | 36                    | 5 3  | 606 9 7      |

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to induce such of the inmates, as are capable, to do some little work in the shape of gardening and a small vegetable garden is being maintained. Improvements have been made in the accommodation of the House which is now fit for receiving a large number. Inadequacy of funds prevents the admission and maintenance of a larger number of poor destitutes. It is hoped that gradually this handicap will be removed as Corporation finances improve. A month war statement of feeding charges incurred is given on Page 38.

A Brief Summary as per G.O. No. 653 P. H. Mis. dated 10-6-1921, of the Public Health work done by various institutions as reported by them.

FRIEND-IN-NEED SOCIETY, MADRAS:—This is a charitable Society incorporated under Act XXI of 1860 and it aims at affording relief to the deserving poor (European & Anglo-Indians) and at suppressing mendicity. For the attainment of these objects the Society has an Asylum for the aged and the infirm a workshop for indigent women and a labour yard for male beggars who are willing to work there. The Society made an appeal which met with much generous response and the adverse balance prognosticated last year was wiped out and the Society has closed the year with a balance to its credit.

THE RAMA KRISHNA MATH CHARITABLE DISPENSARY:—This Charitable Dispensary in Mylapore came into existence 5 years ago and has all along been rendering medical aid to the suffering poor without distinctions of caste or creed. Its useful existence has been justified by a rapid increase in the attendance of patients. The number of patients in 1929 was 30932 as against 18222 in the previous year. There is also a separate medical ward attached to the Rama Krishna Mission Students Home called the "Bobbili Medical ward". It provides 8 beds for in-patients, and a dispensary for the inmates of the Students Home with a doctor in daily attendance. Besides this, the staff and students of this Students Home give Lantern lectures every alternate Saturday for the benefit of the poor in the neighbourhood, and it is reported that Health subjects form an important part of this course of lectures.

INDIAN RED CROSS SOCIETY, MADRAS PROVINCIAL BRANCH:—The activities of this Society are manifold and much useful work by rendering assistance to the sick and the wounded was done during the year under report. In response to a large indent

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for bandages from various hospitals, the society undertook the cutting and rolling of bandages to the various sizes required. It supplied comforts to the various hospitals and distributed pamphlets on various Health subjects in English, Tamil and Telugu. From 1st April 1929, the Madras Presidency Maternity & Child Welfare Association became a division of the Provincial Branch of the Indian Red Cross Society. The activities of the Maternity and Child Welfare Division have been mainly devoted to (1) conducting Baby Welfare Centres in Madras (2) helping mofussil association and Municipalities to undertake Maternity and Child Welfare work and (3) the training of Health visitors. As it was felt that there was considerable over-lapping in the work, due to the Corporation of Madras opening Child Welfare Centres in the same localities, it was agreed to curtail the activity of the maternity division of this society in this behalf. Five centres are maintained by the Division in addition to the two affiliated centres, viz., the Royapettah Centre for poor Anglo-Indians, and the Adyar Centre, all of which have been doing good work during the year. In connection with the National Health and Baby Week Exhibition held in January, a model of a Baby Welfare Centre was exhibited, which attracted the keen interest of large crowds.

**THE VENKATARAMANA DISPENSARY, MYLAPORE:**—This dispensary, run on the Ayurvedic System of treatment, has been rendering useful medical aid to all classes of patients—Hindus, Mahomedans, Christians etc., in the southern part of the City. According to the annual report furnished by the Secretary of this dispensary, the total number of patients treated in the year 1929 was 48,545 as against 45,313 in the previous year.

**VUPPUTUR ALWAR CHETTY GARU'S FREE AYURVEDIC DISPENSARY:**—This Ayurvedic dispensary has been in existence under its present name for the last 6 years. It is conducted by a Board of six trustees and affords free medical aid to a large section of the poor. The total number of patients treated during the year was 84,664 as against 80,340 for the previous year.

**C.T. SUBRAMANYA PANDITHAR'S FREE SIDDHA AYURVEDIC DISPENSARY, MADRAS:**—This is a dispensary where Siddha and Ayurvedic system of treatment is pursued and a survey of the report furnished by the Secretary reveals that the total number of cases treated during the year was 8,654.

**THE UNANI DAR-USH-SHIFA, TRIPLICANE, MADRAS:**—This dispensary, as its name implies, is run on Unani system of treatment of diseases and is maintained by public subscription. The patients treated in the Unani Dar-ush-shifa during 1929 were 1,06,229 against 1,00,574 treated during the year preceeding, showing thereby an increase of 5.6 per cent over the previous year's record.

**THE SANTHOME DISPENSARY:**—This dispensary was founded in 1874 in connection with the S.P.G. Mission. It has continued to do good work to the poor in and around San Thome and Mylapore. Medical aid is available at all hours as the Medical Officer-in-charge of the dispensary resides in the premises. The total number of cases treated in the year was 13,363 as against 13,152 in 1928.

**THE ARYA VYSIA AYURVEDIC CHILDREN'S HOSPITAL:**—This institution was ushered into existence in 1911 with the object of rendering free medical aid according to Ayurvedic system to children of all castes and creeds. It also aims at educating the masses, particularly the female population, in the elementary principles of hygiene. The total number of persons who attended this dispensary was 22,079.

**ST. THOMAS' CONVENT DISPENSARY, SANTHOME, MADRAS:**—This dispensary continues to be run on much the same lines as in 1928 affording relief to both in-door and out-door patients. The poor and destitute receive particular attention and they are said to show their confidence in and appreciation of the sisters' work by seeking their help on all occasions. The number of new out-door patients treated was 9,691 and the number of in-door patients admitted was 7,491.

**P.T. LEE CHENGALVAROYA NAICKER'S FREE AYURVEDIC DISPENSARY:**—This is an Ayurvedic dispensary where medical aid is rendered free to the suffering humanity. According to the annual report on its working in 1929, it has continued to attract patients in increasing numbers from all parts of the city. The total number of patients who resorted for treatment during the year under review, was 1,74,269 as against 1,74,164 in the year preceding.

**ST. PATRICKS' HIGH SCHOOL DISPENSARY ADYAR, MADRAS:**—St. Patrick's High School at Adyar has

a dispensary attached to the institution well stocked with medicines with a Medical Officer, a qualified compounder and a nurse matron. The inmates of the school were all inoculated against Cholera and Typhoid.

**SRI KANYAKA PARAMESWARI DEVASTHANAM CHARITIES DISPENSARY, MADRAS.**—This is a charitable institution doing good work by affording relief to the poor. 58,173 patients were treated during 1929 against 66,496 treated during 1928.

**KALYANI HOSPITAL, MYLAPORE.**—This hospital is a popular institution in the city and is reported to be so frequently over-crowded that the provision of a new Maternity block has become an urgent matter. The hospital is provided with 55 beds for in-patients and two dispensaries for out-patients. One of these dispensaries is situated in Triplicane. The number of in-patients during the year was 1674 and the number of maternity cases dealt with was 588. The total number of new cases attended to in the two out-patient dispensaries was 6,089 and 7,969 respectively.

**GOVERNMENT VICTORIA CASTE AND GOSHA HOSPITAL, MADRAS.**—This hospital is of great value to the classes of patients for whom it is intended. According to the annual report furnished by the Superintendent, the hospital is doing very good work in spite of insufficient accommodation and stands in urgent need of extensions to cope with the steadily growing work. A new feature, this year, is the opening of a special children's department in October 1929, where 1,475 children have been treated since then.

**RAJA SIR RAMASWAMY MUDALIAR'S LYING-IN-HOSPITAL, MADRAS.**—This hospital is intended for the treatment of maternity cases and is maintained by the Corporation. It provides 50 beds for in-patients. The number of delivery cases during the year was 2,018 of which 438 were labour cases of a complicated nature. In addition to this, 981 patients were admitted in-door for ante and post-natal treatment. The hospital has an out-door department which provides an ante and post natal centre and serves also as an infant clinic, where 6,170 patients received treatment. 19 Indian pupil midwives, stipended by the Madras Corporation, qualified themselves during the year and were granted diplomas. As pointed out in the previous reports, the hospital is not upto date and needs to be remodelled and enlarged.

**THE TRIPPLICANE ANNADANA SAMAJAM.**—This charitable institution was founded in 1898 for the purpose of establishing a poor house to feed, and clothe occasionally the poor and disabled persons. It is reported that the Samajam feeds daily at noon a number of disabled poor, irrespective of caste or creed, and clothes some of them occasionally, and that 30,876 were fed and 50 clothed during the course of the year under review.

**THE MADRAS SOCIETY FOR THE PROTECTION OF CHILDREN.**—This is an orphanage brought into existence in 1908 for the rescue of destitute and delinquent children. It also aims at disseminating right views in regard to the training and upbringing of children by means of lectures and distribution of literature. The strength of the Society at the end of 1928, as revealed by the annual Report, was 104 and the number of children rescued during the year was 47. The junior certified school was run throughout the year, and it is reported that 51 boys and 19 girls were receiving instruction at the end of the year. The dietery of the children is said to have improved by the addition of fruit, butter, milk and good gingelly-oil to their daily rations.

**THE WELFARE COMMITTEE, BUCKINGHAM AND CARNATIC MILLS, MADRAS.**—This committee was founded for promoting the welfare and interest of the employees in the above two mills. For the benefit and enlightenment of the work-people in these mills the Committee held a Health Exhibition this year and it cannot be denied that the organisation of the Health Week year after year has resulted in an increasing attention being paid by work-people to matters concerning their health. It is also reported by the Committee that there are three dispensaries in the 'Mills villages' as well as a central one in the 'Joint school' for the treatment of minor diseases.

#### CONSERVANCY.

The Drainage Superintendent continued to be in charge of conservancy during 1929, assisted by the Conservancy Supervisors. In G.O.No. Mis. 2957 L & M dated 24-6-1930 the Government approved the appointment of a qualified Veterinary Officer on Rs. 200—10—400 per mensem with a motor cycle allowance of Rs. 30 per mensem, and a senior grade Veterinary Assistant Surgeon was taken on loan from the Government with effect from 7-5-1929.

During the year under report, there were 1449 men, 120 women, and 59 boys for the cleaning of streets, drains, and latrines in the city. Carts and lorries employed for the removal of rubbish and filth from the divisions are detailed below—

|               |                  |     |
|---------------|------------------|-----|
| Rubbish carts | (Single bullock) | 262 |
| "             | (Double bullock) | 38  |
| Trolleys      |                  | 86  |
| Motor Lorries |                  | 6   |

#### FOR THE REMOVAL OF FILTH.

|                 |                  |     |
|-----------------|------------------|-----|
| Nightsoil carts | (Single bullock) | 126 |
| "               | (Double bullock) | 12  |
| Bullock lorries |                  | 11  |
| Motor lorries   |                  | 6   |
| Hand carts      |                  | 69  |

#### FOR THE REMOVAL OF SEWAGE, SILT, &c.

|                  |                  |    |
|------------------|------------------|----|
| Sewage carts     | (Single bullock) | 30 |
| "                | (Double bullock) | 1  |
| Ford vans        |                  | 2  |
| Fordson Tractors |                  | 2  |

#### LABOUR.

There was a strike of drivers in A & B Depots on 17—2—1929. Immediately on receipt of the intimation, the Commissioner and the Health Officer visited the depots, and the scavenger's lines, and made enquiries. The men could not give any reason for the strike. Some said that they were told not to work because some 'dorais' were coming the next day, (evidently the members of the Royal Commission).

Others stated that they had not been given minimum wage of Rs. 20. Most of the coolies were persuaded to return to work. The strike was instigated by four or five men, one of whom had taken a prominent part in a previous strike. They were seen intimidating and assaulting the other coolies and were arrested by the Police and subsequently on release were dismissed from service. Most of the men returned to work in the afternoon and all the men except those who had been dismissed for intimidation and assault, resumed work on the morning of 18—2—1929. The strike took place without any previous intimation and was entirely unjustifiable. The other depots were not affected by it.

Except for the incident narrated above, the Health Department was free from strikes during the year. But there has been no lack of mischief and misrepresentation by interested persons whose chief aim was to create trouble. Their attempts were successfully frustrated by the officers of the department who were devoting personal attention to the needs of the men and redressing genuine grievances when they were brought to notice.

Every case of grievance represented to the Commissioner by the scavengers either in person or through petitions was personally enquired into by him.

#### ANIMALS.

There were 808 animals at the beginning of the year under report. 127 animals were purchased during the year. 130 animals died during the year against 197 in 1928.

Owing to the discontinuance of the practice of selling unserviceable bullocks, there were a large number of animals remaining in the depots, some suffering from Tuberculosis, and others rendered unfit for work owing to chronic and incurable diseases or old age. In January 1929, 33 such animals from the several depots were collected at the Basin Bridge Depot. The Commissioner and the Principal, Madras Veterinary College, inspected these animals and, under instructions from the latter, 15 animals which were showing advanced symptoms of Tuberculosis, were destroyed. 2 more animals died and the rest viz., 16 animals were sent to the Hope Lodge where they were sheltered and looked after till their death. Similarly, during the course of the year, animals, which were found to be totally unfit for work, were sent to the Hope Lodge. Out of a total number of 39 animals sent in this manner during the year, 36 died before the end of the year. In addition to this, 18 animals were tested for Tuberculosis at the Madras Veterinary College, of which 6 proved positive and were destroyed.

After the appointment of the Senior Grade Veterinary Officer, a systematic test of animals for Tuberculosis was started. During the year, 212 animals from all the depots were collected at the Barbers Bridge Depot, and tested in convenient batches. There were 51 reactors at the test of which 16 showed advanced symptoms of the disease and were destroyed, 5 animals died and the rest of the reactors were segregated at the Barbers Bridge Depot in a separate

shed constructed for the purpose. Except for the reaction at the tests, these remaining animals were not infective. They were given rest for sometime and then used for light work. Their health is being carefully watched so that the moment they show clinical symptoms they may be destroyed.

#### RINDERPEST.

There was no outbreak of Rinderpest during the year in the depots. There was a solitary attack in the Basin Bridge Depot which proved fatal. All the newly purchased animals were subjected to Sero-virus inoculation to give them permanent immunity against the disease.

#### ANTHRAX.

There were four sporadic cases of Anthrax at the "B" & "F" Depots during the year. The spread of the disease was effectively checked by timely inoculations protecting the other animals of the affected depots.

#### TRYPANOSOMIASIS AND PIROPLASMOSIS

There were 9 deaths from Trypanosomiasis during the year, of which 5 were in Basin Bridge Depot, 2 in Chulai, one in Harris Bridge, and one in the Barbers Bridge depots. There were also 2 stray cases of Piroplasmosis in the Chulai and Harris Bridge Depots.

#### FOOT AND MOUTH DISEASE

The outbreak of Foot and Mouth Disease which started at the end of the previous year continued till April 1929. 39 animals of the A Depot were affected. The disease at this depot lasted till March 1929. In the Chulai and Barbers Bridge Depots, the disease broke out in an epidemic form in March 1929. 55 animals in C and 23 in F Depots were affected. All the animals suffering from the disease were segregated at the Hope Lodge and treated.

In December 1929, the disease broke out in a severe form in Basin Bridge Depot where 84 animals were affected. All of them were promptly subjected to intravenous injection of Lugol's Iodine Solution. By this treatment, the duration of the disease was cut short to a great extent and complications avoided. Moreover, the evil consequences such as perpetual roughening of the coat and fatigue after exposure and light work, which usually follow the disease were prevented completely.

Thus, of the total casualties during the year, viz., 130, 58 were due to Tuberculosis, 53 to old age 4 to Anthrax, 1 to Piroplasmosis, 9 to Trypanosomiasis, 4 to accidents and 1 to Rinderpest.

In addition to the routine work of supervising the depots, the newly appointed Veterinary Officer was conducting inoculations and tests hitherto done by the Madras Veterinary College authorities. He was also devoting particular attention to the health of the animals and giving them prompt treatment. The depots were all equipped with the necessary medicines and instruments required for the treatment of the sick and every care was taken to ensure the general cleanliness of the depots and the proper feeding of the animals.

The timely action taken to fight Tuberculosis and eliminate un-serviceable animals from the depots helped considerably to reduce the total mortality for the year. But the strain on the animals in some of the depots is still great. They have to travel long distances both morning and evening with very little rest during the day. Attempts are being made to reduce this strain on the bullocks by using motor lorries wherever possible.

#### HOSPITAL FOR SICK ANIMALS.

The Government having sanctioned the loan for general purposes, the construction of a Veterinary Hospital for the Corporation at the Hope Lodge was taken on hand at a cost of Rs. 15,000 and the work will be completed very shortly. It is designed to accommodate animals, and will consist of two wards, an Isolation Ward and a General Ward, sufficiently removed from each other. Among other things, provision is made in the hospital for (a) Dispensary (2) Quarters for the compounder (3) Post Mortem Room, (4) Store Room (5) Dressing platform (6) Superintendent's quarters and (7) Operation Theatre. Provision has also been made for an ambulance cart for conveying sick animals.

An ambulance car of the Krishnampet Isolation Hospital was completely overhauled at the conservancy lorry station and was detailed for carrying gram from the Central Gram Depot daily to the several cattle depots replacing the bullock drawn gram-carts hitherto used for the purpose.

#### DISPOSAL OF RUBBISH.

408267 cartloads of rubbish were removed from the city during the year against 384510 in the previous year. Of these, 102992

cartloads were received at the Incinerators and burnt after separating earth and other incombustible materials. 202487 cartloads were dumped at the Korukkupet, Otery and Mylapore Dumping Grounds. 70740 cartloads were used to fill up the tanks at Grace Gardens and Robinson Park. 32048 cart loads were used for reclaiming lowlands and pits in unobjectionable localities.

On 16—4—29, the Council approved the proposal to permit the removal of ashes and earth from the Krishnampet Incinerator by the public free of cost. 13411 cartloads of ashes and earth were so removed by the public during the year. Special steps were taken to see that no large accumulations of earth were added at the Krishnampet Incinerator. For this purpose, one motor lorry was entirely set apart to remove the separated earth daily from the Incinerator to the reclamation grounds or to the Otery Depot. The swamp at the Rifle Range, which was being used for dumping rubbish during the past 27 years, was practically abandoned for the greater part of the year owing to the proximity of residential buildings to the place of deposit. Much difficulty was experienced in the disposal of rubbish of the surrounding areas during wet weather. The Rifle Range site was occasionally used during rains for dumping separated earth and necessary precautions were taken to see that no nuisance was caused to the neighbouring residents.

The roads leading to Korukkupet, Otery and Mylapore Dumping Grounds were reformed during the year at a cost of Rs. 5000. Special efforts were taken to minimise the fly nuisance at the Dumping Grounds by levelling the rubbish heaps then and there systematically.

The new rubbish tipping platform at the Langs Garden Pumping Station, Pudupet, was opened on 5th July 1929, when, in the presence of the President and Councillors who were invited for the occasion, a demonstration of the new system of tipping rubbish into the lorries was held by the Commissioner. The work at the platform according to the new method was started immediately and necessary improvements were effected at a cost of Rs. 2,000, the platform being made a pukka built one. The construction of a similar platform at the Bas'n Bridge Depot was taken on hand during the year.

The Tipping Platforms at Anna Pillai Street and Triplicane were improved and metalled during the year, and the walls of the Triplicane Platform were raised.

## DISPOSAL OF FILTH.

The Pail Depots at the DeMellows Road, Ice House Road and Langs Garden continued to work satisfactorily during the year. 112007 cartloads of filth were removed from the city of which, 77675 cartloads were flushed into the sewers in the Pail Depots and the rest trenched in the Korukkupet and Otery Nightsoil Depots. The system of trenching nightsoil in the Korukkupet and Otery depots was also improved. A new laterite road was laid in the Korukkupet Nightsoil depot during the year. Motor lorries and buckets introduced in the several parts of the city during the previous years were continued. Owing to objections raised to the location of the buckets in the streets, a new system is being tried by constructing nightsoil underground pits, with wooden doors, into which the buckets are let.

## SIDE DRAINS AND SYPHON CLEANING.

Syphon cleaning continued to be done under the supervision of the conservancy staff and the work was carried out satisfactorily during the year. A large number of cesspools was done away with especially in Perambore, Nungambakkam and Teynampet areas consequent on the construction of drains.

Watertables were constructed in several divisions of the city where underground drains exist.

## LATRINES.

There are 191 latrines in the city of which 111 are flushout ones; 42 are masonry and the rest 38 sanded. The conversion of the sanded latrines in sewered areas into flushout ones has been taken on hand and the work is in progress.

## NUISANCES.

Complaints against committal of nuisance in public streets continued. The conservancy staff was paying particular attention to cleaning and disinfecting these places. The Police authorities also launched a number of prosecutions in the worst cases on intimation from the Health Department. 236 boards warning the public against committal of nuisance were newly put up in several parts of the city during the year. It is hoped that the provision of more public urinals and latrines in the city will tend to eradicate this evil.

## RECEPTACLES FOR RUBBISH AND FILTH.

1204 new zinc dustbins were manufactured during the year 1929 and 386 more have been manufactured during the 1st quarter of

1930. Out of this, 1242 bins are provided with handles and they are mostly used in places where motor lorries are engaged in the removal of rubbish. The bins are of medium size and are capable of being easily handled when loading the rubbish into the lorries. It has also been possible to keep the sites of these bins clean and tidy and thus avoid the breeding of flies. 450 nightsoil buckets were manufactured during the year to replace the old and unserviceable ones. Arrangements were made to get the petty repairs to the buckets carried out then and there at the Ice House Road and DeMellows Road Pail Depots.

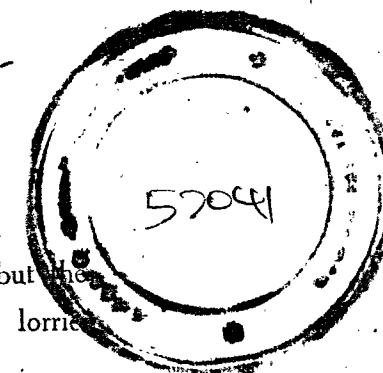
#### DISINFECTION.

655 gallons of Hycol and Phenyle were used during the year for the disinfection of latrines, drains &c. 2469 parabs of chunam were used near dustbins, latrines, and street corners rendered unsightly by the committal of nuisance. As usual, tar was burnt in the Pail Depots to mitigate the smell emanating from them. Disinfectants were also used in the dumping and trenching grounds to prevent the breeding of flies.

#### MOTOR LORRIES.

There were 27 motor lorries at the beginning of the year for the removal of rubbish and filth in the city. Four big Leyland lorries and 4 small lorries (Chevrolet) were purchased during the year at a total cost of Rs. 55,140. Six Ford Lorries which became unserviceable in the course of the year were arranged to be sold in auction.

During the year, street conservancy with motor lorries was introduced in Wall Tax Road, Tiruvotiyur High Road, China Bazaar Road, and Pycrofts Road, and surroundings. A motor lorry was deputed to conserve the area around the Kothawal Bazaar during nights as the bullock carts sent in the day were unable to cope with the enormous quantities of rubbish deposited there at all times of the day. This has very much improved the conservancy of the locality. It is proposed to extend it gradually to the other crowded localities in the city. Out of the four Chevrolet lorries purchased for street conservancy, only 3 were ready for use during the year and the fourth was made ready at the beginning of 1930. These lorries have been provided with hinged tops for covering the refuse and preventing the same from being blown off from the loaded lorries. It is the first time that this type of covered lorries has been purchased by the Corporation.



The other lorries carrying rubbish are covered by tarpaulins but the advantages of having a Steel covering fixed especially to the lorries used in street conservancy are obvious.

The Motor Mechanic appointed at the beginning of the year was in entire charge of the conservancy Lorry Fleet. He was prompt in attending to the repairs to the vehicles and to their regular cleaning &c. and has greatly improved the general condition of the lorries. The improvements to the Lorry Station, which were undertaken by the Works Department during the year, have since been satisfactorily completed.

#### FESTIVALS.

Special conservancy arrangements were made during the festivals at Mylapore and Triplicane during the year under report. The arrangements for the removal of rubbish and filth from the S.I.A.A. Grounds were also undertaken as usual during the Park Fair and Exhibition on payment of cost.

#### PRIVATE SCAVENGING.

The removal of rubbish and filth from several institutions in the city was carried out by the Health Department as per section 197 of the Act, and the total amount of income realised thereby during 1929-30 was Rs. 20707.

The removal of filth from private latrines in the city remains unsatisfactory. The Health Department has been insisting on the introduction of flushout latrines in all the new houses in the city. The scheme for the introduction of flushout latrines was pending sanction of Government and could not be taken up during the year. The work has since been started during the current year and is in progress.

#### GENERAL.

With the introduction of motor lorries for street conservancy and the purchase of 4 large lorries for removal of rubbish from tipping platforms, the conservancy of the city is steadily improving. Several new areas were taken up for conservancy during the year. The Hutting Grounds and other slum areas in the city received special attention. The public latrines were all limewashed and particular care was taken about the cleanliness of the sanded latrines. A small workshop was maintained at the Harris Bridge Depot with a carpenter and rivetter for attending promptly to the minor repairs of conservancy carts.

L 35 : 2111 x 1129  
1120

Special gangs of coolies were formed for the special conservancy of slum areas such as Washermanpet, Perambore and Parthasarathy Kuppam during August and September to prevent the breeding of flies. Four temporary maistries were appointed to supervise the gangs. During the year, arrangements were also made to manufacture double draught carts in the place of unserviceable Single Draught Rubbish Carts. (See pages 138 to 142 for statements.)

#### ANTI-MALARIAL WORK IN THE CITY FOR 1929.

**STAFF:**—A Senior Sanitary Inspector working directly under the Assistant Health Officers was in charge of the operations assisted by 2 Supervisors, one for the North Range, and the other for the South Range, with 3 gangs of 9 coolies each for each range, for cleaning, oiling and introduction of larvicidal fish. A Motor lorry was engaged with 12 coolies for reclamation work.

The chief breeding grounds of Anophelene and Culicine mosquitoes were surveyed. Portions of the River Cooum had to be cleaned and oiled at a cost of Rs. 814—9—0 in order to prevent the mosquito nuisance. It should be mentioned here that Cooum is the main breeding ground for mosquitoes in the City and unless its condition is improved mosquito nuisance is not likely to abate in the City.

#### ANTI-MALARIAL MEASURES ADOPTED:—

1. Cleaning of tanks, ponds and wells, 2. Petrolising
3. Clearing of rank vegetation, 4. Introduction of larvicidal fish and
5. Reclamation.

1. **TANKS AND PONDS:**—Generally tanks and ponds not used for purposes of irrigation and which are mostly shallow and small and covered with moss, weeds, and rank vegetation all round, become very good breeding places for Anophelene mosquitoes. There are at present 496 tanks in the City and these were inspected as often as possible by the sanitary staff and action taken thereon. Owners of 107 tanks paid the estimated cost to the Corporation and they were cleaned by the Health Department.

The total amount collected from the owners of tanks during the year was Rs. 1259—6—0.

**PETROLISING:**—Petrolising is a satisfactory method for destroying mosquito larvae. Petrolising was conducted on a large scale after the monsoons, when a large number of temporary puddles

and pools were formed which were congenial breeding grounds for mosquito larvae. As it is impracticable at present to prevent the formation of such temporary puddles and pools, the only remedy is to keep them free from mosquito larvae by systematically petrolising them. Some of the chief localities where such pools and puddles were systematically petrolised are given below:—

(a) Royapuram near the Railway Bridge and some lowlands in Suriyanarayana Chetty Street, 1st division, (b) Kathiwakkam High Road where there are a number of lowlands on either side and also in Tondiarpet 4th division, (c) Ottery Nullah including Anti-Malarial drain in Decaster Road, Demellows Road and Powder Mills Road 16th division, (d) Erukancherry Road in Vyasarpady 16th division and also the lake, (e) Madavakkam tank, (f) Marshy lowland behind the Government Record Office in Male Asylum Road, 20th division, (g) Spur tank, 20th division, (h) storm water drain in Royopettah, 29th division, (i) Ditch drain in Gopalapuram 29th division, (j) Ditch Drain in Admiralty house, 29th Division, (k) Lowland south of Mylapore from Kifle Range to Adyar, 30th division, (l) Portions of Cooum and Buckingham Channels, and (m) All Cess-pools and drains in the City.

It is necessary to mention in this connection that petrolising is found necessary in those cases where the water is found unused and stagnating. In the case of ponds and wells which are constantly in use, petrolising was objected to because of its supposed deleterious effect on vegetable growth and because the water surface coated with an oily scum is rendered unsightly and the water unfit for human consumption. In such cases, periodical cleaning and introduction of larvicidal fish were resorted to. Mere petrolising and stocking with larvicidal fish are not enough to keep off mosquito larvae so long as the tanks contain moss, weeds, etc., which afford shelter to the larvae.

**RANK VEGETATION AND BUSH CUTTING:**—Rank vegetation is generally found close to tanks, ponds and marshy places affording comfortable lurking places for adult mosquitoes which breed in the stagnant waters close by. The clearing of rank vegetation is primarily the work of house owners or tenants. Sanitary Inspectors were instructed to notify the owners to remove such vegetation wherever found. A considerable quantity of it was thereby removed by the owners. The Anti-Malarial staff cleared about 3,61,531 sq. ft. of rank vegetation from the following places:—

1. Infectious Diseases Hospital, Tondiarpet, 2. Poor House in S. N. Chetty Street, 3. Hindu Burial Ground, Washermanpet, 4. Anti-Malarial drain, Korukupet, 5. Choolai Burning ground, 6. Gopalapuram ditch drain surroundings, 7. Venkatachalam lane, Chetpet, 22nd division.

**INTRODUCTION OF LARVICIDAL FISH.**—Domestic and public wells were stocked with larvicidal fish. In as many as 13105 wells, larvicidal fish were introduced. Every well so treated had to be carefully watched from time to time to see that the fish put in continued to live and thrive. We have since completed the introduction of fish in all the wells of the City twice and are again going on reintroducing them for the third time where ever necessary. In places where wells were found unused, the owners were notified to cover and make them air tight.

There are various species of fish found to be of considerable utility in destroying mosquito larvae. At present we are using *Haplochilus Melanostigma* (in tamil, Munda Cunnu). This adult fish is an inch and a half long, chiefly found in fresh water and is indigenous in every pond and tank in the City of Madras and appears to be peculiarly suited for larval destruction.

The resurvey of wells stocked with fish during the year 1929 disclosed the following:—

|                                         |         |
|-----------------------------------------|---------|
| No. of wells examined.                  | 13,105. |
| " in which fish introduced were alive.  | 11,860. |
| " in which fish introduced had perished | 1,245.  |

From the above it is seen that (1) Fish continue to live and breed in a large number of wells, and, (2) In about 10 per cent of cases they die within a year.

**RECLAMATION WORK.**—The best and the most successful method of stemming the tide of mosquito nuisance is to fill up the tanks, ponds and stagnant waters where mosquito larvae breed. In order to achieve this object, a Motor Lorry was purchased exclusively for this purpose, and 12 coolies engaged and the work commenced from September 1929. Details of the work done by this lorry are found in statement, 'B' page 144. In addition to this, tanks and lowlands at the following places were filled up by the Conserancy carts depositing the rubbish collected in the streets directly into them.—

Robinson Park pond, tanks in Grace gardens, Shanmugapuram, Horti-Agricultural gardens, Kodambakkam and Mambalam and Perambore Barracks.

**GENERAL.**—In addition to the tanks, ponds, wells and shallow sheets of water detailed above and the river Cooum, the cause of the prevalence of Malaria in the City is due to the presence of thousands of permanent breeding places artificially produced the most important of which are cisterns, fountains, tanks, water used in building constructions, leakages from reservoirs, water pipes and cellars into which subsoil water percolates, vessels used in dyeing yards in which water stagnates and paddy soaking cisterns etc. A systematic campaign was conducted to attack the larvae in these places and to minimise the mosquito nuisance as far as possible and practicable.

#### MEDICAL INSPECTION OF CORPORATION SCHOOLS FOR 1929—30.

**1. STAFF.**—Four Medical Inspectors and two Medical Inspectresses worked whole time during the year under review. The staff provided for the medical inspection of girls' schools is inadequate, as out of 11724 girls on rolls only 6653 girls were examined.

**FINDINGS OF MEDICAL INSPECTION.**—During the year under report, 14480 boys out of a total of 17192 on rolls, and 6653 girls out of 11724 on rolls, were medically examined. Out of these, 9101 boys and 4610 girls were found defective. The percentage defective was 62.85 among boys, and 69.29 among girls as against 55.47 and 69.68 respectively last year. The increase was among Entrants especially under the items (1) teeth and mouth (2) nose and throat and (3) respiratory diseases.

**CLEANLINESS, CONDITION OF THE SKIN OF THE SCALP, BODY AND NAILS.**—2381 boys (16.44 per cent) and 1388 girls (20.86 per cent) as against 20.72 per cent and 16.57 per cent respectively in the previous year, were found to be dirty in their person and clothing. The Headmasters were instructed to give the dirty children regular baths at the school.

**MALNUTRITION.**—Under this group are included those conditions of subnormal health which are recorded in terms of nutrition and overstrain. 2248 boys and 379 girls or a percentage of 15.53 and 5.69 respectively as against 16.28 and 10.59 per cent.

last year had to be included as defective under this heading. The cases recorded vary from a slight want of muscular development to an extreme degree of emaciation. Most of these come from the poorest classes. The Medical Inspectors sent selected number of children to the Corporation dispensaries where they were given cod liver oil. Some parents undertook to do the needful for their children.

TEETH AND MOUTH:—3772 boys (26.05 per cent) and 2438 girls (36.67 per cent) were found to be suffering from diseases of teeth and mouth, the percentages for the previous year being 25.23 and 24.79 respectively.

|                          | Boys. | Girls. |
|--------------------------|-------|--------|
| Dirty teeth              | 1034  | 1538   |
| Dental caries            | 1357  | 724    |
| Stomatitis               | 1761  | 468    |
| Pigmented tongue         | 20    | —      |
| Tongue-tie               | 15    | 4      |
| Glossitis                | 35    | —      |
| Cleft palate and harelip | 2     | —      |
| Gum boils                | 1     | —      |
| Spongy gums              | 1     | —      |
| Pyorrhoea                | 36    | —      |
| Coated tongue            | 202   | 507    |

The main defect was found to be decayed teeth or collection of tartar. The importance of clean teeth to good health was explained to the School staff, the children and such of the parents that were seen. Offending teeth were advised to be removed, but the parents are sceptical and do not always follow the advice. Stomatitis was the next common defect found. The defect varied from a mere ulceration of the angles of the mouth to a condition where the mucous membrane of the whole mouth and tongue was denuded and reddened. All these children were given relief in the Corporation dispensaries. Cases of Pyorrhoea and tongue-tie were advised special treatment at Government General Hospital.

4. NOSE AND THROAT:—3622 boys or 25.01 per cent and 1241 girls or 18.65 per cent were suffering from these conditions the percentages last year being 22.76 among boys and 9.68 among girls.

| (a) NOSE—                   | Boys. | Girls. |
|-----------------------------|-------|--------|
| Nasal Catarrh and Rhinitis. | 417   | 186    |
| Nasal Polypus               | 5     | —      |
| THROAT—                     |       |        |
| Enlarged Tonsils.           | 2932  | 747    |
| Enlarged cervical glands    | 778   | —      |
| Adenoids                    | 163   | 11     |
| Granular Pharynx            | 141   | 75     |
| Bifid and elongated Uvula   | 25    | 222    |

Most of the defectives under this head were suffering from enlargement of tonsils and adenoids. As had already been pointed out, the general causes governing the incidence of defects of teeth and mouth are also responsible in bringing about these conditions. In many of these cases, rickets in varying degrees could be traced.

These defects arise during the earlier years of life and are well established at the beginning of school life. Simple enlargement of tonsils was treated at the Corporation dispensaries while those requiring operative treatment were advised to go to hospitals. The parents were also advised about the necessity for operative treatment.

EYE DISEASES:—565 boys (3.90 per cent.) and 224 girls (3.37 per cent.) were found to be suffering from diseases of the eye as against 3.42 per cent and 4.21 percent in the previous year.

|                  | Boys. | Girls. |
|------------------|-------|--------|
| Xerosis          | 204   | 33     |
| Conjunctivitis   | 102   | 77     |
| Squint           | 71    | 15     |
| Corneal opacity  | 61    | —      |
| Granular lids    | 47    | 80     |
| Blepharitis      | 18    | —      |
| Stye             | 24    | 14     |
| Onyx             | 2     | —      |
| Ptosis           | 3     | —      |
| Cataract         | 4     | —      |
| Corneal Ulcer    | 1     | 11     |
| Staphyloma       | 3     | —      |
| Dacrocystitis    | 1     | —      |
| Other conditions | 25    | —      |

Minor complaints as Conjunctivitis, Blepharitis etc., were dealt with at the Corporation Dispensaries, while cases requiring operative or special treatment were sent to the Ophthalmic Hospital. Many cases of squint were advised to correct errors of refraction, as this very often corrects the squint.

VISION:—288 boys (1.99 per cent) and 4 girls (0.06 per cent) showed defective vision, the percentages in the previous year being 1.01 among boys and 0.43 among girls. These children were advised correction of vision at the Eye Hospital.

EAR DISEASES:—322 boys (2.22 per cent) and 161 girls (2.42 per cent) were found to be defective under this heading as against 1.67 per cent. among boys and 2.05 per cent among girls last year.

|                           | Boys. | Girls. |
|---------------------------|-------|--------|
| Otorrhoea                 | 259   | 134    |
| Otitis (Externa)          | 59    | 26     |
| Ch. Otitis Media          | 1     | —      |
| Polypus Ear               | 1     | —      |
| Foreign Body ear          | 1     | —      |
| Deformed and ulcers Pinna | 1     | 1      |

Cases of Otorrhoea and Otitis of a mild nature were treated at the Corporation dispensaries while other chronic and resistant types were advised special treatment at the General Hospital.

HEARING:—20 boys (0.14 per cent) & 10 girls (0.15 per cent) were short of hearing in varying degrees as against 0.23 per cent and 0.09 per cent last year. The School staff were advised to keep these children nearest to them in the class.

SPEECH:—74 boys (0.51 per cent) and 6 girls (0.09 per cent) were found to be defective in speech, most of them being cases of stammering. The percentages for the previous year were 0.78 and 0.04 respectively.

|                              | Boys | Girls. |
|------------------------------|------|--------|
| Stammering                   | 56   | 6      |
| Lisping                      | 16   | —      |
| Thick nasal and hoarse voice | 12   | —      |

The teachers were instructed to be kind to such children. The condition of their teeth, nose, throat and the general health were examined with a view to rectify them and thereby improve the defective speech.

CIRCULATORY SYSTEM:—460 boys (3.18 per cent) and 532 girls (7.99 per cent) were defective as against 2.56 per cent and 10.76 per cent respectively last year.

|                                        | Boys. | Girls. |
|----------------------------------------|-------|--------|
| Anaemia                                | 317   | 217    |
| Functional irregularities of the heart | 103   | 274    |
| Organic diseases of the heart          | 30    | 21     |
| 4. Tachychordia                        | 1     | —      |

Ordinary cases of anaemia were treated at the Corporation Dispensaries, while others were advised treatment at the General Hospital.

TUBERCULOSIS.—Pulmonary and other forms of tuberculosis were detected in 35 boys (0.24 per cent) and 45 girls (3.68 per cent) as against 0.53 per cent and 0.79 per cent respectively in the previous year.

|                           | Boys. | Girls. |
|---------------------------|-------|--------|
| 1. Pulmonary Tuberculosis |       |        |
| (a) Suspected             | 22    | 33     |
| (b) Definite              | 8     | —      |
| 2. Tubercular glands neck | 5     | 12     |

The parents of these children were pointed out the advantages of open air life, and early treatment. Necessary advice regarding treatment was also given to them. Some of the cases were advised treatment at the Government Tuberculosis Institute.

RESPIRATORY DISEASES:—648 boys (4.48 per cent) and 709 girls (10.66 per cent) were found with lung diseases other than Tuberculosis, the percentage for the previous year being 3.86 and 6.77 respectively.

|                   | Boys. | Girls. |
|-------------------|-------|--------|
| Bronchitis        | 610   | 696    |
| Bronchial Asthma  | 37    | 13     |
| Broncho-Pneumonia | 1     | —      |

The entrants, and among them the younger, suffer most from these conditions. All these cases were treated at the Corporation dispensaries.

ABDOMINAL ORGANS:—Under this head, 539 boys (3.72 per cent) and 63 girls (0.95 per cent) as against 3.4 per cent and 2.71 per cent respectively last year were defective.

|                               | Boys. | Girls. |
|-------------------------------|-------|--------|
| Enlarged Spleen.              | 343   | 28     |
| Enlarged Liver                | 10    | 7      |
| Enlarged Liver & Spleen       | 10    | —      |
| Dyspepsia                     | 4     | 16     |
| Gastritis                     | 2     | —      |
| Intestinal Colic              | 10    | —      |
| Dysentery                     | 4     | 2      |
| Diarrhoea                     | 1     | 1      |
| Inguinal Hernia               | 31    | —      |
| Umbilical Hernia              | 31    | —      |
| Hydrocele Vaginal             | 68    | —      |
| Hydrocele Cord                | 5     | —      |
| Generative disorders in girls | —     | 10     |
| Jaundice                      | 1     | —      |

**ENLARGED SPLEEN:**—Investigations showed that the largest number of cases of enlarged spleen were found in schools situated in North Range. Out of 343 cases of enlarged spleen, 336 were among children attending schools in North Range.

Cases of dysentery, dyspepsia and other minor ailments were treated at the Corporation Dispensaries while those requiring operation or institutional treatment were advised to attend bigger hospitals. The school staff were advised to follow up the cases.

**BONES AND JOINTS:**—471 boys (3.25 per cent) and 31 girls (0.47 per cent) were found to be suffering from diseases of bones and joints against 3.38 per cent and 0.63 per cent in the previous year.

|                                   | Boys. | Girls. |
|-----------------------------------|-------|--------|
| Ricketty Chest.                   | 463   | 24     |
| General rickets.                  | 10    | 3      |
| Sprains of joints & dislocations. | 10    | 1      |
| Fracture of limbs                 | 2     | 1      |
| Diseases of bones.                | 10    | 1      |
| Diseases of joints.               | 9     | —      |
| Deformities of joints.            | 15    | —      |

Most of these cases were found to be rickets with deformed chest and were prescribed cod liver oil and necessary treatment.

**NERVOUS AND PSYCHIC SYSTEMS:**—86 boys (0.59 per cent) and 23 girls (0.35 per cent) were recorded defective as against 0.53 per cent and 0.17 per cent, respectively last year.

|                        | Boys. | Girls. |
|------------------------|-------|--------|
| Dull mentality.        | 26    | 3      |
| Incontinence of urine. | 43    | —      |
| Palsies.               | 6     | —      |
| Epilepsy.              | 2     | —      |
| Wrist drop.            | 1     | —      |
| Facial paralysis       | 1     | —      |
| Ulnar paralysis.       | 1     | —      |
| Rheumatism             | —     | 20     |

Necessary advice was given to these cases.

#### INFECTIOUS AND CONTAGIOUS DISEASES

During the year under report, 1335 boys (9.22 per cent) and 654 girls (9.83 per cent) were suffering from infectious diseases, including skin disease, the corresponding percentages for the previous year being 6.71 per cent and 8.86 per cent respectively.

##### (a) SKIN DISEASES.

| No. | Diseases                        | No. defective among |        |
|-----|---------------------------------|---------------------|--------|
|     |                                 | Boys.               | Girls. |
| 1.  | Scabies                         | 1027                | 447    |
| 2.  | Psoriasis                       | 3                   | —      |
| 3.  | Eczema                          | 144                 | 4      |
| 4.  | Anaesthetic patches in the skin | 33                  | —      |
| 5.  | Ringworm                        | 91                  | 15     |
| 6.  | Lichen                          | 31                  | —      |
| 7.  | Dermatitis                      | 15                  | —      |

All these children were kept isolated from the rest of the children or excluded from attending the school until they could be allowed to mix freely with other children. They were also given necessary treatment at the Corporation dispensaries. The children having anaesthetic patches about their body were advised to resort to early treatment

at the Government Royapuram Hospital, (Skin Department). The parents of these children were met in such cases and the necessity for a prolonged course of treatment was clearly explained to them. Marked improvement was noticed in two cases, where the parents followed the advice.

Other infectious and contagious diseases were:—

|                         | Boys. | Girls |
|-------------------------|-------|-------|
| 1. Malaria              | 240   | 83    |
| 2. Hook worm            | 53    | 102   |
| 3. Whooping cough       | 1     | 5     |
| 4. Small pox (scabbing) | 1     | —     |
| 5. Mumps                | —     | 1     |
| 6. Chicken pox          | 1     | —     |
| 7. Influenza            | 19    | —     |
| 8. Tapeworms            | 1     | —     |
| 9. Congenital syphilis  | 1     | 1     |
| 10. Dengue              | —     | 1     |
| 11. Kala-Azar           | 2     | 2     |
| 12. Gonorrhoea          | —     | 1     |

These cases were treated at Corporation dispensaries. Necessary action regarding isolation of infectious cases was also taken.

OTHER DISEASES AND DEFECTS:—2102 boys (14.52 per cent), & 921 girls (13.84 per cent) as against 11.06 per cent among boys and 11.84 per cent among girls in the previous year were found to be defective under this heading. The details of defects are as follows:—

|                               | Boys. | Girls |
|-------------------------------|-------|-------|
| 1. Worms                      | 1643  | 823   |
| 2. Wounds, cuts, ulcers etc., | 189   | 26    |
| 3. Boils, abscesses etc.      | 29    | 15    |
| 4. Undescended testis         | 51    | —     |
| 5. Enlarged glands groin      | 17    | —     |
| 6. Pyrexia                    | 38    | 75    |
| 7. Leucodermic Patches        | 30    | 19    |
| 8. Phimosis                   | 49    | —     |
| 9. Whitlow                    | 4     | —     |
| 10. Keloids                   | 10    | —     |

|                       |    |   |
|-----------------------|----|---|
| 11. Warts             | 20 | — |
| 12. Piles             | 1  | — |
| 13. Sinus Urethra     | 1  | — |
| 14. Obesity           | 2  | — |
| 15. Alopeciac patches | 1  | — |
| 16. Other conditions  | 34 | — |

Minor maladies were treated at the Corporation dispensaries while other serious defects were referred to bigger hospitals.

DEFORMITIES:—53 boys (0.37 per cent) and 15 girls (0.23 per cent) were defective under this heading as against 0.05 per cent and 0.13 per cent respectively last year.

|                          | Boys | Girls |
|--------------------------|------|-------|
| 1. Spinal deformity      | 5    | —     |
| 2. Talipes               | 11   | 1     |
| 3. Shortened limbs       | 10   | 1     |
| 4. Supernumerary fingers | 3    | 8     |
| 5. Genu Varum and Valgum | 7    | —     |
| 6. Ankylosis             | —    | 3     |
| 7. Flat foot             | 6    | —     |
| 8. Deformed jaw          | 1    | —     |
| 9. Amputated leg         | 1    | —     |
| 10. Torticollis          | 1    | 2     |
| 11. Dwarf                | 1    | —     |
| 12. Other deformities    | 7    | —     |

Children having remediable defects were advised treatment at Government General Hospital.

NUMBER BEARING NO MARKS OF VACCINATION: 93 boys (0.64 per cent) and 25 girls (0.38 per cent) as against 0.69 per cent among boys and 0.20 per cent among girls last year, had no marks of vaccination. These were vaccinated.

RE-INSPECTIONS AND "FOLLOWING UP" WORK:—142 reinspections were made this year in addition to the routine inspections, the object of re-inspection being to follow up the cases, to

change the treatment of pupils if necessary, and to see whether all the instructions given were followed by the school staff.

The School staff were directed to maintain a list of all defective pupils with the treatment suggested written therein, and they were also requested to meet the parents, and insist on the instructions being followed.

**MEDICAL TREATMENT:**—During the year under report 12740 children were either advised treatment or actually treated at the various hospitals and dispensaries. The details are shown hereunder.

|                                           |     |       |
|-------------------------------------------|-----|-------|
| 1. Cases sent to Corporation dispensaries | ... | 11515 |
| 2. Cases sent to other Hospitals:—        |     |       |
| (a) General Hospital                      | ... | 475   |
| (b) Gosha Hospital                        | ... | 59    |
| (c) Ophthalmic Hospital                   | ... | 374   |
| (d) Tuberculosis Hospital                 | ... | 27    |
| (e) Dental Dept. of Hospitals             | ... | 257   |
| (f) Royapuram Hospital (Skin Dept.)       | ... | 33    |

Total ... 12740

Minor defects and diseases were treated at Corporation Dispensaries. More serious defects were advised treatment in Hospitals. There should be proper co-ordination between these large hospitals and the medical inspection staff for achieving satisfactory results. At the same time we would welcome greater co-operation and willingness from the parents to follow the advice given to them regarding the health of their children.

**SCHOOL SANITATION:**—The sanitary condition of the school and its surroundings continued to receive careful attention of the school medical service. Many of the sanitary defects pointed out in individual school medical report are only in regard to rented buildings, which are generally found to be unsuitable for school. It is hoped that the defects pointed out will receive careful attention.

**SCHOOL LATRINES:**—Generally latrines in rented building were found to be small and insufficient and required extension and

minor repairs. It would be better if all the schools are provided with flush-out latrines, wherever possible. In the absence of these, the school authorities were instructed to keep the latrines clean and disinfected.

**WATER SUPPLY:**—Pupils in almost all schools continue to drink water directly from the tap. In three of the schools strained water is available. It is highly desirable that the children should be supplied with strained and boiled drinking water in all the schools.

**SCHOOL EQUIPMENT:**—Some of the schools were supplied with new furniture of a satisfactory type during the year under report. Many schools are still badly in need of furniture and this should be attended to without any delay.

**BATHING CLASSES:**—Bath rooms are available for the children in some of the schools. It is necessary to have all the schools provided with bath rooms with adequate supply of water for the pupils to bathe. The school staff have been instructed to select dirty pupils and make them bathe in the school.

**EXCURSIONS:**—The children were taken to the Health Exhibition and the Health charts were explained to them.

**CO-OPERATION OF PARENTS AND TEACHERS:**—It must be pointed out that the contact of the school doctor and the parent is of the greatest importance. The Medical Inspector can diagnose defects, explain their import and suggest remedies but the actual carrying out of the advice rests solely on the part of the parent. Since the parents can be influenced by teachers, it is they that could usefully take a lively interest in following up the cases referred for treatment. The attendance of parents at the time of inspection undoubtedly takes a considerable portion of the Medical Inspectors' time, and so reduces the number of pupils he can examine, but the disadvantage is one which should not be allowed to out-weigh the obvious advantages, and the loss of time is amply repaid. Intelligent co-operation between the teachers and parents is the first essential towards success.

**ATTENDANCE OF PARENTS:**—As many as 3624 parents of pupils were present during the routine inspections and necessary advice was given to them.

For statistical tables see pages 147—153.

## REPORT ON THE WORKING OF THE WATER ANALYSIS LABORATORY FOR THE YEAR 1929.

### A. GENERAL.

During the year under report the Red Hills Lake Water continued to receive pre-treatment with a uniform dose of chlorine of 1.25 parts per million, before slow sand filtration. The average daily consumption was 17.2 m. g. of water and did not show any great increase over that of last year. It was found possible to supply a maximum of 20.9 million gallons of filtered water per day by increasing the rate of filtration from 4" to 6" vertical per hour. The system of mixing a certain quantity of raw or at times even chlorinated raw water with the filtered water (which was in vogue in the past) was finally abandoned. As a result of this procedure the percentage of first class samples (lactose fermenters present or absent in 60 c. cs.) showed a considerable increase over that of last year. The filters in general also functioned more uniformly than during last year but there is still room for great improvement. Sulphuretted Hydrogen, was present in the filters, throughout the year, the quantity varying in different seasons. The whitish gelatinous growth in the filtered water chamber, central collecting drains, filtered water conduit and underground filtered water tanks showed an increase.

There was no outbreak of Cholera during the year although a-typical vibrios were persistently present almost throughout the year. The dose of chlorine was therefore kept uniformly at 1.25 parts per million.

The Government Committee on water and sewage purification submitted their final report to the Corporation recommending the adoption of a system of percolating filters at 24" rate followed by sand filters working at 8" vertical per hour.

### B. SCIENTIFIC.

The volume of work done at the Laboratory from its inception and the great increase in the work for the last 3 years is shown in table I page 154.

In table II page 154 will be found the average monthly results of the most important chemical and bacteriological tests, together with level of water in the lake and rainfall during the year under report. The lake water was of maximum purity during February and June. The highest bacterial pollution was reached in April, May, September and November (if the test for lactose fermenters alone were taken into

consideration). As in previous years the organic content as represented by "absorbed oxygen", ("Tidy's 4 hours test") was found to be lowest when the level of water was highest.

One other important point to note is that in spite of the fuller lake level, the organic content showed some increase and was in fact greater than during similar preceding years. This rather suggests that the growths in the lake have increased followed by natural processes of decay and decomposition. The importance of dealing with growths in the lake is thus brought to the forefront.

Table II (a) page 155 illustrates this point and the fact that the highest average monthly lake level was reached in January 1926 (the year when the maximum lake level was reached) when the lowest figure for organic matter was observed; while the lowest average monthly level was reached in September 1927 when the highest figure for organic matter was obtained.

### C. RAW WATER USED TO FEED THE FILTERS.

I have already noted that chlorinated water alone was used to feed the filters (chlorination being done at the Kilpauk end of the conduit). The bacteriological quality of the untreated raw water was of fair quality (L. F. in 5 c. cs) during the months of January, February, March, April, May, June, July, August and September, while it was of poor quality during the remaining months of the year; but after chlorination, the water was of uniformly good quality from the bacteriological point of view, showing lactose fermenters (present or absent) in 60 c. cs in cent per cent of the samples except in January when only 86.3% of the samples were first class ones. (Tables III & IV page 156)

### D. COST OF CHLORINATION.

The cost of chlorination of one million gallons of water using liquid chlorine at 12½ lbs. per million gallons comes to about Rs. 3 including the cost of establishment and other charges.

### E. SAND FILTERS

As has already been said in the beginning of the report the rate of filtration was increased from 4" to 6" vertical per hour which is continuously maintained throughout the runs of filters. Consequently the bacteriological quality of the filtrates also improved proportionately when compared to the bacteriological condition of the filtrates in

previous years. The monthly average of first class samples was 47.5 per cent for the year under report, while it was far lower in previous years.

Tabular statements V, VI and VII (pages 157 and 158) show respectively the length of runs, acreage cleaned and the quantity of water filtered during the year.

#### F. TEST TAP AT K. P. S.

The sample drawn from the test tap at K. P. S. generally showed a falling off in quality over the results of some of the filtrates. The cause for this may be attributed to the mixing of bad, indifferent and good filtrates from beds at work. This has been mentioned in detail in my previous reports, and unless the filtrates for the first two days of the starting of a filter, are not allowed to mix with the filtrates from matured beds this defect can never be got over. The repeated practice of applying chlorine is not productive of great benefit.

#### G. DISTRIBUTION SYSTEM.

Table VIII (page 159) shows the average chemical results of samples collected from the distribution system. The figure for organic matter absorbed oxygen alone) showed a definite increase over that of 1928.

Appendix A is a tabular statement showing the bacteriological and chemical quality of the City water supply. The chlorinated raw water is uniformly good but as a result of its passage through slow sand filters there is a falling off in quality. A further deterioration at the test tap is noticed due to the mixing of filtrates of good, indifferent and poor quality. The clearing action of the pipe lines is responsible for the improvement noticed in service taps over the test tap results.

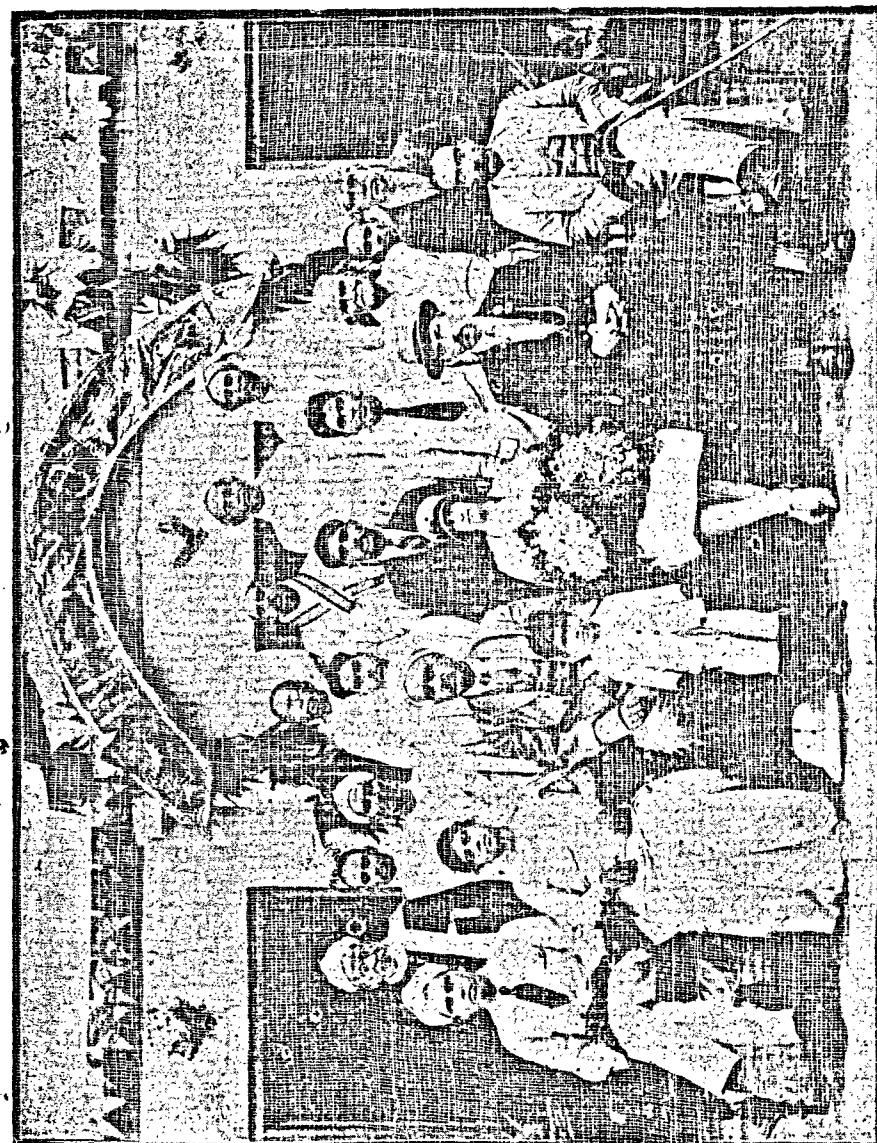
Kilpauk Water Works, } S. V. GANAPATI,  
4-7-1930. } Water Analyst,

# REPORT ON THE WORKING OF THE CHILD WELFARE SCHEME, CORPORATION OF MADRAS FOR THE YEAR ENDING 31st DECEMBER 1929.

This Annual Report of the Child Welfare Scheme marks yet another milestone in the progress of the activities of the Scheme. The year under review witnessed the opening of an additional Child Welfare Centre and the inauguration of a Health and Baby Week under the sole auspices and the entire management of the Corporation of Madras. Also the Scheme had the proud privilege of receiving no less distinguished visitor than Her Excellency Lady Irwin who visited the Child Welfare Centre at Nungambakkam in December last. The visit was arranged in accordance with the expressed wish of Her Excellency who desired to inspect a centre and see the working of the Scheme. I take this opportunity to place on record the gratitude of the members of the C.W.S. Staff to Her Excellency Lady Irwin for the deep sympathy with and for the keen interest of Her Excellency in the welfare of the poor mothers and babies in this city which that visit betokened. The remarks of Her Excellency written on the occasion appear at the end of this report.

During the year under review, 11416 cases of labour which is nearly 47 per cent of the total number of births in the city came under the observation of the Scheme. This again is the highest on record since the Scheme was inaugurated. Though it is gratifying to note that such a large percentage of labour cases in the city came under the observation of the Scheme, still nearly 53 per cent remain untouched and the ambition of the Child Welfare Scheme is that as many labour cases as possible should come under its observation. This can be achieved only with the opening of more Centres when women and children living in the remotest nooks and corners of this city will have the benefit of the expert medical attendance and advice of the Scheme staff.

I am glad to mention that the new Centre which was sanctioned by the Council at its meeting held on 24-10-28 for the Royapettah Division was opened by Mrs. E. Conran Smith at 23/24 Amayappa Mudali Street, Royapettah on 9-10-29. During the short period this centre had been working, 170 cases of labour and 2064 women and



The opening ceremony of the Royapettah Centre Child Welfare Scheme.

children were treated at the outpatients' clinics. Besides, 132 pre-maternity cases were registered thereby fully justifying the need for its opening. The delay in opening the Centre was due to finance and also to the difficulty in securing a suitable house.

The Purasawalkam Centre which was situated in the 17th division in No. 1 Manickam Chetty Street was shifted to 154 Purasawalkam High Road on 1—9—29 as the former building was found unsuitable for the growing needs of the centre. Ever since the centre was shifted to its present residence, its work has considerably increased.

In the previous report, I had occasion to report that the Purasawalkam Centre then comprised four large and congested divisions viz., 17th, 18th, 19th & 21st and that an additional Centre was necessary for this area. I am glad to mention that the Council sanctioned a new centre for the Choolai Division (17th) at its meeting held on 27—8—29. Arrangements are being made for opening this Centre shortly. This will serve the needs of the 19th division as well. The Purasawalkam Centre will then have only the 18th and 21st divisions under its jurisdiction.

#### PERSONNEL.

An additional Lady Doctor Mrs. Balraj, Lady Apothecary, was appointed during the year under review. This was necessitated by the opening of a new Centre for the Royapettah Division. Miss. Chellam, Lady Doctor of the Washermanpet Centre was granted leave for one year on loss of pay with permission to accept a post under Government for bettering her prospects. Miss. Rhenus L.M.P. was appointed as a substitute.

#### WORK OF THE STAFF.

The total number of visits paid by the 12 Lady Doctors was 13416 as against 13111 in 1928. The Lady Doctors treated 3143 morbid cases (puerperal) for the year under review as against 1950 in 1928. This appreciable increase reflects credit on the efforts put forth by the Lady Doctors. The number of women and children treated by the Lady Doctors at the out-patients clinics was 188329 as against 161801 in 1928. The average daily attendance of women and children at the out-patients' clinics in all the centres was 520 as against 442 in the previous year. (vide Statement V). In this connection, the work of the Muthialpet Centre deserves special mention. In



Photograph of H. E. Lady Irwin and the Lady Doctors employed in the Child Welfare Scheme.

the previous year, the total attendance at the out-patients' clinics was 13610 and the average daily attendance was 37.2 while this year the total attendance has risen to 24672 and the daily average attendance to 67.5. This amounts to nearly twice the amount of work done the previous year. Such hard work on the part of the Lady Doctor Miss Mckendray who took charge of the centre on 7—9—28 is praiseworthy.

The total number of visits paid by the Health Visitors increased from 114589 in 1928 to 131297 in 1929. (vide Statement VII) and the total number of prematernity cases registered by them was 10535 as against 10915 in the previous year; but, of 10535 pre-maternity cases registered by the Health Visitors, 6698 expectant mothers actually attended the centres for medical advice and treatment as against 6422 in the previous year.

The total number of labour cases which came under the observation of the Scheme Staff was 11416 as against 10893 in 1928. The total number of visits paid by the Midwives rose from 117905 in 1928 to 133047 in 1929 (vide Statement VII).

There are at present 31 Health Visitors and 76 Nurses in the Scheme.

#### CASES OF ABORTION.

The total number of abortions treated during the year under review was 254 as against 256 for the previous year. Of these 96 were conducted by the Staff, 19 were taken over after the Barber midwife had attended on the patients and 139 were sent to hospitals from all the centres (vide Statement VI).

#### MATERNAL MORTALITY.

Out of 11416 labour cases which came under the observation of the Scheme Staff during the year 1929, 57 deaths occurred amongst the mothers of which 38 occurred among cases sent to hospitals by the Staff of the Child Welfare Scheme, 3 among those which first came under our observation to start with but subsequently were handed over to private medical practitioners at the request of the relatives, 6 which first came to our notice but taken charge of by Vydians at the request of the relatives and under care of the barber midwife. This leaves 9 deaths which actually took place under the care of the Scheme Staff (vide Statement IV A).

The maternal mortality rate for the year under review is therefore .49 per cent as against .52 per cent of the previous year thereby showing a decrease in the mortality rate among mothers.

Below is given a comparative statement of the maternal mortality rates for the last two years for the Child Welfare Scheme and the important Maternity Hospitals in this city.

The rate of .49 per cent for the C. W. S. is the lowest.

|                                      | 1928 | 1929 |
|--------------------------------------|------|------|
| 1. Government Maternity Hospital ... | 1.84 | 2.61 |
| 2. Victoria Goshal Hospital ...      | 1.24 | 1.5  |
| 3. Raja Sir Ramaswamy's L.I.H ...    | 1.8  | 2.17 |
| 4. Kalyani Hospital ...              | 1.57 | .91  |
| 5. Rainy Hospital ...                | 1.55 | 3.94 |
| 6. C.W.S. Corporation of Madras ...  | .52  | .49  |

#### INFANTILE MORTALITY.

Now coming to the question of Infant Mortality, out of 10893 labour cases which came under the observation of the Child Welfare Scheme in 1928, 410 were still births and the remaining were live births. Of the live births, 1798 died during their first year of life (vide Statement VIII). This gives a death rate of 171.6 per mille as against 159.1 of the previous year thereby showing an increase in the infantile mortality rate. Of the 1798 deaths which took place among infants during their first year of life, 419 babies died within the first ten days owing to their low vitality at birth. The majority of deaths were due to intestinal disorders (358) fever (345) respiratory disease (215) small pox (62) etc., (vide statement IX). There seems to have been several factors which have contributed to this increase in the death rate among infants. It must be mentioned that infant mortality cannot be reduced to an appreciable extent by measures directed solely to the mother and child. For instance, of what avail is the advice to the mother on the care of her baby if the father is a syphilitic, or if those who fondle the child are suffering from tuberculosis or any other infectious disease, or if the mother lives in a place where the hygienic surroundings are far from satisfactory and precautions are not taken to prevent food and drinking water from getting contaminated. Above all, poverty is a great bar to sanitary and social progress. There is no use in telling a poverty

stricken mother who has no milk of her own that she should not feed her baby with congee made of starchy food-stuffs and that she should give cow's milk instead. Health is therefore largely dependent on the resources which a community has at its disposal, and it is the community standards which establish the mortality rate and determine largely whether the baby shall be well and healthy or whether it shall sicken and die. The Corporation has bestowed a great blessing on the poorer classes by giving a free supply of good cow's milk to poor and needy infants but the number of such babies receiving free supply of milk at the Child Welfare Centres is limited. There are hundreds of poor babies who die annually in this city from bowel disorders, malnutrition, rickets etc., due to want of proper nourishment during their first year of life. However strenuous the efforts of the Child Welfare Scheme and other social welfare institutions may be in improving the welfare of the poor women and children in this city, yet, in the absence of the means of obtaining proper nourishing food both for the mother and the child, of preserving cleanliness and of obtaining facilities for healthy living and leading happier lives, their efforts are bound to fall short of their expectations.

#### AMBULANCE CAR.

The total number of calls answered by the car was 723 against 746 in the previous year. The difference is due to the driver failing at times to respond to urgent calls for reasons mentioned below and to the fact that the car had to be sent frequently for repairs during the year under review.

During the last four years, this car was kept in a garage attached to D.I. Police Station, Triplicane. Whenever the car was urgently required for conveying patients to the different hospitals, telephone messages were sent to the Police Station through an exchange. A Police Constable generally received the message and transmitted it to the driver. This arrangement did not work satisfactorily. It is obvious that, by this method, no efficient control could be exercised over the driver. Very often it was found that the exchange was engaged or there was no one at the telephone to receive the message. On several occasions the constables reported that the driver was not found in the shed and when the driver was questioned he said that he was in the shed and no one informed him.

The first and most important object for the maintenance of an Ambulance Car is, as everyone knows, to ensure the availability of the conveyance at the shortest notice. This object was defeated by the past arrangement and was causing inconvenience to all concerned. This unsatisfactory state of affairs was put an end to with the permission of the Commissioner by transferring the car to a garage attached to the Ripon Buildings, a much more central place, affording all facilities for exercising immediate control over the driver night and day.

#### MILK SUPPLY.

758 babies received milk as against 639 the previous year. The average daily attendance was 443 as against 368 the last year. The compulsory feeding of infants is working satisfactorily in all the centres.

Dr. Ruth Young W.M.S., Secretary of the Lady Chelmsford All India League for Maternity and Child Welfare, Delhi, whose full remarks appear at the end of this report has observed as follows regarding the milk supply:—"The Corporation gives milk very generously to infants and this must be a great boon in many cases. The milk seems to be of excellent quality".

At present the budget allotment for milk is Rs. 15,000 for the year. This amount will have to be increased as additional centres are opened. If the proposal for opening a Dairy Farm by the Madras Corporation which is already under contemplation materialises, it will remove many difficulties which are now felt in regard to the milk supply. According to the present arrangement, the milk supply is given to a contractor by tender. He engages local men who bring their cows to the different centres. These men are not directly responsible to the Centre Staff. Any complaint regarding the milk such as deficiency in the quantity of the milk, adulteration, diseased cow or calf, arrival of the milkman at a very late hour etc., have to be brought to the notice of the Contractor to whom the milkman is responsible. All this means much trouble and delay in setting things right. To avoid such mishaps, great vigilance has to be exercised and an efficient check has to be maintained over the contractor. On the other hand, if the Corporation maintains a Dairy Farm of its own, the present difficulties can be reduced to a minimum.

#### BATHING OF CHILDREN.

During the year under review, 129515 warm baths were given as against 83849 in the previous year, and on an average 373 children per day were bathed in all the centres as against 355 the last year (vide Statement XI).

#### HEALTH PROPAGANDA WORK.

During the year under review, the progress of work under Health Propaganda has been satisfactory. A total number of 307 out door lectures was delivered against 294 of the previous year. Besides, 33 lectures with the aid of the magic lantern was delivered at the various Child Welfare Centres as against 16 of the previous year.

The propaganda work of the Child Welfare Scheme was handicapped for want of a magic lantern and suitable slides relating to Maternity and Child Welfare Work, exclusively for the use of the Child Welfare Scheme. The lanterns which were in use were common to the Staff of the Child Welfare Scheme and the Health Department.

#### HEALTH SCHOOL.

Till July 1929, the Health School for the training of the Health Visitors was maintained under the joint auspices of the Maternity and Child Welfare Association and the Madras Corporation. The past system of recruiting Health Visitors for the Child Welfare Scheme was as follows. Annually about two or more nurses from the permanent staff were selected and deputed to the Health School for being trained as Health Visitors. Nurses who were so deputed drew their permanent pay and other allowances for which they were entitled as members of the Nursing Staff of the Child Welfare Scheme. Those who passed out were taken on as permanent Health Visitors. This system which was in vogue before ensured the Corporation obtaining from time to time, the services of the requisite number of qualified Health Visitors for the Scheme.

The situation has, however, altered since the Indian Red Cross Society assumed in 1929 the entire control of the Training School for Health Visitors. This Society awards annually a stipend of Rs. 40

per mensem to a limited number of selected candidates. Private students are admitted on payment of a tuition fee of Rs. 75 for the course in addition to the expenses of board, etc. All the stipendiary scholars passing out of the school are required to sign an agreement to serve the Society for a period of 3 years.

Among those selected for training in the Health School in the year 1929—30 by the Indian Red Cross Society were two members of the subordinate staff of the Child Welfare Scheme. Both of them were awarded stipends by the Society. They were permitted by the Corporation to take leave on loss of pay for one year to undergo the course; but, subsequently, they resigned their posts as they had been able to obtain work through the Indian Red Cross Society and were bound to serve them for 3 years. As the Corporation did not pay them any stipend, or salary during the period of their training, they had no claim on the further services of these two students. To overcome the present difficulty of securing the required number of Health Visitors, I would suggest that the Corporation award annually two or more stipends of Rs. 40 per mensem to nurses selected from the staff of the Scheme for undergoing training in the Health School. The stipendiary candidates should sign an agreement to serve the Corporation for a period of 3 years after passing out of the Health School. If this could be done, the Child Welfare Scheme will be in a position to secure the services of the Health Visitors up to the required strength, without detriment to that section of its activities in which Health Visitors play an important part.

#### CITY HEALTH AND BABY WEEK.

The National Health and Baby Week Celebration for the last six years was under the joint auspices of the National Health Association and the Corporation of Madras. The Seventh City Health and Baby Week celebration which took place this year was unique as it was undertaken and run entirely by the Corporation of Madras.

One important effect this produced on the Child Welfare Scheme was the omission of the Preliminary Baby Shows which were usually held in all Child Welfare Centres a week prior to the National Health and Baby Week exhibition. This was necessary as duplication of expenditure had to be avoided. A sum of Rs. 1,000 was sanctioned for the Child Welfare Scheme towards the expenditure in participating in the exhibition.

Thursday the 27th February 1930 was an interesting day in the programme of the City Health Exhibition. This was set apart for women only. The various stalls in the exhibition including those of Commercial Firms as well as the general management were in the hands of ladies from 8 a.m. to 6 p.m. Mrs. Conran Smith, Dr. Mrs. Devanesen, and Miss. Swamikannu were in charge of the arrangement. The several stalls were distributed among the Health Visitors and Nurses of the Corporation Child Welfare Scheme, Headmistresses and Teachers of the Corporation Girls' Schools, Lady students from the Medical School and members of the Seva Sadan. Mrs. H. S. Hensman the President of the day, visited the Exhibition in the morning and presided in the afternoon at the Tamil Lecture on "Child Welfare", given by Srimathi M. Lakshmiammal, Professor. Queen Mary's College. This was translated into Urdu to the large number of Muslim ladies among the audience by Mrs. Rahimathunesa Begum. Lady Beatrix Stanley visited the exhibition in the evening of that day and on arrival was received by Mrs. Conran Smith and several other ladies present. After being garlanded, Her Excellency drove slowly in a car round the Exhibition grounds. The success of the day was due in a large measure to the assistance rendered by the Committee, Mrs. C. E. Wood, Mrs. F.E. James, Mrs. Lakshmanaswami Mudaliar, Mrs. Mullaly, Mrs. Mazuruddin, Mrs. Krishnaswami Chetty, Mrs. Alwar Chetty, Mrs. Kuriyan, Mrs. Sivabushanam Mudaliar, Mrs. Rajamanickam Naidu, Mrs. Kesava Pai, Mrs. Syed Niyamulla and others.

In this connection, I should like to mention the great difficulty and disappointment caused by terminating the Gosha Day at 6 p.m. The great majority of women of all classes prefer to visit the Exhibition in the afternoon after the day's work in their homes. Several of these naturally choose the cool hours of the evening and arrive in the grounds after 4 p.m. Most of these women are not willing to leave the grounds before 6 p.m. as they have not had sufficient time to see all the exhibits. Special efforts had to be put forth by the Gosha day women staff to persuade the Muslim Ladies to quit the grounds before 6 p.m. when the Exhibition was thrown open to men also.

Apart from this difficulty which was seriously felt by those responsible for the Gosha day arrangements, great disappointment was expressed by the Muslim Ladies at their forced departure before they could see the illumination. One cannot but sympathise with them

when they put the question, "When only one day is set apart for Gosha Ladies, why should we not be permitted to remain longer and see the illumination?"

The Exhibition primarily concerns the welfare of women and children and it is they who have the priority in claim and should be given the preference and all facilities to study the exhibits as much as they could. The only opportunity of doing this which the Muslim women get is on the Gosha day and if, on this rare occasion, they should be deprived of the benefit of deriving full advantages, it seems a great hardship and at the same time it partly nullifies the objects for which the exhibition is organised. I would, therefore, request those concerned in fixing the time for the Gosha day to set apart the whole day exclusively for women.

The following medals were awarded to the Child Welfare Scheme of the Corporation.

1. Gold Medal—The most instructive stall of an Institution.
2. Gold Medal—The best posters on Child Welfare by an Institution.

Best Stalls on Child Welfare.

3. Gold Medal—Milk stall.
4. Silver Medal—Baby stall.
5. Bronze Medal—Ante Natal stall.

#### BABY SHOW COMPETITION.

The Baby Show Competition was held on the 1st March 1930 and about 300 Babies of all classes participated in it. The judging commenced at 10 a.m. Lady Beatrix Stanley visited the Baby Show at 11 a.m. and inspected the prize winners. The competing mothers were provided with free midday meal by the courtesy of the Bombay Ananda Bhavan. The babies were also given a free supply of preparations of Glaxo and Horlicks Malted Milk by the respective Commercial Firms and were supplied each with a jacket or a yard of cloth. The prize distribution was held in the evening of the same day, when Mrs. Conran Smith distributed the prizes to the baby winners. About 90 prizes consisting of silver cups, brass and aluminium vessels, sarees etc., were given.

I take this opportunity to express our gratitude to the following donors of silver cups and prizes to winners in the Baby Competition.—

1. Her Excellency Lady Beatrix Stanley.
2. Mrs E. Conran Smith.
3. Lt. Col. C. A. F. Hingston.
4. Mr. C. Abdul Hakim.
5. Sir. C. P. Ramaswami Iyer.
6. Mrs. A. Swaminathan.
7. Mrs. P. Appasamy.
8. Mrs. Shafee Mohamed.
9. Mrs. Hannen Angelo.
10. Mrs Chakkrai Chetty.
11. Rao Bahadur Dr. A. Lakshmanaswami Mudaliar.
12. Dewan Bahadur Balasundaram Naidu.
13. Rao Bahadur V. Shanmugam Mudaliar.
14. Mr. Jamal Moideen.
15. Mr. R. Rajagopal Naidu.

I wish to place on record the visit of Her Excellency Lady Irwin to the Child Welfare Centre at Nungambakam on 14—12—29. Her Excellency was pleased to enter the following remarks:—

"It gave me much pleasure to visit the Nungambakkam Child Welfare Centre and to see the work that is being done by the Madras Municipal Corporation for the care of the infants and children of this city.

I was especially pleased to see the Lady Doctors and workers who are helping in this great work. I heartily congratulate them and Mrs. Devanesan—The Lady Superintendent—on the success of their efforts and wish them all success."

(Sd.) Dorothy Irwin.

We are also very grateful to Dr. Christine J. Thomson M.D., Ph.D., Lady Irwin Research Worker and Dr. Ruth Young W. M. S., Secretary of the Lady Chelmsford All India League for Maternity and Child Welfare who visited our centres and were pleased to enter the following remarks in the Visitors' Book:—

"I have today visited this centre and been most favourably impressed with the work carried on. The premises are very commodious and clean. The midwifery scheme has been carefully thought out and adequate records are kept. The arrangements for giving milk at the centre ensure that the children are actually receiving the milk. The staff are efficient and most obliging and should like to congratulate them on the work which they are carrying on.

I am very much indebted to Dr. Devanesen for her courtesy and kindness in explaining so fully the Corporation Scheme."

(Sd.) Christine J. Thomson M.D., Ph.D.

"It has been a matter of great interest to me to visit one of the Madras Corporation Centres about which I have heard so much. To one from the North, the amount of work carried on by the Corporation midwives is astonishing and it is very satisfactory to know that so many of the confinements are now in their hands. The infants are kept under observation for a year subsequently and the infant mortality among them is much lower than that of the city generally. I think it is a pity that these infants do not attend the centres themselves regularly; they appear to come only when sick, whereas it is healthy babies one wants to see at a Child Welfare Centre. The Health Visitors have a great deal of work and cannot visit the house of each infant more than once. This is not frequent enough for babies under a year and moreover the children cannot be weighed at home.

The Corporation give milk very generously to infants and this must be a great boon in many cases. The milk seems to be of excellent quality. One would like to see the experiment tried of giving more milk to the mothers instead of to infants, so as to re-establish breast feeding where it has given out owing to poor nourishment of the mothers.

I hope that with the re-organisation of the Health School, a supply of well trained Health Visitors will be available soon for the work of the centres so as to emphasise the educative nature of the work."

(Sd.) Ruth Young W. M. S.,

Secretary, Lady Chelmsford

All India League.

### CONCLUSION.

The growing public consciousness of the Scheme's beneficial activities and recognition of the fact that healthy motherhood and childhood are necessary for laying the foundations of a strong and vigorous generation are apparently factors which have been partly responsible for the steady increase in the demand made on the services of the staff. "It is an established fact that the strength of a nation depends to a very great extent on the health of its children and, with this point in view, one should ever keep the welfare of the younger generation constantly in one's mind. I am glad to say that the people of this Presidency realize that it is their duty to see that their children are brought up in such a way as to prepare them to become useful members of a Great Community." Such was the inspiring message sent by H.E. Lady Beatrix Stanley C.B.E. on the eve of the opening of the recent City Health and Baby Week Exhibition. It is needless to point out that the aims outlined in that message are those which the Child Welfare Scheme also have in view and for the achievement of which they are silently yet strenuously working.

Mrs. D. Devanesen,

Lady Superintendent,

Child Welfare Scheme,

**VITAL STATISTICS - (STATEMENTS).**  
**ANNUAL FORM No. A. :- METEOROLOGICAL DATA :- MADRAS.**

LATITUDE :- 13°4' NORTH.  
LONGITUDE :- 80°15' EAST.

| Month 1929. | Barometer                            |       | Reading of Thermometer. |          |      |      |                   |                   | Difference between due point temperature and mean air temperature. | Degree of humidity complete saturation being 100. | Prevailing directions of wind. | Rainfall.  |                               |                                    |                                     |                                       |
|-------------|--------------------------------------|-------|-------------------------|----------|------|------|-------------------|-------------------|--------------------------------------------------------------------|---------------------------------------------------|--------------------------------|------------|-------------------------------|------------------------------------|-------------------------------------|---------------------------------------|
|             | Mean daily reading Reduced to 32° F. |       | Maximum.                | Minimum. | Dry. |      | Mean daily value. | Mean daily value. |                                                                    |                                                   |                                | Dew-point. | Mean maximum solar radiation. | Number of days on which rain fell. | Total all of rain during the month. | Maximum fall of rain during 24 hours. |
|             |                                      |       |                         |          |      |      |                   |                   |                                                                    |                                                   |                                |            |                               |                                    |                                     |                                       |
| January     | 29.941                               | 84.0  | 68.6                    | 15.4     | 75.8 | 67.7 | Not recorded.     |                   | 8.1                                                                | 78                                                | E. by N.                       | 3          | 1.87                          | 1.80                               |                                     |                                       |
| February    | 29.927                               | 84.9  | 69.7                    | 15.2     | 77.1 | 67.6 |                   |                   | 9.5                                                                | 75                                                | East.                          | 4          | 6.41                          | 3.14                               |                                     |                                       |
| March       | 29.893                               | 89.4  | 72.0                    | 17.4     | 80.5 | 70.7 |                   |                   | 9.8                                                                | 73                                                | E. by S.                       | 1          | 0.01                          | 0.01                               |                                     |                                       |
| April       | 29.837                               | 92.8  | 77.5                    | 15.3     | 84.1 | 73.5 |                   |                   | 10.6                                                               | 74                                                | S. E.                          | 4          | 0.55                          | 0.40                               |                                     |                                       |
| May         | 29.717                               | 99.8  | 81.8                    | 18.0     | 88.3 | 73.0 |                   |                   | 15.3                                                               | 68                                                | S. by E.                       | 1          | 0.75                          | 0.75                               |                                     |                                       |
| June        | 29.679                               | 100.0 | 81.1                    | 18.9     | 87.3 | 68.6 |                   |                   | 18.7                                                               | 57                                                | S. W. by S.                    | 13         | 1.47                          | 0.47                               |                                     |                                       |
| July        | 29.689                               | 98.7  | 79.8                    | 18.9     | 86.3 | 68.1 |                   |                   | 18.2                                                               | 58                                                | S. W. by S.                    | 16         | 2.10                          | 0.28                               |                                     |                                       |
| August      | 29.729                               | 94.2  | 77.7                    | 16.5     | 83.7 | 71.2 |                   |                   | 12.5                                                               | 70                                                | S. S. W.                       | 16         | 4.26                          | 0.80                               |                                     |                                       |
| September   | 29.763                               | 92.3  | 77.8                    | 14.5     | 83.5 | 71.9 |                   |                   | 11.6                                                               | 72                                                | South.                         | 12         | 7.36                          | 3.68                               |                                     |                                       |
| October     | 29.841                               | 90.0  | 75.9                    | 14.1     | 81.7 | 72.5 |                   |                   | 9.2                                                                | 77                                                | N. W. by N.                    | 11         | 6.95                          | 3.61                               |                                     |                                       |
| November    | 29.892                               | 84.3  | 72.9                    | 11.4     | 78.0 | 70.9 |                   |                   | 7.1                                                                | 81                                                | N. N. E.                       | 13         | 14.92                         | 5.20                               |                                     |                                       |
| December    | 29.943                               | 83.9  | 70.9                    | 13.0     | 76.8 | 69.3 |                   |                   | 7.5                                                                | 80                                                | N. E.                          | 10         | 5.77                          | 2.13                               |                                     |                                       |
| Total       | 29.821                               | 91.2  | 75.5                    | 15.7     | 81.9 | 70.4 |                   |                   | 11.5                                                               | 72                                                | S. E. by S.                    | 104        | 52.42                         |                                    |                                     |                                       |

Annual Form No. I. - Births registered by divisions during the year 1929.

| Divisions. | Districts.           | 3                                           |          | 4                         |        | 5                                       |        | 6    | 7    | 8.   | 9                                                         |          | 10   | 11   |        |     |
|------------|----------------------|---------------------------------------------|----------|---------------------------|--------|-----------------------------------------|--------|------|------|------|-----------------------------------------------------------|----------|------|------|--------|-----|
|            |                      | Population according to the census of 1921. |          | No. of Births registered. |        | Ratio of Births per 1000 of population. |        |      |      |      | Mean ratio of Births per 1000 during previous five years. |          |      |      |        |     |
|            |                      | Males.                                      | Females. | Total.                    | Males. | Females.                                | Total. |      |      |      | Males.                                                    | Females. |      |      | Total. |     |
| 1          | Royapuram            | 10400                                       | 10491    | 20891                     | 380    | 415                                     | 795    | 18.2 | 19.9 | 38.1 | 91.6                                                      | 22.0     | 20.3 | 42.4 | 26     | 34  |
| 2          | Tondiarpet           | 8536                                        | 8363     | 16899                     | 570    | 517                                     | 1087   | 33.7 | 30.7 | 64.3 | 110.3                                                     | 33.6     | 30.8 | 64.3 | 85     | 26  |
| 3          | Washermenpet         | 11992                                       | 11785    | 23777                     | 505    | 453                                     | 958    | 21.2 | 19.1 | 40.3 | 111.5                                                     | 24.8     | 20.0 | 44.7 | 38     | 14  |
| 4          | Korukunpet           | 8667                                        | 7973     | 16640                     | 443    | 447                                     | 890    | 26.6 | 26.9 | 53.5 | 99.1                                                      | 26.0     | 24.9 | 50.9 | 34     | 21  |
| 5          | Harbaur              | 5082                                        | 2256     | 7238                      | 127    | 117                                     | 244    | 17.4 | 16.1 | 33.5 | 108.5                                                     | 16.3     | 16.1 | 32.4 | 15     | 6   |
| 6          | Muthialpet           | 9670                                        | 5961     | 15631                     | 191    | 181                                     | 372    | 12.2 | 11.6 | 23.8 | 105.5                                                     | 11.0     | 10.8 | 21.8 | 13     | 5   |
| 7          | Katchaleswararnpet.  | 7102                                        | 5953     | 13055                     | 228    | 216                                     | 444    | 17.5 | 16.5 | 34.0 | 105.6                                                     | 17.6     | 15.5 | 33.2 | 12     | 9   |
| 8          | Kothawal Bazaar      | 3120                                        | 1997     | 5117                      | 74     | 71                                      | 145    | 14.5 | 13.9 | 28.3 | 104.2                                                     | 13.3     | 13.5 | 26.8 | 10     | 4   |
| 9          | Ammen Koil           | 8095                                        | 7725     | 15820                     | 354    | 366                                     | 720    | 22.4 | 23.1 | 45.5 | 96.7                                                      | 22.1     | 20.5 | 42.7 | 32     | 12  |
| 10         | Seven Wells.         | 9748                                        | 9880     | 19628                     | 296    | 307                                     | 603    | 15.1 | 15.6 | 30.7 | 96.4                                                      | 17.3     | 16.0 | 33.3 | 25     | 32  |
| 11         | Sowcarpet            | 4283                                        | 3177     | 7460                      | 60     | 70                                      | 130    | 8.0  | 9.4  | 17.4 | 85.7                                                      | 11.1     | 10.1 | 21.1 | 13     | 5   |
| 12         | Peddunackpet         | 8953                                        | 8622     | 17575                     | 426    | 388                                     | 814    | 24.2 | 22.1 | 46.3 | 109.8                                                     | 21.2     | 20.5 | 41.7 | 32     | 14  |
| 13         | Trevelyan Basin      | 8762                                        | 8510     | 17272                     | 303    | 294                                     | 597    | 17.5 | 17.0 | 34.6 | 103.1                                                     | 18.5     | 17.3 | 35.8 | 40     | 13  |
| 14         | Esplanade            | 1548                                        | 1116     | 2664                      | 41     | 37                                      | 78     | 15.4 | 13.9 | 29.3 | 110.8                                                     | 18.8     | 19.1 | 36.0 | 5      | ... |
| 15         | Park Town            | 9583                                        | 7956     | 17544                     | 269    | 255                                     | 524    | 15.3 | 14.5 | 29.9 | 105.5                                                     | 16.0     | 14.9 | 30.9 | 33     | 9   |
| 16         | Perambur             | 15492                                       | 13967    | 29459                     | 804    | 733                                     | 1537   | 27.3 | 24.9 | 52.1 | 109.7                                                     | 24.8     | 23.0 | 48.8 | 76     | 100 |
| 17         | Choolai              | 12306                                       | 11715    | 24021                     | 574    | 547                                     | 1121   | 23.9 | 22.8 | 46.7 | 104.9                                                     | 24.0     | 23.2 | 47.2 | 61     | 16  |
| 18         | Purasawalkam         | 10475                                       | 10181    | 20656                     | 519    | 490                                     | 1009   | 25.1 | 23.7 | 48.8 | 105.9                                                     | 23.8     | 23.1 | 46.9 | 54     | 19  |
| 19         | Vepery               | 10075                                       | 9224     | 19299                     | 398    | 380                                     | 778    | 20.6 | 19.7 | 40.3 | 104.7                                                     | 22.6     | 22.0 | 44.6 | 42     | 36  |
| 20         | Egmore               | 13870                                       | 11757    | 25627                     | 726    | 682                                     | 1408   | 28.3 | 26.6 | 54.9 | 106.5                                                     | 0.7      | 25.9 | 51.5 | 104    | 21  |
| 21         | Kilpauk              | 9667                                        | 8873     | 18540                     | 378    | 370                                     | 748    | 20.4 | 20.0 | 40.3 | 102.2                                                     | 20.3     | 20.0 | 40.3 | 51     | 13  |
| 22         | Nungambakam          | 11242                                       | 10402    | 21644                     | 478    | 455                                     | 933    | 22.1 | 21.0 | 43.1 | 105.1                                                     | 20.1     | 19.2 | 39.3 | 42     | 63  |
| 23         | Chindaripet          | 12259                                       | 11531    | 23790                     | 564    | 535                                     | 1099   | 23.7 | 22.5 | 46.2 | 105.4                                                     | 24.5     | 23.6 | 48.1 | 48     | 24  |
| 24         | Tiruvateeswararnpet. | 12556                                       | 11639    | 24195                     | 689    | 659                                     | 1348   | 28.5 | 27.3 | 55.7 | 104.6                                                     | 28.4     | 28.0 | 56.5 | 90     | 25  |
| 25         | Chepauk              | 7054                                        | 6223     | 13277                     | 368    | 330                                     | 698    | 27.7 | 24.9 | 52.6 | 111.5                                                     | 26.6     | 25.5 | 52.1 | 33     | 9   |
| 26         | Triplicane           | 8675                                        | 7831     | 16506                     | 341    | 311                                     | 652    | 20.7 | 18.8 | 39.5 | 119.0                                                     | 21.3     | 20.9 | 42.2 | 48     | 31  |
| 27         | Ameer Mahal          | 7591                                        | 7663     | 15254                     | 377    | 324                                     | 701    | 24.7 | 21.3 | 46.0 | 116.4                                                     | 26.9     | 25.0 | 52.0 | 49     | 12  |
| 28         | Mirashibpet          | 9286                                        | 9345     | 18631                     | 563    | 533                                     | 1096   | 30.3 | 28.6 | 58.8 | 105.6                                                     | 29.5     | 29.0 | 59.0 | 70     | 25  |
| 29         | Royayettah           | 11606                                       | 11167    | 22773                     | 514    | 461                                     | 975    | 22.6 | 20.2 | 42.8 | 111.5                                                     | 22.4     | 20.9 | 43.4 | 68     | 26  |
| 30         | Mylapore             | 9394                                        | 8464     | 17858                     | 315    | 305                                     | 620    | 17.6 | 17.1 | 34.7 | 103.3                                                     | 19.3     | 19.4 | 38.7 | 38     | 14  |
| Total      |                      | 277044                                      | 261747   | 538791                    | 11875  | 11249                                   | 23124  | 22.5 | 21.3 | 43.7 | 105.6                                                     | 22.6     | 21.6 | 44.2 | 1287   | 688 |

\* Included in the total number of Births shown in columns 4 and 10.

## Annual Form No. II.—Statement of Deaths by divisions during the year 1929.

| Divisions. | Districts.       | Area in acres. | 5                                           |          |        | 6                            |          | 7     | 8                                  |          |            |          |         |          |                |               |                        |               |                             |           |              | 9                 |     |        |          |        |
|------------|------------------|----------------|---------------------------------------------|----------|--------|------------------------------|----------|-------|------------------------------------|----------|------------|----------|---------|----------|----------------|---------------|------------------------|---------------|-----------------------------|-----------|--------------|-------------------|-----|--------|----------|--------|
|            |                  |                | Population according to the census of 1921. |          |        | Number of Deaths registered. |          |       | Deaths per 1000 of Population from |          |            |          |         |          |                |               |                        |               |                             |           |              | All Causes.       |     | Males. | Females. | Total. |
|            |                  |                | Males.                                      | Females. | Total. | Males.                       | Females. |       | Total.                             | Cholera. | Small-pox. | Measles. | Plague. | Malaria. | Enteric Fever. | Other fevers. | Dysentery & Diarrhoea. | Tuberculosis. | Other respiratory diseases. | Injuries. | Child Birth. | All Other Causes. |     |        |          |        |
| 1          | Royapuram        | 537            | 10400                                       | 10491    | 20891  | 385                          | 384      | 769   | 1003                               | 16       | 01         | 01       | 12      | 006      | 47             | 56            | 11                     | 63            | 03                          | 03        | 157          | 370               | 462 | 419    | 431      |        |
| 2          | Tondiarpet       | 464            | 8536                                        | 8363     | 16899  | 506                          | 534      | 1040  | 948                                | 09       | 02         | 02       | 15      | 006      | 85             | 93            | 18                     | 11            | 02                          | 02        | 260          | 593               | 663 | 661    | 662      |        |
| 3          | Wahermenpet      | 321            | 11992                                       | 11785    | 23777  | 581                          | 531      | 1112  | 1094                               | 04       | 04         | 04       | 26      | 01       | 32             | 62            | 26                     | 11            | 05                          | 06        | 194          | 485               | 516 | 541    | 525      |        |
| 4          | Korukupet        | 2093           | 8667                                        | 7973     | 16640  | 485                          | 438      | 923   | 1107                               | 11       | 01         | 01       | 08      | 02       | 38             | 97            | 41                     | 11            | 07                          | 05        | 215          | 560               | 504 | 583    | 562      |        |
| 5          | Harbour          | 114            | 5032                                        | 2256     | 7288   | 156                          | 137      | 293   | 1139                               | 01       | 01         | 01       | 08      | 03       | 26             | 37            | 08                     | 10            | 08                          | 03        | 87           | 310               | 383 | 736    | 493      |        |
| 6          | Muthialpet       | 986            | 9670                                        | 5961     | 15631  | 164                          | 172      | 336   | 953                                | 02       | 02         | 02       | 04      | 03       | 26             | 43            | 18                     | 08            | 09                          | 03        | 177          | 407               | 402 | 381    | 366      |        |
| 7          | Katchaleswarpet. | 112            | 7102                                        | 5953     | 13055  | 211                          | 212      | 423   | 995                                | 07       | 07         | 07       | 05      | 03       | 36             | 27            | 12                     | 09            | 06                          | 05        | 129          | 297               | 356 | 382    | 354      |        |
| 8          | Kothawal Bazaar  | 96             | 3120                                        | 1997     | 5117   | 97                           | 85       | 182   | 1141                               | 16       | 02         | 02       | 04      | 04       | 43             | 43            | 08                     | 06            | 04                          | 04        | 188          | 311               | 426 | 555    | 451      |        |
| 9          | Ammen Kovil      | 110            | 1438                                        | 7725     | 9163   | 326                          | 345      | 671   | 945                                | 12       | 02         | 02       | 10      | 03       | 46             | 32            | 31                     | 12            | 03                          | 08        | 155          | 303               | 447 | 520    | 451      |        |
| 10         | Seven Wells      | 123            | 1596                                        | 9880     | 11476  | 446                          | 399      | 845   | 1118                               | 06       | 02         | 02       | 17      | 04       | 37             | 43            | 53                     | 03            | 03                          | 04        | 168          | 458               | 439 | 531    | 565      |        |
| 11         | Sowcarpet        | 58             | 4283                                        | 3177     | 7460   | 124                          | 115      | 239   | 1078                               | 12       | 02         | 02       | 09      | 03       | 30             | 41            | 28                     | 08            | 01                          | 09        | 118          | 289               | 362 | 409    | 347      |        |
| 12         | Peddunacktenpet  | 155            | 8953                                        | 8622     | 17575  | 399                          | 423      | 822   | 943                                | 09       | 04         | 04       | 10      | 03       | 40             | 25            | 35                     | 12            | 03                          | 08        | 192          | 446               | 491 | 533    | 498      |        |
| 13         | Trevelyan Basin  | 114            | 8762                                        | 8510     | 17272  | 306                          | 349      | 655   | 819                                | 14       | 04         | 04       | 11      | 02       | 47             | 37            | 21                     | 10            | 03                          | 05        | 133          | 349               | 410 | 449    | 434      |        |
| 14         | Esplanade        | 139            | 1548                                        | 1116     | 2664   | 48                           | 50       | 98    | 960                                | 11       | 04         | 04       | 38      | 45       | 68             | 101           | 210                    | 176           | 109                         | 03        | 901          | 310               | 448 | 1138   | 1731     |        |
| 15         | Park Town        | 120            | 9588                                        | 7956     | 17544  | 287                          | 305      | 592   | 941                                | 13       | 03         | 03       | 06      | 01       | 37             | 23            | 14                     | 93            | 03                          | 03        | 145          | 299               | 383 | 337    | 359      |        |
| 16         | Perambur         | 2528           | 15492                                       | 13967    | 29459  | 697                          | 763      | 1460  | 913                                | 11       | 02         | 02       | 07      | 01       | 36             | 70            | 14                     | 158           | 05                          | 08        | 183          | 449               | 546 | 496    | 466      |        |
| 17         | Choolai          | 230            | 12306                                       | 11715    | 24021  | 541                          | 541      | 1082  | 1000                               | 16       | 04         | 04       | 25      | 01       | 05             | 85            | 30                     | 124           | 05                          | 06        | 152          | 439               | 462 | 450    | 468      |        |
| 18         | Purasawalkam     | 269            | 10475                                       | 10181    | 20656  | 471                          | 528      | 999   | 892                                | 18       | 05         | 05       | 22      | 01       | 07             | 100           | 39                     | 139           | 01                          | 03        | 152          | 449               | 518 | 484    | 424      |        |
| 19         | Vepery           | 450            | 10075                                       | 9224     | 19299  | 410                          | 382      | 792   | 1073                               | 10       | 02         | 02       | 18      | 02       | 19             | 50            | 26                     | 108           | 12                          | 05        | 159          | 407               | 414 | 410    | 427      |        |
| 20         | Egmore           | 698            | 13670                                       | 11757    | 25427  | 398                          | 469      | 867   | 849                                | 04       | 02         | 02       | 04      | 02       | 16             | 48            | 31                     | 75            | 03                          | 11        | 142          | 287               | 399 | 338    | 363      |        |
| 21         | Kilpauk          | 1099           | 9667                                        | 8873     | 18540  | 343                          | 326      | 669   | 1052                               | 09       | 02         | 02       | 02      | 03       | 13             | 67            | 23                     | 87            | 13                          | 03        | 139          | 355               | 367 | 361    | 387      |        |
| 22         | Nungambakam      | 1096           | 11242                                       | 10402    | 21644  | 337                          | 327      | 664   | 1031                               | 04       | 02         | 02       | 15      | 01       | 17             | 36            | 20                     | 80            | 03                          | 03        | 125          | 299               | 314 | 307    | 324      |        |
| 23         | Chintadripet     | 201            | 12259                                       | 11531    | 23790  | 497                          | 491      | 988   | 1012                               | 08       | 04         | 04       | 07      | 04       | 23             | 66            | 32                     | 103           | 02                          | 04        | 161          | 405               | 426 | 415    | 431      |        |
| 24         | Tiruvattewarpet. | 333            | 12556                                       | 11639    | 24195  | 577                          | 675      | 1252  | 855                                | 12       | 02         | 02       | 23      | 01       | 75             | 72            | 20                     | 83            | 02                          | 08        | 218          | 459               | 579 | 517    | 517      |        |
| 25         | Chepauk          | 705            | 7054                                        | 6223     | 13277  | 228                          | 251      | 479   | 908                                | 06       | 08         | 08       | 05      | 05       | 20             | 44            | 34                     | 78            | 05                          | 11        | 153          | 323               | 403 | 361    | 374      |        |
| 26         | Triplicane       | 168            | 8675                                        | 7831     | 16506  | 299                          | 267      | 566   | 1120                               | 07       | 03         | 03       | 03      | 07       | 20             | 45            | 27                     | 71            | 04                          | 07        | 150          | 345               | 349 | 343    | 355      |        |
| 27         | Amir Mahal       | 169            | 7591                                        | 7663     | 15254  | 438                          | 354      | 792   | 1237                               | 07       | 01         | 01       | 16      | 04       | 81             | 62            | 25                     | 84            | 03                          | 07        | 229          | 577               | 622 | 519    | 551      |        |
| 28         | Mirashibpet      | 680            | 9286                                        | 9345     | 18631  | 485                          | 471      | 956   | 1030                               | 19       | 02         | 02       | 12      | 02       | 26             | 105           | 24                     | 123           | 02                          | 05        | 188          | 522               | 504 | 514    | 536      |        |
| 29         | Royapettah       | 3115           | 11606                                       | 11167    | 22773  | 391                          | 404      | 795   | 968                                | 06       | 09         | 09       | 12      | 03       | 14             | 63            | 20                     | 82            | 05                          | 03        | 140          | 336               | 362 | 349    | 399      |        |
| 30         | Mylapore         | 1525           | 9394                                        | 8464     | 17858  | 343                          | 364      | 707   | 942                                | 06       | 02         | 02       | 12      | 01       | 20             | 82            | 23                     | 87            | 05                          | 04        | 153          | 365               | 431 | 396    | 358      |        |
| Total      |                  | 19728          | 227044                                      | 251747   | 528791 | 11264                        | 11151    | 22415 | 10170                              | 10       | 01         | 01       | 13      | 02       | 33             | 59            | 26                     | 101           | 05                          | 06        | 169          | 407               | 440 | 468    | 453      |        |

\* Includes 347 deaths in the Government General Hospital of patients admitted from Mofussil and destitutes.

## Annual Form No. III.—Deaths Registered by Divisions during each month of the year 1929.

| Divisions. | Districts.      | 3    |      |        |        |      |       |       |      |       |      |      |      | 4                                        |       |
|------------|-----------------|------|------|--------|--------|------|-------|-------|------|-------|------|------|------|------------------------------------------|-------|
|            |                 | Jan. | Feb. | March. | April. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. | Total deaths registered during the year. |       |
| 1          | Royapuram       | 85   | 66   | 58     | 57     | 61   | 49    | 64    | 50   | 70    | 68   | 69   | 72   | 769                                      | 769   |
| 2          | Tondiarpet      | 88   | 85   | 92     | 69     | 84   | 90    | 84    | 69   | 80    | 110  | 90   | 99   | 1040                                     | 1040  |
| 3          | Washermenpet    | 91   | 86   | 116    | 71     | 82   | 51    | 74    | 91   | 102   | 110  | 124  | 114  | 1112                                     | 1112  |
| 4          | Korukupet       | 70   | 73   | 111    | 96     | 71   | 58    | 58    | 61   | 70    | 81   | 79   | 95   | 923                                      | 923   |
| 5          | Harbour         | 26   | 26   | 26     | 18     | 14   | 20    | 20    | 20   | 24    | 28   | 37   | 34   | 293                                      | 293   |
| 6          | Muthialpet      | 24   | 22   | 33     | 16     | 34   | 25    | 21    | 29   | 33    | 26   | 33   | 40   | 336                                      | 336   |
| 7          | Katchaleswarpet | 38   | 29   | 35     | 41     | 32   | 32    | 38    | 30   | 32    | 31   | 47   | 38   | 423                                      | 423   |
| 8          | Kothawal Bazaar | 22   | 16   | 13     | 14     | 14   | 15    | 11    | 11   | 16    | 18   | 11   | 21   | 182                                      | 182   |
| 9          | Ammen Kovil     | 51   | 57   | 61     | 59     | 58   | 49    | 61    | 38   | 42    | 59   | 72   | 64   | 671                                      | 671   |
| 10         | Seven Wells     | 108  | 72   | 67     | 64     | 62   | 56    | 46    | 57   | 60    | 78   | 91   | 84   | 845                                      | 845   |
| 11         | Sowcarpet       | 22   | 27   | 22     | 17     | 18   | 11    | 17    | 23   | 31    | 16   | 21   | 14   | 239                                      | 239   |
| 12         | Peddunacktenpet | 70   | 63   | 82     | 48     | 44   | 38    | 60    | 52   | 73    | 80   | 90   | 78   | 822                                      | 822   |
| 13         | Trevelyan Basin | 86   | 61   | 65     | 47     | 44   | 38    | 62    | 33   | 50    | 66   | 61   | 48   | 655                                      | 655   |
| 14         | Esplanade       | 39   | 44   | 45     | 27     | 39   | 21    | 40    | 39   | 32    | 35   | 39   | 45   | 445                                      | 445   |
| 15         | Park Town       | 36   | 50   | 56     | 57     | 42   | 47    | 38    | 50   | 42    | 54   | 55   | 65   | 592                                      | 592   |
| 16         | Perambur        | 135  | 104  | 145    | 157    | 112  | 86    | 118   | 107  | 114   | 129  | 119  | 134  | 1460                                     | 1460  |
| 17         | Choolai         | 110  | 75   | 113    | 99     | 83   | 74    | 79    | 64   | 86    | 92   | 116  | 91   | 1082                                     | 1082  |
| 18         | Purasawalkam    | 105  | 85   | 91     | 84     | 84   | 69    | 71    | 60   | 70    | 86   | 95   | 101  | 999                                      | 999   |
| 19         | Vepery          | 77   | 64   | 52     | 57     | 64   | 67    | 63    | 61   | 67    | 66   | 79   | 79   | 792                                      | 792   |
| 20         | Egmore          | 86   | 66   | 52     | 72     | 67   | 84    | 69    | 85   | 69    | 66   | 68   | 83   | 867                                      | 867   |
| 21         | Kilpauk         | 69   | 72   | 45     | 56     | 49   | 42    | 55    | 61   | 56    | 59   | 55   | 50   | 669                                      | 669   |
| 22         | Nungambakam     | 49   | 38   | 50     | 61     | 58   | 38    | 53    | 46   | 47    | 64   | 83   | 77   | 664                                      | 664   |
| 23         | Chintadripet    | 91   | 71   | 72     | 117    | 91   | 78    | 116   | 75   | 69    | 83   | 92   | 88   | 988                                      | 988   |
| 24         | Tiruvattewarpet | 126  | 114  | 129    | 117    | 101  | 90    | 78    | 80   | 81    | 85   | 122  | 131  | 1252                                     | 1252  |
| 25         | Chepauk         | 35   | 40   | 36     | 32     | 44   | 45    | 38    | 36   | 37    | 49   | 47   | 46   | 479                                      | 479   |
| 26         | Triplicane      | 62   | 53   | 49     | 44     | 42   | 38    | 43    | 38   | 34    | 46   | 59   | 58   | 566                                      | 566   |
| 27         | Amir Mahal      | 59   | 73   | 61     | 67     | 64   | 67    | 72    | 47   | 67    | 63   | 82   | 70   | 792                                      | 792   |
| 28         | Mirashibpet     | 83   | 95   | 75     | 62     | 74   | 69    | 65    | 89   | 56    | 90   | 102  | 96   | 956                                      | 956   |
| 29         | Royapettah      | 74   | 67   | 65     | 55     | 45   | 58    | 58    | 59   | 70    | 69   | 84   | 91   | 795                                      | 795   |
| 30         | Mylapore        | 65   | 61   | 55     | 52     | 61   | 39    | 48    | 58   | 82    | 54   | 62   | 70   | 707                                      | 707   |
| Total      |                 | 2082 | 1855 | 1972   | 1788   | 1761 | 1561  | 1714  | 1619 | 1762  | 1941 | 2184 | 2176 | 22415                                    | 22415 |

Annual Form No. IV.—Deaths registered according to age by divisions during the year 1929.

| 1               | 2                   | 3              | 4        | 5                         | 6        | 7                           | 8        | 9                            | 10       | 11                           | 12       |                              |          |                              |          |                              |          |                              |          |                       |          |
|-----------------|---------------------|----------------|----------|---------------------------|----------|-----------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|------------------------------|----------|-----------------------|----------|
| Divisions.      | Districts.          | *Under 1 year. |          | 1 year and under 5 years. |          | 5 years and under 10 years. |          | 10 years and under 15 years. |          | 15 years and under 20 years. |          | 20 years and under 30 years. |          | 30 years and under 40 years. |          | 40 years and under 50 years. |          | 50 years and under 60 years. |          | 60 years and upwards. |          |
|                 |                     | Males.         | Females. | Males.                    | Females. | Males.                      | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                       | Females. | Males.                | Females. |
| 1               | Royapuram           | 122            | 114      | 80                        | 82       | 18                          | 26       | 8                            | 8        | 8                            | 8        | 13                           | 23       | 27                           | 18       | 22                           | 19       | 21                           | 10       | 53                    | 71       |
| 2               | Tondarpet           | 147            | 127      | 84                        | 103      | 31                          | 23       | 9                            | 7        | 13                           | 25       | 35                           | 54       | 41                           | 40       | 37                           | 21       | 31                           | 31       | 31                    | 103      |
| 3               | Washermenpet        | 151            | 139      | 117                       | 92       | 32                          | 31       | 17                           | 13       | 11                           | 16       | 42                           | 44       | 39                           | 39       | 38                           | 35       | 39                           | 26       | 95                    | 96       |
| 4               | Korukupet           | 133            | 107      | 76                        | 68       | 29                          | 25       | 10                           | 11       | 10                           | 16       | 41                           | 53       | 37                           | 35       | 31                           | 24       | 29                           | 18       | 89                    | 81       |
| 5               | Harbour             | 49             | 42       | 25                        | 18       | 9                           | 3        | 1                            | 1        | 4                            | 9        | 18                           | 18       | 12                           | 11       | 14                           | 7        | 7                            | 10       | 17                    | 18       |
| 6               | Muthialpet          | 40             | 46       | 22                        | 18       | 7                           | 4        | 8                            | 6        | 7                            | 10       | 13                           | 21       | 17                           | 24       | 13                           | 9        | 16                           | 11       | 21                    | 22       |
| 7               | Katchaleswarannpet  | 68             | 47       | 30                        | 38       | 12                          | 8        | 2                            | 2        | 2                            | 3        | 16                           | 29       | 11                           | 19       | 26                           | 8        | 12                           | 13       | 33                    | 40       |
| 8               | Kothawal Bazaar     | 20             | 25       | 10                        | 5        | 2                           | 2        | 3                            | 2        | 2                            | 3        | 14                           | 15       | 14                           | 12       | 11                           | 2        | 6                            | 4        | 15                    | 15       |
| 9               | Annen Koil          | 91             | 89       | 60                        | 49       | 13                          | 11       | 9                            | 9        | 17                           | 16       | 47                           | 50       | 68                           | 40       | 61                           | 21       | 26                           | 22       | 46                    | 62       |
| 10              | Seven Wells         | 70             | 72       | 43                        | 41       | 19                          | 25       | 10                           | 16       | 17                           | 16       | 28                           | 39       | 40                           | 40       | 61                           | 32       | 42                           | 40       | 69                    | 67       |
| 11              | Sowcarpet           | 20             | 21       | 12                        | 19       | 3                           | 5        | 4                            | 1        | 5                            | 4        | 20                           | 13       | 13                           | 12       | 13                           | 12       | 13                           | 8        | 21                    | 20       |
| 12              | Peddunakkenpet      | 126            | 113      | 59                        | 63       | 12                          | 16       | 5                            | 10       | 9                            | 12       | 33                           | 41       | 23                           | 39       | 30                           | 23       | 23                           | 22       | 74                    | 78       |
| 13              | Trevelyan Basin     | 85             | 88       | 62                        | 53       | 12                          | 16       | 5                            | 10       | 9                            | 13       | 34                           | 34       | 26                           | 19       | 20                           | 28       | 16                           | 19       | 37                    | 69       |
| 14              | Esplanade           | 19             | 18       | 10                        | 10       | 5                           | 6        | 14                           | 5        | 17                           | 5        | 60                           | 14       | 82                           | 17       | 50                           | 15       | 37                           | 4        | 32                    | 15       |
| 15              | Park Town           | 80             | 73       | 58                        | 57       | 16                          | 8        | 6                            | 5        | 9                            | 15       | 9                            | 30       | 25                           | 25       | 26                           | 15       | 22                           | 17       | 36                    | 60       |
| 16              | Perambur            | 214            | 222      | 150                       | 168      | 54                          | 42       | 13                           | 21       | 13                           | 24       | 42                           | 55       | 35                           | 42       | 36                           | 28       | 46                           | 35       | 94                    | 126      |
| 17              | Choolai             | 170            | 154      | 104                       | 109      | 18                          | 19       | 10                           | 10       | 11                           | 19       | 44                           | 42       | 35                           | 26       | 28                           | 35       | 32                           | 27       | 89                    | 100      |
| 18              | Purasawalkam        | 124            | 127      | 96                        | 103      | 31                          | 26       | 5                            | 7        | 9                            | 15       | 29                           | 58       | 33                           | 37       | 31                           | 33       | 29                           | 21       | 84                    | 101      |
| 19              | Vepery              | 96             | 111      | 61                        | 55       | 26                          | 25       | 6                            | 15       | 7                            | 13       | 39                           | 32       | 30                           | 26       | 31                           | 23       | 34                           | 19       | 80                    | 64       |
| 20              | Egmore              | 138            | 131      | 64                        | 70       | 9                           | 21       | 7                            | 10       | 8                            | 28       | 28                           | 55       | 26                           | 46       | 32                           | 29       | 20                           | 18       | 66                    | 61       |
| 21              | Kilpauk             | 88             | 79       | 53                        | 54       | 12                          | 14       | 7                            | 10       | 12                           | 17       | 29                           | 27       | 33                           | 26       | 31                           | 24       | 29                           | 22       | 49                    | 53       |
| 22              | Nungambakam         | 103            | 88       | 55                        | 58       | 12                          | 13       | 2                            | 4        | 8                            | 10       | 29                           | 28       | 32                           | 22       | 24                           | 16       | 15                           | 12       | 66                    | 76       |
| 23              | Chintadripet        | 167            | 117      | 81                        | 96       | 17                          | 23       | 6                            | 9        | 12                           | 24       | 32                           | 56       | 31                           | 31       | 32                           | 28       | 25                           | 25       | 91                    | 82       |
| 24              | Tiruvateeswarannpet | 156            | 180      | 103                       | 130      | 28                          | 39       | 8                            | 13       | 7                            | 43       | 42                           | 47       | 36                           | 41       | 53                           | 32       | 30                           | 35       | 114                   | 115      |
| 25              | Chepauk             | 57             | 59       | 41                        | 36       | 9                           | 11       | 4                            | 3        | 7                            | 6        | 21                           | 33       | 16                           | 24       | 17                           | 12       | 16                           | 10       | 40                    | 57       |
| 26              | Triplicane          | 83             | 64       | 51                        | 42       | 11                          | 12       | 8                            | 6        | 11                           | 13       | 20                           | 30       | 22                           | 28       | 20                           | 17       | 12                           | 12       | 56                    | 47       |
| 27              | Amir Mahal          | 122            | 91       | 73                        | 59       | 16                          | 16       | 9                            | 6        | 9                            | 13       | 39                           | 42       | 32                           | 26       | 28                           | 17       | 36                           | 20       | 74                    | 64       |
| 28              | Mirashibpet         | 136            | 122      | 105                       | 112      | 27                          | 27       | 6                            | 11       | 11                           | 17       | 36                           | 40       | 27                           | 30       | 30                           | 29       | 37                           | 24       | 70                    | 59       |
| 29              | Royapettah          | 106            | 85       | 60                        | 88       | 18                          | 23       | 10                           | 10       | 11                           | 12       | 34                           | 28       | 22                           | 25       | 26                           | 22       | 21                           | 16       | 83                    | 95       |
| 30              | Mylapore            | 107            | 94       | 57                        | 77       | 19                          | 13       | 6                            | 7        | 6                            | 12       | 30                           | 23       | 28                           | 29       | 18                           | 18       | 24                           | 21       | 48                    | 70       |
| Total           |                     | 3088           | 2845     | 1902                      | 1973     | 537                         | 538      | 223                          | 254      | 273                          | 440      | 921                          | 1074     | 893                          | 834      | 853                          | 634      | 754                          | 572      | 1820                  | 1987     |
| Ratio per 1,000 |                     | *260.0         | 252.9    | 83.5                      | 94.5     | 19.0                        | 18.9     | 8.1                          | 10.5     | 11.0                         | 17.4     | 16.1                         | 19.6     | 18.7                         | 21.8     | 26.1                         | 24.0     | 40.0                         | 35.8     | 138.5                 | 173.4    |

\* In the case of children under one year of age, the ratios are calculated on live births during the year, in all other cases on the number living at the time of the census of 1921.

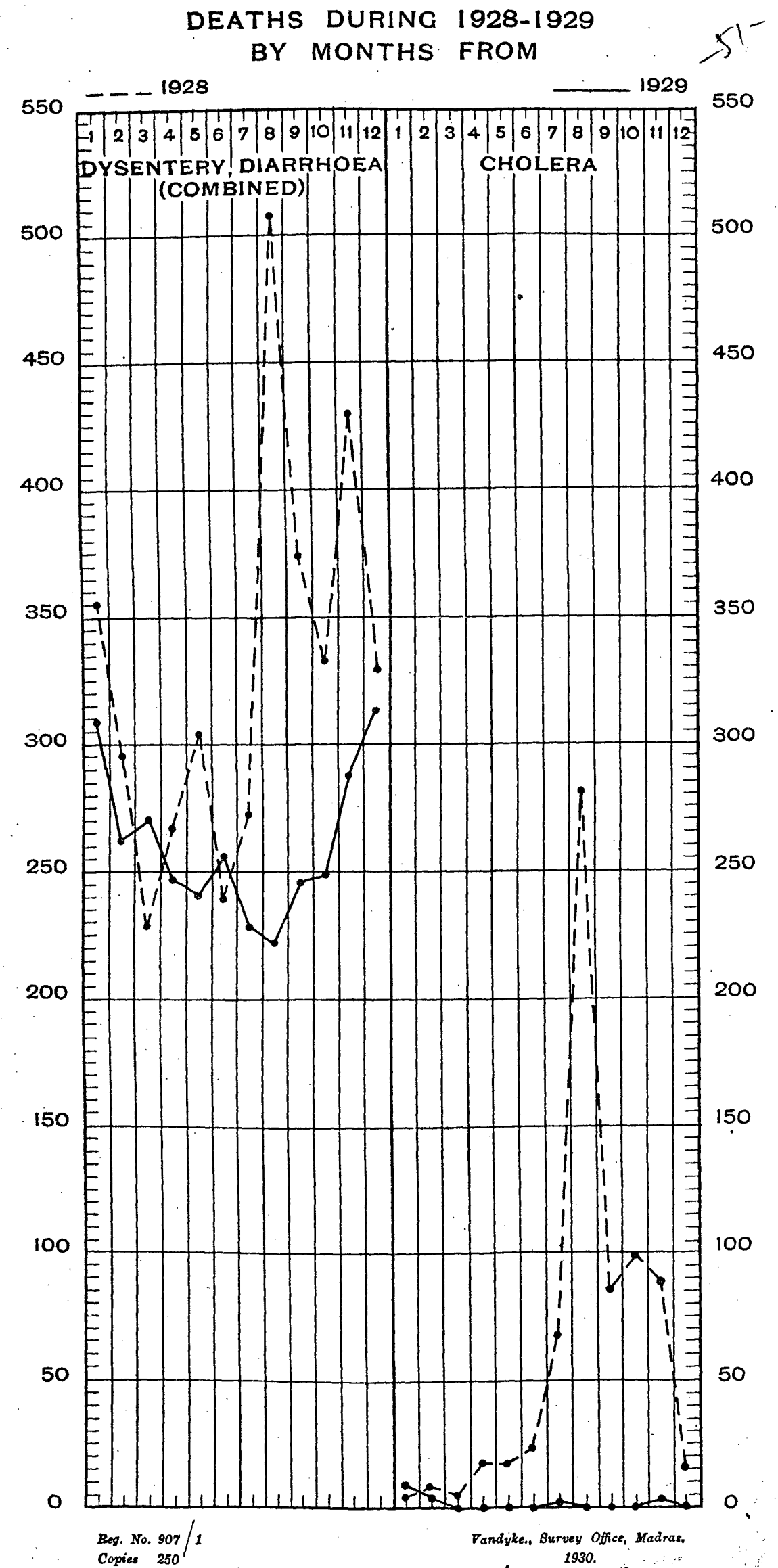
Annual Form No. V.—Deaths registered according to class by divisions during the year 1929.

| 1                                 | 2                   | 3                            | 4       | 5           |                                         |             |         |             |         |        |       |      |      |      |
|-----------------------------------|---------------------|------------------------------|---------|-------------|-----------------------------------------|-------------|---------|-------------|---------|--------|-------|------|------|------|
| Population as per census of 1921. |                     | Number of deaths registered. |         |             | Ratio of deaths per-1000 of population. |             |         |             |         |        |       |      |      |      |
| Divisions.                        | Districts.          | Christians.                  | Hindus. | Mahomedans. | Others.                                 | Christians. | Hindus. | Mahomedans. | Others. | Total. |       |      |      |      |
| 1                                 | Royapuram           | 5612                         | 14269   | 806         | 117                                     | 20891       | 160     | 545.        | 64      | 769    | 285   | 382  | 71.4 | 368  |
| 2                                 | Tondiarpet          | 363                          | 15183   | 1346        | 7                                       | 16899       | 24      | 909         | 107     | 1040   | 66.1  | 59.9 | 79.5 | 61.5 |
| 3                                 | Washermenpet        | 1197                         | 21184   | 1427        | 5                                       | 23777       | 21      | 1029        | 62      | 1112   | 17.5  | 48.6 | 43.4 | 46.8 |
| 4                                 | Korukupet           | 377                          | 13844   | 2395        | 24                                      | 16640       | 16      | 765         | 142     | 923    | 42.4  | 55.3 | 59.3 | 55.4 |
| 5                                 | Harbour             | 355                          | 3875    | 2954        | 104                                     | 7288        | 6       | 129         | 158     | 293    | 16.9  | 33.3 | 53.5 | 40.2 |
| 6                                 | Muthialpet          | 1103                         | 12349   | 2179        | ...                                     | 15631       | 6       | 308         | 22      | 236    | 5.4   | 24.9 | 10.1 | 21.5 |
| 7                                 | Katchaleswarannpet  | 1859                         | 10259   | 879         | 58                                      | 13055       | 46      | 350         | 27      | 423    | 24.7  | 34.1 | 30.7 | 32.4 |
| 8                                 | Kothawal Bazaar     | 190                          | 3243    | 951         | 33                                      | 5117        | 1       | 171         | 10      | 182    | 5.3   | 32.7 | 10.5 | 35.6 |
| 9                                 | Annen Koil          | 1977                         | 11149   | 2627        | 67                                      | 15820       | 59      | 488         | 124     | 671    | 29.8  | 43.8 | 47.2 | 42.4 |
| 10                                | Seven Wells         | 1410                         | 17267   | 931         | 80                                      | 19628       | 38      | 763         | 44      | 845    | 27.0  | 44.3 | 47.3 | 43.1 |
| 11                                | Sowcarpet           | 10                           | 7058    | 41          | 353                                     | 7460        | ...     | 239         | ...     | 239    | ...   | 33.9 | ...  | 32.0 |
| 12                                | Peddunakkenpet      | 30                           | 17261   | 247         | 37                                      | 17575       | 1       | 819         | 2       | 822    | ...   | 47.4 | 8.1  | 46.8 |
| 13                                | Trevelyan Basin     | 23                           | 17082   | 112         | 105                                     | 17272       | ...     | 652         | 3       | 655    | ...   | 32.3 | 26.8 | 37.9 |
| 14                                | Esplanade           | 12                           | 2480    | 100         | 72                                      | 2664        | 4       | 90          | 4       | 98     | 333.3 | 56.3 | 40.0 | 36.8 |
| 15                                | Park Town           | 851                          | 16372   | 262         | 59                                      | 17544       | * 47    | * 285       | * 15    | * 347  | 11.8  | 35.4 | 67.6 | 33.7 |
| 16                                | Perambur            | 1085                         | 22457   | 5722        | 95                                      | 29459       | 49      | 1050        | 361     | 592    | 45.2  | 46.8 | 63.1 | 49.6 |
| 17                                | Choolai             | 1410                         | 22167   | 437         | 7                                       | 24021       | 34      | 1029        | 19      | 1032   | 24.1  | 46.4 | 43.5 | 45.0 |
| 18                                | Purasawalkam        | 3088                         | 17146   | 382         | 40                                      | 20656       | 119     | 870         | 10      | 999    | 38.7  | 50.7 | 26.2 | 48.4 |
| 19                                | Vepery              | 3584                         | 14245   | 1408        | 62                                      | 19299       | 112     | 619         | 61      | 792    | 31.3  | 43.5 | 43.3 | 41.0 |
| 20                                | Egmore              | 4582                         | 18682   | 2238        | 125                                     | 25627       | 120     | 650         | 97      | 867    | 26.2  | 34.8 | 4.4  | 33.8 |
| 21                                | Kilpauk             | 2504                         | 15534   | 471         | 31                                      | 18540       | 66      | 579         | 24      | 669    | 26.4  | 37.3 | 51.0 | 36.1 |
| 22                                | Nungambakam         | 3045                         | 18944   | 1524        | 131                                     | 21644       | 76      | 537         | 51      | 684    | 25.0  | 31.7 | 33.5 | 30.7 |
| 23                                | Chintadripet        | 2011                         | 20726   | 990         | 63                                      | 23790       | 67      | 890         | 31      | 988    | 33.3  | 43.4 | 31.3 | 41.5 |
| 24                                | Tiruvateeswarannpet | 776                          | 15249   | 8115        | 55                                      | 24195       | 23      | 791         | 438     | 1252   | 29.6  | 51.9 | 53.9 | 51.7 |
| 25                                | Chepauk             | 412                          | 8661    | 3004        | ...                                     | 13277       | 4       | 328         | 147     | 479    | 9.7   | 33.3 | 48.9 | 36.1 |
| 26                                | Triplicane          | 50                           | 16060   | 383         | 13                                      | 16506       | 2       | 552         | 12      | 566    | 40.0  | 34.4 | 39.2 | 34.3 |
| 27                                | Amir Mahal          | 536                          | 8956    | 5752        | 13                                      | 15254       | 20      | 449         | 323     | 792    | 37.3  | 50.1 | 56.2 | 51.9 |
| 28                                | Mirashibpet         | 1146                         | 13988   | 3452        | 45                                      | 18631       | 28      | 730         | 198     | 956    | 24.4  | 52.2 | 57.4 | 51.4 |
| 29                                | Royapettah          | 1891                         | 19324   | 1455        | 73                                      | 22773       | 35      | 706         | 54      | 795    | 18.5  | 36.6 | 36.4 | 34.9 |
| 30                                | Mylapore            | 2671                         | 14640   | 528         | 19                                      | 17858       | 92      | 573         | 42      | 707    | 34.4  | 39.1 | 79.5 | 39.6 |
| Total                             |                     | 44160                        | 429155  | 53586       | 1890                                    | 528791      | 1286    | 18475       | 2654    | 22415  | 29.1  | 43.0 | 49.5 | 42.4 |

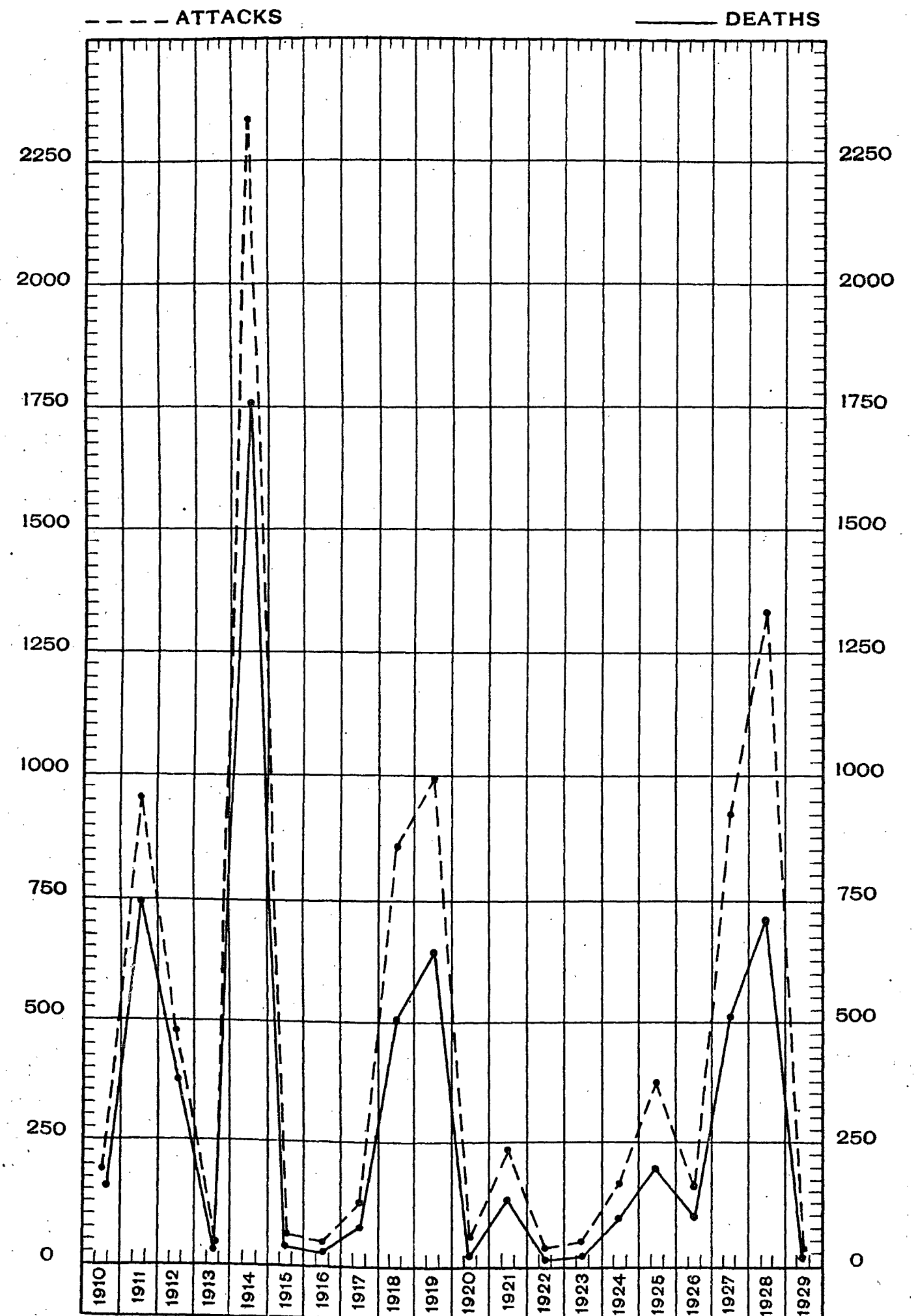
\* Includes 347 deaths in the Government General Hospital of patients admitted from Mofussil and destitutes.

Annual Form No. VI.—Deaths registered from 'CHOLERA' by divisions during each month of the year 1929.

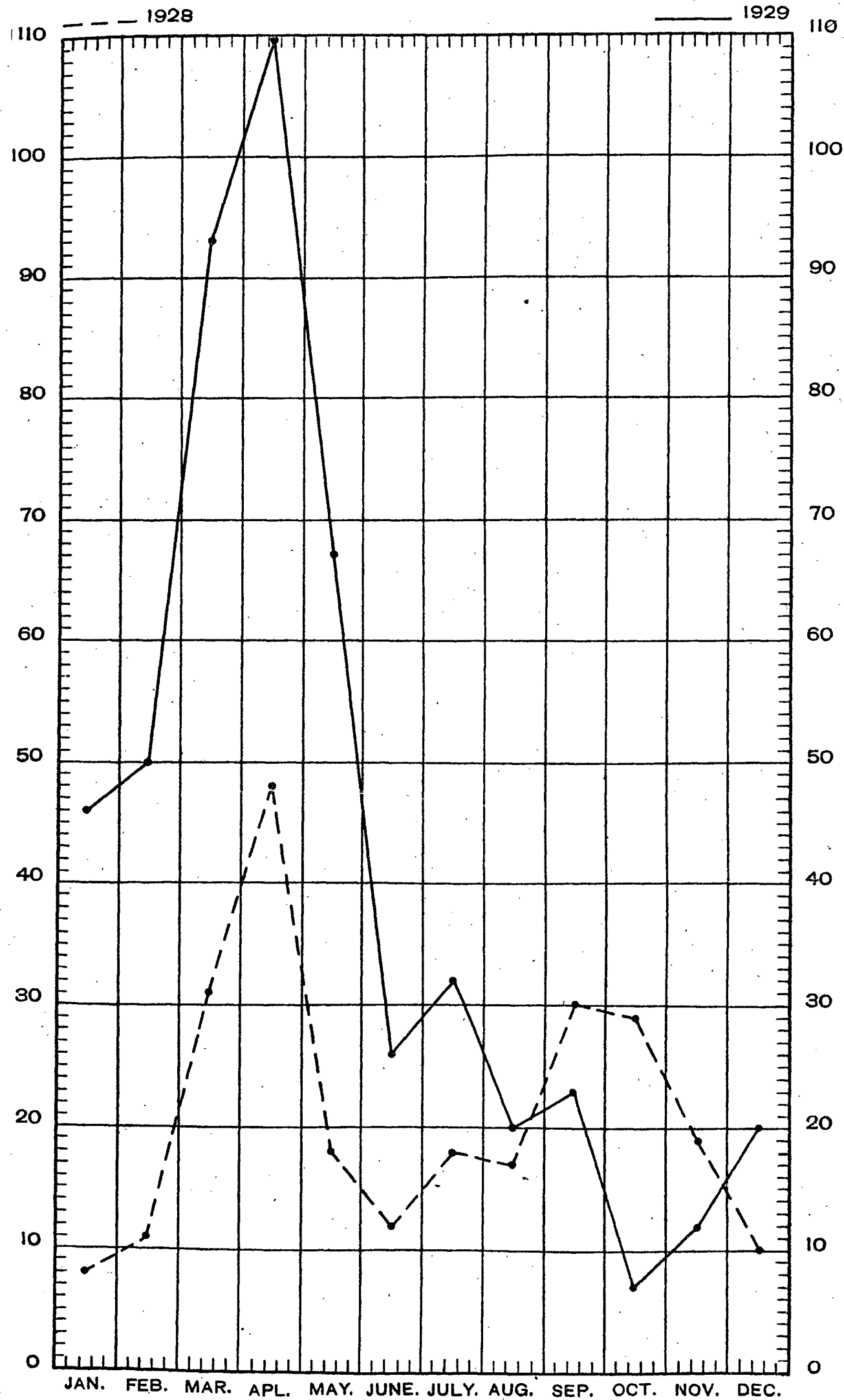
| Divisions. | Districts.         | 3      |          |        |                                         |          |        |        |          |        |                                         |          |        | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | 4    |      |     | 5 |  |  | Mean ratio per 1000 during previous five years. |
|------------|--------------------|--------|----------|--------|-----------------------------------------|----------|--------|--------|----------|--------|-----------------------------------------|----------|--------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|------|------|-----|---|--|--|-------------------------------------------------|
|            |                    | Total. |          |        | Ratio of deaths per 1000 of population. |          |        | Total. |          |        | Ratio of deaths per 1000 of population. |          |        |          |           |        |        |      |       |       |         |            |          |           |           |      |      |     |   |  |  |                                                 |
|            |                    | Males. | Females. | Total. | Males.                                  | Females. | Total. | Males. | Females. | Total. | Males.                                  | Females. | Total. |          |           |        |        |      |       |       |         |            |          |           |           |      |      |     |   |  |  |                                                 |
| 1          | Royapuram          | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.6 |   |  |  |                                                 |
| 2          | Tondiarpet         | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.9 |   |  |  |                                                 |
| 3          | Washermenpet       | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.7 |   |  |  |                                                 |
| 4          | Korukupet          | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 1.3 |   |  |  |                                                 |
| 5          | Harbour            | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.7 |   |  |  |                                                 |
| 6          | Muthialpet         | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.3 |   |  |  |                                                 |
| 7          | Katchaleswaranpet  | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.6 |   |  |  |                                                 |
| 8          | Kothawal Bazaar    | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.3 |   |  |  |                                                 |
| 9          | Ammen Coll.        | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.7 |   |  |  |                                                 |
| 10         | Seven Wells        | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.1 |   |  |  |                                                 |
| 11         | Sowcarpet          | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.6 |   |  |  |                                                 |
| 12         | Peddunackanpet     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.3 |   |  |  |                                                 |
| 13         | Trevelyan Basin    | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 1.5 |   |  |  |                                                 |
| 14         | Esplanade          | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.4 |   |  |  |                                                 |
| 15         | Park Town          | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.7 |   |  |  |                                                 |
| 16         | Perambur           | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.4 |   |  |  |                                                 |
| 17         | Choolai            | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.7 |   |  |  |                                                 |
| 18         | Purasawalkam       | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.1 |   |  |  |                                                 |
| 19         | Vepery             | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.6 |   |  |  |                                                 |
| 20         | Egmore             | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.5 |   |  |  |                                                 |
| 21         | Kilpauk            | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.5 |   |  |  |                                                 |
| 22         | Nungambakam        | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.6 |   |  |  |                                                 |
| 23         | Chintadripet       | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.3 |   |  |  |                                                 |
| 24         | Tiruvateeswaranpet | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.5 |   |  |  |                                                 |
| 25         | Chepauk            | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.4 |   |  |  |                                                 |
| 26         | Triplicane         | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.7 |   |  |  |                                                 |
| 27         | Amir Mahal         | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.7 |   |  |  |                                                 |
| 28         | Mirshahpet         | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 1.3 |   |  |  |                                                 |
| 29         | Royapettah         | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.6 |   |  |  |                                                 |
| 30         | Mylapore           | ..     | ..       | ..     | ..                                      | ..       | ..     | ..     | ..       | ..     | ..                                      | ..       | ..     | ..       | ..        | ..     | ..     | ..   | ..    | ..    | ..      | ..         | ..       | ..        | ..        | ..   | ..   | 0.3 |   |  |  |                                                 |
| Total      |                    | 9      | 4        | 16     | 6                                       | 10       | 6      | 16     | 0.04     | 0.02   | 0.03                                    | 0.02     | 0.03   | 0.02     | 0.03      | 0.03   | 0.04   | 0.02 | 0.03  | 0.02  | 0.03    | 0.02       | 0.03     | 0.02      | 0.03      | 0.02 | 0.03 | 0.6 |   |  |  |                                                 |



52  
ATTACKS & DEATHS FROM  
CHOLERA. 1910-1929



# DEATHS FROM SMALL-POX BY MONTHS IN 1928 & 1929



Reg. No. 907/4  
Copies 250

Vandiyke, Survey Office, Madras.  
1930.

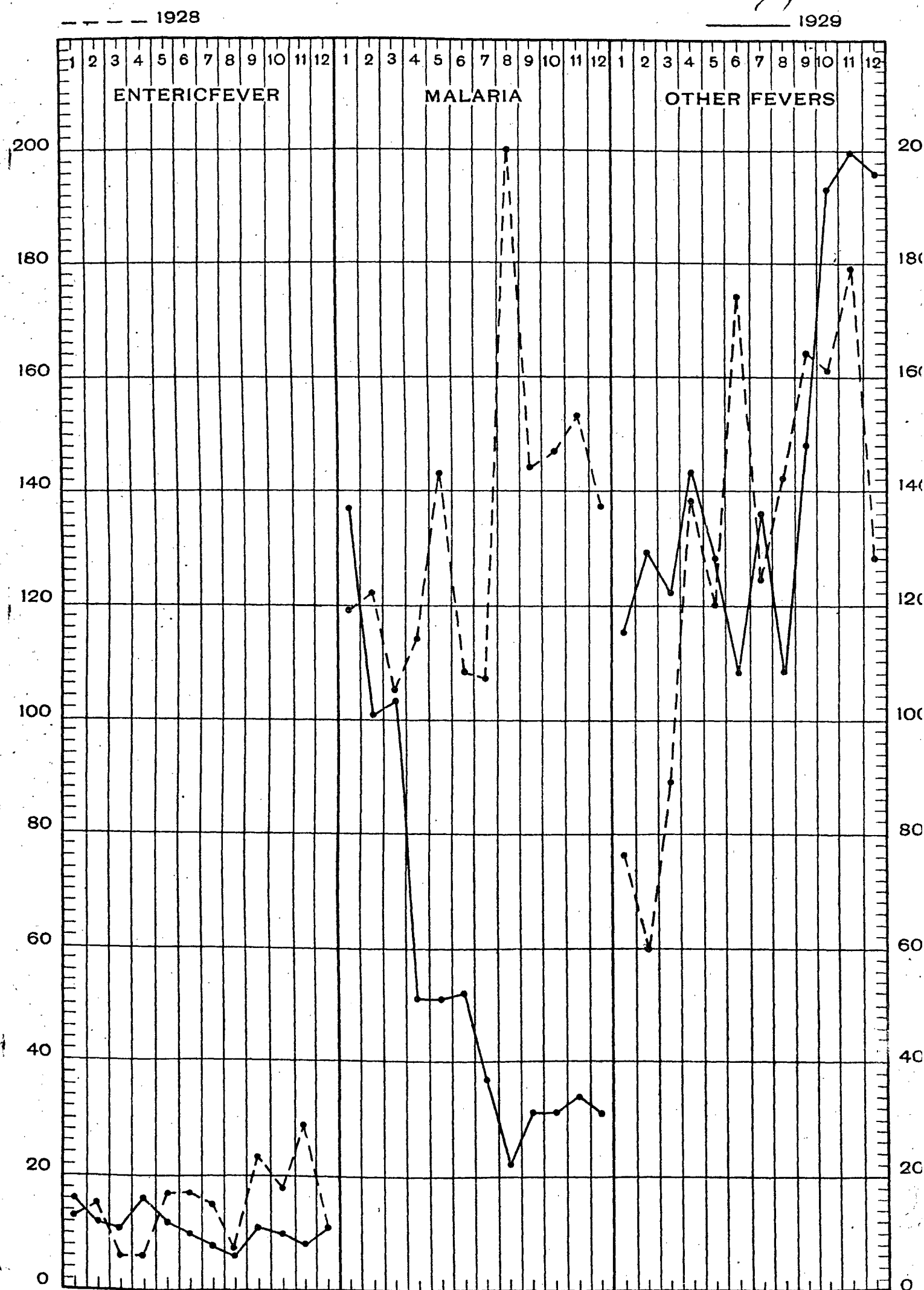
Annual Form No. VII.—Deaths registered from 'SMALL-POX' by divisions during each month of the year 1929.

| 1         | 2                 | 3        |           |        | 4      |      | 5     |       | 6       |            |          |           |           |        |          |                                         |          |                                        |        |
|-----------|-------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------|----------|-----------------------------------------|----------|----------------------------------------|--------|
| Division. | Districts.        | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Total. |          | Ratio of deaths per 1000 of population. |          | Mean ratio per 1000 during five years. |        |
|           |                   |          |           |        |        |      |       |       |         |            |          |           |           | Males. | Females. | Males.                                  | Females. |                                        | Total. |
| 1         | Royapuram         | 10       | 6         | 8      | 2      | 4    | 2     | 1     | 2       | 1          | 1        | 1         | 1         | 17     | 16       | 33                                      | 1.6      | 0.7                                    |        |
| 2         | Tondiarpet        | ...      | 2         | 1      | 4      | 4    | ...   | 2     | 2       | ...        | ...      | 1         | ...       | 11     | 5        | 16                                      | 0.9      | 0.6                                    |        |
| 3         | Washermenpet      | ...      | ...       | 3      | 4      | 2    | 3     | ...   | 1       | 2          | ...      | ...       | ...       | 6      | 4        | 10                                      | 0.4      | 0.5                                    |        |
| 4         | Korukupet         | ...      | 1         | 1      | 5      | 2    | ...   | 1     | 1       | 2          | ...      | ...       | ...       | 9      | 9        | 18                                      | 1.3      | 0.5                                    |        |
| 5         | Harbour           | ...      | ...       | ...    | ...    | ...  | ...   | ...   | 1       | ...        | ...      | ...       | ...       | ...    | 1        | 1                                       | 1        | 0.4                                    | 1.0    |
| 6         | Muthialpet        | ...      | ...       | 1      | ...    | ...  | ...   | ...   | 2       | ...        | ...      | ...       | ...       | 2      | 1        | 3                                       | 0.2      | 0.5                                    |        |
| 7         | Katchaleswarpet   | ...      | ...       | ...    | 1      | 2    | 2     | 4     | 1       | ...        | ...      | ...       | 1         | 1      | 8        | 9                                       | 1.3      | 0.7                                    |        |
| 8         | Kothawal Bazaar   | ...      | 1         | 1      | ...    | ...  | 2     | ...   | ...     | 1          | ...      | ...       | ...       | 6      | 2        | 8                                       | 0.1      | 0.8                                    |        |
| 9         | Ammen Coll        | ...      | 1         | 1      | ...    | 7    | 5     | 1     | 1       | 1          | 1        | ...       | ...       | 11     | 8        | 19                                      | 1.4      | 0.9                                    |        |
| 10        | Seven Wells       | ...      | 2         | 1      | ...    | 2    | ...   | ...   | ...     | ...        | ...      | ...       | ...       | 6      | 5        | 11                                      | 0.6      | 0.4                                    |        |
| 11        | Sowcarpet         | ...      | 1         | 5      | ...    | 1    | ...   | ...   | 1       | 1          | ...      | ...       | ...       | 6      | 3        | 9                                       | 1.4      | 0.5                                    |        |
| 12        | Peddunackentpet   | ...      | ...       | 1      | 1      | 2    | 1     | 3     | 2       | 1          | ...      | 2         | 2         | 7      | 9        | 16                                      | 0.8      | 0.4                                    |        |
| 13        | Trevelyan Basin   | ...      | 4         | 4      | 3      | 1    | 1     | 2     | ...     | 1          | 1        | 1         | ...       | 15     | 10       | 25                                      | 1.7      | 0.3                                    |        |
| 14        | Esplanade         | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | 3          | ...      | ...       | ...       | 3      | 3        | 3                                       | 1.9      | 0.4                                    |        |
| 15        | Park Town         | ...      | ...       | 6      | 3      | ...  | ...   | 3     | ...     | 3          | 1        | 2         | 2         | 7      | 15       | 22                                      | 0.7      | 0.3                                    |        |
| 16        | Petambur          | ...      | 2         | 7      | 12     | 6    | 3     | ...   | 1       | 1          | 1        | 3         | ...       | 11     | 22       | 33                                      | 1.6      | 0.5                                    |        |
| 17        | Choolai           | ...      | 2         | 10     | 10     | 9    | 1     | 2     | 2       | 1          | ...      | ...       | ...       | 15     | 24       | 39                                      | 1.2      | 0.4                                    |        |
| 18        | Purasawalkam      | ...      | 3         | 12     | 14     | 4    | 4     | 1     | ...     | ...        | ...      | ...       | ...       | 19     | 18       | 37                                      | 1.8      | 0.4                                    |        |
| 19        | Vepery            | ...      | 2         | 5      | 3      | 1    | ...   | 2     | ...     | 2          | 1        | ...       | 3         | 12     | 20       | 1.2                                     | 0.9      | 0.4                                    |        |
| 20        | Egmore            | ...      | 3         | ...    | 2      | ...  | ...   | 1     | ...     | ...        | ...      | ...       | ...       | 4      | 5        | 9                                       | 0.3      | 0.1                                    |        |
| 21        | Kilpauk           | ...      | 2         | 4      | 5      | 1    | ...   | 1     | ...     | ...        | ...      | ...       | 1         | 11     | 6        | 17                                      | 1.1      | 0.4                                    |        |
| 22        | Nungambakam       | ...      | 3         | 4      | 4      | ...  | ...   | 1     | ...     | ...        | ...      | ...       | ...       | 3      | 5        | 8                                       | 0.3      | 0.2                                    |        |
| 23        | Chintadripet      | ...      | 2         | 1      | 4      | 3    | 1     | 5     | 2       | ...        | 1        | ...       | 2         | 10     | 10       | 20                                      | 0.8      | 0.04                                   |        |
| 24        | Tiruvatteeswarpet | ...      | 4         | 7      | 14     | 2    | 1     | ...   | 1       | ...        | ...      | ...       | 1         | 14     | 16       | 30                                      | 1.1      | 0.7                                    |        |
| 25        | Chepauk           | ...      | ...       | 1      | 4      | 2    | ...   | ...   | 1       | ...        | ...      | ...       | ...       | 5      | 5        | 8                                       | 0.4      | 0.4                                    |        |
| 26        | Triplacane        | ...      | 3         | 1      | 2      | 2    | ...   | ...   | ...     | ...        | ...      | ...       | ...       | 3      | 6        | 11                                      | 0.6      | 0.6                                    |        |
| 27        | Amir Mahal        | ...      | 3         | 1      | 2      | 1    | ...   | ...   | ...     | 1          | ...      | ...       | ...       | 5      | 5        | 10                                      | 0.7      | 0.7                                    |        |
| 28        | Mirshahibpet      | ...      | 4         | 4      | 6      | 6    | 3     | 2     | 4       | 1          | 1        | ...       | 1         | 17     | 19       | 36                                      | 2.0      | 1.0                                    |        |
| 29        | Royapettah        | ...      | 1         | 4      | 5      | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | 6      | 8        | 14                                      | 0.5      | 0.4                                    |        |
| 30        | Mylapore          | ...      | ...       | ...    | 1      | 3    | 1     | 1     | ...     | 3          | 1        | ...       | 1         | 5      | 6        | 11                                      | 0.7      | 0.8                                    |        |
| Total     |                   | 46       | 50        | 93     | 110    | 67   | 26    | 32    | 20      | 23         | 7        | 12        | 20        | 247    | 259      | 506                                     | 0.9      | 1.0                                    | 0.5    |

Annual Form No. XI—Deaths registered from "ENTERIC FEVER" by Divisions during each month of the year 1929.

| 1          |                   | 2        |           | 3      |        | 4    |       | 5     |         | 6          |          |           |           |        |          |                                         |     |                                        |
|------------|-------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------|----------|-----------------------------------------|-----|----------------------------------------|
| Divisions. | Districts.        | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Total. |          | Ratio of deaths per 1000 of population. |     | Mean ratio per 1000 during five years. |
|            |                   | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Males. | Females. | Total.                                  |     |                                        |
| 1          | Royapuram         | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 1        | ...                                     | 0.1 | 0.2                                    |
| 2          | Tondiarpet        | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 3        | ...                                     | 0.1 | 0.1                                    |
| 3          | Washermanpet      | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 3        | ...                                     | 0.2 | 0.1                                    |
| 4          | Korukupet         | 2        | ...       | ...    | ...    | ...  | ...   | ...   | ...     | 2          | ...      | ...       | ...       | ...    | 1        | ...                                     | 0.1 | 0.1                                    |
| 5          | Harbour           | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | ...      | ...                                     | 0.2 | 0.1                                    |
| 6          | Muthialpet        | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | ...      | ...                                     | ... | 0.3                                    |
| 7          | Katchaleswarpet   | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | ...      | ...                                     | ... | 0.3                                    |
| 8          | Kothawal Bazaar   | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | ...      | ...                                     | ... | 0.2                                    |
| 9          | Ammen Coil        | 2        | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 2        | ...                                     | 0.3 | 0.2                                    |
| 10         | Seven Wells       | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 5        | ...                                     | 0.4 | 0.2                                    |
| 11         | Sowcarpet         | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 8        | ...                                     | 0.7 | 0.3                                    |
| 12         | Peddunaickenpet   | 3        | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 2        | ...                                     | 0.2 | 0.3                                    |
| 13         | Trevelyan Basin   | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 6        | ...                                     | 0.2 | 0.3                                    |
| 14         | Esplanade         | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 4        | ...                                     | 0.3 | 0.2                                    |
| 15         | Park Town         | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 1        | ...                                     | 0.6 | 3.4                                    |
| 16         | Perambur          | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 2        | ...                                     | 0.1 | 0.3                                    |
| 17         | Choolai           | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 4        | ...                                     | 0.2 | 0.1                                    |
| 18         | Purasawalkam      | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 3        | ...                                     | 0.2 | 0.2                                    |
| 19         | Vepery            | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 3        | ...                                     | 0.3 | 0.2                                    |
| 20         | Egmore            | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 2        | ...                                     | 0.2 | 0.3                                    |
| 21         | Kilpauk           | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 6        | ...                                     | 0.1 | 0.4                                    |
| 22         | Nungambakkam      | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 6        | ...                                     | 0.5 | 0.3                                    |
| 23         | Chintadripet      | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 2        | ...                                     | 0.2 | 0.1                                    |
| 24         | Thiruvatteswarpet | 3        | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 9        | ...                                     | 0.3 | 0.3                                    |
| 25         | Chepauk           | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 2        | ...                                     | 0.2 | 0.2                                    |
| 26         | Triplacane        | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 5        | ...                                     | 0.3 | 0.3                                    |
| 27         | Amir Mahal        | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 4        | ...                                     | 0.4 | 0.2                                    |
| 28         | Mirashibpet       | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 7        | ...                                     | 0.6 | 0.3                                    |
| 29         | Royapettah        | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 11       | ...                                     | 1.2 | 0.4                                    |
| 30         | Mylapore          | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | ...      | ...       | ...       | ...    | 6        | ...                                     | 0.5 | 0.3                                    |
|            | Total             | 16       | 12        | 11     | 16     | 12   | 10    | 7     | 6       | 11         | 10       | 8         | 11        | 91     | 39       | 130                                     | 0.3 | 0.2                                    |

\* Molluscs and destitutes.

DEATHS IN 1928 & 1929  
BY MONTHS FROM

Annual Form No. XII.—Deaths registered from "OTHER FEVERS" by divisions during each month of the year 1929.

|            |                     | 1        | 2         | 3      |        |      | 4     |       |         |            | 5        |           | 6         |        |          |                                         |        |                                                 |     |
|------------|---------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------|----------|-----------------------------------------|--------|-------------------------------------------------|-----|
| Divisions. | Districts.          | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Total. |          | Ratio of deaths per 1000 of population. | Total. | Mean ratio per 1000 during five previous years. |     |
|            |                     |          |           |        |        |      |       |       |         |            |          |           |           | Males. | Females. |                                         |        |                                                 |     |
| 1          | Royapuram           | 8        | 5         | 4      | 4      | 8    | 5     | 9     | 5       | 10         | 10       | 11        | 19        | 44     | 54       | 98                                      | 42     | 51                                              | 4.7 |
| 2          | Tondiarpet          | 10       | 6         | 8      | 4      | 9    | 15    | 14    | 10      | 18         | 19       | 17        | 13        | 68     | 75       | 143                                     | 80     | 90                                              | 8.5 |
| 3          | Washermenpet        | 2        | 4         | 2      | 4      | 3    | 1     | 7     | 2       | 10         | 14       | 10        | 11        | 35     | 41       | 76                                      | 29     | 35                                              | 3.2 |
| 4          | Korukupet           | 3        | 2         | 3      | 4      | 2    | 1     | 8     | 2       | 5          | 9        | 7         | 4         | 40     | 23       | 63                                      | 46     | 29                                              | 3.8 |
| 5          | Harbour             | ...      | 4         | 3      | 4      | 1    | 2     | 3     | 4       | 4          | 7        | 4         | 1         | 22     | 9        | 31                                      | 44     | 40                                              | 4.3 |
| 6          | Muthialpet          | 4        | 2         | 3      | 2      | 5    | 1     | ...   | 4       | 4          | 4        | 3         | 8         | 24     | 17       | 41                                      | 25     | 29                                              | 2.6 |
| 7          | Katchaleswaranpet   | 3        | 3         | 4      | 5      | 1    | 2     | 5     | 6       | 5          | 5        | 4         | 4         | 29     | 18       | 47                                      | 41     | 30                                              | 3.6 |
| 8          | Kothawal Bazaar     | 3        | 1         | 3      | 1      | 2    | 6     | ...   | 2       | 2          | 3        | 1         | 3         | 12     | 10       | 22                                      | 38     | 50                                              | 4.3 |
| 9          | Amnen Coil          | 5        | 10        | 5      | 8      | 6    | 6     | 6     | 2       | 6          | 6        | 6         | 7         | 31     | 41       | 72                                      | 38     | 53                                              | 4.6 |
| 10         | Seven Wells         | 7        | 8         | 8      | 8      | 6    | 1     | 4     | 2       | 1          | 2        | 14        | 1         | 39     | 34       | 73                                      | 40     | 34                                              | 3.7 |
| 11         | Sowcarpet           | 2        | 1         | 2      | 2      | 7    | 11    | 2     | 3       | 1          | 3        | 3         | 8         | 13     | 9        | 22                                      | 30     | 28                                              | 3.0 |
| 12         | Peddunackenpet      | 3        | 2         | 7      | 7      | 8    | 4     | 3     | 5       | 5          | 7        | 9         | 4         | 32     | 39       | 71                                      | 37     | 45                                              | 4.0 |
| 13         | Trevelyan Basin     | 11       | 9         | 6      | 9      | ...  | 3     | 1     | 1       | 1          | 6        | 9         | 4         | 36     | 45       | 81                                      | 41     | 53                                              | 4.7 |
| 14         | Esplanade           | ...      | 2         | 2      | 1      | ...  | 3     | ...   | ...     | ...        | 2        | 2         | 3         | 5      | 9        | 14                                      | 32     | 81                                              | 5.3 |
| 15         | Park Town           | 1        | 6         | 4      | 11     | 7    | 3     | 3     | 4       | ...        | 6        | 10        | 10        | 56     | 29       | 65                                      | 38     | 36                                              | 3.7 |
| 16         | Perambur            | 1        | 1         | 9      | 10     | 7    | 7     | 9     | 9       | 13         | 21       | 10        | 9         | 36     | 50       | 106                                     | 36     | 36                                              | 3.6 |
| 17         | Choolai             | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | 3        | 5         | 2         | 7      | 6        | 13                                      | 06     | 05                                              | 0.5 |
| 18         | Purasawalkam        | ...      | ...       | ...    | ...    | ...  | ...   | ...   | ...     | ...        | 2        | 7         | 1         | 5      | 9        | 14                                      | 05     | 09                                              | 0.7 |
| 19         | Vepery              | 6        | 3         | 7      | 6      | 3    | 1     | ...   | ...     | 4          | 2        | 3         | 3         | 21     | 16       | 37                                      | 21     | 17                                              | 1.9 |
| 20         | Egmore              | ...      | 3         | ...    | 6      | ...  | 7     | ...   | ...     | 2          | 2        | 3         | 3         | 21     | 20       | 41                                      | 15     | 17                                              | 1.6 |
| 21         | Kilpauk             | ...      | 3         | ...    | 6      | 1    | 1     | ...   | ...     | 9          | 1        | ...       | 1         | 14     | 10       | 24                                      | 14     | 11                                              | 1.3 |
| 22         | Nungambakam         | ...      | 3         | ...    | 4      | 2    | 2     | ...   | ...     | 1          | 4        | 4         | 4         | 21     | 16       | 37                                      | 19     | 14                                              | 1.7 |
| 23         | Chintadripet        | 3        | 1         | 2      | 4      | 2    | 4     | ...   | ...     | 4          | 8        | 2         | 10        | 26     | 28       | 54                                      | 19     | 23                                              | 2.3 |
| 24         | Tiruvatteeswaranpet | 5        | 6         | 1      | 1      | 9    | 7     | 5     | 4       | 1          | 12       | 15        | 25        | 86     | 95       | 181                                     | 68     | 82                                              | 7.5 |
| 25         | Chepauk             | 16       | 10        | 11     | 21     | 13   | 7     | 18    | 10      | 14         | 6        | 5         | 3         | 9      | 17       | 26                                      | 13     | 27                                              | 2.0 |
| 26         | Triplicane          | ...      | ...       | 3      | ...    | 4    | 1     | ...   | ...     | 1          | 6        | 4         | 5         | 14     | 19       | 33                                      | 16     | 24                                              | 2.0 |
| 27         | Amir Mahal          | ...      | 1         | 8      | 10     | 11   | 11    | 7     | 2       | 13         | 9        | 13        | 14        | 68     | 56       | 124                                     | 90     | 73                                              | 8.1 |
| 28         | Mirshabpet          | ...      | 7         | ...    | 8      | ...  | 2     | 14    | 6       | 3          | 8        | 8         | 11        | 30     | 19       | 49                                      | 32     | 20                                              | 2.6 |
| 29         | Royapettah          | 3        | 7         | ...    | 1      | 1    | 2     | 3     | 1       | 3          | 5        | 7         | 4         | 18     | 15       | 33                                      | 16     | 13                                              | 1.4 |
| 30         | Mylapore            | 6        | 2         | 1      | ...    | 2    | ...   | 1     | 5       | 2          | 1        | 5         | 4         | 17     | 19       | 36                                      | 18     | 22                                              | 2.0 |
| Total      |                     | 115      | 128       | 122    | 144    | 132  | 109   | 136   | 107     | 148        | 194      | 200       | 196       | 883    | 848      | 1731                                    | 32     | 34                                              | 33  |
|            |                     |          |           |        |        |      |       |       |         |            |          |           |           |        |          |                                         |        |                                                 | 2.0 |

\* Mofussil and destitutes.

Annual Form No. XIII.—Deaths registered from "DYSENTERY and DIARRHOEA" by divisions during each month of the year 1929.

| 1          |                    | 2        |           | 3      |        |      | 4     |       | 5       |            | 6        |           |           |        |          |                                         |          |                                              |
|------------|--------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|--------|----------|-----------------------------------------|----------|----------------------------------------------|
| Divisions. | Districts.         | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Total. |          | Ratio of deaths per 1000 of population. |          | Mean ratio per 1000 during previous 5 years. |
|            |                    |          |           |        |        |      |       |       |         |            |          |           |           | Males. | Females. | Males.                                  | Females. |                                              |
|            |                    |          |           |        |        |      |       |       |         |            |          |           |           |        |          |                                         |          |                                              |
| 1          | Royapuram          | 11       | 9         | 7      | 11     | 11   | 15    | 13    | 5       | 8          | 9        | 10        | 7         | 55     | 61       | 5.3                                     | 5.8      | 8.4                                          |
| 2          | Tondiarpet         | 14       | 20        | 12     | 12     | 19   | 16    | 5     | 7       | 7          | 21       | 16        | 9         | 89     | 69       | 10.4                                    | 8.3      | 12.8                                         |
| 3          | Washermenpet       | 16       | 6         | 11     | 11     | 9    | 6     | 11    | 17      | 11         | 15       | 16        | 19        | 70     | 78       | 5.8                                     | 6.7      | 5.7                                          |
| 4          | Korukupet          | 19       | 8         | 21     | 12     | 11   | 8     | 8     | 13      | 8          | 13       | 13        | 27        | 84     | 77       | 9.7                                     | 9.7      | 6.4                                          |
| 5          | Harbour            | 3        | 2         | 4      | 2      | ...  | 2     | 2     | 4       | 1          | ...      | 3         | 5         | 10     | 17       | 2.2                                     | 7.5      | 6.9                                          |
| 6          | Muthialpet         | 3        | 2         | 4      | 1      | 3    | 2     | 2     | 2       | 4          | 1        | ...       | 4         | 10     | 18       | 1.0                                     | 3.0      | 2.0                                          |
| 7          | Katchaleswaranpet  | 2        | 1         | 1      | 7      | ...  | 6     | 2     | 1       | 6          | 6        | ...       | 2         | 16     | 19       | 2.3                                     | 3.2      | 4.1                                          |
| 8          | Kothawal Bazaar    | 2        | 1         | 1      | ...    | ...  | ...   | 2     | 1       | 1          | 1        | 1         | 3         | 7      | 6        | 2.2                                     | 3.0      | 3.9                                          |
| 9          | Amman Kovil        | 4        | 7         | 7      | 4      | 3    | 3     | 8     | 3       | 2          | 3        | 3         | 7         | 23     | 27       | 2.8                                     | 3.5      | 6.4                                          |
| 10         | Seven Wells        | 19       | 7         | 10     | 4      | 7    | 3     | 1     | 7       | 4          | 3        | 13        | 7         | 49     | 36       | 5.0                                     | 3.6      | 8.4                                          |
| 11         | Sowcarpet          | 2        | 1         | 1      | 2      | 1    | 2     | 1     | ...     | 2          | ...      | 2         | 2         | 10     | 16       | 2.3                                     | 1.9      | 2.4                                          |
| 12         | Peddunaickenpet    | 8        | 5         | 7      | 6      | 8    | 11    | 6     | 3       | 7          | 7        | 7         | 4         | 38     | 41       | 4.2                                     | 4.8      | 5.7                                          |
| 13         | Trevelyan Basin    | 8        | 9         | 6      | 6      | 2    | 1     | 5     | 3       | 7          | 9        | 10        | 2         | 33     | 31       | 3.8                                     | 3.6      | 4.9                                          |
| 14         | Esplanade          | 4        | 5         | ...    | ...    | 1    | 1     | 2     | 4       | ...        | 1        | 3         | 6         | 2      | 5        | 1.3                                     | 4.5      | 13.9                                         |
| 15         | Park Town          | 1        | 4         | 3      | 4      | 2    | 5     | 3     | 4       | 2          | 4        | 2         | 5         | 15     | 13       | 2.7                                     | 1.6      | 3.4                                          |
| 16         | Perambur           | 16       | 17        | 28     | 25     | 10   | 10    | 17    | 20      | 23         | 15       | 6         | 20        | 88     | 119      | 5.7                                     | 8.5      | 9.2                                          |
| 17         | Choolai            | 20       | 11        | 21     | 25     | 15   | 9     | 22    | 10      | 18         | 14       | 16        | 22        | 98     | 105      | 7.9                                     | 8.9      | 7.0                                          |
| 18         | Purasawalkam       | 24       | 20        | 20     | 20     | 12   | 18    | 14    | 16      | 14         | 13       | 13        | 22        | 92     | 114      | 8.8                                     | 11.2     | 8.7                                          |
| 19         | Vepery             | 8        | 7         | 7      | 6      | 8    | 9     | 7     | 7       | 11         | 9        | 10        | 8         | 57     | 40       | 5.7                                     | 4.3      | 6.8                                          |
| 20         | Egmore             | 13       | 5         | 4      | 11     | 18   | 10    | 7     | 9       | 9          | 11       | 10        | 15        | 57     | 65       | 4.1                                     | 5.5      | 6.5                                          |
| 21         | Kilpauk            | 9        | 17        | 9      | 9      | 12   | 7     | 15    | 8       | 12         | 12       | 8         | 6         | 54     | 70       | 5.6                                     | 7.9      | 6.6                                          |
| 22         | Nungambakkam       | 6        | 5         | 6      | 5      | 6    | 5     | 2     | 3       | 8          | 5        | 16        | 12        | 35     | 44       | 3.1                                     | 4.2      | 6.2                                          |
| 23         | Chintadripet       | 15       | 6         | 13     | 11     | 16   | 18    | 18    | 17      | 12         | 6        | 13        | 12        | 74     | 83       | 6.0                                     | 7.2      | 7.5                                          |
| 24         | Tiruvatteswaranpet | 13       | 22        | 26     | 18     | 15   | 21    | 11    | 10      | 7          | 8        | 11        | 12        | 76     | 98       | 6.1                                     | 8.4      | 8.9                                          |
| 25         | Chepauk            | 2        | 6         | 1      | 7      | 5    | 9     | 4     | 3       | 3          | 7        | 6         | 5         | 32     | 26       | 4.5                                     | 4.2      | 4.7                                          |
| 26         | Tripligane         | 8        | 12        | 6      | 5      | 9    | 5     | 5     | 3       | 2          | 5        | 6         | 8         | 39     | 35       | 4.5                                     | 4.5      | 4.5                                          |
| 27         | Amir Mahal         | 3        | 9         | 9      | 5      | 10   | 12    | 3     | 5       | 9          | 8        | 13        | 9         | 55     | 40       | 7.2                                     | 5.2      | 8.3                                          |
| 28         | Mirshahibpet       | 21       | 18        | 9      | 8      | 11   | 20    | 13    | 16      | 16         | 16       | 28        | 19        | 96     | 99       | 10.3                                    | 10.6     | 10.4                                         |
| 29         | Royapettah         | 16       | 12        | 9      | 4      | 6    | 9     | 11    | 10      | 19         | 12       | 18        | 18        | 60     | 84       | 5.2                                     | 9.0      | 8.3                                          |
| 30         | Mylapore           | 19       | 8         | 8      | 6      | 10   | 12    | 9     | 11      | 16         | 14       | 13        | 20        | 66     | 80       | 7.0                                     | 9.5      | 6.7                                          |
| Total      |                    | 309      | 262       | 270    | 247    | 240  | 255   | 228   | 222     | 245        | 248      | 288       | 313       | 1516   | 1611     | 5.5                                     | 6.4      | 7.1                                          |

\* Moffusil and destitutes

DEATHS IN 1928 & 1929  
BY MONTHS FROM

