

Report of the Health Officer, Corporation of Madras Health Department.

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Annual Report

of the

Health Department
(Corporation of Madras)

For the Year 1930

By

The Health Officer.

MADRAS :
PRINTED BY THOMPSON AND CO., LTD.

1931.



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(Corporation of Madras)

For the Year 1930

By

G. S. Govinda Pillai
M. B. Ch. B., L. R. C. P. & S., D. P. B. (Edin.)

Health Officer.

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INTRODUCTION.

Commissioner.

Sir,

I beg to submit the Annual Report on the health of the City for the year 1930.

The estimated population for the year 1930 was 5,38,483 and it is on this figure as well as on the census figure for 1921 the rates relating to the Vital Statistics have been prepared. The preliminary figures which have just been published show that the population has been under-estimated by 1,08,050. It is therefore obvious that the rates found in these reports are somewhat over-estimated. Calculated on the census population of 1931, the death rate would show an appreciable reduction (35.3). With the increasing attention now paid to Public Health matters, it is desirable that the data presented through the medium of these reports should be as accurate as possible. But where there has been a phenomenal migration due to industrial development, trade and educational facilities, any attempt to estimate the population correctly is bound to fail unless enumeration is made at shorter intervals. The discrepancies between the estimated and the actual population disclosed by the recent census would appear to emphasise the need for a quinquennial enumeration. While the enormous increase noticed in the population—equal to the entire population of Salem—will be gratifying to all lovers of the City, the fact that this involves additional responsibility should not be lost sight of. Perambur, Royapettah, Royapuram and Nungambakam show considerable increase.

The most outstanding feature of the Vital Statistics is that the Birth-rate has gone up to 48.5 the highest figure ever recorded. The infantile mortality fell from 256 to 243. The slight increase noticed in the Death rate (43.2) is due to the increased mortality that prevailed during the last quarter of the year. The heavy and continued rains during October and November caused serious dislocation in the flooded areas at Washermanpet, Perambur, Choolai and Egmore where most of the inhabitants were rendered homeless. The level of the sub-soil water suddenly rises during monsoons. The slum dwellers of the low-lying areas suffer most from chills due to exposure and diarrhoea. Added to all these, a severe outbreak of Cholera occurred during December following the rains. The infection which was virulent, was mainly confined to Choolai. Prompt measures were immediately adopted. From the beginning the infection was localised and in a short time what threatened to be a serious general outbreak was nipped in the bud. The staff had to forego the Christmas holidays.

The only disquieting feature of the infectious diseases that prevailed during the year under report was the wide-spread infection of small-pox. In my last report I had dealt with this question at some length. A detailed study of the cases revealed that 66 per cent. of the cases occurred amongst persons who had recently migrated into the City and who had their vaccination in other parts of the Presidency. Vaccination is done in the City with the utmost care under Medical supervision. Every effort is taken to see that all infants are vaccinated in time. Progress made in vaccination during the year under review has been quite satisfactory as can be seen from the figures furnished in the report on Vaccination appearing elsewhere. But one point should be clearly understood. The immunity conferred by vaccination does not last for more than 5-7 years. Unless re-vaccination is done systematically at intervals, the community cannot remain immune to this scourge. I repeat the appeal made last year to every one to co-operate with this department in order to see that every child born in the City or outside is vaccinated as early as possible.

It is very pleasing to note that Malaria is steadily yielding ground. Total number of deaths registered under Malaria was 283 as against 681 of the previous year. The presence of a large number of tanks and marshy places in

North Madras is giving anxiety to those engaged in anti-malarial operations in the City. The River Cooum still remains the main breeding ground for mosquitoes causing sickness and annoyance to the citizens. How sad it is to contemplate that what ought to be a point of beauty to the City is allowed to remain a disgusting nuisance affecting the health of a large population. If the river is kept inclosed by compound walls on both sides from Willingdon Bridge to Harris Bridge, sides strengthened by means of embankments and banks kept properly sloped, much of the nuisance will disappear. The firewood depots and other structures that disfigure the river bank at present should be removed. There should be a vigilant staff to patrol the river and to clean and oil the edges. Proper wharfs should be constructed and all trespassers into the river booked then and there. The water margin should be kept at a certain level during all seasons. I trust the scheme will be taken up by the Government without delay. The expenditure involved will be more than repaid by the promotion of health and comfort which the scheme is bound to produce.

The most outstanding feature of the various improvements effected in conservancy was the conversion of over 1,300 dry latrines into flush-out in Chintadripet area. The scheme has been extended to Pudupakam at the time of writing this report. The importance of sewerage every street in Madras in the shortest period and introducing flush-out latrines in the place of dry latrines does not require much stressing. Every citizen realises it and with the prevalence of Enteric fever and the almost inevitable fly in the tropics the existence of so many dry latrines must always remain a source of grave anxiety. In areas where the compulsory scheme has not been introduced, progress in this direction has been slow. The collection, transport and disposal of human filth from a vast area like Madras is fraught with serious danger not to speak of the intolerable nuisance the process involves. The quickest and the only practical way of ending the present difficulty is by putting up flush-out latrines in the place of the existing dry ones by the owners themselves. A considerable number of public sanded latrines have been converted into flush-out latrines. A substantial advance in the mechanisation of Conservancy was made during the year under report. Slow moving and noisome open carts were replaced by motor vehicles. 11 of them are now working in different areas in the City. While the Council is making a most praiseworthy effort to improve the conservancy of the City, much yet remains to be done. I cannot pass this section without stressing the urgent necessity of appointing a separate Conservancy Officer who will take up the entire management of that department.

Similarly, I should like to urge the pressing necessity of improving the Otary dumping ground where, due to lack of sufficient space, accumulations are assuming serious proportions. Low-lying areas close-by should be acquired urgently and a modern destructor that will deal with 100 tons of garbage daily should be put up. The present condition of this dumping ground is a serious menace to the health of Perambur, Puraswalkam and Choolai.

One of the essentials for a healthy race is suitable housing. Recent census figures about which reference has been made in the beginning should make any one furiously to think. The congestion in the City is increasing. The majority of the poor live in tenements belonging to the well-to-do private owners. Over-crowding in these tenements has almost reached the saturation point. Families are seen living huddled together in these tenements with disastrous effects on the morality and health of the dwellers therein. Any action taken against overcrowding will only mean the driving of a large number of persons into the streets.

A vigorous campaign of house inspection was conducted during the year under report. Improvements were effected in the case of 3246 dwelling houses. What is even more essential than the actual improvement of insanitary tenements and dwelling houses is the provision of new houses. To alleviate the sufferings and sickness—the inevitable lot of slum dwellers—large employers of labour like Government, Corporation, large firms etc., should construct more sanitary dwelling houses. Every first-rate educational institution should have sufficient hostel accommodation to safe-guard the interests of its students.

As reported last year, the Bogipalayam Scheme has been in progress. The new tenements are now nearing completion. Motai Garden in Perambur and Moolakottalam in Washermenpet—two of the worst cheries in the City—have been greatly improved by providing roads, drainage and other amenities.

The detailed report on the work done in connection with the enforcement of Food Adulteration Act started in September will not fail to strike the attention of even the most casual reader. About 70 per cent. of the foods examined showed varying degrees of adulteration. In the case of 'Ghee', adulteration existed in 88.5 per cent. of samples examined, the degree of adulteration varying from 30 to 100 per cent. When it is remembered that the percentage of adulterated samples in Calcutta for 1929 was only 8, one gets an idea of the gross adulteration practised by the profiteering classes in Madras. The Food Adulteration Act aims at checking this fraud and warning the public against the danger. The nutritional value of ghee and butter is due to the presence of fat soluble Vitamin 'A' which is responsible for growth and prevents rickets. This Vitamin 'A' increases powers of resistance to infection. Absence of Vitamin 'A' would not only cause retardation of growth, but increases susceptibility to bacterial disease. Hydrogenated vegetable fats imported into the country are "indirectly injurious to health as they are lacking in an important vitamin which is present in ghee and hence they cannot compare in food value with ghee and therefore cannot be used as a substitute for ghee." People are buying to-day from 88 per cent. of ghee shops in Madras a substance which cannot be easily distinguished from genuine ghee, but which contains only a small percentage of genuine ghee and therefore practically worthless from a nutritional point of view. Some people delude themselves with the belief that they are using an article which is equal to ghee in its properties, but very much cheaper than ghee! The introduction of this foreign vegetable fat has complicated the position very much and it is doubtful if legislation alone can completely eradicate the growing evil.

As will be seen elsewhere in the report, the year under review saw many improvements. A vegetable market has been constructed at Purasawalkam to accommodate the vegetable vendors who used to squat at Tanna Street. Proposal to build a fruit market opposite to Pachaiyappas has been sanctioned. The condition of private markets has been very much improved and in one case the sanitary upkeep has been entrusted to the Corporation. A new tipping platform has been constructed at Krishnampet and a Veterinary Hospital at Perambur. Medical relief has been extended to Thousand Lights, Mambalam and Choolai by the opening of an Ayurvedic, Unani and Sidda dispensary in the respective areas.

In conclusion, may I be permitted to express my grateful thanks to the Council for the unstinted efforts to promote all beneficent measures to increase the general health and comfort of the poor. A great deal of the success is undoubtedly due to Mr. E. Conran Smith who continued to be the Commissioner during the period.

I have the honour to be

Sir,

Your most obedient Servant,

C. S. GOVINDA PILLAI,

Madras, }
Dated 19-8-31 }

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

Health Officer.

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 divisions (10—15)	...	91.1. "
Inhabited houses (Census of 1921)	...	65,048.
Total births registered in 1930 excluding still births.	25,662.	
as against 23,124 in 1929.		
Still births	...	1,260.
as against 1,287 in 1929.		
Illegitimate births	...	480.
as against 638 in 1929.		
Birth rate	...	48.5.
as against 43.7 in 1929.		
Total deaths registered in 1930 excluding still births.	22,839.	
as against 22,415 in 1929.		
Death rate	...	43.2.
as against 42.4 in 1929.		
Infantile Mortality	...	6,258.
as against 5,933 in 1929.		
Infantile Mortality rate	...	243.9.
as against 256.6 in 1929.		
Estimated population in the middle of the year 1930.	5,38,483.	
Birth rate based upon the estimated population in the middle of 1930	...	47.7.
Death rate based upon the estimated population in the middle of 1930	...	42.4.
Percentage of infant deaths to total mortality	...	27.4.

Vital Statistics.—The facts regarding the state of Public Health in the City of Madras during the year 1930 under review, as revealed by the Statistical returns of Births and deaths, are:—

(i) that the birth-rate increased from 43.7 in 1929 to 48.5 in 1930, which is the highest rate till now recorded.

(ii) that the death rate increased from 42.4 in 1929 to 43.2 in 1930, the slight increase being due to the adverse effects of the unusual rain that broke out during the last quarter of the year,

(iii) that the rate of infantile mortality declined from 256.6 in 1929 to 243.9 in 1930.

It is therefore evident that during the year under review the Public Health of the City was satisfactory in all respects and better than the previous year except for the slight increase in the general mortality rate, due as pointed out above, to the severe monsoon rains.

Meteorology :—A statement showing the atmospheric conditions as recorded by the Madras Observatory for 1930 is furnished in the Annual form A and Table B—The maximum temperature varied from 98° F. in July to 82.5° F in November. The mean minimum temperature varied from 68.4° F. in January to 80.5° F. in July. The lowest degree of humidity was recorded in July (57 degrees) and the highest in October (87 degrees). A gradual fall in the reading of the barometer was recorded during the first half of the year from 29.927 inches in February to 29.652 inches in June, the reading in January (29.925 inches) being slightly lower than in February. After June, the reading of the barometer slowly and steadily rose to 29.934 inches in December. (Pages 52 & 79.)

Rainfall :—The total rainfall of 78.69 inches recorded during the year under review was abnormal exceeding the record of 75.0 inches in 1918. The total rainfall during 1929 was 52.42 inches, the quinquennial average being 46.91. The highest rainfall was recorded in October (30.01 inches) and during this

month the City had rain for 26 days. The rainfall during the last quarter of the year was 55.05 inches with 56 wet days. During the whole year there was rainfall on 115 days.

It is an admitted fact, that, whether conditions have a definite influence upon Public Health. The atmospheric conditions following a severe monsoon contribute to the increase of mortality chiefly from respiratory diseases. The graph showing the rainfall and its influence on weekly mortality shows clearly the rise in the mortality curve soon after the severe and continued rains. The graph showing the birth, death and infantile death rates during the months of the year also shows the corresponding rise in the mortality rates during the months of November and December, which followed the monsoon. The increase of mortality noted after heavy rains coincides generally with a sudden and large rise in the sub-soil water. Overcrowded and damp areas favour the incidence and spread of respiratory diseases and the citizens of Madras, accustomed as they are to hot weather, are easily affected by sudden and accidental exposure to cold and rain. Infants and children whose vitality is generally at a low ebb suffer most.

Area and Population:—The area of the City is 29.41 sq. miles and the population including that of the Mambalam extension was 5,28,791 (census of 1921). A natural increase of 2,823 in the population was noted during the year under review due to the excess of births over deaths. The calculation of the weekly and annual statistics was based on the census figures of 1921.

Registration of Statistics:—Fifteen licensed Medical Practitioners designated as Medical Registrar Vaccinators assisted by 32 Assistant Vaccinators (one Asst. Vaccinator sanctioned in addition during the year) and 2 female Vaccinators attended to the registration of Births and Deaths during the year. Five additional Sub Asst. Surgeons relieved a few of the Registrars from the Vaccination work this year also.

No prosecution was launched during the year under report for failure to register birth or death.

Births:—The number of babies born in 1930 under report was 25,662 as against 23,124 in the previous year. The birth rate works out to 48.5 per 1,000 of the population as against 43.7 in 1929 and is the highest rate that has ever been registered in this City. The mean of the previous five years was 44.1. (Page 53.)

Of the children whose births were registered, 13,252 were males and 12,410 females, the ratio of males to 100 females being 106.8. The sex ratio in births has been varying from 103 to 107 during the last five years. The high birth rate prevalent in the City indicates the existence of a large female population at the child-bearing age.

As regards seasonal distribution of births, the largest number of births was recorded in October (2,304) and the lowest in February (1,690). The distribution of births during the different quarters of the year are as follows. (Page 82.)

		No. of births registered.	Percentage of total.
First quarter	...	5,803	22.61
Second quarter	...	6,504	25.34
Third quarter	...	6,494	25.31
Fourth quarter	...	6,861	26.74
Total	...	25,662	100.00

Local variations in the birth rate:—Thirteen divisions registered birth rates above the annual birth rate (48.5 per mille) of the City, the maximum rates being 73.5 per mille in the second division (Tondiarpet), 60.5 in the 28th

division (Mirsahibpet) and 59.7 in the 16th division (Vyasarpady). The lowest rate was recorded in the eleventh division (Sowcarpet) (25.6). (Annual form No. 1. page 53).

As compared with 1929, it is remarkable to note that increase in the birth rates occurred in all the 30 divisions, the increase ranging from the minimum of 0.4 in Nungambakam division to the maximum of 12.2 in Royapettah division.

The birth rates exceeded the death rates in 25 divisions, the difference of increase ranging from 0.2 in Kothwal Bazaar division to 17.4 in Egmore division. In the five divisions where the birth rates fell below the death rates, the maximum decrease of 7.2 was recorded in Korukkupet division. (Page 53.)

Birth-rate in communities :—The birth rates in the different communities and among the principal sub-divisions of the Hindu community are shown in tables C. & D. (Pages 80 & 81).

The Mussalman community, as usual, continued to return the highest rate of 54.6 per mille and the European, the lowest rate of 22.8 per mille. The rates for Hindus, Indian Christians, and Anglo Indians were 49.0, 39.6 and 40.9 per mille respectively.

Illegitimacy :—There were 480 illegitimate babies born during the year as compared with 638 in 1929. The illegitimate births represented 1.9 per cent. of the total number of births registered during the year.

Still births :—There were 1,260 still-births notified during the year as compared with 1,287 in the preceding year. This represents one still-birth to every 20 live-births. The causes governing this incident are mostly attributable to poverty, un-hygienic conditions and diseases in the mother or father, or both. There were 13 still births among the illegitimate births representing 1.03 per cent. of the total number of still births registered during the year.

Deaths :—The Deaths of 22,839 persons were registered during the year as against 22,415 in the preceding year. The annual death rate was 43.2 per 1,000 of the population as compared with 42.4 in 1929 and was less than the quinquennial average (45.5). (Page 54).

Seasonal variations in the Mortality :—The incidence of mortality during the quarters of the year are as follows :—

	No. of Deaths registered.	Percentage of total deaths.
1st quarter	5,715	25.02
2nd "	5,383	23.57
3rd "	5,050	22.11
4th "	6,691	29.30
Total	22,839	100.00

The mortality was highest in the last quarter; and November and December recorded the highest, 2,389 and 2,629 deaths respectively. The quarters of the year next in order were the first, second and third.

Local variations in the death-rate :—The detailed statement regarding deaths according to the various divisions in the City during the year is given in the Annual form No. II at page 54. The death rates in divisions 2, 3, 4, 5, 9, 16, 17, 18, 24, 27 & 28 were higher than the annual death rate (43.2) for the whole City. The 2nd division (Tondiarpet) and the 4th division (Korukkupet) recorded the death-rates of 60.8 and 64.5 per mille respectively. The social, economic and bad housing conditions of the poorer and lower classes of Hindu community were responsible for the high death rate in those divisions. In divisions 24, 27 & 28 the death rates were influenced by the presence of a large proportion of poorer class of Muslim community. The 6th division (Muthialpet) continued to

maintain the lowest rate of 22.3 per mille this year also. Hindus on a higher social and economic scale of life living here are responsible for its healthiness.

As compared with 1929, 13 divisions showed decrease in death rate (the maximum decrease of 3.6 in 12th division and 3.5 in 30th division). Increases occurred in 16 divisions (the maximum of 9.1 in 4th division, and 6.4 in 29th division). The death rate of 24th division remained stationary.

Mortality rate in communities :—The following statement gives the death rates among the different communities in the City during the year under report. The highest rate is still kept up by the Muslim community and is a regular and striking feature, year by year, noted in these returns. To be brief, the causes inimical to the well-being of the members of this community are poverty, ignorance, want of suitable housing accommodation, prejudices of the poorer members, strict observance of purdah system and last but not least their refusal to take medical or sanitary aid and advice when offered by the sanitary staff, midwives or Health Visitors.

Community.	Death rate per 1,000 population in each community 1930.
Musalmans	... 51.6
Hindus	... 43.6
Indian Christians	... 33.0
Anglo-Indians	... 28.4
Europeans	... 10.2
Others	... 0.5

Mortality rate at different age periods :—The following table gives the specific death rates in different age periods during 1930.

Ages.	Death rates in 1930 per 1,000 population in each age group.
Under 1 year ...	243.9*
1—5 ...	88.1
5—10 ...	15.4
10—15 ...	9.2
15—20 ...	13.6
20—30 ...	17.7
30—40 ...	21.5
40—50 ...	25.1
50—60 ...	41.6
60 and upwards ...	168.8
All ages ...	43.2

* Calculated on births registered during the year.

As usual, the mortality rate is at the highest at both extremes of life. Barring these two, the highest rate is recorded in the age group 1—5; after which a sudden and marked decrease is noted in the next age group and the rate recorded in the age group 10—15 is the lowest. This is followed by a gradual and steady increase up to the age of 50 after which the rise is more pronounced.

Mortality rate by sex :—Out of the total number of deaths registered during the year, 11,758 were among males and 11,081 among females, the ratio being 106.1 males to every 100 females. (Page 54).

The following table gives the specific death rates according to sex and age in the population during 1930 showing the influence of these factors on mortality.

Ages.		Death rates in 1930 per 1,000 population in each age group.	
		Males.	Females.
Under 1 year	...	261.2*	225.3*
1—5	...	86.9	89.3
5—10	...	15.5	15.2
10—15	...	8.0	10.7
15—20	...	11.0	16.2
20—30	...	15.3	20.2
30—40	...	20.7	22.5
40—50	...	26.3	24.0
50—60	...	45.2	37.4
60 and upwards	...	153.4	186.6
All ages	...	42.4	44.0

* Calculated per 1,000 births registered during the year.

The usual but not an abnormal or significant feature is noted during this year also in the persistence of higher death rates among females than among males from 10 up to the age of 40. As already explained in my previous report, this excess of death rate especially between the ages of 15 and 40 was due to the fact that women during these periods were exposed to risks attending on child birth. The indoor life of women in this country and the purdah system among the Mussalman community are factors, which cannot but be reckoned, in accounting for the higher rates of death among females in the age periods under reference than among males in the same age periods.

Infantile mortality :—The deaths of 6,258 infants under one year of age were recorded during the year as against 5,933 in the preceding year. The infantile mortality rate expressed as the number of deaths of infants under one year of age per 1,000 live births registered during the year, was 243.9 as compared with 256.6 in the previous year, the quinquennial average being 267.8. With the exception of the year 1927, which returned the rate of 237.6, the infantile mortality rate for the year under review stands the lowest. (Page 83.)

The total number of 6,258 deaths among infants under one year of age formed 27.4 per cent. of the total deaths at all ages during the year as compared with 26.5 per cent. in the previous year.

The following table gives the ages at death :—

Age periods.	No. of deaths.	Proportion to total deaths in infants—1930.
Under 7 days	1,524	24.4
7 days & under 1 month	867	13.8
1 month & under 4 months	1,191	19.0
4 months & under 7 months	1,022	16.3
7 months and under 10 months	956	15.3
10 months & under 1 year	698	11.2
Total	6,258	100.0

The deaths during the 1st week continued to be the highest and next in order was the age period of 1 month and under 4 months which accounted for 19 per cent. of the total deaths in infants. The figures indicate that no less than 38.2 per cent. of all the deaths took place among children under one month of age.

Causes of Infantile mortality:—The main causes contributing to the infantile deaths were respiratory diseases (2,165), Premature births (1,772), Dysentery and Diarrhoea (744), fever and convulsion (613) and also deaths from debility and marasmus. Over crowding, ill-ventilated tenements, extremes of weather, artificial feeding, poverty and ignorance act as the chief exciting causes for respiratory and bowel diseases. (Page 84.)

Seasonal variations in the infantile death rate:—Table E. in the Appendix gives in detail the deaths of infants during each month of the year as compared with figures for 1929. The death-rate was highest in November (325.2) and December (310.3) and lowest in September (194.9). (Page 82.)

The incidence of mortality was highest in the last quarter, the quarters of the year next in order being the second, first and third.

Quarters.	Infantile deaths in 1930.	Per cent. of total infant deaths.
January to March ...	1,446	23.11
April to June ...	1,479	23.63
July to September ...	1,352	21.60
October to December ...	1,981	31.66
Total ...	6,258	100.00

Local variations in the infantile death rates:—The infantile mortality rates in the 14th division, Esplanade (357.8) and in the 5th division Harbour (317.1) were the highest recorded. The lowest was recorded in the 21st division Kilpauk (198.0). (Table F. page 83.)

Compared with 1929, 18 divisions recorded decreases in infant death rates.

Infantile mortality rates among communities:—The infantile death rates among the different communities during the year 1930 are as follows:—

	Infant mortality rate per 1,000 live-births.
European ...	104.5
Anglo-Indian ...	135.9
Indian Christian ...	179.3
Mussalman ...	249.7
Hindus ...	249.3

The infantile death-rates for the sub-castes of the Hindu community are as follows:—

Caste.	Infantile death rate per 1,000 live-births.
Brahmin ...	196.0
Chetty ...	187.6
Vellala or Mudaliar ...	272.4
Balijah or Naidu ...	233.7
Vanniah or Naicker ...	305.9
Adi-dravida ...	221.3
Patnavar ...	394.0
Yaddeval or Edayar ...	251.6
Viswakarma Brahmin or Kammalar ...	197.1
Other Hindus ...	244.9

Cholera :—125 cases were reported during the year of which 43 or 34.4 per cent. proved fatal against 33 attacks and 16 deaths or 48.5 per cent. in the previous year, the death rate being 0.08 per mille as against 0.03 per mille in 1929. The mean ratio for the previous five years was 0.6 per mille. (Page 58).

Cholera was raging in the adjoining districts during the last quarter of the year and there were many chances of the infection entering into the city by the large influx of people from the infected areas. The atmospheric conditions were then very favourable for the reception, maintenance and spread of infection. The heavy and continued rains during October and November caused a sudden and large rise in the sub-soil water and this fact is always found to coincide with the incidence of Cholera in the city. The flooded areas in the divisions 4, 16, 17 & 23 with their inhabitants rendered homeless and panic-stricken offered a favourable nidus for the disease to obtain a footing. There were as many as 15 imported cases from the surrounding infected districts. In December alone there were 119 attacks and 40 deaths from Cholera. The 17th division, Choolai returned 40 attacks and 9 deaths, the 16th division Perambur 13 attacks and 6 deaths, the 4th division (Korukkupet) 14 attacks and 6 deaths and the 23rd division (Chintadripet) 6 attacks and 3 deaths. The cases that occurred in other divisions were due to the dissemination of the disease from these locally infected areas and the infection continued to exist even in the following year.

Previous to this infection, there were two attacks and no deaths in April, one attack and one death in July and 3 attacks and two deaths in October, of which two cases were imported.

The usual preventive methods were vigorously carried out to stamp out the disease. Prompt isolation of the patients, disinfection of infected houses soiled beddings and clothings, inoculation and surveillance of the contacts, as well as house to house inspection for detection of early cases were done in the affected localities. The citizens were offered the benefit of anti-cholera inoculation at their doors. The total number of inoculations done during the year was 2,601. Special attention was also paid to the drains, latrines and conservancy of the affected areas. The infected houses were disinfected and limewashed. Propaganda work was done by free distribution of pamphlets and by oral and lantern lectures on the prevention of cholera.

A flood relief fund was immediately raised in aid of the distressed people in the flooded areas, where Cholera was raging and their misery was alleviated by providing temporary accommodation and free supply of meals.

Diarrhoea and Dysentery :—The total number of deaths registered during 1930 under this group of causes was 3,056 against 3,127 in 1929. These correspond to rates of 5.8 and 5.9 per mille of population in the two years, the quinquennial average being 6.9. The seasonal incidence of mortality was highest in the last quarter especially in the months of November and December, the quarters of the year next in order were the first, second and the third. (Page 64).

<i>Quarters.</i>		<i>Deaths.</i>
January to March	...	736
April to June	...	711
July to September	...	705
October to December	...	904
Total	...	3,056

Small-Pox :—Small-Pox was prevalent in the City throughout the year. The number of attacks during the year was 877 of which 188 or 21.4 per cent. proved fatal as against 2,019 attacks and 506 deaths or 25.1 per cent. in the previous year. The annual death rate was 0.4 per mille being less than the rates of the previous year, (1.0 per mille) and the quinquennium (0.6 per mille). (Page 59.)

The seasonal incidence of Small-Pox was as follows :—

<i>Quarter.</i>	<i>Attacks.</i>	<i>Deaths.</i>
January to March ...	452	80
April to June ...	243	62
July to September ...	139	35
October to December ...	43	11
Total ...	877	188

The largest number of attacks and deaths occurred in the 1st quarter and in order followed the 2nd, 3rd and 4th quarters of the year. The largest number of attacks (192) and deaths (37) was in the month of March.

As regards local variations, the 5th division (Harbour) recorded the highest death-rate of 1.4 per mille and the 22nd division returned no deaths from small-pox.

Compared with 1929, increased mortality was recorded in 3 divisions, namely, the 3rd division (Washermanpet), 5th division (Harbour) and 6th division (Muthyalpet); in the rest the death-rate showed a decrease.

Besides the usual preventive methods, intensive vaccination campaign was conducted to combat the spread of small-pox. 25,958 primary vaccinations and 33,257 re-vaccinations were performed during the year. Oral and lantern lectures were delivered on the dangers and the prevention of small-pox. Propoganda leaflets on the disease were freely distributed.

Measles :—16 deaths were registered from Measles during the year against 68 in 1929. This represents a rate of 0.03 per mille as compared with 0.1 per mille in 1929, the quinquennial average being 0.09. (Page 60).

Malaria :—283 deaths were registered from Malarial Fever during the year 1930 as against 681 in 1929. The death-rate was 0.5 per mille against 1.3 per mille in the preceding year, the quinquennial average being 2.4 per mille. The seasonal mortality from this disease was highest in the last quarter and next in order followed the second, third, and the first quarter of the year. (Page 61).

<i>Quarter.</i>	<i>Death.</i>
January to March ...	56
April to June ...	73
July to September ...	59
October to December ...	95
Total ...	283

As regards local variations, the highest death-rate was recorded in the 4th division (1.2 per mille), in the 23rd division (1.3 per mille) and in the 14th division (1.5 per mille) and the lowest rate of 0.1 per mille in the 1st, 13th, 15th and 29th divisions.

The decline in the death-rate was due to the continued activities of a small establishment engaged in anti-malarial operations since 1927 and also due to the increased tendency of the public to resort to early treatment. The anti-malarial operations performed by the separate staff during the year under report are given separately.

The annual form No. X, page 61 gives the deaths according to the divisions and months.

Enteric Fever :—There were 126 deaths from Enteric Fever during the year 1930 against 130 deaths in 1929. The death-rate of 0.2 per mille was the same as in the previous year, the quinquennial average being 0.3 per mille. (Page 62).

The seasonal incidence of mortality from Enteric fever was as follows :—

<i>Quarters.</i>	<i>Deaths.</i>
January to March ...	31
April to June ...	27
July to September ...	45
October to December ...	23
Total ...	126

The disease occurred in all seasons of the year and showed a slight tendency to increase in the 3rd quarter. In a City like Madras, cases of Typhoid in a sporadic form are likely to occur throughout the year.

Besides the usual preventive methods adopted, 1971 persons were inoculated against Typhoid during the year.

Kala-Azar :—Kala-Azar accounted for 32 deaths in 1930 against 39 deaths in 1929. (Page 72).

Other Fevers :—1,961 deaths were registered in 1930 under this head as against 1,731 deaths in 1929. The annual death-rate was 3.7 per mille against 3.3 per mille in 1929, the quinquennial average being 2.5. The term 'other fevers' under which these deaths were registered is not a specific cause of death but includes various diseases, the predominant symptom of which is fever. Deaths from Malaria, Tuberculosis and Enteric Fever where-ever definitely known were registered as such. (Page 63).

General Respiratory Diseases :—5,256 deaths or 9.9 per mille of population were registered under this group of causes against 5,324 deaths or 10.1 per mille in the previous year, the quinquennial average being 10.2. Among these deaths, 2,165 deaths *i.e.*, 41.2 per cent. of the total deaths from respiratory causes were among children under one year of age. (Page 66).

The seasonal mortality from respiratory diseases are given below :—

<i>Quarters.</i>	<i>Deaths.</i>
January to March ...	1,280
April to June ...	1,229
July to September ...	1,145
October to December ...	1,602
Total ...	5,256

The last quarter recorded the highest number of deaths owing to weather conditions after the Monsoon. Next in order came the first, second and third quarters of the year.

Tuberculosis :—The deaths of 1,075 persons were registered in 1930 from Tuberculosis including tuberculosis of lungs as against 1,371 deaths in 1929. The death-rate was 2.0 per mille of population as compared with 2.6 per mille in 1929, the quinquennial average being 3.1 per mille. Tuberculosis of lungs alone accounted for 924 deaths or 1.7 per mille against 1,354 deaths or 2.6 per mille in 1929, the quinquennial average being 2.8.

Though a decline in the death-rate from Tuberculosis is noted during the year, there is no doubt that this disease is a scourge to Madras and in general to mankind all the world over. The degree and extent of its havoc depend upon the amount of sanitary benefits afforded by the state or community, towards improvement of public health. The disease is associated with poverty, economic distress, bad housing and over-crowding. The necessity of improving the slums, providing sanitary dwellings and opening parks and playgrounds was already emphasised to keep this disease under control. The importance of early diagnosis and special treatment cannot be over-emphasised. Mass education is of all importance and is being done by propaganda work done by the health staff. Early notification is of the utmost value in the prevention and spread of this disease. (Annual Form XIV page 65. Annual Form XIX page 70).

Diseases of the Nervous System :—1,128 deaths were registered under this head as against 937 in 1929. Among these deaths 273 *i.e.*, 24.2 per cent. were among infants under one year of age. (Pages 73 and 84).

Maternal Mortality :—The deaths due to child birth were 328 during 1930 as against 304 in 1929. The statistics relating to this cause of death from 1925 to 1930 are given below :—

Year.	Deaths.	Rate per 1,000 births.
1925	344	14.9
1926	352	16.0
1927	293	11.8
1928	366	15.4
1929	304	13.1
1930	328	12.7

A gradual decline is noticed in the maternal mortality rate, expressed as a ratio to 1,000 births, during the last three years.

Certified Deaths :—Out of 22,839 deaths registered in 1930, 684 deaths were reported by the General Medical Practitioners and 2,956 by the various hospitals in the city. The percentage of deaths certified to the total deaths registered was 15.9 as compared with 13.5 in 1929. The other deaths were verified by the Medical Registrars of Births and Deaths as to the causes of death.

Burial and Burning Grounds :—The Burial and Burning Grounds were inspected by the Sanitary Inspectors. Among 22,839 deaths registered during the year excluding 1,260 still-births, 17,797 corpses were buried and 5,042 burnt. 93 licensed grave diggers worked during the year. 256 applicants were granted plots of land for erection of tombs over graves, the amount realised therefrom being Rs. 937-10-0. 570 persons applied for grant of birth and death extracts and the amount realised was Rs. 1033-1-0. In 33 cases the extracts were not available.

VACCINATION.

Staff :—Ten Medical Registrars of Births and Deaths continued to be in charge of vaccination work during the year under review while in five areas where registration and vaccination work had been separated, the vaccination work was exclusively in the charge of five Sub-Assistant Surgeons. 32 Assistant vaccinators (one assistant vaccinator sanctioned in addition during the year) and 2 female Assistant Vaccinators assisted the medical vaccinators. The female vaccinators worked in Gosha and Mussalman localities.

Operations :—The total number of vaccinations performed during the year under report was 59,215 against 66,606 in the previous year. Among these, 25,958 were primary vaccinations and 33,257 re-vaccinations. Besides, 408 re-vaccinations were reported to have been done in the Madras Penitentiary of which 175 were successful and 233 failures. (Statement No. III, pages 88 & 89).

		1929	1930	Increase or decrease.
Primary vaccination	...	23,250	25,958	+ 2,708
Re-vaccination	...	43,356	33,257	—10,099
Total	...	66,606	59,215	—7,391

The decrease in the total number of vaccinations during the year is due to the fall in the number of re-vaccinations. The increase of 2708 under primary vaccinations was marked and the number of primary vaccinations performed during the year under report is the highest recorded since 1911.

The vaccination statistics for the past 5 years are given below and it is gratifying that the vaccination in the city has been progressively improving.

Year.	Primary vaccination.	Re-vaccination.	Total.
1926 ...	19,330	6,481	25,811
1927 ...	20,763	11,875	32,638
1928 ...	22,051	29,591	51,642
1929 ...	23,250	43,356	66,606
1930 ...	25,958	33,257	59,215

The number of primary vaccinations has been steadily on the increase throughout the years under reference indicating that a larger number of children are being protected by vaccination and the increase during this year over the previous year is significant.

Number of successful vaccination.—The accompanying statement shows the number of successful vaccinations among the operations, shown above, performed during the last five years.

Number of successful vaccination.

Year.	Primary vaccination.	Re-vaccination.	Total.
1926 ...	19,133	1,240	20,373
1927 ...	20,588	3,311	23,899
1928 ...	21,762	7,932	29,694
1929 ...	22,272	10,860	33,132
1930 ...	25,201	6,492	31,693

With the exception of the year 1929, a steady and gradual improvement has been noted in the total number of persons successfully vaccinated and remarkable is the increase and improvement in the number under successful primary vaccinations in 1930.

Success rate.—Success-rate in primary vaccination for the year under report is 99.0. The percentage-rates of success during the last five years are shown below.—

Success-Rates in vaccination.

Year.	Percentage of success in primary vaccination.	Percentage of success in re-vaccination.
1926	99.4	27.9
1927	99.7	33.7
1928	99.7	36.3
1929	98.5	30.1
1930	99.0	23.6

Number of persons successfully vaccinated per 1000 population:—

The number of persons successfully vaccinated per 1,000 of the population during the year under review was 59.9 as compared with 62.6 in 1929 and the following figures show the gradual improvement noted till the present time.

No. of persons successfully vaccinated per 1,000 population:—

Year.	No. of persons per 1,000 population.
1926 ...	38.5
1927 ...	45.2
1928 ...	54.0
1929 ...	62.6
1930 ...	59.9

Vaccinations under one year of age.—The number of Primary vaccinations done among infants under one year during the year was 18,187 against 16,420 in 1929 and the number that were successful was 17,774 against 15,929 thus recording an increase of 1,845 over the previous year. The figures for the previous five years are as follows :—

Vaccination of children under one year of age.

Year.	No. of Primary vaccinations performed.	No. of successful-Primary vaccinations.
1926 ...	15,257	15,133
1927 ...	16,219	16,097
1928 ...	17,357	17,182
1929 ...	16,420	15,929
1930 ...	18,187	17,774

Out of 18,187 children vaccinated, 14,434 were born in Madras and 3,753 in moffusil, against 13,078 and 3342 respectively in the previous year.

Vaccination during the last three triennia :—The following figures during the last three triennia reveal that vaccination in this city has progressed to a marked extent.

Triennium ending.	Primary vaccination.	Increase compared with Triennium ending 1924.	Re-vaccination.	Increase compared with Triennium ending 1924.	Total No. of vaccination.	Increase compared with triennium ending 1924.
1924 ...	52,518	—	70,726	—	1,23,244	—
1927 ...	59,521	+ 7,003	76,008	+ 5,282	1,35,529	+ 12,285
1930 ...	71,259	+ 18,741	1,06,204	+ 35,478	1,77,463	+ 54,219

The marked increase in the vaccination work in the last two triennia was due to the intensive campaign started since 1925. The Medical Vaccinators and the Assistant Vaccinators were required to inspect daily not less than 20 houses each within the area of their jurisdiction, and examine all children under 5 years of age for vaccinal conditions. This careful inspection revealed a number of children and infants born in the city and moffusil, whose vaccination was evaded in some way or other. These daily house inspections enabled also detection of infectious diseases and gave an ample opportunity to the vaccination staff to explain the valuable effects of vaccination to the young and the aged, and to parents and guardians of both sexes and to all the persons met with during the inspections. The necessity of re-vaccination was also explained to them. The success of this scheme was made greatly easy by the abolition of fees for vaccination done at residences since the middle of the year 1924. Ever since, vaccinations and re-vaccinations have been done conveniently in the residences according to the personal convenience of the citizens. The unprotected children detected during the daily inspections and also persons volunteering re-vaccinations, were vaccinated at the spot.

This intensive vaccination scheme worked throughout the year irrespective of the presence of small-pox epidemic and, throughout the area of the city. It afforded also facilities for checking the birth registration. Enquiries were made about the births, and registration of such births, of babies seen during inspections. The births were verified in the registers if reported as registered, and if not registered, the parents were explained the duties expected of them.

The marked increase of vaccinations performed during the last triennium is a sufficient testimony to prove the usefulness of this intensive vaccination campaign in this city.

Vaccination in districts :—The total number of vaccinations performed during the year was highest in the 16th division Perambur (6998) and in the 1st division Royapuram (3660) and in the 20th division Egmore (2977) and the lowest recorded in the 11th division Sowcarpet (466).

As compared with 1929, increase in the total number of vaccinations performed, occurred in 14 divisions and the increase was most marked in the 1st division Royapuram (+ 1209) and in the 7th division Katchaleeswaranpet (+ 963). The diminution in other divisions was mainly due to fall in the number of re-vaccinations.

The efficiency of the vaccination staff is judged primarily by the number of vaccinations performed in children and infants. It will be gratifying to note that 26 out of 30 divisions during the year showed increase in the number of primary vaccinations as compared with 1929, the increase varying from 3 (26th division, Triplicane) to 477 (24th division Tiruvateeswaranpet). There were 11 divisions which showed increase of over 100, 6 divisions over 50 and under 100, and 6 divisions over 20 and under 50. The maximum decrease was recorded in 28th division, Mirsahibpet (— 199) and minimum (— 16) in 14th division Esplanade, the reason being that a sufficient number of unprotected children was not available on account of intensive vaccination in previous years.

Verification of Births :—25,643 births were verified during the year under review against 22,751 in 1929. 4,330 children died before attaining the age of one year and without vaccination. 4548 children left the city without being vaccinated. The number available for vaccination during the year was 16,765 of which 12,216 or 72.9 per cent. were vaccinated against 74.7 per cent. in 1929. The decrease was due to 1330 children whose vaccination was postponed on medical reasons as against 869 in 1929. (Page 87.)

Postponement of vaccination in Children :—During the year, 1267 certificates were received from Medical Practitioners for postponement of vaccination against 927 in the previous year.

Inspection of vaccinated persons.—As usual, the Health Officer, the two Assistant Health Officers and the Medical Vaccinators inspected the vaccinated persons. The results of 25,442 Primary vaccinations and 24,792 re-vaccinations were inspected during the year.

Lymph :—The King Institute of Preventive medicine, Guindy, supplied lymph for vaccination. The Medical Registrar Vaccinator at Chintadripet depot received the supply and distributed lymph to all the depots in the city. Lymph for 55,250 cases was received during the year and the total number of vaccinations performed was 59,215.

Prosecutions :—The parents and guardians of 58 unprotected children were prosecuted during the year for failure to vaccinate their children as against 16 prosecutions in 1929. Among them, the parents of 5 children were fined and the amount realised was Rs. 10. Prosecutions were withdrawn in 47 cases and 6 cases were pending at the end of the year.

Training of vaccination pupils :—80 students were trained by the Medical vaccinators during the year in vaccination (practical) against 117 in 1929.

Cost of vaccination :—The cost of each successful vaccination was Re. 1-7-2 against Re. 1-2-5 in 1929, the increase being due to the decrease in the total number of successful vaccinations especially under re-vaccinations.

REPORT OF THE PORT HEALTH OFFICER, MADRAS, FOR THE CALENDAR YEAR 1930.

1. **In—Coming vessels :—**796 vessels arrived here during the year from different ports with 74,541 crew and 1,24,959 passengers as against 826 vessels with 76,140 crew and 98,117 passengers of the previous year.

2. **Out-going vessels :—**333 vessels with 38,466 crew and 30,825 passengers were inspected and granted Bills of Health during the year as against 342 vessels with 35,807 crew and 34,683 passengers of the previous year.

3. **Epidemic and Infectious Diseases** :—4 cases of Chicken Pox and 1 case of Small-pox were landed and sent to the Isolation Hospital, Tondiarpet.

4. **Disinfection** of bedding and clothing of deck passengers and crew landing 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 mortality was found on any of the vessels that entered the harbour during the year under report.

SANITATION.

The administration of the Health Department was carried on by the Health Officer assisted by 2 Assistant Health Officers for the North and South Ranges. The Child Welfare Scheme was in charge of the Lady Superintendent, the Conservancy under the Drainage Superintendent, both the Officers working under the control and directions of the Health Officer.

The Office of the Assistant Health Officer for the South Range continued to be in one of the divisions of the South Range during the year under report.

Drainage.—25,022 feet of underground drainage has been laid during the year making a total length of 9,79,594 up to 31-12-30 (*vide* Statement on page 90). Several portions of the City have yet to be sewered which, when accomplished, will go a long way to help the water-carriage system of the disposal of human excreta.

In many parts of sewered areas, while the main streets have been sewered, small lanes and streets have been left out for some reason or other. Cess-pools causing soil pollution and breeding mosquitoes still remain in such areas. It is therefore necessary that simultaneously with the taking of new areas for sewerage, there should be a special staff to watch the drainage of the sewered areas, to map out these pockets of infection and deal with them without delay.

In all the sewered portions of the City the conversion of the existing dry latrines into flush-out latrines is receiving attention, sometimes by recourse to the provisions of the Act.

Water supply.—The supply of water was tested daily at the Kilpauk Laboratory, samples thereof being taken from the different parts of the City for testing and regulating the dosage of chlorine to the water based on the daily results of analysis. A separate and detailed report on this is appended to this report. Owing to the general inadequacy of water supply, free use could not be made for watering the streets to mitigate the dust nuisance.

The Corporation maintains 2 Dhobikanas at Robinson Park and Chetpet respectively, water for the same being drawn from the water supply of the City. The need for opening more of such model institutions is pressing, if fouling of private water sources by the dhobies is to be effectively checked and prevented.

One more public bathing fountain was provided for the convenience of the poor during the year making a total of 117. If public health is to be secured, the problem of overcrowding in private tenements and the inadequacy of water supply in such houses has to be solved. Public bathing fountains should be constructed in areas where the poorer classes dwell.

One noticeable improvement has been made in the year under report by the construction of water tables in several divisions of the City to facilitate the carriage of storm water, while the refuse water from dwellings has been separately led into the underground drainage through the syphon boxes in all the sewered areas. In addition to this, this department has been carrying on work relating to cleaning and oiling of tanks, pools and ponds, a special report about which will be found under anti-malarial measures.

Slums and Housing.—As stated in my previous report, the Bogipalayam Scheme has been in progress during the year under review. The improvement of this vast slum is a first class sanitary measure, which, when completed, will go

a long way to improve the housing condition of a large population. Due to the exertions of the Labour Department, hutting grounds of Mulokottalam and Mottai Cheri have been improved by providing drainage and roads. The Mambalam scheme continued to progress. While it is true that within the means at the disposal of the authorities an earnest attempt is being made to improve the slums in the City and to provide areas for the public to build houses, the fact that the severe congestion noticeable in George Town, Triplicane and Tondiarpet still remains where it was, should not be lost sight of. New areas near Choolai, Royapettah and Royapuram should be made available for constructing new dwelling houses.

Throughout the year under report the house to house inspection has been carried out systematically. Defects found during inspections were notified to the owners and the same caused to be set right by recourse to the sections of the Act whenever necessary. 13,916 houses have been inspected as a result of the routine inspections and on receipt of complaints from the public. Action was taken by this department in respect of 5,151 dwellings. In respect of 3,246 dwellings the parties complied with the requirements notified to them. (Pages 94 & 97).

As usual, all building applications were scrutinised by this department as regards sanitary requirements thereof and the number of plans so received for scrutiny was 2,236 out of which in as many as 697 applications, flush-out latrines were recommended and in 351 cases they were complied with.

Hycol was the chief disinfectant used during the year in connection with the work of disinfection of houses. The number of premises disinfected was 2,668 and the quantities of several disinfectants used were as follows :—

Hycol	— 263 gallons.
Phenyle	— 10 do
Phenodyne	— 55½ do
Bleaching powder	— 4 drums, 2 cwts. 2 qrs.
Chunam	— 56 parahs.

Factories.—The Health Department has been carrying on the inspection of Factories, the Health Officer and the Asst. Health Officers carrying out such inspections as Additional Inspectors of Factories. Defects noticed in the course of such inspections were communicated to the Chief Inspector of Factories. Ten factories were notified for the conversion of the existing dry latrines into flush-out ones, of which 5 factories have complied with the requisitions during the year 1930.

Sanitary control by license.—Sanitary control is being exercised over places, where dangerous and offensive trades are carried on. Bye-laws regulating such trades are under consideration before the Standing Committee (Health). Some have been passed by the Council and are pending sanction of the Government. During the year under report 4,147 applications were received for grant of licenses of which 3,831 were sanctioned, 128 refused and the rest were pending at the end of the year as against 4,115 applications received, 3,749 sanctioned and 155 refused during the previous year.

In 1252 cases improvements were found necessary and were effected in 1087 cases. This department launched 617 prosecutions in this behalf of which 213 were for breach of conditions of licence.

The control over private cattleyards and hack-stables continued to be exercised by this department. But the difficulties experienced in getting the owners to comply with the sanitary requirements and rectification of defects noticed during inspections are not a little due to ignorance and poverty of most of the owners. The Corporation maintained two model cattle yards at Basin Road and Chintadripet. The one constructed at Puraswalkam was completed during the year. The need for more of such model cattle yards, as has been mentioned in the previous report, continues to exist. It is hoped that the Corporation will provide the same, when finances improve. During the year under report the number of cattle housed in the Model cattle yards was 241.

The Corporation maintains 2 cart stands. The one at the Elephant Gate is under the control of this department and was leased out on contract along with the bazaars adjacent thereto for a sum of Rs. 9,100.

The Corporation maintains the Slaughter Houses at Perambur where cattle, sheep and pigs are slaughtered. The necessity for providing suitable conveyance for carrying meat from the Slaughter House to the various markets is keenly felt. It is hoped, when funds improve, this want will be attended to.

The right of collecting rents and fees from the Slaughter Houses for cattle and sheep has been sold in auction for Rs. 20,000 and Rs. 57,250 respectively as against Rs. 22,500 and Rs. 60,750 in 1929. The number of animals slaughtered during the year under report was 17,075 cattle, 456,865 sheep and goats and 2,117 pigs as against 16,320 cattle 444,332 sheep and goats and 1,861 pigs in 1929. The right of collecting blood from the Slaughter Houses has been leased out to a contractor for three years at Rs. 1,600 per annum from 10-2-30. As regards slaughter of animals in private houses, the Corporation, as usual, has been permitting such slaughter free and on payment of fees for religious purposes. The fees so collected for the year amounted to Rs 98-12-0.

Food Control.—One of the most important problems that have to be effectively tackled is the question of markets in the City. The Corporation maintains 2 markets, the Moore Market and the Smith Field Market. The former is run departmentally and the latter let on contract for Rs. 2000 a year. The need for more public markets is very keenly felt and the Corporation should have a scheme to acquire and municipalise private markets. This step will go a long way in maintaining proper sanitation. For it has been found from experience that several of the private markets have to be constantly watched in the matter of sanitary upkeep. Wherever possible the owners of markets have been repeatedly intimated of the several improvements felt necessary in the markets. During the year under report, flush-out latrines were introduced in 7 markets. The conditions of licenses are very strictly enforced in all these places and several improvements have been effected as a result thereof. One other reason for the Corporation to maintain model markets is to afford facilities to a very large number of petty vendors, who are not willing to go into the private markets, but squat on the road sides exposing the articles of food to dust and contamination besides causing obstruction to traffic. However, this department is doing its utmost to prevent this evil.

Prevention of Food Adulteration.—As regards the food control exercised by the Corporation, one important measure *viz.*, the *Madras Prevention of Adulteration Act*, 1918, as amended by the *Madras Prevention of Adulteration (Amendment) Act*, 1927, was made applicable to the City of Madras as per G.O. No. 1410 P.H., dated 5th June 1929. Funds were provided in the Budget for 1930-31. Mr. Venkatachellam, M.A., was appointed to undergo training under the Public Analyst at Guindy as required in the G.O.

To work the provisions of the Act, in addition to the appointment of the Corporation Analyst (to undergo training under the Government Analyst for a period of 2 years and then work independently as the Corporation Analyst) 4 fully qualified Sanitary Inspectors with the necessary clerical and menial staff were appointed.

Work could not be started earlier than September 1930 as definite rules had to be framed by the Government for delegating the powers of the Commissioner, as the Chief Executive Officer, to the Health Officer, the Asst. Health Officers and the Sanitary Inspectors under Section 3 of the Adulteration Act.

The adoption of the Food Adulteration Act is of inestimable value to the inhabitants of this City. About 70 to 80 per cent. of foods are adulterated and the dealers cover the inferiority, purely from selfish and mercenary motives. The Food adulteration Act aims at checking these practices, which are fraudulent and technical in nature and some other forms of adulteration, which are positively injurious to health.

There are many possible ways of adulterating food stuffs. Mixing is the simplest form and an example of it is the addition of water to milk. Any substance may be added so as to reduce or lower or injuriously affect its quality or strength. Substitution is another method by which an article is substituted wholly or in part. Substitution of cotton seed oil for

olive oil and glucose or saccharin for sugar are examples. The substitution of cheap chemicals as acetic acid or mineral acids for vinegar and similar devices are common frauds and they are in some cases injurious to health. Abstraction of valuable constituents wholly or in part from a substance is also a fraud and skimming milk is an example of it. There is however no objection to abstracting valuable or nutritive substances provided the truth is stated on the labels. Damaged and inferior articles are mixed with colours, powder or stains to conceal the defects. This is a common form of adulteration and sometimes injurious. Addition of poisons as Formaldehyde, sulphites, arsenic, salicylic acid, borax, boracic acid, etc. as preservatives to articles may render such articles injurious to health. The term 'misbranding' provides for all possible conditions of fraud, mis-labelling, imitation, substitution and other forms of deception. These practices do not affect health but deceive the customer as he is made to purchase an article of a less nutritive value at a high price. In such conditions honest labelling is aimed at stating the character, origin and the constituent parts of the article.

These are the practices of the profiteering class of merchants in every City or town. It is hoped that these evils in this City will be mitigated by the working of the Food Adulteration Act.

The enforcement of the provisions of the Act was therefore much resented by the merchants dealing in food-stuffs in the City as their pecuniary interests were adversely affected. Despite this resentment the work was started and the testing of samples was confined chiefly to ghee, butter, milk, coffee, tea and gingelly oil.

From September to December, the total number of samples sent to the Public Analyst, Guindy, was 458 of which, reports of analysis were received only for 359 samples during the year and the reports for the remaining 99 samples were received after 31-12-30. Among 359 samples analysed during the year, 102 or 28.4 per cent. of samples were certified as genuine and 257 or 71.6 per cent. of samples as adulterated. The statement of samples sent to, and the results received from the Public Analyst, Guindy, is given below.

Description.	No. of samples sent during 1930.	No. of samples for which reports of analysis were received up to 31-12-30.	No. of samples reported as genuine.	No. of samples reported as adulterated.
Ghee ...	268	235	27	208
Butter ...	40	30	20	10
Milk ...	28	24	17	7
Coffee powder	40	26	1	25
Tea ...	63	43	37	6
Gingelly oil.	19	1	...	1
Total ...	458	359	102	257

Ghee.—It will be seen from the above statement that the number of samples of ghee alone sent for analysis, was 268 and out of 235 samples for which reports were received during the year, 208 samples or 88.5 per cent. of samples analysed were certified to have been adulterated. The chief adulterant used in this article of food is a foreign vegetable product commonly known as Marvo having no smell or taste and can be easily mixed with ghee. The substitution of this product for ghee is very common in this City and therefore particular attention has been devoted to taking samples of this commodity for analysis. The reports of the Public Analyst reveal that the ratio of this adulterant varied from 30 to 100 per cent. Out of 208 samples declared as adulterated 183 samples or 88 per cent. of the samples showed adulteration to the extent of 50 per cent. and above. Though this foreign fat might have been originally

introduced as a cheap substitute for ghee, its principal use at present is as an adulterant of ghee. All animal fats like butter and ghee (with the exception of lard) have been proved beyond doubt to contain fat soluble Vitamin 'A,' but the oils and fats derived from vegetable products have been proved to have little or no such vitamin. The presence of fat soluble vitamin. 'A' in the animal fat helps growth and increases the power of resistance to infections and the absence of this vitamin in vegetable products has exactly the opposite effect. Therefore it will be seen that the latter is not entirely harmless and the continued use of it for a long time is liable to impair the resistive forces.

Butter.—The reports of analysis were received for 30 samples and of which 10 samples or 33.3 per cent of samples were certified as adulterated. The nature of adulterant was excess of moisture and its extent varied from 2.1 to 47 per cent.

Milk.—7 samples or 29.2 per cent. of samples analysed were certified as adulterated with water, the extent of adulteration varying from 17 to 47 per cent.

Coffee powder.—The reports of analysis were received during the year for only 26 samples of which 25 samples or 96.2 per cent. of samples analysed were declared as adulterated and the extent of adulteration varied from 30 to 75 per cent. The adulterants were chicory, exhausted coffee, and imitation coffee.

Tea.—Six or 14 per cent. of samples analysed were reported as having been adulterated with imitation of tea. The highest extent of adulteration was 60 per cent. and the lowest 10 per cent.

Legal proceedings.—In 94 cases of adulterated samples, prosecution was resorted to and 3 convictions obtained during the period under report and the following is a summary of the legal proceedings taken during the year in connection with food inspection :—

Nature of sample.		No. of adulterated cases prosecuted.	No. of cases convicted.	Amount of fines levied.	No. of cases withdrawn.	No. of cases pending in Court.
				Rs.		
Ghee	...	80	...	...	1	79
Butter	...	2	...	...	...	2
Milk	...	4	1	5	...	3
Coffee powder	...	8	2	28	...	6
Tea	...	...	...	...	...	...
Gingelly oil	...	...	...	...	...	...
Total	...	94	3	33	1*	90

* Party died.

At the time of writing this report, the convictions obtained in the Magisterial Courts were all set aside by the High Court on a technical ground as regards the applicability of the subsidiary rules framed under the Adulteration Act to this City. This matter is now engaging the attention of the Corporation and the Government.

Proposals are afoot as regards the fitting up of a Corporation Food Analyst's Laboratory etc., as the Corporation Analyst at Guindy will complete his training in the course of 1932.

A detailed tabulated statement of work done under the Adulteration Act is appended hereto.

At their meeting held on 25-11-1930 the Council has called for proposals to open a dairy Farm and a scheme is accordingly being drawn up.

Weights and Measures.—One other important step indirectly connected with the control of food has been the enforcement of the weights and measures by-laws during the year under report. The work relating to this was done in the City by 2 Inspectors, one for the North and the other for the South Range respectively, by a systematic inspection of all markets, bazaars, shops etc., seizure of false scales, weights and measures, and institution of prosecutions wherever necessary.

The number of defective scales, weights, measures etc., seized was 291 and prosecutions were launched in 13 cases, the amount of fine recovered being Rs. 37.

In the course of the inspection of the markets etc. in the City, the weights and measures used by as many as 7194 vendors were checked. In most cases the vendors were ignorant and itinerary carrying on petty trade. The best that could be done in these cases was only severe admonition and threats of prosecution in case of repetition. It is gratifying to note that a sort of fear has been instilled in the petty vendors, who now hesitate to use false and inaccurate weights and measures and the public have also come to know of the work that is being done by the Corporation in this direction.

Medical Relief.—The Corporation maintains 2 infectious diseases Hospitals at Tondiarpet and Krishnampet respectively, 19 allopathic dispensaries and 2 dispensaries affording Unani and Ayurvedic treatment. The last 2 dispensaries of which one is a Unani Dispensary and the other an Ayurvedic dispensary for women and children were opened on 1-11-30 and 26-11-30 at Mambalam and Thousand Lights respectively. They are placed under Medical Officers who have passed out of the Government School of Indian Medicine. The Medical Officer in charge of the Ayurvedic dispensary is a Lady Doctor.

Mention has to be made in this connection with regard to practical difficulties met with in the matter of control and supervision of these dispensaries where treatment is given in indigenous systems of medicine. Though the Principal of the Government School of Indian Medicine has been kind enough to give all help and advice on matters referred to him, yet it may not be practically feasible to take to this course as a routine measure. However, the working of these dispensaries is being watched carefully.

One other point for consideration is the accommodation of the dispensaries in rented buildings. Out of 21 dispensaries, 15 dispensaries are located in rented buildings and the Corporation pays Rs. 11,124 per annum by way of rent. As has been advocated by me in my previous reports, the need for eventually opening dispensaries in almost all the 30 divisions of the City is manifesting itself more and more, considering the popularity of these institutions in affording relief to the poor people. Time has arrived for consideration whether these dispensaries cannot be housed in buildings owned by the Corporation, for, the amount spent under capital expenditure will considerably repay the Corporation in the long run. From experience it has been found that buildings generally intended for dwelling purposes have not been suitable for dispensaries. It has also been noted that the owners are not naturally too willing to accommodate the Corporation in the matter of compliance with the needs of a dispensary as regards accommodation and the maintenance of the same in good repair. It is therefore recommended for consideration that early steps may be taken in the matter of provision of buildings to house the dispensaries, the Offices of the Medical Registrars and also of the divisional Sanitary Inspectors.

Poor House.—The Poor House continues to be maintained. The object with which such a useful institution has been started by the Corporation is not and cannot be fully achieved unless and until compulsory legislation is introduced to prevent begging in the streets and facilitate the compulsory removal of the beggars with the aid of Police to the Corporation Poor House. The City Police Act has to be suitably amended in this behalf. As it is, the Corporation can only maintain the disabled and the destitute beggars who resort to it voluntarily and whose number cannot be large in spite of propaganda. It will be a

good day indeed when adequate legislation is passed and the City is rid of the pestilence of beggars who can all be taken into the poor house. Expenditure incurred in this behalf is in the interests of the public at large. If this is achieved, the poor house can gradually be developed on the model of work houses existing in western countries. During the year under report the number admitted was 139, discharged 84, absconded 2, deaths 41, and the number remaining was 113.

Zoo.—The Corporation maintains the Zoological gardens wherein rare and good specimens of wild animals, birds etc., are kept. Continued and systematic progress was being made in the maintenance of the gardens. An attempt has been made with success to keep the animals as far as possible in their natural environments. The first step taken in this direction was the provision of a lion's cage with open space in front, providing plenty of room for the animals to roam about. Several other cages were remodelled giving similar facilities. One other noticeable feature has been the successful breeding of lions in the gardens which enabled the Corporation to realise some money by the sale of animals. The grounds have been extended as far as possible and practicable. The right of collecting the entrance fee is let out on contract and during the year under report the amount realised was Rs, 17,000.

THE INFECTIOUS DISEASES HOSPITAL TONDIARPET.

Staff :—

1. Medical Officer (Assistant Surgeon)	...	1
2. Sub-Assistant Surgeon	...	1
3. Senior Sick Nurse	...	1
4. Sick Nurses	...	3
5. Nurses (Midwives)	...	2
6. Clerk	...	1
7. Wireman	...	1
8. Compounder	...	1
9. Ambulance driver	...	1
and other menial staff.		

The total number of admissions during the year was 1102 as compared with 1468 in the year 1929. 406 contacts were also admitted as against 830 in the year 1929. The total daily average number of patients was 75.6 as compared with 87 in 1929. The Mortality rate for all diseases was 11.3 per cent. (*Vide* pages 99 and 100).

Diseases :—Small-pox prevailed throughout the year, the highest number of admissions was 133 in March and the lowest 1 in December. 541 cases were admitted during the year. There were 88 deaths, case mortality per cent. being 15.4 *vide* Table I. External application of 5 to 10 per cent aqueous solutions of Potassium Permanganate proved efficacious to reduce pitting and permanent marks of small-pox to a minimum. It also had the advantage of modifying the secondary rise of temperature and severe septic cases were few, if any. This external application seems to be the best among the many that were tried and next in order we may mention Oleum Eucalyptus dram one to Cocoonut oil or Olive oil oz. 1.

Routine administration of Hydrag Cum Creta gr. X T.D. S. during the acute stages of the disease avoided septic diarrhoea as a complication altogether. Mention of this was also made in the report of 1928.

Cholera :—There were 74 admissions and 27 deaths during the year giving a case mortality of 36.5 per cent. 69 of these cases occurred in December, the first few cases among these were from Tiruvathiyoore outside the City where there was an epidemic of cholera. Subsequently cases were admitted from the City, the area most affected being Choolai division. The outbreak was of a very virulent form.

The treatment followed was the routine as prescribed by Sir Leonard Rogers. Bacteriophage supplied by Dr. C. G. Pandit of the King Institute, Guindy, was tried in the treatment of cholera in a few cases.

Measles :—There were 43 admissions and no deaths.

Chicken pox :—There were 227 admissions and no deaths.

Bacteriological examinations were done by the King Institute, Guindy.

Final year and Health Officer's class students of the Medical College, Madras, have been attending the Hospital for clinical instructions in Infectious Diseases. (Statistical tables *vide* pages 93-101).

THE KRISHNAMPET ISOLATION HOSPITAL.

1. **Staff** :—The permanent staff of the hospital consists of one Medical Officer, two Nurses, one Compounder, two Male Ward—Attendants, one peon and one Motor Ambulance Car Driver.

2. **Statistics** :—The total number of patients admitted during the year was 585 of whom 62 died, as compared with 866 admissions and 112 deaths of the previous year. The total daily average was 26.58 and the total mortality rate for all diseases was 10.09 per cent. The mortality rate for the previous year was 9.5 per cent. The slight increase is due to the prevalence of Cholera during the last weeks of the year under report.

3. **Treatment** :—A few indigenous drugs were tried on patients with Cholera by the Research Officer, Pharmacological Department, Medical College. It had to be combined with Roger's methods, as patients could not be withheld from treatments which have been proved to be good.

4. **Accommodation** :—There are six wards fitted with electric installation. The two big wards (male and female) are in addition provided with fans.

5. **Ambulance** :—The hospital is fitted with telephone connections and an ambulance car is permanently stationed for conveying cases of infectious diseases to the hospital. It is available at all hours free of charges. (Statistical tables *vide* pages 102-104).

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 include, lectures, lantern demonstrations, informal & friendly talks, cinema shows and exhibitions. A good lot of printed literature on matters relating to health in Tamil, Telugu, Hindusthani and English was circulated broadcast. An Exhibition on a huge scale was organised and conducted at the S. I. A. A. Grounds from Tuesday the 25th February to Monday the 3rd March 1930, and four divisional health exhibitions in Choolai, Perambur, Triplicane and Komaleeswaranpet. During the year under report 1467 open air lectures, 1169 magic lantern demonstrations, 47 cinema shows and 3735 talks were conducted by the Health and Child Welfare Staff to a total audience of 1,74,428.

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

NATIONAL HEALTH AND BABY WEEK CELEBRATIONS, 1930.

1. The Seventh Health and Baby Week Celebrations were conducted in the City of Madras at the S.I.A.A. grounds from the 25th February to 3rd March 1930 both days inclusive by the Madras Corporation.

2. The Exhibition was organised on a large scale and the activities were more extensive and varied than on any previous occasion. There can be little doubt that a considerable population of the City and suburbs, especially the students and the ladies, had their attention forcibly drawn to the problems of health and disease and the principles of well-being. The celebrations brought before their eyes in a practical manner the realities of the present situation and the need for educating the people in matters affecting public health. The

articles in the press, hand bills, the posters and the large amount of literature in local vernaculars distributed before and during the week reached many people even in distant areas of the suburbs.

3. In addition to the articles in the press, early in January, an appeal was issued to the prominent citizens individually requesting their co-operation and help and the President sent out another circular inviting monetary contributions in the shape of prizes to be awarded to the winners of competitions. Another appeal inviting Government Institutions and Commercial Firms to take part in the activities was very successful. The generous and voluntary response of the citizens made it possible to improve and extend the celebrations.

4. As in previous years it was decided to issue a directory for the information of the public. Accordingly circular letters were sent out to several leading ladies and gentlemen both in the city and abroad asking for messages. The numerous replies that were received in time were incorporated in the Directory. To make it known to the public, a short history of the activities of each department of the Corporation since it was formed was included therein. With a view to educate the literate classes of people short articles on health kindly contributed by Specialists were added. The programme of the week, the members of the various committees, the panel of Judges and the different items of competitions were inserted together with a description of a few institutions that took part in the activities.

Another pictorial book containing illustrations of existing insanitary evils was likewise printed and 10,000 copies were freely distributed.

5. In addition to the Directory, over 70,000 hand-bills announcing the celebration of the week were distributed house to house in the City. 10 varieties of posters were printed in local vernaculars and exhibited in prominent parts of the City. The Editors of Newspapers were kind enough to publish the various bulletins issued every now and then. The staff of the Health and Child Welfare Scheme also carried on house to house talks.

To entertain the children, a chute was fixed up as also a merry-go-round. The charges for the chute came to Rs. 100. Visitors were allowed to use it on payment of six pies each and the amount thus realised was Rs. 63-10-6. The owner of the merry-go-round donated Rs. 7 for allowing him to run it within the grounds. The monopoly of advertisement in the grounds was given to Messrs. S. S. J. Ram & Co., for a sum of Rs. 200.

6. The spacious grounds of the South Indian Athletic Association placed at our disposal were decorated with flags, festoons, buntings and banners (kindly lent to us by the chairman of the Madras Port Trust, Messrs. Best & Co., and the Executive Engineer, North Presidency Division). The stalls were arranged in a rectangular row and a few tents were pitched round the grounds to accommodate the commercial firms and the Boy Scouts stalls. A big shamiana and three other tents were set apart exclusively for Cinema demonstrations, musical entertainments, for enacting a health drama, feeding of mothers and babies and for holding the baby show.

The electrical illuminations constituted a new feature in the Exhibition which was greatly appreciated by the citizens of Madras. The credit for this work is due to the Corporation Electrical Engineer and his staff.

A number of charts and models were prepared under the supervision of the executive officers. These were arranged in a series of pandals specially put up for the occasion at a cost of Rs. 1,800 in such a way as to avoid over-crowding in any one particular place. The interesting exhibits and models were arranged in a number of spacious sheds while a large number of the charts were similarly fixed up in serial order according to a particular subject or disease. These were intended to educate the lay public on the various insanitary and unwholesome conditions which cause the spread of infection 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. Most of them contained explanations in English and Tamil.

The sanitary Inspectors, the Medical Inspectors of Schools, the Medical Registrars, Vaccinators, Medical Officers of dispensaries, Lady Doctors of

Child Welfare Centres, Lady Health Visitors, Nurses, Head-Masters, Head-Mistresses of Schools and students of the Madras Medical College were placed in charge of each sub-section and these persons explained the charts, models and exhibits to the visitors.

The exhibits were arranged in the following order :—

Maternity and Child Welfare Section.

Out-patient Clinic :—for expectant and nursing mothers, puerperal cases and children below 10 years of age.

Anti-Natal Clinics :—for pregnant women.

The milk depot.

Baby's stall.

Clean midwifery room as compared with that of the Barber midwifery.

Models Section.

Dwellings :—Good and bad showing arrangements for lighting, ventilation, drainage.

Drainage, Latrines :—Types of water closets—under-ground drainage system, septic tanks, sanded masonry and flush-out latrines, etc.

Refuse Disposal :—Rubbish carts, night-soil carts, rubbish bins, incinerator, pail depot, sewage farm, conservancy cattle depots, tipping platforms, etc.

Cow Houses :—Dairy farm.

Markets.

Coffee hotels, tea clubs, bake house, Sweetmeat stall, hopper bazaars, etc.

Sanitation models.

Crematoriums.

Intestinal Parasites, *viz.*, round worms, hook worms thread worms, etc.

Wax Specimens :—showing stages of small-pox and the progress of a case of vaccination.

Disease carrying Insects :—Mosquitoes conveying malaria, filaria, dengue and flies, fleas, bugs, louse, etc.

Isolation sheds :—showing the practice obtained in the Infectious diseases hospitals in regard to isolation, disinfection, and treatment.

Malaria, small-pox, cholera, tuberculosis, their causes, spread and cure.

Vital Statistics :—depicting by charts and graphs the birth, diseases and death-rates of the City as compared with other cities.

Medical Inspection :—of school-children, the benefit therefrom.

The Health Stores :—with cartoons on health, the health shop, etc.

City extensions :—showing the Mambalam area, and the advantages derived by taking up residence in airy localities.

Madras water works :—dealing with both the Engineering aspect and the analytical portion together with diagrams illustrating the advantages of filtered water supply to the City. A model of the entire works from Tambrapakkam anicut down to the distribution mains was also on view.

Drainage and Sanitary Fittings —Samples of stoneware pipes, house-drain gratings, silt catcher, model of public flush-out latrine and other accessories, necessary for public conveniences, etc.

The school exhibits on positions, physical exercises, food, cleanliness of kitchen, clothings, etc., were on view.

The Guides' and Blue Birds' activities were illustrated by hand craft, nature collections, guide laws, games, songs, and health rules.

A booth was specially allotted for exhibiting charts and pictures on temperance and the evils of drink. In the Electrical section were exhibited models of a traffic controller, electrocuting lethal chamber, electric fountain, loud speaking equipment and other domestic electric appliances. An exact model

of the house proposed for the Bogipalayam housing Scheme was also constructed and criticisms invited.

The following Government Institutions exhibited their propaganda materials :—

The Director of Public health, Madras.

The Chairman of Central Publicity Committee, Madras.

The Director of Town planning, Madras.

The Principal, Veterinary College, Madras.

The Superintendent, Government Ophthalmic Hospital, Madras.

The Director of Fisheries, Madras.

The Social Hygiene Council and Dr. Happer of the Government General Hospital.

The Director of Industries (Soaps) pumping Engines.

The Director of Agriculture, Madras.

The Health and Baby Week commenced on the 25th February 1930, on which day thousands of School Boys and girls marched to the exhibition grounds carrying banners, health maxims, etc., heralding the opening of the exhibition. An unusually large crowd of spectators had come into the grounds long before the hour of opening. A number of distinguished visitors were seated round the dais. Precisely at 4-30 p.m., His Excellency Sir George Frederick Stanley and Lady Beatrix Stanley arrived in state. Their Excellencies were received by the President, Corporation of Madras, and the Commissioner and they reviewed the Boy Scouts and Girl Guides who presented the Guard of honour. The Hon'ble Dewan Bahadur A. Ramaswami Mudaliar, President, Corporation of Madras, requested His Excellency to open the Exhibition. His Excellency then opened the Exhibition. Rao Bahadur Dr. C. Natesa Mudaliar, the Chairman of the Standing Committee, Health, thanked their Excellencies for having kindly agreed to perform the opening ceremony in the midst of their multifarious duties. Soon after, the visitors moved round and inspected the numerous charts, exhibits and models.

The Saifee Health Troupe gave a free demonstration of their physical activities and a set of musicians entertained the innumerable visitors with a choice selection of Music. By the generosity of certain commercial firms in the City, sweets and biscuits were distributed to the large number of children who had assembled in the spacious grounds.

Later was held a demonstration of films on health subjects with the aid of a Cinema machine. The exhibition, though it was originally proposed to be closed at 8 p.m. every night, had to be kept open till 9-30 p.m. for the convenience of the large number of visitors who stayed late in the booths studying the exhibits.

On the 2nd day the exhibition as previously arranged was opened at 7-30 a.m. and the citizens began to arrive in large numbers throughout the day. In the after-noon the Ambulance competitions and Ambulance display were held under the immediate supervision of Dr. U. Rama Rao who delivered a very interesting lecture on "disease carrying insects" with the aid of magic lantern slides. Rao Bahadur Dr. C. Natesa Mudaliar, M.L.C., Chairman, Standing Committee, Health, presided on the occasion. It was followed by a cinema demonstration which lasted till late in the night.

The third day was entirely set apart for gosha ladies. The grounds and all the stalls were left in charge of ladies under the management of Mrs. Conran Smith and Dr. (Mrs.) Devanesan who were assisted by a band of ladies. Lady Beatrix Stanley was graciously pleased to visit the grounds at 4 p.m. In the after-noon sports were held among the Corporation School girls and later Sri M. Lakshmi Ammal of the Queen Mary's College delivered a very instructive lecture on child Welfare to the ladies assembled in the grounds. Mrs. M. Hensman kindly presided over the function this day. It is generally agreed that the 'Womens' Day' was a great success and it is hoped that through its agency the gospel of health has been carried to many homes. After 6 p.m. males were admitted into the grounds and then commenced the usual cinema demonstration and magic lantern lectures.

On the 4th day, the number of visitors had increased considerably. The Judges went round the various places of competitions in the City and selected the best for further inspection. In the after-noon sports were held amongst Corporation School boys and in the evening a very illuminating lecture was delivered by Rao Bahadur Dr. A. Lakshmanaswami Mudaliar on the civic activities in the West in relation to health and welfare, under the presidency of Lt.-Col. C. A. F. Hingston, I.M.S., and the usual Cinema demonstration was also held.

Saturday the 1st March 1930, was the 5th day of the celebrations and this was set apart for the babies and children and mothers. At 8 a.m., commenced the baby competitions. It took sometime for the Judges to select the best five babies under each item of competition. Dr. (Mrs.) Monohan, Major Hesterlow, Messrs. Subramanyam, Shenoy, Viswanadan and Sadasivan were very busy examining the best babies. For the third time again, Lady Beatrix Stanley visited the Exhibition grounds and witnessed the selection of babies, inspected the food and feeding arrangements made for the women and children. The feeding of the poor mothers and babies kindly undertaken by Messrs. Bombay Ananda Bavan free of any charges lasted till 2-30 p.m., though it commenced by 11 a.m. Biscuits, aerated waters and lozenges were freely distributed by Messrs. Carr & Co., French India Oilman Stores and others. Alfred Young & Co., and Parry & Co., freely distributed Glaxo and Horlicks food to the children and mothers. Messrs. Lakshmi Ratans Ltd., and Mrs. Rajamanickam Naidu gave buttermilk to the visitors.

In the afternoon, the Y.M.C.A. under the direction of Mr. Buck and Dr. Gray gave a series of physical exercise demonstrations and later Mrs. Conran Smith distributed the prizes to the ladies, mothers and school girls. This was followed by the usual cinema show demonstrations.

On the 2nd March 1930, the Boy Scouts displayed Scout games and the Saifee Health Troupe once again exhibited their physical feats. Major A. M. V. Hesterlow, I.M.S., the Professor of Hygiene, Medical College, delivered an interesting lecture on the "growing child, its needs and care" under the Presidency of Hon'ble Mr. S. Muthiah Mudaliar, the Minister for Public Health. Soon after this, a drama "Natesan or the Romance of Public Health" in Tamil was enacted by the officials of the Corporation.

Monday the 3rd March, was the last day of the week. The prizes were awarded for the several items of competitions and in the after-noon Lady Beatrix Stanley was requested to distribute them.

The exhibition came to a close with this day's celebrations.

AIDED INSTITUTIONS.

A brief summary of the Public Health work done by various institutions based on their annual reports. (This is incorporated in accordance with the G.O. 653 P.H. Mis. dated 10-6-1921.)

The Chennapuri Annadana Samajam.—This Samajam was founded in 1890 with the object of feeding the blind, the lame and the decrepit. It was registered in 1893 under Act XXI of 1860. The poor are being fed daily since October 1929. The forward step in the work of this Samajam is the relief afforded to the poor children of the Madras Brahma Ragged School. About 120 boys are provided with midday meal on school days.

The Friend-in-need Society.—This society was founded in 1813 and registered in 1897. The object of this society is to relieve the deserving poor and to suppress mendicity amongst the European and Anglo-Indian Christians. A home is provided for the aged, infirm and destitute, in which they are lodged, clothed and supplied with the necessities for health and comfort. Pension is allotted to the aged and the infirm in whose cases exceptional circumstances render them fit subjects for out-door than for in-door relief. A workshop is maintained for women.

Throughout the year there has been on an average 74 inmates. The society is anxious to become at least partially self-supporting and has begun an industry for making chicks and carpets.

The Government Victoria Caste and Gosha Hospital :—This hospital has, during 1930, kept upto its usual level. In the maternity ward, patients have often had to sleep on mats. From 150 to 180 deliveries occur every month and the ward has only 30 beds. The proposed extension to the Hospital has not been carried out as funds are not available with the Government.

Indian Red Cross Society, Provincial Branch.—This institution continued to supply comforts to the various hospitals and dispensaries and other institutions. A sum of Rs. 1,855 was distributed towards Christmas treats to the Civil and Military hospitals and other institutions in Madras and the Military hospitals in the Presidency. A monthly contribution of Rs. 20 was made to the Free Hahnemann Dispensary, Madras. The National Health Association was given a grant of Rs. 500. A grant of Rs. 1,500 was sanctioned for giving relief to those who were affected by the floods during the monsoon in Madras.

Pamphlets on various health subjects in English, Tamil and Telugu were freely distributed and lantern slides on various health subjects lent to various institutions for carrying on Propaganda work.

Kalyani Hospital, Mylapore.—The total number of patients treated in this hospital and the two dispensaries connected with it was 16,120. Of these 1,835 were in-door and 14,285 out-door patients. The number of maternity cases rose to 649 which was the highest on record since the Hospital was founded.

There are 35 beds in the Hospital and the present accommodation is quite inadequate. The provision of better accommodation is delayed as the Government has no funds to sanction new schemes requiring grants.

The Madras Society for the Protection of Children.—This institution was founded in 1908. On 1-1-1930 the inmates numbered 58 boys and 24 girls. During the year 48 boys and 20 girls were newly admitted. On 31-12-30 the strength was 65 boys and 25 girls. Of this number 59 boys and 23 girls are certified under Sec. 29(1) of the Madras Children Act IV of 1920.

The total receipts came to Rs. 23,140-1-9 and the total expenditure was Rs. 20,232-3-6. The junior school started in 1925 was run throughout the year. At the end of the year 65 boys and 21 girls were receiving instruction.

Physical instruction is given to the boys and girls. 27 boys and 8 girls gave a physical demonstration at the Park Fair and were awarded a prize of Rs. 50.

A Lady doctor from the Rainy Hospital visits the girls once a week and a Sub-Asst. Surgeon from the Government Royapuram Hospital similarly visits the boys.

The Monegar Choultry.—The total number of admissions was 207 in 1930-31 as against 112 in 1929-30. The Board of Directors have raised the maximum to be dieted daily from 75 to 100 persons.

The total receipts were Rs. 11,761-10-1 and expenditure Rs. 11,466-13-1. The Board of Directors have sanctioned the construction of an additional ward. When this is carried out the question of raising the number of inmates will be considered.

The Rajah of Venkatagiri Choultry.—The daily average number of out-door paupers receiving $\frac{1}{4}$ measure or 12 oz. of rice was 160.41 in 1930-31 as against 146.25 in 1929-30. The total receipts were Rs. 4,567-0-0 and expenditure Rs. 4,361-13-5.

In September 1930, the Board of Directors raised the number of recipients of rice doles from 150 to 170.

The Ramakrishna Mission Students' Home and Math.—There is a hospital attached to the Students' Home called the Bobbili Medical Ward where medical aid is given to the students of the Home as well as the poor of the locality who approach for aid. As in the previous years the students conducted Magic Lantern talks on health subjects occasionally for the benefit of the poor people of the neighbourhood.

There is also a charitable dispensary attached to the Math situated in Brodies Road. The total number of cases treated in this dispensary was 54,567.

San Thome Dispensary.—This dispensary was founded in 1874 and renders help to the poor of all classes. This is managed by a Committee of 6 members and is supported by grants from public bodies and donations and subscriptions from the generous public.

The total number of cases treated during 1930 was 12,717. The number of minor operations performed was 705.

Sri Kanyaka Parameswari Devasthanam Charities Dispensary.—The total number of patients treated during the year was 60,649 as against 58,173 during 1929. The expenditure incurred during the year was 4,406-14-8.

The Triplicane Ananda Samajam.—During the year 1930, 28,697 adults and 1355 children were fed. 51 adults were clothed during the year.

The Unani Dar-ash-Shifa, Triplicane.—This unani free dispensary was opened in 1922. During 1930 as many as 1,25,015 persons received gratuitous professional treatment and indigenous medicines free of all costs.

The Venkataramana Ayurvedic Dispensary.—This institution is rendering medical aid to all classes of patients in the southern parts of the city. The total attendance at the dispensary during the year 1930 was 1,07,408 including minor surgical cases.

CONSERVANCY.

During the year, the efficiency of conservancy was maintained at a satisfactory level. On more than one occasion, however, the organisation had to face serious trouble owing to the insufficiency of carts and lorries. For some years now, the department has not had the advantage of keeping an adequate number of carts and bullocks required for the work and a sufficient reserve for meeting emergencies. Meantime, gradual mechanisation was introduced, but the finances of the Corporation did not permit the investment of the Capital necessary for the rapid change the scheme involved so as to keep pace with the wastage in livestock. During outbreaks of epidemics among the bullocks, the organisation is put to enormous strain which has the effect of increasing the wastage in the livestock and the depreciation of the mechanical power. True to the saying that a stitch in time saves nine, the lack of sufficient provision in the budget to enable the timely replenishment of the means of transport forces the authorities to the necessity of having to spend enormous sums of money when threatened with a crisis.

In the budget for 1930-31 there was a provision of Rs. 10,000 for bullocks and a similar sum for lorries. The wastage in the animals was so heavy that within the first quarter of the financial year it was found impossible to cope with the work. Consistent with the policy of mechanisation, the provision made for the purchase of bullocks was utilised for the purchase of motor lorries. As this was not adequate to meet the situation, money had to be found from several other items in the Budget in the course of the year. A detailed account of the purchases made in this manner will be found under the heading 'Motor lorries'.

Details of the staff.—The Drainage Superintendent continued to be in charge of Conservancy during the year. At its meeting held on 22-10-30 the Council resolved to appoint a separate Officer with Sanitary Engineering qualifications to be in charge of Conservancy and sewer cleaning. The proposal was awaiting the sanction of the Government. Two Supervisors on Rs. 150-10-200 per mensem assisted the Drainage Superintendent. There has been no change in the Subordinate staff. The Veterinary Officer lent by the Government also continued.

The strength of Conservancy Labour during the year was 2304 men 183 women and 88 boys, including cart drivers and those engaged in the Night-soil depots, Incinerators, etc. 160 peons were employed to supervise the work of the cleaning of streets, drains and syphons.

Carts.—68 four wheeled trollies and 263 two wheeled carts were used in the year for the removal of street rubbish against 86 trollies and 300 carts

during the previous year. 11 four wheeled lorries and 103 two wheeled carts were used for the removal of filth against 11 lorries and 138 carts employed during the previous year. 31 carts were employed for the removal of sewage from cess pools. The shortage in carts due to the reduction in live-stock was not replaced during the year but their work was managed with Motor lorries.

Animals.—There were 805 animals at the commencement of the year. 40 animals were purchased in March 1930 with the balance of amount available in the Budget for 1929-30. 201 animals died during the year. Of these 11 died at the Sewage Farm, Tondiarpet, out of 22 unserviceable animals stationed there in accordance with the resolution of the Council, dated 18th March 1930, and 3 kept at the Hope Lodge died there. There were thus 633 animals at the depots and 11 at the sewage farm at the close of the year.

Of the total casualties, viz., 201, 76 were due to rinderpest, 20 to tuberculosis, 4 to anthrax, 8 tripanosomiasis, 2 to accidents and the rest 91 to old age and other natural causes.

Rinderpest.—In April 1930, there was a sudden out-break of the disease in the Harris Bridge Depot. It was speedily controlled. In November, the disease broke out in a very virulent form in Monegar Choultry depot. At the same time even private cattle yards in George Town were affected and many cattle owners were ruined by the ravages caused by the disease. The entire herd of this depot was about to collapse, but it was averted by giving the animals timely protection by serum simultaneous inoculations. From Monegar Choultry depot the disease passed on to the Basin Bridge Depot and from there to the Choolai Depot. The bullocks of all these depots were protected in succession by serum simultaneous inoculation. The total casualties on account of rinderpest in A, B, C and D depots were 76 of which 74 died before serum simultaneous inoculation and 2 after it.

Tuberculosis.—During the year the animals at the depots were carefully watched for signs of tuberculosis. Two animals which showed clinical symptoms were detected in time and destroyed after test. Of the animals segregated at the Tuberculosis shed at Barbers Bridge Depot, 18 died during the year.

Foot and Mouth disease.—This disease was prevalent in January and April 1930. In January 1930, 40 animals were affected in the A depot. In E and F depots, there were 7 and 23 attacks respectively in April 1930. All precautionary measures were adopted to check the spread of the disease.

The question of proper feeding of the conservancy animals has been engaging serious attention for some time. For the past few years they were being fed with raw crushed horse gram. A series of experiments conducted at the depots showed that in spite of the close scrutiny of the gram at the Central Stores and the cleaning done there, foreign material such as sand and stones was found to be mixed in the crushed gram which was dangerous to the health of the animals. A beginning was therefore made at the end of the year to give the animals boiled gram. The change has been found to have beneficial effects.

The construction of the Veterinary Hospital was nearing completion at the end of the year.

Statement showing the receipts and issues of bullocks, monthwar and the details of treatment rendered at the depots will be found in pages 105 & 106.

Motor lorries.—At the commencement of the year there were four Chevrolet lorries for street conservancy. Four Manchester trucks, two Willys Trucks and one New Model Ford Lorry were purchased during the year at a total cost of Rs. 26,965 which sum was made available by reappropriating the grants for purchase of bullocks, repairs to cattle depots, etc., with the sanction of the Council. Three McCormick Deering Tractors with four large trailers were purchased during the year at a total cost of Rs. 26,230 for the heavy haulage of rubbish at Tipping platforms. Four Leyland lorries purchased during the previous year were also heavily used. The Morris six wheeler was

entirely set apart for the daily clearance of separated earth at the Krishnampet Incinerator.

Out of a total fleet of 39 vehicles in stock, not more than 24 were available on an average for the daily work. Five Ford lorries and 1 old Thornycroft lorry were rendered unfit for work. Some of the old lorries were constantly in repair. All the new lorries had therefore to be constantly over-worked and some of them were even used both day and night. During November and December 1930 when there was a severe outbreak of rinderpest in the depots and the Conservancy Lorry fleet was utterly incapable of managing the work, the Commissioner placed at the disposal of the department 5 metal transport lorries of the Works Department to ease the situation. It was a very critical period for this department as bullocks were dying in large numbers and the survivors had to be protected by S. S. inoculation and stopped from work. The havoc caused by the storm aggravated the situation which was already hopeless.

The Motor Mechanic appointed in 1929 continued to be in charge of the fleet.

Tipping platforms.—The new model tipping platform constructed at Langs Garden during the previous year continued to work satisfactorily. The platform at B. depot constructed at a cost of Rs. 7,500 was opened for use during the year. Consequently, the tipping platforms at Moneger Choultry and Andiappa Gramany Street and the one at Anna Pillai Street were abandoned as the new platform at B. depot was also centrally situated to serve these areas. The platform at Triplicane was also maintained during the year.

Disposal of rubbish.—The quantity of rubbish removed from the City during the year was approximately 4,29,964 cart loads against 4,08,267 of the previous year. The large quantity of leaves and branches of trees that had to be removed after the storm mostly accounts for the increase. 1,08,089 cart loads were disposed of at the 2 big Incinerators at Basin Bridge and Krishnampet. 2,03,275 cartloads were dumped at the Korukkupet, Otteri and Mylapore dumping grounds and at the Rifle Range and Kodambakkam low lands. 1,18,600 cart loads were used in reclaiming tanks, pits, etc. The land at Rifle Range belonging to the Military was taken on lease for a year for dumping purposes and a road was laid to the interior of the dumping ground so that nuisance might not be felt by the residents of San Thome High Road on account of the dumping operations.

It has to be mentioned in this connection that the reclamation of low lands by rubbish is not a new innovation in the City. A very large number of tanks and low lands in the City were filled up in this manner by the Special Malaria Department which was existent during the period 1912-1920. It should not, however, be taken to mean that this method of filling is an approved one from the sanitary point of view. But in areas sufficiently removed from human dwellings, it is more advantageous to fill up with rubbish than by means of small Incinerators. The stuff deposited by the carts is then and there levelled properly and covered over with ashes or clean earth to prevent the breeding of flies. Where there is sufficient quantity of combustible rubbish, it is raked, spread on the top, and set fire to. Thus reclamation with rubbish is done only in unobjectionable areas and with the least possible nuisance. It is done only in cases where better methods are not practicable. Buildings are not allowed on these sites until the soil becomes sufficiently hard.

The material obtained as rubbish in the streets of Madras contains a large percentage of mud and other incombustible substances, which, after separation from the burnable portion, is not very much different from the crude material itself. Even though small Incinerators are erected the material used for filling will mostly be the separated earth obtained in the above manner, the ashes forming a very inconsiderable portion of the same. Small Incinerators are unworkable in wet weather.

The two big Incinerators continued to work during the year. The existence of the Krishnampet Incinerator has been causing much agitation. During the past few years various improvements have been effected to mini-

mise the nuisance felt on account of its working. The huge mounds which were found there three years ago have now almost disappeared and the Incinerator has been restored to proper working condition. The daily accumulation of separated earth is removed by means of a Motor Lorry exclusively detailed for the purpose. There will be no chance for the mounds to grow again at the Incinerator. Still the working of a big Incinerator in the midst of an inhabited area is bound to be of some nuisance. This Incinerator was constructed in the year 1898 at a huge cost. The site was originally an extensive piece of low lying land without any habitations nearby. In the course of the years that followed the low surroundings were raised by earth and ashes obtained at the Incinerator and gradually huts and houses have sprung up. The residents of the locality now find that the Incinerator is a nuisance and agitate for its removal. Suitable sites within easy reach of carts are not available for the erection of another big Incinerator which is indispensable if the one at Krishnampet has to be abandoned. The question is now under the consideration of the Council.

Disposal of filth.—1,29,669 cart loads of filth were removed from the City of which 24,455 loads were trenched in the Korukkupet and Otteri Night soil depots and 1,05,214 loads flushed in the Pail depots at D'Mellows Road, Langs Garden and Ice House Road. The department is eagerly looking for the day when no night soil or sewage will be required to be removed. The scheme of compulsory introduction of flush-out latrines started in Chintadripet last year was nearing completion and 774 houses were provided with them during 1930. The total number of flush-out latrines constructed in private premises in the City by the Special Works Department during the year was 1161. In addition to this, 499 flush-out latrines were constructed by private licensed plumbers. At the rate of progress now maintained it will take a long number of years before the whole City can boast of a universal water carriage system. It is desirable that the scheme should be carried out more vigorously.

In Nungambakkam division, Motor Lorries were introduced for the removal of filth during nights replacing the old unsatisfactory system of bullock carts.

Three underground pits for placing night soil buckets screened from public view were constructed in the 27th division. For want of funds, this could not be extended to other places where they were badly required.

The method of removing filth by means of buckets was introduced a few years ago as a measure of improvement over the system of bullock carts which was very unsatisfactory. There is no defect in the design of these receptacles. They are provided with lids and handles and can be easily conveyed into the lorries. But owing to the apathy of the scavengers who sometimes fail to put the lid in its place after depositing the stuff or overload the bucket, the system gives room for complaints from the neighbouring residents. Want of sufficient number of lorries is another great impediment to the proper working of the scheme. To avoid the difficulties now experienced, the buckets have to be removed before they are full, and this can be done only when more lorries are available. The buckets are renewed as often as required and they are washed and disinfected daily.

Public latrines.—There were 199 public latrines in the City during the year of which 132 were flush-out, 40 were masonry and 27 sanded. A list showing the new latrines constructed during the year and sanded and masonry latrines converted into flush-out ones is in the Appendix. (Page 107.)

Dust bins and Night soil receptacles.—886 dust bins and 310 night soil buckets were manufactured during the year. Dust bins are still needed in many localities in the City, but could not be purchased for want of funds.

Festivals.—Special conservancy arrangements were made during the year in connection with the Big festivals at Mylapore and Triplicane. The conservancy of the S. I. A. A. grounds was also undertaken during the Park Fair 1930-31 on payment of fees.

Private scavenging.—The corporation derived an income of Rs. 21,881 during 1930-31 as conservancy charges for services rendered to private insti-

tutions as contemplated in Section 197 of the Act. The scavenging of house latrines is under the control of private agencies. The scheme of flush-out latrines has to be rapidly extended to all parts of the City to minimise the evils of the present system of private scavenging.

Nuisances.—Committal of nuisance in public streets and lanes remains an unsolved problem in this City. In the absence of police powers, the Corporation can do very little in this direction. As far as possible latrines and urinals are being built where suitable sites are available. The police authorities do prosecute several cases every year, but the evil does not show signs of abatement. Especially during important festivals, street corners and lanes present a horrible sight with stagnant pools of urine. In spite of the cleaning and disinfection done by this department, these sites continue to look untidy. It is a matter which should be earnestly taken up and solved by social workers in the City. The department is also trying its best by way of propaganda to put a stop to this evil.

Disinfection.—1,156½ gallons of hycol, 149 gallons of phenyle, 2,860 paras of chunam and 8 cwts. of bleaching powder were used for the disinfection of latrines, drains, street corners, night soil buckets, etc., and in the pail depots and dumping grounds.

Labour.—There were no strikes during the year. The general tendency of the coolies to abscond from work at the slightest opportunity continues. No punishments are inflicted on the coolies without the orders in writing of the Health Officer. There was some agitation for increase of wages, but the Commissioner visited the depots and explained to the coolies that it could not be considered owing to the financial stringency. There is a cry for more model lines. At present 302 coolies are accommodated in the Corporation Model lines. In Krishnampet and Barbers Bridge, most of the coolies live in houses constructed by themselves in the Corporation land. 118 families live in Corporation Hutting grounds.

General.—Though the system of work continues in the main unchanged several improvements were effected in the matter of details of work. As already mentioned, the defective system of night conservancy by slow moving bullock carts in Nungambakkam was replaced by Motor lorries. In Kothwal Bazaar area and in 24th and 27th divisions, Motor lorries were used for the removal of street rubbish during nights in addition to the day conservancy. Dumping grounds were maintained in a satisfactory condition as was indicated by the absence of fly nuisance and cholera during the year. The total expenditure on account of conservancy for the year 1930-31 was Rs. 9,49,730 (Rs. 69,185 capital, and Rs. 8,80,545 ordinary) against Rs. 10,07,379 (Rs. 1,24,521 capital and Rs. 8,82,858 ordinary) for 1929-30. The amount spent on wages to conservancy labourers was Rs. 4,89,589 for 1930-31 against Rs. 5,05,892 for 1929-30. Statement of rice transactions during the year 1930-31 is furnished in page 106.

ANTI-MALARIAL WORK.

Staff:—A Senior Sanitary Inspector working directly under the Assistant Health Officers was in charge of the operations assisted by one Sanitary Inspector exclusively in charge of 3 & 4 divisions where, as many as 210 tanks exist, and 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 the tanks, ponds, wells and drains and introducing larvicidal fish into wells and tanks. A motor lorry was engaged with 12 coolies for reclamation work.

The chief breeding grounds for mosquito larvae were surveyed and prompt action was taken to destroy the larvae by cleaning and oiling the tanks, ponds, wells and drains.

Anti-Malarial Measures adopted.

1. Cleaning of tanks, ponds and wells.
2. Petrolising.

3. Clearing of rank vegetation.
4. Introduction of larvicidal fish into wells and tanks.
5. Reclamation.

No. 1. Tanks and Ponds.—Generally tanks and ponds which are not used for purposes of irrigation and are mostly shallow, covered with moss, horizontal growth of weeds and rank vegetation become very good breeding places for anopheline larvae. There are at present 498 tanks in the city and these were inspected constantly by the sanitary staff and action taken whenever necessary. Owners of 105 tanks paid the estimated cost for cleaning and oiling their tanks to the Corporation and work was done departmentally. The total amount collected from the owners of these tanks during the year was Rs. 1,193-8-4.

Petrolising.

The only satisfactory and economical method for the destruction of mosquito larvae, both anopheline and culex is by petrolising frequently. Generally after monsoons, a large number of temporary puddles and pools formed and became breeding grounds for mosquito larvae. Petrolising was then conducted on a large scale with good results. As it is not possible to reclaim such lowlands at present, 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 :—

1. Royapuram near the railway bridge and some lowlands in Suryanarayana Chetty Street, 1st division.
2. Kathivakkam High Road, where there are a number of lowlands on either sides and also in Tondiarpet, 4th division.
3. Cochrane Basin and the Anti-Malarial drain close to Washermanpet burial ground.
4. Ottary Nulla including Anti-Malarial drain in De'coster Road, De'mellows Road and Powder Mills Road, 16th division.
5. Erukancherry Road in Vyasarpady and the lake in 16th division.
6. Modavakam Tank, 21st division.
7. Marshy lowland behind the Record Office in Male Asylum Road, 20th division.
8. Spur Tank, 20th division.
9. Storm water drain in Rayapettah, 29th division.
10. Ditch drain in Gopalapuram, 29th division.
11. Ditch drain near 'Admiralty House'.
12. Lowland south of Mylapore from Rifle Range to Adyar, 30th division.
13. Portions of Cooum and Buckingham canal.
14. All cess-pools and drains in the city.

It is necessary to mention in this connection that petrolising was found effective in destroying the mosquito larvae in places, where water was found unused and stagnating. In the case of tanks, ponds and wells, which are constantly in use, petrolising was objected to because of its supposed deleterious effect on the growth of vegetables. 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.

Generally rank vegetation is found close to tanks, ponds and marshy places affording comfortable lurking places for adult mosquitoes which breed in the stagnant waters close by. In private places the clearing of rank vegetation is primarily the work of the house owners or tenants. Sanitary Inspectors were instructed to issue notice to 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 4,80,754 sq. feet of rank vegetation from the following places :—

1. Infectious Diseases Hospital, Tondiarpet.
2. Poor House in Suryanarayana Chetty Street.
3. Hindu Burial Ground, Washermanpet.
4. Anti-Malarial Drain, Korukupet.
5. Choolai Burning ground.
6. Gopalapuram ditch drain and the surroundings.
7. Venkatachalam Lane, Chetput.
8. Haddow's Road ditch drain.
9. Anderson Road ditch drain.

Introduction of larvicidal fish:—All the wells either domestic or public were stocked with larvicidal fish. Before the introduction of fish these wells were cleared of algae, weeds, and other floating matter in order to give free scope for the fish to feed on the larvae. As many as 11,886 wells were stocked with larvicidal fish. Every well so treated was carefully watched from time to time to see that the fish put in continued to live and thrive. Introduction of fish in all the wells of the city was done thrice since 1927. This is being done again systematically introducing fish wherever necessary. In places where wells were formed unused the owners were notified to cover and make them airtight or to fill them up completely.

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.)

The resurvey of wells stocked with fish during the year 1930 disclosed the following :—

No. of wells examined	...	...	11,886
" " in which fish introduced were alive.	...	...	10,529
" " in which fish introduced had perished	...	...	1,357

From the above it is seen that

- (1) fish continued to live and breed in a large number of wells and
- (2) in about 9 per cent. of cases they die within a year.

Reclamation work:—The best and the most successful method of stopping the mosquito nuisance is to fill up the lowland, where water stagnates and also to fill up the unused wells, tanks and ponds, where mosquito larvae breed. In order to achieve this object a motor lorry was purchased exclusively for this purpose, and 12 coolies were engaged and the work commenced from September 1929. Details of the work done by this lorry are found in the statement 'B' page 110.

General.

In addition to the action taken with regard to the tanks, ponds, wells, and shallow waters as detailed above, attention had to be paid with regard to the thousands of breeding places caused by the carelessness of the citizens, namely cisterns used in building constructions, leakages from reservoirs, vessels used in dyeing yards in which water stagnated and paddy soaking cisterns, etc. A systematic campaign was conducted to destroy the larvae in these places and to minimise the mosquito nuisance as far as practicable.

MEDICAL INSPECTION OF CORPORATION SCHOOLS FOR 1930-31.

Staff:—Four Medical Inspectors and two Medical Inspectresses continued to work during the year. The staff provided for the Medical Inspection of Girls' Schools is still inadequate. For the efficient discharge of the work, one more Medical Inspectress is necessary.

Findings of Medical Inspection.—During the year under report 16,066 boys out of 18,305 on rolls and 9,276 girls out of 12,114 on rolls were subjected to careful Medical Examination. The average daily attendance during the period of the inspections was 14,543 boys and 8,923 girls. The percentage of pupils examined to the total number on rolls was 87.77 in the case of boys and 76.57 in the case of girls as against 84.22 and 56.75 respectively last year. Out of the total number examined, 9,993 boys (62.2 per cent.) and 6,366 girls (68.63 per cent.) were found to be defective, the corresponding percentages for the previous year being 62.85 and 69.29 respectively. A general fall in almost all the items of defects was noted this year especially under respiratory diseases and the dental condition of the pupils.

Cleanliness, condition of the skin of the scalp, body and the nails:—2,772 boys (17.25 per cent.) and 1,435 girls (15.47 per cent.) were found to be dirty in their person and clothing as against 16.44 per cent. and 20.86 per cent. respectively in the previous year. Most of the children defective under this head came from the poorer classes who were unable to provide themselves with proper and clean clothing. The School staff were advised to give baths daily to such children in the school premises and thus inculcate in them the habit of cleanliness of person and clothing.

Malnutrition:—3,582 boys (22.22 per cent.) and 782 girls (8.43 per cent.) were found to be under-nourished, the percentages for the previous year being 15.53 and 5.69 respectively. Poverty, unemployment and social condition of the parents were responsible for the incidence of this defect. Cod Liver oil was prescribed for these for suitable periods. The parents who could afford, undertook to purchase cod liver oil and other tonics suggested by the Medical Inspectors while the poorer among them were directed to get the supply from the Corporation dispensaries.

Teeth and Mouth:—3,468 boys (21.59 per cent.) and 2,309 girls (24.89 per cent.) were found to be suffering from dental and oral diseases as against 26.05 per cent. and 36.67 per cent. respectively last year. The chief defects found under this head were Dental caries and Stomatitis. The latter was present specially among the children of the poorer classes who were found to be under-nourished.

	Boys.	Girls.
Dirt teeth	881	917
Dental caries	968	983
Stomatitis	1,770	437
Tongue-tie	11	7
Glossitis	7	3
Other conditions	8	...

Every opportunity was taken to advise the parents and teachers on the need for clean teeth and mouths for maintaining sound health. All these children were given relief at the Corporation dispensaries.

Nose and Throat:—3,892 boys (24.23 per cent.) and 1,564 girls (16.86 per cent.) had diseases pertaining to the nose and the throat, the percentages of incidence last year being 25.01 and 18.65 respectively.

(a) Nose	Boys.	Girls.
Nasal Catarrh	248	519
Nasal Polypus	17	...
(b) Throat		
Enlarged tonsils	3,168	1,001
Enlarged cervical glands	699	9
Adenoids	148	6
Granular Pharynx	130	80
Bifid and Elongated Uvula	22	148
Other conditions	5	4

As may be seen from the above list, most of the defectives had enlargement of tonsils, glands of the neck and adenoids. The general causes governing the incidence of dental or oral diseases are also responsible in bringing about these conditions. In many children a mild form, or an old history of rickets could be traced. These defects arise during early childhood and are of such

minor degrees as to be passed unnoticed until they are well established and produce their bad effects during school life. The school doctors keeping this in view aimed at correcting the general nutritional condition of the children by advising the parents on proper dieting and prescribed cod liver oil and other necessary drugs.

Simple enlargements of tonsils were treated at the Corporation dispensaries while cases with complications were advised operative treatment at the General Hospital. The parents of such children were seen and personal advice given.

Eye Diseases :—514 boys (3.20 per cent.) and 350 girls (3.77 per cent.) were found suffering from affections of the eye as against 3.90 per cent. and 3.37 per cent. respectively last year.

	Boys.	Girls.
Xerosis	148	67
Conjunctivitis	124	98
Squint	72	34
Corneal opacity	71	18
Granular lids	41	108
Stye	31	11
Blepharitis	11	5
Keratitis	5	...
Cataract	5	8
Ptosis	4	...
Staphyloma	3	...
Dacryocystitis	1	...
Corneal Ulcer	1	11
Meibomian Cyst	1	...
Other conditions	6	4

Minor complaints such as conjunctivitis, etc., were treated at the Corporation dispensaries while cases requiring special treatment were referred to the Government Ophthalmic Hospital. Most of the cases of squint were advised to correct errors of refraction as this very often corrects the squint.

Vision.—184 boys (1.15%) and 20 girls (0.22%) showed defects of vision as against 1.99% and 0.06% respectively last year. All these children were advised correction of vision at the Eye Hospital.

Ear diseases —278 boys or (1.73%) and 147 girls or 1.58% had diseases pertaining to the ear, the percentages for the previous year being 2.22 and 2.42 respectively.

	Boys.	Girls.
Otorrhoea ...	242	52
Otitis ...	32	94
Polypus ear ...	2	...
Foreign body ear ...	2	1

Cases of Otorrhoea and Otitis of a simple nature were treated at the Corporation dispensaries while other chronic and resistant types were advised treatment at the ear, nose and throat departments of the Government General Hospital.

Hearing.—17 boys (0.11%) and 6 girls (0.06 per cent.) were short of hearing as against 0.14% and 0.15% respectively last year. The school staff were advised to keep these children nearest to them in the classes.

Speech.—81 boys (0.50%) and 15 girls (0.16%) had defective speech. Most of them were stammerers. The percentages for the previous year were 0.51 and 0.09 respectively.

	Boys.	Girls.
Stammering	58	12
Lisping	21	...
Dumb	2	3

Care was taken to instruct the teachers to be kind to such children and the condition of their teeth, nose and throat, and their general health also were carefully attended to.

Circulatory System.—270 boys (1.68 per cent.) and 121 girls (1.30%) were defective under this head as against 3.18% and 7.99% respectively last year.

	Boys.	Girls.
Anaemia ...	144	94
Functional irregularities of the heart..	77	25
Organic diseases of the heart ...	51	8

Suitable advice was given to these cases. Some children requiring institutional treatment were referred to the general hospitals while the rest were treated at the Corporation Dispensaries.

Tuberculosis.—Pulmonary and other forms of Tuberculosis were detected in 23 boys (0.14 per cent.) and 32 girls (0.34 per cent.) as against 0.24 and 0.68 per cent. respectively in the previous year.

	Boys.	Girls.
1. Pulmonary Tuberculosis		
(a) Suspected ...	14	27
(b) Definite ...	3	...
2. Tubercular glands, neck...	6	5

The school medical staff were alive to the necessity of early detection and treatment of these cases. All cases of fatigue, wasting, anaemia and irregular temperature were carefully investigated and necessary advice and prescriptions were given. The parents of these children were made aware of the nature of the disease and were advised to resort to early treatment. Suitable cases were referred to the Tuberculosis Institute for treatment. The school staff were also instructed to watch the progress.

Respiratory Diseases.—450 boys or 2.80 per cent. and 318 girls or 3.43 per cent. were found suffering from respiratory diseases other than Tuberculosis, the percentages for the previous year being 4.48 among boys and 10.66 among girls.

	Boys.	Girls.
Bronchitis ...	421	297
Bronchial Asthma ...	29	21

All these cases were prescribed and sent to the Corporation Dispensaries.

Abdominal Organs.—493 boys (3.07 per cent.) and 70 girls (0.75 per cent.) were defective as against 3.72 per cent. and 0.95 per cent. respectively in the previous year.

	Boys.	Girls.
Enlarged Spleen ...	299	28
Enlarged Liver ...	3	5
Enlarged Spleen and Liver ...	12	6
Gastritis ...	1	9
Intestinal Colic ...	2	8
Dysentery ...	4	6
Diarrhoea ...	8	3
Inguinal Hernia ...	61	...
Umbilical Hernia ...	22	6
Hydrocele (Vaginal) ...	82	...
" (Cord) ...	5	...
Jaundice ...	2	...
Cirrhosis of Liver ...	1	...
Prolapse of the anus ...	1	...
Piles ...	1	1
Generative disorders in girls ...	...	3

Enlarged Spleen.—The incidence of cases from enlarged spleen due to previous attacks of Malaria among children attending schools in North Range fell from 336 cases *i.e.* 4.74 per cent. recorded last year to 291 cases *i.e.* 3.75 per cent. this year. All these children were treated at the Corporation dispensaries. The school staff were also instructed to maintain a list of these cases and persuade the parents to continue treatment till their children were cured. The anti-malarial staff were also working in the affected localities.

Minor ailments as dysentery and diarrhoea were treated at the Corporation dispensaries while others requiring operation or institutional treatment were referred to bigger hospitals.

Bones & Joints.—522 boys (3.25 per cent.) and 29 girls (0.31 per cent.) were found to suffer from diseases of bones and joints as against 3.25 per cent. and 0.47 per cent. respectively last year.

	Boys.	Girls.
Rickety Chest ...	482	26
General Rickets ...	11	...
Sprains of joints & dislocations ...	7	...
Fracture Limbs ...	2	1
Diseases of bones ...	1	1
Diseases of Joints ...	5	...
Deformities of bones ...	2	1
Deformities of Joints ...	15	...

Most of these children were found to be under-nourished and weak. They were prescribed Cod Liver Oil and given necessary treatment and advice.

Nervous and Psychic systems:—35 boys (0.22 per cent.) and 9 girls (0.10 per cent.) were recorded defective as against (0.59 per cent.) and 0.35 per cent. respectively last year.

	Boys.	Girls.
Dull ...	21	2
Incontinence of urine ...	12	...
Palsies ...	2	1
Facial paralysis ...	...	4
Hysteria ...	...	2

Necessary advice was given to these cases.

Infectious and contagious diseases:—During the year under report 1,863 boys (11.60 per cent.) and 886 girls (9.55 per cent.) were suffering from infectious diseases including skin affections, the corresponding percentages for the previous year being 9.22 and 9.83 respectively. The slight rise in the percentage was mainly due to the high incidence of scabies. Special care was taken to give instructions on personal hygiene to these children. The teachers were advised to give daily baths to these children in the school and send them to the Corporation dispensaries for treatment.

(a) *Skin Diseases.*

	Boys.	Girls.
Scabies ...	1,408	621
Psoriasis ...	2	8
Eczema ...	173	8
Anaesthetic patches in the skin. ...	49	4
Ring-worm ...	100	25
Lichen ...	32	...
Dermatitis ...	2	8
Impetigo ...	1	...

Children having infectious skin conditions were kept isolated from the rest of the children or excluded from the school until they could be allowed to mix freely with others. 53 children were reported as having anaesthetic patches in the skin. Their parents were seen and advised to get them treated early at the Leper Out-Patient Department, Government Royapuram Hospital. The necessity of a prolonged though tedious course of treatment was clearly pointed out to them.

One pupil who had leprosy in an advanced stage was advised admission into the Leper Hospital near Chingleput. He was excluded from the school. In other cases the Head Teachers were instructed to allow these children to attend the school only on the production of a certificate from the Royapuram Hospital that their nasal secretions were free from *Lepra Bacilli*.

(b) *Other Infectious and Contagious Diseases* :—

	Boys.	Girls.
Malaria	99	84
Hookworm	17	128
Whooping Cough	1	7
Mumps	1	1
Kala Azar (Suspicious)	11	2
Filariasis	1	...

All these, except the suspicious cases of Kala Azar, were treated at the Corporation dispensaries. The parents of the pupils suffering from suspected Kala-Azar infection were met and advised early treatment at the Royapuram Hospital.

Other Diseases or defects :—1,693 boys (10.54 per cent.) and 594 girls (6.40 per cent.) were found to be defective under this head as against 14.52 per cent. and 13.84 per cent. respectively last year. The details of the defects are as follows:—

	Boys.	Girls.
Worms	978	475
Wounds, cuts, etc.	433	28
Boils, abscesses, etc.	56	16
Undescended Testis	49	...
Enlarged groin glands	83	...
Pyrexia	17	66
Leucodermic patches	26	3
Phimosis	91	...
Keloids	8	1
Warts	5	5
Obesity	4	...
Alopecia	2	...
Sebaceous Cyst	1	...
Lipoma Head	1	...
Orchitis	1	...
Salivary Fistula	...	1
Other conditions	22	17

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

Deformities :—65 boys (0.40 per cent.) and 24 girls (0.26) were noted as deformed as against 0.37 per cent. and 0.23 per cent. respectively in the previous year.

	Boys.	Girls.
Spinal Deformities	7	...
Talipes	8	1
Shortened limbs	14	2
Congenital Dislocation-Hip	2	...
Ankylosis of joints	3	3
Flat Foot	3	5
Amputated Limb	2	...
Genu Valgum and Varum	5	2
Supernumerary Fingers	5	6
Tilted Pelvis	1	2
Coxa Vara	2	...
Syndactily	1	...
Other conditions	12	3

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

Number bearing no marks of vaccination :—82 boys (0.51 per cent.) and 60 girls (0.65 per cent.) as against 0.64 per cent. and 0.38 per cent. respectively last year had no visible marks of vaccination. These were vaccinated.

Re-inspections and "following up" work :—114 re-inspections were made this year. During these inspections the children were re-examined and re-prescribed according to necessity. On the whole the results of re-inspections were fairly satisfactory.

CONCLUSION. The willing co-operation of the school staff is all important in the success of medical inspection. They are being reminded that medical inspection and "following up" work are part and parcel of their school curriculum and it is their legitimate duty to devote their best attention in bringing medical inspection to a success. The school teachers were instructed to maintain a list of defective pupils and to persuade the parents and the pupils to carry out the medical advice and treatment suggested by the school doctors.

Medical Treatment :—During the year under review, 15,565 children were either advised to go to or be treated at the various Corporation Dispensaries and Government Hospitals. The details are shown hereunder :—

1. Cases sent to Corporation dispensaries	Boys.	Girls.
...	8,780	5,221
2. Cases referred to other Hospitals:—		
(a) General Hospital ...	604	493
(b) Gosha Hospital ...	...	2
(c) Ophthalmic Hospital ...	322	50
(d) Tuberculosis Hospital ...	19	21
(e) Royapuram Hospital, Leper out-patient department.	49	4
Total ...	<u>9,774</u>	<u>5,791</u>

School Sanitation.—The Sanitary condition of the school and its surroundings continued to receive careful attention of the school medical staff. During the year under report, the buildings of 21 schools were reported as unsuitable for school purposes for want of proper accommodation, ventilation and latrine arrangements. Suggestions were given to improve accommodation, ventilation, etc. in the case of 44 schools. 95 schools are being conducted in rented buildings while 47 are located in Government and Corporation buildings. Rented buildings were generally found to be unsuitable for school purposes.

School latrines.—The latrines in rented buildings were found to be small and insufficient and wherever possible flush-out latrines were suggested.

At present only 28 schools have flush-out type of latrines and the rest are conserved by hand. Three schools have no separate latrine accommodation. Provision of latrines was recommended for these schools. 75 schools have inadequate latrine accommodation and necessary suggestions were given for improvement.

Water-Supply.—A sufficient number of taps has been provided in all the schools. During the year under review, the children were supplied with strained tap water for drinking purposes. Provision should be made to supply boiled water in such of the schools as receive midday meals.

Play-Ground.—66 schools have no facilities for play and recreation. Drill and games had to be conducted in-doors. The pupils of 8 schools were taken to the Model Playgrounds or to open spaces nearby for drill and games. It is necessary that all the schools should be provided with suitable playgrounds.

School-equipment.—All schools have adequate furniture.

Bathing classes.—49 schools have facilities for baths. The teachers were instructed to arrange for the bathing of dirty children daily.

Excursions.—The children were taken to the Health Exhibition and Health Charts were explained to them.

Midday Meals.—The supply of midday meals was re-introduced this year. The meals were cooked and distributed under the management of the Corporation. 38 schools received the supply. The total number of children fed daily during the school days was 2,500. The school doctors inspected these schools daily at the time when the meals were served.

Attendance of Parents.—As many as 3,663 parents of pupils were seen during the routine inspections, and the health of these children as well as the benefits of school medical service were explained to them.

Propaganda.—75 lectures were delivered to and 107 talks arranged with the parents and pupils during the course of the inspections, the total attendance being 7,964.

The details of the propaganda work are given below :—

Subjects.	No. of Lectures.	No. of Talks.
Small-pox ...	20	5
Cholera ...	11	5
Tuberculosis ...	11	4
Malaria ...	12	2
Hook-Worm ...	4	2
Leprosy ...	1	20
Measles ...	1	...
Flies ...	1	...
Personal Hygiene ...	12	47
Ventilation & Housing ...	1	20
Other subjects ...	1	2
Total ...	75	107

(For Statistical Tables see pages 113—120.)

WATER ANALYSIS REPORT.

General—

The out-standing features of the year under report are briefly stated thus.—

Slow sand filtration at 6" vertical per hour continued to be the method of purification for the Red Hills lake water. The continuance of such a system was responsible for the production of Sulphuretted Hydrogen which, in its turn, helped the growth of whitish, gelatinous stuff, which found its way into the distribution system and caused loud protests from the City. The lake water, as usual was chlorinated with a dose of chlorine at 1.25 parts per million for the most part of the year before it was sent to the filters. Although the Government Committee on 'water and sewage purification' had submitted their final report last year, recommending the adoption of a system of percolating filters at 24" rate, followed by sand filters working at 8" vertical per hour, no action could be taken to put in the percolating filters because the necessary plans and estimates are being prepared by the Sanitary Engineer to Government.

The average daily consumption was 18.84 million gallons. Sporadic cases of cholera were reported in July and August, mostly imported from the neighbouring villages.

Scientific.

(a) The work done at the Laboratory during the year is shown in Table I. (Page 121).

(b) *Red Hills Lake water.*—The hottest portion of the year was March, April, May, June, July and August when the maximum temperature ranged between 96° and 105° F. This was followed by a heavy rainfall in October and November and the total rainfall during the year showed an increase of 65.8 per cent. over that of the previous year (Table II). Bacteriologically the lake water was of maximum purity (L.F. in 5 c.c. and upwards) during March, May, July and October (Table III). The average total colonies per c.c. was 830 for the year. Chemically the lake water contained, as usual, a large amount of organic matter of vegetable origin. (Table IV). (*Vide* pages 121—123).

(c) *Raw water at Kilpauk end.*—Bacteriologically, the raw water was of fair quality throughout the year (Table III). On the chemical side the figures for organic matter resembled those of the lake water (Table IV). A-typical vibrios were present occasionally, almost throughout the year. A microphotograph of these vibrios is given in figure I. The organic content as represented by the figures for 'absorbed oxygen' was found to be highest in April when the



FIG. I.—VIBRIOS FOUND IN RED HILLS LAKE WATER.

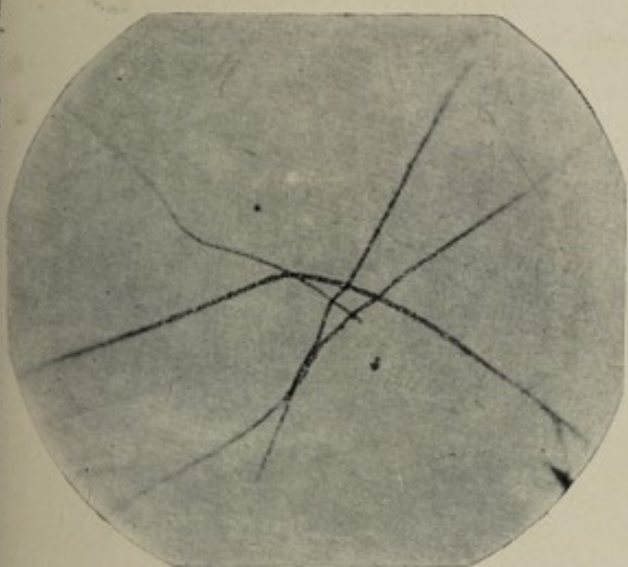


FIG. II.—SINGLE THREADS OF BEGGIATON, SHOWING SULPHUR GRANULES IN THEIR CELLS

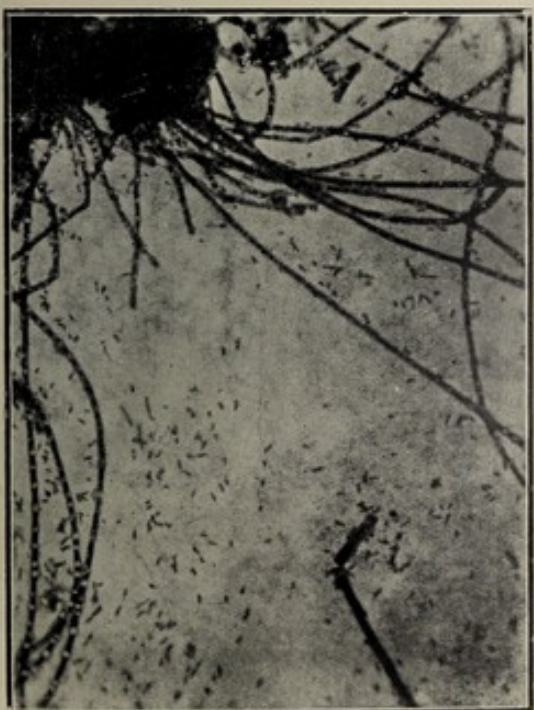
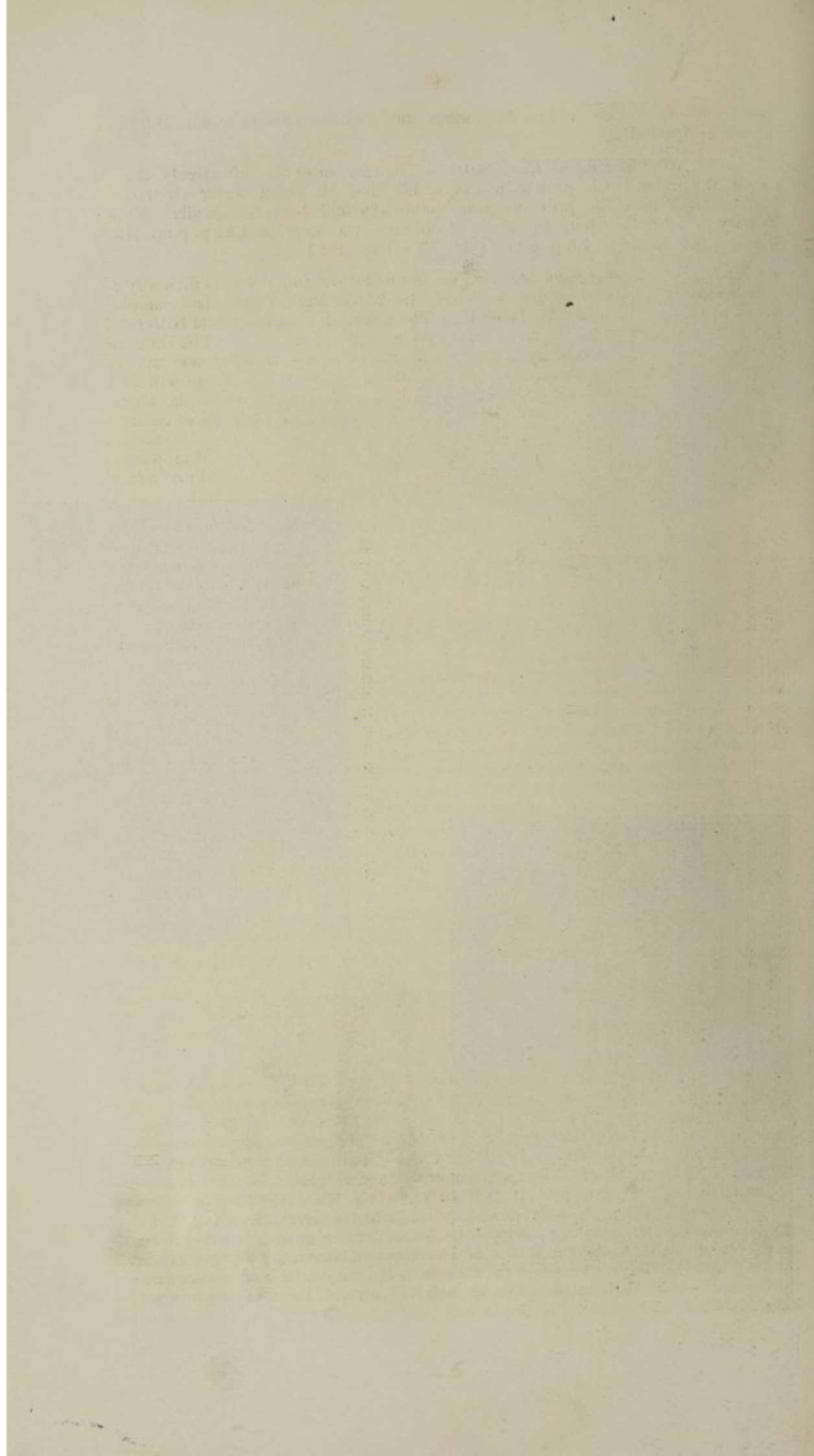


FIG. III.—THREADS OF THIOBACILLUS, SHOWING SULPHUR GRANULES IN THEIR CELLS.



lake level was lowest and in December the conditions were reversed (graph shown in Appendix).

(d) *Chlorinated Raw water* :—The raw water was effectively chlorinated throughout the year with the result that the feed water showed an improvement over the previous year chemically and bacteriologically. From January to 12th October, the dose of chlorine was kept at 1.25 p. p.m. after which it was raised to 1.5 p. p.m. (Table V). (Page 124.)

(e) *Filtrates from beds* :—The filters did not function so efficiently as in last year as is evidenced by the fall in the percentage of first class samples (L. F. in 60 c.c. and upwards, Table III). The figures for 'ammoniacal Nitrogen' and 'absorbed oxygen' were comparatively high (Table IV). The intense production of sulphuretted hydrogen in the filters in hot weather was mainly responsible for these high figures. It also paved the way for the growth of a whitish gelatinous stuff, which was found in long trailing filaments on the weirs, sides of the filtered water chambers, central collecting filtered water conduit and on the sides of the filtered water under-ground reservoirs. This consisted of two kinds of colourless sulphur bacteria-Beggiatoa and Thiothrix (Microphotographs shown in figures 2 and 3, appendix). These organisms according to Mez are indications of the presence of H_2S in places where they are found.

A short historical review of the physiology of these bacteria is given below. A microscopic examination of the organisms will show that they have in their cells highly refractive globules which were first noticed by Cramer who showed that they behaved exactly like Sulphur in presence of solvents. So he thought them to be free sulphur. Cohn's investigations of Beggiatoa, later led to the same result. Winogradsky proved them to be oily amorphous sulphur, the greater part of which was soluble in Carbon-disulphide. Cohn, who made an investigation into the origin of the sulphur granules, came to the conclusion that H_2S was produced by the reducing action of these bacteria on sulphates in water and that they subsequently reoxidised H_2S , as a result of which, sulphur was deposited in their cells. The credit goes to Winogradsky who proved conclusively by a series of laboratory experiments that they did not produce H_2S but oxidised it and stored up the separated sulphur granules in their cells. These granules of sulphur were consumed by them if H_2S was not present for their life processes. Threads of Beggiatoa consumed daily from 2 to 4 times their own weight of the gas. In short, sulphur or H_2S play the same rôle towards these organisms as the carbo-hydrates do towards the majority of Schizomycetes. Its combustion liberates the energy necessary to the maintenance of their life activities. So it will be evident that these colourless, gelatinous sulphur bacteria thrive in the presence of H_2S which is produced in the filters.

(f) *Mixed Filtrates and Test tap*.—The number of first-class samples (L.F. in 60 c.c. and upwards) under this heading was considerably low due to the mixing of good, indifferent and bad filtrates from beds at work (Table III, page 122).

(g) *Distribution system*.—This year there has been a great reduction in the number of first-class samples—(L.F. in 60 c.c. and upwards) over the corresponding figures for last year ; the average bacterial count per c.c., also showed an increase.

(h) *Complaints*.—In the months of August and September the water as supplied especially in some areas of the City emitted a very offensive smell. Numerous complaints about this and of the presence of gelatinous growths in water were received. It was even suspected that there was sewage contamination taking place somewhere in the distribution system. But it was all due to the situation at the Headworks. As much as 5 milli grammes of H_2S per litre were present in the filtrates from Beds and as has been explained previously H_2S encouraged the profuse growth of the sulphur bacteria which found their way into the City mains. All attempts at checking their growth failed. Fortunately Nature came to the rescue for in October and November a heavy rainfall (50.45") over the lake region filled the lake with fresh water and in consequence the production of H_2S as also the growth of sulphur bacteria considerably diminished.

Summary.

1. Occasionally a-typical vibrios were detected in Raw water samples almost throughout the year.
2. Total rainfall in the lake region showed an increase of 65.8 per cent and the yearly average lake level an increase of 4.2 feet over the respective figures for the previous year.
3. The filters in general did not function so efficiently as in last year.
4. Although it is more than a year since the Government Committee on 'Water and Sewage purification' had suggested a new method of purification, yet the same old system of slow sand filtration had to be continued throughout the year.
5. The continuance of this system was responsible for the production of H_2S which was most intense in the months of March, April, May, June, July, August and September.
6. Sulphuretted Hydrogen served as nutrient medium for the growth of the colourless sulphur bacteria which were found profusely growing in the filtered water chamber, conduit and under-ground reservoirs. The colourless gelatinous stuff consisted of two kinds of sulphur bacteria—Beggiatoa and Thiothrix. Micro-photographs of the two are shown in figures 2 and 3.
7. Numerous complaints were received from all parts of the City especially in August and September about bad smell and growths in tap water:—bad smell was due to H_2S produced in large amounts in the filters and the growth consisted of sulphur bacteria which had found their way from the Head works into the distribution system.
8. Heavy rainfall in October and November in the lake region was chiefly responsible for the improvement in the quality of water during the last 3 months of the year.
9. Until the recommendations of the Government Committee on 'Water and Sewage purification' are given effect to, some temporary arrangement in the working of the filters appears to be necessary to get over the troubles arising from sulphuretted hydrogen and the concomitant growths. This may be done by speeding up the filters followed by chlorination when necessary.

Water works,
Kilpauk
15-5-1931 }

S. V. GANAPATI,
Water Analyst.

21

**Report on the Working of the Child Welfare Scheme, Corporation of
Madras, for the year ending 31st December 1930.**

The record of work during the year under review is one of steady progress in all directions. The total number of labour cases attended on by the staff rose to the figure of 12,600 which is the highest reached in the history of the Child Welfare Scheme. Also the rate of Infantile Mortality dropped down from 171.6 to 157.2 per mille which is the lowest recorded. These two facts doubtless signify that the activities of the Scheme are yielding calculable results. The following are the encouraging words of advice given by Lady Beatrix Stanley on the eve of her opening the City Health and Baby Week Exhibition this year.

"The experience of my first year in the Madras Presidency has brought home to me how very important are the questions of Child Welfare and the prevention of disease. It is impossible to exaggerate the importance of these two subjects. I hope that this year's Health Week will do everything in its power to advertise and encourage the efforts of all those who have helped to organise the Child Welfare Centres in this city. From year to year I shall hope to see an increase in the number of the centres and in the support which is given to this organization by the public. I shall also hope to see that the centres which are now existing will be able to increase the help which they are already giving to the children of this city. Finally, I wish the coming Health Week every success".

Such an inspiring message is bound to elicit a response from all those concerned in the work of Maternity and Child Welfare. A movement of this nature designed to improve the social well-being and life of the nation can attain appreciable success only with the willing co-operation of the public at large which is not wanting in this city.

By the opening of a new centre at Choolai during the year under report the total number of centres has increased to twelve. In this connection, it is regretted that the Indian Red Cross Society which has been till now running eight Baby Welcome Centres in this city and thus contributing its share of help in Maternity and Child Welfare work, has reduced the number to three. This really means that the responsibility of the Corporation for the welfare of the indigent mothers and children in the city has increased. Owing to the limited number of health visitors and nurses employed, it is now just possible to cope with the requisitions for labour cases and with other lines of activities. But any further demand on the energies and time of the existing staff will impair the efficiency of their work, unless in the near future more hands are employed commensurate with the increasing popularity of the work of the Scheme.

It may be mentioned that the new centre which was sanctioned by the Council at its meeting held on 27-8-29 for the Choolai division (17th) was opened on 24-9-30 at 3, Avadanam Papier Road, Choolai. This centre serves the needs of the 19th division as well. During the short period this centre has been working, 252 cases of labour were attended to, 460 pre-maternity cases registered and 5,744 women and children treated at the out-patients clinics. The delay in opening the centre was due, in the main, to want of finance and, in part, to difficulties in securing a suitable building for rent.

Under great tension work is now being carried on in the George Town Centre. The jurisdiction of this centre extends over not less than seven municipal divisions (8, 10, 11, 12, 13, 14 and 15. *vide* Statement XIV, pages 138 & 139), whereas the other centres serve the needs of 1 to 4 divisions. The total number of births for 1930 for the seven municipal divisions served by the George Town centre was 3,284 of which 1,646 births came under the care of the staff. The amount of work at the George Town Centre is disproportionately heavy and more than the present staff can conscientiously cope with. When a similar difficulty was encountered in the Purasawakkam centre which was then serving the needs of six large municipal divisions, it was solved by opening three new centres successively, viz, Perambur, Egmore and Choolai. Thus the number of divisions served by the Purasawakkam centre was reduced to two municipal divisions and the staff there are now able to cope with the work successfully and maintain a high standard of efficiency in the discharge of their duties.

The present George Town Centre is situated in division No. 10 (Seven Wells). The total number of births in divisions 8, 10 and 12 was 1,776 for 1930 of which 812 were attended to by the staff. The total number of births in the remaining four divisions namely 11, 13, 14 and 15 was 1,508 of which 507 came under the treatment of the staff. The desirability, therefore, of grouping divisions 11, 13, 14 and 15 as an area for the proposed additional centre which may conveniently be located in division 15 (Park Town) and of separating divisions 8, 10 and 12 into another area under the jurisdiction of the present George Town Centre is evident. If this proposal is given effect to, the existing congestion of work will disappear and the Maternity and Child Welfare work will be distributed more evenly in all the divisions concerned.

Personnel.

Mrs. D. Devanesen, Lady Superintendent, was on leave from 14-3-30 to 13-6-30 and Mrs. H. V. Kamalammal, Lady Doctor, Triplicane Centre, acted in the vacancy. Miss Mahadevi Chellam who was granted a year's leave on loss of pay with permission to accept a post under Government reverted and was permitted to join the Scheme on 1-9-30.

Work of the Staff.

The total number of visits paid by the 15 Lady Doctors was 14,975 as against 13,416 in 1929 (*vide* Statement VII, page 132). The Lady Doctors treated 3,884 morbid cases (puerperal) for the year under review as against 3,143 the previous year. The number of women and children treated at the out-patients' clinics rose from 1,88,329 in 1929 to 2,02,441 for the year under report. The average daily attendance of women and children at the out-patients' clinics in all the Centres was 600 as against 520 in the previous year (*vide* Statement V, page 131). The total number of visits paid by the Health Visitors was 127,320, as against 131,297 in 1929 and the total number of pre-maternity cases registered by them was 11,292 against 10,535 in 1929. Of these, 8,540 expectant mothers actually attended the centres for medical advice and treatment as against 6,698 the previous year. It was a common custom, not long ago, for an expectant mother not to take notice of her condition till the last minute when she took to bed. But now, largely owing to the home visitation paid by the Health Visitors and the talks on hygiene, maternity etc., given by them to expectant mothers, the latter freely resort to the centres and seek advice from Lady Doctors. This is, as all will agree, a very hopeful sign and affords not a little encouragement to the welfare workers.

During the year under review, 12,600 cases of labour which is 49 per cent. of the total number of births in the city came under the care of the scheme. Of these, 9,733 cases were actually conducted by the mid-wives, 1,738 cases were taken over after the barber mid-wife had conducted labour and 1,129 cases were sent to the various maternity hospitals in the city. Of the 12,600 labour cases, 2,027 were Mohamedans and 10,573 non-Mohamedans (*vide* Statement I, page 126). The total number of visits paid by the mid-wives rose from 1,33,047 in 1929 to 1,57,373 in 1930. (*Vide* Statement VII, page 132). There are at present 31 Health Visitors and 82 Mid-wives in the Scheme.

Cases of abortion.

The total number of abortions treated during the year under review was 257 as against 254 for the previous year. Of these, 85 were conducted by the staff, 14 were taken over after barber mid-wives had taken part and 158 difficult cases were sent to hospitals from all the centres (*Vide* statement VI, page 132).

Maternal Mortality.

Out of 12,600 labour cases which came under the observation of the scheme staff during the year under review, a total of 62 deaths occurred among the mothers of which 41 occurred among complicated cases sent to hospitals by the staff of the Child Welfare Scheme. Seven deaths took place among cases which first came under our observation but subsequently were handed over to private medical practitioners at the request of the relatives. Five came to our

notice first but later taken charge of by "Vydians" at the request of the relatives and one under care of the barber mid-wife. This leaves 8 deaths which actually took place under the care of the Scheme Staff (*vide* Statement IV, page 130). The maternal mortality rate for the year under review is therefore 49 per cent. which is the same as that of the previous year.

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 the city. It will be seen that the maternal mortality rate for Child Welfare Scheme is the lowest.

	1929	1930
1. Government Maternity Hospital ...	2.61	2.22
2. Victoria Gosha Hospital ...	1.5	2.23
3. Raja Sir Ramaswamy Mudaliar's Lying-in-Hospital ...	2.17	2.86
4. Kalyani Hospital ...	.91	1.62
5. Rainy Hospital ...	3.94	3.29
6. Government School of Indian Medicine...	...	1.04
7. Child Welfare Scheme, Corporation of Madras ...	0.49	0.49

Considering the insanitary surroundings where the delivery is conducted by the Child Welfare Scheme mid-wives, frequently in dirty huts, the poverty of mothers who cannot afford even the minimum comforts and nourishment necessary for a lying-in-mother such as change of garments, a cup of milk, hot water for cleaning purposes, etc., the want of proper attendance and the low vitality of many of the mothers during this critical period, it is surprising that the deaths among them under care of child welfare scheme should have been so few. It is needless to add that the welfare work, as carried on now, if combined with economic prosperity and freedom from the blighting influence of poverty, will be far more effective and still further reduce the rate of maternal mortality.

Infantile Mortality.

It is gratifying to note that Infantile Mortality rate of 157.2 for the year under review as against 171.6 per mille of the previous year is the lowest on record in the history of the scheme. Out of 11,416 labour cases which came under the observation of the Child Welfare Scheme in 1929, 14 cases were twins; that means 11,430 babies were actually born. Of these, 477 were stillbirths and the remaining were live births. Of the live births, 1,722 died during their first year of life (*vide* Statement VIII, page 133). This gives a death rate of 157.2 per mille as against 171.6 of the previous year thereby showing a reduction in the mortality rate. The infantile mortality rate for the City also shows a reduction being 256.6 per mille as against 286.8 of the previous year. The infantile mortality which was declining during 1926 and 1927 rose in 1928 as will be seen in the graph opposite and in the succeeding year it shows a marked decrease lower than that of 1927. It is also noteworthy that in some years the Child Welfare Scheme rate and the City rate act in co-ordination which implies, perhaps, that the causes which are responsible for the rates are identical but that the proportion of deaths is greater for the city. Out of 1,722 deaths which took place among infants during their first year of life, 463 babies died within the first ten days owing to their low vitality at birth. The majority of deaths was due to respiratory diseases (404), fever (334), intestinal disorders (324), nervous system (111), small-pox (60), etc. (*vide* Statement IX, page 134).

Ambulance Car.

The total number of calls answered by the car was 459 against 723 in the previous year. The decrease is due to the fact that last year the car had to be sent for repairs frequently and the total period during which it was out of order was nearly three months. The inconvenience caused to the public and to the staff during this period was considerable. Now that the car is located in

the Ripon Buildings, there have been fewer complaints regarding the failure of the driver to answer urgent calls.

Milk Supply.

717 babies received milk as against 758 the previous year. The average daily attendance was 427.15 as against 443 last year. There is no doubt that the compulsory feeding of infants is working satisfactorily in all the Centres.

Bathing of Children.

During the year under review, 1,18,824 warm baths were given as against 1,29,515 in the previous year and on an average 309 children were bathed in all the centres as against 373 the previous year (*vide* Statement XI, page 135). The decrease in number was due to the discontinuance of the former practice of bathing children up to ten years and restricting baths to children of pre-school going age up to five years.

Health Propaganda Work.

The progress of work under Health Propaganda has been very satisfactory. A total number of 454 lectures were delivered at the various Child Welfare Centres as against 340 of the previous year. Out of these, 185 lectures were delivered with the aid of Magic lantern as against 33 of the previous year. A new feature in the propaganda work this year was the inclusion of Cinema films in the lectures of which there were six. The average attendance was 53. The lantern lectures are obviously far more attractive in securing attendance and effective in imparting education on health subjects to the masses than lectures delivered without their aid. For these reasons, greater attention was paid to lantern lectures. This was possible mainly because of setting apart of one lantern for the exclusive use of the Child Welfare Scheme. The work can be much more intensified and the educative value of the lectures spread more widely if the number of cinema lectures could be increased. But this is not feasible at present as there is only one cinema machine for the entire Health Department.

City Health and Baby Week.

It has been customary to include hitherto an account of the City Health and Baby Week Exhibition of the current year in the report of the previous year. Since this is chronologically not correct, it is proposed to omit it from the report for 1930. The exhibition which took place in the beginning of the current year will appear in the report for that year in due course. An account of the Exhibition which was held during the year under review has already appeared in the report for the year 1929.

A new feature of the year's work was the opening of several "Divisional Exhibitions" where the work carried on in the Health Department was demonstrated to the public on a small scale by means of charts, magic lanterns, cinema shows, models, etc. The Maternity and Child Welfare Work was illustrated in this way in the Exhibitions held in the following Divisions :—

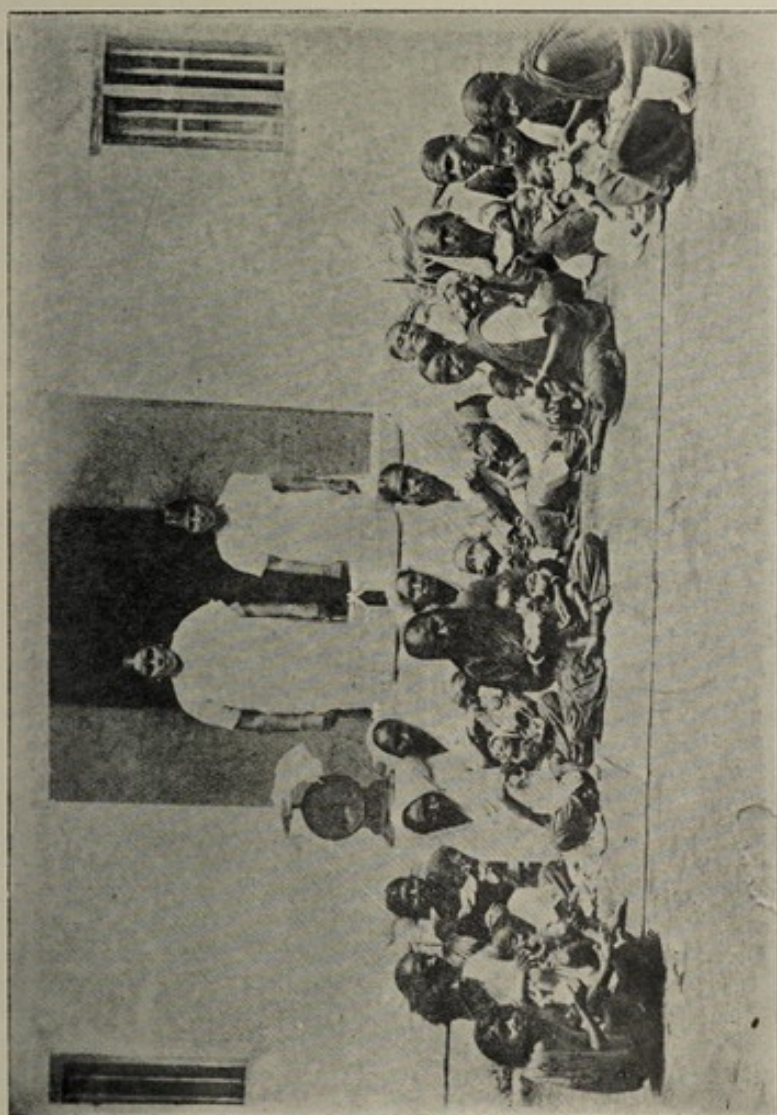
Perambur, Egmore, Choolai and Triplicane.

A "Divisional Exhibition" lasted for three days. The object with which these secondary exhibitions were organised was for bringing the exhibits within the easy reach of the public in a division reminding them of the health lessons inculcated in the Annual City Health and Baby Week Exhibition and thus continuing and stabilising the general work of the exhibition.

Visitors.

We are very grateful to Dr. Paul F. Crussey, Ph.D., Miss L.M. Chute and Dr. F. J. Wampler, M.D., C.Ph., who visited our Centres and were pleased to enter the following remarks in the Visitor's book :—

"I have been very much impressed with what I have seen of the work of the Child Welfare Scheme in Madras. That it should have developed in



COMPULSORY FEEDING OF INFANTS AT THE CHILD-WELFARE CENTRE, TRIPPLICANE.

CH. 1. THE HISTORY OF THE UNITED STATES OF AMERICA.

such a relatively short period of time to its present magnitude of service is a great tribute to the energy and devotion of all those who have been connected with the Scheme.

The general prosperity of a Society rests in no small measure upon the physical health and well-being of mothers and children of that society. Too frequent child bearing results in high death rates, unnecessary suffering and the physical deterioration of mothers and their children. Lack of intelligent knowledge and prudence in regard to those problems presents an almost insurmountable handicap to any real social or economic progress. It seems to me that the Child Welfare Scheme is ideally situated for the proper dissemination of this type of helpful knowledge among the poorer classes of Madras. If it were made possible for the Scheme to undertake this type of educational guidance it seems to me that its contribution to the Civic Welfare and happiness of Madras would be greatly increased."

Triplicane Centre,
1st December 1930.

Paul F. Crussey, Ph. D.
University of Chicago, U. S. A.

"The work here seen so far has been most interesting. It has been surprising to see the splendid organisation. Coming from Canada where the Public Work is fairly well established I was greatly pleased to see how favourably your work here compared with that there".

Nungambakkam Centre,
1st December 1930.

Lorma M. Chute, Vellore.

"I am glad to have had this opportunity to see what Madras is doing for the care of its women and children. This city may well point the way for India in this line of health and welfare work."

Nungambakam Centre,
4th December 1930.

Fred. J. Wampler, M.D.C. Ph.
Richmond Vas, U.S.A.

Conclusion.

The care and preservation of the lives of the young as well as the education and protection of the mother in this City ought to be continued not only systematically as heretofore but also more intelligently and sympathetically, understanding the peculiar social customs and habits of the various communities among whom the work is spreading. What may be suitable and necessary for one nation or community may be unsuitable and useless for another. Adaptability to the varying conditions of social life and customs is vital to success in Welfare Work. Though welfare work is essentially preventive, in a country like India, where literacy among women is low and the economic standard poor, medical advice ought to be combined with actual treatment at times for achieving an adequate measure of success. In bringing the year's report to a close, one may emphasise the need for further effort and more intensive work. The cause of the poor mother and the needy infant is being espoused in an increasing measure by all countries which lay claim to civilisation. It behoves, therefore, every one of the Indian welfare workers not to lag behind in their work, in the great humanitarian service, which, perhaps, constitutes the keystone in the arch of a nation's progress.

Mrs. D. DEVANESEN,
*Lady Superintendent, Child Welfare Scheme,
Corporation of Madras.*

VITAL STATISTICS (STATEMENTS.)

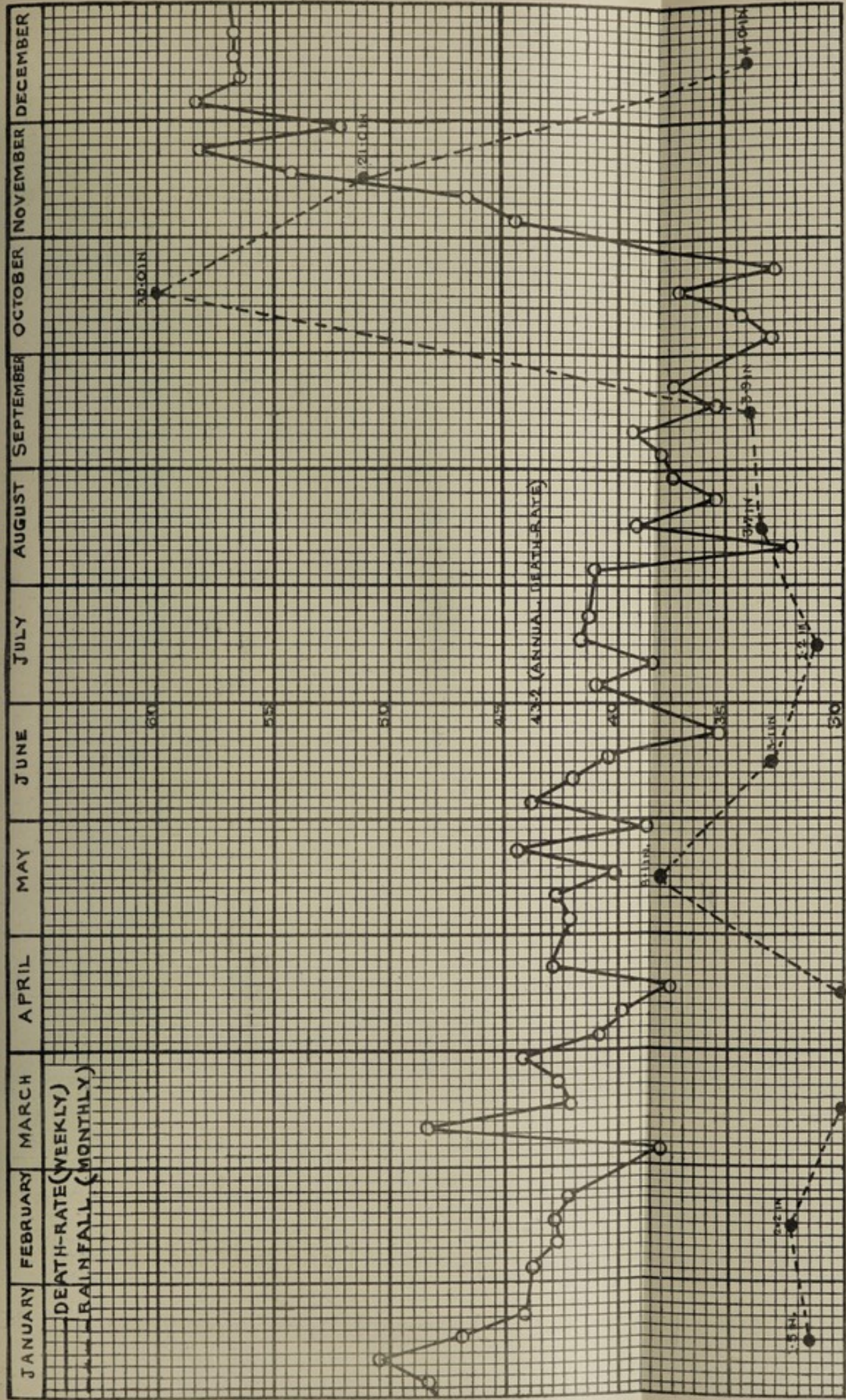
Annual Form No. A—Meteorological Data for 1930, Madras.

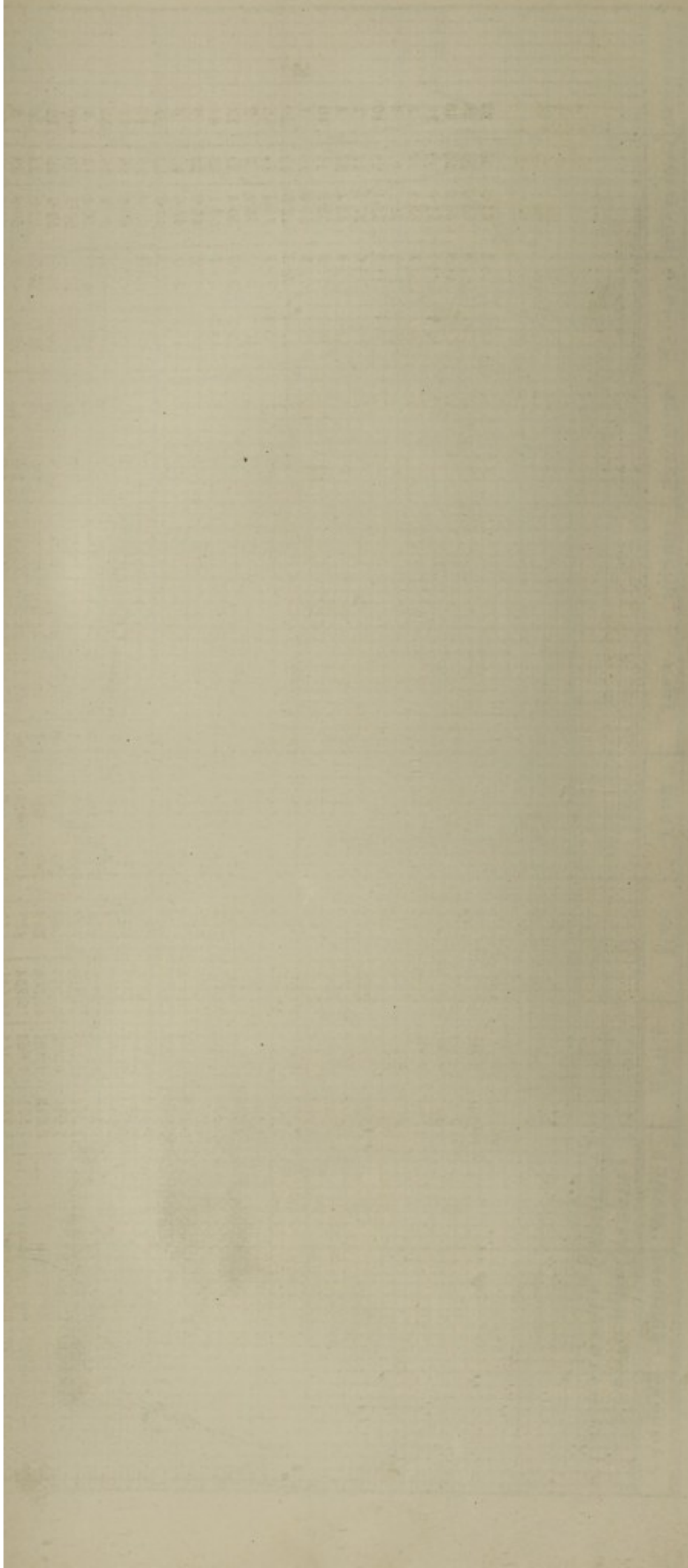
Latitude, 13°·4' N.

Longitude 80°·15' E.

Months.	Barometer. Mean daily reading reduced to 32° F.	Reading of Thermometer.						Difference between dew point temperature and mean air temperature.	Degree of humidity com- plete Saturation being 100.	Prevailing directions of wind.	Rainfall.		
		Dry.			Dew point.		Mean Maximum Solar Radiation.				Number of days on which rain- fell.	Total fall of rain during the month	Inches.
		Maximum.	Minimum.	Mean daily range.	Mean daily value.	Mean daily value.							
January	29-925	83-4	68-4	15-0	75-6	69-7	Not recorded.	5-9	77	E by N.	5	1-47	1-19
February	29-927	85-7	70-1	15-6	77-8	67-6		10-2	74	E by S	6	2-21	1-03
March	29-827	90-2	72-5	17-7	80-8	70-4		10-4	73	S E by E	1	0-01	0-01
April	29-771	93-0	77-4	15-6	84-5	73-7		10-8	73	S E	...	...	...
May	29-685	96-9	79-1	17-8	85-7	73-8		11-9	72	S	5	8-14	3-65
June	29-652	96-0	79-1	16-9	85-0	71-4		13-6	68	S S W	12	3-10	1-27
July	29-667	98-0	80-5	17-5	87-1	68-1		9-0	57	S W	9	1-17	0-89
August	29-689	96-0	78-1	17-9	85-1	70-2		14-9	65	S S W	10	3-66	1-80
September	29-764	93-7	77-0	16-7	84-0	72-0		12-0	71	S by W	11	3-88	1-26
October	29-511	86-0	74-9	11-1	81-1	73-9		7-2	87	E	26	30-01	6-29
November	29-862	82-5	71-9	10-6	76-8	70-7		6-1	83	N by E	19	21-04	4-01
December	29-934	83-3	70-7	12-6	76-3	68-8		7-5	79	N N E	11	4-00	1-36
	29-789	90-4	75-0	15-4	81-6	...	...	...	73	S. E.	115	78-69	...

RAINFALL AND ITS INFLUENCE ON WEEKLY MORTALITY FOR THE YEAR 1930





Annual Form No. 1.—Births registered by divisions during the year 1930.

1	2	3			4			5			6	7	8	9		10	11
Divisions.	Districts.	Population according to the Census of 1921.		Total.	No. of Births registered.		Total.	Ratio of Births per 1000 Population.		Number of males born to every 100 females born.	Excess of Births over deaths per 1000 of Population.	Excess of deaths over births per 1000 of Population.	Mean ratio of births per 1000 during previous five years.		Still Births.	Illegitimate Births.	
		Males.	Females.		Males.	Females.		Males.	Females.								
1	Royapuram	10,400	10,491	20,891	508	432	940	48.8	41.2	45.0	117.6	9.8	43.8	39.1	41.5	36	22
2	Tondiarpet	8,636	8,363	16,999	649	593	1,242	76.0	71.0	73.5	109.4	12.7	67.1	62.8	65.0	96	26
3	Washermanpet	11,992	11,785	23,777	582	553	1,135	48.5	46.9	47.8	105.2	3.4	47.0	44.9	46.0	52	13
4	Korukupet	8,667	7,973	16,640	492	461	953	56.8	57.8	57.3	108.7	...	50.2	53.1	51.6	49	18
5	Harbour	5,032	2,256	7,288	171	122	293	34.0	54.1	40.2	140.2	...	24.2	53.2	33.2	12	3
6	Muthialpet	9,670	5,961	15,631	192	228	420	19.9	38.2	27.9	93.6	4.6	18.4	28.2	22.1	2	2
7	Katchalewaranpet	7,102	5,953	13,055	244	245	489	34.4	41.2	37.5	99.6	4.7	30.8	34.3	33.1	22	10
8	Kothwal Bazaar	3,120	1,997	5,117	95	79	174	30.4	39.6	34.0	120.3	0.2	21.5	35.6	27.2	11	1
9	Amnen Koil	8,095	7,725	15,820	376	390	766	46.4	50.5	48.4	96.4	...	41.0	42.8	43.4	37	4
10	Seven Wells	9,748	9,880	19,628	376	369	745	38.6	37.3	38.0	101.9	...	33.6	31.9	32.8	16	40
11	Sowcarpet	4,283	3,177	7,460	94	97	191	21.9	30.5	25.6	56.9	...	15.7	23.3	20.6	10	1
12	Peddunackanpet	8,953	8,622	17,575	421	436	857	47.0	50.6	48.8	96.6	5.6	42.8	42.3	42.6	43	10
13	Trevelyan Basin	8,762	8,510	17,272	339	310	649	38.7	36.4	37.6	109.4	0.7	36.3	34.4	35.4	44	15
14	Esplanade	1,548	1,116	2,664	58	51	109	37.5	45.7	40.9	113.7	1.1	31.7	37.6	34.2	5	2
15	Park Town	9,588	7,956	17,544	313	246	559	32.6	30.9	31.9	127.2	...	29.1	32.2	30.4	39	13
16	Perambur	15,492	13,967	29,459	912	846	1,758	58.9	60.6	59.7	107.8	12.9	48.7	51.7	50.1	69	8
17	Choolai	12,306	11,715	24,021	623	563	1,186	50.6	48.1	49.4	110.7	2.5	46.7	47.2	46.9	53	9
18	Purasawalkam	10,475	10,181	20,656	570	548	1,118	54.4	53.8	54.1	104.0	7.3	57.8	47.0	47.6	43	8
19	Vepery	10,675	9,224	19,299	428	433	861	42.5	46.9	44.6	98.8	3.9	42.2	44.3	43.2	52	23
20	Egmore	13,870	11,757	25,627	725	713	1,438	52.3	60.6	55.1	101.7	17.4	48.9	55.5	51.9	99	17
21	Kilpauk	9,667	8,873	18,540	421	397	818	43.6	44.7	44.1	106.0	6.4	39.0	42.7	40.8	35	11
22	Nungambakam	11,242	10,402	21,644	483	464	947	43.0	44.6	43.5	104.1	9.0	39.6	41.0	40.2	38	58
23	Chintadripet	12,259	11,531	23,790	645	554	1,199	52.6	48.0	50.4	116.4	8.7	46.7	47.0	46.8	44	9
24	Tiruvateeswaranpet	12,556	11,639	24,195	692	677	1,369	55.1	58.2	56.6	102.2	4.9	55.0	57.5	56.2	70	10
25	Chepak	7,054	6,223	13,277	392	355	747	55.6	57.0	56.3	110.4	14.4	50.7	55.9	53.0	55	12
26	Triplicane	8,675	7,831	16,506	348	338	686	40.1	43.2	41.6	103.0	6.5	41.0	43.2	42.0	33	24
27	Amir Mahal	7,591	7,663	15,254	457	401	858	60.2	52.3	56.2	114.0	5.6	52.8	48.9	50.9	39	5
28	Mirahibpet	9,286	9,345	18,631	573	554	1,127	61.7	59.3	60.5	103.4	5.7	59.9	57.8	58.9	76	13
29	Royapettah	11,606	11,167	22,773	651	601	1,252	56.1	53.8	55.0	108.3	13.7	44.2	42.4	43.3	50	6
30	Mylapore	9,394	8,464	17,858	422	354	776	44.9	41.8	43.5	119.2	7.4	36.4	40.1	38.1	28	11
Total		2,77,044	2,51,747	5,28,791	13,252	12,410	25,662	47.8	49.3	48.5	106.8	5.3	43.2	46.2	44.1	1266	480

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

Annual Form No. III.—Deaths Registered by divisions during each month of the year 1930.

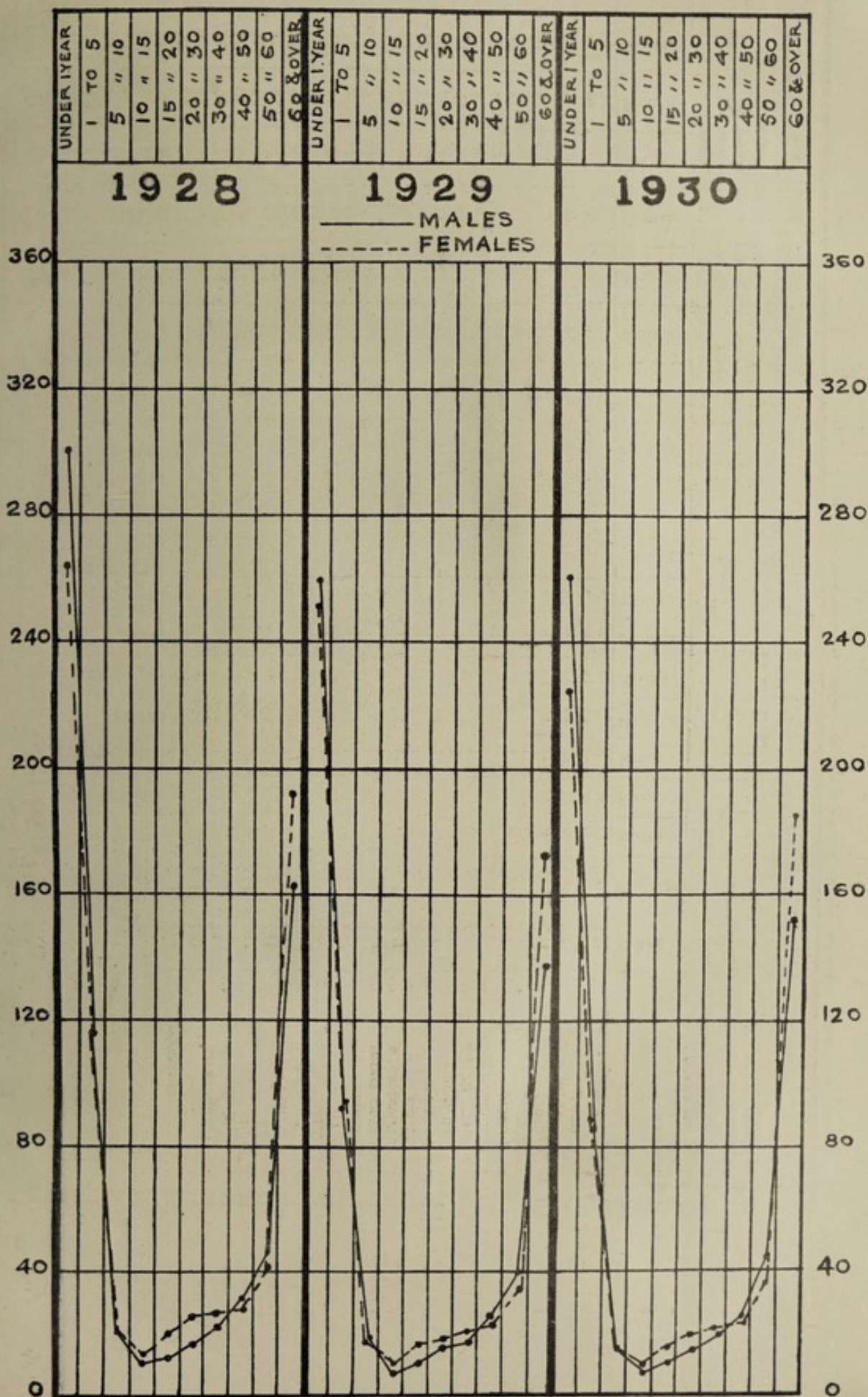
1	2	3												4
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year 1930.
1	Royapuram	62	54	49	54	63	64	55	58	57	45	70	104	735
2	Tondiarpet	112	84	67	86	78	78	87	57	70	75	106	127	1,027
3	Washermanpet	101	68	105	102	93	71	71	76	74	75	115	102	1,033
4	Korukkupet	76	81	128	105	115	95	80	55	69	57	86	126	1,073
5	Harbour	28	20	42	30	29	33	25	26	18	25	34	23	333
6	Muthialpet	21	29	29	34	31	22	20	29	29	25	41	38	348
7	Katchaleswaranpet	37	42	43	24	40	25	31	33	30	27	40	55	427
8	Kothawal Bazaar	17	17	16	7	18	17	10	10	8	13	20	20	173
9	Ammen Koil	77	52	74	58	55	50	60	34	58	59	66	66	709
10	Seven Wells	60	56	68	84	79	66	64	73	53	58	94	89	844
11	Sowcarpet	26	23	14	24	13	20	18	11	24	17	23	24	237
12	Peddunaickenpet	66	70	71	55	61	61	58	39	52	52	87	87	759
13	Trevelyan Basin	57	61	65	43	41	60	58	39	39	44	57	73	637
14	Esplanade	45	32	27	33	29	33	31	43	40	33	32	48	426
15	Park Town	58	50	68	44	44	31	50	48	42	45	55	50	585
16	Perambur	110	96	120	107	99	102	135	94	92	110	149	164	1,378
17	Choolai	88	79	86	78	79	78	97	90	75	87	122	166	1,125
18	Purasawalkam	76	72	83	77	67	70	67	71	76	69	106	133	967
19	Vepery	105	62	57	57	55	65	71	53	48	58	86	86	803
20	Egmore	87	77	81	81	72	59	81	77	78	77	163	119	992
21	Kilpauk	61	54	50	40	70	46	58	50	49	56	69	97	700
22	Nungambakam	66	55	79	56	61	52	55	59	47	57	76	89	752
23	Chintadripet	80	74	65	71	85	84	73	74	69	84	119	115	992
24	Tiruvatteswaranpet	126	82	90	91	95	104	105	106	80	88	151	133	1,251
25	Chepauk	73	46	46	34	50	38	36	38	46	40	59	50	556
26	Triplicane	56	39	46	55	52	42	30	49	42	36	61	70	578
27	Amir Mahal	68	63	66	51	73	62	59	53	43	52	83	99	772
28	Mirshabpet	80	71	76	80	82	74	90	86	83	78	113	108	1,021
29	Royapettah	90	63	77	67	79	88	76	78	65	72	92	94	941
30	Mylapore	55	39	52	49	57	51	39	52	43	59	74	74	644
Total		2,064	1,711	1,940	1,777	1,865	1,741	1,790	1,661	1,599	1,673	2,389	2,629	22,839

Annual Form No. IV—Deaths registered according to age by divisions during the year 1930.

Divisions.	Districts.	1		2		3		4		5		6		7		8		9		10		11		12	
		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.	Males.	Females.	Males.	Females.
1	Royapuram	144	89	67	57	8	9	4	3	8	9	24	29	30	27	27	14	28	24	78	63	28	24	78	63
2	Tondiarpet	141	141	90	80	20	22	13	18	9	11	18	57	40	45	28	26	41	26	112	86	41	26	112	86
3	Washermanpet	145	122	85	94	29	20	17	14	11	27	36	34	47	45	34	24	44	41	95	69	44	41	95	69
4	Korukupet	155	115	80	88	33	35	17	16	10	18	34	43	47	54	55	35	34	16	80	107	34	16	80	107
5	Harbour	55	38	28	26	11	10	7	4	9	6	9	14	25	11	13	9	5	7	17	29	5	7	17	29
6	Muthialpet	57	52	26	31	8	8	3	5	2	10	15	16	6	12	16	13	10	12	26	21	10	12	26	21
7	Katchaleswaranpet	62	42	35	35	10	11	4	8	4	9	16	20	26	17	18	10	18	8	32	41	18	8	32	41
8	Kothawal Bazaar	20	22	15	14	4	1	...	2	1	4	14	8	13	10	9	4	9	6	8	9	9	6	8	9
9	Amnen Koil	39	93	51	50	12	14	9	10	6	13	32	42	23	29	24	22	36	25	55	64	22	22	36	25
10	Seven Wells	107	78	41	42	7	17	3	5	17	28	50	46	56	34	63	24	48	27	82	69	48	27	82	69
11	Sowcarpet	20	25	14	11	2	1	2	1	7	6	7	13	11	19	12	14	15	11	22	14	15	11	22	14
12	Peddunaickenpet	100	126	34	75	17	11	6	8	7	22	22	47	36	19	23	22	27	19	72	62	27	19	72	62
13	Trevelyan Basin	107	89	54	45	11	10	6	3	5	8	24	31	23	19	21	17	30	16	61	57	30	16	61	57
14	Espanade	21	18	14	8	8	1	12	8	18	6	66	19	72	11	48	8	42	6	25	14	42	6	25	14
15	Park Town	192	57	40	42	8	11	3	9	15	15	18	38	28	29	22	12	37	18	34	50	37	18	34	50
16	Perambur	224	185	110	159	28	32	11	10	15	19	45	62	55	40	29	23	36	29	141	124	36	29	141	124
17	Choolai	189	136	102	97	20	13	5	12	8	12	45	62	36	40	33	33	32	26	103	111	33	26	103	111
18	Purasawalkam	163	109	93	89	19	11	3	7	6	12	30	51	18	32	33	26	32	20	81	116	32	20	81	116
19	Vepery	112	90	54	71	13	20	6	11	12	15	57	26	40	23	35	23	23	18	71	82	23	18	71	82
20	Egmore	164	140	86	68	16	8	7	6	12	18	29	75	40	46	39	31	29	24	76	78	39	24	76	78
21	Kilpauk	95	67	46	40	12	9	7	6	15	12	35	30	37	30	37	25	40	20	72	65	37	20	72	65
22	Nungambakkam	96	98	70	56	15	17	5	6	14	11	24	31	24	19	28	26	27	25	73	87	27	25	73	87
23	Chintadripet	147	127	95	98	12	21	6	9	11	17	32	51	40	34	26	31	39	24	66	111	39	24	66	111
24	Tiruvatteswaranpet	212	143	87	85	17	19	25	22	12	22	41	52	51	44	50	34	37	30	125	139	37	30	125	139
25	Cherauk	75	92	48	47	6	10	2	9	5	15	19	42	21	23	15	9	12	10	39	57	12	10	39	57
26	Triplicane	95	76	40	46	12	10	4	7	6	10	20	20	24	18	17	13	23	16	63	56	23	16	63	56
27	Amir Mahal	127	104	47	69	16	15	3	9	7	15	31	41	24	32	26	25	28	14	67	72	28	14	67	72
28	Mirshibpet	169	125	97	106	23	26	10	12	7	11	30	41	32	35	32	25	19	24	92	105	32	24	92	105
29	Royapettah	136	125	78	86	26	22	11	9	13	11	32	42	39	32	29	26	83	24	77	90	83	24	77	90
30	Mylapore	113	71	37	50	16	18	7	9	5	9	20	22	27	33	23	16	19	11	71	70	19	11	71	70
Total		3,462	2,796	1,768	1,865	439	422	220	258	274	408	875	1,105	991	860	859	622	853	597	2,017	2,138	853	597	2,017	2,138
Ratio per 1,000		261.2	225.3	86.9	89.3	15.5	15.2	8.0	10.7	11.0	16.2	15.3	20.2	20.7	22.5	26.3	24.0	45.2	37.4	153.4	186.6	45.2	37.4	153.4	186.6

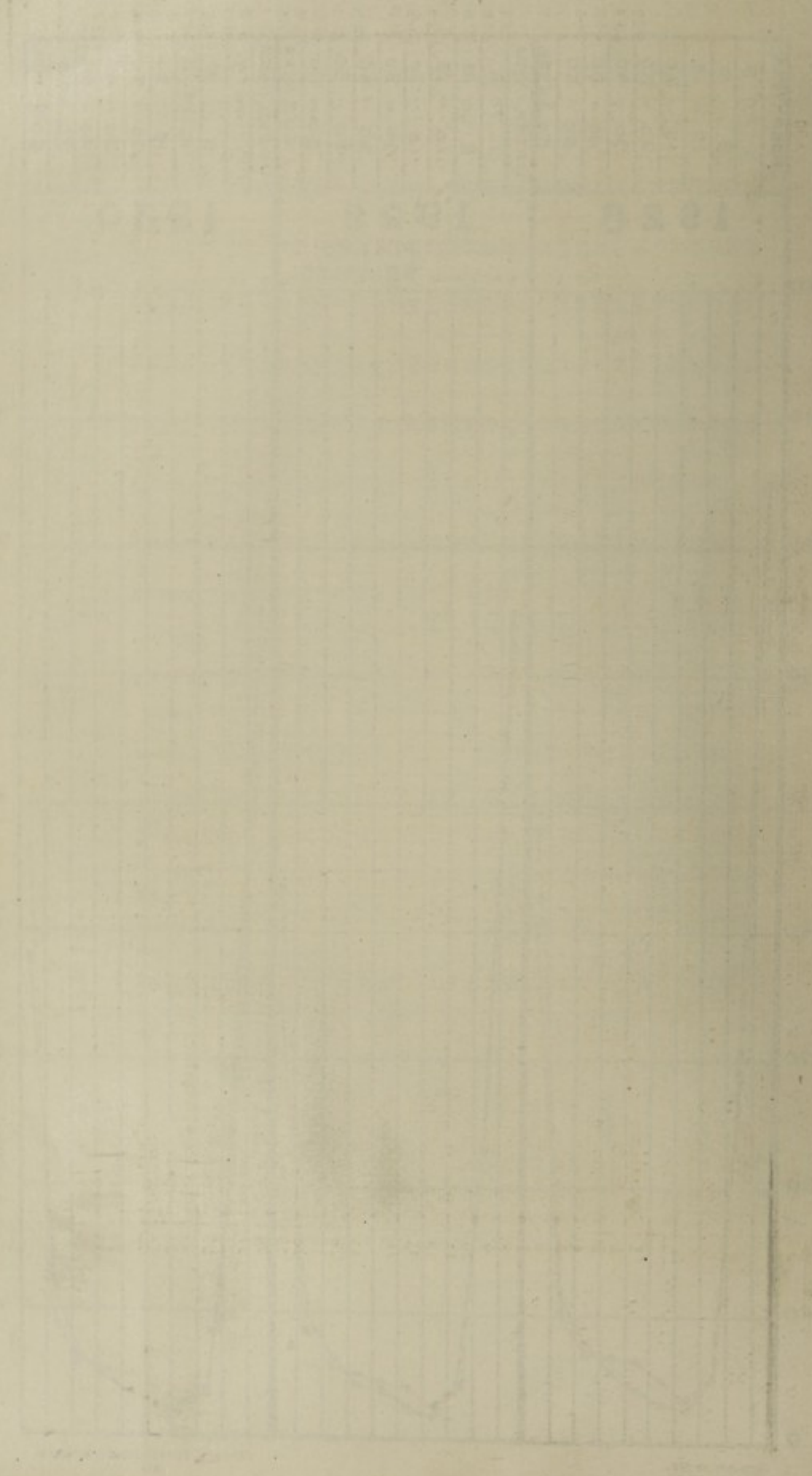
In the case of children under one year of age, the ratios are calculated on live births during the year, in all other cases on the number living at the time of the census of 1921.

GRAPH SHOWING RELATIVE MORTALITY AMONG MEN & WOMEN AT DIFFERENT AGE PERIODS



GRAPH SHOWING RELATIVE MORTALITY

OF THE WOMEN AT THE PENITENTIARY



Annual Form No. V. Deaths registered according to class by divisions during the year, 1920.

Divisions.	Districts.	Population as per Census of 1921.			Number of deaths registered.			Ratio of deaths per 1,000 of population.			
		Christians.	Hindus.	Mahomedans.	Others.	Total.	Christians.	Hindus.	Mahomedans.	Others.	Total.
1	Royapuram	5,612	14,266	896	117	20,891	139	530	46	...	735
2	Tondiarpet	363	15,183	1,346	7	16,899	31	891	166	...	1,037
3	Washermanpet	1,197	21,148	1,427	5	23,777	42	927	81	...	1,053
4	Korukupet	377	1,3844	2,395	24	16,640	17	884	172	...	1,073
5	Harbour	355	3,875	2,954	194	7,288	8	112	212	...	333
6	Muthialpet	1,103	12,349	2,179	...	15,631	3	315	30	...	348
7	Katchaleswaranpet	1,859	10,259	879	58	13,055	41	362	24	...	437
8	Ko thawal Bazaar	190	3,943	351	33	5,117	5	161	7	...	173
9	Ammen Koil	1,977	11,149	2,627	67	15,820	48	506	156	...	709
10	Seven Wells	1,410	17,207	931	80	19,628	62	739	43	...	844
11	Sowcarpet	10	7,056	641	353	7,450	...	236	...	...	237
12	Peddunaickenpet	30	17,261	247	37	17,575	...	757	2	...	759
13	Trevelyan Basin	23	17,032	112	105	17,272	1	636	...	...	637
14	Esplanade	12	2,480	100	72	2,664	1	104	...	...	106
15	Park Town	851	16,372	262	59	17,544	11	573	1	...	585
16	Perambur	1,085	22,557	5,722	95	29,459	45	1,061	272	...	1,378
17	Choolai	1,410	22,167	437	7	24,021	42	1,065	18	...	1,125
18	Purasawalkam	3,088	17,146	382	40	20,656	112	838	17	...	967
19	Vepery	3,584	14,245	1,408	62	19,299	123	631	49	...	803
20	Egmore	4,582	18,682	2,236	125	25,627	146	745	109	...	992
21	Kilpauk	2,594	15,534	471	31	18,310	71	612	17	...	709
22	Nungambakam	3,045	16,924	1,544	131	21,644	77	628	47	...	752
23	Chintadripet	2,011	20,726	990	63	23,790	63	896	34	...	993
24	Tiruvateswaranpet	776	15,249	8,115	55	24,195	23	728	499	1	1,251
25	Chepauk	412	9,861	3,004	...	13,277	11	389	156	...	556
26	Triplicane	50	16,060	383	13	16,506	3	565	10	...	578
27	Amir Mahal	536	8,956	5,752	10	15,254	13	452	307	...	772
28	Mirshahpet	1,146	13,988	3,452	45	18,631	27	745	249	...	1,021
29	Royapettah	1,891	18,995	1,813	73	22,773	47	831	63	...	941
30	Mylapore	2,671	14,640	528	19	17,858	92	531	21	...	614
Total.		44,160	4,29,155	53,585	1,890	5,28,791	1,348	18,724	2,766	1	22,839
							30.5	43.6	51.6	0.05	43.2

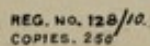
* Includes Deaths in the Government General Hospital of patients admitted from mofussil and destitute.

Annual Form No. VI.—Deaths registered from "CHOLERA" by divisions during each month of the year 1930.

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.	
														Males.	Females.	Total.			
1	Royapuram	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5
2	Tondiarpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.8
3	Washermanpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7
4	Korukupet	...	...	...	...	...	...	...	...	...	...	...	6	...	...	0.3	0.4	1.0
5	Harbour	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	0.3	0.7
6	Muthialpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3
7	Katchaleswaranpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6
8	Kothwal Bazaar	...	...	...	...	...	...	...	...	...	2	...	1	...	...	0.3	0.2	0.4
9	Amman Koil	...	...	...	...	...	...	...	...	...	...	...	...	1	...	0.1	0.1	0.8
10	Seven Wells	...	...	...	...	...	...	...	...	...	...	...	1	...	...	0.1	0.05	0.7
11	Sowcarpet	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	0.1
12	Peddunaickenpet	...	...	...	...	...	...	...	...	...	...	...	1	...	...	0.2	0.2	0.5
13	Trevelyan Basin	...	...	...	...	...	...	...	...	...	...	...	1	...	...	0.1	0.06	0.3
14	Esplanade	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.5
15	Park Town	...	...	...	...	...	...	...	...	...	...	...	1	...	...	0.1	0.06	0.3
16	Perambur	...	...	...	...	...	...	...	...	...	...	...	6	...	...	0.1	0.2	0.7
17	Choolai	...	...	...	...	...	...	...	...	...	...	...	9	...	...	0.2	0.4	0.8
18	Purasawalkam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6
19	Vepery	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	0.05	0.5
20	Egmore	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	0.04	0.5
21	Kilpauk	...	...	...	...	...	...	...	...	...	...	...	2	...	...	0.1	0.1	0.6
22	Nungambakam	...	...	...	...	...	...	...	...	...	...	...	1	...	...	0.1	0.05	0.3
23	Chintadripet	...	...	...	...	...	...	...	...	...	...	...	3	...	...	0.2	0.1	0.4
24	Tiruvateeswaranpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5
25	Chepauk	...	...	...	...	...	...	1	...	...	...	...	1	...	...	0.1	0.2	0.5
26	Triplicane	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6
27	Amir Mahal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7
28	Mirsahibpet	...	...	...	...	...	...	...	...	...	...	...	1	...	...	0.1	0.05	1.0
29	Royapettah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6
30	Mylapore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3
Total		1	2	...	40	20	23	43	0.07	0.08	0.6

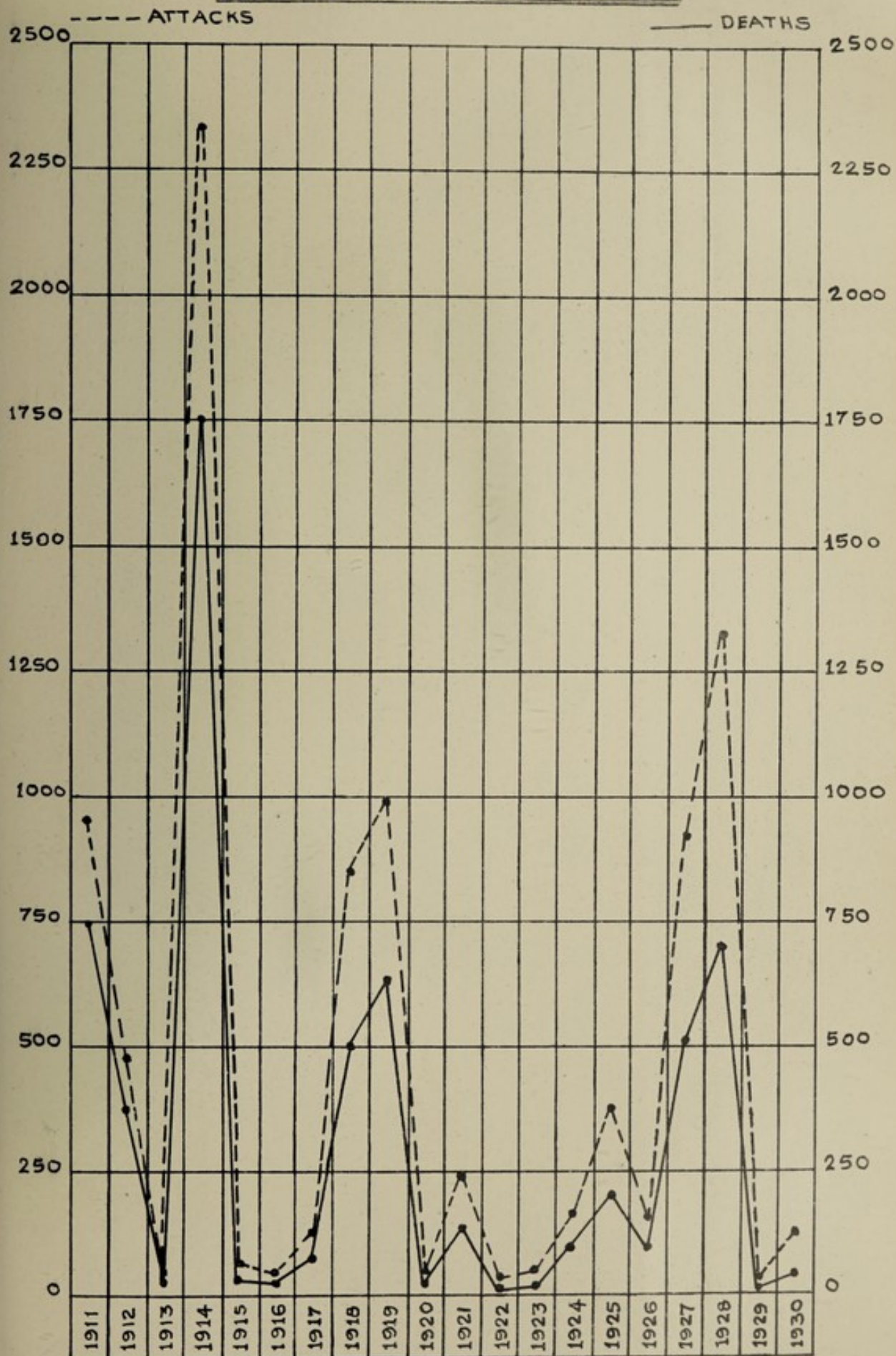
BY MONTHS FROM

—1930

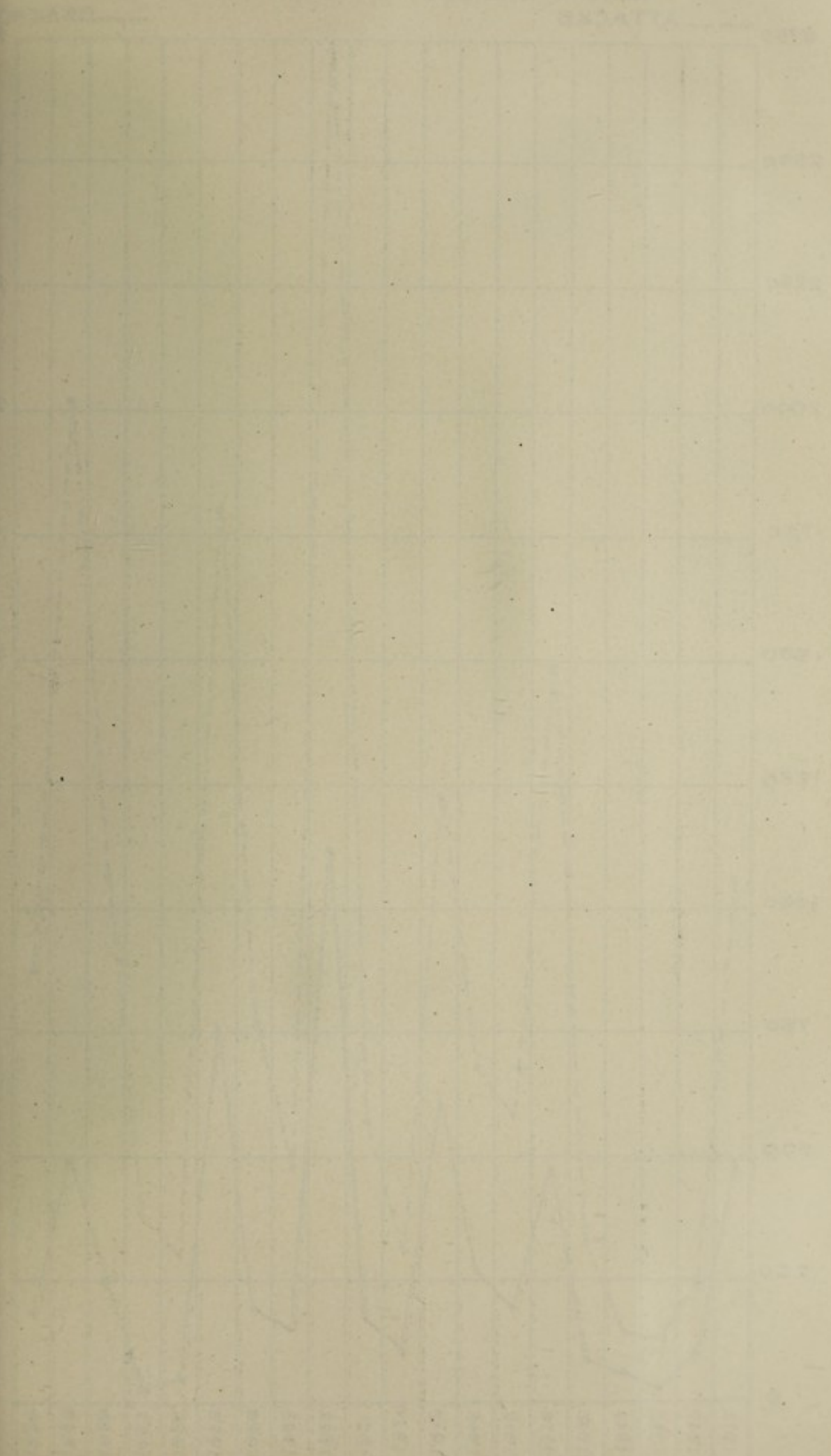


VANDYKE, SURVEY OFFICE, MADRAS.
1937.

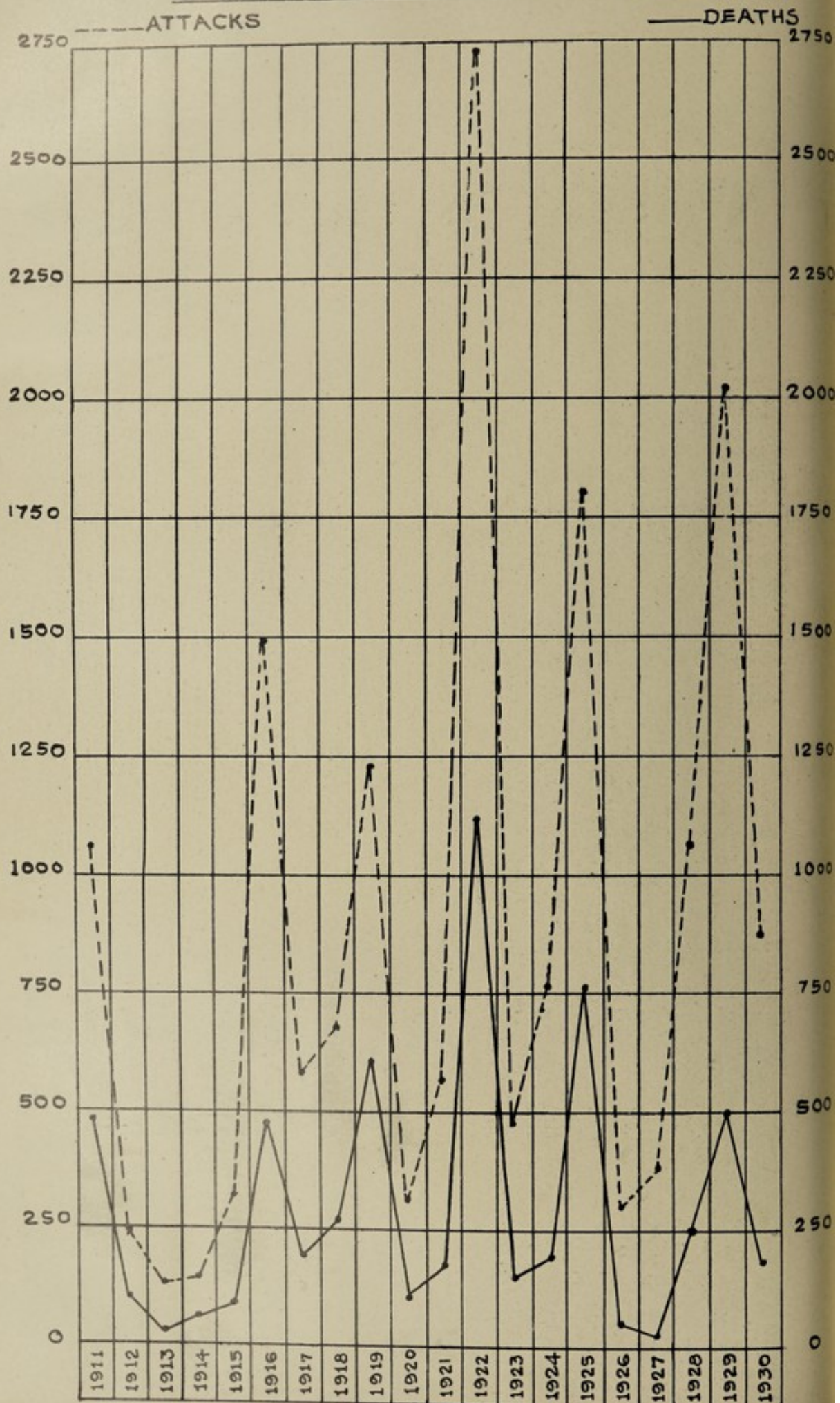
ATTACKS & DEATHS FROM CHOLERA. 1911-1930

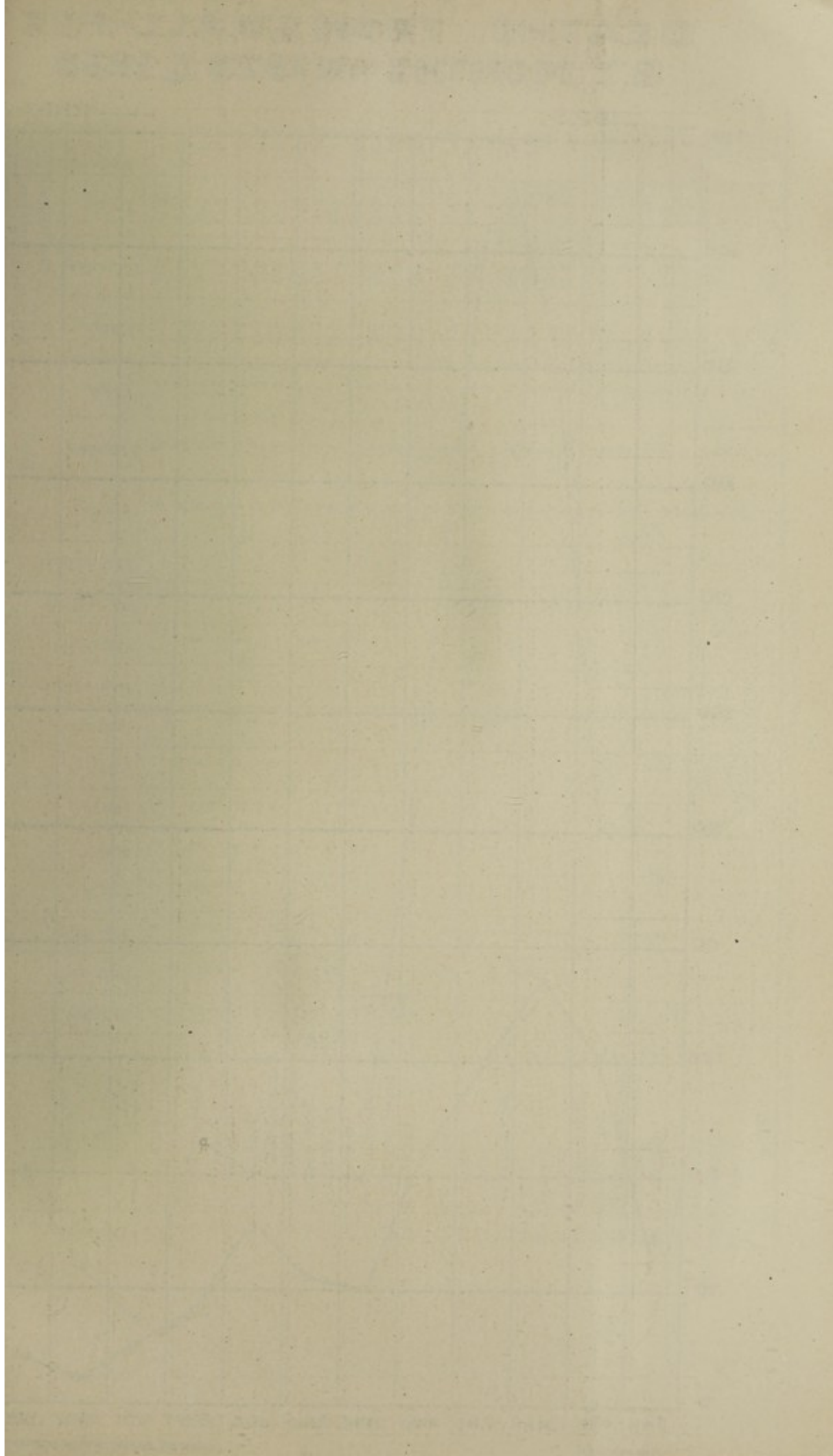


SMALL-POX, 1911-1912

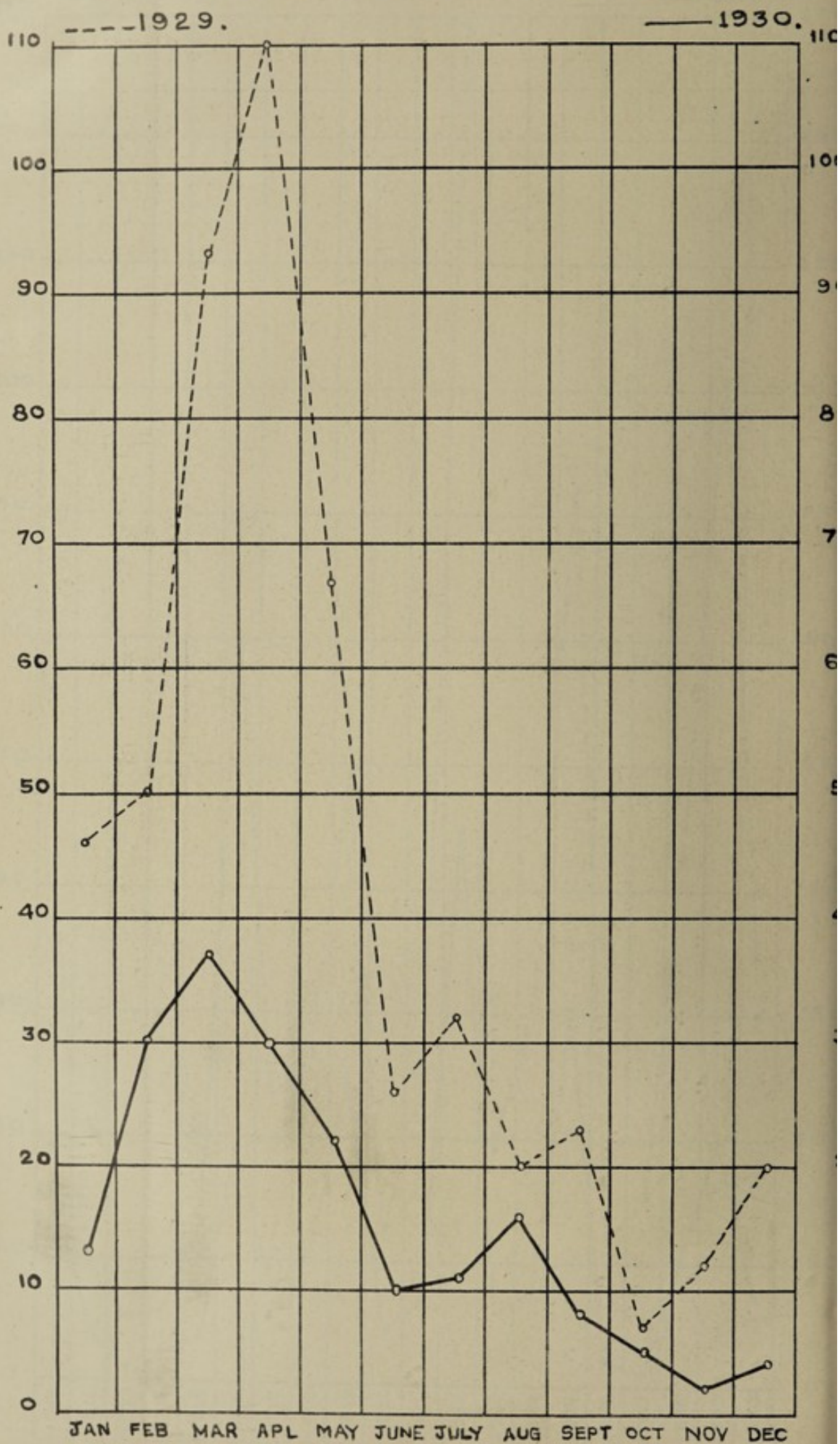


ATTACKS & DEATHS FROM SMALL-POX. 1911-1930





DEATHS FROM SMALL-POX BY MONTHS IN 1929 & 1930



ANNUAL FORM NO. VII—Deaths registered from SMALL-POX by divisions during each month of the year 1930.

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 1,000 of population.			Mean ratio per 1,000 during previous five years.
														Males.	Females.	Total.	Males.	Females.	Total.	
1	Royapuram	1	2	1	1	2	1	2	1	2	1	2	1	2	4	6	0.2	0.4	0.3	1.0
2	Tondiarpet	...	...	...	2	2	...	...	1	...	...	...	...	...	4	7	0.5	0.4	0.4	0.8
3	Washermanpet	...	...	...	4	2	1	1	...	...	1	...	...	...	3	11	0.3	0.7	0.5	0.5
4	Korukupet	1	1	8	1	...	2	1	...	...	...	1	...	10	15	1.2	1.2	0.6	0.9	0.7
5	Harbour	...	...	1	1	1	1	2	2	1	...	...	...	7	10	1.4	1.4	1.3	1.4	0.8
6	Muthialpet	...	...	1	...	1	...	...	2	1	...	...	...	3	5	0.3	0.3	0.3	0.3	0.4
7	Katchaleswaranpet.	1	2	1	...	...	1	2	1	...	...	...	...	6	8	0.8	0.8	0.3	0.6	0.8
8	Kothawal Bazaar	...	2	1	...	...	...	...	...	...	...	...	...	2	3	0.6	0.6	0.5	0.6	0.8
9	Amman Koil	1	...	2	2	1	...	...	...	...	1	...	...	3	7	0.4	0.4	0.5	0.4	1.0
10	Seven Wells	...	3	...	3	1	...	...	...	...	...	...	...	3	7	0.3	0.3	0.4	0.4	0.4
11	Sowcarpet	...	...	...	...	1	...	...	...	...	...	...	...	1	1	0.2	...	...	0.1	0.5
12	Peddunaikenpet	2	2	...	1	3	...	...	...	...	...	...	...	5	8	0.6	0.6	0.4	0.5	0.5
13	Trevelyan Basin	...	4	3	2	...	...	...	...	...	...	...	...	3	9	0.3	0.3	0.8	0.5	0.5
14	Esplanade	1	1	...	...	1	...	...	1	...	...	...	...	1	2	0.6	0.6	0.9	0.7	0.4
														*1	*2					
15	Park Town	2	2	2	1	...	...	...	...	...	...	...	...	3	7	0.3	0.3	0.5	0.4	0.4
16	Perambur	1	...	...	...	1	1	...	...	1	...	...	...	3	4	0.2	0.2	0.1	0.1	0.7
17	Choolai	...	...	1	...	...	...	1	...	...	...	...	...	2	2	0.2	0.2	...	0.1	0.7
18	Purasawalkam	1	1	4	...	...	...	...	...	...	...	...	...	5	6	0.5	0.5	0.1	0.3	0.8
19	Vepery	2	3	2	2	...	...	...	...	...	...	...	...	4	9	0.4	0.4	0.5	0.5	0.5
20	Egmore	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	0.1	0.04	0.2
21	Kilpauk	...	...	1	...	1	...	...	...	...	...	...	...	1	3	0.1	0.1	0.2	0.2	0.6
22	Nungambakam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3
23	Chintadripet	...	...	...	...	1	...	...	...	1	...	...	...	1	2	0.1	0.1	0.1	0.08	0.2
24	Tiruvateeswaranpet.	...	...	3	...	...	...	2	...	1	...	...	...	4	6	0.3	0.3	0.2	0.3	0.9
25	Chepauk	...	...	1	...	...	...	...	...	...	...	...	...	1	1	0.1	0.1	...	0.08	0.2
26	Triplicane	...	1	2	6	1	...	...	...	...	1	...	...	4	8	0.5	0.5	1.0	0.7	0.6
27	Anir Mahal	...	...	1	...	...	1	...	...	2	...	...	...	2	4	0.3	0.3	0.3	0.3	0.6
28	Mirshahibpet	...	2	...	2	3	1	...	4	2	...	...	2	7	9	0.8	0.8	1.0	0.9	1.0
29	Royapettah	...	1	...	1	...	...	...	2	...	1	...	1	4	6	0.3	0.3	0.2	0.3	0.5
30	Mylapore	...	...	...	1	2	1	...	3	...	...	...	...	5	8	0.5	0.5	0.4	0.4	0.9
	Total	13	30	37	30	22	10	11	16	8	5	2	4	100	88	188	0.4	0.4	0.4	0.6

*Includes deaths in the Government General Hospital of patients admitted from mofussil and destitute.

Annual Form No. VIII. —Deaths registered from 'MEASLES' by divisions during each month of the year 1930.

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 1,000 of Population.		Mean ratio per 1000 during previous five years.	
															Males.	Females.	Total.		
1	Royapuram	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
2	Tondiarpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
3	Washermanpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.04
4	Korukupet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
5	Harbour	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.03
6	Muthialpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
7	Katchaleswaranpet	...	...	...	...	...	1	...	...	...	...	...	...	1	...	1.0	0.08	0.1
8	Kothawal Bazaar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
9	Annen Koil	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
10	Seven Wells	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	0.05	0.1
11	Sowcarpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.03
12	Peddunaickenpet	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	0.06	0.2
13	Trevelyan Basin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.01
14	Esplanade	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
15	Park Town	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6
16	Perambur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
17	Choolai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.04
18	Purasawalkam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.04
19	Vepery	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	0.05	0.1
20	Egmore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
21	Kilpauk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
22	Nungambakam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.04
23	Chintadripet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2
24	Tiruvateswaranpet	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	0.4
25	Chepauk	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	0.5
26	Triplicane	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	0.07	0.4
27	Amir Mahal	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	0.1	0.4
28	Mirshahibpet	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	0.1
29	Royapettah	...	1	1	...	...	...	...	...	...	...	...	...	2	...	...	0.1	0.1
30	Mylapore	...	...	...	...	...	1	...	...	2	...	...	...	1	...	...	0.2	0.1
Total		1	3	2	1	1	2	...	1	3	2	7	9	16	0.03	0.04	0.09

Annual Form No. IX. —Deaths registered from PLAGUE—Nil.

THE INDIAN

MORE CHIEF

1880

1881

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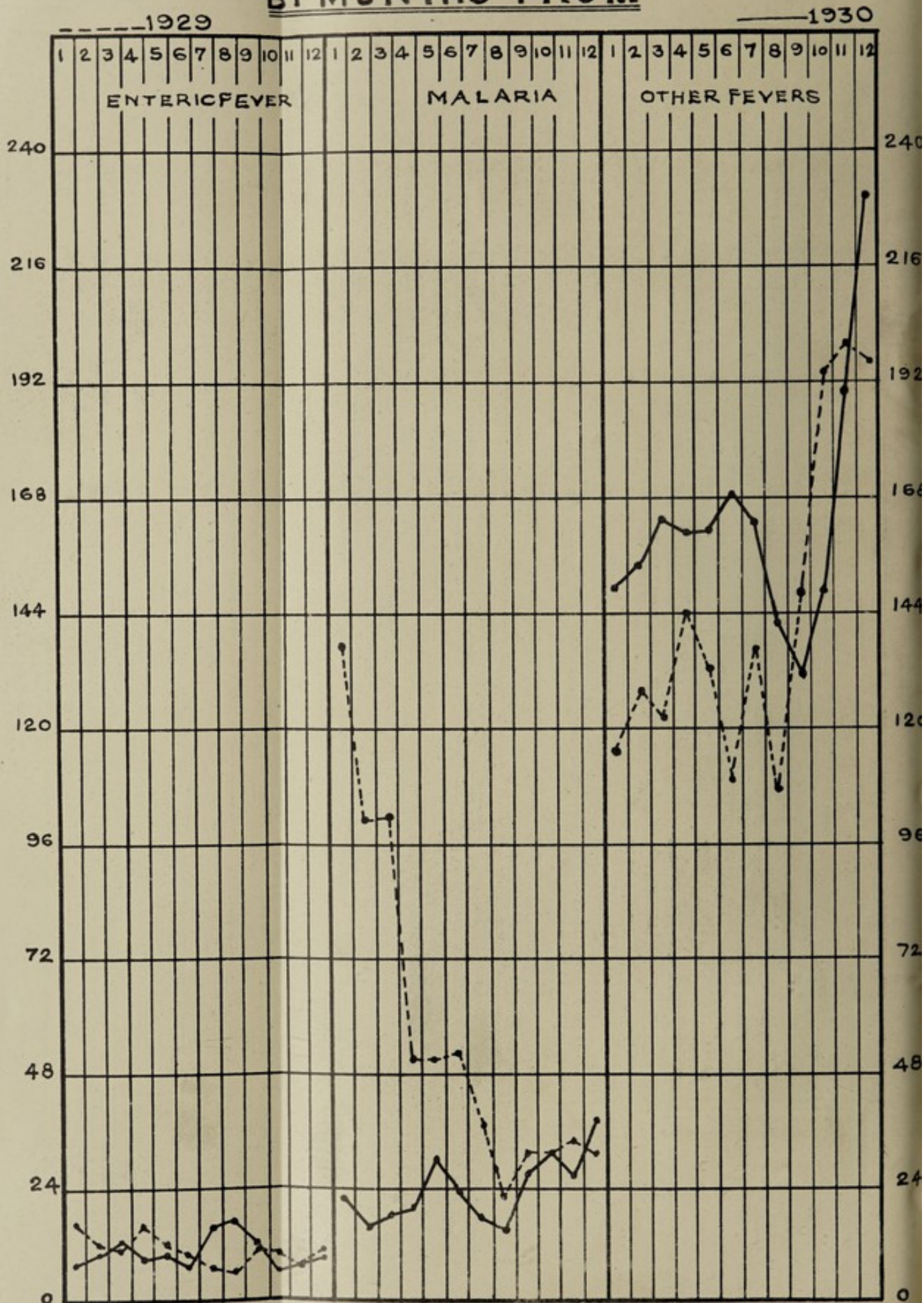
1914

1915

1916

DEATHS IN 1929 & 1930

BY MONTHS FROM



Annual Form No. X.—Deaths registered from "MALARIA" by Divisions during each month of the year 1930.

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 1,000 of population.		Mean ratio per 1,000 during five years.			
														Males.	Females.	Total.	Males.		Females.	Total.	
1	Royapuram	...	...	...	...	...	3	...	...	...	...	...	...	...	3	...	...	0.3	0.1	2.9
2	Tondiarpet	...	...	...	...	...	1	...	...	...	...	...	...	...	9	...	...	1.0	0.7	3.1
3	Washermanpet	...	...	...	...	...	1	...	...	...	...	...	...	...	11	...	...	0.9	0.7	3.1
4	Korukkupet	...	...	...	...	...	1	...	...	...	...	...	...	...	11	...	...	1.0	1.2	3.0
5	Harbour	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	0.4	0.4	6.0
6	Muthialpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.1
7	Katchaleswaranpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.1
8	Kothwal Bazaar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.2	6.0
9	Annen Koil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.4	2.0
10	Seven Wells	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.1	2.0
11	Sowcarpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	1.2	1.1
12	Peddunaickenpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.6	2.0
13	Trevelyan Basin	0.8	0.1	3.0
14	Espanade	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.9	1.5	7.0
15	Park Town	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.0
16	Perambur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.3	2.1
17	Choolai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.8	2.1
18	Purasawalkam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	0.7	2.0
19	Vepery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.4	2.0
20	Egmore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.7	0.8
21	Kilpauk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.3	1.0
22	Nungambakkam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.6	1.0
23	Chintadripet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.4	1.3	1.0
24	Tiruvateeswaranpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.9	0.9	2.1
25	Chepauk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.3	0.9
26	Triplicane	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.6	0.8
27	Amir Mahal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.4	2.0
28	Mirshahibpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.5	0.5	2.1
29	Royapettah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.3	0.1	1.0
30	Mylapore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.6	1.0
Total		22	16	18	20	30	23	17	15	27	31	26	38	135	148	283	0.5	0.6	0.5	2.4	

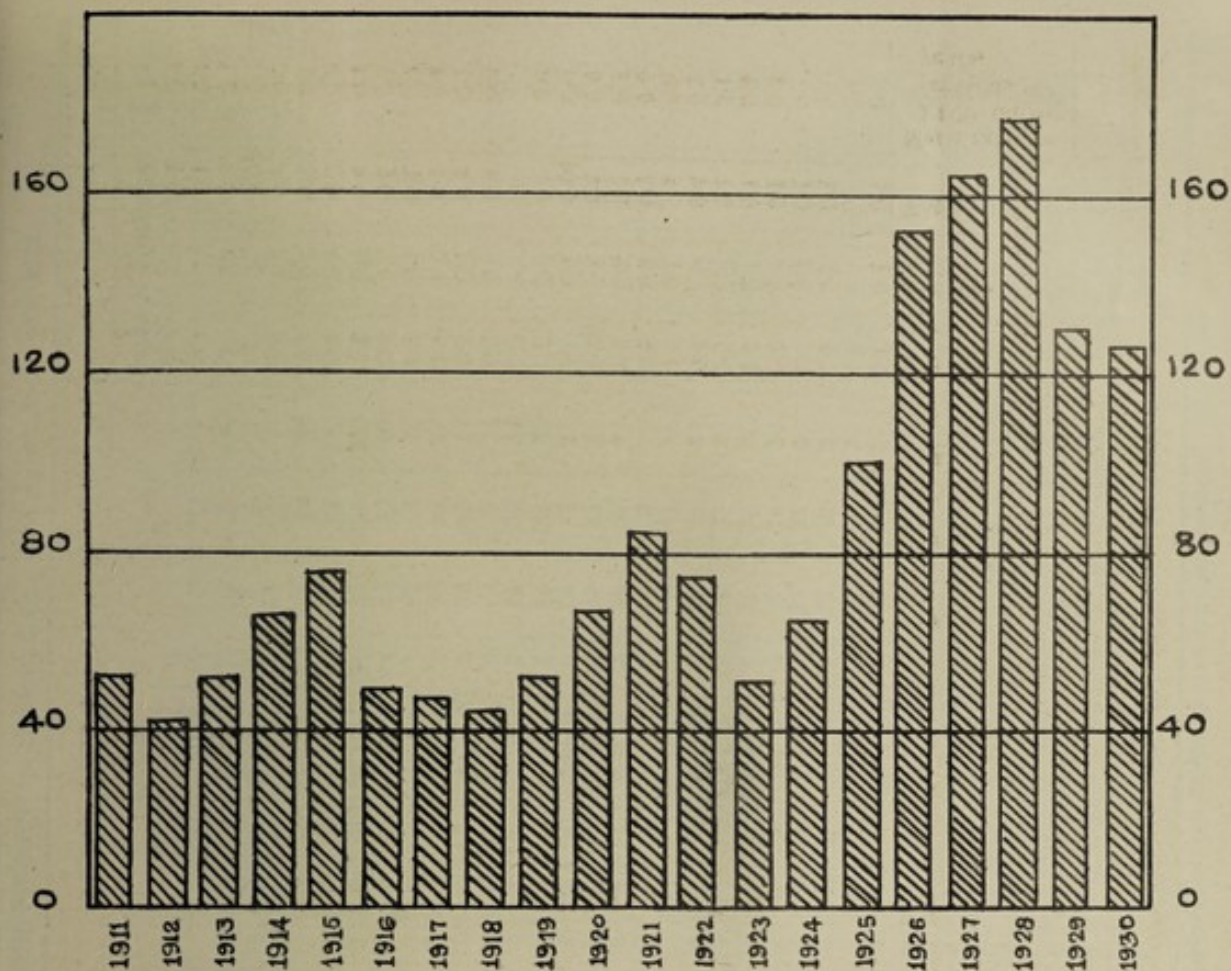
* Includes deaths in the Government General Hospital of patients admitted from medical and destitute.

Annual Form No. XI.—Deaths registered from "ENTERIC FEVER" by divisions during each month of the year 1930.

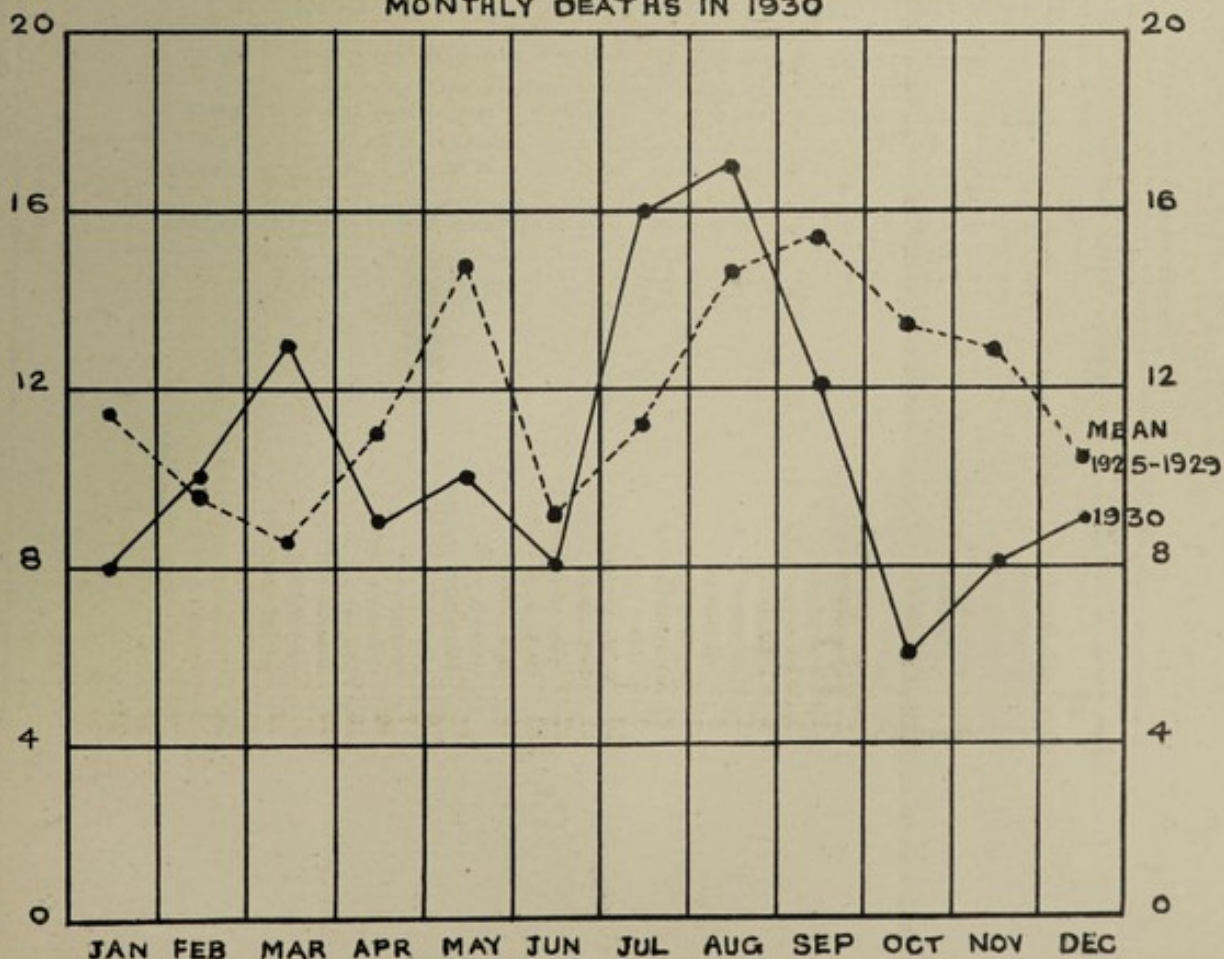
Divisions.	Districts.	3												4			5		Mean ratio per 1,000 during five years.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.		Males.	Females.	Ratio of deaths per 1000 of the Population	
														Males.	Females.				
1	Royapuram	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	0.1	0.1	0.2
2	Tondiarpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
3	Washermanpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
4	Korukupet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
5	Harbour	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
6	Muthialpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
7	Katchaleswaranpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
8	Kothwal Bazaar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
9	Amman Koil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
10	Seven Wells	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
11	Sowcarpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
12	Peddunaickenpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
13	Trevelyan Basin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
14	Esplanade	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
15	Park Town	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
16	Perambur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
17	Choolai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
18	Purasawalkam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
19	Vepery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
20	Egmore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
21	Kilpauk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
22	Nungambakam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
23	Chintadripet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
24	Tiruvaleeswaranpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
25	Chepauk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
26	Triplicane	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
27	Amir Mahal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
28	Mirahibpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
29	Royapettah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
30	Mylapore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
Total		8	10	13	9	10	8	16	17	12	6	8	9	71	55	126	0.3	0.2	0.3

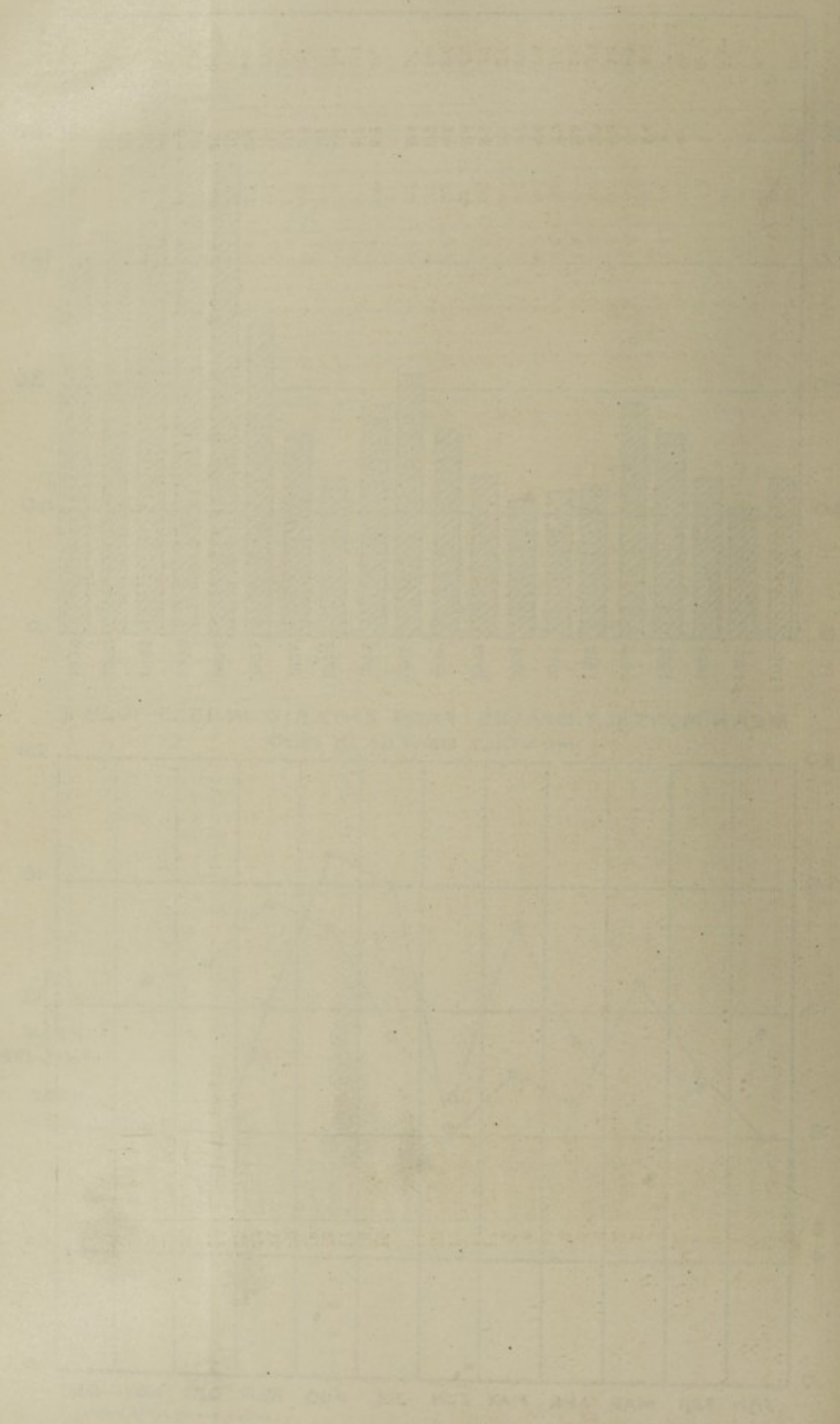
* Includes deaths in the Government General Hospital of patients admitted from mofussil and destitute.

DEATHS FROM ENTERIC FEVER 1911-1930



MEAN MONTHLY DEATHS FROM ENTERIC IN 1925-1929 & MONTHLY DEATHS IN 1930





Annual Form No.--XIII. Deaths Registered from DYSENTERY and DIARRHOEA by Divisions during each month of the year 1930.

Divisions.	Districts.	3												4		5		Mean ratio per 1,000 during previous five years.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Ratio of Deaths per 1,000 of population.	
1	Royapuram	14	6	3	6	4	11	8	9	9	4	9	18	46	55	101	4.4	7.7
2	Tondiarpet	21	12	7	11	8	11	14	11	16	6	17	13	74	66	140	8.7	1.2
3	Washermanpet	16	10	21	13	19	8	11	11	16	4	18	17	81	86	167	6.8	5.8
4	Korukupet	9	8	14	18	20	12	15	13	11	6	9	10	61	84	145	7.0	6.9
5	Harbour	4	2	7	2	3	8	5	4	2	4	4	2	22	26	48	4.4	6.3
6	Muthialpet	2	5	6	3	3	3	1	4	4	2	3	6	14	26	40	1.4	1.9
7	Katchaleswararnpet...	5	5	5	3	3	7	4	3	1	3	3	2	24	19	43	8.4	3.8
8	Kothawal Bazaar	1	1	3	1	2	3	1	1	1	7	1	4	14	12	26	4.5	3.5
9	Amnen Koil	4	4	2	3	11	12	8	4	8	3	10	12	40	41	81	4.9	5.8
10	Seven Wells	9	7	4	6	11	10	7	11	5	6	15	24	66	49	115	6.8	7.3
11	Sowcarpet	...	1	1	1	1	3	1	...	5	1	3	1	9	9	18	2.1	2.4
12	Peddunaickenpet	3	8	2	6	11	8	11	8	11	8	16	23	42	73	115	4.7	5.3
13	Trevelyan Basin	4	...	10	12	7	7	4	3	5	8	6	6	38	34	72	4.3	4.6
14	Esplanade	6	3	2	1	1	3	4	2	2	2	2	9	20	9	29	5.3	1.3
15	Park Town	5	6	8	4	2	4	7	6	4	8	3	5	25	32	57	2.6	3.3
16	Perambur	13	14	13	12	16	17	20	15	14	15	17	21	85	103	188	5.5	8.7
17	Choolai	11	10	15	10	11	14	16	13	10	20	25	23	101	77	178	8.2	9.3
18	Purasawalkam	17	21	9	18	9	14	15	9	14	8	19	29	86	96	182	8.2	9.2
19	Vepery	15	8	4	3	6	7	6	7	4	6	9	11	44	42	86	4.4	6.3
20	Egmore	8	15	10	8	13	12	13	8	10	8	17	15	67	70	137	4.8	6.2
21	Kilpauk	9	4	4	8	3	5	9	8	5	6	10	21	59	33	92	6.1	6.6
22	Nurgambakam	12	10	8	6	3	5	3	9	5	6	3	15	36	49	85	3.2	7.3
23	Chintadripet	8	12	9	9	9	7	4	14	9	8	14	11	50	64	114	4.1	8.7
24	Tiruvateswararnpet.	11	11	8	11	6	12	9	16	7	7	22	13	73	60	133	5.8	5.5
25	Chepauk	6	7	4	2	5	1	6	4	2	5	5	7	21	32	53	3.0	4.7
26	Triplicane	8	2	5	4	6	4	...	4	4	2	10	12	30	31	61	3.5	4.1
27	Amir Mahal	8	7	10	4	6	12	7	10	9	4	9	7	42	46	87	5.5	7.7
28	Misahibpet	17	12	19	7	11	16	20	10	9	10	29	23	87	96	183	9.4	10.6
29	Royapettah	15	14	13	15	10	18	15	19	11	12	9	18	82	87	169	7.7	8.0
30	Mylapore	11	2	8	13	10	6	12	8	6	6	11	10	59	44	103	6.3	7.3
Total		272	227	237	222	229	260	256	241	208	190	326	386	1,507	1,549	3,056	5.4	6.9

* Includes deaths in the Government General Hospital of patients admitted from mofussil and destitute.

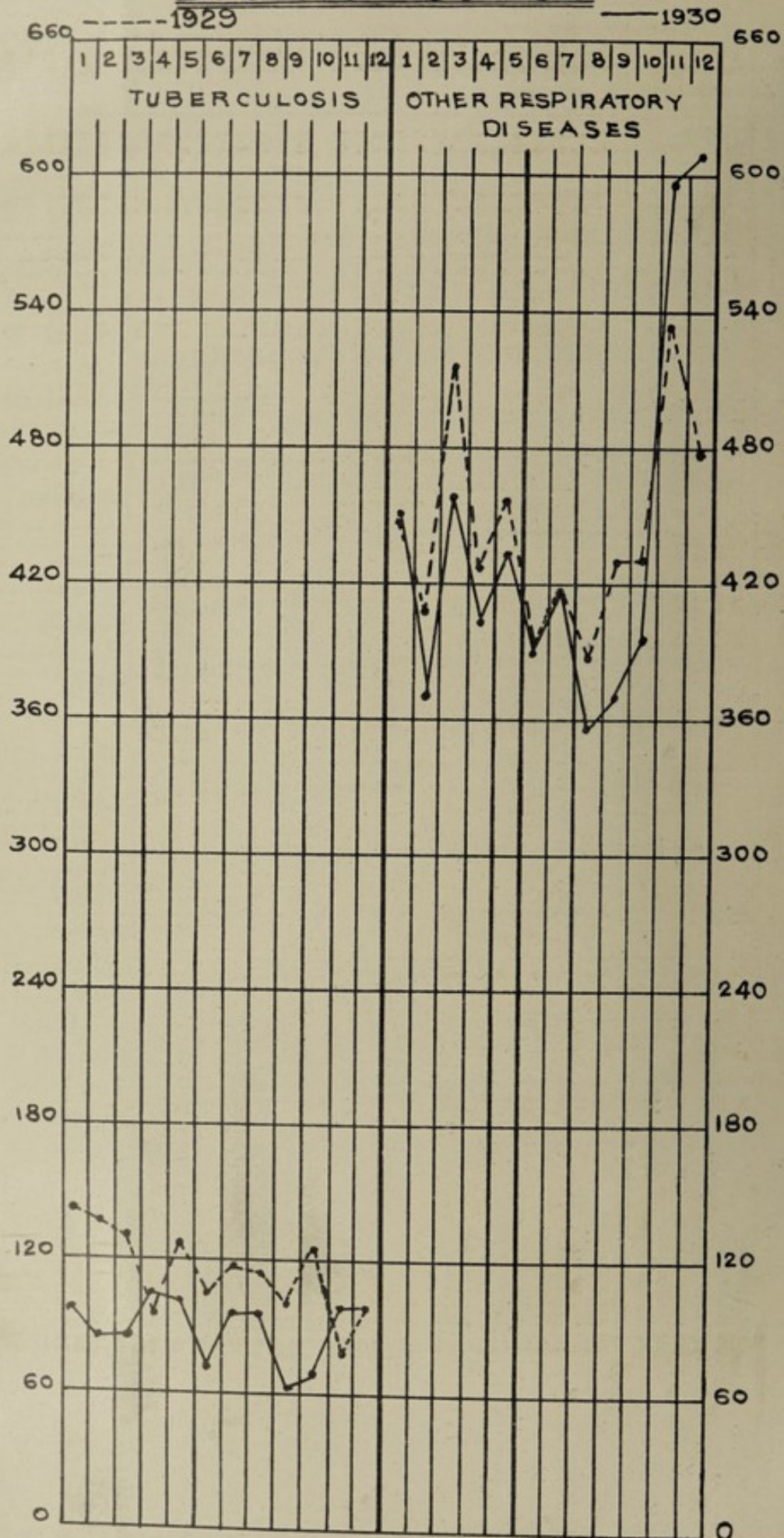
DEATHS IN 1930

BY MONTHS

Month	Deaths
Jan	10
Feb	12
Mar	15
Apr	18
May	20
Jun	22
Jul	25
Aug	28
Sep	30
Oct	32
Nov	35
Dec	38

DEATHS IN 1929 & 1930

BY MONTHS FROM



Annual Form No. XIV.—Deaths registered from "TUBERCLE" including Tubercle of the lungs by divisions during each month of the year 1930.

Divisions.	Districts.	3												4		5		Ratio of deaths per 1000 of population.	Mean ratio per 1,000 during previous five years.	
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.		Males.	Females.			
1	Royapuram	1	1	1	2	4	...	...	...	1	2	1	1	8	6	14	0.7	0.6	1.8
2	Tondiarpet	1	1	...	2	1	...	...	...	1	...	...	...	6	5	11	0.7	0.6	2.8
3	Washermanpet	3	6	...	7	4	...	...	...	8	4	...	...	38	22	60	3.2	1.9	2.4
4	Korukkupet	5	8	...	8	10	...	...	...	3	1	...	...	46	22	68	5.3	2.3	3.2
5	Harbour	...	...	...	...	...	...	...	...	1	...	...	...	4	1	5	0.8	0.4	2.3
6	Muthialpet	...	1	...	...	...	...	...	...	...	3	...	...	2	4	6	0.2	0.7	1.5
7	Katchaleswarannpet	1	1	...	...	...	...	...	...	1	1	...	...	4	5	9	0.6	0.8	1.1
8	Kothwal Bazaar	2	...	...	...	...	...	...	...	...	...	...	...	3	4	7	1.0	2.0	2.2
9	Amman Koil	1	...	...	...	...	...	...	...	1	3	...	...	18	15	33	2.2	1.9	4.6
10	Seven Wells	3	4	...	7	10	...	...	...	2	5	...	...	41	28	69	4.2	2.8	5.6
11	Sowcarpet	...	1	...	2	1	9	9	...	2.8	1.2	2.9
12	Peddunackennpet	...	1	...	3	...	...	...	...	...	1	...	...	19	13	32	2.1	1.5	4.1
13	Trevelyan Basin	1	1	...	...	...	...	...	...	...	1	...	...	7	9	16	0.8	1.1	2.1
14	Esplanade	7	5	...	7	...	...	...	...	...	2	...	...	1	...	1	0.6	...	2.3
15	Park Town	1	1	...	1	1	...	...	...	...	2	...	...	8	3	11	0.8	0.4	1.9
16	Perambur	6	3	...	4	...	...	...	...	...	4	...	...	20	19	39	1.3	1.4	2.4
17	Choolai	2	4	...	5	3	...	...	...	...	7	...	...	29	34	63	2.4	2.9	3.6
18	Purasawalkam	3	3	...	3	1	...	...	...	...	7	...	...	21	29	50	2.0	2.8	3.8
19	Vepery	10	5	...	6	...	...	...	...	...	3	...	...	29	19	48	2.9	2.1	3.3
20	Egmore	8	6	...	7	8	...	...	...	...	4	...	...	38	33	76	2.7	3.2	2.6
21	Kilpauk	3	4	...	3	...	...	...	...	...	3	...	...	21	11	32	2.2	1.2	2.8
22	Nungambakkam	5	4	...	6	6	...	...	...	...	1	...	...	23	18	41	2.0	1.7	2.1
23	Chintadripet	7	4	...	7	3	...	...	...	...	4	...	...	32	37	69	2.6	3.2	3.2
24	Tiruvateswarannpet	3	5	...	1	6	...	...	...	...	2	...	...	24	21	45	1.9	1.8	3.8
25	Chepauk	8	3	...	6	5	...	...	...	...	2	...	...	12	30	42	1.7	4.8	3.7
26	Triplicane	1	2	...	7	...	...	...	...	...	9	...	...	10	23	33	1.2	2.9	2.9
27	Amir Mahal	3	2	...	3	2	...	...	...	...	2	...	...	20	11	31	2.6	1.4	3.7
28	Mirshahpet	3	1	...	5	...	...	...	...	...	4	...	...	15	17	32	1.6	1.8	3.2
29	Royapettah	6	1	...	2	...	...	...	...	...	3	...	...	15	31	46	1.3	1.9	2.7
30	Mylapore	3	7	...	3	...	...	...	...	...	1	...	...	16	22	38	1.7	2.6	2.2
Total		98	85	85	105	102	71	97	96	63	75	99	99	571	504	1,075	2.1	2.0	3.1	

* Includes deaths in the Government General Hospital of Patient admitted from mofussil and deatitote.

Annual Form No. XV.—Deaths registered from "RESPIRATORY DISEASES" excluding Tubercle of the lungs by divisions during each month of the year 1930.

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 1,000 of population.			Mean ratio per 1,000 during previous five years.
														Males.	Females.	Total.	Males.	Females.	Total.	
1	Royapuram	6	6	6	11	16	19	15	15	13	6	8	22	90	53	143	8.7	5.1	6.8	6.9
2	Tondiarpet	13	8	13	16	18	23	25	9	9	11	13	18	97	79	176	11.4	9.4	10.4	11.8
3	Washermanpet	26	13	24	27	15	15	12	12	15	10	12	20	110	91	201	9.2	7.7	8.5	15.3
4	Korukupet	21	22	27	18	21	22	9	12	8	6	11	19	111	85	196	12.8	10.7	11.8	15.2
5	Harbour	4	4	9	5	15	11	6	9	4	7	7	10	53	38	91	10.5	16.8	12.5	12.3
6	Muthialpet	8	6	11	12	8	6	7	7	11	6	20	10	54	58	112	5.6	9.7	7.2	6.2
7	Katchaleswaranpet	9	10	4	5	7	7	9	11	9	12	20	15	59	59	118	8.3	9.9	9.0	9.5
8	Kothwal Bazaar	7	5	5	...	5	2	2	2	1	...	9	4	20	22	42	6.4	11.0	8.2	9.6
9	Ammen Koil	30	17	30	22	15	15	26	5	22	17	21	15	115	119	234	14.2	15.4	14.8	11.4
10	Seven Wells	24	16	25	35	18	15	12	15	17	11	21	13	119	103	222	12.2	10.4	11.3	9.5
11	Sowcarpet	5	7	7	2	2	6	4	2	6	5	3	7	35	20	55	8.4	6.3	7.5	7.4
12	Peddunaickenpet	22	19	30	20	14	16	19	8	18	15	28	10	106	113	219	11.8	13.1	12.5	11.8
13	Trevelyan Basin	18	18	15	5	14	16	16	8	10	14	11	16	88	73	161	10.0	8.6	9.3	9.9
14	Esplanade	5	2	1	2	1	2	2	4	2	6	3	10	16	12	28	10.3	10.8	10.5	22.5
15	Park Town	18	14	16	8	9	9	9	8	13	14	14	16	79	69	148	8.2	8.7	8.4	8.6
16	Perambur	26	26	36	27	26	23	37	26	23	32	41	49	196	176	372	12.7	12.6	12.6	14.4
17	Choolai	22	23	20	22	29	26	27	21	18	21	37	52	184	134	318	15.0	11.1	13.2	12.9
18	Purasawalkam	27	19	27	19	22	16	15	23	27	20	25	45	167	128	295	15.9	12.6	14.3	11.3
19	Vepery	24	22	9	16	19	17	17	17	11	14	19	18	104	99	203	10.3	10.7	10.5	1.0
20	Egmore	19	14	16	15	15	14	16	19	24	16	21	33	125	98	223	9.0	8.3	8.7	6.8
21	Kilpauk	11	15	11	7	22	11	14	13	11	19	15	25	98	76	174	10.1	8.6	9.4	8.0
22	Nungambakam	14	6	25	15	20	11	17	15	3	15	35	29	118	93	211	10.4	8.9	9.7	6.2
23	Chintadripet	20	13	9	17	16	17	24	17	18	22	45	30	123	125	248	10.0	10.8	10.4	8.6
24	Tiruvateeswaranpet	9	8	13	17	13	2	15	16	9	12	27	17	77	81	158	6.1	7.0	6.5	1.2
25	Chepak	15	9	10	6	6	9	7	2	4	4	11	10	49	44	93	6.9	7.1	7.0	8.7
26	Triplicane	7	5	8	8	14	8	6	5	7	11	13	17	58	51	109	6.7	6.5	6.6	7.6
27	Amir Mahal	7	10	8	13	11	8	12	9	11	13	16	5	51	72	123	6.7	9.4	8.6	1.5
28	Misabibpet	16	15	17	15	18	21	16	21	15	20	22	30	110	116	226	11.8	12.4	12.1	11.6
29	Royapettah	12	14	19	12	15	16	21	16	18	26	35	33	111	127	238	9.6	11.4	10.5	8.1
30	Mylapore	5	5	8	6	11	7	...	10	9	11	23	11	50	56	106	5.3	6.6	5.9	7.4
Total		450	371	459	404	435	390	417	357	371	396	597	609	2,780	2,476	5,256	10.0	9.8	9.9	10.2

* Includes deaths in the Government General Hospital of Patients admitted from mofussil and destitute.

Annual Form No. XVI.—Deaths Registered form "INJURIES" by Divisions during each month of the year 1930.

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 five years.	
														Males.	Females.	Total.	Males.	Females.		Total.
1	Royapuram	...	...	...	...	...	1	1	1	...	1	...	...	4	1	5	0.4	0.1	0.2	0.4
2	Tondiarpet	...	...	...	2	...	1	1	...	...	...	...	...	5	4	9	0.6	0.4	0.5	0.4
3	Washermanpet	...	...	...	...	1	1	1	1	2	...	1	...	8	...	8	0.7	...	0.3	0.3
4	Korukkupet	...	...	2	...	1	...	1	...	1	1	2	...	8	4	12	0.9	0.5	0.7	0.5
5	Harbour	...	2	...	...	1	...	...	1	...	...	...	...	3	2	5	0.6	0.8	0.7	0.7
6	Muthialpet	...	...	...	1	1	...	...	...	...	...	...	...	1	1	2	0.1	0.2	0.1	0.3
7	Katchaleswaranjpet	...	...	1	...	1	...	1	...	...	...	1	2	3	4	7	0.4	0.7	0.5	0.3
8	Kothwal Bazaar	...	...	1	1	...	...	1	...	1	...	...	...	3	1	4	1.0	...	0.6	0.6
9	Ammen Koil	...	...	1	1	...	...	...	...	1	1	...	...	2	...	3	0.2	0.2	0.3	0.2
10	Seven wells	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4
11	Sowcarpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.1
12	Peddunaickenpet	...	...	...	...	...	1	...	...	1	...	...	...	...	2	2	...	0.2	0.1	0.2
13	Trevelyan Basin	...	...	...	...	...	...	2	...	1	...	1	...	...	3	1	4	0.3	0.1	0.2
14	Esplanade	...	2	1	2	4	1	2	6	1	6	1	3	23	0	29	1.8	...	0.8	9.3
15	Park Town	...	1	...	1	...	1	...	...	1	...	2	...	3	3	6	0.3	0.4	0.3	0.2
16	Perambur	...	2	1	1	3	2	2	1	1	2	1	...	10	6	16	0.6	0.4	0.5	0.5
17	Choolai	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	0.1	0.3
18	Purasawalkam	...	...	1	...	...	...	...	...	...	1	...	...	...	2	3	0.2	0.1	0.1	0.2
19	Vepery	...	...	3	...	3	...	1	2	3	3	4	2	15	7	22	1.2	0.8	1.1	1.0
20	Egmore	...	1	1	1	...	...	...	1	1	2	...	...	5	2	7	0.4	0.2	0.3	0.2
21	Kilpauk	...	2	3	3	6	1	3	2	5	...	...	...	25	11	36	2.6	1.2	1.9	1.2
22	Nungambakam	...	1	1	1	1	1	1	1	...	1	...	3	8	7	15	0.7	0.7	0.7	0.4
23	Chintadripet	...	1	1	1	...	...	...	1	...	1	...	...	1	6	7	0.1	0.5	0.3	0.2
24	Tiruvateeswaranpet	...	1	1	...	...	...	...	...	2	...	...	...	4	1	5	0.3	0.1	0.2	0.4
25	Chepauk	...	...	...	...	1	...	...	...	...	...	3	1	6	1	7	0.9	0.2	0.5	0.5
26	Triplicane	...	...	...	1	...	...	...	...	2	...	...	1	2	1	3	0.2	0.1	0.2	0.4
27	Amir Mahal	...	1	...	...	...	...	...	...	...	1	...	...	3	2	5	0.4	0.3	0.3	0.4
28	Mirshahpet	...	1	...	1	...	...	...	1	...	1	...	...	2	1	3	0.2	0.1	0.2	0.4
29	Royapettah	...	1	...	2	4	...	3	3	...	2	1	1	10	7	17	1.1	0.5	0.7	0.4
30	Mylapore	...	3	...	1	...	...	...	...	...	...	...	...	...	4	4	...	0.5	0.2	0.4
Total		19	23	18	22	26	31	19	22	23	23	22	21	161	88	249	0.6	0.4	0.5	0.5

* Includes deaths in the Government General Hospital of patients admitted from mofussil and destitute.

Annual Form No. XVII.—Deaths registered from "CHILD BIRTH" by divisions during each month of the year 1930.

1	2	3	4												5	6		
			Ratio of Deaths per 1,000 of population.															
Divisions.	Districts.	Total.												Males.	Females.	Total.	Mean ratio per 1000 during previous five years.	
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.					
1	Royapuram	...	1	1	1	1	1	1	1	1	1	1	1	...	8	0.8	0.3	0.4
2	Tondiarpet	...	1	3	2	2	2	1	1	1	1	1	3	...	22	2.6	1.3	1.4
3	Washermanpet	...	1	1	2	2	2	1	1	1	1	4	...	14	...	1.2	0.6	0.5
4	Korukkupet	...	1	2	2	2	2	...	3	3	...	...	...	15	...	1.9	0.9	0.7
5	Harbour	...	1	1	1	1	...	1	...	1	1	1	...	7	...	3.1	1.0	1.1
6	Muthialpet	...	1	...	1	1	...	...	...	...	...	...	...	6	...	1.0	0.4	0.4
7	Katchaleswarpet	...	...	1	1	1	...	...	...	...	...	...	...	4	...	0.7	0.4	0.4
8	Kothwal Bazaar	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1.0	0.4	0.6
9	Amnen Koil	...	...	...	2	1	...	1	2	...	...	...	1	9	...	1.2	0.6	0.9
10	Seven Wells	...	...	...	1	...	...	2	1	...	...	...	1	8	...	0.8	0.5	0.7
11	Sowcarpet	...	...	...	1	...	...	...	...	...	...	...	...	4	...	1.3	0.5	0.8
12	Peddunaickenpet	...	...	1	1	...	...	...	1	1	1	2	...	12	...	1.4	0.7	0.7
13	Trevelyan Basin	...	3	...	1	...	1	1	1	1	...	1	2	11	...	1.3	0.6	0.6
14	Esplanade	...	...	...	1	...	...	...	...	...	1	...	...	1	...	0.9	0.4	0.4
15	Park Town	...	...	1	1	...	...	2	2	...	...	...	...	10	...	1.3	0.6	0.6
16	Perambur	...	2	1	1	1	1	2	2	1	1	2	...	17	...	1.2	0.6	0.6
17	Choolai	...	1	1	...	1	1	1	2	1	3	1	3	14	...	1.2	0.6	0.5
18	Purasawalkam	...	1	...	2	1	...	...	1	1	...	...	...	12	...	1.2	0.6	0.5
19	Vepery	...	1	...	...	...	...	...	...	...	...	2	...	4	...	0.4	0.2	0.5
20	Egmore	...	1	1	2	...	...	3	4	...	3	3	6	24	...	2.0	0.9	1.4
21	Kilpauk	...	...	2	...	1	...	1	1	1	1	...	...	7	...	0.8	0.4	0.4
22	Nungambakam	...	...	1	...	...	1	...	2	1	2	3	1	11	...	1.1	0.5	0.2
23	Chintadrpet	...	...	4	3	...	...	...	...	1	3	2	3	18	...	1.6	0.8	0.6
24	Tiruvateeswarpet	...	3	1	1	2	1	4	2	1	4	1	2	22	...	1.9	0.9	0.5
25	Chepauk	...	3	1	...	2	1	4	1	3	1	1	1	20	...	3.6	1.5	0.8
26	Triplicane	...	2	...	...	...	1	...	1	1	1	1	...	6	...	0.8	0.4	0.5
27	Amir Mahal	...	2	2	1	4	...	1	...	2	2	2	1	17	...	2.2	1.1	0.5
28	Mirahibpet	...	1	...	3	...	2	...	...	1	...	1	...	9	...	0.6	0.5	0.5
29	Royapettah	...	1	...	1	1	1	...	1	1	...	1	...	6	...	0.5	0.3	0.6
30	Mylapore	...	...	3	1	1	...	...	...	...	...	1	2	8	...	0.9	0.4	0.4
Total.		...	30	26	27	29	28	16	25	23	31	32	31	328	...	1.3	0.6	0.6

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 1,000 during previous five years.		
														Males.	Females.	Total.	Males.		Females.	Total.
1	Royapuram	31	28	32	30	24	24	27	32	28	21	38	46	211	150	361	202	142	173	170
2	Tondiarpet	56	45	39	35	36	35	32	29	39	44	63	68	260	261	521	205	312	208	254
3	Washermanpet	47	27	43	38	33	31	24	36	22	46	67	47	243	220	463	226	186	195	230
4	Korukupet	34	32	52	36	42	45	36	20	37	32	50	62	243	236	479	283	296	288	248
5	Harbour	14	10	14	14	8	9	6	6	7	7	19	7	63	58	121	125	257	166	158
6	Muthialpet	7	13	8	10	11	9	6	13	8	13	14	16	65	63	128	67	106	81	90
7	Katchaleswarpet	13	19	21	11	22	8	9	12	12	9	12	30	99	79	178	139	133	136	113
8	Kothwal Bazaar	5	6	3	5	9	10	5	4	5	5	7	8	40	32	72	128	160	141	150
9	Amman Koil	35	26	34	19	19	11	21	11	19	24	26	27	140	132	272	172	171	172	201
10	Seven Wells	19	24	30	27	30	30	31	28	24	31	39	29	196	146	342	212	148	174	229
11	Sowcarpet	16	12	1	15	8	6	7	8	8	9	11	11	55	57	112	128	179	160	146
12	Peddunaickenpet	32	30	22	15	21	25	18	15	15	26	28	38	143	149	292	160	173	166	211
13	Trevelyan Basin	21	25	23	16	12	31	29	20	21	14	32	44	160	136	296	182	160	171	164
14	Esplanade	23	14	16	20	16	23	17	21	27	14	22	21	29	16	45	187	143	163	99.8
														*157	32	*189				
15	Park Town	25	17	31	21	31	14	22	26	13	19	27	22	142	126	268	148	158	153	157
16	Perambur	55	41	60	53	43	32	52	35	35	43	66	65	309	272	581	199	195	197	168
17	Choolai	47	32	36	34	31	31	43	44	34	32	50	63	229	248	477	186	212	198	151
18	Purasawalkam	25	21	36	30	33	28	30	28	30	31	41	45	177	201	378	169	197	182	147
19	Vepery	49	23	26	27	20	31	33	21	24	28	39	43	192	172	364	191	186	188	165
20	Egmore	46	34	39	38	29	25	35	31	36	36	45	55	225	224	449	162	191	175	151
21	Kilpauk	34	21	23	19	28	23	23	23	22	24	36	34	169	144	313	175	162	163	159
22	Nungambakam	27	20	34	24	26	31	28	23	24	25	30	28	160	160	320	142	154	152	136
23	Chintadripet	38	33	36	23	44	40	31	29	31	40	38	48	215	216	431	175	187	182	169
24	Tiruvateswarpet	78	42	50	45	47	53	53	47	42	40	65	69	348	288	636	277	245	263	196
25	Chepak	35	26	20	18	23	21	10	23	22	16	32	22	124	144	268	175	231	203	173
26	Triplicane	32	24	20	29	22	23	15	26	25	15	29	28	161	127	288	185	163	162	168
27	Amir Mahal	36	31	27	23	41	27	23	17	17	25	35	62	185	179	364	244	234	239	218
28	Mirshibpet	43	37	32	49	41	29	49	43	44	37	52	46	271	231	502	292	247	269	196
29	Royapettah	51	25	37	32	43	43	27	30	30	27	40	37	221	201	422	190	189	185	144
30	Mylapore	28	25	25	17	28	27	23	25	24	31	34	39	182	144	326	235	170	183	153
Total		1,002	766	880	775	821	781	768	729	725	764	1,087	1,160	5,414	4,844	10,258	195	153	194	178

* Includes deaths in the Government General Hospital of patients admitted from mofussil and destitute.

Annual Form No. XIX--Comparing the deaths from some of the principal diseases during the year with the deaths during the preceding five years.

	Cholera.		Small-Pox.		Measles.		Plague.		Malaria		Enteric Fever.		Other fevers.		Dysentery and Diarrhoea.		Respiratory Disease.				Death from child birth.		All other causes.		Total Deaths.					
	Deaths.	Ratio per 1,000	Deaths.	Ratio per 1,000	Deaths.	Ratio per 1,000	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.						
1925	203	0.4	763	1.4	96	0.2	...	...	1292	2.5	99	0.2	940	1.8	4031	7.6	88	0.2	1516	2.9	4812	9.1	219	0.4	344	0.7	10591	20.0	25000	47.3
1926	98	0.2	60	0.1	21	0.04	...	...	1342	2.6	152	0.3	1191	2.3	3867	7.3	177	0.3	1361	2.6	4932	9.5	243	0.5	352	0.7	9980	18.9	23776	45.0
1927	512	1.0	32	0.06	5	0.09	...	...	1367	2.6	164	0.3	1095	2.1	3263	6.2	162	0.4	1619	3.1	5035	9.6	228	0.4	293	0.5	8589	16.2	22364	42.3
1928	708	1.3	251	0.5	59	0.1	...	...	1599	3.0	177	0.3	1555	2.9	3931	7.4	163	0.4	1649	3.2	6879	13.0	262	0.5	366	0.7	9116	17.2	26715	50.5
1929	16	0.03	506	1.0	68	0.1	...	...	681	1.3	130	0.2	1731	3.3	3127	5.9	17	0.03	1364	2.6	5324	10.1	242	0.5	304	0.6	8915	16.9	22415	42.4
Mean of the last 5 years ...	307	0.6	322	0.6	50	0.09	...	...	1257	2.4	144	0.3	1302	2.5	3644	6.9	121	0.2	1500	2.8	5396	10.2	239	0.5	332	0.6	9439	17.8	24054	45.5
1930	43	0.08	188	0.4	16	0.03	...	...	283	0.5	126	0.2	1961	3.7	3056	5.8	151	0.3	924	1.7	5256	9.9	249	0.5	328	0.6	10258	19.4	22839	43.2

Annual Form No. XX.—Table of deaths for 1930 arranged in accordance with the international list (Third Revision 1920) as adopted for use in England and Wales, Scotland and Northern Ireland.

Classification No.	Causes of death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
I. INFECTIOUS DISEASES.														
1	Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Malaria	...	...	...	...	...	...	...	...	...	...	...	...	...
6	" Cachexia	...	...	...	...	...	...	...	...	...	...	...	...	...
7	Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Measles	...	...	...	...	...	...	...	...	...	...	...	...	...
10	Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...
11	Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...
13	Mumps	...	...	...	...	...	...	...	...	...	...	...	...	...
14	Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...
16	Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...
20	Leprosy	...	...	...	...	...	...	...	...	...	...	...	...	...
21	Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...
25 (3)	Kala Azar	...	...	...	...	...	...	...	...	...	...	...	...	...
28	Rabies	...	...	...	...	...	...	...	...	...	...	...	...	...
29	Tetanus	...	...	...	...	...	...	...	...	...	...	...	...	...
31	Tuberculosis of the Respiratory System	...	...	...	...	...	...	...	...	...	...	...	...	...
33	" Intestine and Peritoneum.	...	...	...	...	...	...	...	...	...	...	...	...	...
36	" other organs	...	...	...	...	...	...	...	...	...	...	...	...	...
36 (c)	" lymphatic System (Scrofula)	...	...	...	...	...	...	...	...	...	...	...	...	...
38	Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	...
40 (1)	Congenital Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	...
41	Gonorrhoea	...	...	...	...	...	...	...	...	...	...	...	...	...
	Purulent Infection—	...	...	...	...	...	...	...	...	...	...	...	...	...
	Septicaemia	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pyæmia	...	...	...	...	...	...	...	...	...	...	...	...	...
	Sæpæmia	...	...	...	...	...	...	...	...	...	...	...	...	...
II. GENERAL DISEASES. (Not included in I)														
43	Cancer of the buccal cavity	...	...	...	...	...	...	...	...	...	...	...	...	...
44	" Pharynx, Liver Stomach & Annexa.	...	...	...	...	...	...	...	...	...	...	...	...	...
45	" Intestine & Rectum	...	...	...	...	...	...	...	...	...	...	...	...	...
46	" female genital organs	...	...	...	...	...	...	...	...	...	...	...	...	...
47	" Breast	...	...	...	...	...	...	...	...	...	...	...	...	...
49	" other or unspecified organs	...	...	...	...	...	...	...	...	...	...	...	...	...

Infectious Diseases.

General Diseases.

General Diseases—Contd.																		
50	Tumours not returned as malignant	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
51	Rheumatic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
52 (3)	Gout	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
53	Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
55	Beri-beri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
56	Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
57	Diabetis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	"
	"
	Carbuncle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	"
	"
	Gangrene	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
58 (a)	Pernicious Anaemia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b)	Anaemia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
64	Enlargement of Spleen	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
66	Alcoholism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
67 (2)	Poisoning by mineral substances	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
69 (3)	Toxaemia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
III. DISEASES OF THE NERVOUS SYSTEM & SENSE ORGAN.																		
71	Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
72	Tabs dorsalis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
74-a (1)	Cerebral haemorrhage	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(2)	Apoplexy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
75	Paralysis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
75 (a)	Hemiplegia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b)	Paraplegia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
77	Other forms of insanity	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
78	Epilepsy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
80	Infantile convulsion (under 5 years of age)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
82 (1)	Hysteria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Sciatica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
82 (2)	Neuritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
84 (5)	Neurasthenia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
DISEASES OF THE EAR.																		
86 (2)	Otitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
IV. DISEASES OF THE CIRCULATORY SYSTEM.																		
87	Pericarditis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
88 (2)	Endocarditis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(3)	Myocarditis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
89	Angina Pectoris	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90 (4)	Unspecified Valve disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(5)	Fatty degeneration of heart	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Annual Form No. XX—Table of deaths for 1930 arranged in accordance with the international list (Third Revision 1920) as adopted for use in England and Wales, Scotland and Northern Ireland.

Classification No.	Causes of death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diseases of the Circulatory System— <i>Contd.</i>	90 (9) Heart disease undefined ...	4	4	13	5	8	4	7	5	7	9	15	8	89
	Cardiac Dropsy ...	4	3	3	...	...	4	...	3	...	...	...	...	17
	91 (a) Aneurysm ...	1	...	...	...	...	...	...	...	...	1	1	...	6
	(b) Arterio-Sclerosis ...	...	...	1	1	...	...	...	...	...	...	...	...	2
	93 Diseases of Veins ...	...	...	...	...	...	...	...	1	...	...	1	...	5
	Haemorrhoids ...	5	2	4	4	8	2	1	...	4	...	...	6	36
94 Diseases of the Lymphatic System	...	...	2	1	...	...	...	...	...	...	...	...	...	3
95 Haemorrhage without stated cause	...	2	5	5	5	...	...	5	2	2	...	2	1	29
V. DISEASES OF THE RESPIRATORY SYSTEM														
99 (a) Acute Bronchitis ...	...	7	8	6	8	9	16	11	3	11	10	16	16	121
(b) Chronic Bronchitis ...	...	35	30	48	24	23	22	30	32	20	27	33	39	363
100 Broncho-Pneumonia ...	...	244	216	246	255	249	231	272	255	228	239	387	399	3,201
101 (a) Lobar Pneumonia ...	...	1	3	5	6	9	8	6	3	14	10	11	16	92
(b) Pneumonia not otherwise defined	...	132	89	116	84	117	85	70	64	62	78	123	110	1,130
102 Pleurisy ...	...	1	1	...	...	2	1	...	...	...	...	...	2	7
102 (2) Pneumo Thorax ...	...	...	...	...	...	...	...	...	1	...	1	...	...	2
103 Oedema of Lung ...	...	...	1	...	2	...	...	4	...	1	...	1	3	12
105 Asthma ...	...	21	16	27	20	14	18	20	15	26	25	22	17	241
106 Emphysema ...	...	...	...	1	...	...	...	...	...	...	1	...	...	2
VI. DISEASES OF THE DIGESTIVE SYSTEM														
108 (1) Stomatitis ...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
(5) Parotitis ...	...	...	...	...	...	1	...	...	...	1	...	1	...	2
109 (1) Tonsillitis ...	...	...	...	...	1	...	...	...	...	...	...	...	...	2
110 Diseases of oesophagus ...	...	...	1	...	...	...	...	1	...	...	1	...	...	3
111 (a) Ulcer of Stomach ...	...	3	8	5	2	7	3	4	8	5	6	7	3	61
(b) Ulcer duodenum ...	...	3	4	5	1	...	1	1	2	6	3	2	1	29
Other diseases of Stomach.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
112 (1) Gastritis ...	...	8	5	8	5	9	8	10	8	9	13	17	9	109
(2) Dyspepsia ...	...	1	5	1	4	5	6	1	4	2	4	3	2	53

113-114	Diarrhoea and Enteritis ...	...	80	66	69	79	66	95	110	70	74	58	92	121	980
(2)	Colitis	...	1	...	2	2	1	1	4	3	2	...	1	7	24
(2)	Colic	...	4	...	5	...	4	3	3	...	...	...	3	4	27
	Infantile Diarrhoea	...	32	25	30	27	41	38	24	39	31	33	57	43	420
	Gastro-Enteritis	...	1	1	2	2	4	3	1	1	2	5	4	3	29
	Ankylostomiasis	...	10	4	6	2	3	1	3	5	2	2	5	9	52
115	Guinea Worm	...	...	...	...	...	1	...	...	...	...	...	...	...	1
116 (e)	Undefined Intestinal Parasites	...	1	1	1	...	2	2	1	...	1	3	1	...	13
(f)	Appendicitis	...	3	1	2	...	2	4	3	...	2	1	2	...	22
117	Hernia	...	8	5	2	4	2	4	7	3	2	7	5	3	52
118 (a)	Intestinal Obstruction	...	9	7	8	10	10	5	10	8	5	5	5	2	84
(b)	Constipation	...	2	1	1	1	1	...	1	...	...	...	...	4	11
119 (1)	Ischio-Rectal Abscess	...	...	...	...	...	1	...	...	...	...	...	...	...	2
(2)	Hepatitis	...	4	1	3	2	3	2	...	2	...	1	3	4	25
120	Hydatid Cyst	...	...	...	...	1	...	...	...	1	...	1	3	4	2
121	Cirrhosis of Liver	...	22	16	13	11	11	10	11	16	10	11	16	23	170
122 (b)	Biliary Cirrhosis	...	...	1	1	2	1	2	1	1	...	2	1	1	13
	Ascites	...	2	6	4	1	3	5	2	5	3	4	2	3	41
124	Enlargement of Liver	...	3	...	...	1	1	1	2	3	2	2	2	3	20
	Jaundice	...	7	5	1	8	5	2	6	9	5	8	3	10	71
126	Hepatic Abscess	...	...	...	...	...	...	...	...	1	...	...	1	...	2
129	Peritonitis	...	4	1	6	5	7	2	7	4	3	7	5	6	57
	Other Diseases of Digestive System	...	5	1	...	1	1	...	...	...	1	1	...	1	11
VII. NON-GENITAL DISEASES OF THE GENITO-URINARY SYSTEM.															
128	Acute Nephritis	...	35	34	39	30	30	36	34	31	40	28	30	28	395
129	Chronic Nephritis	...	18	16	16	24	25	11	16	12	22	17	25	31	233
	Renal Dropsy	...	15	6	15	30	16	20	14	11	14	13	10	9	173
132	Uræmia	...	4	4	2	3	3	2	...	3	4	3	5	4	37
133 (1)	Calculi of the Urinary Passages	...	...	...	...	...	1	...	...	...	...	...	...	...	2
(2)	Cystitis	...	3	1	...	1	1	1	2	...	2	...	1	1	13
	Retention of Urine	...	2	1	...	1	...	...	...	...	1	...	2	...	7
134	Rupture Bladder	...	...	...	...	...	...	1	...	...	...	1	...	...	2
(a)	Diseases of the Urethra :-	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Stricture Urethra	...	...	2	1	1	4	...	1	...	...	1	...	2	12
136	Extravasation of Urine	...	...	2	...	...	...	...	...	...	...	1	1	2	6
	Non-Veneral diseases of male genital organs -	...	...	...	...	...	2	...	...	...	...	...	...	1	3
	Hydrocele	...	...	...	...	...	...	...	...	...	...	...	...	...	...
141	Other diseases of female genital organs :-	...	...	...	...	...	...	...	...	...	...	...	1	...	1
(1)	Amenorrhoea	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Dysmenorrhoea	...	...	...	...	...	...	1	...	...	...	...	...	...	8
	Endo-metritis	...	1	1	3	...	1	...	1	...	...	...	...	1	...
VIII. PUERPERAL STATE.															
143	Accidents of Pregnancy :-	...	...	2	...	3	...	3	1	1	1	...	...	2	13
(a)	Abortion	...	...	...	...	1	...	...	...	...	...	...	...	...	1
(c)	Miscarriage	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Other accidents of Pregnancy	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Diseases of the Digestive System - Could.

Diseases of the Genito-Urinary System.

Puerperal State.

Annual Form No. XX.—Table of deaths for 1930 arranged in accordance with the International list (Third Revision 1920) as adopted for use in England and Wales, Scotland and Northern Ireland.

Classification	Causes of death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Puerperal State.— <i>Contd.</i>	144 Puerperal haemorrhage ...	...	...	1	1	...	...	...	...	2	...	2	2	8
	Placenta praevia ...	...	...	...	...	...	...	...	...	...	...	...	...	4
	145 Post partum haemorrhage ...	4	2	2	1	2	2	1	...	5	2	3	2	26
	Other accidents of child-birth :—	...	...	...	...	1	...	...	...	...	...	...	...	1
	Child birth ...	...	1	1	...	...	...	1	...	...	...	...	1	4
	Difficult labour ...	...	...	...	2	...	...	...	...	...	...	2	...	5
	Prolonged labour ...	1	...	...	1	...	...	3	...	...	...	1	...	5
	Rupture uterus ...	18	12	18	18	15	10	18	17	8	22	17	21	194
	146 Puerperal sepsis ...	...	...	...	...	1	...	1	2	1	2	1	1	13
	147 (2) Sudden death after delivery ...	1	3	...	...	1	...	1	3	1	3	5	1	30
	148 Puerperal eclampsia and convulsions ...	2	6	2	...	2	5	...	3	1	3	5	1	30
	Toxaemia of Pregnancy ...	3	...	...	1	1	3	1	2	1	1	1	1	15
IX. DISEASES OF SKIN AND CELLULAR TISSUE.														
Diseases of Skin and Cellular Tissues.	151 (2) Cancrum oris ...	1	...	1	1	2	1	3	1	...	1	5	1	17
	Gangrene ...	...	1	...	1	...	3	1	3	1	1	...	2	13
	152 Carbuncle and boil ...	...	2	2	2	2	3	4	4	6	1	...	6	36
	153 (1) Cellulitis ...	3	1	2	1	8	2	7	4	...	3	3	6	39
	(2) Abscess ...	10	7	6	11	8	14	15	7	19	5	15	9	126
	154 (1) Ulcer ...	5	1	2	1	1	...	2	2	1	1	1	2	20
	(4) Elephantiasis ...	1	1	...	1	...	...	1	...	1	...	...	...	5
X. DISEASES OF BONES AND ORGANS OF LOCOMOTION.														
Diseases of Bones.	155 Scabies ...	...	...	1	...	...	...	...	...	...	...	...	1	2
	Diseases of Bones ...	...	2	...	...	2	...	...	...	2	...	1	1	8
	156 Diseases of Joints :—	...	...	...	...	...	...	...	...	...	...	1	1	10
	Arthritis ...	1	...	2	...	...	2	2	1	...	...	...	...	1
XI. CONGENITAL MALFORMATION.														
Congenital Malformation.	152 (3) Imperforate Anus ...	...	1	1	...	1	2	1	...	...	...	3	4	13
	Spina bifida ...	...	1	...	...	...	...	...	...	1	...	...	...	2

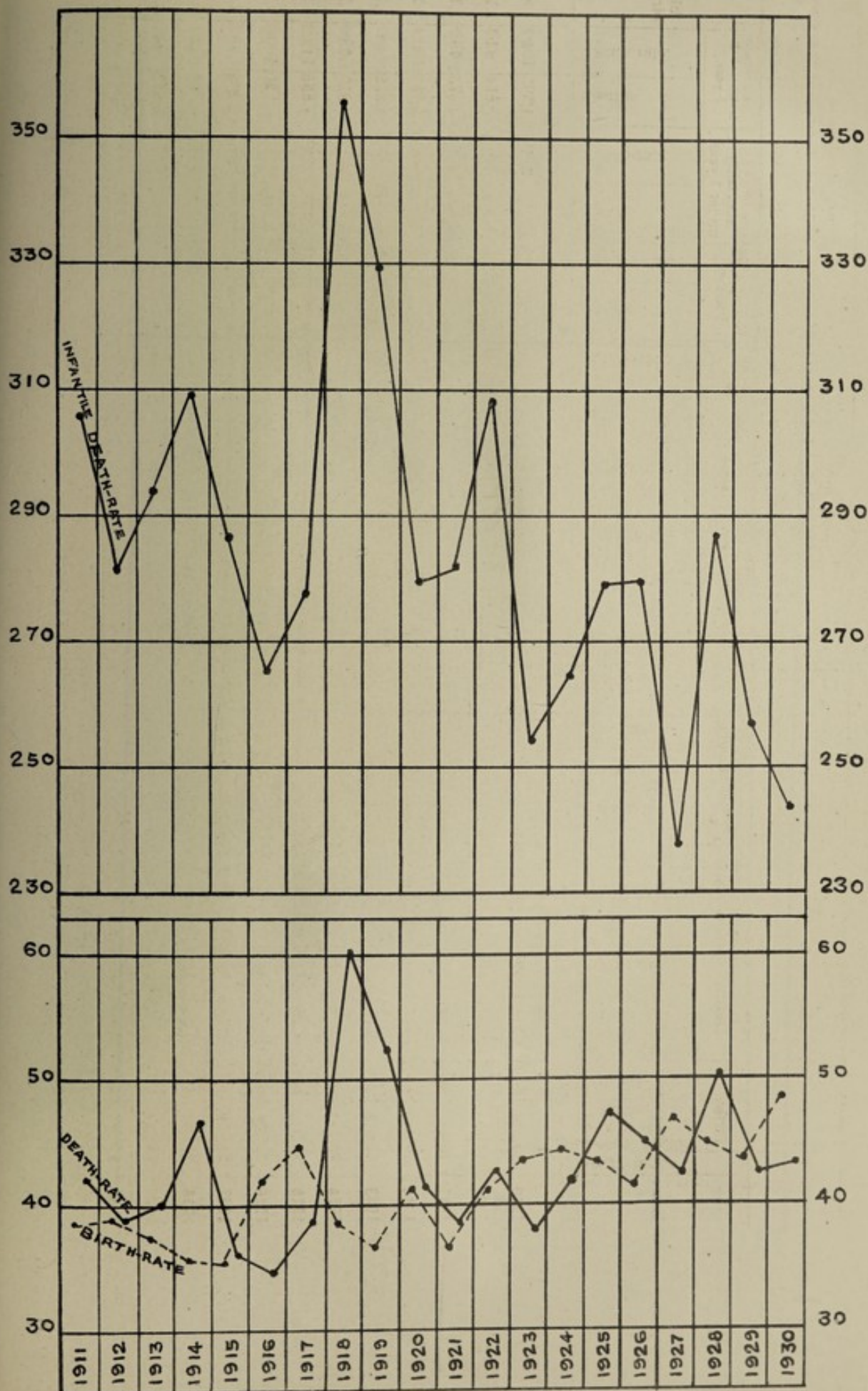
TABLE A.

Comparative statement of deaths from some of the principal diseases during the past 12 years.

Year.	Births.		Deaths.		Cholera.		Small Pox.		Malaria.		Other fevers.		Other infectious diseases.		Plague.		Dysentery and Diarrhoea.		Respiratory diseases.		Infantile mortality under 1 year.		Children between 1 & 6 year.	
	No. of Births registered exclu- sive of still births.	Birth-rate.	No. of deaths registered exclu- sive of still births.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.	Deaths.	Death-rate.
1919	18,926	36.5	27,187	52.4	642	1.2	611	1.2	736	1.2	2,574	5.0	1,288	2.5	14	0.03	5,835	11.3	5,148	9.9	6,250	329.0	4,595	104.7
1920	21,396	41.3	21,418	41.3	22	0.04	109	0.2	560	1.1	1,780	3.4	1,995	3.8	8	0.002	4,671	9.0	4,428	8.5	5,976	279.3	3,654	83.3
1921	19,187	36.4	20,268	38.5	139	0.3	180	1.2	652	1.2	1,475	2.8	708	1.3	3	0.006	4,149	7.9	4,467	8.5	5,403	281.9	3,273	79.9
1922	21,650	41.1	22,475	42.7	17	0.03	121	2.1	763	1.4	1,325	2.5	612	1.2	1	0.002	4,167	7.9	4,911	9.3	6,569	308.0	4,113	100.4
1923	22,975	43.6	19,933	37.9	21	0.04	151	0.3	783	1.5	759	1.5	363	0.7	1	0.002	3,778	7.2	4,610	8.7	5,837	254.0	3,272	79.9
1924	23,275	44.2	21,960	41.7	97	0.4	197	0.4	971	1.8	681	1.3	982	1.9	...	...	3,700	7.0	5,598	10.6	6,148	264.1	3,810	93.0
1925	23,070	43.6	25,000	47.3	203	0.4	763	1.4	198	2.5	1,039	2.0	682	1.3	...	...	4,631	7.6	6,416	12.1	6,431	278.8	4,656	112.9
1926	22,000	41.6	23,776	45.0	98	0.2	60	0.1	1342	2.6	1,343	2.7	565	1.1	...	...	3,867	7.3	6,470	12.2	6,145	279.3	4,120	100.0
1927	24,760	46.8	22,364	42.3	512	1.0	32	0.06	1367	2.6	1,259	2.1	...	...	...	...	3,263	6.2	6,815	12.9	5,888	237.6	3,806	92.3
1928	23,729	44.9	26,715	50.5	708	1.3	251	0.5	1599	3.0	1,732	3.2	1,056	2.0	...	...	3,927	7.4	8,691	16.4	6,806	286.8	4,864	118.0
1929	23,124	43.7	22,415	42.4	16	0.03	506	1.0	681	1.3	1,861	3.5	612	1.2	...	...	3,127	5.9	6,695	12.7	5,933	256.5	3,875	94.0
1930	25,662	48.5	22,839	43.2	43	0.08	188	0.4	283	0.5	2,097	3.9	411	0.8	...	...	3,056	5.8	6,331	12.0	6,258	243.9	3,633	88.1

BIRTH, DEATH & INFANTILE DEATH-RATES

1911 - 1930



WORLD DEATHS - INFANTILE DEATHS

1911 - 1920

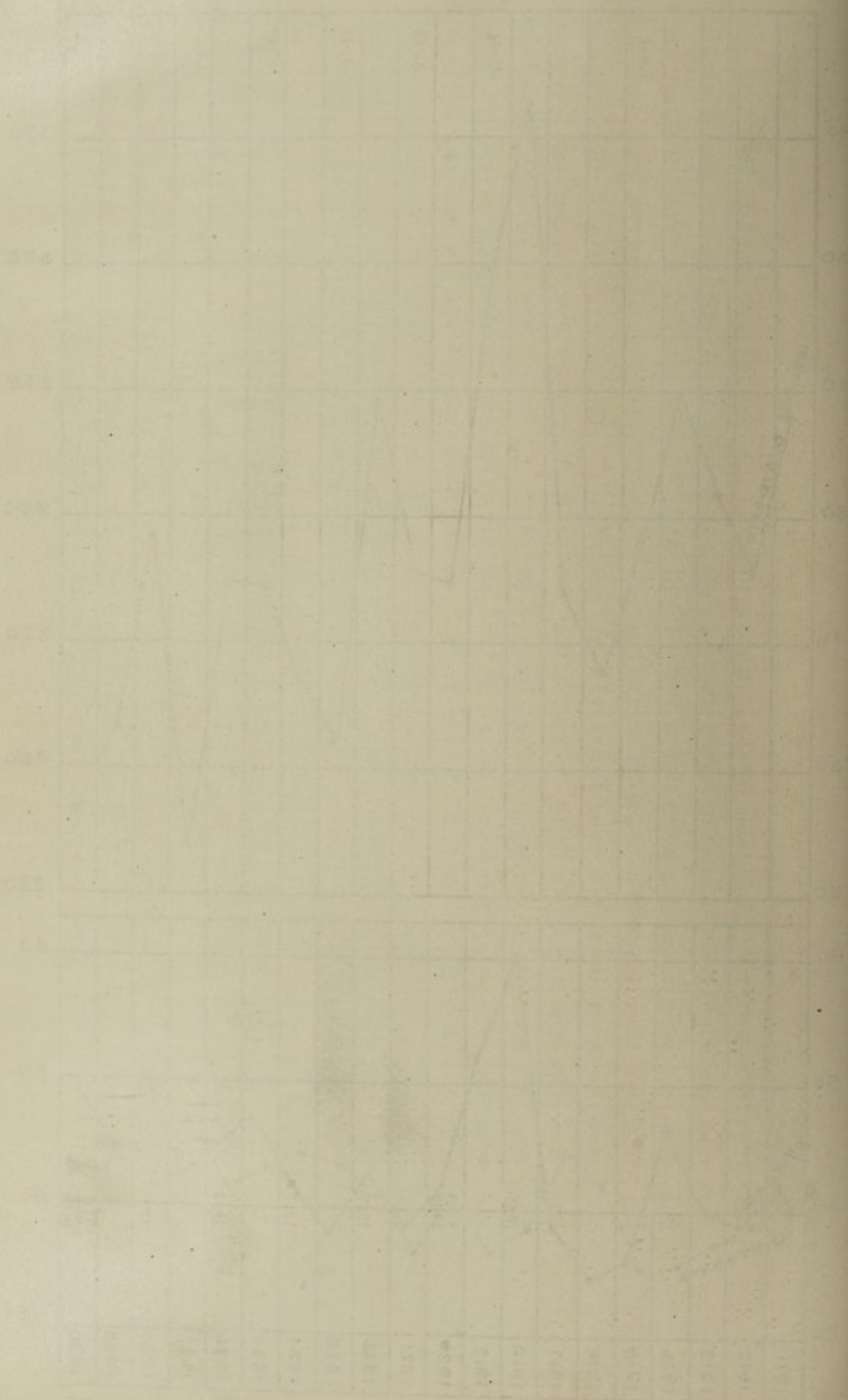


TABLE B
Rainfall.

Years.	1st Quarter.				Total.	
	Inches.				Inches.	
	January to March.	April to June.	July to September.	October to December.		
1925	4.19	4.33	11.15	47.17	65.84	
1926	1.11	0.60	9.05	20.66	31.42	
1927	0.55	4.17	7.80	19.88	32.40	
1928	3.30	0.33	16.15	31.69	51.47	
1929	8.29	2.77	13.72	27.64	52.42	
1930	3.69	11.24	8.71	55.05	78.69	

TABLE C.

Table of Births, Deaths and Infantile Death rates for the different Communities in the city of Madras for 1929 and 1930.

Race or Caste.	Population according to the censuses of 1921.	1930.						1929.					
		Total No. of Births.	Birth-rate.	Total No. of Deaths.	Death-rate.	Infantile Deaths.	Infantile Death-rate.	Total No. of Births.	Birth-rate.	Total No. of Deaths.	Death-rate.	Infantile Deaths.	Infantile Death-rate.
Europeans	2,912	67	22.8	30	10.2	7	104.5	48	16.3	25	8.5	1	20.8
Anglo Indians	9,002	368	40.9	256	28.4	50	135.9	378	42.0	267	29.7	48	127.0
Indian Christians	32,216	1,277	39.6	1,062	33.0	229	179.3	1,269	39.4	994	30.9	287	186.8
Hindus	4,29,155	21,021	49.0	18,724	43.6	5,241	249.3	18,721	43.6	18,475	43.1	4,902	261.8
Mahomedans	53,586	2,928	54.6	2,766	51.6	731	249.7	2,706	50.5	2,654	49.5	745	275.3
Others	1,890	1	0.5	1	0.5	...	...	2	1.1	...	...	...	...
Total	5,28,791	25,562	48.5	22,839	43.2	6,268	243.3	23,124	43.7	22,415	42.4	5,933	255.6

DEATH-RATES IN DIFFERENT COMMUNITIES

(1917 - 1930)

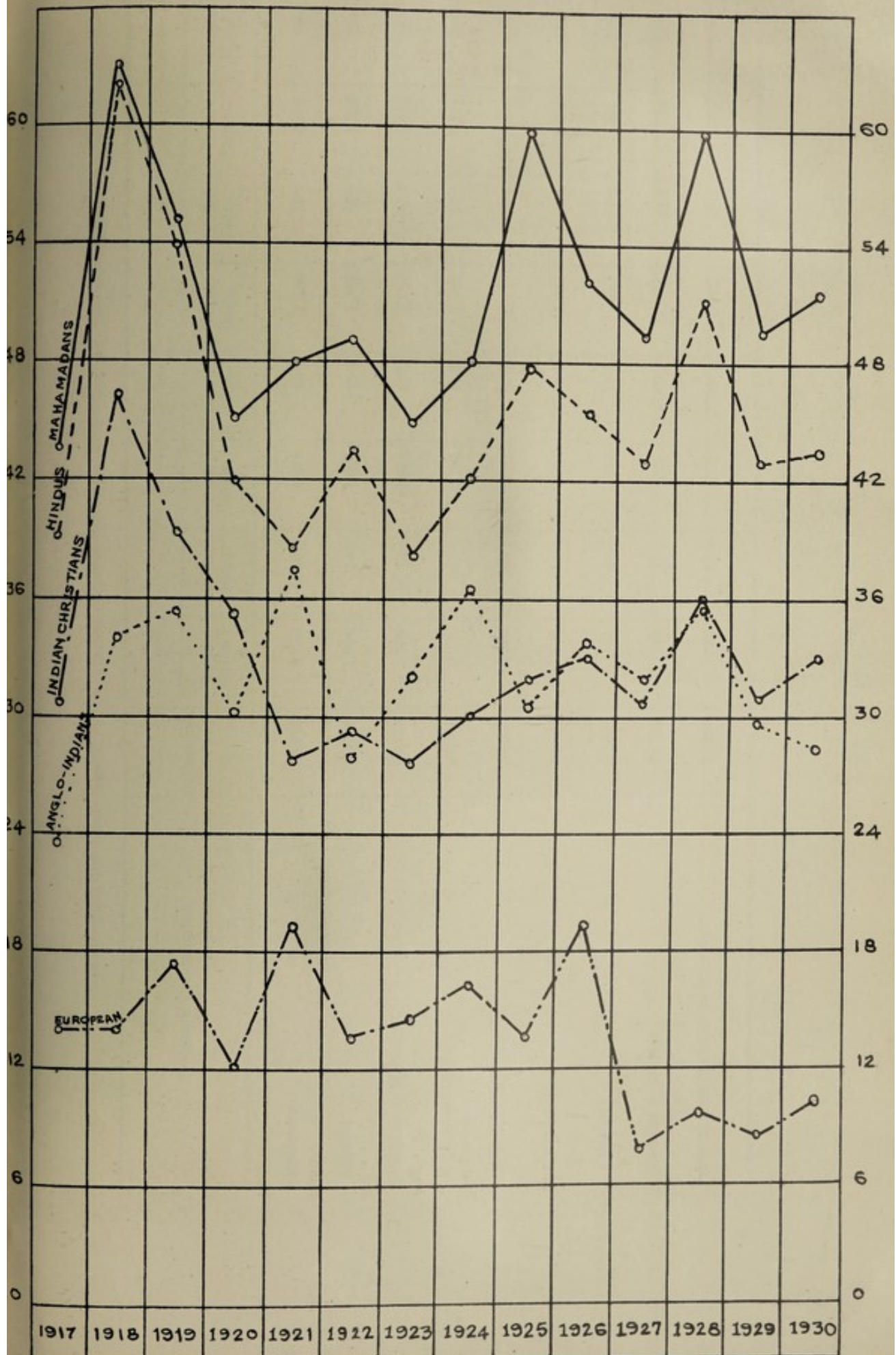
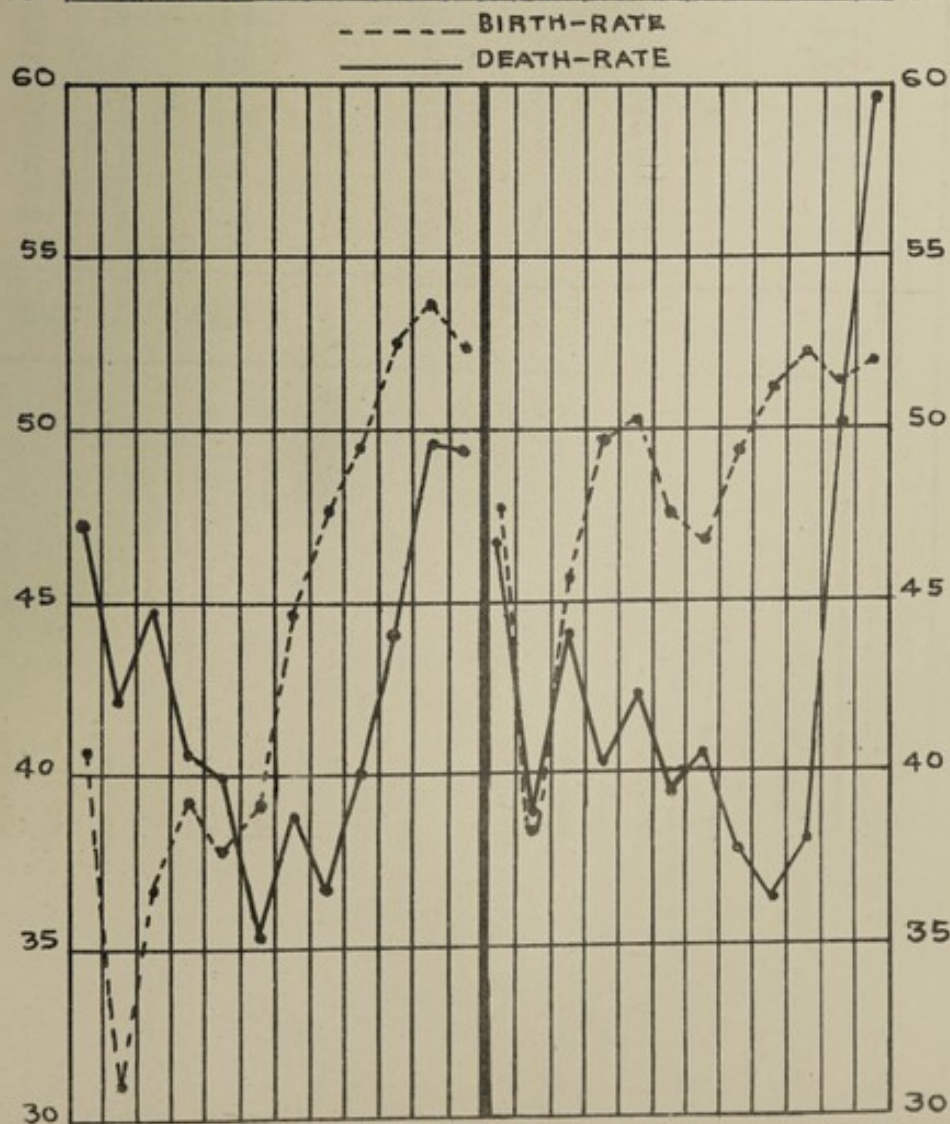
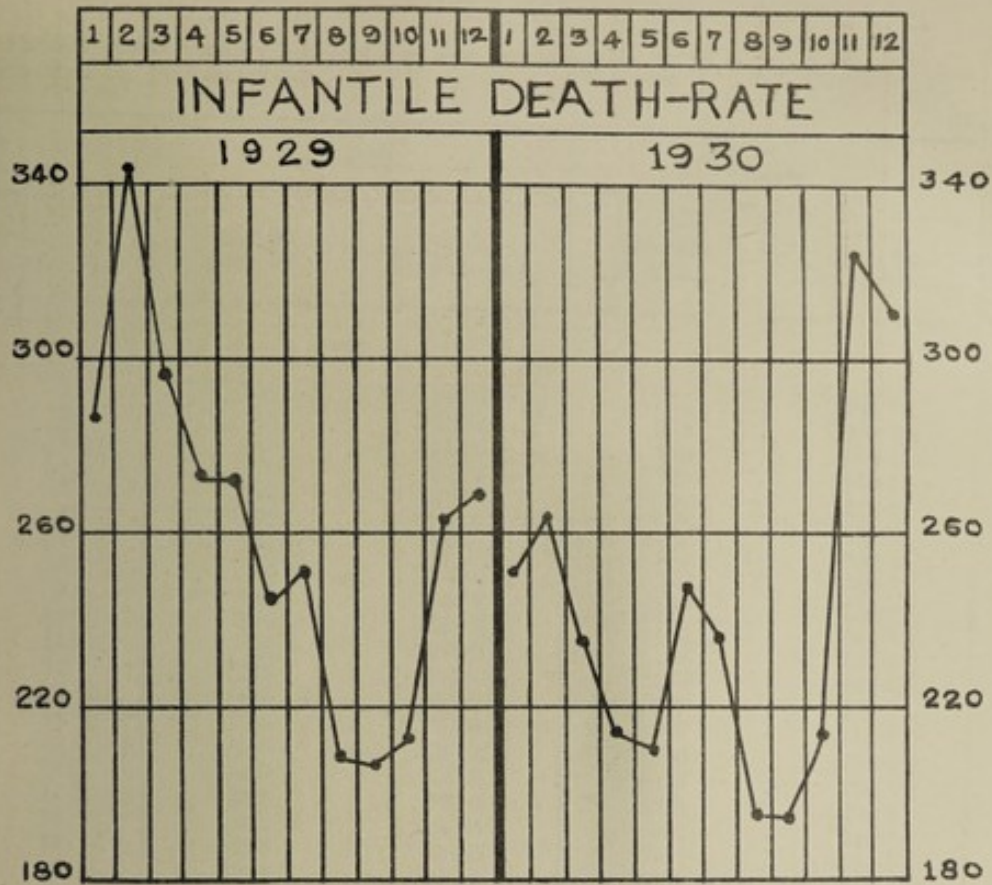


TABLE-D.

Table of Birth and Death rates of Principal Sub-divisions of the Hindu Community for 1929 and 1930.

Names of Communities.	Population.	1930				1929				
		Total Births.	Birth Rates.	Total Deaths.	Death Rates.	Total Births.	Birth Rates.	Total Deaths.	Death Rates.	
Brahmins	...	48,223	1,750	36.3	1,385	28.7	1,689	35.0	1,081	22.4
Chetties	...	36,366	1,964	54.0	1,665	45.8	1,342	36.9	1,028	28.3
Vellalah or Mudaliars	...	69,768	2,676	38.4	2,965	42.5	2,751	39.4	2,450	35.1
Baliyah or Naidus	...	49,976	2,092	41.9	2,224	44.5	1,787	35.8	1,511	32.3
Vannia or Naickers	...	50,366	2,553	50.7	2,565	50.9	2,777	55.1	2,326	46.2
Adi-Dravidas	...	58,751	3,195	54.4	2,641	45.0	2,896	49.3	2,601	44.3
Patnavars	...	10,456	434	41.5	478	45.7	265	25.3	353	33.8
Yadaval or Idayars	...	15,290	783	51.1	826	54.0	669	43.8	536	35.1
Visvakarma Brahmin or Kammalar	...	13,830	629	45.5	568	41.0	599	43.3	505	36.6

BIRTH, DEATH, & INFANTILE DEATH-RATES BY MONTHS IN 1929 & 1930.



BY MONTHS IN 1925

REVENUE FROM TAXES

IN THE STATE OF NEW YORK

FOR THE YEAR 1925

IN THE COUNTY OF ALBANY

FOR THE YEAR 1925

IN THE CITY OF ALBANY

FOR THE YEAR 1925

IN THE CITY OF ALBANY

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IN THE CITY OF ALBANY

FOR THE YEAR 1925

IN THE CITY OF ALBANY

TABLE-F.

Ratio of deaths among Children under one year of age per 1,000 live births registered in each division for 1929 and 1930.

Divisions.	1930.		1929.	
	Infantile Mortality.	Infantile Death-rates.	Infantile Mortality.	Infantile Death-rates.
1	233	247.9	236	296.9
2	282	227.1	274	252.1
3	267	235.2	290	302.7
4	270	283.3	240	269.7
5	93	317.1	91	373.0
6	109	259.5	86	231.2
7	104	212.7	115	259.0
8	42	241.4	45	310.3
9	192	250.6	180	250.0
10	185	248.3	142	235.5
11	55	288.0	41	315.4
12	226	263.7	239	293.6
13	196	302.0	173	289.8
14	39	357.8	37	474.4
15	159	284.4	153	292.0
16	410	233.2	436	283.7
17	325	274.0	324	288.8
18	272	243.3	251	248.7
19	202	234.6	207	266.1
20	304	211.4	269	191.1
21	162	198.0	167	223.3
22	194	204.9	191	204.7
23	274	228.5	284	258.4
24	355	259.3	336	249.2
25	167	223.6	116	166.2
26	171	249.3	147	225.4
27	231	269.2	213	303.9
28	294	260.9	258	235.4
29	261	208.5	191	195.9
30	184	237.1	201	324.2
Total ...	6,258	243.9	5,933	256.6

TABLE-G.

Table of Infantile Mortality by months in the year 1930.

1930	Small-pox.	Measles.	Malaria.	Other fevers.	Dysentery and Diarrhoea.	Premature Birth.	Debility.	Nervous system.	Respiratory system.	All other causes.	Total of 1930.			Total of 1930.
											Males.	Females.	Total.	
January	22	39	176	12	16	179	82	286	241	527	514
February	...	1	...	27	41	144	13	7	142	70	266	182	448	467
March	...	1	...	20	45	152	1	14	153	81	267	204	471	479
April	23	60	129	4	24	161	66	245	226	471	474
May	...	1	1	23	64	128	3	15	187	62	273	214	487	454
June	1	28	75	146	6	21	173	70	279	242	521	421
July	36	67	112	1	13	191	67	265	222	487	494
August	1	31	49	118	1	15	151	59	248	177	425	440
September	...	1	...	22	59	128	2	19	140	67	221	219	440	452
October	26	55	140	8	36	167	61	278	215	493	493
November	1	36	107	204	7	51	282	89	446	331	777	624
December	1	46	83	195	7	42	239	97	388	323	711	621
Total	...	4	5	840	744	1,772	65	273	2,165	871	3,452	2,796	6,258	5,933

TABLE--H.

Table of Percentage of Infantile Deaths from Principal Causes in the year 1930.

Age periods.	Small-Pox.		Measles.		Malaria.		Other Fevers.		Diarrhoea and Dysentery.		Premature Births.		Debility.		Nervous System.		Respiratory System.		All Other Causes.		Total.	
	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.
Under 7 days	...	...	...	...	...	...	2	0.13	10	0.66	1,137	74.61	12	0.78	93	6.10	174	11.42	96	6.30	1,524	24.35
7 days and under 1 month	1	0.12	...	...	...	...	20	2.31	34	4.84	492	56.75	12	1.38	44	5.07	122	14.07	142	16.38	867	13.85
1 month and under 4 months	...	...	...	...	1	0.08	106	8.90	209	17.55	129	10.83	20	1.68	48	4.03	498	41.81	180	15.11	1,191	19.03
4 months and under 7 months	9	0.88	4	0.39	2	0.19	99	9.69	216	21.13	10	0.98	10	0.98	31	3.03	516	50.49	125	12.28	1,022	16.33
7 months and under 10 months	7	0.73	...	...	2	0.21	70	7.32	159	16.63	2	0.21	6	0.68	24	5.21	515	53.87	171	17.89	956	15.27
10 months and under 1 year.	2	0.29	...	...	...	...	43	6.16	116	16.62	2	0.29	5	0.72	33	4.73	340	48.71	157	22.49	698	11.15
Total	19	0.30	4	0.06	5	0.08	340	5.43	744	11.89	1,772	28.33	65	1.04	278	4.36	2,165	34.60	871	13.92	6,258	

VACCINATION (STATEMENTS).

Statement No. 1 showing the number of births (Divisional and Hospital) verified during the calendar year 1930 and the number of vaccination of Infants under one year of age.

Divisions.	Total Births excluding Still Births.		Still-Births.		Deaths under one year.		Number of Infants Surviving.		Number of Infants vaccinated under one year.		Percentage of vaccination to Births Registered.	
	Divisional.	Hospital.	Divisional.	Hospital.	Divisional.	Hospital.	Divisional.	Hospital.	Divisional.	Hospital.	Divisional.	Hospital.
1	582	310	9	18	78	18	504	292	264	136	45.3	43.9
2	749	447	24	68	138	38	611	409	377	73	50.3	16.3
3	848	311	24	27	124	50	724	261	474	104	55.9	33.4
4	702	283	13	26	134	33	568	250	284	90	40.4	31.8
5	243	65	8	4	46	8	197	57	85	19	35.0	30.0
6	328	90	14	8	64	10	264	80	131	34	39.9	37.8
7	372	144	11	11	73	23	299	121	144	26	38.7	18.0
8	107	63	6	6	23	6	79	57	39	13	36.4	20.7
9	515	277	10	12	94	68	421	209	286	128	55.5	46.2
10	488	202	7	21	82	30	406	172	208	80	42.6	39.6
11	120	53	5	5	17	10	103	43	63	17	52.5	32.0
12	722	187	18	25	181	30	541	157	307	80	42.5	43.0
13	504	151	42	17	103	43	401	108	264	61	52.4	40.4
14	68	33	1	5	19	3	49	30	28	18	41.2	55.0
15	460	104	23	14	112	24	348	80	164	37	36.3	35.6
16	1,470	252	48	19	218	49	1,252	203	1,050	108	71.4	43.0
17	1,001	200	34	15	171	36	830	164	602	56	60.1	28.0
18	872	252	27	20	146	37	726	215	489	131	56.8	52.0
19	491	336	19	26	94	55	397	281	281	172	57.3	51.2
20	607	828	21	94	122	74	485	754	360	228	59.3	27.5
21	538	264	22	25	79	37	459	227	287	93	53.5	35.2
22	661	318	14	15	124	45	537	273	364	104	55.0	32.4
23	791	396	12	26	129	45	662	351	449	119	56.7	30.0
24	1,190	349	44	42	185	47	1,005	302	746	168	62.7	48.1
25	458	271	2	29	68	31	390	240	172	21	37.5	8.0
26	555	160	27	18	95	21	460	139	231	40	41.6	25.0
27	598	178	21	15	136	30	462	148	316	65	52.6	36.5
28	801	843	14	46	169	86	632	257	374	108	46.7	31.5
29	903	313	30	22	125	16	778	297	506	117	54.9	37.3
30	564	155	18	9	131	42	433	113	328	98	58.1	53.2
Total	18,308	7,335	568	688	3,285	1,045	15,023	6,290	9,672	2,544	52.8	34.7

VACCINATION STATEMENT No. II.

Showing the number of Births verified in 1930 and the number of Infants vaccinated under one year of age.

Year.	Total number of Births excluding Still Births.	Number of children in column 2 who died before attaining the age of one year without being Vaccinated.	Number of children in column 2 who left the city before attaining the age of one year with out being Vaccinated.	Number of children in column 2 who were available for Vaccination (column 2 minus columns 3 and 4).	Number of children in column 5 who were Vaccinated before they attained the age of one year.	Percentage of column 6 to column 5.	Number of children in column 5 whose Vaccination was postponed beyond one year of age for medical reasons.
1	2	3	4	5	6	7	8
1928. { Divisional	...	17,650	4,420	2,285	10,945	91.3	298
{ Hospital	...	7,125	1,195	940	4,990	54.4	63
1929. { Divisional	...	16,352	3,408	2,823	10,121	85.1	692
{ Hospital	...	6,399	806	1,445	4,148	49.1	177
1930. { Divisional	...	18,308	3,285	3,052	11,971	80.8	1,062
{ Hospital	...	7,335	1,045	1,496	4,794	53.1	268

Statement No. III.—Showing particulars.

Divisions.	Districts.	Population according to the census of 1921 + Mambalam extension area.	Number of Depots.	Number of Vaccinators.	Total No. of persons Vaccinated.			Average No. of persons vaccinated by each Vaccinator.	Total.			Primary
					Males.	Females.	Total.		Males.	Females.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	
1	Royapuram	20,891			2,070	1,590	3,660		603	584	1,187	
2	Tondiarpet	16,899			1,529	1,247	2,776		665	701	1,366	
3	Washermanpet	23,777			1,373	729	2,102		669	452	1,121	
4	Korukkupet	16,640			1,173	691	1,864		590	398	988	
5	Harbour	7,288			826	276	1,102		191	175	366	
6	Muthialpet	15,631			884	454	1,338		280	265	545	
7	Katchaleswaranpet	3,055			947	747	1,694		270	232	502	
8	Kothawal Bazaar	5,117			475	157	632		94	75	169	
9	Ammen Kovil	15,820			1,091	1,140	2,231		404	388	792	
10	Seven Wells	19,628			886	783	1,669		370	410	780	
11	Sowcarpet	7,460			220	246	466		100	153	253	
12	Peddunaickenpet	17,575			880	840	1,720		396	436	832	
13	Trevelyan Basin	17,272	15	49	718	791	1,509	1,208	313	358	671	
14	Esplanade	2,664			464	131	595		85	71	156	
15	Park Town	17,544			854	550	1,404		324	272	596	
16	Perambur	29,459			4,762	2,296	6,998		1,187	1,004	2,191	
17	Choolai	24,021			1,106	948	2,054		617	528	1,145	
18	Purasawalkam	20,656			1,155	896	2,051		516	449	965	
19	Vepery	19,299			1,226	1,557	2,783		573	497	1,070	
20	Egmore	25,627			1,845	1,132	2,977		550	554	1,104	
21	Kilpauk	18,540			1,744	1,076	2,820		457	450	907	
22	Nungambakkam	21,644			811	625	1,436		463	479	942	
23	Chintadripet	23,790			1,527	806	2,333		575	526	1,101	
24	Tiruvateeswaranpet	24,195			1,606	1,002	2,608		703	676	1,381	
25	Chepauk	13,277			1,342	488	1,830		357	286	643	
26	Triplicane	16,506			594	533	1,127		397	363	760	
27	Amir Mahal	15,254			1,066	433	1,501		446	365	811	
28	Mirsahibpet	18,631			695	550	1,245		379	384	763	
29	Royapettah	22,773			830	705	1,535		605	577	1,182	
30	Mylapore	17,858			786	369	1,155		344	325	669	
	Total	528,791			35,425	23,790	59,215	1208	13,525	12,433	25,958	

of vaccination during the calendar year 1930.

Vaccination.					Re-Vaccination.			Percentage of Successful cases in which the result were known.		Persons successfully vaccinated per 1,000 of Population.	Average annual No. of persons Successfully Vaccinated during the previous 5 years.		Average annual No. of deaths from Small-pox during the previous 5 years.		Average cost of each Successful Vaccination.
Successful.															
Under one year.	One year and under six years.	Six years and above.	Total.	Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.		Number.	Ratio per 1,000 of Population.	Number.	Ratio per 1,000 of Population.	
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
738	410	37	1,185	...	2,473	616	293	99.8	28.3	86.2	1,198	57.3	20	1.0	
901	427	32	1,360	...	1,410	264	249	99.6	22.7	95.2	1,235	79.0	14	0.8	
846	215	47	1,108	5	981	222	257	99.3	30.7	55.9	1,308	55.0	13	0.5	
641	202	137	980	5	876	247	284	99.7	41.7	73.7	1,150	67.9	11	0.7	
160	194	2	356	4	736	163	77	98.3	24.7	71.2	500	68.6	6	0.8	
272	262	1	535	3	793	226	37	98.7	29.9	48.7	601	39.0	6	0.4	
292	201	1	494	1	1,192	335	99	98.6	30.7	63.5	645	49.4	10	0.8	
91	73	...	164	4	463	122	27	99.4	28.0	55.9	228	44.6	4	0.8	
593	194	1	788	2	1,439	399	114	99.5	30.1	75.0	827	52.3	16	1.0	
550	225	1	776	1	889	227	62	99.5	27.4	61.1	836	42.6	8	0.4	
158	93	1	252	...	213	27	10	99.6	13.3	37.4	255	34.2	4	0.5	
600	220	5	825	...	888	225	56	99.2	27.0	59.4	945	53.8	9	0.5	
452	178	7	637	17	838	249	116	97.4	34.5	51.3	663	38.4	8	0.5	
103	37	1	141	10	439	46	264	96.6	26.3	70.2	207	77.7	1	0.4	
332	203	2	537	29	808	76	46	94.7	10.0	34.9	645	36.8	7	0.4	
1,298	819	50	2,167	1	4,807	489	117	98.9	10.4	90.2	2,358	80.0	20	0.7	
901	172	71	1,144	1	909	299	78	100.0	36.0	60.1	1,362	56.7	17	0.7	
744	168	38	950	7	1,086	345	4	99.2	31.9	62.6	1,250	60.5	16	0.8	
880	148	36	1,064	2	1,713	208	5	99.5	12.2	65.9	1,170	60.6	10	0.5	
826	228	30	1,084	3	1,873	308	997	98.5	35.2	54.3	1,416	55.2	5	0.2	
707	131	55	893	3	1,913	268	67	98.8	14.5	62.6	867	46.8	11	0.6	
690	243	...	933	4	494	169	144	99.5	48.3	50.9	1,190	55.0	6	0.3	
926	136	12	1,074	9	1,232	201	634	98.4	33.6	53.6	1,382	58.1	5	0.2	
894	266	11	1,171	189	1,227	312	175	98.2	29.7	61.3	1,323	54.7	22	0.9	
365	177	2	544	94	1,187	51	1,107	98.0	63.8	44.8	726	54.7	3	0.2	
399	288	6	693	50	267	17	342	97.6	68.0	43.1	708	42.9	10	0.6	
590	155	8	753	55	690	83	120	99.6	14.6	54.8	792	51.9	9	0.6	
559	199	2	760	...	482	101	1	99.6	21.0	46.2	980	52.6	24	1.0	
780	379	10	1,169	5	353	66	8	99.3	19.1	54.2	1,164	51.1	11	0.5	
486	177	1	664	...	486	131	...	99.3	27.0	44.5	851	47.7	16	0.9	
17,774	6,820	607	25,201	504	33,257	6,492	5,790	99.0	23.6	59.9	28,855	54.6	322	0.6	

Rs. 1—7—3

Rs. 1-7-2

Statement showing the areas in the City which have been sewered and are yet to be sewered.

Municipal Division.	Name of Area.	Length of sewers laid during 1930.	Length of sewers laid up to 31-12-30	Percentage of sewered portion up to 31-12-30.	Percentage yet to be sewered.
1	Royapuram	...	40,693	83	17
2	Tondiarpet	...	31,486	68	32
3	Washermanpet	54	52,541	96	4
4	Korukkupet	...	22,401	65	35
5	Harbour	...	29,938	92	8
6	Muthialpet	...	24,104	94	6
7	Katchaleswaranpet	...	34,410	91	9
8	Kothawalchavadi	...	22,058	98	2
9	Ammenkoil	...	25,244	99	1
10	Seven Wells	...	28,766	100	...
11	Sowcarpet	...	18,045	96	4
12	Peddunaickenpet	...	30,597	96	4
13	Trevelyan Basin	...	31,909	96	4
14	Esplanade	...	8,896	72	28
15	Park Town	293	20,489	85	15
16	Perambur	1,772	20,043	45	55
17	Choolai	...	26,761	50	50
18	Purasawalkam	...	51,015	98	2
19	Vepery	...	35,712	75	25
20	Egmore	436	73,960	85	15
21	Kilpauk	...	28,431	52	48
22	Nungambakkam	1,634	8,163	15	85
23	Chintadripet	...	40,623	95	5
24	Thiruvatteswaranpet	...	47,271	85	15
25	Chepauk	...	22,026	90	10
26	Triplicane	...	25,638	85	15
27	Amir Mahal	...	25,440	80	20
28	Mirsahibpet	16,436	77,478	85	15
29	Royapettah	...	31,449	45	55
30	Mylapore	4,397	44,007	35	65
Total		25,022	9,79,594	78.40	21.60

List of Licensable trades.

Description.	Number of cases dealt with.	Number sanctioned.	Number refused.	Number pending.
Aerated water factory ...	42	36	6	...
Bakery ...	94	74	20	...
Candles and Soap ...	18	16	2	...
Cart-stands ...	20	20	...	...
Cattle-yards ...	1487	1332	1	154
Cocoonat fibres, Flax, Hemp and Jute ...	19	19	...	...
Cotton, bones, hoofs, hair, rags, wool and horns ...	36	36	...	...
Dairy ...	24	24	...	...
Flour ...	89	81	8	...
Guilting, Electroplating, Condiments, Carpets ...	154	141	13	...
Hack-stable ...	85	85	...	...
Dyeing ...	53	52	1	...
Onions and Garlic ...	63	62	1	...
Oil Mills and oil storing, boiling ...	470	459	11	...
Lodging house ...	55	55	...	...
Markets ...	44	44	...	...
Meat-stalls ...	135	82	53	...
Paper ...	...	...	...	...
Spirits, Turpentine, Rosin ...	120	120	...	...
Sweetmeat bazaars, Coffee hotels ...	393	359	...	34
Washing soiled clothes ...	34	34	...	...
Fish, Fins ...	17	17	...	...
Skins, Hides, Leather ...	121	117	4	...
Paddy Boiling ...	...	...	...	...
Sugar, Sugarcandy ...	12	12	...	...
Catgut, Tallow, Offal, blood, bones ...	6	4	2	...
Pig Styer ...	8	8	...	...
Snuff ...	98	97	1	...
Cotton ...	25	25	...	...
Brick Kiln ...	1	...	1	...
Lime Kiln ...	28	27	1	...
Eating house, Tea shop ...	396	393	3	...
Total ...	4147	3831	128	188

Statement of unwholesome articles of food destroyed during
the year 1930.

Aerated water.	26 dozens & 6 bottles.
Appams.	125.
Apples	1163 and 3 tins.
Beef.	24½ Visses, 5 carcasses, 5½ baskets, 26 lbs. and 21 seers.
Biscuits	40 lbs. & 64.
Bitter gourd.	20.
Boiled gram.	3 Seers.
Boiled rice.	38 plates and 5 baskets.
Bread.	54.
Brinjals.	8½ Visses, 2 baskets and 60.
Cabbages.	90.
Cheese.	86 Tins and 24 plates.
Beef dripping.	1 Tin.
Butter milk.	4 pots.
Country apples	82 baskets and 55.
Cocoanuts and pieces.	1 Basket, 429, and 34 pieces.
Curd.	8 gallons.
Custard apples.	1 Basket, 8 dozens and 1952.
Eggs.	1 Basket, 13,228 dozens.
Stale fish.	100 baskets, 5 visses, 4½ seers, 5 lbs. and 16.
Guava fruits.	147.
Grapes.	11 baskets, 11 palams.
Pomegranates.	14 dozens and 9.
Seetha fruits.	126 dozens and 8.
Iddily.	5 baskets and 223.
Jack fruits.	471 and 23 trays.
Lemons.	2683.
Lime.	120.
Lozenges.	½ lb.
Mangoes.	832 dozens.
Green grapes.	13 tins, 23½ seers, 13 bunches.
Cherries.	11 Tins.
Barley.	3 cases.
Pears.	322.
Pumpkins.	126.
Rice cakes.	831.
Salted fish.	20 baskets, 62, and 3 visses.
Soup.	31 plates.
Sweets.	92 plates and 25 lbs.
Sweet cakes.	758.
Syrup.	297 cups.
Tamarind.	1 viss.
Tomatoes.	1 Tin, 1 basket, & 9418.
Trash.	10 visses & 11 plates.
Vadai.	58.

Vegetables.	One heap.
Wood apples.	3 baskets, 19.
Berries.	232 and 2 dozens.
Puri.	24.
Masal vadai.	1350.
Melons.	349.
Mutton.	1 carcass of a sheep, 70 seers, 58 lbs.
Onions.	36½ baskets, 12½ maunds.
Oranges.	1016 dozens and 10.
Palmyrah fruits.	2 baskets.
Plantain fruits.	798 doz. 3.
Sugarcane.	40.
Pine apple.	7.
Potatoes.	69½ visses and 20.
Prawns.	25 baskets.
Peas.	1 Tin.
Chutney.	1 plate.
Meat offal.	½ basket.
Oats.	12 tins.
Vegetable Cyro brand.	31 tins.
Meat.	30 seers.
Butter.	½ lb.
Meat (curry)	8 lbs.
Cucumber.	26.
Jilabi.	32.
Savoury.	33 plates.

STATEMENT OF NOTICES ISSUED AND DISPOSED OF TOGETHER WITH

Section or By-law.	Substance of Section or By-Law.	NOTICES.						
		No. pending on 1st January 1930.	No. issued during the year.	Total.	No. complied with			No. cancelled.
					Volun- tarily.	By prose- cution.	By transfer to W.D. for Departmental execution and recovery of cost.	
(1)	(2)	(3)	(4)	(5)	(6)			(7)
177	Failure to alter, repair and keep in order all house drains and all private latrines and cesspools ...	1	30	31	25	...	...	5
178 (4)	Occupying or allowing occupation of house without proper drainage ...	2	1	3	2	...	...	...
186	Failure to obey requisition to provide latrine or to remove latrine to another site and failure to keep latrines clean and in proper order ...	339	386	725	200	64	...	152
188	Failure to obey requisition to provide latrine for market, cattle stand or cart-stand, or to keep them clean and in proper order ...	1	...	1	...	1	...	...
189	Failure to construct latrines so as to screen persons using them from view ...	1	6	7	...	...	...	1
202 (5)	Keeping rubbish or filth for more than twenty-four hours, etc. ...	1	15	16	9	...	...	3
6	Allowing sewage to flow in streets ...	15	60	75	58	1	...	9
264	Failure to obey requisition to fill up, etc. tank or well, or drain off water, etc. ...	153	362	515	317	9	2	91
269	Failure to obey requisition to enclose, clear or cleanse untenated premises ...	36	47	83	45	5	...	19
270	Failure to obey requisition to clear or cleanse, etc. building or land in filthy state or overgrown with pickly-pear or other noxious vegetation ...	22	71	93	74	1	...	8
272	Failure to obey requisition to lime-wash or otherwise cleanse building ...	67	468	535	436	3	...	18
273	Failure to obey requisition to execute work or take other action with respect to insanitary buildings ...	1122	3154	4276	2651	169	...	365
280 (b)	Unlawful keeping of animal so as to be a nuisance or dangerous ...	...	...	...	...	...	..	...

THE STATEMENT OF PROSECUTIONS INSTITUTED DURING THE YEAR 1930

No. pending.	PROSECUTION.								No. pending.
	No. of prosecutions pending disposal on 1st January 1930.	No. instituted during the year.	Total.	Number convicted.	Fines imposed.	Number acquitted.	Number withdrawn.	No. in which parties were not found.	
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
					Rs. a p.				
1	...	4	4	...	...	...	4	...	...
1	2	1	3	...	...	...	3	...	...
309	28	89	117	7	42 8 0	4	98	...	8
...	...	1	1	...	...	...	1	...	...
6	1	...	1	...	...	...	1	...	...
4	...	1	1	...	...	...	1	...	...
7	1	3	4	2	4 0 0	...	1	...	1
96	10	14	24	1	1 0 0	1	19	...	3
14	1	12	13	1	1 0 0	...	10	...	2
10	2	8	10	6	2 6 0	...	2	...	2
76	...	8	8	...	...	...	8	...	...
1091	40	241	281	33	124 8 0	7	214	...	27
...	...	3	3	3	16 0 0	...	...	...	...

STATEMENT OF NOTICES ISSUED AND DISPOSED OF TOGETHER WITH

Section or By-law.	Substance of Section or By-Law.	NOTICES.							No. cancelled.
		No. pending on 1st January 1930.	No. issued during the year.	Total.	No. complied with				
					Volun- tarily.	By prose- cution.	By transfer to W. D. for Departmental execution and recovery of cost.		
(1)	(2)	(3)	(4)	(5)	(6)			(7)	
282	Use of place as stable, cattle stand, etc. without license or contrary to license ...	...	...	...	...	...	...	...
283	Repairs to or demolishing of stable, cattle-shed, etc. ...	6	4	10	8	...	...	2
284	Construction or maintenance of stable, cattle-shed, etc. contrary to Act or subsidiary legislation ...	6	2	8	5	1	...	1	
287 (8)	Use of place without license or contrary to licenses ...	...	...	...	...	...	...	...
297	Slaughter of animals for sale or food or skinning or cutting up carcasses without license or contrary to license, drying skin so as to cause a nuisance ...	...	...	...	...	...	...	...
304	Keeping open private markets without a license or contrary to license ...	...	3	3	...	3	...	...
309	Carrying on butcher's, fishmonger's or poulterer's trade without license, etc ...	...	...	...	...	...	...	...
310	Sale of article in public streets after prohibition or contrary to regulations ...	...	...	...	...	...	...	...
333	Obstruction in the removal of cases of infectious diseases to the infectious diseases hospital ...	...	1	1	1	...	...	...
334	Failure to obey requisition to cleanse or disinfect building or article ...	1	526	527	518	5	...	1	
345	Failure to give information of small-pox ...	...	...	...	...	...	...	...
Action taken under the By-laws.									
349 (11)	Regulation of hotels, lodging houses, boarding houses, etc. and any premises to which the public are admitted for the consumption of any food or drink ...	23	43	66	22	4	...	26	
349 (21)	Prevention of the sale or exposure for sale of unwholesome meat, fish or provisions, etc. ...	9	21	30	13	2	...	6	

THE STATEMENT OF PROSECUTIONS INSTITUTED DURING THE YEAR 1930

No. pending.	PROSECUTION.								No. pending.
	No. of prosecutions pending disposal on 1st January 1930.	No. instituted during the year.	Total.	Number convicted.	Fines imposed.	Number acquitted.	Number withdrawn.	No. in which parties were not found.	
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
					Rs. a. p.				
...	53	555	608	430	2,270 2 0	2	98	...	78
...
1	1	1	2	1	1 0 0	...	1	...	...
...	30	201	231	140	1,707 0 0	1	46	...	44
...	3	18	21	11	60 8 0	...	5	...	5
...	3	11	14	5	44 0 0	...	7	...	2
...	2	15	17	9	71 0 0	...	2	...	6
...	1	3	4	3	2 0 0	1	...	...	...
...
3	...	6	6	1	3 0 0	...	5	...	...
...	10	11	21	15	23 0 0	1	5	...	...
14	13	175	188	87	652 0 0	14	36	...	51
9	18	139	157	92	392 8 0	9	25	...	31

Statement showing the number of cases treated in the Corporation Dispensaries during 1929 and 1930.

Serial No.	Dispensaries.	Year on which the institution was opened	Total No. of cases treated.		Total No. of minor operations performed.	
			1929.	1930.	1929.	1930.
1	Royapuram Dispensary ...	1924	64,180	72,194	350	291
2	Washermanpet „ ...	1913	87,430	1,01,023	881	830
3	Harbour Division „ ...	1929	26,250	73,181	31	202
4	Mannady „ ...	1923	76,251	86,992	635	562
5	Mafuskhan Garden „ ...	1923	88,013	83,300	498	549
6	Mint Street „ ...	1923	93,806	91,268	1,480	1,278
7	George Town „ ...	1919	1,08,133	1,00,602	608	404
8	Perambur „ ...	1928	35,896	40,053	470	459
9	Pulianthope „ ...	1922	64,937	68,164	903	954
10	Vyasarpady „ ...	1929	10,416	27,186	101	321
11	Baliah Naidu „ ...	1899	91,130	91,492	2,448	2,361
12	Kosapet „ ...	1929	10,653	32,470	49	345
13	Kilpauk „ ...	1919	37,151	42,917	395	293
14	Nungambakkam „ ...	1923	65,137	73,830	356	447
15	Chintadripet „ ...	1909	1,03,896	98,558	723	674
16	Triplicane „ ...	1918	1,16,604	1,05,733	378	419
17	Pudupakkam „ ...	1924	1,00,742	1,05,287	1,022	1,020
18	Teynampet „ ...	1921	28,842	32,612	365	279
19	Mylapore „ ...	1924	74,607	91,410	511	597
20	*Mambalam „ ...	1930	...	1,996	...	32
+21	†Thousand Lights „ ...	1930	...	2,745	...	...

* Unani opened on 1-11-1930.

† Ayurvedic for women and children only. Opened on 26-11-1930.

THE INFECTIOUS DISEASES HOSPITAL, TONDIARPET—(STATEMENTS.)

TABLE No. 1

Admission, discharge and death under various diseases during the year 1930.

	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.	Total.
Patients remaining in the Hospital on 31st December, 1929 at 12 Midnight	32	8	...	...	...	...	...	...	...	...	...	...	...	...	...	9	49
Admitted from 1st January to 31st December 1930	541	227	43	74	9	40	7	6	3	...	15	12	...	...	9	116	1102
Total No. Treated	573	235	43	74	9	40	7	6	3	...	15	12	...	...	9	125	1151
" No. Discharged	483	230	43	17	6	37	7	6	2	...	15	12	...	...	9	116	983
" No. Died	88	...	...	27	2	3	...	...	1	...	...	...	...	...	...	9	130
Mortality rate per cent.	15.4	...	...	36.5	22.2	7.5	...	...	33.3	...	...	...	...	...	...	7.2	11.3
Patients remaining in the Hospital on 31st December, 1930 at 12 Midnight	2	5	...	30	1	...	...	...	...	...	...	...	...	...	...	...	38

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	65	43	2	1	1	1	1	1	1	1	1	1	1	1	2	13	35	165	70
February	96	35	1	1	1	2	2	1	1	1	3	3	1	1	2	8	78	230	126
March	123	80	1	1	1	10	1	1	1	1	1	4	1	1	1	20	88	338	171
April	96	24	1	1	1	2	1	1	1	1	2	1	1	1	2	6	78	214	156
May	55	8	1	1	1	3	1	1	1	1	1	1	1	1	1	3	29	101	96
June	20	5	1	1	1	6	1	2	1	1	2	1	1	1	1	6	9	51	48
July	39	4	3	1	1	9	1	2	1	1	3	3	1	1	1	18	7	90	41.9
August	16	6	10	1	1	3	1	1	1	1	1	1	1	1	1	7	11	56	51.06
September	14	4	3	1	1	2	1	1	1	1	1	1	1	1	1	4	19	47	37
October	4	9	13	3	1	1	1	1	1	1	1	1	1	1	1	9	30	72	27.9
November	2	1	5	1	2	1	1	1	1	1	1	1	1	1	1	10	6	28	7
December	1	8	3	63	4	1	1	1	1	1	2	1	1	1	1	12	16	116	19.5
Total. ...	541	227	43	74	9	40	7	6	3	1	15	12	1	1	9	116	406	1508	75.6

TABLE No. III

Admissions according to nationality, Age and Sex.

		Adults.		Children.		Total.
		Male.	Female.	Male.	Female	
European and Anglo Indian	...	19	18	13	10	60
Hindus	...	389	155	78	60	682
Mahomedans	...	39	5	6	1	51
Others	...	121	102	33	53	309
Total	...	568	280	130	124	1,102

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

THE ISOLATION HOSPITAL, KRISHNAMPET—(STATEMENTS).

TABLE No. I.

Admissions, discharges and deaths under various diseases during the year 1930.

	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 1929 ...	20	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	5	34
Patients admitted from 1st January 1930 to 31st December 1930.	232	161	51	38	3	14	19	...	...	...	3	...	...	...	2	...	...	1	61	114	699
Total No. treated ...	252	169	51	38	3	14	19	...	...	...	3	...	...	...	2	...	...	1	62	119	733
No. Discharged ...	214	165	51	10	1	13	19	...	...	...	3	...	...	...	2	...	...	1	44	111	634
" Died ...	36	2	...	12	2	1	...	...	...	...	...	...	...	...	...	...	...	...	9	...	62
Mortality rate per cent.	14.28%	1.18%	...	31.57%	66.66%	7.14%	...	...	...	...	...	...	...	...	...	...	...	...	14.51%	...	10.09%
Patients remaining in the hospital on 31st December 1930 ...	2	2	...	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	8	37

TABLE No. II.

Distribution of Admissions throughout the year 1930 in the Krishnampet Isolation Hospital.

1930.	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	19	24	4	...	...	1	15	...	...	1	...	...	...	...	...	...	...	...	...	3	52	33
February	34	20	5	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	7	82	45
March	40	43	6	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	11	105	55
April	31	31	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	82	52
May	17	5	5	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	9	46	28
June	22	3	3	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	10	32	9
July	16	6	4	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	9	58	18
August	14	14	2	...	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	12	47	20
September	8	1	3	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	12	47	21
October	7	2	3	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	7	23	10
November	12	8	...	35	...	5	...	...	...	1	...	...	...	...	...	...	...	...	...	6	30	10
December	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	19	95	18
Total	232	161	51	38	3	14	19	...	...	3	...	...	...	2	...	...	1	61	...	114	669	26.58

TABLE No. III.

Admissions according to Nationality, Sex and Age
(Excluding Contacts for the year 1930.)

Nationality.	Adults.		Children.		Total.
	Male.	Female.	Male.	Female.	
Europeans and Anglo-Indians ...	31	11	14	6	62
Hindus ...	193	66	24	22	305
Mahomedans ...	8	6	1	2	17
Others ...	97	60	24	20	201
Total ...	329	143	63	50	585

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

The following statement gives the incidence of small-pox among the vaccinated and the un-vaccinated.—

All Ages.	Cases.	Deaths.	Fatality rate per cent.
Among vaccinated ...	517	61	11·8
Do un-vaccinated ...	194	72	37·1
Do stated to have been vaccinated but with no scars visible ...	166	55	33·1
Total ...	877	188	21·4

It may be mentioned that out of 773 cases treated in the Infectious Diseases Hospitals, 511 cases i.e. 66·1% occurred among persons who had come to this City from outside. (Among 467 cases that occurred among the vaccinated, 324 i.e. 69·4% were among persons whose vaccinations had been performed in the mofussil). The greater incidence of the disease in the City is therefore largely due to the influence exerted by those resorting to this place from outside.

CONSERVANCY (STATEMENTS.)

Statement of Bulls detained and treated at Depots from 1-1-30 to 31-12-30.

Depots.	Foot and Mouth.	Sore neck.	Sprain.	Fever etc.	Eye disease.	Tuberculosis.	Fits.	Pyroplasmosis.	Trypanosomiasis.	Rinderpest.	Tympany.	Anthrax.
A	...	40	55	12	20	14	1 (tested)	...	2	21	...	...
B	98	17	9	12	...	...	4	20	5	...
C	67	38	31	...	...	30	...	30	1	...
D	97	34	27	...	...	31	2	13	...	1
E	...	7	145	21	22	...	...	7	...	...	...	...
F	...	67	15	10	22	...	...	16	...	...	...	...
Total...	114	477	132	131	26	1	84	2	9	93	6	1

Rice Transactions.

		Measures.	Rs.	A.	P.
Balance of stock on hand on 31-3-30	...	271½	67	2	9
Purchased during 30-31	...	5,14,780	1,17,970	0	0
		5,15,051½	1,18,037	2	9
Issued during 30-31	...	5,12,915	1,17,546	9	9
Issued to L. Chambers	...	912	209	0	0
Balance on 31-3-31	...	1,224½	281	9	0
Gain in the transaction	...	...	12,116	6	3
Quantity sold during the year	...	5,18,652	...		
Amount realised by selling	...	...	1,29,653	0	0

Statement of receipts and issues of animals in Conservancy depots including Grass Farm in 1930.

Month.	No. at the beginning of the month.	Casualties.	Number purchased.	Number at the end of the month.
January	805	20	...	785
February	785	19	...	766
March	766	12	40	794
April	794	11	...	783
May	783	17	...	766
June	766	4	...	762
July	762	7	...	755
August	755	3	...	752
September	752	10	...	742
October	742	11	...	731
November	731	50	...	681
December	681	37	...	644 *

* 633 at Depots. 11 at Grass Farm.

New Works.

Serial No.	Budget Head.	Division.	Expenditure up to the end of Dec. '30.
	<i>Preventive Medicine, Latrines.</i>		Rs.
1	Extending F.O.L. of 6 seats in Ghhouse Moideen street.	1	1,122
2	Do do ...	1	1,305
3	Converting the existing latrine into F.O.L. of 30 seats in Rama Naick street ...	2	2,304
4	Do in Model cherry, Cemetry Road ...	3	2,962
5	Do 30 seats in Lalagunta ...	4	2,770
6	Do do in Kakatope ...	4	2,610
7	Extending F.O.L. of 2 seats in Vasamode Paracheri ...	9	1,810
8	Do 2 seats at seven wells Junction of St. Xavier street ...	10	346
9	Construction of F.O.L. in Strahans Road, 2nd lane ...	16	803
10	Converting the existing latrine into F.O.L. of 12 seats in Parthasarathi Naidu street ...	16	1,491
11	Do F.O.L. do Old Slaughter—House Road ...	17	2,789
12	Extending F.O.L. by 6 seats in Nariangadu ...	20	788
13	Construction of F.O.L. of 30 seats in Kalimancherri ...	24	2,643
14	Do of 6 seats in Manicka Maistry street ...	27	759
15	Converting the existing latrine into F.O.L. of 20 seats in Muthia Mudali Garden ...	28	1,768
16	Do the existing sanded latrine into F.O.L. in Poes Road ...	29	1,814
17	Installing F.O.L. in Thandava Gramani street ...	3	685
18	Installing a single seat reinforced concrete latrine in Godown street ...	8	161
19	Do in Badrian street ...	8	170
20	Do in Stringers street ...	8	1,155
21	Do in Anderson street ...	8	169
	<i>Bathing Fountain.</i>		
22	Construction of a bathing fountain at Subbaraya Mudali street Junction of Jani Badsha street ...	24	229
	<i>Other Works.</i>		
23	Construction of a Karamandaram shed in Lloyd Road.	28	431
24	Laying 2" water main in 'E' Depot ...	28	109
25	Reforming Road at Dumping Ground South of Rifle range ...	30	309
26	Construction of tipping platform at Krishnampet ...	28	501
27	Do at 'B' Depot Tondiarpet ...	4	6,694
28	Construction of Isolation Hospital for sick bulls in depots ...	...	14,417
29	Extension to the existing Laboratory at Kilpauk ...	21	2,439
30	Erecting Electrocutation station for dogs, Demellows Road ...	16	6,470

Drains.

No.	Budget head	Division	Expenditure up to the end of December, 1933.
			Rs.
1	Covering drain in Kandappa Mudali High Road ...	18	598
2	Do in Triplicane High Road ...	26	2,760
3	Construction of S.W. Table in Thambu Chetty street ...	6	2,371
4	Do Kondala Iyer street ...	12	184
5	Do in Devaraja Mudali street ...	14	2,080
6	Do do in 17th division ...	17	1,004
7	Do in Thackers lane ...	21	69
8	Do in Nagappa Iyer street ...	24	480
9	Do Pathala Vigneswarar Koil street ...	1	273
10	Do Velayudha Pandian street ...	2	303
11	Do Bala Arunachella Mudali street ...	3	277
12	Do Ramanuja Kutam street ...	4	324
13	Do in Ramasami street ...	6	301
14	Do in Saiva Muthia Mudali street ...	7	316
15	Do in Godown street ...	8	222
16	Do in Periahamby street ...	9	271
17	Do in Kutti Maistry street ...	10	327
18	Do in Ayalur Muthia Mudali street ...	12	321
19	Do in Nyniappa Naick street ...	14	831
20	Do in Appasami Pillai street ...	16	314
21	Do in Avadanam Papier 2nd lane ...	17	333
22	Do in Chellappa Gramany street ...	18	138
23	Do in Madox street ...	19	230
24	Do in Munia Pillai street ...	20	297
25	Do in Thacker street ...	21	331
26	Do in Arunachela Naick street ...	23	308
27	Do in Venkatachela Mudali street ...	28	315
28	Do in Royapettah bazaar road ...	29	333
29	Do in Arunagiri Maistry street ...	30	171
30	Do one side of Seliappa Mudali street ...	30	77
31	Do masonry drain on the western row of Rama Naick street ...	2	405
32	Sewer connection to drain in Rama Naick street ...	2	119
33	Construction of side-drain in Govindappa Naick street ...	10	699
34	Do in Mangammal street ...	10	249
35	Do in Murthinga Iyer street ...	16	1,000
36	Do in Thandava Pillai street ...	16	152
37	Constructing side-drain on both sides of Kannabiran Koil street ...	16	1,663
38	Covering side-drain in Kandappa Mudali High Road ...	18	1,819
39	Do drain near Maternity hospital ...	20	102
40	Constructing side-drain in Othawadai street ...	22	288
41	Do in Subraya Gramani street ...	22	1,321
42	Do at the back of Abbu Naick street ...	22	245
43	Do at the southern end of Kumarappa Mudaly street ...	22	117
44	Connecting S.W. drain of Victoria Hostel in Pycrofts Rd. ...	26	348
45	Laying 6" sewer between Pycrofts Road and Mir Bashi Ali street ...	27	965
46	Laying sewer main in Varada Pillai street ...	28	680
47	Do Arrack Godown street ...	27	281
48	Construction of drain in Tholasinga Mudali lane ...	21	451
49	Do masonry drain in Erusappa Gramani street ...	28	1,173

ANTI-MALARIAL WORK—(STATEMENTS.)

STATEMENT A.

Statement showing the action taken *re* : Cleaning of tanks, wells and ponds in the City of Madras during the year 1930.

No. of Notices served.	No. Complied with.						No. not Complied with.	Amount Collected.	No. reclaimed.				Amount Collected.	No of Prosecutions instituted.*	Fines Collected.		Remarks.									
	(a) By the party.			(b) By the Corporation at the cost of the owner.					Owned By Corporation.	Private lands by owners' Cost.	Amount	No of Prosecutions instituted.*			Amount.	Tanks.		Wells.								
	Tanks.	Ponds.	Wells.	Tanks.	Ponds.	Wells.	Tanks.	Ponds.	Wells.	Tanks.	Ponds.	Wells.	Rs.	A.	Tanks.	Ponds.	Wells.	Rs.	A.	Rs.	A.					
304 48	291	194	21	232	91	14	...	19	13	59	1,193	8	4...	5...	...	4	...	600	...	2	5	5	...	1	...	* 2 Tanks and 1 well action pending. 5 ponds and 3 wells, cases withdrawn, action regarding 1 well, convicted and fined.

STATEMENT B.

Statement showing the reclamation work done in places with the owner's name, cubical contents and the cost recovered.

Serial No.	Places.	Owner's Name.	No. of cubic feet.	Amount collected.	Remarks.
1	No. 18, Luz Church Road "Champak Vilas"	... Mr. K. Bashyam.	12,150	Rs. A. P. 270 0 0	
2	Choolai Burial Ground	... Madras Corporation.	45,900	...	
3	Mambalam	... Do	1,080	...	
4	Palmyrah Kuppam	... Do	4,770	...	
5	Rifle Range	... Do	26,010	...	
6	Hope Lodge	... Do	65,700	...	
7	Mambalam	... Dr. P. Sadasiva Iyer.	900	20 0 0	
8	No. 4, Sullivans Garden	... Mr. P. D. Sawmy.	8,100	180 0 0	
9	No. 110, Acharappan Street	... Mr. Bysani Krishniah Chetty.	1,800	100 0 0	
10	Lloyds Road	... Dr. Gurusawmi.	1,250	30 0 0	
Total ...			1,57,760	600 0 0	

STATEMENT "C".
NORTH RANGE.

Serial No.	Register No.	Reference No.	Division.	Locality.	Name and address of the owner.	Date on which work under contract was completed.	Details of the estimated cost.						Date of Payment.	Remarks.	
							Cleaning charges.	Oiling charges.		Supervision charges.	Total.				
								Amount.	Rs.			A.			Amount.
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STATEMENT 'C'.
SOUTH RANGE.

Serial No.	Register No.	Reference No.	Division.	Locality.	Name and address of the owner.	Date on which work undertaken departmentally.	Details of the estimated cost.					Date of Payment.	Remarks.
							Cleaning charges.		Oiling charges.		Supervision charges.		
							No of clean-ings.	Amount.	Amount.	Amount.	Amount.		
								Rs. A.	Rs. A.	Rs. A.	Rs. A P.		
1			22	42 A, Peters Road	Rajah of Jeyapre	6-5-30	4	22 0	...	5 8	27 8 0	119 dated 24-4-30	
2			23	Nainiappa Naik Street	Audikesavalu Naidu	8-5-30	1	5 8	...	1 6	6 14 0	20 dated 25-4-30	
3			29	Mount Road	Military Grass Farm	10-5-30	4	22 0	...	5 8	27 8 0	15 dated 29-4-30	
4			26	Triplicane	Trustees: Parthasarathy Temple	17-5-30	2	11 0	...	2 12	13 12 0	20 dated 16-5-30	
5			25	Mount Road	Ex. Engr. South Presy. Div., Govt. House.	11-6-30	4	22 0	...	5 8	27 8 0	...	
6			25	Do.	Do. do.	13-6-30	4	22 0	...	5 8	27 8 0	...	
7			25	Do.	Do. do.	15-6-30	4	22 0	...	5 8	27 8 0	...	
8			29	Mowbrays Road	C. Kusal Doss & Sons	23-8-30	1	5 8	...	1 6	6 14 0	24 dated 9-6-30	
9			26	Venkatarangam Pillai Street	Venkatasubbiah Chetty	2-7-30	1	5 8	...	1 6	6 14 0	78 dated 28-6-30	
10			26	Do.	Do.	2-7-30	2	11 0	...	2 12	13 12 0	...	
11			23	Madavaperumal Coil Street	Trustees	3-7-30	1	5 8	...	1 6	6 14 0	64 dated 26-5-30	
12			28	Virupatcheswarar Coil Street	.....	8-7-30	8 coolies.	4 0	...	1 0	5 0 0	89 dated 8-6-30	
13			18	Kandasawmi Coil Street	Masilamoni Pillai	11-8-30	1	5 8	...	1 6	6 14 0	17 dated 4-7-30	
14			29	Murrays Gate Road	Kalavala Ethirajammah	28-7-30	2	11 0	...	2 12	13 12 0	42 dated 4-7-30	
15			30	Brodies Road	Kabaleswarar Temple	29-7-30	4	22 0	...	5 8	27 8 0	8 dated 8-7-30	
16			19	Sawmi Pillai Street	P. Manicka Mudaliar	4-10-30	...	...	3 0	1 4	6 4 0	44 dated 9-7-30	
17			17	Angalammen Coil Street	Raja Achari (Trustee)	10-8-30	1	5 8	...	1 6	6 14 0	68 dated 12-7-30	
18			22	No. 19, Whites Road	Raja of Venkatagiri	1-5-30	4	22 0	...	5 8	27 8 0	41 dated 21-7-30	
19			20	Monteith Road	G.T.M. Chidambara Chetty, "Prince Villa"	25-8-30	...	...	...	...	18 8 4	35 dated 30-7-30	
20			17	No. 45, Perambur Barracks Road	Messrs. Roshan & Co.	5-10-30	1	5 8	...	1 6	6 14 0	43 dated 12-8-30	
21	(4 A)		26	Triplicane	Trustees: Parthasarathy Temple	16-8-30	...	...	...	...	25 0 0	123 dated 14-8-30	1st Instalment.
22			25	Chepauk	Victoria Hostel	21-8-30	2	11 0	6 0	4 4	21 4 0	80 dated 22-8-30	
23			22	Whites Road	Hobarts Training School, Ex. Engr. Trustee.	19-6-30	4	22 0	...	5 8	27 8 0	32 dated 9-4-31	
24			28	Valleswarar Coil Street	Trustee.	15-9-30	1	5 8	...	1 6	6 14 0	191 dated 1-9-30	
25			25	Lankerkana, Chepauk	Ex. Engr., South Presy. Division.	...	1	5 8	4 8	2 8	12 8 0	32 dated 9-4-31	
26			22	Pachiappas Hostel Road	Warden, Pachiappas Hostel	10-12-30	2	11 0	...	2 12	13 12 0	62 dated 2-9-30	
27			22	No. 4, Anderson Road	A. G. Leach	17-9-30	1	5 8	...	1 6	6 14 0	121 dated 16-9-30	
28			21	Purasawalkam High Road	Gangadaraswarar Temple	9-10-30	4	22 0	...	5 8	27 8 0	69 dated 4-10-30	
29			22	"Banstead", Nungambaukam High Road.	Oosmen Wahid Saib, 14, Monteith Road.	...	1	5 8	...	1 6	6 14 0	45 dated 13-10-30	
30			29	Lloyds Road	Balasubramania Ammal	20-8-30	2	11 0	...	2 12	13 12 0	114 dated 1-8-30	
31			22	Greames Road	Maharani of Oorduan, "Mansion House."	12-12-30	1	5 8	...	1 6	6 14 0	108 dated 14-11-30	
32			19	Jeremiah Road	Miss Sykes	15-11-30	4	22 0	...	5 8	27 8 0	101 dated 15-11-30	
33			20	No. 12, Police Commr's. Office Road.	Bashyakaralu Naidu	...	1	5 8	...	1 6	6 14 0	44 dated 26-11-30	
34			22	Woods Road	Secretary, Madras Club	15-7-30	...	...	7 8	...	7 8 0	121 dated 4-7-30	
35			22	College Road	Mrs. K. Kay, "Eccleston House"	7-12-30	1	5 8	2 0	1 14	9 6 0	118 dated 8-12-30	
36			22	Do.	A. J. Leach, "Palms"	7-12-30	...	...	2 0	0 8	2 8 0	194 dated 9-12-30	
37			22	Haddows Road	Bewes "Weston"	8-12-30	1	5 8	2 0	1 14	9 6 0	...	
38			12	Weslyan Mission College, Royapattah	J. S. M. Hooper	...	2 ponds.	...	8 0	2 0	10 0 0	56 dated 13-12-30	
39	4-B		26	Triplicane	Trustee: Parthasarathy Temple	13-12-30	...	...	...	...	25 0 0	57 dated 13-12-30	
40			22	Cathedral, Mount Road	"Spring Gardens"	17-12-30	1	5 8	4 0	2 6	11 14 0	65 dated 15-12-30	
41			22	No. 1, College Road	Mother Superior, "Moorats Garden."	...	...	...	2 0	0 8	2 8 0	93 dated 19-12-30	
42			17	Thattankulam	Raja Achari	...	3 months	...	1 8	0 6	1 14 0	99 dated 23-12-30	
43	4-C		26	Triplicane	Trustee: Parthasarathy Temple	10-1-31	...	...	...	...	50 0 0	...	3rd & 4th Instalment.
44			17	Perambur Barracks Road	Sadhu Maha Sangam	3-10-30	1	5 8	...	1 6	8 14 0	151 dated 1-9-30	
			22	St. George Cathedral, Mount Road.	Executive Engineer	...	...	...	3 0	0 12	3 12 0	32 dated 9-4-31	
			22	No. 1, Harrington Road	Dhanakoti Mudaliar	12-4-31	Well	11 0	...	2 12	13 12 0	134 dated 26-3-31	
Total											669 2 4		

THE CHURCH
ST. JOHN'S

NAME		DATE	AMOUNT	REMARKS
J. A. Smith		1890	100.00	For rent of land
J. B. Jones		1891	50.00	For rent of land
J. C. Brown		1892	75.00	For rent of land
J. D. White		1893	120.00	For rent of land
J. E. Black		1894	80.00	For rent of land
J. F. Green		1895	90.00	For rent of land
J. G. Hall		1896	110.00	For rent of land
J. H. King		1897	130.00	For rent of land
J. I. Lee		1898	140.00	For rent of land
J. J. Miller		1899	150.00	For rent of land
J. K. Wilson		1900	160.00	For rent of land
J. L. Moore		1901	170.00	For rent of land
J. M. Taylor		1902	180.00	For rent of land
J. N. Anderson		1903	190.00	For rent of land
J. O. Evans		1904	200.00	For rent of land
J. P. Roberts		1905	210.00	For rent of land
J. Q. Phillips		1906	220.00	For rent of land
J. R. Thompson		1907	230.00	For rent of land
J. S. Jackson		1908	240.00	For rent of land
J. T. Martin		1909	250.00	For rent of land
J. U. Lewis		1910	260.00	For rent of land
J. V. Clark		1911	270.00	For rent of land
J. W. Adams		1912	280.00	For rent of land
J. X. Baker		1913	290.00	For rent of land
J. Y. Campbell		1914	300.00	For rent of land
J. Z. Carter		1915	310.00	For rent of land
J. AA. Evans		1916	320.00	For rent of land
J. AB. Fisher		1917	330.00	For rent of land
J. AC. Gibson		1918	340.00	For rent of land
J. AD. Hall		1919	350.00	For rent of land
J. AE. King		1920	360.00	For rent of land
J. AF. Lee		1921	370.00	For rent of land
J. AG. Miller		1922	380.00	For rent of land
J. AH. Wilson		1923	390.00	For rent of land
J. AI. Moore		1924	400.00	For rent of land
J. AJ. Taylor		1925	410.00	For rent of land
J. AK. Anderson		1926	420.00	For rent of land
J. AL. Evans		1927	430.00	For rent of land
J. AM. Roberts		1928	440.00	For rent of land
J. AN. Phillips		1929	450.00	For rent of land
J. AO. Thompson		1930	460.00	For rent of land
J. AP. Jackson		1931	470.00	For rent of land
J. AQ. Martin		1932	480.00	For rent of land
J. AR. Lewis		1933	490.00	For rent of land
J. AS. Clark		1934	500.00	For rent of land
J. AT. Adams		1935	510.00	For rent of land
J. AU. Baker		1936	520.00	For rent of land
J. AV. Campbell		1937	530.00	For rent of land
J. AW. Carter		1938	540.00	For rent of land
J. AX. Evans		1939	550.00	For rent of land
J. AY. Fisher		1940	560.00	For rent of land
J. AZ. Gibson		1941	570.00	For rent of land
J. BA. Hall		1942	580.00	For rent of land
J. BB. King		1943	590.00	For rent of land
J. BC. Lee		1944	600.00	For rent of land
J. BD. Miller		1945	610.00	For rent of land
J. BE. Wilson		1946	620.00	For rent of land
J. BF. Moore		1947	630.00	For rent of land
J. BG. Taylor		1948	640.00	For rent of land
J. BH. Anderson		1949	650.00	For rent of land
J. BI. Evans		1950	660.00	For rent of land
J. BJ. Roberts		1951	670.00	For rent of land
J. BK. Phillips		1952	680.00	For rent of land
J. BL. Thompson		1953	690.00	For rent of land
J. BM. Jackson		1954	700.00	For rent of land
J. BN. Martin		1955	710.00	For rent of land
J. BO. Lewis		1956	720.00	For rent of land
J. BP. Clark		1957	730.00	For rent of land
J. BQ. Adams		1958	740.00	For rent of land
J. BR. Baker		1959	750.00	For rent of land
J. BS. Campbell		1960	760.00	For rent of land
J. BT. Carter		1961	770.00	For rent of land
J. BU. Evans		1962	780.00	For rent of land
J. BV. Fisher		1963	790.00	For rent of land
J. BW. Gibson		1964	800.00	For rent of land
J. BX. Hall		1965	810.00	For rent of land
J. BY. King		1966	820.00	For rent of land
J. BZ. Lee		1967	830.00	For rent of land
J. CA. Miller		1968	840.00	For rent of land
J. CB. Wilson		1969	850.00	For rent of land
J. CC. Moore		1970	860.00	For rent of land
J. CD. Taylor		1971	870.00	For rent of land
J. CE. Anderson		1972	880.00	For rent of land
J. CF. Evans		1973	890.00	For rent of land
J. CG. Roberts		1974	900.00	For rent of land
J. CH. Phillips		1975	910.00	For rent of land
J. CI. Thompson		1976	920.00	For rent of land
J. CJ. Jackson		1977	930.00	For rent of land
J. CK. Martin		1978	940.00	For rent of land
J. CL. Lewis		1979	950.00	For rent of land
J. CM. Clark		1980	960.00	For rent of land
J. CN. Adams		1981	970.00	For rent of land
J. CO. Baker		1982	980.00	For rent of land
J. CP. Campbell		1983	990.00	For rent of land
J. CQ. Carter		1984	1000.00	For rent of land

Medical Inspection of Corporation Schools (Statements).

STATEMENT I.

1930-31.

No.	Defects.	Boys.						Girls.						Remarks.		
		Entrants		Regulars.		Total defective (Entrants and Regulars combined).	Percentage.	Entrants.		Regulars.		Total defective (Entrants and Regulars combined).	Percentage.			
		No. Defective.	Percentage.	No. Defective.	Percentage.			No. Defective.	Percentage.							
					1930-31				1929-30	1930-31	1929-30				1930-31	1929-30
1	Malnutrition	1543	20-24	15-70	2039	24-15	15-33	3582	22-22	433	7-46	349	10-05	782	8-43	
2	Dirty head, Body and Nails	1442	18-91	18-99	1830	13-75	13-61	2772	17-25	987	17-00	448	12-90	1435	16-47	
3	Teeth and Mouth	1639	21-80	23-51	1829	21-66	26-65	3468	21-59	1398	24-08	911	26-25	2309	24-89	
4	Nose and Throat	1842	24-16	25-57	2050	24-28	24-39	3892	24-23	886	15-26	678	19-53	1564	16-86	
5	Eye diseases	201	2-63	3-90	313	3-71	3-91	514	3-20	231	3-98	119	3-43	350	3-77	
6	Vision	80	1-04	1-50	104	1-23	2-44	184	1-15	12	0-21	8	0-23	20	0-22	
7	Ear diseases	128	1-68	2-09	150	1-78	2-41	278	1-73	98	1-69	49	1-41	147	1-58	
8	Hearing	7	0-09	0-11	10	0-12	0-17	17	0-11	3	0-05	3	0-09	6	0-06	
9	Speech	37	0-48	0-38	44	0-52	0-56	81	0-50	9	0-16	6	0-17	15	0-16	
10	Circulatory System	96	1-25	3-09	174	2-06	3-27	270	1-68	68	1-17	53	1-53	121	1-30	
11	Tuberculosis	6	0-07	0-25	17	0-20	0-23	23	0-14	22	0-38	10	0-29	32	0-34	
12	Respiratory system	224	2-93	4-74	226	2-68	4-19	450	2-80	190	3-27	128	3-69	318	3-43	
13	Abdominal Organs	195	2-56	4-01	298	3-53	3-39	493	3-07	42	0-72	28	0-81	70	0-75	
14	Bones and Joints	238	3-12	3-46	284	3-36	3-02	522	3-25	21	0-36	8	0-23	29	0-31	
15	Nervous and Psychic System	17	0-22	0-71	18	0-21	0-47	35	0-22	6	0-10	3	0-09	9	0-10	
16	Infectious and Contagious diseases	863	11-32	9-68	1000	11-84	8-71	1863	11-60	569	9-80	317	9-13	886	9-56	
17	Other diseases and Defects	813	10-67	17-08	880	10-42	11-67	1693	10-54	409	7-05	185	5-33	594	6-40	
18	Vaccination	82	1-07	1-13	...	...	0-10	82	0-51	60	1-03	...	...	60	0-65
19	Deformities	30	0-39	0-35	35	0-41	0-38	65	0-40	18	0-31	6	0-17	24	0-26	

STATEMENT II—1930-31.

Height and Weight Table.

Age of pupil.		Boys.		Girls.		Remarks.
		Average Height in inches.	Average Weight in pounds.	Average Height in inches.	Average Weight in pounds.	
4 years	...	33.50	24.00	39.00	*36.12	*Recorded in Muslim Girls' Schools where healthy children under 4 years were noted.
5 "	...	38.92	31.60	38.00	34.15	
6 "	...	41.27	33.69	41.00	34.51	
7 "	...	43.55	37.07	42.25	39.30	
8 "	...	45.82	40.88	44.00	39.50	
9 "	...	46.00	44.52	46.40	40.54	
10 "	...	49.16	47.30	49.50	47.51	
11 "	..	50.81	50.68	50.75	52.32	
12 "	...	51.82	53.58	54.75	61.51	
13 "	...	53.40	59.04	54.75	71.73	
14 "	...	56.82	66.74	5.75	69.54	
15 "	...	59.29	73.71	59.00	63.56	
16 "	...	60.30	79.50	59.25	*112.00	*One girl only.
17 "	...	60.46	80.24	61.45	88.00	
18 "	...	61.00	85.00	One girl only.
20 "	...	...	...	59.16	89.00
30 "	...	...	..	59.36	70.00
						Do.

APPENDIX TO STATEMENT I.

1930-31.

Group.	No. on Roll		Average Daily attendance.		No. Examined.		No. Defective.		Percentage Defective.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Entrants ...	18,305	12,114	14,543	8,923	7,623	5,805	4,678	3,928	61.37	67.67
Regulars ...					8,443	3,471	5,315	2,438	62.95	70.24
Total ...	18,305	12,114	14,543	8,923	16,066	9,276	9,993	6,366	62.20	68.63

TREATMENT TABLE.

Corporation Schools.		No. sent to Corporation Dispensaries.	No. referred to General Hospital.	No. referred to Ophthalmic Hospital.	No. referred to Tuberculosis Institute.	No. referred to Gosha Hospital.	No. referred to Govt. Royapuram Hospital (Leper out-patient Department.)	No. of parents met.	No. of Re-inspections.
Boys	...	8,780	604	322	19	...	49	3,433	92
Girls	...	5,221	493	50	21	2	4	230	22
Total	...	14,001	1,097	372	40	2	53	3,663	114

TEETH AND MOUTH TABLE.

1930-31.

No.	Defects.	Entrants.						Regulars.						Total defective Boys & Girls.
		Boys.			Girls.			Boys.			Girls.			
		No. Defective	No. sent to Corporation Dispensaries.	No. referred to General Hospital.	No. Defective.	No. sent to Corporation Dispensaries.	No. referred to General Hospital.	No. Defective.	No. sent to Corporation Dispensaries.	No. referred to General Hospital.				
1	Dirty Teeth.	403	..	14	544	...	14	478	148	14	373	...	21	1798
2	Dental Caries.	415	279	20	628	302	13	523	354	21	355	205	14	1951
3	Stomatitis.	865	865	...	242	242	...	905	905	...	195	195	...	2207
4	Glossitis.	3	3	...	3	3	...	4	4	...	...	...	...	10
5	Tongue-tie.	3	...	3	3	...	3	8	...	8	4	...	4	18
6	Other Conditions.	4	3	1	...	...	...	4	3	1	...	...	...	8

N.B.—Cases not amenable to or not requiring treatment have been omitted from the treatment column.

NOSE AND THROAT TABLE.

1930-31

No.	Details.	Entrants.						Regulars.						Total defective Boys & Girls.
		Boys.			Girls.			Boys.			Girls.			
		No. Defective.	No. sent to Corporation Dispensaries.	No. referred to General Hospital.	No. Defective.	No. sent to Corporation Dispensaries.	No. referred to General Hospital.	No. Defective.	No. sent to Corporation Dispensaries.	No. referred to General Hospital.	No. Defective.	No. sent to Corporation Dispensaries.	No. referred to General Hospital.	
1	Nasal Catarrh including Rhinitis.	154	154	...	307	307	...	94	94	...	212	212	...	767
2	Nasal Polypus	7	...	7	...	...	...	10	...	10	...	...	...	17
3	Enlarged Tonsils	1525	1414	111	550	350	200	1643	1512	131	451	303	151	4169
4	Granular Pharynx	77	77	...	53	53	...	53	53	...	27	27	...	210
5	Adenoids	51	36	15	1	...	1	97	88	9	5	2	3	154
6	Enlarged Cervical glands	304	103	...	7	7	...	395	124	...	2	2	...	708
7	Bifid & elongated Uvula	7	6	...	88	88	...	15	6	2	60	60	...	170
8	Other Conditions	1	1	...	3	3	...	4	3	1	1	1	...	9

N.B.—Cases not amenable to or not requiring treatment have been omitted from the treatment column.

EYE-TABLE.

1930-31.

No.	Defects.	Entrants.						Regulars.						Remarks.
		Boys.			Girls.			Boys.			Girls.			
		No. sent to Corporation	Dispensaries.	No. referred to Ophthalmic Hospital.	No. Defective.	No. sent to Corporation	Dispensaries.	No. referred to Ophthalmic Hospital.	No. sent to Corporation	Dispensaries.	No. referred to Ophthalmic Hospital.	No. Defective.	No. sent to Corporation		Dispensaries.	No. referred to Ophthalmic Hospital.
1	Conjunctivitis	57	5	64	64	64	3	75	75	64	3	75	222	
2	Blepharitis	2	...	3	3	3	...	...	...	...	...	...	16	
3	Granular lids	7	12	75	75	75	...	...	...	...	...	...	149	
4	Corneal opacity	...	21	14	14	14	...	...	...	...	...	...	89	
5	Corneal ulcer	...	1	8	8	8	...	...	...	...	...	...	12	
6	Staphyloma	...	...	...	...	...	...	...	...	...	...	...	3	
7	Dacryo-cystitis	...	...	...	...	...	...	...	...	...	...	...	1	
8	Cataract	...	1	...	...	...	...	...	...	...	...	...	8	
9	Xerosis	44	5	35	35	35	...	...	...	...	...	...	215	
10	Stye	7	5	8	8	8	...	...	...	...	...	...	42	
11	Squint	...	20	25	25	25	...	...	...	...	...	...	106	
12	Keratitis	...	1	...	...	...	...	...	...	...	...	...	5	
13	Ptoxis	...	2	...	...	...	...	...	...	...	...	...	4	
14	Meibomian Cyst	...	1	...	...	...	...	...	...	...	...	...	1	
15	Other Conditions	...	...	...	...	...	...	...	...	...	...	...	10	
16	Defective Vision	...	80	12	12	12	...	...	...	...	...	...	204	

N. B.—Cases not amenable to or not requiring treatment have been omitted from treatment column.

OTHER DISEASES AND DEFECTS

1930-31.

H-30

No.	Defects.	Entrants.						Regulars.						Total defective Boys and Girls.
		Boys.			Girls.			Boys.			Girls.			
		No. Defective	No. sent to Corporation	No. referred to General Hospital	No. Defective.	No. sent to Corporation	No. referred to Hospital.	No. Defective.	No. sent to Corporation	No. referred to Hospital.	No. Defective.	No. sent to Corporation	No. referred to Hospital.	
1	Worms	491	491	...	350	350	...	487	487	...	125	125	...	1453
2	Wounds, Cuts, Ulcers, etc.	216	216	...	12	12	...	217	217	...	16	16	...	461
3	Undescended Testis	29	...	...	...	...	...	20	...	...	...	...	...	49
4	Phimosis	38	...	38	...	...	...	53	...	53	...	...	...	91
5	Enlarged groin glands	27	27	...	...	...	...	56	56	...	...	...	...	83
6	Pyrexia	10	10	...	34	34	...	7	7	...	32	32	...	83
7	Boils and abscesses	22	22	...	10	10	...	34	34	...	6	6	...	72
8	Keloids	4	...	...	1	...	...	4	...	...	...	...	...	9
9	Warts	2	...	...	4	...	...	3	...	...	...	...	...	10
10	Leucodermic patches	6	4	...	1	...	...	20	3	...	2	...	...	29
11	Obesity	1	2	...	...	...	...	3	...	...	...	...	...	4
12	Alopecia	2	...	...	...	...	...	...	...	...	...	...	...	2
13	Sebaceous Cyst	...	...	...	...	...	...	1	...	1	...	...	...	1
14	Lipoma Head	...	...	...	...	...	...	1	...	1	...	...	...	1
15	Orchitis	...	...	...	...	...	...	1	...	...	...	...	...	1
16	Salivary Fistula	...	...	...	...	...	...	...	...	...	...	...	...	1
17	Other Conditions	14	11	...	1	8	...	...	4	...	9	9	...	39

N.B.—Cases not amenable to or not requiring treatment have been omitted from treatment column.

Statement showing the details of other defects found on Medical
Inspection of Corporation Schools.—1930-31.

No.	Systems or Organs.	Details.	No. Defective				
			Entrants.		Regulars.		Total defective (Boys & Girls.)
			Boys.	Girls.	Boys.	Girls.	
1	Ear	1. Otorrhoea	115	35	127	17	294
		2. Otitis	12	63	20	31	126
		3. Other Ear Diseases	1	...	3	1	5
		4. Defective Hearing	7	3	10	3	23
2	Heart and circulation.	1. Heart Disease (a) Organic	19	6	32	2	59
		(b) Functional	27	16	50	9	102
		2. Anaemia	52	49	92	45	238
3	Lungs.	1. Bronchitis (acute and chronic)	215	176	206	121	718
		2. Other Non-Tuberculous Diseases (Asthma, etc.)	9	14	20	7	50
4	Tuberculosis.	1. Pulmonary (a) Definite	...	...	3	...	3
		(b) Suspected	3	19	11	8	41
		2. Non-Pulmonary (a) Glands	3	3	3	2	11
		(b) Spine	...	...	...	...	...
		(c) Hip	...	...	...	...	...
		(d) Bones & Joints	...	...	...	...	...
		(e) Skin	...	...	...	...	...
		(f) Other Forms	...	...	...	...	...
5	Abdominal Organs.	1. Enlarged Spleen	114	15	185	13	327
		2. " Liver	...	2	3	3	8
		3. " Spleen & Liver	3	4	9	2	18
		4. Hydrocele (a) Vaginal	38	...	44	...	82
		(b) Cord	1	...	4	...	5
		5. Hernia (a) Inguinal	20	...	41	...	61
		(b) Umbilical	11	6	11	...	28
		(c) Femoral	...	...	...	...	...
		6. Stomach Conditions	...	7	1	2	10
		7. Bowel Conditions	7	8	7	9	31
		8. Other Conditions	3	1	2	...	6
		9. Generative Disorders in Girls	...	1	...	2	3
6	Bones and Joints.	1. Bones (a) Fractures	1	1	1	...	3
		(b) Caries	...	...	1	...	1
		(c) Deformities	2	...	...	1	3
		(d) Diseases	...	...	...	1	1
		2. Joints (a) Dislocation & Sprains	1	...	6	...	7
		(b) Diseases	...	...	5	...	5
		(c) Deformities	3	...	12	...	15
		3. Rickets (a) General	6	...	5	...	11
		(b) Deformed Chest	226	20	256	6	508
7	Nervous System	1. Organic Diseases (Palsies, etc.)	...	3	2	2	7
8	Psychic System.	2. Functional Disorders	5	2	7	...	14
		Mentally Defective, etc.	12	1	9	1	23
9	Deformities.	General Deformity—					
		(a) Spinal Deformity	3	...	4	...	7
		(b) Talipes	3	...	5	1	9
		(c) Shortened Limbs	8	1	6	1	16
		(d) Congenital Dislocation Hip.	1	...	1	...	2
		(e) Ankylosis, Joints	...	2	3	1	6
		(f) Amputated Limbs	1	...	1	...	2
		(g) Genu Valgum & Varum	2	2	3	...	7
		(h) Supernumerary Fingers	3	6	2	...	11
		(i) Flat Foot	2	3	1	2	8
		(j) Other Conditions	7	4	9	1	21

WATER ANALYSIS (STATEMENTS.)

Table I.—Statement Showing the work done at the Laboratory during 1930.

Chemical Examination	...	5352
Vibrio tests	...	1215
Bacteriological Examination	...	1237
Total	...	7804

Table II.—Showing the Monthly average Lake Level, and Rainfall at Red Hills Lake, for 1930.

Month.	Lake Level expressed in feet.	Rainfall in inches.	Remarks.
January	65.20	2.78	Total Rainfall 1929 45.41
February	65.47	2.65	Do 1930 75.2)
March	65.34	Nil	Percentage of increase 65.8
April	62.25	Nil	
May	63.95	6.10	
June	64.33	2.31	
July	64.91	1.61	
August	63.55	2.53	
September	63.75	1.96	
October	63.83	26.61	
November	64.55	23.84	
December	65.75	4.90	
Average	64.41	6.27	

Table III.—Showing the Bacteriological Results for 1930.

1930 Months.	Red Hills Lake.		Kilpauk end of R. W. conduit.		Chlorinated Raw water.		Filtrates from Beds.		Mixed Filtrates and Test Tap		Distribution system.		Remarks.
	L.F. in 5 c.c. & up- wards.	Total colonies per c.c.	L.F. in 5 c.c. & up- wards.	Total colonies per c.c.	L.F. in 60 c.c. & upwards	Total colonies per c.c.	L.F. in 60 c.c. & upwards.	Total colonies per c.c.	L.F. in 60 c.c. & upwards.	Total colonies per c.c.	L.F. in 60 c.c. & upwards.	Total colonies per c.c.	
Column Nos.	1	2	3	4	5	6	7	8	9	10	11	12	13
January ...	0 %	400	83.3 %	850	100 %	110	34.7 %	450	6.7 %	530	0 %	720	
February...	* ...	...	75.0 %	1000	100 %	180	41.3 %	490	18.8 %	510	0 %	520	
March ...	100 %	750	81.8 %	900	100 %	150	26.0 %	370	0 %	670	16.6 %	560	
April ...	0 %	1100	85.7 %	850	100 %	150	34.8 %	480	0 %	670	16.6 %	560	
May ...	100 %	810	60.0 %	910	100 %	110	14.6 %	420	0 %	730	0 %	780	
June ...	* ...	...	66.6 %	920	100 %	170	21.9 %	620	0 %	750	8.3 %	530	
July ...	100 %	820	84.6 %	880	100 %	160	26.5 %	520	0 %	720	0 %	620	
August ...	0 %	1100	57.1 %	1010	100 %	180	5.5 %	590	0 %	670	0 %	690	
September.	* ...	...	50 %	930	100 %	160	27.9 %	630	0 %	730	0 %	740	
October ...	100 %	780	70 %	1170	100 %	170	56.5 %	480	21.0 %	620	66.6 %	440	
November.	33 %	880	100 %	770	100 %	190	58.3 %	400	11.8 %	380	0 %	470	
December.	* ...	...	50 %	1020	100 %	220	41.2 %	480	8 %	620	18.7 %	640	
Average.	54.1 %	830	72.0 %	934	100 %	162	32.4 %	494	5.5 %	633	10.6 %	606	

* Samples were not collected from the lake.

GRAPH

SHOWING THE RELATION BETWEEN LAKE LEVEL AND ORGANIC MATTER (ABSORBED OXYGEN FIGURES)

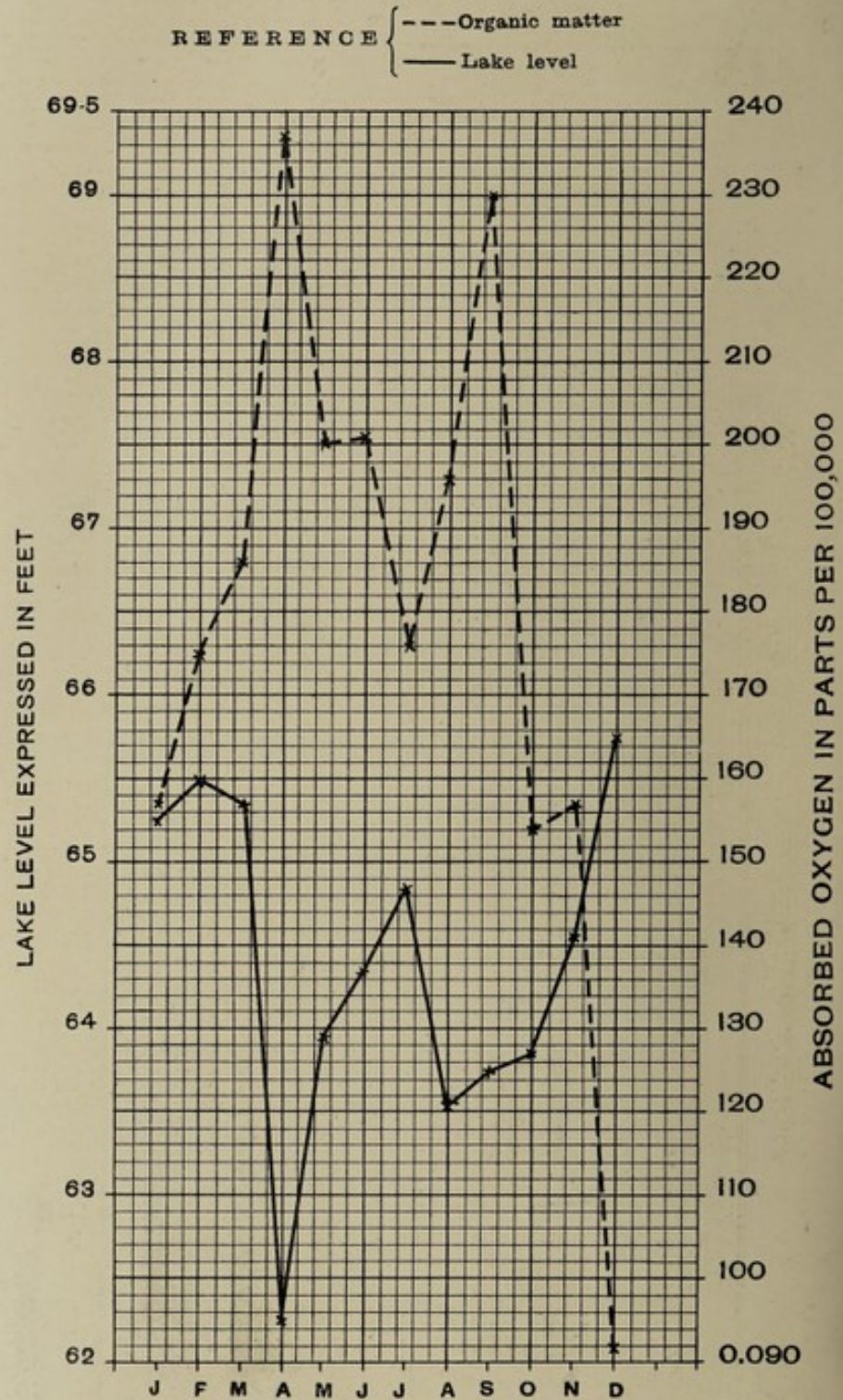


Table IV—Showing the Chemical Results for 1930 (expressed in parts per 100,000.)

1930. Months.	Red Hills Lake.			Kilpauk end of R. W. conduit.			Chlorinated, Raw-water.			Filtrates from Beds.			Mixed Filtrate and Test Tap.			Distribution system.		
	Ammoniacal Nitrogen.	Albuminoid Nitrogen.	Oxygen ab- sorbed.	Ammoniacal Nitrogen.	Albuminoid Nitrogen.	Oxygen ab- sorbed.	Ammoniacal Nitrogen.	Albuminoid Nitrogen.	Oxygen ab- sorbed.	Ammoniacal Nitrogen.	Albuminoid Nitrogen.	Oxygen ab- sorbed.	Ammoniacal Nitrogen.	Albuminoid Nitrogen.	Oxygen ab- sorbed.	Ammoniacal Nitrogen.	Albuminoid Nitrogen.	Oxygen ab- sorbed.
Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
January ...	Trace	0.031	0.180	Trace	0.045	0.155	Trace	0.039	0.124	0.012	0.021	0.119	0.015	0.026	0.118	0.002	0.021	0.076
February ...	Trace	...	...	Trace	0.031	0.175	0.003	0.036	0.161	0.016	0.022	0.135	0.012	0.020	0.132	0.008	0.023	0.112
March ...	Trace	0.056	0.166	0.001	0.045	0.186	0.001	0.042	0.178	0.023	0.028	0.194	0.019	0.028	0.150	0.004	0.020	0.149
April ...	Trace	0.048	0.200	Trace	0.051	0.237	0.004	0.044	0.193	0.026	0.032	0.251	0.024	0.027	0.203	0.008	0.026	0.107
May ...	Trace	0.054	0.173	Trace	0.044	0.200	0.001	0.045	0.173	0.025	0.030	0.259	0.031	0.027	0.175	0.020	0.031	0.111
June ...	Trace	...	...	Trace	0.060	0.201	0.002	0.042	0.170	0.029	0.032	0.239	0.024	0.027	0.148	0.013	0.026	0.117
July ...	Trace	0.047	0.178	Trace	0.040	0.176	...	...	0.187	0.029	0.035	0.213	0.020	0.022	0.138	0.021	0.032	0.113
August ...	Trace	0.041	0.185	0.003	0.038	0.196	0.006	0.038	0.182	0.021	0.027	0.172	0.020	0.026	0.149	0.015	0.026	0.115
September ...	Trace	...	...	0.002	0.040	0.230	...	...	...	0.026	0.030	0.297	0.019	0.027	0.172	0.019	0.029	0.117
October ...	0.003	0.032	0.215	0.005	0.041	0.154	0.006	0.037	0.154	0.025	0.031	0.266	0.025	0.033	0.186	0.011	0.025	0.096
November ...	0.007	0.043	0.133	0.002	0.045	0.157	0.004	0.035	0.111	0.019	0.027	0.116	0.018	0.029	0.104	0.007	0.015	0.070
December ...	...	...	...	0.002	0.032	0.092	0.001	0.033	0.072	0.010	0.025	0.080	0.014	0.025	0.084	0.002	0.021	0.086
Average...	0.002	0.044	0.179	0.001	0.043	0.180	0.003	0.039	0.155	0.022	0.028	0.195	0.020	0.026	0.147	0.011	0.025	0.106

* Samples were not collected during these months.

Table V.—Showing the determined dose of chlorine (according to Sims-wood-head Field Test) and the applied dose of chlorine for Raw water.

1930 months.		Parts per million.		Remarks.
		Determined dose.	Applied dose.	
January	...	0.9	1.25	From 13-10-'30(applied dose raised from 1.25 to 1.5 parts per million.)
February	...	1.0	"	
March	...	1.1	"	
April	...	1.0	"	
May	...	1.0	"	
June	...	0.9	"	
July	...	0.9	"	
August	...	1.1	"	
September	...	1.0	"	
October	...	1.0	1.5	
November	...	0.9	"	
December	...	0.9	"	

Table VI.—Showing the Length of Runs of Filters at work, during 1930 :—

Bed No.	Total No. of Runs during the year.	Total No. of days.	Average Number of days per Run.	Remarks.
1	7	261	37	
2	7	288	41	
3	7	268	38	
4	3	243	81	
5	6	246	41	
6	11	311	28	
7	8	302	38	
8	3	173	58	
9	8	308	39	
10	9	298	33	
11	7	294	42	
12	9	312	35	
13	7	297	42	
14	7	284	41	
15	4	274	69	
16	6	248	41	
17	7	284	41	
Average life of a filter			44 days.	

N. B.—Average worked out to the nearest integer.

Table VII.—Showing acreage cleaned in 1929 & 1930.

Year.	Area in square feet cleaned.	Percentage of increase.
1929	2,042,000	...
1930	2,387,000	16.89

Table VIII.—Showing the quantity of water filtered during the year 1930.

Bed No.	Quantity of water expressed in million gallons filtered at		Total quantity of water filtered in million gallons.	Remarks.
	4" vertical and below per hour.	6" to 8" vertical and below per hour.		
1	74.75	209.50	344.25	
2	57.25	339.25	396.50	
3	61.50	436.75	498.25	
4	56.75	274.25	331.00	
5	42.50	296.75	339.25	
6	60.75	361.75	422.50	
7	26.50	403.00	429.50	
8	37.00	201.50	238.50	
9	32.00	407.75	439.75	
10	81.25	317.00	398.25	
11	79.50	315.25	394.75	
12	53.25	381.00	434.25	
13	19.50	409.37	428.87	
14	62.75	327.00	389.75	
15	86.6	420.00	504.66	
16	194.66	200.66	395.32	
17	136.33	355.00	491.33	
Total for the year.		...	6876.68	

CHILD WELFARE (STATEMENTS).

STATEMENT I.

Showing the cases of labour which came under the observation of the staff of the Child Welfare Scheme from January to December 1930 with comparative statements for the years 1918 to 1929.

Period.	Centres.	How Conducted.			Total Cases.	Caste.		Remarks.
		By Nurses of the C. W. S.	Taken over after Barber Women conducted labour.	Taken to Hospitals.		Maho-medans.	Non-Maho-medans.	
From 1st January to 31st December 1930	...							
	Triplicane	1,550	100	33	1,683	740	943	
	Washermanpet	879	263	127	1,269	203	1,066	
	Purasawalkam	1,100	135	116	1,354	73	1,284	
	George Town	1,319	115	213	1,645	63	1,583	
	Nungambakam	373	217	33	623	51	572	
	Mirsaipet	817	262	144	1,223	217	1,005	
	Muthialpet	810	117	115	1,042	193	849	
	Royapuram	836	180	182	1,198	123	1,075	
	Perambur	800	94	60	954	209	745	
	Egmore	623	109	54	786	79	707	
	Royapet	431	170	29	630	61	569	
	Choolai	195	33	24	252	18	234	
	Total for 1930	9,733	1,738	1,129	12,600	2,027	10,573	
From 24-9-30 to 31-12-30.	...							
	1929	8,585	1,796	1,027	11,415	1,862	9,546	
	1928	8,216	1,541	1,136	10,893	1,967	8,926	
	1927	7,422	1,491	1,248	10,161	1,827	8,334	
	1926	6,393	1,005	945	8,253	1,484	6,769	
	1925	6,118	1,243	933	8,294	6,807	1,487	
	1924	5,163	1,216	644	7,023	5,598	1,425	
	1923	4,357	1,097	366	5,820	4,638	1,074	
	1922	3,968	1,213	368	5,549	4,475	1,074	
	1921	3,060	796	256	4,112	3,281	831	
	1920	2,953	672	203	3,828	...	...
	1919	976	108	87	1,173	612	561	
	1918	550	77	54	681	...	...

Prematernity cases registered and diseases and ailments of Pregnancy treated at the centres in 1930.

Total for 1930--11,292--1925--6,269.
1929--10,535--1925--6,062.
1928--10,915--1924--4,071.
1927--9,232--1923--3,501.

STATEMENT III.

Maternal Morbidity (Puerperal) 1930.

Serial No.	Centres.	Anaemia.	Albuminuria.	Malaria.	V. D. H.	Bronchitis.	Dysentery.	Influenza.	Typhoid.	Retained Membranes.	Adherent Placenta.	Retained Placenta.	Eclampsia.	Pneumonia.	T. P.	Ulcerated Vagina.	Retention of Urine.	Syphilis.	Asthma.	Diarrhoea.	Jaundice.	Indigestion.	Gastritis.	Constipation.	Worms.	Mastitis & Breast Abscess.	Nephritis.	Sapraemia.	A. P. H.	P. P. H.	Mumps.	Skin disease.	Stomatitis.	Sepsis.	Neuritis and Sciatica.	Septicaemia.	Ulcerated Vulva.	Fever and Hyperpyrexia.	Piles.	Rheumatism.	Chicken Pox.	G. Conjunctivitis.	After pains.	Other diseases.	Total.
1	Triplicane	201	49	44	3	50	50	45	13	8	7	2	2	2	2	33	4	53	51	224	...	5	5	36	30	...	41	46	1	83	...	888				
2	Washermanpet	179	32	20	28	14	9	1	1	1	1	1	1	...	2	10	...	1	1	...	12	27	1	4	...	346	
3	Purasawalkam	131	22	35	7	32	40	28	4	2	1	2	2	2	5	17	214	3	29	...	1911	90	719	...	2	3	6	...	2	13	6	...	3	1100	1	...	1	5	23	...	3	701			
4	George Town	133	47	48	5	28	19	15	6	1	5	4	5	7	7	5	7	69	1	1	...	7	12	1	20	9	462		
5	Nungambakam	76	11	4	...	15	10	5	...	1	...	2	2	...	1	4	3	1	4	...	1	32	1	173				
6	Mirsaibpet	184	2	1	3	12	7	2	...	4	...	1	1	...	2	1	2	8	2	2	1	8	...	1	...	1	...	1	2	1	2	264	
7	Muthialpet	42	29	11	1	5	5	10	1	...	1	3	214	1	...	4	7	...	2	3	...	10	1	4	...	1	75	...	2	...	1	2	...	1	1	2	...	60	124	436		
8	Royapuram	38	69	4	1	10	10	2	...	2	2	1	1	1	1	1	...	3	6	2	154		
9	Perambur	18	6	4	1	6	7	4	...	3	1	...	4	...	3	...	4	1	...	1	14	216	2	5	3	11	1	...	6	12	3	...	138				
10	Egmore	34	3	3	...	7	7	2	1	...	1	6	...	1	3	8	...	2	...	3	1	1	...	2	8	5	2	...	1	...	29	2	2	...	128		
11	Royapet	43	...	18	...	2	8	3	3	...	3	2	7	4	...	3	...	8	...	1	10	4	131			
12	Choolai	21	...	3	...	2	1	6	...	8	2	15	5	63				
Total.		1100	270	195	49	183	173	112	726	20	26	153	35	37	35	30	18	116	825	12	254	1580	214	1729	164	164	20	3	760	241	5	1	610	252	144	3884									

STATEMENT IV.

A.

Maternal mortality (Puerperal) among cases treated by C.W. Scheme for 1930.

Centres.	V.D.H.	Typhoid.	Adherent placenta.	Anaemia.	Dysentery	Tuber. Enteritis.	Sepsis.	Total.
Triplicane ...	1	..	..	..	..	..	..	1
Washermanpet ...	..	..	..	..	..	..	..	..
Purasawalkam ...	1	..	1	..	1	..	..	3
George Town ...	..	..	..	1	..	1	..	2
Nungambakam ...	..	..	..	..	..	..	..	..
Mirsaibpet ...	..	..	..	..	..	..	1	1
Muthialpet ...	..	..	..	..	..	..	..	..
Royapuram ...	..	..	..	..	..	..	..	..
Perambur ...	..	..	..	..	..	..	..	..
Egmore ...	..	..	..	..	..	..	..	..
Royapettah ...	..	1	..	..	..	..	..	1
Choolai ...	..	..	..	..	..	..	..	..
Total ...	2	1	1	1	1	1	1	8

B.

Deaths among cases brought to the notice of the Child Welfare Scheme in 1930 but not under our treatment.

	Triplicane.	Washermanpet.	Purasawalkam.	George Town.	Nungambakam.	Mirsaibpet.	Muthialpet.	Royapuram.	Perambur.	Egmore.	Royapettah.	Choolai	Total.
1. In Hospital ...	5	10	4	9	1	3	2	1	..	2	2	2	41
2. Under private Doctors. ...	..	1	..	2	..	..	2	1	1	..	..	..	7
3. Under Vydians' treatment ...	1	1	..	..	..	..	..	2	..	1	..	..	5
4. Under Barber Women ...	..	..	1	..	..	..	..	..	..	..	..	..	1
Total ...	6	12	5	11	1	3	4	4	1	3	2	2	54

STATEMENT IV.

C

Showing the Causes of death among cases brought to the notice of Child Welfare Scheme but not under our treatment in 1930.

Centres.			Small-pox.	Eclampsia.	Adherent Placenta	P. P. H.	V. D. H.	Anaemia.	Tub. Enteritis.	Septicaemia.	Pneumonia.	General Anasarca.	Dysentery.	T. P.	Fever.	Placenta Praevia.	Causes unknown.	Total.
Triplicane	...	...	1	2	...	1	...	1	...	1	...	...	...	...	...	...	...	6
Washermanpet	...	...	2	1	...	...	6	...	...	...	...	2	1	...	...	...	...	12
Purasawalkam	...	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...	2	5
George Town	...	...	1	1	...	3	1	...	...	2	...	...	2	...	1	...	...	11
Nungambakam	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Mirsaibpet	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	1	1	4
Muthialpet	...	...	...	1	...	...	...	...	...	...	...	...	...	1	2	...	...	4
Royapuram	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	3
Perambur	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Egmore	...	...	...	1	...	...	...	1	...	1	...	...	...	...	...	...	...	3
Royapettah	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	2
Choolai	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2
Total	...	...	3	7	4	4	9	2	2	6	3	2	4	1	3	1	3	54

A total of 62 deaths occurred among the 12,600 labour cases which came under the observation of and Child Welfare Scheme. Maternal Mortality rate for all deaths among cases brought to the notice of the Scheme is 49 per cent.

Maternal Mortality rates for the C. W. S. for

1922—5 per cent.
 1923—56 per cent.
 1924—56 per cent.
 1925—59 per cent.
 1926—72 per cent.
 1927—4 per cent.
 1928—52 per cent.
 1929—49 per cent.
 1930—49 per cent.

STATEMENT V.

Table showing the total attendance of Children and Mothers at the Child Welfare Centres during 1930.

From 1st January to 31st December 1930.	Age.			Total New Attendance.	Nature of disease.							Total attendance for the year.	Pregnant women treated at the Centre.	Average Daily Attendance.	Remarks.			
	Under 1 year.	5 to 12 years.			Women.	Respiratory.	Alimentary.	Skin affection.	Influenza.	Ear and Eye disease.	Malaria.					Syphilis.	Anaemia.	Other causes.
		1 to 5 years.																
Triplicane	3,470	1,406	925	3,567	9,368	2,682	1,731	538	1,048	381	116	1	1,349	1,518	24,873	928	68-00	From 24-9-30 to 31-12-30.
Washermanpet	1,389	1,005	662	2,724	5,781	560	881	542	502	282	567	16	108	2,323	12,478	446	34-00	
Purasawalkam	2,622	1,445	1,117	4,892	10,076	1,768	2,194	636	734	387	290	63	252	3,232	20,408	1,190	55-33	
George Town	2,883	2,166	1,825	3,675	13,549	1,788	1,484	995	524	1,028	1,366	...	986	5,386	23,740	1,930	81-47	
Nungambakam	2,360	1,421	1,276	1,744	6,801	1,124	2,014	905	345	430	312	2	281	1,388	15,285	378	41-87	
Mirsaipet	1,542	1,166	742	2,814	6,264	892	1,735	580	78	334	483	4	552	1,506	15,261	720	41-26	
Muthialpet	2,324	1,372	945	4,387	9,028	786	2,115	548	795	249	638	...	181	3,716	24,844	817	68-06	
Royapuram	1,452	1,233	617	2,914	6,216	1,176	1,874	559	73	299	872	6	142	1,202	10,420	816	29-0	
Perambur	2,455	1,099	1,241	3,096	7,892	907	2,856	740	626	569	305	167	269	2,036	17,284	583	50-09	
Egmore	1,447	1,387	1,420	2,316	6,570	962	1,663	810	208	586	185	13	209	2,312	13,905	378	39-09	
Royapet	1,424	938	581	2,037	5,000	852	784	648	191	642	203	18	145	1,517	12,199	308	33-4	
Choolai	303	370	350	858	1,891	255	693	171	67	224	98	5	188	190	5,744	365	58-02	
Total for	1930 23,681	15,000	11,711	38,044	88,436	13,752	19,524	7,672	5,191	5,406	5,441	395	4,653	26,354	2,02,441	8,463	599-53	
"	1929 19,514	13,254	11,062	37,720	81,550	1,838	18,570	6,196	3,634	3,980	6,026	247	4,258	26,801	1,88,329	7,104	520-19	
"	1928 15,195	10,167	9,265	33,745	63,918	9,864	15,633	4,200	1,808	2,813	4,845	195	3,513	18,273	1,61,801	6,637	442-1	
"	1927 12,394	7,691	5,383	26,096	51,567	5,789	12,736	3,378	1,493	2,662	3,055	191	2,886	18,401	1,20,019	5,169	328-8	
"	1926 11,578	9,343	7,703	20,332	48,856	6,747	13,371	3,829	1,258	1,941	3,195	95	2,810	15,246	1,14,814	4,192	316-0	
"	1925 14,704	8,871	5,713	20,708	49,996	6,469	21,504	2,783	967	2,856	3,900	64	2,547	12,806	1,05,363	4,054	299-3	
"	1924 10,731	7,444	4,256	14,006	36,137	6,040	12,721	2,231	840	1,741	2,074	13	1,783	8,789	71,244	3,134	194-79	
"	1923 6,549	3,678	2,349	7,463	19,126	3,359	5,833	2,090	243	617	995	30	...	6,060	33,535	3,773	93-0	
"	1922 4,995	3,387	1,457	4,533	14,372	2,357	4,846	1,997	189	429	285	24	...	4,245	58,138	1,778	78-0	
"	1921 5,474	2,533	1,203	5,564	14,774	2,719	3,133	1,087	494	473	...	24	...	6,875	25,919	1,490	35-0	
"	1920 4,079	1,762	1,855	3,934	10,636	1,912	1,160	874	583	308	...	29	...	5,715	18,816	1,040	73-0	
"	1919 1,617	858	316	1,074	3,365	295	139	250	31	37	...	12	...	253	8,442	322	24-1	
"	1918 222	207	52	235	716	77	27	55	4	1	...	4	...	35	1,568	116	18-0	

STATEMENT VI.

Showing the number of abortion cases which came under the observation of Child Welfare Scheme staff during the year 1930.

Period.	Centres.	How Conducted			Total.
		By Nurses of C.W.S.	Taken over after B.W. conducted labour.	Taken to Hospital.	
1-1-30 to 31-12-30.	Triplicane ...	4	1	15	20
	Washermanpet ...	6	...	17	23
	Purasawalkam ...	12	4	16	32
	George Town ...	7	1	30	38
	Nungambakam ...	5	2	4	11
	Mirsaitpet ...	6	2	12	20
	Muthialpet ...	17	...	29	46
	Royapuram ...	7	...	16	23
	Perambur ...	7	2	7	16
	Egmore ...	5	2	6	13
	Royapet ...	6	...	2	8
24-9-30 to 31-12-30.	Choolai ...	3	...	4	7
	Total ...	85	14	158	257

STATEMENT VII.

Number of visits paid by the staff of the Child Welfare Scheme during the year 1930.

Centres.	Visits paid by			Total.
	Mid-wives.	Health Visitors.	Lady Doctors.	
Triplicane ...	18,372	10,185	1,485	30,042
Washermanpet ...	12,651	9,502	1,278	23,431
Purasawalkam ...	15,885	16,575	1,518	33,978
George Town ...	22,956	13,805	1,479	38,240
Nungambakam ...	9,090	11,192	1,101	21,383
Mirsaibpet ...	13,224	14,091	1,066	28,381
Muthialpet ...	12,785	13,710	1,621	28,116
Royapuram ...	11,865	13,888	1,236	26,989
Perambur ...	19,943	8,613	1,409	29,965
Egmore ...	9,361	6,725	1,215	17,301
Royapet ...	10,348	8,302	1,241	19,891
Choolai ...	893	732	326	1,951
Total ...	1,57,373	1,27,320	14,975	2,99,668

STATEMENT

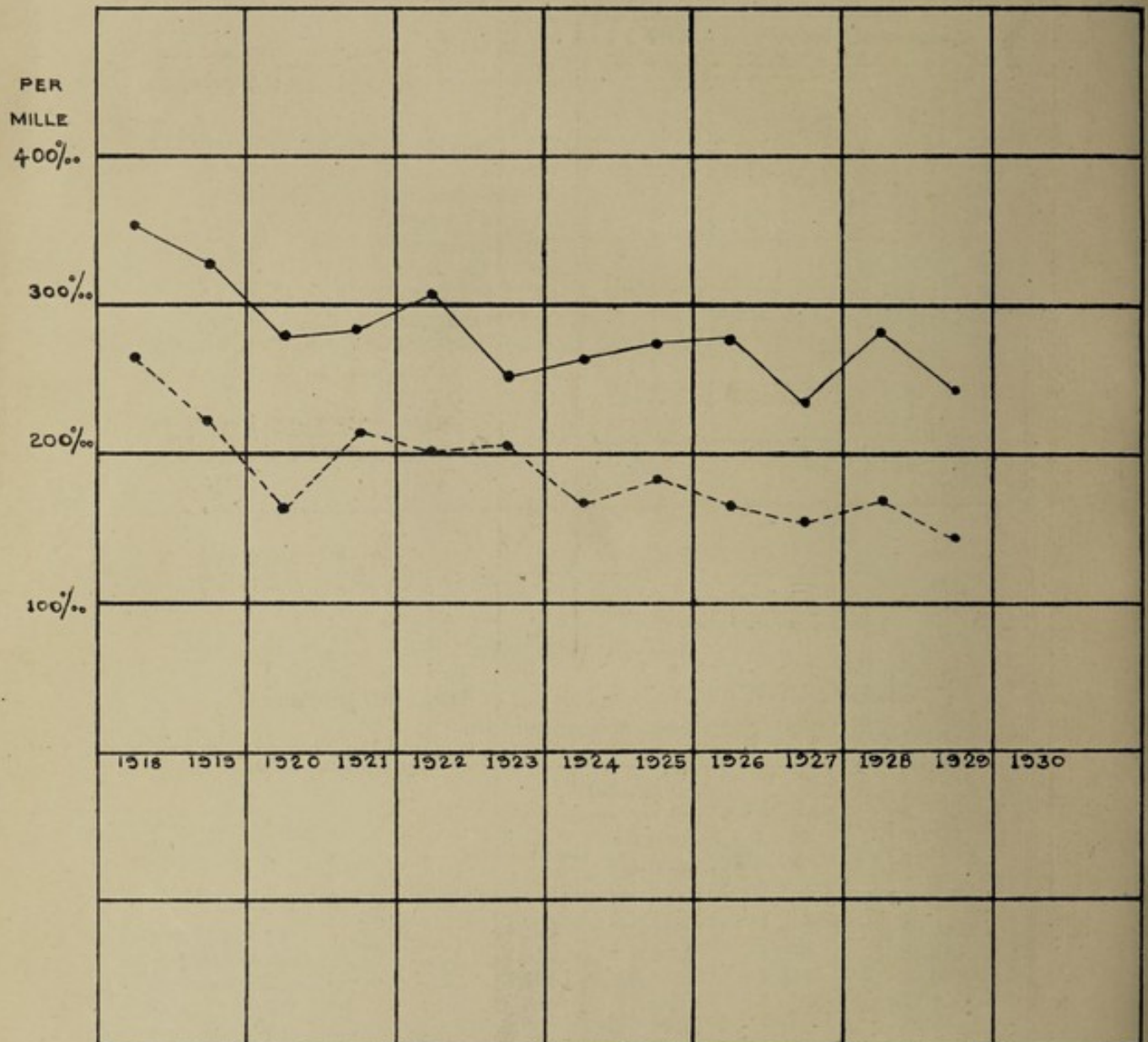
Showing the number of persons who have been admitted to the State of Ohio, and the number of persons who have been expelled from the State, from the year 1800 to 1860.

Year	Admitted	Expelled
1800	1,000	0
1801	1,200	0
1802	1,500	0
1803	1,800	0
1804	2,000	0
1805	2,200	0
1806	2,500	0
1807	2,800	0
1808	3,000	0
1809	3,200	0
1810	3,500	0
1811	3,800	0
1812	4,000	0
1813	4,200	0
1814	4,500	0
1815	4,800	0
1816	5,000	0
1817	5,200	0
1818	5,500	0
1819	5,800	0
1820	6,000	0
1821	6,200	0
1822	6,500	0
1823	6,800	0
1824	7,000	0
1825	7,200	0
1826	7,500	0
1827	7,800	0
1828	8,000	0
1829	8,200	0
1830	8,500	0
1831	8,800	0
1832	9,000	0
1833	9,200	0
1834	9,500	0
1835	9,800	0
1836	10,000	0
1837	10,200	0
1838	10,500	0
1839	10,800	0
1840	11,000	0
1841	11,200	0
1842	11,500	0
1843	11,800	0
1844	12,000	0
1845	12,200	0
1846	12,500	0
1847	12,800	0
1848	13,000	0
1849	13,200	0
1850	13,500	0
1851	13,800	0
1852	14,000	0
1853	14,200	0
1854	14,500	0
1855	14,800	0
1856	15,000	0
1857	15,200	0
1858	15,500	0
1859	15,800	0
1860	16,000	0

GRAPH ILLUSTRATING INFANTILE MORTALITY RATE

FOR
THE CITY OF MADRAS.

--- C.W.S. RATE
— CITY RATE.



STATEMENT VIII.

Ages at death of infants born during 1929 and kept under observation during the 1st year of Life.

From 1st January to 31st December 1929.	Total No. of cases Visited.	Still born.	Died within.			Total deaths Excluding Still births.	Left City & Otherwise not traceable.	No. of living Children traceable when one year old.
			10 Days.	1 to 3 Months.	3 to 6 Months.	6 to 12 Months.		
Triplicane	1,441	47	55	51	25	79	329	855
Washermanpet	1,041	48	44	19	29	66	109	735
Purasawalkam	1,217	61	53	47	56	67	84	876
George Town	1,420	90	71	46	37	49	83	1,044
Nungambakam	652	16	25	34	23	26	39	489
Mirsaibpet	1,258	61	38	42	41	53	50	973
Muthialpet	876	35	49	27	53	46	138	528
Royapuram	1,028	39	44	21	32	41	60	791
Perambur	860	30	14	25	30	25	82	664
Egmore	720	25	25	18	20	35	81	516
Royapet	594	17	22	14	21	33	102	385
Choolai	293	8	20	3	11	14	8	229
Total	11,430	477	463	347	378	534	1,156	8,075

City rate.

For infants in care of C. W. Scheme.

Infantile Mortality rate for

per mille.

City rate.

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STATEMENT IX.

Causes of death among infants born in 1929 and kept under observations during the 1st year of life.

Centres.	Total No. of cases visited.	Still born.	Died within 10 days.	Pneumonia.	Influenza.	Abscess.	Enteritis.	Small-pox.	Bronchitis.	Malnutrition.	Malaria.	Convulsion.	Whooping cough.	Skin disease.	Syphilis.	Chicken-pox.	Fever.	Drugged with native medicines.	Diarrhoea.	Dysentery.	Constipation.	Rickets.	Gastritis.	Causes unknown.	Dropsy.	Infant Paralysis.	By vaccination.	Rat bite.	Total deaths.	Left the city and not traceable.	No. of living children who survived the 1st year of life.
Triplicane	1,441	47	55	14...	1	39	2	8	5	2	20	1	4	1	1	34	2	...	3	1	1	...	16	...	...	...	...	...	210	329	835
Washermanpet	1,041	48	44	6...	...	15	...	6	...	...	14	6	1	...	1	22	...	13	10	...	...	...	20	...	...	...	...	...	158	100	735
Pursawalkam	1,247	51	56	9...	1	...	15	30	...	...	5	4	2	...	...	59	...	35	3	1	...	...	5	...	...	...	...	...	226	84	876
George Town	1,420	90	71	2...	...	15	10	6	3	...	13	3	1	3	4	21	9	9	...	...	...	10	23	...	...	...	...	...	203	83	1,041
Nungambakkam	652	26	25	1	2	...	10	2	34	...	...	6	4	5	...	13	...	...	...	...	...	...	...	...	...	...	...	...	108	39	489
Mirsaibpet	1,258	61	38	3	5	...	27	11	1	...	...	8	1	1	1	40	1	...	...	...	...	18	11	1	1	1	1	1	174	50	973
Muthialpet	876	35	49	3	...	...	32	5	1	4	...	18	...	...	...	36	...	...	...	...	...	...	...	1	21	...	...	...	175	138	528
Royapuram	1,028	39	44	...	...	1	11	2	9	...	...	4	4	...	...	39	...	310	...	...	...	...	...	...	5	...	...	...	138	60	791
Perambur	860	30	14	2	2	...	15	2	21	1	...	...	...	2	3	13	...	1	8	1	...	...	...	8	...	...	...	...	91	82	651
Egmore	720	25	25	...	...	1	...	5	2	1	...	...	2	2	...	22	...	22	3	...	...	...	...	...	13	...	...	...	98	81	516
Royapettah	594	17	22	3	...	2	1	...	13	...	2	20	...	6	...	10	...	...	5	1	...	...	...	...	5	...	...	...	90	102	385
Choolai	298	8	23	...	...	1	...	6	...	...	...	2	...	...	...	11	...	6	1	...	...	...	...	...	...	...	...	...	48	8	229
Total	11,430	477	463	45	10	7	165	60	131	14	4	110	25	29	8	8	320	12	95	50	3	2	2	29	127	1	1	1	1,722	1,156	8,075

STATEMENT X.

Showing the number of cases taken on for Milk Supply during the year 1930.

Centres.	No. taken on for Milk Supply.	Yearly attendance.	Average daily attendance
Triplicane ...	56	13,144	36.0
Washermanpet ...	38	12,563	34.0
Purasawalkam ...	87	15,936	43.6
George Town ...	72	14,267	39.08
Nungambakkam ...	56	12,568	44.8
Mirsaibpet ...	73	17,122	47.0
Muthialpet ...	72	13,459	36.87
Royapuram ...	66	14,301	39.0
Egmore ...	67	13,551	36.8
Perambur ...	84	15,807	43.3
Royapet ...	43	7,559	21.0
Choolai (Started on 22—12—30) ...	3	57	5.7
Total ...	717	1,50,334	427.15

STATEMENT XI.

Showing the number of children who were given free baths during the year 1930.

Centres.	New admissions.	No. of baths given to babies.	Average.
Triplicane ...	720	12,538	34.0
Washermanpet ...	231	13,503	13.0
Purasawalkam ...	291	7,374	20.2
George Town ...	239	9,475	25.9
Nungambakkam ...	577	14,401	39.45
Mirsaibpet ...	819	9,801	24.1
Muthialpet ...	233	12,891	35.31
Royapuram ...	1,314	12,082	33.0
Egmore ...	108	9,524	26.09
Perambur ...	252	5,913	16.2
Royapet ...	300	10,130	28.0
Choolai (Started on 9—10—30) ...	119	1,192	14.2
Total ...	5,203	1,18,824	309.45

STATEMENT XII.

Showing the details of Health Propaganda Work done by the Staff in 1930.

Centres.	No. of out-door lectures delivered.		No. of lectures with aid of Magic Lanterns.		Total attendance at the lectures.		Subjects.														Remarks.												
							Small-pox.	Measles.	Chicken-pox.	Influenza.	Malaria.	Typhoid.	Tuberculosis.	Maternity & Child-Welfare.	Personal Hygiene.	Domestic Hygiene.	Cholera.	Dysentery.	Ankylostomiasis.	Leprosy.		Mosquitoes.	Water supply.	Plague.	Round worms.	Other diseases.	Ventilating houses.	Worms.	Flies.	First aid.	Cinema.	Total.	
Triplicane ...	24	24	3,170	8	2	4	2	4	2	2	2	2	2	2	1	1	1	1	1	1	...	1	...	1	1	2	50	Average attendance per lecture = 53.
Washermanpet ...	30	17	1,477	4	...	...	...	...	...	...	2	...	3	3	3	2	3	3	2	2	5	1	...	...	...	...	...	...	...	...	...	48
Puarasawalkam ...	9	13	1,600	5	...	...	...	...	...	...	5	...	1	2	1	2	2	2	2	1	...	...	...	...	...	...	...	...	...	...	...	22
George Town ...	24	23	2,721	3	1	...	...	...	...	...	6	...	2	4	5	2	3	3	4	1	3	1	...	...	...	...	...	...	...	...	...	47
Nungambakam ...	26	10	1,748	2	...	...	...	...	...	...	3	...	2	4	2	4	3	3	2	4	1	2	1	...	...	...	...	...	...	...	...	36
Mirsabibpet ...	22	9	1,916	6	...	...	...	...	...	...	1	...	...	4	...	...	...	2	2	1	...	...	...	...	...	...	...	...	...	...	...	31
Muthialpet ...	23	18	2,486	5	...	...	...	...	...	...	5	1	...	3	7	...	2	3	2	1	2	1	...	...	...	...	...	...	...	...	...	41
Royapuram ...	28	10	1,690	7	...	...	...	...	...	...	4	...	2	5	1	...	...	3	3	6	3	5	1	...	...	...	...	...	...	...	...	38
Perambur ...	28	18	3,593	3	...	...	...	...	...	...	4	...	3	4	5	2	1	1	4	1	3	3	2	...	2	9	...	...	...	...	...	56
Egmore ...	16	12	950	2	...	...	...	...	...	...	3	...	2	4	...	...	...	1	1	2	1	1	...	...	...	...	...	...	...	...	...	28
Royapettah ...	17	25	2,055	4	...	...	...	...	...	...	3	...	5	5	4	2	2	2	1	2	3	...	2	...	...	...	...	...	...	...	...	42
Choolai ...	6	6	574	...	...	...	...	...	...	...	1	...	2	2	1	1	1	...	...	1	1	1	...	...	...	...	...	...	...	...	...	12
Total ...	263	185	23,980	49	3	2	6	38	9	26	46	33	22	30	10	23	20	26	13	2	4	67	5	5	17	1	6	454					

STATEMENT XIII.
Showing the Births, Infantile Mortality and Infantile Mortality rate during 1930 and Infantile Mortality rate from 1921 to 1929.

Division.	Infantile Mortality rate for										Remarks.				
	No. of Births registered excluding Still-births.		Infantile Mortality.	Infantile Mortality rate.	Infantile Mortality rate for										
	1930				1929	1928	1927	1926	1925	1924		1923	1922	1921	
1	940	36	233	247.9	296.9	352.2	253.6	330.3	293.1	294.8	319.9	286.2	308.9		
2	1242	96	282	227.1	252.1	278.8	225.2	271.6	277.7	297.6	277.9	283.6	285.5		
3	1135	52	267	235.2	302.7	316.5	253.0	353.2	288.4	285.8	273.2	333.1	286.1		
4	945	49	270	283.3	269.7	343.4	251.9	323.3	256.6	286.2	238.3	304.0	331.2		
5	293	12	93	317.1	373.0	502.1	332.0	379.9	370.7	381.4	405.0	342.3	456.9		
6	420	24	109	259.5	231.2	238.0	232.4	295.3	361.6	390.0	287.0	385.7	348.8		
7	489	22	104	212.7	259.0	265.3	239.4	295.3	318.5	300.4	305.4	328.4	390.1		
8	174	11	42	241.4	310.3	328.8	289.8	258.6	438.0	437.0	369.6	342.5	476.2		
9	766	37	192	250.6	250.0	323.8	266.1	281.8	303.7	312.2	289.7	301.7	331.2		
10	745	16	185	248.3	235.5	341.5	290.1	833.3	381.8	282.9	271.0	373.6	336.0		
11	191	10	55	288.0	315.4	407.6	369.4	304.3	359.8	401.3	329.7	433.7	522.6		
12	857	43	226	263.7	293.6	367.8	255.8	323.4	303.5	318.5	325.8	309.1	319.6		
13	649	44	196	302.0	289.8	337.8	308.7	309.4	391.8	365.9	295.0	428.1	376.2		
14	109	5	39	357.8	474.4	465.9	319.8	388.2	284.1	452.8	295.7	500.4	339.8		
15	559	39	159	284.4	292.0	301.2	255.7	376.7	377.9	318.4	309.0	360.9	296.9		
16	1758	69	410	233.2	283.7	296.9	281.4	271.8	195.8	232.5	203.2	261.7	220.3		
17	1186	53	325	274.0	288.8	281.2	279.4	284.9	344.9	253.8	241.0	329.9	289.9		
18	1118	43	272	243.3	248.7	261.0	212.7	248.5	251.0	262.5	205.0	306.7	203.8		
19	861	32	202	234.6	266.1	275.6	232.9	267.6	258.6	269.5	236.2	332.1	269.5		
20	1438	99	304	211.4	191.1	222.1	192.1	238.9	231.8	197.3	232.0	258.6	229.3		
21	1818	35	162	198.0	223.3	232.1	209.3	235.6	274.6	236.5	250.0	310.7	229.6		
22	947	38	194	204.9	204.7	239.1	211.9	214.6	250.3	216.8	215.4	281.7	256.4		
23	1199	44	274	228.5	258.4	271.7	283.3	306.8	258.2	246.9	249.6	323.6	267.0		
24	1369	70	355	259.3	259.2	292.6	248.6	251.7	236.1	236.4	214.5	255.4	249.0		
25	747	55	167	223.6	166.2	230.9	177.6	204.2	162.5	206.6	221.9	218.4	206.6		
26	686	33	171	249.3	225.4	279.3	224.5	255.7	247.9	261.6	216.5	275.5	230.8		
27	858	39	231	269.2	303.9	330.8	227.1	288.3	272.3	299.7	249.7	302.4	266.8		
28	1127	76	294	260.9	235.4	220.7	190.3	254.3	282.6	238.5	260.5	312.6	239.3		
29	1252	50	261	208.5	195.9	251.3	203.0	241.3	267.1	239.0	287.2	296.0	251.3		
30	776	28	184	237.1	324.9	248.0	258.3	254.5	313.0	261.5	252.2	218.9	254.4		
Total	25662	1260	6258	243.9	256.6	286.8	237.6	279.3	278.8	264.1	254.0	308.0	281.9		
General Death rate ...			42.4	42.3	45.0	47.3	41.7	37.8	42.7	38.5					

Table showing details of all Births in the Municipal Divisions in which

Centre.	Municipal Divisions.	Total No. of Births from 1-1-1930 to 31-11-1930.	No. of cases conducted by Corporation Midwives.	Percent				
				1930.	1929.	1928.	1927.	1926.
Royapuram ...	1	940	553	58.8	41.5	39.5	41.9	39.3
Washermanpet.	2	1,242	630	50.7	38.08	33.7	33.8	33.1
	3	1,135	534	47.04	48.5	41.9	43.4	39.6
	4	953	344	36.09	37.9	33.3	30.1	28.5
Muthialpet ...	5	293	161	54.9	32.37	32.5	21.3	15.6
	6	420	141	33.5	26.8	22.5	23.9	15.0
	7	489	364	74.4	57.6	50.6	46.3	56.7
	9	766	376	49.08	32.36	30.8	30.75	23.8
George Town...	8	174	51	29.3	22.06	16.2	18.8	11.0
	10	745	379	50.8	50.41	31.4	36.3	31.8
	11	191	16	8.3	3.84	6.7	3.8	1.1
	12	857	382	44.5	40.04	38.1	37.75	29.8
	13	649	294	45.2	42.21	35.1	31.1	28.0
Perambur ...	14	109	34	31.1	41.02	31.5	38.8	67.0
	15	559	163	29.1	22.51	20.8	9.4	7.4
	16	1,758	800	45.5	47.1	28.0	25.2	22.7
Choolai ...	17	1,186	143	12.5	40.76	40.4	37.2	31.0
	18	861	51	5.9	37.56	39.3	35.6	35.8
Purasawalkam..	19	1,118	442	39.5	21.46	19.6	16.1	12.9
	20	818	233	28.4	29.67	22.3	18.3	16.6
Egmore ...	21	1,438	238	16.5	21.53	8.8	5.1	5.2
	22	1,199	385	32.1	37.85	16.6	21.0	17.4
Nungambakam.	23	947	373	39.3	64.2	28.9	26.0	28.5
	24	1,369	897	65.5	55.48	47.9	49.2	41.1
Triplicane ...	25	747	344	46.5	37.24	35.3	32.2	32.5
	26	858	442	51.5	42.22	41.7	39.85	38.1
Mirsaiibpet ...	27	686	236	34.4	26.22	22.6	22.15	25.9
	28	1,127	654	58.3	36.13	41.6	40.8	36.0
Royapet ...	29	776	333	42.9	27.09	27.1	26.2	22.0
	30	1,252	630	50.3	10.87	28.5	21.7	21.8
Total		25,662	10,623	41.39	37.74	30.5	30.0	27.3

Note.—1. The cases conducted in hospitals are as follows. —

1. Government Maternity Hospital	2,858
2. Victoria Goshia and Caste do	1,562
3. Raja Sir Ramaswami's do	1,962
4. Kalyani do	522
5. Christiana Rainy do	611
6. Government Indian Medicine School	175
7. Commanding British Military Fort St. George	...
8. Government Mental Hospital	1
9. Lady Ampthil Nurses' Institute	27
10. Government Tuberculosis Hospital	1
11. Dr. Voegili Aray Nursing Home	5
12. Dr. Rungachari's Nursing Home	8

Total ... 7,732

MENT XIV.

the Scheme was working for one year ending with 31st December 1930.

age to Total Births.								Remarks.
1925	1924	1923	1922	1921	1920	1919	1918	
20.1	13.0	7.1	...	...	8.9	...	...
31.1	10.9	19.2	12.4	15.7	20.9	...	...
39.4	38.3	25.5	29.7	35.8	20.5	...	...
31.7	38.4	24.2	21.2	22.1	...	...	...
12.5	6.7	5.5	1.9	...	...	...	...
16.4	1.6	12.6	7.4	...	...	...	...
41.3	27.6	18.0	6.4	...	...	...	...
23.5	18.8	15.0	7.9	...	...	...	...
3.1	13.4	19.6	1.3	...	...	...	...
31.5	28.3	24.0	11.4	...	...	...	...
3.9	2.5	7.6	5.0	...	...	...	...
31.1	24.4	27.4	15.8	...	...	...	...
23.7	19.3	20.0	10.0	...	...	...	...
21.3	6.2	2.8	...	...	...	...	...
8.5	6.4	9.3	6.5	...	...	...	...
21.5	20.8	25.3	22.4	18.6	15.9	...	...
30.7	22.1	26.4	27.9	26.7	18.4	...	...
26.7	28.7	28.3	25.1	24.7	25.2	...	...
12.95	12.0	12.9	12.6	8.6	10.3	...	...
14.0	25.6	14.6	13.3	9.3	13.3	...	...
5.6	3.7	4.4	4.1	1.8	3.5	...	...
16.5	42.0	11.3	10.1	8.2	6.6	...	...
28.1	14.5	3.8	3.8	...	...	...	...
38.9	29.7	38.2	40.4	41.5	42.0	...	...
25.8	11.8	35.5	33.1	30.7	28.5	...	...
35.3	45.9	35.6	31.2	28.1	37.9	...	...
19.3	25.1	16.8	19.0	20.7	16.3	...	...
34.2	4.9	19.4	19.1	16.2	14.9	...	...
14.2	21.0	4.7	4.2	...	...	...	...
20.35	14.9	3.0	9.9	9.4	11.0	...	...
25.1	21.0	19.0	19.5	21.7	21.3	10.4	11.0	

Note 2.—Percentage of hospital births to total births.

1930	1929	1928	1927	1926	1925	1924	1923	1918
30.09	34.01	32.5	32.6	29.8	30.0	28.5	23.8	16.9

Note 3.—Percentage of cases in care of C.W.S. to total births.

1930	1929	1928	1927	1926	1925	1924	1923	1922	1921
41.39	37.74	39.5	30.0	27.3	25.1	21.0	19.0	19.6	21.7
	1920	1919	1918						
	21.3	10.4	11.0						



