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

#### **Contributors**

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## Annual Report

of the

Bealth Department (Corporation of Madras)

## For the Year 1932

1Bp

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

bealth Officer.

MADRAS: PRINTED BY THOMPSON AND CO., LTD.

1933.





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## For the Year 1932

By

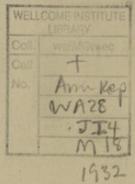
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### Introduction.

Commissioner.

Sir,

I have the honour to submit herewith the Annual Report relating to

the health of the City of Madras during the year 1932.

I desire to acknowledge figures and information for inclusion in the report from the Lady Superintendent, Child Welfare Scheme, Public Analyst, Corporation, Water Analyst, School Medical Inspectors, Veterinary Officer and Medical Officers in charge of Malaria and Infectious Diseases Hospitals. I am also grateful to the heads of several voluntary Hospitals and Dispensaries and other charitable institutions who have supplied information for inclusion in the Report.

A perusal of the information scattered throughout the following pages embodying the activities of the several branches affords a good indication of the development of the department during recent years and of the co-operation that

exists among them.

A review of the health of Madras during a particular period should contain a discussion of the population, birth-rate and death-rate as they form a true index of the extent of public health and other activities.

Population:—The estimated mid-year population for 1932 was 6,64,900 as compared with 6,47,230 in 1931 i.e., an increase of 17,670. The several rates of vital statistics have been prepared for the purpose of comparison on the basis of the estimated population.

Births:—The total number of births 27,996 shows an excess of 2,258 as compared to the births in 1931. The birth-rate was 42·1 as compared with 39·8 in 1931. The Hindu community recorded the highest birth-rate which had been the privilege of Mussalman community hitherto.

Deaths:—The total number of deaths in 1932, 22,290 shows a decrease of 872 as compared to the deaths in 1931. Death-rate for the year was 33.5 as against 35.8 in 1931.

An important factor from the point of view of the City's health is the "natural increase" i.e., the excess of births over deaths (5,706). This is the highest recorded during any year for the last 30 years.

Divisional deaths.—The highest mortality 41.7 was recorded in Tondiarpet and the lowest in Nungambakam 24.9. Divisions inhabited by labouring classes record comparatively higher death-rates. Washermanpet, Harbour, Seven Wells, Choolai, Chintadripet, Thiruvateeswaranpet, Meersahibpet and Royapettah are again in the fore-front in regard to high mortality. A reduction in this behalf can only be expected to proceed paripassu with improvements in housing.

Infantile mortality.—The infantile mortality rate, another sensitive index of communal health, was 236.5. This is the lowest recorded in any year in Madras. In spite of some diminution in the infantile mortality rate during the past few years it should be noted that the figure is still regrettably high as may be seen when contrasted with the rate for Madras Presidency 182.9 for 1932. On account of a variety of reasons, the infantile mortality rates in Madras City have been high. Thus during the ten yearly periods 1900 to 1910, the average infantile mortality rate was 298.7. During the period 1910 to 1920 it was 299.4; during 1920 to 1930, 272.6. A substantial reduction in infantile mortality rate is possible only with improvement in housing and a rise in the standard of life of the average citizen.

Infectious diseases:—On the whole it is gratifying to note that the health of the City during the year was satisfactory although there was a slight

increase in the incidence of small-pox and measles. The reduction of general death-rate was accompanied by a decrease in the number of deaths from 8 principal zymotic diseases. The incidence of cholera was the lowest on record. Only 5 persons died of cholera during the year. Decline in mortality from diarrhoea, dysentery, and typhoid noted in 1931 has been maintained. Deaths from malaria showed a decrease of 112 deaths over 1931.

School Medical Service:—The work of this Section continued to be satisfactory. 1690 under-nourished children improved after treatment. 775 cases of chronic stomatitis were cured. 82 pupils under-went operation for the removal of enlarged tonsils. 876 cases of enlarged tonsils were cured by treatment at the Corporation Dispensaries. 120 cases of early leprosy were detected among school children. Out of the 91 that under-went treatment,

improvement was noticed in 31 cases.

One of the saddest features of the report on school medical work is the enormous amount of health defect noticed amongst pupils despite previous inspections and advice. The failure of the parents to respond adequately to the requirements of the scheme has been the chief cause. Out of 27,506 parents, only a third attended the school during Medical Inspection. Although the attendance of parents in 1932 was better than that of 1931—9433 as against 4517—the parents in the City have again to be reminded that they are not doing their share. During the year under report, at the instance of the Health Propaganda Board a Conference of Medical Inspectors was held in the City. The programme of health service in Schools as practised in the Presidency and elsewhere came within the purview of the Conference which has given a new impetus to the movement.

Food Inspection:—The work of this Section shows increased activity. 1160 samples were taken as against 730 in 1931. The percentage of adulteration has fallen from 41·7 in 1931 to 32·8 in 1932, illustrating the deterrent effect of the working of the Act. There was an improvement in the quality of the articles of food dealt with under the Act particularly in coffee, tea and ghee. A greater degree of adulteration was noticed in gingelly oil.

Sanitary improvements.—Despite extreme financial depression, various improvements have been effected. 2043 dry latrines were converted into flush out latrines chiefly at Triplicane and Egmore. 3063 dwelling houses have been rendered fit for human habitation. Sanitary flush-out latrines were

installed in 7 Factories.

30 public flush-out latrines were constructed by the Corporation. Reclamation of marshy lands at Choolai and Perambore continued. All the private markets in the City continued to be under strict control. Conservancy of 3 of

them was handed over to the Corporation by the owners.

Conservancy.—Progress noticed in 1931 was maintained and the work of the Department has been one of great activity throughout the year. 3 more lorries have been purchased during the year. The state of conservancy in George Town has definitely improved and this area can be ranked with any of the best conserved Cities in the East.

Preparation of compost was first started as an experiment at Korukupet and Oteri Dumping Grounds at the instance of Col. Webb, the Director of Public Health, by utilising night soil and street rubbish. Fly breeding noticed in the beginning disappeared under suitable measures. The experiments have been a great success. The valuable manure so prepared was sold to various individuals. Compost is a first class manure for gardening and cultivation. There is no doubt that the method may point to a more economic disposal of the City's garbage and nightsoil if there was adequate demand for the manure prepared.

Housing:—Reference was made in the report for 1931 to the fact that the population of Madras had increased by 22.8 per cent. during the last decennium without corresponding increase in the number of sanitary houses. Congestion has become worse than what it was in previous years. More and more huts are springing in the out-lying divisions increasing the extent and number of slums therein. Usually in all cities in the West the out-lying divisions return a lower mortality. In Madras it is the reverse with the exception of Nungambakam. It is undoubtedly due to the large number of cherries and

slums that exist in the out-lying divisions. Slum improvement has now become the most vital issue for Madras transcending other civic problems. Unless this is tackled boldly and comprehensively, the health of the City as a whole may be in

peril.

Madras.

Dated 1-9-33.

In conclusion, I desire to record my appreciation of the work done by the Corporation health services. The amount of work noted here could never have been possible but for the high sense of duty of the clerical and out-door staff of the Department.

I have the honour to be

Sir,

Your most obedient Servant,

C. S. GOVINDA PILLAI,

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

Health Officer.

Forwarded to the Council.

D. D. WARREN,

Commissioner,

6-9-33.

## SUMMARY OF VITAL STATISTICS FOR 1932.

Area		4	19,728	acres	
Estimated popul	ation (middle of 1932	2)	6,64,900		
Population (Cen	sus 1931)		6,47,230		
Average density	per acre		32.8		
Inhabited house	s (Census 1931)		73,845		
Births 27,996	Birth rate	42·1 per	1000 Es		d ation.
Deaths 22,290	Death-rate	33-5 per	1000	Do	
Natural increase 5,706	Rate of increase	8.6 per	1000	Do	
Deaths of infants under one year of age 6,622	Infantile death-rate.	236·5 pe	er 1000 B	irths.	
Deaths from child birth 279	Maternal death-rate	10.0 pe	r 1000 B	irths.	

### Deaths from principal diseases.

Cholera		5	Death-rate per 1000 Estimated population.	0.008
Diarrhoea & Dysentery	2	2644	Do	4.0
Small-pox		176	Do	0.3
Measles		16	Do	0.02
Malaria		165	Do	0.3
Enteric fever		101	Do	0.2
Phthisis		747	Do	1.1
Respiratory Diseases	5	5509	Do	8.3.

#### odd to daso req belyiTAL STATISTICS, edn more

The important features of the state of public health in the City of Madras during 1932 as revealed by the statistical records of Births and Deaths and compared with the previous year 1931 are summarised as follows:-

(i) Increase in the birth-rate from 39.8 per mille to 42.1 per mille. (ii) Decrease in the death-rate from 35.8 per mille to 33.5 per mille. (iii) Decrease in the Infantile mortality rate from 248-3 to 236-5.

(iv) Dec

Decrease in the mortality under:—	
(a) Cholera	(-148)
(b) Malaria	(-112)
(c) Enteric Fever	(- 65)
(d) Other Fevers	(102)
(e) Diarrhoea and Dysentery	(-102)
(f) Phthisis	(- 96)
(g) Respiratory diseases	(-234)
(h) Deaths from child-birth	(- 20), and,
ncrease in the mortality under:-	
(a) Small-pox	(+152)
(b) Meneles	1 121

It is gratifying to note the decreases in the general mortality rate and infantile mortality rate as well as reduction under all the diseases except Small-pox and Measles. The state of public health was no doubt more satisfactory during the year under review than during the previous year. A natural increase of 8.6 per mille was recorded during 1932 compared with

4.0 per\_mille during 1931.

12.635

Meteorology.—A statement showing the atmospheric conditions recorded during 1932 is given in the Annual Form A (page 44). The maximum temperature varied from 99.1°F in June to 82.9°F in December. The minimum temperature varied from 67.7°F in January to 82-0°F in June. The lowest degree of humidity was recorded in June (57 degrees) and the highest in November (88 degrees).

Rainfall.-The total rainfall during 1932 was 46.59 inches compared with 58:53 inches in 1931. There was rainfall in all the months of the year except January and March. The highest rainfall was recorded in October (21-63 inches) and the lowest in April (0.58 inches). The last quarter ending December recorded the highest rainfall of 36-31 inches and the first quarter the lowest

of 0.69 inches. During the whole year there was rainfall on 100 days.

2011 Population.—The area of the city is 19,728 acres and the estimated population during 1932 is 6,64,900. The general birth and death-rates given in this report are based on the estimated population. The various statistical statements appended to this report are worked out as usual on the Census figures of 1931. The birth and death-rates during the year under report calculated on the estimated population are 42.1 and 33.5 per mille respectively against 43.3 and 344 per mille calculated on the Census population of 1931.

The rates prepared on the estimated population alone represent the

correct state of affairs.

Registration of Statistics.—16 Licensed Medical Practitioners designated as Medical Registrars of Births and Deaths attended to registration of births and deaths during the year 1932.

One prosecution was launched during the year under report for failure

to register death and a fine of Rupee one was imposed for this default.

Births.—During the year 1932, 27,996 births were registered with an excess of 2,258 births over the preceding year 1931. The annual birth-rate calculated per mille of estimated population was 42·1 compared with 39·8 in

1931, the mean ratio of the previous five years being 38.0 per mille.

Among 27,996 babies registered during 1932, 14,371 were males and 13,625 females; thus 106 male babies were born for every 100 female babies against 107 in 1931. Preponderance of male births was recorded in 22 divisions, the variations ranging from 100.2 to 125.7. In the remaining 8 divisions, the female births exceeded the male births, the ratio of males to 100 females varying from 90.7 to 99.8.

The number of illegitimate births was 432 or 1.6 per cent. of the total births in 1932 against 355 or 1.4 per cent. in 1931.

De la Contraction de la contra		193		
1931.	-	Legitimate.	Illegitimate.	Total
13,299 12,439	Males Females	14,151 13,413	220 212	14,371 13,625
25,738	Total	27,564	432	27,996
39-8	Rate per 1000 living.	41.5	1.6	42-1

Seasonal variation.—The largest number of births was registered in October (2710) and lowest in February (1613). The distribution of births during the different quarters of the year is as follows:—

Quarters.		No. of births registered.	Percentage to Total.
First Quarter Second Quarter Third Quarter Fourth Quarter		 5,503 7,138 7,624 7,731	19·7 25·5 27·2 27·6
	Total	 27,996	100-0

Local variation.—The Egmore division recorded the highest birth rate of 55·1 per mille according to census population of 1931 as in the previous year. The reason for this is obviously the attraction that the Government Hospital for women and children has for pregnant women in and outside Madras. The lowest birth-rate of 24·6 per mille was returned by the Sowcarpet division as in the previous year; and the reason therefor is that this division is a business centre.

Compared with 1931, 28 divisions recorded increase in the birth-rate, the difference of increase ranging from a minimum of 0.5 to a maximum of 2.2 per mille. Kilpauk division recorded a decrease of 0.7 per mille over the previous year and the rate of Mylapore division was the same in 1931 and 1932.

In 28 divisions the birth-rates exceeded the death-rates, the difference of increase ranging from a minimum of 0.3 per mille in Esplanade division to a maximum of 22.8 per mille in Egmore division. This excess of birth-rates over death-rates adds to the growth of the population in these divisions. In the remaining two divisions namely Harbour division and Sowcarpet division the death-rate exceeded the birth-rate by 4.4 and 3.6 per mille respectively.

Birth-rate in Communities.—The birth-rates among the different communities and among the principal sub-divisions of the Hindu Community are given in the Tables C & D on pages 72 and 73.

Communities.		Estimated Population
Hindu	A STATE OF	43.2
Mussalman		42.5
Anglo-Indian		36.5
Indian Christian		83.6
European	***	15.2
A11		The state of the s
All communities	The state of the s	49.1

During the year 1932, the Hindu community recorded the highest birth-rate which had till then been the privilege of the Mussalman Community. The European Community recorded, as usual, the lowest rate.

Still-Births.—During 1932 the number of still-births registered was 1326 against 1318 in the preceding year 1931. This represented 47.3 per 1000

live births compared with 51.2 per 1,000 births in 1931.

Deaths.—The deaths of 22,290 persons were registered during the year under review—872 deaths less than in the preceding year 1931. The annual death-rate was 33.5 per mille of estimated population, being 2.3 per mille less than in the previous year and 2.8 per mille less than the quinquennial average.

Among 22,290 persons whose deaths were registered during 1932, 11684 were males and 10606 females. As usual male deaths predominated over female deaths; 110 deaths among males for every 100 female deaths compared with 105 male deaths for every 100 female deaths in 1931. Preponderance of deaths among males over female deaths occurred in 22 divisions, the variations ranging from 100.3 in Triplicane division to 123.6 in Kilpauk division. In the remaining 8 divisions where the male deaths fell below female deaths, the ratio of male deaths to 100 female deaths varied from 69.0 in Mafuskhan division to 97.2 in Muthialpet division (Annual form II on page 46).

Seasonal Variation.- The largest number of deaths was registered in December (2323) and the lowest in April (1572). The incidence of mortality was highest during the last quarter and lowest in the third quarter of the year as

will be evident from the accompanying table.

Quarters.	101	Deaths registered.	Percentage to total.
First quarter	701	5,574	25.0
Second quarter		5,145	23-1
Third quarter		5,047	22.6
Fourth quarter		6,524	29.3
Total		22,290	100-0

Local Variation.-The highest death-rate was returned by the Tondiarpet division (41.7 per mille based on Census population 1931,) and the lowest by Nungambakkam division (24.9 per mille). Except Tondiarpet division which recorded death-rate above 40, the remaining 29 divisions returned death-rates below it; and among these, eight divisions recorded rates between 35 and 40; 13 divisions between 30 and 35, and the rest below 30 per mille. The social, economic and housing conditions of the poorer classes were responsible for high death-rates.

Compared with 1931, 21 divisions recorded decrease in the death-rate, the decrease varying from 0.1 to 8.0 per mille. In the remaining 9 divisions which showed increase, the minimum and maximum increases were 0.3 and 3.2 per mille respectively.

#### DEATH-RATE IN DIFFERENT COMMUNITIES.

Community. I		000 Estimated population
Mussalman	•••	37.8
Hindu		34.3
Indian Christian	STATE OF THE PARTY	23.9
Anglo-Indian		19.9
European		10.1
Others	target out out the	1.0
All commu	nities	33-5

The highest rate is still returned by the Mussalman Community. The reasons for this have been dealt with in previous reports,

Mortality in Age-Groups.—The following statement shows the number of deaths at each age-group in different quarters of the year:—

Age-groups.	Age-groups. Quarter ending.					Percentage	
to and paret be	March.	June.	September,	December.	1932.	total deaths.	
Zinder Lace	1/01	2540	1019	2049	6622	29.7	
Under 1 year. 1 to 5 years.	794	1540	1612 842	1140	3609	16.2	
5 to 10 ,,	197	161	151	219	728	97073.3	
10 to15 ,,	128	96	80	120	424	olmm 1.9	
. 15 to 20 ,,	168	145	151	185	649	2.9	
20 to 30 ,,	493	438	395	502	1828	8.2	
30 to 40 ,,	450	403	353	403	1609	7.2	
40 to 50 ,,	388	365	366	425	1544	6.9	
11 50 to 60m,	408	339	318	398	1463	6.5	
60 and above.	1127	825	779	1083	3814	17-2	
ni sa	-			117			
VALUE OF THE STATE OF	*****	detue.	E047	0291	99 900	100.0	
Total.	5574	5145	5047	6524	22,290	100.0	

years of age and 17.2 per cent. among persons above 60 years of age. Setting aside these periods, the highest percentage to the total deaths occurred in the age-groups of 20 to 30 years followed by the age-groups of 30 to 40 and 40 to 50 which are periods of great economic value in life.

Mortality rate in Age and Sex:—The specific death-rates at different age-groups and in sexes are given in the following statement:—

Age-group.	Death-rate in 1932 per 1000 Estimated population in each age-group.					
and I all limit (	Male.	Female.	Both sexes.			
Under 1 year	246.2*	226.3*	236.5*			
1 to 5 years	55.3	56.2	55.7			
5 to 10 ,,	10.5	9.8	10.2			
10 to 15 ,,	6.1	6.3	6.2			
15 to 20 ",	7.2	11:2	9.2			
20 to 30 ,,	11.4	13.9	12.6			
30 to 40 ,,	13.9	16.0	14.8			
40 to 50 "	24.3	21.2	23.0			
50 to 60 ,,	46.4	34.7	41.0			
60 years & above.	166-8	195.3	179-6			
Total	33.3	33.8	33.5			

<sup>\*</sup> Calculated on 1,000 births registered during the year.

The trend of the mortality-rate in different age-periods under both sexes has continued to be the same as in previous years. The highest mortality rate has occurred at both the extremes of life. The rate recorded in the age-group of 1 to 5 years is the second highest. There is a sudden and marked decrease in the next age-group and the rate recorded in the age-group 10-15 is the lowest. The rates in the other age-groups assume a gradual and steady increase up to the age of 50 after which the rise is abrupt and pronounced.

Infantile Mortality:—During the year 1932, the deaths of 6,622 children under one year of age were registerd. The infantile mortality-rate was 236.5 per 1,000 births registered during the year under report compared with 248.3 in 1931, the quinquennial average being 254.6. The rate obtained during the year under review is the lowest recorded in the city.

The following is the statement of infantile deaths and rates from 1922

2	•	-				
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Deaths under one year.	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Number.	6,669	5,837	6,148	6,431	6,145	5,888	6,806	5,933	6,258	6,391	6,622
Rate per 1000 Births	308-0	254.0	264-1	278-8	279-3	237-6	286-8	256.6	243.9	248-3	236-5

The distribution of the infantile deaths in the different periods of first year of life is as follows:--

Age-periods.	Age-periods. No. of deaths.	
Under 7 days	1,451	21.9
7 days and under 1 month	973	14.7
One month & under 4 months.	1,583	23.9
4 months & under 7 months	902	13.6
7 months & under 10 months.	1,222	18:5
10 months and under 1 year	491	7.4
Total	6,622	100.0

About 60 per cent, of the total deaths in children under one year of age occurred during the first four months of life. This is due to the fact that sickness in the mother or father or in both, their ignorance, their low social and poor economic status in life adversely affect the health of the infants either during the period of pregnancy or after delivery. Unless the health of the mothers is regulated and improved during the period of maternity and skilled maternity aid is availed of concurrently with improvement in the social and economic scale in life, no reduction in the mortality among infants during the first year of life is likely to take place.

Causes of Infantile Deaths:—The infantile deaths were chiefly due to

Causes of Infantile Deaths:—The infantile deaths were chiefly due to Respiratory Diseases (2,040), premature births (1911), Dysentery and Diarrhoea (726), Fever and convulsions (773), Small-pox (32) and debility (52). The ignorance of the mother, improper feeding, exposure to insanitary surroundings formed the exciting causes for respiratory and bowel diseases.

Seasonal Variation:—During the month of December the highest mortality-rate was recorded (283.6) and the lowest in July (196.2). The distribution of infantile deaths during the different quarters of the year is as follows:—

Quarters.	Infantile deaths in 1932.	Percentage to total
First Quarter	 1,421	21.5
Second Quarter	 1,540	23.3
Third Quarter	 1,612	24.3
Fourth Quarter	 2,049	30.9
Total	 6,622	100.0

Local Variation:—The highest infantile mortality-rate was recorded in Harbour division (335.5) followed by Sowcarpet division (333.3) and Esplanade division (310.6). The lowest infantile mortality-rate was returned by Nungambakkam division (170.0).

Compared with 1931, 16 divisions recorded decrease in the infantile mortality-rate.

Infantile Mortality-rate in different Communities:—The infantile mortality-rates among the different communities during 1932 are as follows:—

Community.		Infantile death-rate per 1000 births in each community.
European Anglo-Indian Indian Christian Hindus Mussalman		 125·0 103·0 130·5 254·0 172·3
	All Communities	 236-5

The Hindu community recorded the highest death-rate and the Anglo-Indian community the lowest rate.

The infantile death-rates among the sub-castes of the Hindu commu-

nity are furnished below :-

Caste.	Infantile death-rate per 1000 births in each caste.
Brahmins	189.3
Chetty	218-1
Vellala or Mudaliar	220.9
Balijah or Naidu	218-3
Vannia or Naicker	288-8
Adi-Dravida	210.8
Patnavar	424-3
Yaddeval or Eddaiyer	179-8
Viswa Brahmin	210.0

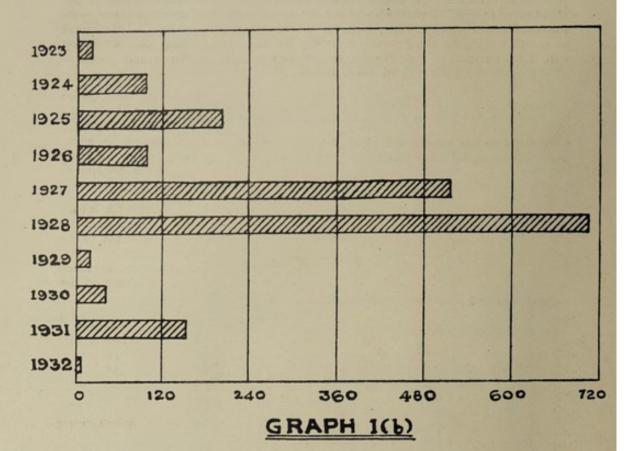
General History of Diseases.—The following statement furnishes the deaths from principal diseases during the last five years:—

	Deaths in					Increase or de- crease in 1932	
Diseases.	1928	1929	1930	1931	1932	as com	
Cholera	708	16	43	153	5	-	148
Dysentery and Diarrhoea.	3,931	3,127	3,056	2,746	2,644	_	102
Plague					1	+	1
Small-pox	251	506	188	24	176	+	152
Measles	59	68	16	1 3	16	+	13
Malaria	1,599	681	283	277	165	-	112
Enteric fever	177	130	126	166	101	-	65
Other fevers	1,555	1,731	1,961	1,748	1,646	_	102
General Respiratory dis-							
eases	6,879	5,324	5,256	5,743	5,509	-	234
Tuberculosis	1,812	1,371	1,075	1,020	917		103
Deaths from child-birth.	366	304	328	299	279	-	20
All other causes	9,378	9,157	10,507	10,983	10,831	-	152
Total	26,715	22,415	22,839	23,162	22,290	-	872

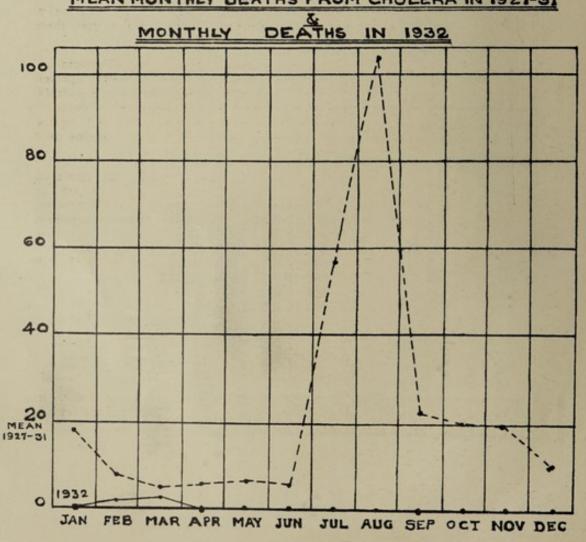
DEATHS FROM CHOLERA 1923-1932 .

## GRAPH1@

## DEATHS FROM CHOLERA 1923-1932



#### MEAN MONTHLY DEATHS FROM CHOLERA IN 1927-31



A review of the above statement shows that the public health in the city during the year under report has been an improvement over the other years under reference and decidedly better than the previous year 1931. There has been a reduction in the general mortality by 872 deaths over the preceding year with remarkable decreases in all diseases except Small-pox and Measles. The diseases are dealt with in detail below.

Cholera:—There were 9 attacks and 5 deaths during the year under report giving a fatality-rate of 55.5 per cent. against 380 attacks and 153 deaths with a fatality-rate of 40.3 per cent. in 1931. Three cases occurred in February of which the first two cases that died were imported—one in Egmore division, another in Katchaleeswaranpet division and another in Choolai division. Subsequently in the month of March there were 6 cases in Vepery division of which three were fatal.

The year 1932 was an exceptional year as the City recorded the lowest number of attacks and deaths from Cholera. The annual death-rate worked out to 0.01 per mille against 0.2 per mille in the previous year, the average of the quinquennium being 0.4 per mille (Annual Form No. VI on page 50).

The mortality statistics from Cholera for the past 10 years are furnished below and further illustrated in Graph 1 (a). The seasonal incidence of this

disease is shown in Graph 1 (b)

Year.	Deaths.	Year.	Deaths.
1923	21	1928	708
1924	97	1929	16
1925	203	1930	43
1926	98	1931	153
1927	512	1932	5

It will be seen from the above figures that the mortality from Cholera has been comparatively low during the last four years.

As mentioned above, the incidence was during the months of February and March. In February there were 3 attacks and 2 deaths and in March 6 attacks and 3 deaths and in the remaining months of the year there was no further incidence.

Mortality in Districts.—Four divisions namely Katchaleeswaranpet, Choolai, Vepery and Egmore reported the incidence. Vepery division reported 6 attacks and 3 deaths, Katchaleeswaranpet and Egmore divisions one attack and one death each while Choolai division reported one attack and nil death.

In addition to the usual preventive measures carried out by the sanitary staff, 513 persons were inoculated with Anti-cholera vaccine as a prophylactic measure by the medical staff.

Diarrhoea & Dysentery.—The deaths of 2644 persons were registered under this group of causes during 1932 with a decrease of 102 deaths over the previous year 1931. The annual death-rate was 4.0 per mille of estimated population compared with 4.2 per mille in 1931, the average of the quinquennium being 5.0 per mille (vide page 56).

The mortality statistics from Dysentery and Diarrhoea from 1923 to 1932 are given below and illustrated in graph II (a).

Year.	Deaths.	Year.		Deaths.
1923	3778	1928		3931
1924	3700	1929		3127
1925	4031	1930		3056
1926	3867	1931	1000	2746
1927	3263	1932		2644

With the exception of the year 1928 a gradual and steady decline in mortality from Diarrhoea and Dysentery is evident since 1925 and the reduction in 1931 and 1932 is remarkable.

The amount of incidence of Cholera, Enteric fever, Diarrhoea, Dysentery and other bowel diseases is an index of the sanitary state of any town or city and a reference to the reduction in the mortality from Diarrhoea and Dysentery as well as decrease in the incidence of Cholera and Enteric tever mentioned elsewhere will indicate that the City has made a start in its general sanitary progress and improvement. The prompt removal of rubbish and filth, laying of underground sewers and last but not least introduction of flush-out type of latrines in several areas of the City have in no small measure contributed their share to the decline of mortality from bowel diseases.

The seasonal incidence of mortality from Diarrhoea and Dysentery isgiven below and illustrated according to months in Graph II B:

Quarters.		Deaths.
First quarter.		712
Second quarter.		539
Third quarter.		566
Fourth quarter.		827
	Total	2644

The fourth quarter and the second quarter recorded the highest and the lowest number of deaths respectively. The largest number of deaths was registered in December (328) and the least in April (142).

The death-rate was highest in Mirsahibpet division (6.7 per mille based on the census population 1931) followed by Washermanpet division (6.1 per mille). The lowest rate was recorded in Esplanade division (1.0 per mille).

Compared with 1931, 20 divisions recorded decrease in the death-rate from a minimum decrease of 0·1 per mille in Mirsahibpet division to a maximum decrease of 1·5 per mille in Royapuram division and Peddunaickenpet division. The death-rate in Katchaleeswaranpet division and Mofuskhan division was the same as in the previous year. Among the remaining 8 divisions which showed increase in the death-rate, the maximum increase (2·3 per mille) was noted in Harbour division and the minimum increase of 0·2 per mille in Perambur division.

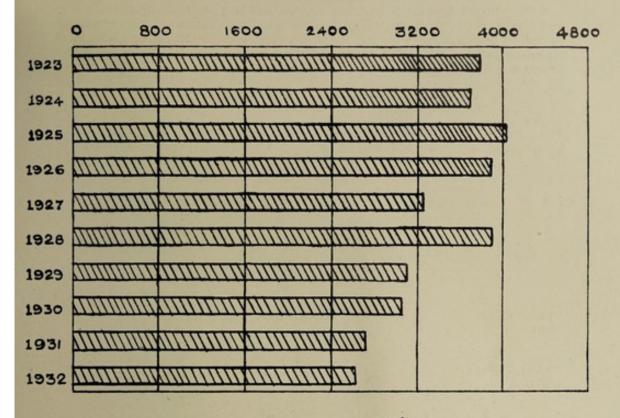
Plague:—During the year 1932, there was one death from Plague in the month of April. This case was imported from Kolar Gold Fields and was removed from Perambur division to the Infectious Diseases Hospital at Tondiarpet on the day of arrival into the City. The patient succumbed to the disease and the contact which was only one was kept under observation in the hospital. Necessary disinfection and sun drying were done and no further case occurred in the locality. The incidence of death from Plague in the City previous to this case was in the year 1923.

Small-Pox:—Small-pox was prevalent throughout the year under report. 842 attacks and 176 deaths were reported during 1932 as against 109 attacks and 24 deaths in 1931. The fatality-rate in 1932 was 20.9 per cent. compared with 22.0 per cent. in 1931. The annual death rate was 0.3 per mille of estimated population compared with 0.04 per mille in 1931, and same as the quinquennial average (0.3 per mille) page 51.

The mortality from small-pox from 1923 to 1932 is set forth below and illustrated in Graph III (a).

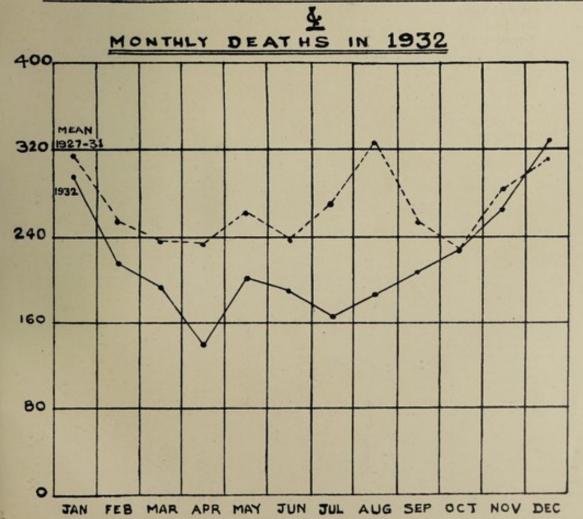
Year.	Deaths.	Year.	Deaths.
1923	 151	1928	 251
1924	 197	1929	 506
1925	 763	1930	 188
1926	 60	1931	 24
1927	 32	1932	 176

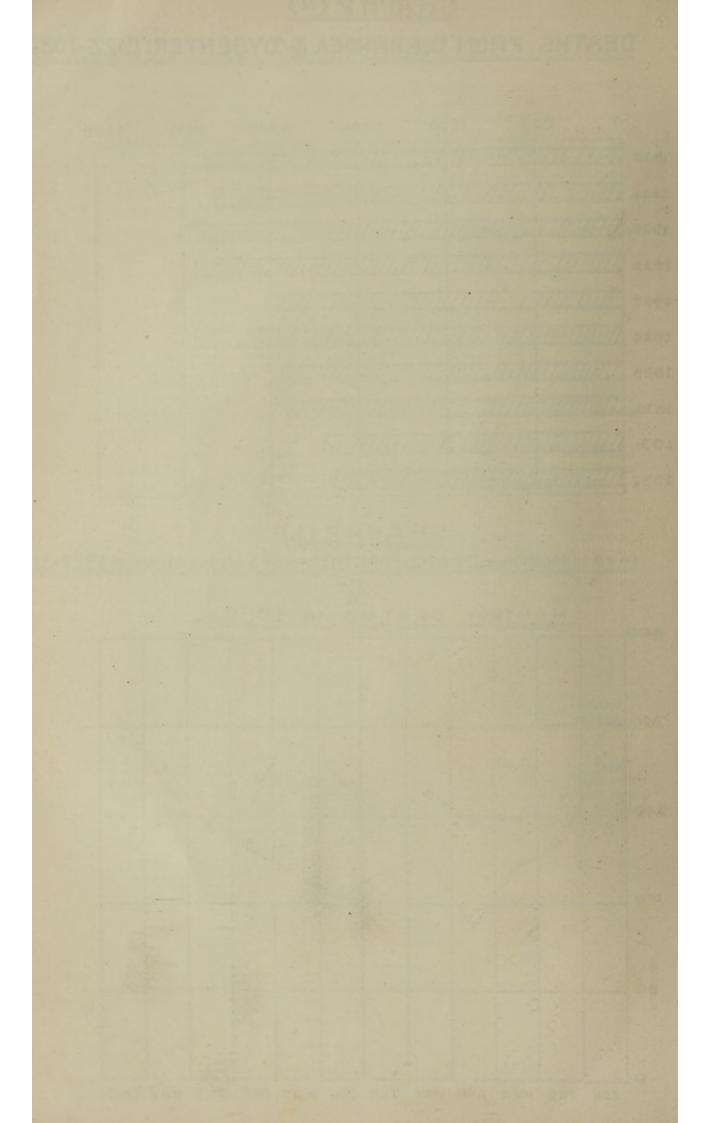
# GRAPH 2 (a) DEATHS FROM DIARRHOEA & DYSENTERY1923-1932



GRAPH2(b)

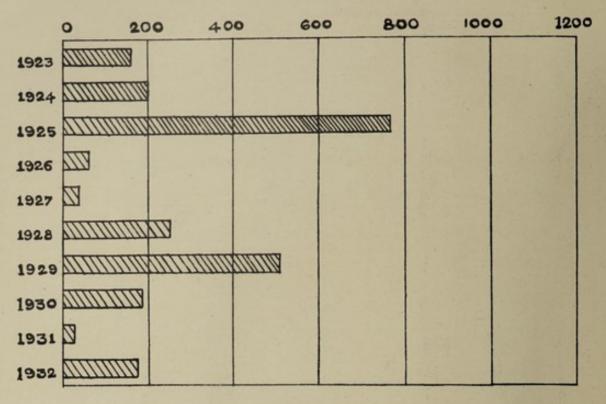
MEAN MONTHLY DEATHS FROM DIARRHOEA & DYSENTERY IN 1927-31





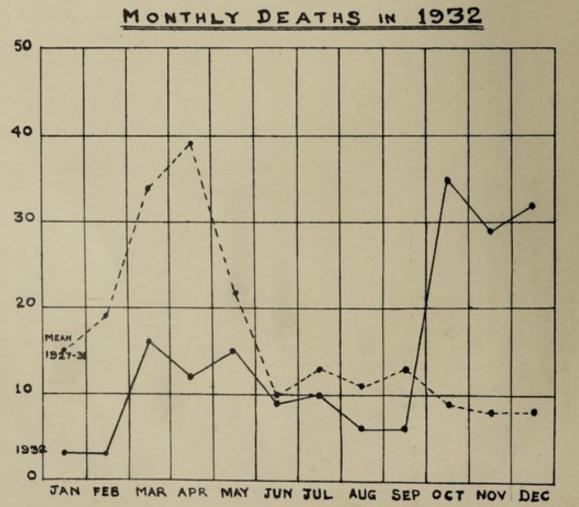
## GRAPH.3.(4)

## DEATHS FROM SMALL-POX 1923-1932



GRAPH 3(b)

# MEAN MONTHLY DEATHS FROM SMALL-POX IN 1927-31



As regards seasonal incidence, the following figures will indicate the attacks and deaths from small-pox in the different quarters of the year.

Quarters,		Attacks.	Deaths.
First quarter		86	22
Second quarter		134	36
Third quarter		169	22
Fourth quarter	of the section is	453	96
	Total	842	176

The fourth quarter has recorded the highest number of attacks and deaths.

As regards the incidence of attacks from small-pox in the Municipal divisions, it may be mentioned that no division was free from this infection. Except Choolai division in which the largest number of attacks occurred (104) four divisions recorded attacks above 50 and below 100, eight divisions 30 and below 50 and among the remaining 17 divisions that recorded attacks less than 30, the lowest was returned by Sowcarpet division which reported one attack.

The death-rate was highest in Harbour division (2.2 per mille based on Census population 1931). The Choolai division reported the second highest rate of 1.05 per mille. In 24 divisions the rates ranged between 0.04 to 0.8 per mille and in the remaining four divisions namely Sowcarpet, Trevellyan Basin, Park Town and Chepauk divisions no death from small pox was reported.

Compared with 1931, all the Municipal divisions reported increased death-rates except Sowcarpet, Trevellyan Basin, Park Town, Chepauk and Royapettah.

It is observed from the following statement that the small-pox fatality rate among the vaccinated was  $5\frac{1}{2}$  times less than the rate among the un-vaccinated indicating that the disease was being controlled by vaccination.

All ages.	Cases,	Deaths.	Fatality-rate per cent.
Among the vaccinated Among the un-vaccinated	461 381	32 144	6·9 37·8
Total	842	176	20-9

The response from the public in the matter of reporting occurrence of small-pox is still slow. During the year under report the Health Department was put to the necessity of prosecuting parties in five cases under Section 345 of the City Municipal Act for not reporting the occurrence of small-pox to the Health authorities. The Sanitary and Vaccination staff detected the cases by vigorous house inspections and removed the patients to the Infectious Diseases Hospitals for isolation and treatment. The infected houses and clothes were immediately disinfected and the contacts vaccinated and kept under observation. Mass re-vaccination was done throughout the City as a preventive measure. The number of vaccinations done during the year is given in a separate report on page 18.

Measles.—16 deaths were registered from measles during 1932 against 3 in 1931. The annual death-rate was 0.02 per mille compared with 0.006 per mille in the previous year, the quanquennial average being 0.05 per mille (page 52).

The mortality from measles from 1923 to 1932 is as follows:

Years.	Deaths.	Years.	Deaths.
1923	25	1928	59
1924	32	1929	68
1925	96	1930	16
1926	21	1931	3
1927	5	193z	16

The mortality from measles is observed to be comparatively low during

the last three years.

Deaths from measles were reported in all the months of the year except January, February and June. Only eleven divisions recorded deaths from measles, the death-rates based on Census population of 1931 ranging from 0.002 per mille to 0.4 per mille and the remaining 19 divisions recorded no deaths from this disease.

Malaria:-During the year 1932, 165 deaths were registered compared with 277 in 1931. The annual death-rate was 0.3 per mille of estimated population against 0.4 per mille in 1931, the average of the quinquennium being 1.3 per mille (page 53).

The mortality from Malaria from 1923 to 1932 is given below and

illustrated in Graph IV (a):

Year.	Deaths.	Year.	Deaths.
1923	783	1928	1599
1924	971	1929	681
1925	1298	1930	283
1925	1342	1931	277
1927	1367	1932	165

The deaths from Malaria have shown a further decrease of 112 deaths over the previous year.

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The seasonal incidence of mortality from Malaria is as follows and illustrated according to months in Graph IV (b).

Quarters. Deaths. First quarter

Second quarter 39 ... Third quarter 23 Fourth quarter 41 Total 165

The first quarter recorded the highest number of deaths and during this quarter 26 deaths were registered in January. The third quarter recorded the lowest number of deaths.

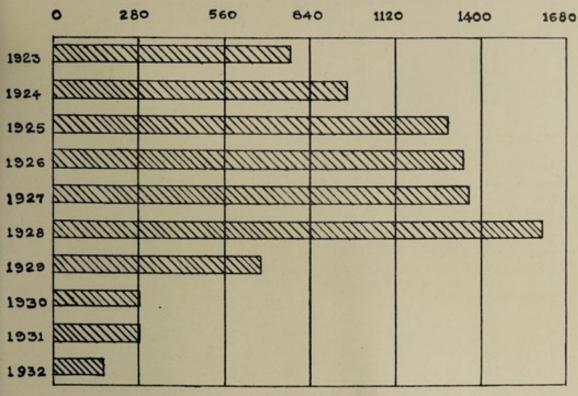
As regards local variations, the highest death-rate of 0.7 per mille according to census population of 1931 was recorded in both Korukupet and Esplanade divisions. In other divisions the rates ranged between 0.02 to 0.6 per mille with the exception of Harbour division, Muthialpet division, Katchaleeswaranpet division, Choolai division and Kilpauk division, which registered no death from Malaria.

Compared with 1931, 22 divisions recorded decrease in the death rate. The death-rate in Sowcarpet division was the same as in the last year (0.4 per mille).

The report about the Anti-malarial measures carried out by the special staff during the year under report is given on page 30.

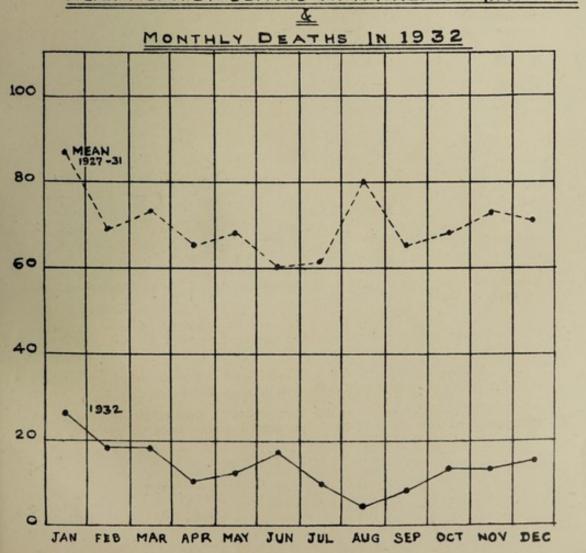
Enteric Fever:-101 deaths were registered from enteric fever during 1932 compared with 166 in 1931. The annual death-rate of 0-2 per mille was

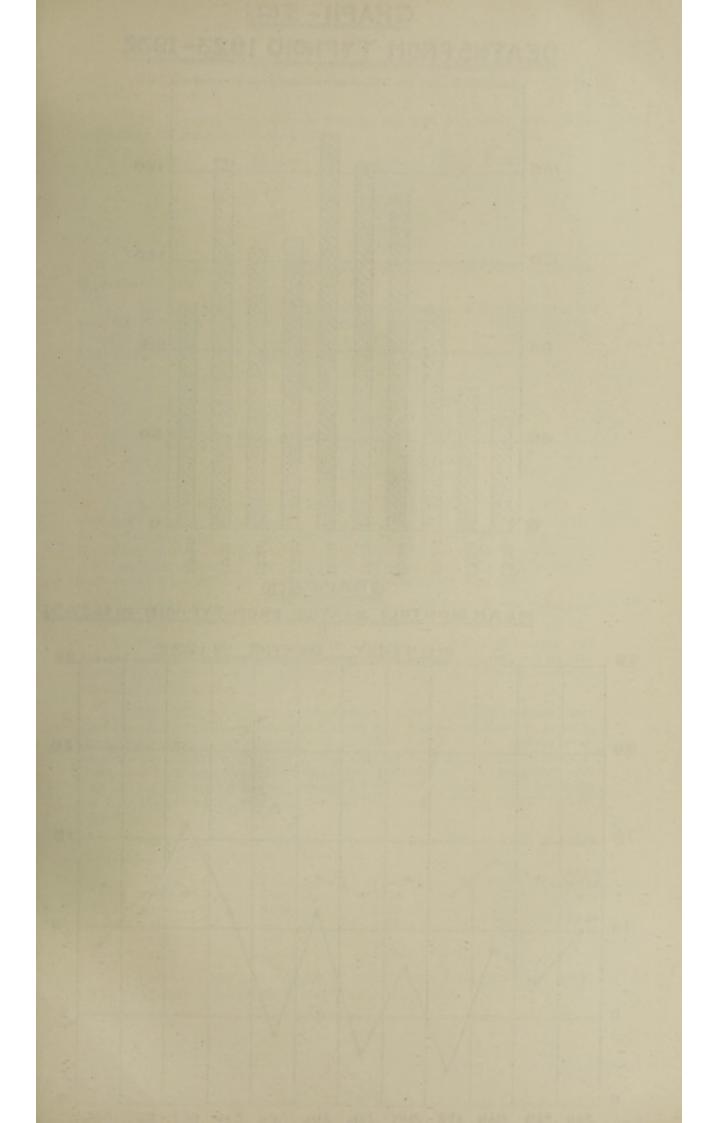
# GRAPH 4 (4) DEATHS FROM MALARIA 1923-1932



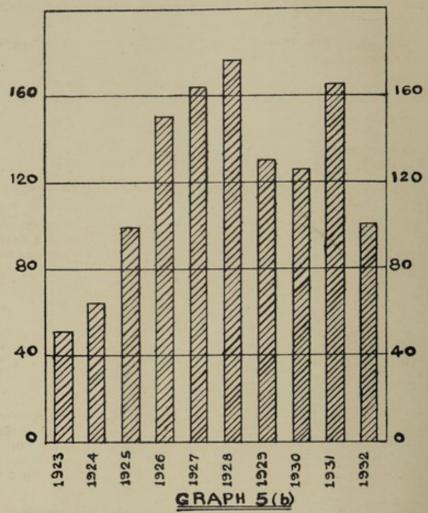
## GRAPH4(b)

MEAN MONTHLY DEATHS FROM MALARIA IN 1927-31

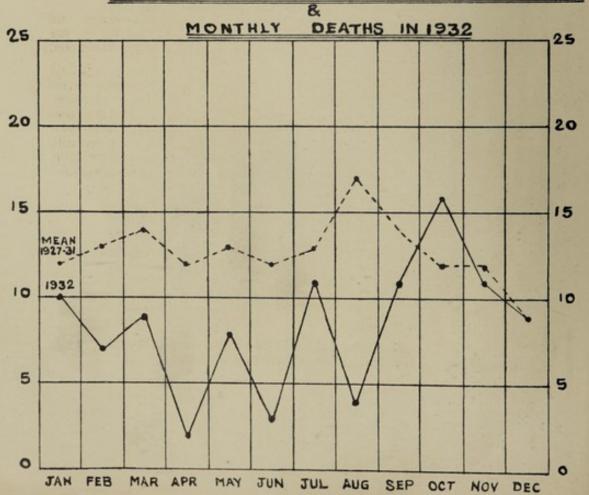




## <u>GRAPH-5(a)</u> <u>DEATHS FROM TYPHOID 1923-1932</u>



MEAN MONTHLY DEATHS FROM TYPHOID IN 1927-31



0.1 per mille less than in the previous year and same as the average of the past five years (page 54).

The mortality from Enteric fever for the past 10 years is given below and further illustrated in Graph V (a):-

Year.	Deaths.	Year.	Deaths.
1923	51	1928	177
1924	65	1929	130
1925	99	1930	126
1926	152	1931	166
1927	164	1932	101

A reduction of 65 deaths is noted during the year under report over the preceding year.

The deaths from enteric fever were reported in all the months of the year, the highest having occurred in October (16) and the lowest in April (2). The distribution of mortality during the quarters of the year is furnished below. The Graph V (b) illustrates the monthly deaths from this disease.

Deaths.
 26
 13
 26
 36
 101

As regards local variations, the highest death-rate was reported by Esplanade division (3·1 per mille). The lowest rate of 0·1 per mille was recorded by 16 Municipal divisions while three divisions—Tondiarpet division, Korukupet division and Katchaleeswaranpet division—recorded no deaths from this fever. The remaining 10 divisions recorded rates above 0·1 per mille but not more than 0·5 per mille which was the second highest rate recorded.

Compared with 1931, 18 divisions showed decrease in the death-rate and six divisions recorded rates same as in the previous year

The usual preventive measures such as disinfection of houses and infected clothing, surveillance of the contacts etc., were carried out by the sanitary staff. The medical staff inoculated 554 persons with Anti-typhoid vaccine as a preventive measure.

Other Fevers.—The term 'other fevers' includes all deaths from fevers other than Malaria, Tuberculosis and Enteric fever which are shown separately. Deaths from kala-azar are included in deaths under 'other fevers', and the number of deaths from kala-azar registered during 1932 was 31 against 30 in 1931. There were 1646 deaths registered under this head during 1932 compared with 1748 in 1931, the annual death-rate being 2.5 per mille which was 0.2 per mille less than the preceding year and same as the average of the quinquennium. (page 55).

The mortality from this group of causes from 1923 to 1932 is stated below and illustrated in Graph VI (a):—

Year.	Deaths.	Year.	Deaths.
1923	769 1928	1928	1,555
1924	616	1929	1,731
1925	940	1930	1,961
1926	1,194	1931	1,748
1927	1,095	1932	1,646

A gradual decline since 1930 is evident and during the year under report a reduction of 102 deaths is noted over the last year.

The seasonal incidence of these deaths is given below and further shown in Graph VI (b).

Quarters.		Deaths.	
First quarter			346
Second quarter			441
Third quarter			371
Fourth quarter			488
	Total		1,646

The fourth and first quarters recorded the highest and lowest number

of deaths respectively.

The highest death-rate was recorded in Mafuskhan division (4.6 per mille based on Census population) followed by Royapuram division (4.4 per mille), Harbour division (4.3 per mille) and Katchaleeswaranpet division (4.1 per mille). In other divisions the rates ranged between 0.1 per mille in Mylapore division to 3.9 per mille in Tondiarpet division.

Compared with 1931, decreases in the death-rates were noted in 15.

Compared with 1931, decreases in the death-rates were noted in 15. divisions, the maximum and minimum decrease being 1.2 and 0.1 per mille respectively. In Purasawalkam division the death-rate was same as in the previous

year.

General Respiratory diseases.—The number of deaths registered under this group of causes during 1932 was 5509 with a reduction of 234 deaths over the previous year 1931. The annual death-rate worked out on estimated population was 8.3 per mille which was 0.6 per mille less than in 1931 and 0.4 per mille less than the average of the quinquennium (page 58).

The following statement furnishes the mortality statistics for the past ten years:-

Year.	Deaths.	Year.	Deaths.
1923	3,342	1928	6.879
1924	4,183	1929	5,324
1925	4,712	1930	5,256
1926	4,947	1931	5,743
1927	5,035	1932	5,509

The number of deaths during 1932 shows a decrease of 234 over the preceding year 1931. Graph VII (a) illustrates the deaths from Respiratory diseases from 1923 to 1932.

The seasonal incidence of mortality is as follows and further shown in the Graph VII (b).

Quarters.		]	Deaths.
First quarter			1,336
Second quarter			1,337
Third quarter			1,235
Fourth quarter			1,601
	Total		5,509

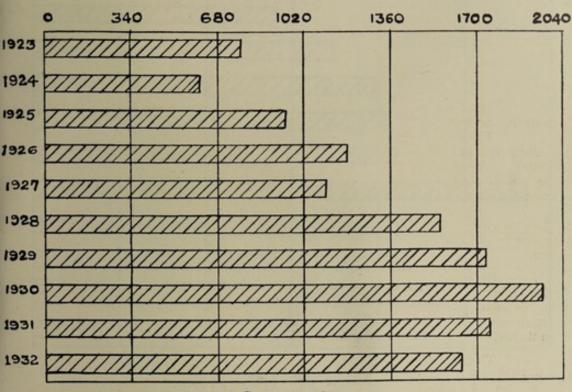
The fourth and third quarters recorded the highest and lowest number of deaths respectively.

Choolai division returned the highest death-rate of 13.7 per mille of population according to 1931 census followed by Purasawalkam division (10.6 per mille). In other divisions the rates ranged from 5.5 per mille in Nungambakam division to 10.3 per mille in Vepery division.

Compared with 1931, decreases were recorded in 18 divisions. In Harbour, Sowcarpet and Egmore divisions the rates were same as in 1931.

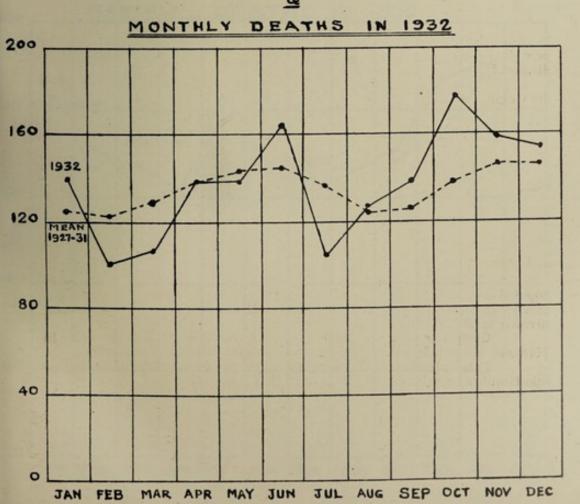
Tuberculosis.—917 deaths were registered during 1932 from Tuber-culosis with a decrease of 103 deaths over 1931 (page 57).

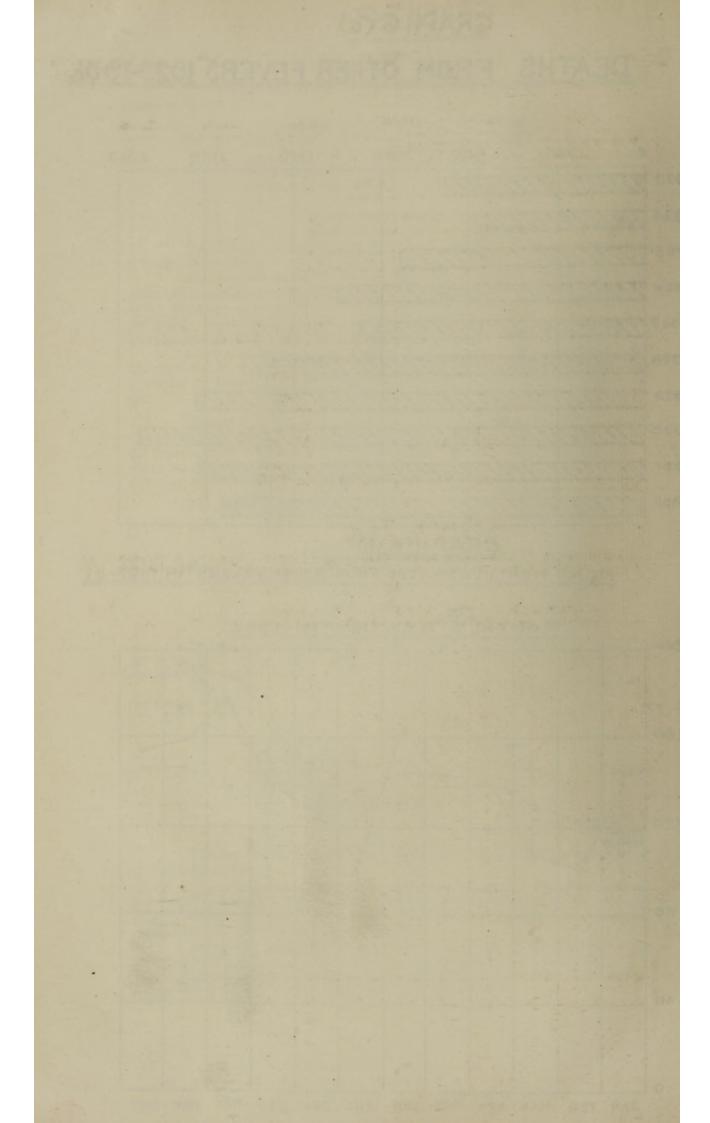
# GRAPH 6 (a) DEATHS FROM OTHER FEVERS 1923-1932



CRAPH 6(b)

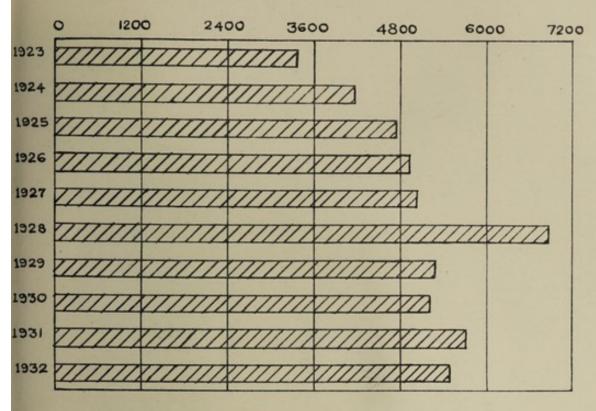
MEAN MONTHLY DEATHS FROM OTHER FEVERS" IN 1927-31





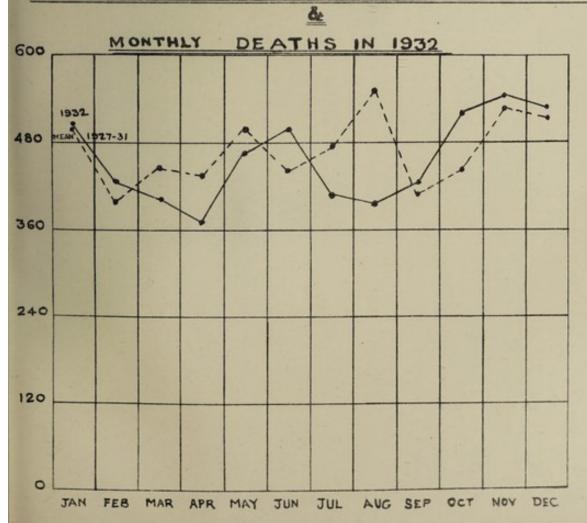
## GRAPH 7(a)

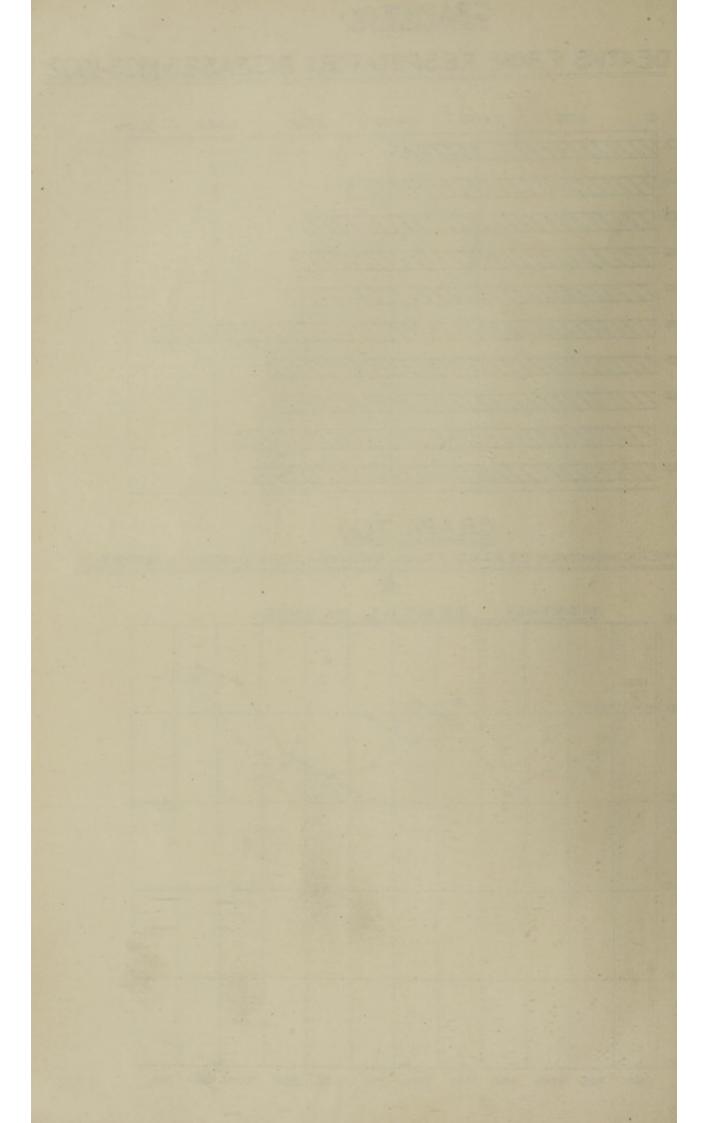
## DEATHS FROM RESPIRATORY DISEASES 1923-1932



## GRAPH 7(b)

MEAN MONTHLY DEATHS FROM RESPIRATORY DISEASES IN 1927-31

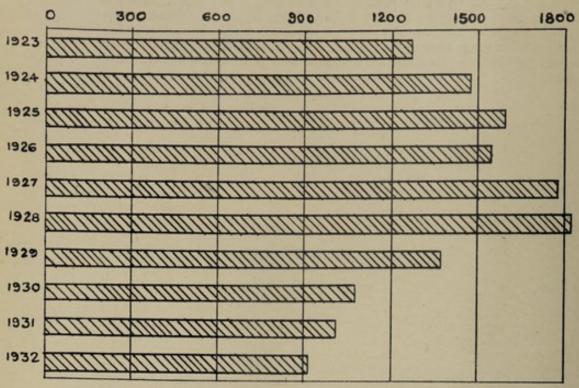




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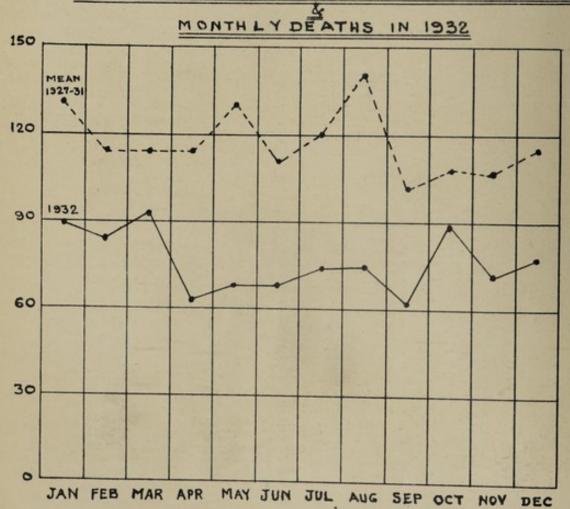
# GRAPH 8(a)

# DEATHS FROM TUBERCULOSIS 1923-1932



GRAPH 8(b)

# MEAN MONTHLY DEATHS FROM TUBERCULOSIS IN 1927-31



The annual death-rate with reference to estimated population was 1.4 per mille which was 0.2 per mille less than in 1931 and 0.8 per mille less than the average of the quinquennium. The deaths due to Tuberculosis of lungs were 747 or 1.1 per mille compared with 843 deaths or 1.3 per mille in 1931, the mean of the previous five years being 2.0 per mille (page 62).

The mortality from Tuberculosis from 1923 to 1932 is furnished below

and further illustrated in Graph VIII (a).

Year	Deaths.	Year.	Deaths.
1923	1268	1928	1812
1924	1468	1929	1371
1925	1604	1930	1075
1926	1538	1931	1020
1927	1781	1932	917

There is a gradual decline in the mortality from Tuberculosis since 1928 and during the year under report a reduction of 103 deaths over the previous year is recorded.

The seasonal mortality during 1932 is furnished below and shown in

Graph VIII (b) :-

Quarters.		Deaths.
First quarter		 267
Second quarter		 200
Third quarter		 211
Fourth quarter		 239
	Total	 917
		Spirit Inch

As regards local variations, the death-rates of Vepery division and Esplanade division were the highest (2.3 per mille of population according to 1931 census) and the lowest (0.2 per mille) respectively. 19 divisions recorded rates above 1.0 per mille.

Compared with 1931, 17 divisions showed decrease and the death-rates

of 3 divisions were same as in 1931.

The prevention of tuberculosis is purely a social problem as it is more a disease of the poor than of the well-to-do classes. It gains a strong foot-hold only where poor food, bad housing, crowding, overwork and worry exist, for these diminish the power of resisting it. If any great reduction in the mortality rate is to be effected, the social and economic conditions of the mass of the population should be improved. As the prevention of tuberculosis like all other wide-spread infections depends for its success upon the education of the public, strenuous efforts were taken by the staff to arrange lectures, talks, lantern demonstrations and distribution of leaflets on the prevention of tuberculosis throughout; the City.

Deaths from Child-Birth: -279 women died during 1932 from causes connected with child-bearing giving a maternal mortality-rate of 10-0 per 1000 births. There were 299 deaths from child-birth in 1931 with a rate of

11.6 per 1000 births.

The mortality from child-birth from 1925 to 1932 is furnished below :-

Year.	Maternal deaths.	Mortality-rate for 1000 births.
1005		Maciner 140
1925	344	14.9
1926	353	16.0
1927	293	11.8
1928	366	15-4
1929	304	13-1
1930	328	12.7
1931	299	11.6
1932	279	10.0

A reference to the above figures relating to mortality-rate reveals a gradual decline since 1928. An analysis of 279 deaths has disclosed that 65.6 per cent. of the total deaths have been due to puerperal sepsis alone. Calculated with reference to births, the death-rate from puerperal sepsis has been 6.5 per 1000 births in 1932 compared with 7.8 per 1000 births in 1931. It is hoped that expectant mothers would attend the various clinics in the City and derive all help relating to their welfare and their coming infants.

Deaths from "Other Causes":—The deaths under 'other causes' include deaths from a host of diseases which relate to circulatory, digestive, nervous, genito-urinary and other systems excepting respiratory system. Under this head 10564 deaths were registered in 1932 compared with 10708 deaths in 1931 and the death-rates for these two years were 15.9 and 16.5 per mille respectively, the

quinquennial average being 14.7 (page 61).

Certified Deaths — The deaths of 2728 persons were certified by the various hospitals in the City. The general medical practitioners certified the causes of death in the case of 824 persons. The certified deaths represented 15.0 per cent of the total deaths registered during 1932 compared with 14.6 per cent in 1931. The deaths which were not certified were verified by the medical registrars as to the causes of death. The adoption of the system of Certification

of deaths is engaging the attention of the Corporation.

Burial and Burning Grounds:—The various cemeteries and burning grounds were under the supervision of the Sanitary Inspectors. Out of the total number of deaths excluding still-births registered during the year under report, 17,553 corpses were buried and 4737 corpses burnt. 98 licensed diggers worked during 1932. 160 applicants were granted plots of ground for erection of tombs and the amount realised there-from was Rs. 1377-8-0. Extracts of births and deaths were granted to 826 applicants and the amount realised was Rs. 1223-12-3.

### VACCINATION.

Staff:—During the year 1932, 17 Sub-Assistant Surgeons designated as Medical Vaccinators and assisted by 34 Vaccinators of whom two were females were in charge of Vaccination work. The Medical Vaccinators attended to Registration of Births and Deaths in addition to vaccination work.

Operations:—During the year under report, 48, 833 vaccinations were performed. Among these, 27076 were primary vaccinations and 21,757 revaccinations. Besides, 710 re-vaccinations were reported to have been done in the Government Penitentiary. (Vaccination Statement III on pages 80 and 81).

The following statement furnishes the comparative vaccination figures for 1931 and 1932:—

		1931.	1932.	Increase or decrease.
Primary vaccination Re-vaccination		27,260 9,377	27,076 21,757	-184 + 12,38 0
Total	:::	36,637	48,833	+12,196

There was a marked increase in the total number of vaccinations during the year under review. This increase was mainly due to the large number of re-vaccinations performed during the outbreak of small-pox (vide report on small-pox on page 12). It is only during an epidemic that the health staff are able to persuade the public to submit to re-vaccination. And even

then the response is slow. Men of all castes and creeds are alike in their reluctance. Although vaccination is done free and at the residence of the citizens, they do not realise that it is in their interest to get themselves and their household vaccinated. Strangely enough they fear vaccination more than an attack of small-pox. Intensive propaganda by lantern lectures, talks, cinema shows, health exhibitions and distribution of leaflets conducted in the city have not as yet produced the desired effect of making the public understand and realise that by infant vaccination, small-pox is prevented in children or at least is not so serious in them as in adults and that the need for re-vaccination among adults is essential as the immunity conferred on children by infant vaccination wanes after 5 to 7 years. Revaccination has to be made compulsory in the city and unless this is done periodical outbreaks of small-pox are bound to continue. Draft bye-laws in this behalf are now under consideration.

The decrease in the primary vaccinations over the previous year is only 184 and it is due to the fact that there were less number of un-protected children during the year owing to many children having been detected and vaccinated by regular and systematic daily house inspections made by the staff in previous years. Nevertheless the primary vaccinations performed during the year under review stand next to the primary vaccinations of previous year 1931 mentioned in my last report as the highest on record in the city.

The vaccination statistics for the past five years are furnished in the following statement:—

year.	Service Servic	Primary Vaccina- tion.	Re-vacci- nation.	Total
1928		22,051	29,591	51,642
1929	1/1 (9.2)	23,250	43,356	66,606
1930		25,958	33,257	59,215
1931		27,260	9,377	36,637
1932		27,076	21,757	48,833

Number of successful vaccinations:—The number of successful operations performed during the past five years is furnished in the following statement:—

### Number of successful vaccinations.

Year.	Rel was	Primary Vaccina- tion.	Re-vacci- nation.	Total.
1928		21,762	7,932	29,694
1929	0.0	22,272	10,860	33,132
1930		25,201	6,492	31,693
1931		27,042	1,997	29,039
1932		27,011	4,610	31,621

The excess in the total number of successful vaccinations over that of the previous year is very marked. The decrease in the number of successful primary vaccinations is only 31. As mentioned elsewhere the primary vaccinations during the year under report stand next to the last year's figure referred to as the highest on record.

Success-rate:—The success rates under primary and re-vaccinationsfor the previous five years are set forth in the following statement:—

The transfer Year.		Percentage of success in primary vaccinations.	Percentage of success in re-vaccinations.	
TRACTOR OF THE BUILDING	11111111111		000	
1928		99.7	36.3	
1929		98-5	30.1	
1930		99.0	23.	
1931		99.6	26.7	
1932		99-9	20.2	

The rate of success under primary vaccinations during the year under report shows a distinct and decided improvement and records an increase of 0.3 per cent over the previous year 1931. Probably it is the highest rate recorded in the city.

As regards the rate of success in the different municipal divisions, it should be mentioned to their credit that in 20 divisions the rate of success under primary vaccinations was cent per cent. Five divisions recorded the rate of 99.9 per cent; three divisions the rate of 99.7 per cent; and the remaining two divisions 99.5 per cent and 99.2 per cent which was the lowest rate recorded.

The low success-rate under re-vaccinations was due to the varying amount of immunity which was present among the persons who had been vaccinated in infancy. As regards the rate of success obtained in the different municipal divisions the highest rate was 79.4 per cent recorded by the Chepauk division and the lowest was 7.1 recorded by the Washermanpet division.

Number of persons successfully vaccinated per 1000 population:—Calculated with reference to population, the rate of successful vaccination per mille of population for the year 1932 was 48.9 as compared with 44.9 in 1931. A distinct increase of 4.0 per mille is obtained during the year under report over that of the previous year. As regards the local variations, the largest number of persons successfully vaccinated per mille of population was in Tondiarpet division (69.5) and the least in Sowcarpet division (29.5).

Compared with 1931, 25 divisions recorded increase in the number of persons successfully vaccinated per 1000 of population. The highest increase of 17.5 per mille was shown by the Harbour division and the lowest of 0.3 per mille by the Mylapore division. The remaining five divisions recorded decrease ranging from 2.1 per mille in Tiruvatteeswaranpet division to 5.6 per mille in Katchaleswaranpet division.

Infantile Vaccination:—18976 infants under one year of age were vaccinated in 1932 compared with 19823 in 1931 and the number successfully vaccinated was 18940 against 19703 in 1931.

The figures for the previous five years are as follows :-

### Vaccination under one year of age.

Year.	No. of primary vaccinations performed.	No. of successful primary vaccinations.
1928	 17,357	17 100
1929	 16,420	17,182 15,929
1930	 18,187	17,774
1931	 19,823	19,703
1932	 18,976	18,940

With the exception of the year 1931 which recorded the highest in the city, the successful primary vaccination in infants during the year under report shows improvement over the other previous years. The fall in the number of primary vaccinations has already been explained.

Among 18976 infants vaccinated, 14174 were born in Madras and 4802 in moffusil against 14735 and 5088 respectively in the preceding year 1931.

Vaccination in Divisions:-Perambore division recorded the highest number of vaccinations (5381) followed by Choolai division (2877) and Tondiarpet division (2806) the reason being that these divisions are inhabited by a large number of coolies working in the mills situated there and who are easily vaccinated with the help of the mill authorities. Sowcarpet division returned the lowest number of vaccinations (237) and this is due to the fact that this division is small and is a business centre. Compared with 1931, 25 divisions recorded increase in the total number of vaccinations. The maximum increase of 1889 was shown by the Perambore division and the minimum of 52 by Amir Mahal division. Five divisions recorded decrease ranging from 14 in Sowcarpet division to 260 in Royapettah division.

As regards primary vaccinations, the largest number was performed by Perambore division (2155) followed by Washermanpet division (1402) Tondiarpet division (1396) and Royapettah division (1375). Esplanade division did the lowest (183). Compared with 1931, 13 divisions recorded increase ranging from a minimum of 2 in Esplanade division to 236 in Mirsaibpet division. The number of primary vaccinations in Amir Mahal division was the same as in the previous year. The decrease in the remaining divisions ranged from a minimum of 2 in Kothawal Bazaar division to a maximum of 244 in Perambore division, the reason being, as already explained, that a larger number of children had been vaccinated during house inspections conducted in previous years.

The highest number of re-vaccinations was performed by Perambore division (3226) followed by Choolai division (1695), Vepery division (1546) and Tondiarpet division (1410). The lowest number was performed by Sowcarpet division (28). Compared with 1931, 26 divisions recorded increase ranging from a minimum of 6 in Peddunaickanpet division to a maximum of 2133 in Perambore division.

Verification of births :- During the year 1932, 26298 births were verified for purposes of vaccination compared with 26293 in 1931. 4035 children died before attaining the age of one year and without vaccination. 4905 children left the city without being vaccinated and the number available for vaccination was 17358 of which 12453 or 71.7 per cent were vaccinated against 73.6 per cent in the previous year (Vide Vaccination Statement II on page 79). The decrease was due to 1578 children whose vaccination was postponed on medical grounds as against 1238 in 1931.

Postponement of Vaccination in Children:—1559 medical certificates were received during the year for postponement of vaccination in children against 1498 in 1931.

Inspection of vaccinated persons :- The Health Officer, the two-Assistant Health Officers, and Medical Vaccinators, as usual, inspected the vaccinated persons. The results of 27031 or 99.8 per cent of the total primary vaccinations and 17568 or 80.7 per cent of the total re-vaccinations were verified by them during the year under report.

Lymph:—The King Institute of Preventive Medicines at Guindy, supplied as usual the vaccine lymph. The Medical Registrar in charge of the Chintadripet Vaccination Depot received the supply and distributed it to all the vaccination depots in the city. The lymph received was for 44,875 cases during 1932 and the total number of persons vaccinated was 48,833.

Prosecution:—One parent was prosecuted for failure to vaccinate his child and fined Rs. 2.

Training of Vaccination Pupils:—80 students were trained in vaccination work by the Medical Vaccinators during 1932.

Cost of vaccination:—The cost of each successful vaccination was Re. 1-2-2 as against Rs. 1-3-9 in 1931.

### REPORT OF THE PORT HEALTH OFFICER, MADRAS, ON THE WORKING OF THE PLAGUE. REGULATIONS AT THE PORT FOR THE CALENDAR YEAR 1932.

In-coming Vessels.-671 vessels arrived here during the year from different ports with 61,408 crew and 89,977 passengers as against 796 vessels with 64,073 crew and 1,00,477 passengers of the previous year.

Out-going Vessels.—270 vessels with 29,448 crew and 12,369 passengers

were inspected and granted Bills of Health during the year as against 266 vessels

with 29,991 crew and 15,223 passengers in the previous year.

Epidemic and Infectious Diseases .- 8 cases of chickenpox and 2 cases of measles were landed from ships and sent to the Infectious Diseases Hospital,

Tondiarpet.

Disinfection of bedding and clothing of deck passengers and crew landing and embarking here is carried on at the discretion of the Port 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.

Rais on steamers.—No deaths among rats were found on any of the

vessels that entered the harbour during the year under report.

### SANITATION.

The administration of the Department continued to be in charge of the Health Officer assisted by two Assistant Health Officers. As in the last year, the conservancy was under the charge of Drainage Superintendent,

Drainage.-During the year 65,636 feet of underground drainage were laid, the total length laid up to 31-12-32 being 1,08,7575 feet (vide statement

on page 82).

The flush-out system was extensively introduced in sewered areas.

2,043 flush-out latrines were constructed during the year.

Water supply.—The usual daily tests of the supply of water to the City continued, samples being taken from different parts of the City. A report on the working of the Water Analysis Laboratory at Kilpauk will be found elsewhere. 6 Bathing fountains were constructed during the year.

Slums and housing.—There is yet much to be done to improve the general housing conditions in the City. The Corporation is doing its utmost in

this behalf.

House to house visits were carried on systematically by the Sanitary Staff and action was taken wherever necessary. During the year 13,994 houses were inspected. Action was taken in the case of 4042 buildings which were found defective and improvements were carried out in 3063 houses.

As usual plans for construction or reconstruction of buildings were referred to this department for scrutiny. The number of plans so referred was 2,709. The provision of flush-out latrines was recommended in 994 cases and

was carried out in 530 cases.

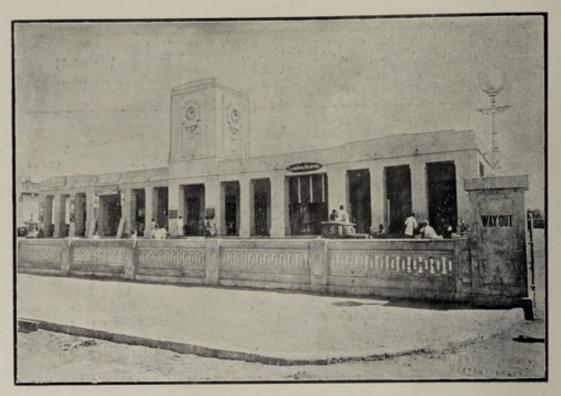
318 gallons of hycol were used during the year for disinfection. The total number of houses disinfected during the year was 2,596 while the number of houses inspected in connection with the detection of epidemic diseases was 33,447.

Factories.—The Health Officer and the Assistant Health Officers continued to inspect these places as Additional Inspectors. (Inspection Reports were sent to the Chief Inspector in 118 cases). The defects noticed during the inspections were intimated to the Chief Inspector. As a result of the action taken by this department, flush-out latrines were installed in 7 places in the place of dry ones.

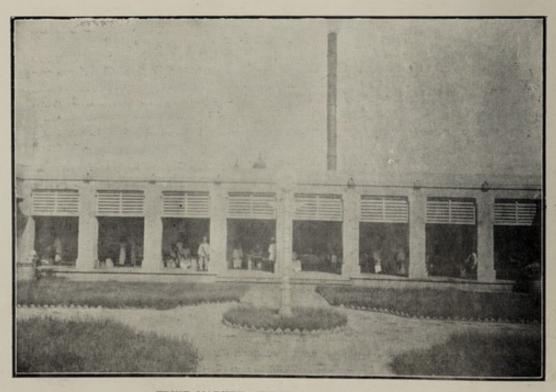
Offensive and dangerous trades.-The bylaws for these have not yet been sanctioned. During the year 5530 applications were received of which 5285 were sanctioned, 189 refused and 56 were pending disposal at the end of the year as against 4873, 4596, 155 and 122, the corresponding figures of the

previous year (page 83).





FRUIT MARKET, (EXTERIOR), ESPLANADE.



FRUIT MARKET, (INTERIOR), ESPLANADE.

The Corporation maintains 3 model cattle yards one in Chintadripet, another in Basin Road, and the third in Purasawalkam. The total number of animals housed therein was 318.

Milk Supply.—The problem of milk supply still remains unsolved. It is necessary that the Corporation should have a dairy farm of its own with extensive pasturage. A scheme was prepared, but owing to financial stringency it did not materialise.

The Corporation maintains two cart stands. The one at Elephant Gate which is under the control of this department was leased out on contract for the official year 1932-33 for Rs. 7,300.

Meat Supply.—The City gets its requirements mainly from the Corporation Slaughter Houses at Perambur where cattle, sheep and pigs are slaughtered.

The right of collecting rents from the cattle and sheep slaughter houses was sold in auction for Rs. 18,000 and Rs. 63,100 respectively. The blood from

the Slaughter Houses is removed and trenched departmentally.

As usual, slaughter of animals for religious purposes in places other than the Slaughter houses, was permitted free during Hakika and Bakrid festivals and on payment of fees on other occasions. The amount collected during the year was Rs. 101.

Food Control.—The Corporation maintained three markets, the Moore Market, the Smithfield Market and the Vegetable Market at Purasawalkam. The construction of the Fruit Market at Esplanade was almost completed at the end of the year. The construction of the Vegetable Market at Mambalam was started during the year.

The sanitation of these and other private markets in the City was receiving special attention. A regular and systematic inspection of the articles

of food exposed for sale was conducted throughout the year.

It has to be mentioned that in the absence of any scheme for the municipalisation of the private markets, there should be a steady increase in the provision of more Municipal Markets in the City. The private markets, in spite of the rigorous action taken by the department to keep them clean, continue to be in an insanitary state on account of the apathy of the owners to carry out necessary improvements. It is gratifying that in recent years, the question of providing more Municipal Markets has been taken up in right earnest with the result that the Purasawalkam Market came into existence, the Fruit Market and Mambalam Market were constructed and the construction of a market at Wall Tax Road is under consideration.

The nuisance of vegetable vendors selling their stuff on road-sides and over public drains is still great. The Sanitary Inspectors with the help of the Police conduct a systematic campaign to drive away these people but permanent results will be obtained only by the provision of more markets to accommodate them on small rents.

A list of unwholesome articles of food destroyed and the number of prosecutions instituted under Section 310 to prevent the sale of foodstuffs on roadsides, over side-drains etc., will be found elsewhere.

Prevention of Food Adulteration.—During the year, the Government Public Analyst at Guindy continued to analyse the samples sent by the Corporation Food Inspectors. Mr. Venkatachalam, the Food Analyst of the Corporation, continued his training under the Government Public Analyst at Guindy.

During the year 1932, the total number of samples taken under the Prevention of Adulteration Act and sent to the Government Analyst, Guindy, for analysis was 1191. Of these, reports were received on 1160 samples during the year. One sample of milk could not be analysed as it was received by the Analyst in a decomposed condition. Reports on 30 samples were pending on 31st December 1932. Of the 1160 samples for which reports were received, 780 samples were found to be genuine and 380 samples adulterated.

780 samples were found to be genuine and 380 samples adulterated.

The samples consisted of Milk, Butter, Ghee, Coffee-powder, Tea, Gingelly Oil and Cocoanut Oil. A tabulated statement of the samples analysed

is given below.

TABLE No. 1.

tile tands one in Chiefaction

Nature of sample.	ais.	No. of samp- les for which reports were received during 1932.	No. of adulterated sam ples in 1932.	Percentage of adulte- rated sam- ples in 1932	No. of sam- ples analy- sed in 1931.	Percentage of adultera- ted samples in 1931.
					1-500 15 17 9 376	7 700 110 1
Milk		157	60	38.2	70	40.0
Butter		71	16	22.5	19	21.1
Ghee		431	201	46.6	294	56:1
Coffee Powder		128	. 18	14.1	128	65 6
Tea		135	6	4.5	117	11.1
Gingelly oil		225	79	35.1	99	10.1
Cocoanut oil		13	nil	nil	3	nil
Total		1,160	380	32.8	730	41.7

It will be noticed from Table No. 1 that the number of samples analysed during the year is 1160 as against 730 in 1931 and the percentage of adulteration is 32.8 as against 41.7 in 1931. Though a larger number of samples of the different articles have been analysed during the year, the percentage of adulteration is generally less showing that the working of the Act has had a deterrent effect on the guilty vendors. The effect is especially noticeable in the case of Coffee Powder, where the percentage of adulteration has fallen from 65.6 to 14.1. In the case of Gingelly Oil, the percentage of adulteration has increased which might be partly due to the fact that a much larger proportion of guilty vendors have come within the observation of the Food Inspectors.

The nature and extent of adulteration of the various articles are given below:

(1) Milk: -157 samples were analysed during the year. Extraneous

water ranging from 6 to 62 per cent. was detected in 60 samples.

(2) Butter:—71 samples were analysed and in 16 of them, excess water from 3 to 80 per cent was found. (The limit for water in butter prescribed by the Government Food Adulteration rules dated 1st September 1932 is 20

per cent.)

- (3) Ghee: -- 431 samples were analysed and 201 were reported to contain fat other than ghee mostly of vegetable origin ranging from 20 to 100 per cent. By the Government Food Adulteration Rules, dated 1st September 1932, it is now obligatory on the part of the vendors of adulterated ghee to label it in the form prescribed in Schedule I or II as the case may be and vendors who previously escaped by an oral declaration that the ghee was adulterated were prosecuted for infringing the labelling regulations during the latter part of the year.
- (4) Coffee Powder: -128 samples were analysed and 18 contained either chicory or exhausted coffee from 20 to 60 per cent.
- (5) Tea:-135 samples were analysed and 6 were found to be adulterated. The adulterant was either imitation tea prepared from Black-gram husk or leaves of plants other than 'Camellia Thea'. In two cases, sand and sweeping were reported.

(6) Gingelly Oil: -225 samples of the oil were analysed and 79 were found to be adulterated. The adulterant in almost all the cases was ground-nut

oil. In one case the oil proved to be 100 per cent Safflower.

(7) Cocoanut Oil:-13 samples were analysed and all of them found to be genuine.

The total number of prosecutions conducted by the Corporation during the year was 340 including those pending disposal at the close of 1931. Convictions were obtained in 276 cases and the total fines realised amounted to Rs. 4,922 as against Rs. 1677 in 1931. 52 cases were pending disposal at the



FOOD ANALYSIS LABORATORY, KILPAUK.



VETERINARY HOSPITAL, HOPE LODGE, PERAMBUR.



close of the year. 9 cases were withdrawn; one was acquitted and proceedings were stayed in two. A statement of the prosecutions is given in Table No. 2.

TABLE No. 2.

Nature of sample.	No. of prose- cutions in 1932.	No. of cases pending	No of cases convicted.	Amount of fines realised,	Average fine per conviction.	No. of con- victions in 1931.	Average fines per conviction in 1931.
	100			Rs.	Rs.		Rs,
Milk	49	10	39	528	14	24	5 7
Butter	8	3	5	80	16	3	7
Ghee	196	28	161	3,220	20	75	12
Coffee powder	20	Nil	19	251	13	68	6
Tea	7	Nil	6	84	14	20	6 12
Gingelly oil	60	11	46	759	17	9	12
Total	340	. 52	276	4,922	18	199	8

Table No. 2 shows that the number of convictions in 1932 is higher than in 1931. The average fines are also generally much higher, and this will have a more deterrent effect on guilty vendors. In course of time it is to be desired that the fines would be higher still in order to make the Act effective. It should also be pointed that vendors may be convicted a second or third time. In such cases there is no excuse for inflicting small fines at all, for the vendors can and will gladly pay off the fines from a small portion of their illegitimate profits and still continue with their adulteration. If the progress shown in Table 2 is maintained, the situation will improve considerably.

In conclusion mention may be made of the Prevention of Adulteration Rules published in G.O. No. 1867, P. H., dated 1st September 1932. This has made the work of the Food Inspectors considerably easier in respect of ghee, for it is obligatory on the vendors of adulterated ghee to label their articles according to Schedule I or II as the case may be. Under the same rules admixture of fat from the carcase of an animal with ghee, and addition of water to milk are prohibited. The limit of water in butter has been fixed at 20 per cent. The rules have made the administration of the Act easier but the full advantage will be seen only in the working of the Act during 1933,

Weights and Measures.—During the year under review the two Inspectors of Weights and Measures carried out regular inspection of all markets, bazaars, shops and hawkers etc. In 412 cases the weights, measures and scales found defective were seized. In many cases the vendors were let off with a warning. Prosecutions were launched in 49 cases and 37 were disposed of. The total fine collected was Rs. 154-8-0. From experience it is felt that the Bye-laws should be amended to include the provision for penalising the very possession of false weights and measures,

Medical Rilief.—The Corporation continued to maintain two Infectious Diseases hospitals, 19 Allopathic dispensaries and three dispensaries affording Unani, Siddha and Ayurvedic treatment. During the year one more Unani dispensary was opened in the 24th Division. Statements of the cases treated in these institutions will be found on pages 90–100.

Of the two leprosy clinics attached to the dispensaries at Triplicane and Vyasarpady, the latter was very popular. Treatment was given at the clinics to early non-infectious cases of leprosy. During the year as many as 47 cases were registered at the Leper Clinic, Vyasarpady. Of these 9 cases were infectious and were referred to the Government General Hospital and the remaining 38 were treated at the clinic.

Table showing cases according to sex.

Male,	Female.	Male-children.	Female-children.
31	10	6	1 2
	23 22	Treatment table.	Name of J. E.
	Symptoms free Referred cases Treatment suspend	ded and under observat	2 9
	Cases that had no Cases that had par Cases still under t	treatment rtial treatment	5

Due to considerable publicity and propaganda, the attendance has gone up to 15 to 20 cases in a day and all types of leprosy are being treated now.

The Corporation Poor House,-The year opened with 156 members on the roll. There were 192 admissions during the year. Out of these 129 were discharged for various reasons and 47 died in the Poor House and 10 absconded, thus leaving a balance of 162 inmates on 31-12-1932. The Institution has been working very satisfactorily and the inmates enjoy a homely life. The male and the female inmates are given free boarding, lodging and clothings. Bhajana parties and Kalakshepams are conducted on Saturdays and on special festival days. Medical help is rendered by the Superintendent-in-charge of the house. Two separate medical wards with 48 beds are maintained in the house. The usual ten treats earmarked by M.R.Ry. Dewan Bahadur C. V. Viswanatha Sastriar Avergal, and the two treats ear-marked by the Government Official's Party out of the interest accruing from their endowments of Rs. 5,000 and 1,000 respectively were given during the year on the said festival days much to the satisfaction of all the inmates. A sum of Rs. 50 was given by the Corporation Officials' Association. In addition to this, several gentlemen have been kind enough to send contributions for giving treats to the in-mates.

Such of the in-mates who are able to do light work are given vegetable

growing and general gardening work.

The beggar nuisance in the City is still a problem. It is a common sight to see beggars standing at every bus-stand pestering the public for alms. It is difficult to induce them to go to Poor House as they find it easy to eke out a livelihood by pursuing the 'profession'.

An amendment of the Police Act in this direction seems to be

a dire necessity.

Side by side there should be more Poor Houses with sufficient accommodation to house all the deserving beggars. This can be done by public support. As a first step to mitigate the nuisance, the public should discourage the practice of giving alms to persons begging on public roads.

Anti-Rabic Measures:- The Electrocuting chamber maintained by the Corporation at Basin Road for the destruction of stray dogs serves the needs of the City. During the year 11586 stray dogs were admitted into the lethal chamber of which 10129 were destroyed and 336 returned to the owners, the amount collected being Rs. 1,029.

Zoo .- The Zoological Gardens maintained by the Corporation continued to attract a large number of visitors. The right of collecting entrance fees

was sold in auction for Rs. 20,900.

Publicity & Health Education .- This was conducted by means of press information, posters and hand bills, booklets, health talks, lectures, magic lantern demonstrations, cinema shows and health exhibitions. During the year 1502 open air lectures and 2408 talks, 1281 magic lantern demonstrations and 64 cinema shows were conducted. Besides this, the Health Week celebrations were conducted throughout the city during August 1932 with Exhibitions in Korukupet, Choolai and Triplicane Divisions.

### INFECTIOUS DISEASES HOSPITAL, TONDIARPET.

Staff :-1.	Medical Officer (Assistant Surgeon)	N.d.m	initian e
2.			1
3.			1 10000010101
4.	Sick Nurses	A STORY	3
5.	Nurses (Mid-wives)		2
6.	Clerk		1
7.	The state of the s		1
8.	Wireman		1
9.	Ambulance Car Driver		1

\*\*

The total number of admissions during the year was 1482 as compared with 781 in the year 1931. The number of contacts admitted was 181, the number admitted during 1931 being 92. The daily average number of patients was 57.5 and the case mortality rate for all diseases was 7.4 per cent.

Diseases: —The largest number of admissions during the year was for chicken-pox amounting to nearly half the total admissions. It began during the month of January and lasted till the end of May reaching the peak during the month of March in which there were 250 admissions. It was attended by

no mortality, all the cases having an uneventful recovery.

The next largest number of admissions was for Small pox, there being 529 admissions with this infection. The number of admissions for Small-pox began to increase during the latter portions of the year, the number of cases during October, November and December being 106, 98 and 125 respectively. During December, Small-pox began to assume epidemic proportions which increased in the succeeding year 1933. The treatment for Small-pox continues to be symptomatic, no medicine with a specific effect having been discovered.

There were only two stray cases of cholera during the month of Febru-

ary and the rest of the year was free from admissions for this condition.

A statement regarding the vaccinal condition of Small-pox cases is appended.

Bacteriological examination was done at the King Institute, Guindy,

### KRISHNAMPET ISOLATION HOSPITAL.

 Staff:—The permanent staff of the hospital consists of one Medical Officer, two nurses, one compounder, two male ward attendants, two femaleward attendants, one peon and one motor ambulance car driver.

2. Statistics:—The total number of admissions during the year was 617 as compared with 482 during 1931. The number of contacts admitted was 111 against 72 during 1931. The total daily average number of patients was 27 and the case mortality rate for all diseases was 7.5 per cent.

3. The largest number of admissions was for Chicken-pox and Smallpox, the number of cases being 267 and 252 respectively. There were 5 cases

of admission for Cholera.

4. The vaccinal condition of Small-pox patients will be found in the appended statement.

### AIDED INSTITUTIONS.

A brief summary of the Public Health Work done by various institutions based on their annual reports is furnished hereunder in accordance with G.O. No. 653 P. H. Mis. dated 10—6—1921.

The Buckingham and Carnatic Mills Welfare Committee:—During the year 1932, the Welfare Department carried on a sustained Health Propaganda for the benefit of the workmen living in the 'villages' attached to the Mills and the work people of the Mills living in the outlying 'Cherries'. A number

of Cinema shows and Magic lantern lectures on health subjects was given tothe workmen by the National Health Association of Southern India. Under the joint auspices of the Health Association and the Corporation of Madras, a Health Exhibition was held in the Mills lasting for six days from 22—8—32 to-27—8—32 and it was much appreciated.

The Chengalvaraya Naicker's free Ayurvedic Dispensary:—The Dispensary continued to render free medical aid and 2,21,787 patients were treated during 1932 as against 1,98,539 for the previous year.

The Chenunapri Annadana Samajam:—During the year 1932 this Samajam fed 67009 poor men as against 59,452 of the previous year.

The friend-in-Need Society:—The object of this Society is to render relief to the deserving poor and to suppress mendicity amongst the European and Anglo-Indian Christians. During the year 1932 there were 77 permanent in-mates. Besides the Home relief, a sum of about Rs. 30,000 was spent for rendering out-door relief, casual relief and special relief.

The Government Victoria Caste and Gosha Hospital:—The number of maternity cases treated in this hospital during 1932 was 2192 as against 2095 of last year.

The Kalyani Hospital:—The total number of patients treated in this hospital and its two dispensaries was 47417. The number of maternity cases was 738.

The Madras Society for the protection of children:—This Society has completed its twenty fifth year of existence. During the year there were 80 boys and 31 girls making a total of 111.

Medical inspection of the boys was done by a qualified doctor of the Government Royapuram School and of the girls, by a Lady Doctor of the Rainy Hospital.

The Ramakrishna Mission Students' Home:—This institution for poor and deserving boys had a strength of 141. It has a medical ward for the in-mates with a doctor in charge.

The Ramakrishna Math Charitable Dispensary:—The total number of patients treated in this dispensary during 1932 was 53,287 as against 58,905 of the previous year.

San Thome Dispensary:—There were 13,368 patients treated by this dispensary as against 12,975 of the previous year.

The San Thome Convent Dispensary:—The number of patients treated in this dispensary during 1932 was 23,045.

Sri Kanyaka Parameswari Devasthanam Dispensary:—The total number of patients treated in this dispensary for 1932 was 90,977 as against 75,319 of the previous year.

The Unani Dar-ush-Shifa:—The total number of patients treated in this Unani dispensary during the year under report was 1,24,429.

# CONSERVANCY.

During the year under report Mr. W. L. Edwards the Drainage Superintendent continued to be in charge of conservancy work assisted by the two Supervisors. Mr. N. Muniyappa, the Veterinary Officer lent by Government continued till 10-7-52 when he was reverted to Government. Mr. V. J. Balasundara Doss, the Senior Veterinary Assistant in charge of Slaughter Houses was appointed as the Veterinary Officer from 11-7-32.

The sewer cleaning staff consisting of the Sewer Foreman, Sewer Superintendents and coolies were transferred to the control of Health Department from 1-9-32.

There were 2336 men, 185 Women and 178 boys employed for the cleaning of streets, drains and latrines with 160 peons to supervise their work.

539 bullock-drawn carts and 38 motor lorries were maintained during the year for the removal of rubbish, filth and sewage.

### Animals.

No. of animals at the commence-	1931.	1932.
ment of the year	644	688
No. purchased during the year	161	144
" died "	117	119
No. at the end of the year	688	713

Of the 713 animals remaining at the end of the year 13 bullocks were condemned as unserviceable and maintained at the Sewage Grass Farm,

Tondiarpet.

Foot & Mouth disease.—There was a severe outbreak of foot and mouth disease at A, B and C depots. Prompt measures were immediately adopted and all the affected animals about 150 were segregated at the Corporation Veterinary Isolation Hospital and treated. There was no death. The disease was controlled in a short time.

Rinderpest.—All the newly purchased bullocks were protected against rinderpest by serum simultaneous method. Almost all the animals in the depots are now protected against rinderpest except a few old bullocks at Mylapore Depot. There was no outbreak of rinderpest in the Corporation cattle depots during the year although the disease was prevalent in the City and throughout the Presidency.

Anthrax.-There was an outbreak of anthrax at Krishnampet depot in August and there were 3 deaths. Preventive measures were taken and the disease was quickly brought under control. There was an isolated case of death

at Royapuram cattle depot in November 1932.

Tuberculosis: - There were 12 deaths from tuberculosis compared to 15 during the previous year and they were among animals previously tested for the disease. 2 bullocks which were showing clinical symptoms of tuberculosis were destroyed. It is gratifying to note that the disease is on the decline now and all possible preventive measures are adopted.

Piroplasmosis:-156 animals were affected from this disease of which 12 died. By taking timely preventive measures the disease was brought

under control.

There were 3 casualities from Trypanosomiasis, one from Coccidiosis and two from Lymphangitis,

The rest of the deaths viz 83 was due to old age and other natural

causes.

The Central Gram Depot was abolished from 1-4-32. Arrangements were made to get the supplies from the contractors direct at the depots.

Animals requiring treatment were sent to the Veterinary Hospital which was recently constructed and attended to there by the Veterinary Officer.

Motor lorries :- During the year under report there were 38 motor vehicles in use for the removal of rubbish, filth and sewage. One Stewart lorry was purchased for the prompt removal of sewage from cesspools in the un-sewered areas and orders were placed for another such lorry. One Thornycroft Lorry and one Ford Standard Lorry were purchased during the year for the removal of rubbish. 9 old lorries which were condemned were auctioned during the year. One Manchester Lorry was fitted with a Diesel Oil Engine as an experimental measure with a view to reduce the cost of consumption of petrol etc.,, One Ford Watering Van was transferred from Works Department to Health Department for flushing sidedrains and water tables.

Tipping platforms:—The two model tipping platforms constructed at Basin Bridge Depot and Langs Garden Pumping Station continued to serve very satisfactorily. The platform at Triplicane was also used during the year for the temporary deposit of rubbish.

Disposal of rubbish: - About 478750 cart-loads of rubbish were removed from the City against 451485 cart-loads in the previous year. 75154 cart-loads were disposed of at the Incinerators by separation and incineration. 254191 cart-loads of rubbish were used in reclamation works. The balance was removed to the

dumping ground at Korukupet, Otteri, Rifle Range and Mylapore.

Disposal of filth: - During the year under report about 100857 cartloads of filth were removed from the City of which 67789 cart-loads were flushed into sewers at the Pail Depots at DeMellows Road, Langs Garden and Ice House Road. The balance was trenched at the Korukupet and Otteri Night-Soil Depots.

Public Latrines: -- 175 Flush-out, 40 masonry, and 25 sanded latrines

were maintained during the year.

Festivals: -As usual special arrangements were made for efficient cleaning and disinfection during all the important festivals in the City. The conservancy of South Indian Athletic Association Grounds was attended to departmentally during the Park Fair 1932-33 on payment of fees.

Private scavenging: -A sum of Rs. 23,739-5-2 was derived as charges for conservancy services rendered to private institutions under Section 197 of

the Act.

Disinfection :- 5954 gallons of Hycol, 23724 parahs of chunam and 116 lbs. of Bleaching powder were used for the disinfection of drains, street corners, dust-bins and night-soil buckets.

Dust-bins and Night-soil buckets:-1005 dust-bins and 375 night-soil

buckets were manufactured during the year.

Labour :- The time scale of wages fixed and approved by the Council at its meeting held on 1-9-31 was given effect to from 1-5-32. Bonus is being granted to the coolies who retired on account of old age or infirmity as per regulations issued in G.O. No. 4942 L & M dated 22-12-31.

As per resolution of the Council the issue of rice to conservancy

coolies was stopped from 1-4-32.

301 Conservancy coolies are occupying houses in model lines and 161

live in huts on Corporation land.

Some of the scavenger hutting-grounds are much congested. More

model lines have to be constructed.

General.-The total expenditure on account of conservancy for the financial year 1932-33 was Rs. 9,23,639 (Rs. 51,665 'Capital' and Rs. 8,71,974 'Ordinary') against Rs. 9,05,234 for 1931-32 (Rs. 66,028 'Capital' and Rs. 8,39,206 Ordinary). The amount spent on wages of conservancy coolies was Rs. 5,32,120.

A sum of Rs. 6,400 was derived as income by the sale of manure from

Korukupet and Otteri Night Soil Depots in 1932-33.

## ANTI-MALARIAL WORK FOR THE YEAR 1932.

Staff:—The staff consists of a Medical Officer in the grade of a Sub Assistant Surgeon and two supervisors, one for the North Range and the other for the South Range. A Senior Sanitary Inspector was in charge of the Anti-Malarial work during the first half of the year under report and on his demise

the Medical Officer was appointed on 8-7-1932.

The Medical Officer inspected from time to time tanks, ponds, wells, drains, stagnant pools etc., where mosquitoes bred or were likely to breed and gave, where private owners were concerned, necessary suggestions to the divisional Sanitary Inspectors to take action against them to protect these places from such breeding. As regards public tanks, ponds, drains etc., the tendency to breed was prevented by the Malaria staff. Several investigations were made by the Medical Officer on complaints regarding mosquitoe nuisance. The Malaria Supervisors who were in direct charge of the labour staff worked under his immediate guidance. The labour staff consisted of two cleaning gangs, one petrolising gang and one fish gang for each range as in previous years. One motor lorry with a gang of 12 coolies attended to reclamation work. The entire staff employed on this work were placed under the directions of the Assistant

The chief anti-mosquito measures carried out during the year under report were the following:-

1. Cleaning of tanks & ponds.

2. Petrolising.

3. Removal of rank vegetation.

- 4. Introduction of larvicidal fish into wells.
- 5. Reclamation.

1. Cleaning of Tanks & Ponds :- There are 502 tanks and ponds in the City. Most of these with the exception of temple tanks are used for purposes of irrigation. Weeds and moss grow abundantly in them and floating matter such as fallen leaves, branches etc., favour the breeding of mosquitoes mainly of the anopheline variety. In order to stop or check the breeding, the owners were served with notices to clean periodically their tanks by removing the moss or weeds, by sloping or cutting sharp the edges and by removing overhanging branches and rank vegetation to the extent of two to three feet all round so that the larvae might be exposed to the action of the fish and other natural enemies which feed on them. In response to the notices, the owners either cleaned their tanks themselves or placed them under the control of the Malaria staff for periodical cleaning. 191 private tanks were thus cleaned at the cost of the owners. The amount realised thereby was Rs. 2199-3-6. The Malaria staff

cleaned 13 public tanks belonging to the Corporation.

The divisional Sanitary Inspectors inspected the tanks and ponds in their divisions from time to time and made their remarks in the tank registers. In Korukupet and Thiruvattiyur Divisions where 210 tanks exist, one Sanitary Inspector was kept exclusively in charge of this work as in the previous year. He inspected these tanks constantly and kept them in good condition. A similar arrangement is necessary for the control of the tanks situated in the vast areas of the Nungambakam, Royapettah and Mylapore divisions where 154 tanks exist in addition to the several low lands and stagnant pools which breed mosquitoes after rains. Frequent inspections of these tanks and other such places which are situated far away from one another cannot be expected to be done by the respective divisional Sanitary Inspectors who are saddled with multifarious duties. Unless a separate Sanitary Inspector is appointed exclusively for this purpose as in the case of Korukupet and Thiruvottiyoor Divisions, the supervision and control of tanks, ponds and low lying lands in the three divisions referred to, will not be satisfactory.

2. Petrolising:-A dilution of liquid fuel with kerosene oil was sprayed on the surface of water by means of knapsack sprayers and saw dust and used cotton-waste soaked in oil were used in addition, wherever necessary, to give a continuous film of oil. As oiling is less costly, and highly toxic to both anopheline and culex mosquitoes in their different stages of development-be they eggs, larvae or pupae-it was intensively used. All stagnant pools, un-used ponds, tanks and wells, gulley traps, cesspits, cess-pools, ditch drains and covered drains were systematically oiled by the

oiling gangs once a week throughout the City.

The portions of the Cooum and Buckingham Canal still continue to be a menace to public health specially after rains. With the limited staff at disposal, it has not been possible to attend to these places regularly

and systematically to prevent mosquito breeding.

3. Rank Vegetation :- Rank vegetation near tanks, ponds, and stagnant pools afford shelter to the adult mosquitoes breeding in the waters close-by. The staff cleared about 1,262,813 sq. feet of rank vegetation in public places during the year under report. In private lands where rank vegetation was found, the Sanitary Inspectors served notices on the owners for removal.

4. Introduction of Larvicidal Fish into Wells:- The introduction of larvicidal fish into private and public wells in the City forms a very important part of the anti-mosquito measures carried out by the Malaria staff. Ever since the introduction of pipe water supply, the wells have ceased to be the chief source of water supply to the citizens with the result that most of the wells are now in a very deplorable condition-un-used and un-cared for. The parapet walls of such wells are only used for keeping flower pots, brooms, fire-wood, grounded cheeka, turmeric and cow-dung cakes etc. It is not, therefore, unreasonable to expect any of these to fall into the wells accidentally and pollute the water. During the examination of wells, childrens' toys in numbers, rubbish and filth of every description and occasionally dead rats and cats were seen in them. The neglect on the part of the citizens is therefore responsible for making the wells a home for mosquitoes to breed in. During the examination of wells for the introduction of larvicidal fish, the citizens were made to understand clearly that the wells were no longer a necessity to the residents of a city where there is an unfailing supply of pipe water and that therefore the wells should be filled up or at least covered with cuddapah slabs to prevent the breeding of mosquitoes. Larvae were shown to them as a stage in the development of mosquitoes and the diseases propagated by mosquitoes were explained to them. Tins, pots and other vessels left neglected in corners of the houses containing larvae were destroyed in their presence. Aversion to fill up the wells or to cover them with cuddapah slabs is still so strong in private owners that permanent measures are found difficult to enforce.

During the year 1932, 11878 wells were examined and stocked with larvicidal fish. Before the fish were let in, the wells were rid of all floating materials so that the fish might have free scope to feed on the larvae. The fish that were introduced were obtained locally and satisfied all the conditions required for larvicidal purposes. Haplochilus melanostigma (mundaikunnoo), Panchax (Pachai mundai kunnoo or Namakundai), Chela (Vellichai Kundai) and Barbus Vitatus (Chinna Kullai Kundai) are the four varieties which are commonly introduced into the wells. Of these, Haplochilus Melanostigma is the best and of proved utility as mosquito destroyer. This is introduced in large numbers into the wells and is depended upon for efficient control. Haplochilus is a common species present in shallow ponds and tanks and even in the Cooum. It thrives equally well in fresh and brackish water. It swims very close to the water surface and always along the edges where the larvae often breed. "Its flat head and its transverse mouth are adaptations to surface feeding and the habit of inhaling the oxygenated surface water enables it to with-stand to a considerable extent foul or polluted water detrimental to most fish".

It has been observed that in about 60 per cent of wells the fish introduced during the previous year have died and in about 30 per cent of the wells examined larvae have been breeding. The present bad condition of most of the wells accounts for the death and absence of fish. The wells are re-stocked with fish once in 10 months at present. This interval is too long to expect the fish to thrive under the most trying circumstances. As the citizens are paying little or no attention to maintain the wells in good condition, constant supervision and re-stocking of fish at shorter intervals of at least once in three months are needed. The present staff for fish introduction consists only of one gang of a fisherman and two cooles for each range and in the circumstances explained above it is necessary that this staff should be suitably increased.

Reclamation:—Reclamation is the best and lasting measure to do away with the breeding grounds of mosquitoes. Owing to heavy cost, reclamation is not always taken up when suggested. During 1932, 2 ponds and 157 wells were filled up. 51 wells were covered with cuddapah slabs. Reclamation of the low lands at Rifle Range, Choolai and Perambur was done by the Corporation during the year under report.

Statement A shows the notices and prosecutions under Section 264

(1) regarding tanks and wells (vide page 104).

Conclusion:—It is well known that mosquitoes increase in numbers anywhere and everywhere after rains owing to stagnation of water which afford extra-ordinary facilities for breeding. During the regular examination of wells for fish introduction, every opportunity was taken to inspect the houses and destroy all breeding places in tins, pots and other vessels containing collections of rain water. In the compounds of bungalows, cisterns used for gardening purposes formed favourable grounds for mosquito breeding. Further, breeding was noticed in empty butter, jam, fruit, milk, fish tins etc., thrown all over the compounds and containing water after rains. Necessary steps were

taken to put down such breeding. With the limited staff it was not possible to stop or control effectively the nuisance all over the City after the monsoon. Unless all the houses, compounds and drains are regularly and systematically inspected in each division once a week and all breeding places destroyed, mosquito nuisance cannot be effectively controlled. For this purpose searching gangs or units should be posted in different areas of the City at least for a period of six months from September to February when the nuisance is usually very severe after the monsoon. This will enable the detection and destruction of all breeding places every week as they arise and keep such areas under strict survey and surveillance. Such diseases as Malaria, Dengue Fever, Filariasis etc., which have a tendency to increase after monsoon concurrently with the increase in the number of mosquitoes which transmit these diseases are sure to be checked by the destruction then and there of the breeding places of mosquitoes.

### MEDICAL INSPECTION OF SCHOOLS FOR THE YEAR 1932-33.

Staff:—On 8-7-32 one of the Medical Inspectors was transferred as Sub-Assistant Surgeon in charge of Anti-Malarial operations and hence only three instead of four Medical Inspectors worked during the year till 1-4-33, when the post of the fourth Medical Inspector was filled up. There was no

change in the staff of the Medical Inspectresses.

Findings of Medical Inspection:—17297 boys & 10209 girls were subjected to medical inspection during the year under report. The total number on rolls among the boys was 19539 and that among the girls 12558, and the average attendance 16014 and 9512 respectively. The percentage of boys examined to the total number on rolls works up to 88.55 among boys and 81.29 among girls, the corresponding percentages for the previous year being 89.39 and 81.88. The slight fall in the percentage is due to the fact that only three Medical Inspectors worked during the major portion of the year.

Out of the total number examined 10189 boys (58.91 per cent) and 5422 girls (53.02 per cent) were ailing and required treatment. The percentage defective for the previous year was 59.14 in the case of boys and 58.61 among girls. A reduction of the percentage of defectives was noticed both among the

boys and girls.

Cleanliness, Condition of the Skin, of Scalp, Body and Nails:—2475 boys (14.31 per cent) and 602 girls (5.90 per cent) required attention to personal cleanliness. The percentage defective under this head for the previous year was 13.28 and 11.05. They were given baths in the school premises periodically under the direction of the school staff. Instructions on personal hygiene were given to them by the Medical Inspectors and the school staff. Children who had verminous heads were advised shaving their heads or combing with an emulsion of kerosine and vinegar.

Malnutrition:—3924 boys (22.69 per cent) and 326 girls (3.19 per cent) were under-nourished as compared with 21.10 per cent and 4.08 per cent respectively in 1931-32. These children were directed to attend the nearest Corporation dispensary for treatment. In certain cases parents were advised to purchase Cod liver oil and other tonics for the use of their children till they improved in health. General advice regarding the suitable diet for the under-

nourished children was also given.

Teeth and Mouth:—2893 boys (16.73 per cent) and 1308 girls (12.81 per cent) were suffering from oral and dental complaints, the corresponding percentages for the previous year being 17.34 and 21.60 respectively. Most of the children were suffering from stomatitis and dental caries. 2010 had stomatitis and 1488 had dental caries. Children who had stomatitis were given relief at the Corporation dispensaries while selected cases of caries teeth were advised removal or filling up of the affected teeth at the dental section of the different hospitals. Some with tartar teeth were advised cleaning by dentists at the hospitals (vide statement on page 110).

Nose and Throat:—Diseases pertaining to these were found in 4768 boys (27.57 per cent) and 2323 girls (22.75 per cent) as against 24.43 per cent and 17.18 per cent detective respectively in the previous year. Enlarged tonsils and glands of the neck formed the bulk of the defects found, 5958 having the former and 1268, the latter condition. Children with simple enlargement of tonsils were directed to attend the Corporation dispensaries while in other cases where the enlargement was so large as to cause other complications, operative treatment was suggested. The condition of their general health was attended to and co-existing defects such as caries teeth, oral sepsis treated. Important cases were followed up by the Medical Inspectors while the school staff watched progress in others.

Eye Diseases: -444 boys (2.57 per cent) and 382 girls (3.74 per cent) had eye diseases. The percentages for the previous year were 2.98 among boys and 2.73 among girls. 205 children had conjunctivitis. They were excluded from the schools and advised treatment at the dispensaries. 245 had granular lids. 158 of these were referred to Government Ophthalmic Hospital while the rest were dealt with at the local dispensaries. 5 cases of Infantile Cataract were referred to the Eye Hospital. The details of defects are shown

in the statement on page 112.

Vision :- 224 boys (1.30 per cent) and 12 girls (0.12 per cent) were having defective vision as against 1.29 per cent and 0.21 per cent respectively in the previous year. 108 children having defects of minor degrees and who were ill-nourished were advised Cod liver oil. 128 children were referred for refraction.

Ear Diseases: -255 boys (1.46 per cent) and 187 girls (1.83 per cent) compared with a percentage of 1.53 and 2.35 respectively in the previous year had complaints of the ear. Except cases of chronic otorrhoea which were advised treatment by specialists at the Government General Hospital, all others were dealt with at the Corporation dispensaries.

Hearing:-11 boys (0.06 per cent) and 11 girls (0.11 per cent) were short of hearing as against 0.08 per cent and 0.19 per cent respectively last year. Such children were advised seats nearest the teacher. Treatment by the

specialist was recommended in these cases.

Speech: -66 boys (0.38 per cent) and 14 girls (0.13 per cent) had defects of speech. The percentages for the previous year were 0.53 among boys

and 0.21 among girls.

Circulatory System: -185 boys (1.07 per cent) and 40 girls (0.39 per cent) were found defective under this heading, the percentages for the previous year being 1.24 and 0.60 respectively. Children having functional defects of the heart were given treatment at the dispensaries. Organic defects of the heart were referred to the various hospitals for institutional treatment. 106 were anaemic and were treated at the local dispensaries.

Tuberculosis:-17 boys (0.10 per cent) and 29 girls (0.29 per cent) were found having signs of pulmonary and other forms of tuberculosis. 0.14 per cent of boys and 0.19 per cent of girls were defective last year. The importance of early treatment in arresting the disease was brought home to the parents through frequent talks and lectures arranged in the schools. The treat-

ment given to them was followed up carefully.

Respiratory Diseases: -542 boys (3.13 per cent) and 325 girls (3.18 per cent) had respiratory affections. The percentages for the previous year were 4.12 among boys and 4.83 among girls. 835 had Bronchitis and 32 were subject to attacks of Bronchial asthma. Relief was given to them at the local dispensaries. Chronic affections were advised institutional treatment.

Abdominal Organs: -283 boys (1.64 per cent) and 68 girls (0.67 per cent) had defects pertaining to abdominal organs as against 2.05 per cent and 0.72 per cent respectively last year. Children having Hernia or Hydrocele were suggested operative treatment while others were treated at the local

dispensaries.

There has been a further reduction in the number of children having enlarged spleen. Only 96 (0.35 per cent) as against 133 (0.47 per cent) in the previous year had spleen. They were mainly in the schools in North Range. These children were carefully followed up subsequent to the detection. The

parents were advised to continue the treatment till they were completely cured. The school staff were also advised to watch the treatment given to them.

Bones and Joints:—497 boys (2.86 per cent) and 42 girls (0.41 percent) had affections of the bones or joints, the percentages for the previous year being 3.60 and 0.44 respectively. A majority of them were ill-nourished and 509 had rickety deformed chest. Cod liver oil, fruits and good food were suggested. The poorer among them were directed to the local dispensaries for treatment.

Nervous and Psychic System:—27 boys (0.16 per cent) and 8 girls (0.08 per cent) were having functional and organic defects as against 0.27 per cent and 0.17 per cent in the previous year. 10 children had infantile paralysis and the rest had functional disorders, Suitable treatment was suggested to them.

Infectious and Contagious Diseases:—2233 boys (12.91 per cent) and 756 girls (7.41 per cent) had infectious diseases including skin conditions. The percentages of defectives in 1931-32 were 13.16 and 9.37, a slight reduction over the previous year's figures. Children having infectious skin diseases were isolated in the classes and treatment arranged at the dispensaries. Daily baths were given at the school premises wherever personal cleanliness was wanting. Certain of them who had whooping cough or other infectious diseases were

excluded from schools for a suitable period.

120 children (0.44 per cent) showed clinical signs and symptoms of leprosy as against 105 (0.57 per cent) detected during the previous year and they were all of the nerve type. There has been a slight increase in the number of cases reported this year. Out of the 120 children 44 were entrants. The parents were advised to resort to early and proper treatment of their children at the leper out-patient sections of hospitals and continue treatment till the disease was arrested. Pamphlets dealing with the subject were distributed to them. A careful watch was kept on the treatment given to them and the school authorities were also requested to follow them and use their persuasive powers in the refractory cases. The results of the work done are shown in the following up statement on page 117.

For details of other defects under this head vide statement of

Infectious Diseases on page 113.

Other Diseases and Defects: -1521 boys (8.79 per cent) and 607 girls (5.95 per cent) had defects not included in other items, the corresponding percentages for the previous year being 9.16 and 7.50 respectively.

The chief defects under this were worms and minor injuries. 174

children having Phimosis were advised circumcision.

Deformities:—72 boys (0.42 per cent) and 21 girls (0.21 per cent) had deformities as against 0.53 per cent and 0.27 per cent respectively in the previous year. 15 children had spinal curvatures and 11 had super-numerary fingers. Details of deformities are shown in statement on page 115. Remediable defects were advised to be rectified.

Number bearing no marks of Vaccination:—A careful search among the children for vaccination marks revealed 73 boys (0.42 per cent) and 59 girls (0.58 per cent) not having visible marks. The percentages for the previous year were 0.53 and 0.82. They were all vaccinated.

Medical Treatment :- 15338 children were advised treatment this year

at the dispensaries and hospitals. The details are shown hereunder:-

1.	Children sent to Corporation dispensaries		Boys. 9231	Girls. 3641
2.	Children referred to		STATE OF	DOSTAGO
20	(a) General Hospital		681	1253
	(b) Gosha "			2
	(c) Ophthalmic ,,		182	199
	(d) Tuberculosis Institute		7	22
	(e) Leper out-patient sections of Hospita	ls &		
	Corporation dispensary, Vyasarpad	y	110	10
	Total	1	0211	5127

Re-inspections and Following-Up work:—During the year 236 revisits have been paid to schools after the routine inspections as against 306 in the previous year. The slight decrease in the number of the revisits is due to the fact that during the major part of the year only 5 Medical Inspectors and Inspectresses worked instead of 6 in the previous year. 15493 re-examinations of children were made during these revisits.

A summary of the results of following-up work is given below:—

Malnut rition:—546 under-nourished children regained normal health
after treatment, 1144 improved in general health and treatment was continued
to this class of children. 1105 children showed no appreciable improvement but
were advised continuance of treatment.

Teeth and Month: 12 children had their teeth cleaned for tartar. 72 had their caries teeth extracted. 775 who had chronic ulceration of the mouth were cured after treatment at the dispenseries. 456 continued treatment for the same defect and their condition was slightly improved.

Enlarged Tonsils:—82 of the children advised Tonsillectomy wereoperated and they continued Cod liver oil for improving the general health. 876 who attended the local dispensaries for treatment of enlarged tonsils obtained complete relief. In 1418 children improvement was perceptible. 1232 continued treatment as there was no improvement.

Defective Vision:—15 children were refracted for defects in vision and were wearing glasses on the advice of the Medical Inspectors. In 45 children normal vision was restored after paying attention to the general nutritional condition. In three the degree of defect was lessened after taking Cod liver oil. The last group continued treatment.

Ear Disease:—138 children having ear complaints were treated and cured at the local dispensaries. 54 improved after treatment.

Circulatory System: —Out of 43 children who had anaemia, 16 werecured, 19 improved and the rest required a prolonged course of treatment.

Tuberculosis:—36 children advised treatment for tubercular lung underwent treatment and regained weight and normal health. They were all in the incipient stages.

Respiratory Affections:—490 Bronchitic children obtained relief at the local Corporation dispensaries. In 69 chronic types improvement was noticed while in 47 treatment had to be continued.

Abdominal Organs:—Among the 96 children found having enlarged spleen, 43 were cured after treatment, in 27 there was reduction in the size of the spleen and 26 showed no improvement. The latter two groups continued treatment. Two children were operated for Inguinal Hernia and another for Hydrocele on the advice of the school doctors.

Infectious Diseases:—1085 children having scabies of varying severity were freated and cured. They were given separate seats in the classes and arrangements made with school staff for giving them frequent baths in the schools. In addition to 133 children who obtained relief at the local dispensaries for Eczema, one boy who had Chronic Eczema underwent X-ray treatment at the Government General Hospital.

Leprosy:—Out of 120 children found having this malady 91 underwent treatment. A larger number of children attended the treatment centres this year as only 68 out of 105 attended in the previous year. The percentage of cases treated to the number detected is 82.5 as against 64.8 in the previous year. Out of the 91 that underwent treatment one was reported as free from the malady, 30 improved after treatment and 60 required continuance of treatment before signs of improvement could be detected. In 29 cases the parents were indifferent in spite of repeated advice.

Hookworm Disease :- 10 children were treated for Hook-worm disease with benefit.

Other Diseases:—41 children underwent circumcision operation after medical advice.

Co-operation of Parents:—The response from the parents was better this year. 9433 parents of children were present during the inspections and took medical advice regarding the health of their children. The number of parents met during the previous year was 4517. In some cases the parents too were examined and prescribed at their own request.

Co-operation of Teachers:—The school staff continued the followingup work this year, maintained defective register for each class and persuaded the parents and children to give effect to the medical advice especially in cases where there was either indifference or lack of interest in the treatment of their children. The Medical Inspectors in addition explained to the staff the common diseases of the children with special reference to infectious diseases and their exclusion.

School Sanitation:—The sanitary condition of the school and its surroundings continued to receive the attention of the Medical Inspectors. Extension of building or other changes to improve accommodation and ventilation were suggested for 41 schools. 15 school buildings were reported as unsuitable for school purposes for want of proper accommodation, ventilation, latrine arrangements and absence of play-ground. Change of premises was suggested in the latter case.

School Latrines:—37 schools were having flush-out latrines. In all the other schools, latrine arrangements were not satisfactory and required frequent cleaning. Wherever possible construction of flush-out type of latrines was suggested. Four schools had no latrines for the use of the children.

Water Supply:—A sufficient number of taps have been provided for all the schools. Water supply for Kodambakam Elementary School was found defective as there was no flow of water from the taps available there and the school authorities were using water of doubtful purity from the neighbouring wells.

Play-ground:—47 schools had no play-ground. In 2 schools the children were taken to the open spaces nearby for recreation.

School Equipment :- Adequate furniture has been supplied to all the

schools.

School Baths:—58 schools were having bath rooms with or without tap connections for the use of the children. Dirty children were given baths regularly during the midday and they washed their clothing after baths.

During the inspections this year, Korukupet School was noted to have been re-modelled and accommodation extended. Additional sheds to accommodate 4 classes were noted to have been added in Chetpet School, Jagannathapuram for the use of the girls' section.

Midday Meal:—The supply of midday meal was continued this year also. 78 schools were supplied with meals. 4200 children were fed daily. The number of schools supplied with meals in the previous year was 52 and the number of children fed daily 3500. The Medical Inspectors visited these schools at the time when the children were fed and inspected the sanitary arrangements made.

Propaganda:—88 Lectures were delivered in the various schools on health subjects. Due to the prevalence of small-pox during the year, special attention was directed towards this subject and the importance of vaccination in the prevention of the disease. The total attendance at these lectures was 13195. In addition, 231 talks on various health subjects were arranged with the parents in the schools. Charts on school hygiene were exhibited in the divisional Health Exhibitions held at Korukupet, Choolai and Triplicane High Road Schools.

The details of propaganda work done are given below:-

No.	Subject.		No. of lectures delivered.	No. of talks arranged.	Remarks
1	Small-pox		20	26	
	Cholera		1		111111111111111111111111111111111111111
	Tuberculosis		16	44	13 11 11 11
4	Malaria		11	33	11 11/20
5	Hookworm disease		1	2	A CONTRACTOR
6	Leprosy	1 1	12	38	A 10 WALL
7	Flies		3	14	March 18
8	Personal Hygiene	- 10 0	9	33	How have
9	Ventilation & Housing			3	
10	Diseases of children		1	1	THE PROPERTY
11	Infectious diseases		4	15	3 040 69
12	Mosquitoes			1	D. Talbert
13	Domestic Hygiene.			2	A STATE OF THE STA
	Water supply			1	THE REAL PROPERTY.
	Worms		4	5	E H HULL
	Guinea worms		1		- 4
17	Enlarged tonsils		1	1	
	Dental caries		1		To the State of
	Other subjects		3	12	
	The second second second	34 40 19	88	231	

### REPORT OF THE WATER ANALYST FOR THE YEAR ENDING 31st DECEMBER 1932.

During the year under report the quality of water supplied to the city was "epidemiologically safe". In other respects the year was eventful. The trouble due to the smell of sulphuretted hydrogen and the whitish gelatinous growths noticed in the water-supply developed into an acute form in July and August and complaints poured in from all parts of the city. The question of improving the city's water-supply came up prominently before the council and received its serious attention. On the advice of the Director, King Institute, Guindy, the lake water was treated once with copper sulphate costing nearly Rs. 4,000. (It will be remembered that several experts and committees had given their opinion regarding this problem, but apart from chlorination adopted no other steps were taken).

Another change that was effected in the process of purification (and it is continued) was to pass the raw water at 12 vertical inches per hour, i.e., at three times as fast as the rate at which the sand filters were originally intended to be worked.

The Analyst has to report that his researches \* in the direction of finding out the exact mechanism of the production of sulphuretted hydrogen in the slow sand filters and eliminating the smell of hydrogen sulphide and the whitish gelatinous growths (carried out mainly in the Corporation laboratory) during the last three years came to what must be considered a successful conclusion. His practical suggestions are quoted in full.

<sup>•</sup> The results of his researches were presented to the Madras University in the form of a thesis of 100 pages and secured for him the M. Sc., Degree and the Associateship of the Institute of Chemistry of Great Britain and Ireland.

"In the tropics slow sand filtration is not suited to impounded surface waters of the type of Red Hills Lake water, as conditions there tavour the tormation of sulphuretted hydrogen and other attendant biological phenomena by sulphate reduction on a large scale.

The remedies which suggest themselves are many. A method of filtration in which the two principles of aeration and rapid filtration are employed would offer the best solution for the purification of such a water. Merely rapid

filters of the type of Bell, Candy, Jewel or Paterson also are suitable.

In the dilemma presented by the Madras slow sand filters, a little more of organic matter (in solution) seems preferable to the noxious smell of sulphuretted hydrogen and to unsightly coloured growths in drinking water. Where large financial commitments have been made as in Madras it is no practical help to suggest that slow sand filters be displaced by mechanical filters. The results obtained by mechanical filters may very nearly be obtained by a modification of the existing filters.

A change which involves least violence to the existing system is chlorination of raw water at Red Hills with a view (i) to eliminate the growth of Plumatella Tangy-naikae which affords a resting place for Spirillum desulfuricans from the lake to the filters at Kilpauk, (ii) to reduce a portion of the organic content of raw water and (iii) to afford sufficient period of contact for chlorine

to act upon the water.

An attempt may also be made to reduce the alkalinity of raw water by adding dilute acid at the lake end of the conduit as the high alkalinity of raw water is partly responsible for all the troubles in the slow sand filters. Each of the existing 17 filters (each measuring 200' × 100') may be made into a double filter by putting a cross-wall. In the primary filter, coarse sand may be used and water rushed through at a much faster rate than now and refiltered rapidly through the secondary filter. Such a process will not afford anaerobic conditions and will therefore prevent the reduction of sulphate which takes place only in stagnant or slowly moving waters. If sulphate reduction is thus prevented, sulphuretted hydrogen and the concomitant growths may not appear at all in the filtrates and in the distributory system. The final effluent if found unsatisfactory from the bacteriological point of view may be chlorinated again with a very small dose of chlorine".

The Analyst has some remarks to offer on the treatment of water with copper sulphate. The observations of Sir Alexander Houston (Director of the Metropolitan Water Board, London) and of A. J. Jenkins are of considerable interest. The former on page 5 of his 25th Annual Report for the year ending

31-12-1930 wrote as follows :-

"It is thirty years since Copper sulphate was used in America as an algicidal agent. It was first used by the Board in 1907 to combat a growth of Oscillaria (see 15th Annual Report p. 52) and has been employed on numerous occasions since, both as preventive and curative measure. The results have usually, although not always, been successful but the writer does not wholly approve of the treatment, if it can reasonably be avoided, because sometimes the destruction of one kind of growth appears to pave the way for the growth, subsequently of others of a much more objectionable kind. Further there is always the possibility of algal growths becoming more and more inured to copper, calling for progressively increasing doses of the chemical. Chlorine has also been used as an algicidal agent, but, on the whole, chlorine is better as a bactericidal than as an algicidal agent—the converse holds good in the case of copper. Deep reservoirs, with sides which do not slope too much, clean bottoms, good circulation and the use presumably of as pure a water as possible for abstraction purposes are factors which seem to keep the excessive growth of algae in check.

Other and seemingly better methods of removing algal growths are by such mechanical means as preliminary rapid filtration or the use of excess lime

method of purification".

Again in the discussion which followed when Sir Alexander Houston and H. E. Stillgoe read their paper "The Filtration and Treatment of Water for Domestic Purposes" at the Surveyor's Institution on June 7, 1928, A. J. Jenkins spoke as follows (vide p. 360. August 20, 1928, "Water and Water Engineering").

Where, as in Madras, the chief trouble is due to sulphate reduction the Analyst is sceptical about the efficacy of the treatment of the lake water with copper sulphate. This, quite apart from the troubles anticipated by Sir Alexander Houston and A. J. Jenkins, should be the reason for not continuing that treatment. In any event no case has been made out for using it. The improvement in the quality of water after August in his opinion, was due to rapid

filtration and to low depth of sand.

### Scientific.

1. Red Hills Lake.—The total rainfall in the catchment area was 39.06 inches for the year while it amounted to 56.12 inches last year. The graph I, on page shows the relation between the lake level and rainfall in 1932.

The yearly average chemical results nearly resembled those of last year (Table III page 120). On the bacteriological side, the lake water contained B. coli in 5 c. c and upwards in 66.6 per cent of the samples examined

(Table II, page 119).

The lake water was treated with ten tons of copper sulphate costing nearly Rs. 4000 on 26th and 27th August 1932. Before the treatment the lake water was yellowish but a few days after treatment the water looked bluish. On 11-9-32 i.e. 16 days after when the Analyst inspected the lake the whole lake appeared distinctly green due to the over growth of a particular species of alga.

2. Raw Water at the Kilpauk End:—The bacteriological results are shown in Table II on page 119. The raw water contained B. coli in 5 c.c and upwards in 66.2 per cent of the samples analysed which is a distinct falling off when compared with the results of last year. No material difference is noticed between the chemical results of last year and those of the year under report. Organic matter as represented by the figure for "absorbed oxygen" was highest in June and lowest in December while the lake level was lowest in October and highest in January (vide graph II).

highest in January (vide graph II).

3. Chlorinated Raw Water:—Raw water was chlorinated effectively at the Kilpauk end of the raw water conduit before it entered the filter beds. The dose of chlorine was kept at 1.0 ppm till 4-9-1932 after which it was daily adjusted to the varying needs of the water (till 4-12-1932). From 5-12-1932, filtered water was chlorinated and the applied dose then varied from 0.6 to 0.8

ppm (Table IV on page 121).

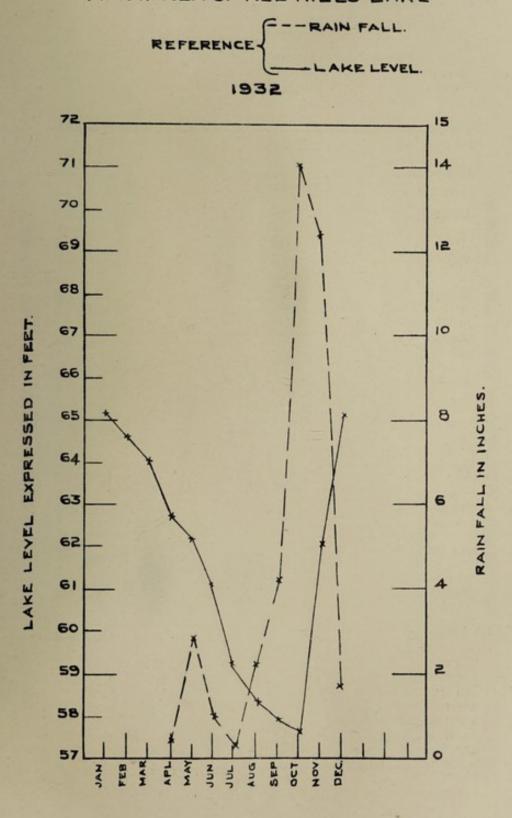
The percentage number of samples of water after treatment with chlorine in which B. coli was present or absent in 60 c. c was 94. The yearly average chemical figures (vide Table III) showed a distinct reduction over those of raw water. Taking the "absorbed oxygen" figure alone, a reduction of about

10 per cent was effected as a result of chlorination.

4. Filtrates from Sand Filters:—A decrease in the number of first class samples (B. coli in 60 c. c) from 33·0 per cent in 1931 to 20·5 per cent in 1932 was noticed. On the chemical side, the oxidisable organic matter was reduced to 8·2 per cent; albuminoid nitrogen 37·1 per cent, while the ammoniacal nitrogen showed an increase over the corresponding figures of raw water (1932). Sulphuretted hydrogen was present in filtered water almost throughout the year, and along with it colourless sulphur bacteria were seen in long, trailing filaments on the walls of the filtered water chambers, filtered water conduit and underground filtered water reservoirs. These growths were also seen issuing from house taps in the City,

5. Distribution System:—Only 5.9 per cent of the samples of water examined from service taps in the City were first class ones (Table II on page 119).

# GRAPH NAI SHOWING THE RELATION BETWEEN LAKE LEVEL AND RAIN FALL IN THE CATCH-MENTAREA OF RED HILLS LAKE

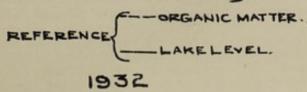


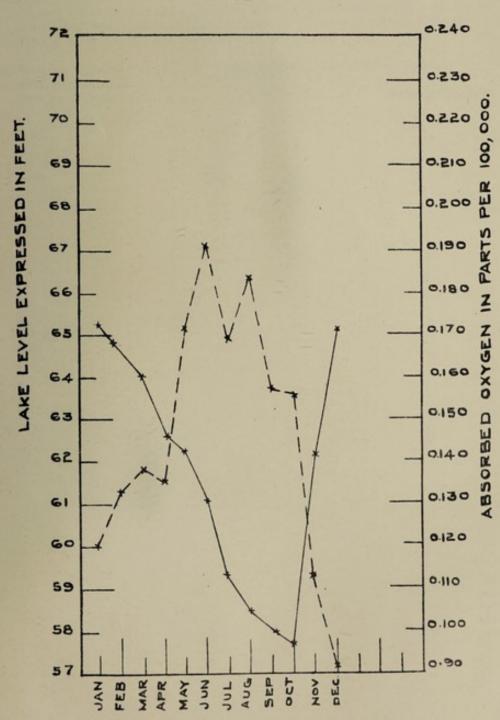
### GRAPH NAIL

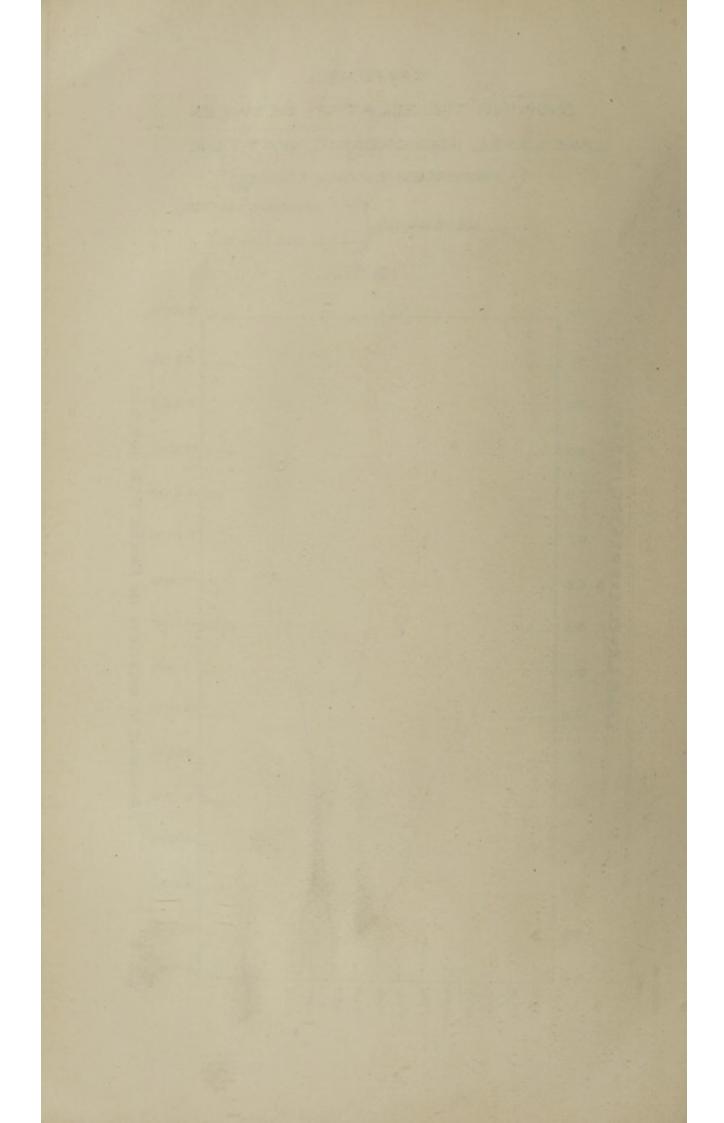
SHOWING THE RELATION BETWEEN

LAKE LEVEL AND ORGANIC MATTER

(ABSORBED OXYGEN FIGURES)







In July and August, the quality of water as supplied to the city was far from satisfactory. This was due to the bad situation at the head works. The sand filters were working at the slow rate of 4 vertical inches per hour for the major portion of their runs since July '32. Consequently sulphuretted hydrogen was produced in large amounts, the climatic conditions favouring it. During this period, therefore, the sulphur bacteria (Beggiatoa and Thiothrix) also increased as the most favourable conditions for their growth were existing. From the waterworks at Kilpauk the sulphur bacteria were pumped into the distribution system.

It was suggested then, that the system of filtration at a slow rate of 4-8 vertical inches per hour should be given up in favour of a system in which the two principles of aeration and rapid filtration are employed. Acting on the above suggestion some of the sand filters were worked at 12 vertical inches per hour with very low depths of sand; and the filtrates from those beds were free from sulphuretted hydrogen and the concomitant growths of sulphur bacteria.

The quality of water as supplied to the city also improved.

Water Analysis Laboratory. | Water Works, Kilpauk. 22nd June 1933. S. V. GANAPATI, B.A., M.Sc., A.I.C.,

Water Analyst.

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A. V. GANAPATI, BA., Miles, ALIC.,

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## STATEMENTS.

## VITAL STATISTICS (STATEMENTS)-1932.

Annual Form No. A :- Meteorological Data-Madras.

Latitude :- 13° 4' North.

Longitude :- 80° 15' East.

	guin	Maximum of rain di 24 hours.	0.45 0.45 0.45 0.67 0.63 0.63 0.67 0.67 0.67 0.67 0.67 0.67 0.67	:
Rainfall.	Sning .1	the Month	69-0 18-5 85-1 18-98	46-59
	days	Number of on which fell.	: 5 : 5 : 5 : 5 : 5 : 5 : 5 : 5 : 5 : 5	100
lo suo	directi	Prevailing of	NNE ESE Eby S SSE SSE SSE SSE SSE SSE SSE SSE SSE S	:
	Satur	Degree of complete being 100	888 277 277 28 23 23	74
Sture	temper	Difference I point and Mes perature,	10.7 10.7 10.0 10.0 10.0 10.0 10.0 10.0	10.6
	.Sui	Mean Maxi Solar read	oldslisva toN	
neter.	Dew point.	Mean daily value.	64:5 69:33 73:40 69:66 73:40 69:66 73:40 69:66	10.5
ding of Thermometer.		Mean daily value.	24-4-1-25-25-25-25-25-25-25-25-25-25-25-25-25-	Sea level and gravity
Reading of	y.	Mean daily range.	15.8 17.0 17.0 18.1 19.8 19.8 19.8 19.8	
R	Dry.	.muminiM	69-6 69-6 70-7 70-7 70-7 88-0 88-0 88-0 74-5 74-5 74-5 74-5 74-5 78-1 78-1 78-1 78-1 78-1 78-1 78-1 78-1	ToT
		.mnmixsM	88.8 99.2.2 99.5.1 88.8 86.9 86.9 86.9 86.9 86.9	89-9
Barometer.	-best	*Mean daily ing.	30.005 23.903 870 870 679 627 7704 775 813	* Barometer reading reduced to 32° F
1	1932	Months.	Januery February April May June July September October December	Total

Annual Form No. I.-Births registered by divisions during the year 1932.

=	imate.	*Illegit	26	11	7 =	1 60	12	eo ×	000	64	11		10	92	23	01:	c:	130	38	11	+	9	34	7	14	00	0	461
10		Still bi	48	25	44	12	26	00:	66	11	30	N -	1.6	99	59	07	44	200	3 15	53	82	48	41	35	13	200	20	1326
	births ing	Total.	40.3	43.0	35.5	0 20 00	36.4	23.8	23.4	20.00	38.1	0.4.0	23.4	35.8	42.2	34.7	8.38	20.0	33.8	43.7	44.9	43.5	35.9	40.5	41.8	6.250	1.00	38-0
6	Mean ratio of births per 1000 during previous 5 years.	Females	38.5	42.3	36-0	34.2	381	30-4	24.8	25.4	38.5	33.8	26.0	36.6	42.6	39-21	41.6	1.00	25.0	42.7	45.6	47.7	36.5	39.3	41.3	33.1	2.79	39.1
	Mean per prev	Males.	12.1	43.6	35-1	24.6	34.9	19.7	37.4	20.5	37.6	35.1	23.1	35.0	42.8	38.5	33.0	47.1	99.8	49.7	44.3	40.1	35.4	41.6	42.3	32.7	33:1	37.1
00	over 1000	deaths of popul			::	4.4	:	::		14	:	:	:		: :	: :	::	:	:	:	: :			:	:	:	:	:
1	ths of on.	populari per 1000	1.3	1.8.1	0.6	16	10.6	8.0	7.7	9.5	10.9	2.5	2.0	12.0	10.1	111.5	3.1	8.23	0.0	12.1	0 60	16.8	10-0	9.6	60.00	1.6	8:3	8.8
9	orn to 0 nrod	Males be every 10 Females Females	100-2	114.6	106.3	\$111.9	102.0	1.06	107-9	8.66	105.5	116-2	114.6	6-101	190.5	101.7	97.4	103.5	101-1	110.1	1.017	93.5	92.1	119.3	106.5	91.3	105.1	105.5
		Total,	45.8	54.3	41.0	34.6	40.5	28.5	42.7	40.0	45.3	39.0	1.92	37.4	50-1	43.1	37.9	55-1	36-0	37.6	16.91	47.1	41.1	48.0	47.4	40.4	38-1	43.3
2	Ratio of births per 1000 of Population.	Females.	45.1	51.5	41.1	41.1	35.9	38-2	43.5	20.0	45.6	8.98	\$0.4	0.54	47.9	14.8	43.5	2.99	35.6	38.9	13.1	54.0	45.4	45.3	46.5	44.0	380	44.5
	Rati per Po	Males.	45.4	57.0	10.0	29-0	27 ° 0	21.9	42.3	38.9	45.0	51.4	23.7	33.7	1.04	42.7	33.5	53.6	34.4	36.9	2.04	41.1	37.4	50.5	48.2	37.0	38.5	13.1
	bs d.	Total.	993	1,408	1,048	301	461	185	819	811	976	735	103	642	1,334	1,182	889	1,618	875	1,023	1,221	808	803	941	1.295	1,311	810	27,996
+	No. of births registered.	Females.	496	929	508	142	252	202	394	106	475	340	48	218	166	586	425	795	435	487	400	418	418	429	627	701	395	13,625
	No.	Males.	497	752	240	159	236	888	425	405	501	395	55	524	943	596	414	823	440	536	643	120	388	512	668	640	415	14,371
	cord-	Total.	21.952	25,911	25,538	8,704	14,257	6,550	19,202	20,294	21,547	18,916	3,906	17,183	43,817	97.054	22,137	29,385	21,334	27,238	26,845	170,10	10,032	19 615	27,343	33,203	21,270	6,47,230
3	Population according to the Census of 1931,	Females.	11.603	12,722	12,599	3,221	5,880	2,537	9,124	0886	3,034	9.235	1,581	7,568	20,641	13.086	9.764	14,022	11,259	12,726	2,928	208 2	0,000	9.480	13.483	15,919	10,407	3,06,007
	Popula ing to	Males.	10.949	18,189	13,064	5,483	8,317	6,856	_		4,160	7.681	2,325	9,615	23,176	13 96x	12,373	15,353	13,075	14,512	12,317	0 204		10,135	13.860	17.284	10,863	3,41,223 3,06,007 6,47,230 14,371
	THE REAL PROPERTY.		1	: :	: :			upet	:		ton	1	:	:						m		anper	:	:	:			
01		Districts.	Shearuram	Condiarpet	Washermanpet Korukkunet	Harbour	Muthialpet	Katchaleswaranpet Kothawal Bazaar	Ammen Koil	Seven Wells	Sowcarpet	Trevelvan Basin	Esplanade	Park Town	Perambur	Choolat	Venery	Egmore	Kilpauk	Nungambakkam	Chintadripet	l iruvateeswaranpei	Ouepauk.	Amir Mahal	Mirealilbret	Rovapettah	Mylapore	
1	•	Division	-		ω <del>4</del>	000			0 6	-	11 5			250	-	18						24 0x					30	

38.1 Mean ratio of deaths per 1,000 during previous Five years. 8.98 LetoT 32.3 40.4 38.1 87.6 37.6 Females. 10 35.9 35-1 Males. 33.4.4 84-2 84-7 84-4 Total. causes. 31.0 32.1 33.0 35.0 36.9 Females. 0 88 8 83 8 21:12 42.5 AII Males. 13.3 15.1 16.6 13.8 Deaths from child 2007 1120 1140 120 120 120 120 10.6 8.9 17.9 18.7 13.0 648 \$ 0 - 0 S :000 4++--200000 Deaths per 1,000 of population from Olher respiratory Annual Form No. II-Statement of Deaths by Divisions during the year 1933. 1000 Tuberculosis. 7 Dysentery 1887 7 10000 0 -- 0 0 0 0 Other fevers. 20.00 2 :2 :22 :22 3000 Enferic forer. 0.5 0.05 100 40000 Malaria. 0.00 1111 1111 000 Plague. 1111111 11:0 6: 0: 0000000 0.1 0.3 3 1112111 1111 111115 Cholera. temales. 105.9 110.6 97.2 102.7 81.8 119-9 101-9 102-7 102-7 102-7 95-1 128-6 119-8 110-2 No. of deaths of males to every 100 deaths of 203 741 628 102) 888 22,290 Total. No. of deaths. 909'01 Females, 11,684 Males. 17,183 227,488 227,034 227,034 227,335 227,335 237,355 237,35 6,47,230 to the .IstoT Population according Census of 1931. 3,034 10,412 9,235 1,581 112 255 15 148 15 148 15 148 16 19 18 10 407 3,06,007 Females. 10,949 13,189 13,191 5,483 8,377 8,377 6,856 4,018 14,512 16,223 10,301 10,135 10,135 11,284 10,863 3,41,223 Males. 68.2 68.2 174.6 166.0 130-8 139-0 166-0 28-1 17.3 1 32.8 Density per acre. 2,628 230 280 269 269 1,996 201 201 833 168 2,093 114 114 986 110 110 123 58 116 114 139 19,728 60 Area in acres. 11111111 1111 111111111 Total Royapuram
Tondlarpet
Washermanpet
Korukkupet
Harbour
Muthlalpet
Katchaleswaranpet
Kothawal Bazaar
Ammen Koil Nungambakkam Chintadripet Tiruvateeswaranpet Sowcarpet Peddunalckenpet Travelyan Basin Esplanade Districts. 04 Choolai Purasawalkam Chepauk Triplicane Amir Mahal Mirahibpet Royapettah Mylapore Park Town Perambur Kilpank 2 1224 Dieisione.

Includes 246 and 388 deaths in the Government Royapuram and General Hospital of patients admitted from moffustl and destitute.

Registered during the year 1932. Total deaths 22,290 2,323 December. 2,170 8500844444680880808986868005448888 November Annual Form No. III. - Deaths Registered by Divisions during each moth of the year 1932. 2,031 4899335566931188995699544489098 4899335566931188995699555 October. 1,758 488884444846640684886688488848888488 September 1,651 August. 1,638 545 655 871 July. 00 1,803 ·aun[ 1,770 472747274728668686874747777777 May. 1,572 Iinq A 1,713 Матсh. 1,753 February 2,108 anuary. Districts. ca **Tiruvateeswaranpet** Katchaleswaranpet Sowcarpet Peddunaickenpet Kothawal Bazaar Trevelyan Basin Nungambakkam Purasawalkam Washermanpet Chintadripet Mirsahibpet Royapettah Seven Wells Ammen Koil Amir Mahal Korukkupet Park Town Royapuram Tondiarpet Muthialpet Splanade Perambur Criplicane Mylapore Harbour Chepank Egmore Kilpauk Choolai Vepery Divisions.

164.5 191.1 Upwards. 60 years 3 1951 50 years and 34.7 under 60 years. = 40 years and 603 21.4 under 50 Annual Form No. IV-Deaths registered according to age by divisions during the year 1932. years. 24.8 30 years and 16.4 under 40 years. 14.3 20 years and under 30 14.3 981 years. 226.3 58.4 59.1 10.8 10.1 6.3 8.4 7.5 11.7 11.7 10 years 15 years 20 years. under 395 and 15 years. under and 213 10 years. 5 years 312 under and 1800 1809 385 5 years. year under 48128456646666 48525 Under 1 year 246-2 3,538 Total Ratio per 1,000 Firuvateeswaranpet Katchaleswaranpet Kothawal Bazaar Peddunaickenpet frevelyan Basin Nungambakkam Districts. Washermanpet dia. Porasawalkam Ammen Koil Chintadripet Seven Wells Korukkupet Park Town Amir Mahal Mirsahibpet Rovapuram Muthialpet Pondiarpet Royapettah Esplanade Sowcarpet Perambur **Priplicane** Harbour Egmore Chepauk Vepery Choolai Divisions.

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 1931,

Annual Form No. V.-Deaths registered according to class by divisions during the year 1939.

		1	1	-000		1.	1	1	-	1			1000	1
Pc	Population as	рет	Census of 1	1931.	Na	Number of	deaths	deaths registered	ered.	Ratioo	Ratio of deaths	рег	1,000 of	population
Christians.	-subniH	suspemsdoM	Others.	Total	Christians	.subaiH	susbamadoM	Others.	Total,	Christians.	+subniH	Mohamadans	Others,	T'otal.
5,797	14,840	-	166	21,932	123	513	1001	:	732	20.0	36.6	57.4	1	33.3
888	23,036	36 1,728	112	25,663	121	854	74	::	616	23 6	37.1	42.8	: :	37.0
916	20,557		84	25,538	18	651	150	:	819	18.4	31.6	38.0		32.1
203	3,491		23	8,704	6	124	213	:	339	66.	35.5	45.4	::	38.9
1,235	9.889		59	19,707	97	319	30		320	9.6	22.0	97.0	:	8.56
185	100	-	46	6.550	100	167	200	: :	180	27.0	31.9	1.4	: :	27.5
2,259	12,967	1	107	19,202	59	165	147	: :	671	25.7	35.8	38-3		34.9
271	17,8	200	129	20,294	70	839	55		718	64.5	98.0	43.5	:	47.5
14	6,658		488	7.194	-	202	-		203		30.8	5-68		28.5
22	21,141	41 305	26	21,547	01	731	00	::	711	9.93	34.6	26.2	:	34.4
200	18,500	1	292	18,916	7	618	9	***	****	102.0	33.4	8-69		33.5
213	6,556		08	3,906	-35	100	1 200		102	9.8	29.2	6.1		26.1
665	16,169	_	-	17,183	15	570		: :	585	22.5	35-2	:		31.1
2,175	33,024		1	43,817	_	-066	290	:	1,327	21.6	59.9	34.5	:	30-3
1,427	20,025	1		27,488		1,034	53		1,093	210	40.5	57-2	::	39.8
4,1,6	15,929	076 1 670	150	84,137	96	616	9 8		771	\$3.t	38.6	30.3	:	37.5
5,080	21.313	-		28 385		710	000	:	NT6	97.5	33.7	21.1	::	29.3
3,584	20,003			24,331	_	584	200	: :	089	20.3	29.1	31.7	: :	27.9
4,365	21,036	_	20	27,238		547	64		677	15.1	26.0	37.1		24 9
1,951	23,550	711		26,845		905	69	I	1,022	29.5	38.4	48.1	1.2	38-1
1,071	19,646	_		31,371		744	411	1	1,183	25.2	37.8	6-82	13.2	37-7
603	12,817	-		17,093	1	386	140		527	11-3	3).6	33.5	:	30.8
400	19,002			19,514		689	#1	:	607	42.0	30-9	35.8	:	31-1
201	11,019	_	11	19,615		118	316	-	755	22.9	555.5	17.1	6.06	7.82
9.481	20,040			22,909		900	208		1,042	17.0	9999	58.5	:	28.1
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	-	's	Division	-	04 6		* *	9	7	00	6	19	11	12	13	4:	15	16	10	100	202	31	22	20.00	47	96	27	28	53	30	13

Annual Form No. VII-Deaths registered from 'SMALL-POX' by Divisions during each month of the year 1932.

9	aning o	Mean Ratio 1,000 du previous years.	00000000000000000000000000000000000000	0.3
	s per	Total.	20000000000000000000000000000000000000	0.3
9	of deaths per	Females.	25-1 1 1 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	0.5
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7	Total.	Females.	Mail 10 20 00 00 - 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1	72 1
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	1	April.	1:11:1:::::::::::::::::::::::::::::::::	52
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1	-	February.		3
	14	January.		33
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04	Capture	Districts.	Royapuram Tondiarpet Washermanpet Korukkupet Harbour Muthialpet Katchaleswaranpet Kothawal Bazaar Ammen Koil Seven Wells Sowcarpet Peddunaickenpet Trevelyan Basin Esplanade Park Town Perambur Choolai Purasawalkam Vepery Egmore Kilpauk Nungambakam Chepauk Triplicane Amir Mahal Mirsanibpet Royapettah Mylapore	Total
I	1	Divisions		1

will be good to throw the from more of the Black and bette grantfully the army a panel

years.

0.02 0-05 0.000 Mean ratio per 1000 during previous five : 12 0.5 0.03 0.01 0.05 0.01 0.3 Ratio of Deaths per 1,000 of Population. Total. 0.002 Females 5 year 1932. Annual Form No. VIII. - Deaths registered from 'MEASLES' by divisions during each month of the year 1932. 0-03 : E : Males. month of the 16 Total. Total. Females Annual Form No. IX-Deaths registered from "Plague" by divisions during each Males. 1 December, 1 November, 1 October. September. 1 August. : · Am 00 : Jame, 1 May. . April. : March. : February. : : : January. Total Total **Districts**. Chintadripet Tiruvateeswaranpet 04 Katchaleswaranpet Kothawal Bazaar Peddunaickenpet Trevelyan Basin Nungambakam Tondiarpet Washermannet Purasawalkam Ammen Koil Seven Wells Korukkupet Park Town Amir Mahal Royapuram Mirsahibpet Esplanade Royapettah Mothinlpet Sowcarpet Perambur Priplicane Perambur Harbour Vepery Chepauk Choolai Kilpauk 16 DIVISIONS.

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	deaths per population.	Total.	900 900 900 900 900 900 900 900 900 900	0.3
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	Ratio 1,000	Males.	00000000000000000000000000000000000000	0.5
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4	Total.	Females.		95
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9	garina	Mean rat 1,000 d previou years,	000000000000000000000000000000000000000	0.5
-	us per	Total.	**************************************	0.0
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-		Divisions	00001000000000000000000000000000000000	

1	9	Buring	Mean ra 1,000 c previous years,	4.7	7.7	9 69	3.3	00 0	9.6	2.7	3.2	2.5	2.5	6.3	3.8	2.6	1.9	- 0.0	1.9	1.8	1-1	1.1	1	1.6	1-1	8.1	1.9	-	1.0	2.2
	17.0	Deaths per population.	Total.	7.5	20 20	3.1	4.3	3.1	2.5	4.6	25.53	3-1	2:50	3.6	3.5	3.5	÷.5.	1.7	0.50	2.1	6.0	0.0	2.5	1.3	1.2	3.1	2.0	1.1	10	2.5
year 1932.	5	of Deal	Females.	6.1	9.8	20.00	2.5	3.5	4.3	4.3	6.3	4.5	3.1	3.8	1.1	8.8	25.8	6-0	6.6	151	-:	0-0	200	1.7	6.0	2.1	0.1	1.6	1.0	2.6
the year		Ratio c	Males.	3.6	20.0	25.5	3.4	800	1.4	4.5	2.8	2.1	4.5	3.4	2.1	2.2	2.1	200	7.7	2.6	0.1	111	20 10	1.0	7.1	3.5	2.0	27	-	-1.2
of	1 1 20	-	Total.	86	103	80	31	55.	17	90	₹ 60.	227	80	69	200	35	136	55	46	81	55	200	117	63	27	62	9	48	67	1646
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\* Includes deaths in the Government Royapuram and General Hospital of patients admitted from moffusil and destifute.

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	20	atio of Death per 1,000 of population.	Females	1.9	0.00	0.0	1.6	3.5	4.7	4.8	2.2	3.6	4.5	5.3	:	3.6	4.9	3.9	2.	6.0	9.0	3.1	4.5	3.4	4.2	3.8	50.0	2.5	6.4	1	4.3	
the year		Ratio of per 1, popul	Males.	23 0	7.53	1.9	7.7	6.6	1.7	9.0	4.5	6.0	3.1	63	1.7	1.1	4.8	2.7	4.2	8.9	2.5	3.0	5.2	3.6	2.8	3.0	4.50	6.0	3.5	1	0.1	
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Annual Form No. XIII, - Deaths Registered	Total 2	A STATE OF THE PARTY OF THE PAR	Districts,	Royapuram	Tondiarpet	Korukkupet	Harbour Muthialant	Katchaleswaranpet	Kothawal Bazaar	Ammen Koil	Seven Wells	Sowcarpet	Peddunaickenpet	Trevelyan Basin	Esplanade	Dark Town	Perambur		Purasawalkam	Vepery	Kilnauk	Nungambakam	Chintadripet	Tiruvateeswaranpet	Chepauk	Triplicane	Amir Mahal	Mirsahibpet	Koyapettah		Total	
-	-	-81	Division	-	23 20	4		1	00	6	9	1	12	13	14	1.5	16	17	18	119	02	22	23	34	25	26	27	210	30	-		-

Mean ratio per 1,000 during previous five years. Annual Form No. XIV. - Deaths registered from "TUBERCLE" including Tubercle of the Lungs by divisions during each month of the year 1982. Ratio of deaths per 1000 of population. 322312125000121 Total. 1:3 Females. Males. 1:5 Total. 917 includes deaths in the Government Royapuram and General Hospital of Petients admitted from moffussil and destitute. Females 404 Males. December. November, 89 October, 62 September. 75 August July. 'aun[ May. 64 JinqA. 93 March. 83 February. 89 11 Total Districts. Tiruvateeswaranpet Muthialpet Katehaleswaranpet Kothawal Bazaar Sowcarpet Peddunaickenpet Trevelyan Basin Nungambakkam Royapuram Tondiarpet Washermanpet Purasawalkam Korukkupet Harbour Ammen Koil Chintadripet Mirsahibpet Royapettah Mylapore Amir Mahal Seven Wells Park Town Esplanade Triplicane Perambur Egmore Chepauk Choolai 33344884881165 Divisions.

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Annual Form No. XV.- Deaths registered from "RESPIRATORY DISEASES" excluding Tubercle of the Lungs by divisions during each month of the year 1932.

9	-arq g	Mean rat 1000 durin 5 yious five	2.5	11.3	10.5	8.9	0.9	10.0	10.4	8.5	10-1	10.5	14.6	8.6	10-3	19.3	10.4	0.01	7:1	6.5	9.3	7.4	7.3	2.9	7.1	8.7	6.3	8.7	1
3	-		8.8	9.9	6.6	0.9	0.00	1.6	8.7	7-4	9.1	8.5	2.2	8.7	7.8	13.7	9.01	7.9	8.9	5.2	10.0	8.9	24 0	1.3	**	0.0	7.3	X:5	
ç	of Deaths per	Females.	9-8	8:3	11.2	N OC	7.1	96	8.6	11.5	1.6	7.3	9.5	7.5	8.7	13.4	11.3	7.8	6.9	5.1	10.8	6.1	20.00	1.1	9.0	3.0	6.8	8.5	1
	Ratio d	Males.	8:9	10.2	00	4 6.5	2 60	8.5	1.1	4.3	84	8.9	0.9	9.6	8.5	14.0	66	5.6	6.9	2.2	9.3	7.5	5.0	0.0	200	200	9.0	8:5	1
		Total.	156	237	. 28	20 4	39	174	*37	53	195	154	\$40	149	370	377	286	220	168	149	296	214	123	142	16.3	Zhu	154	5.5 39	-
-	Total.	Females.	109	104	36	48	18	88	97	35	101	89	15	56	180	177	148	100	11	65	139	93	19	1)	200	130	72.0	2.603	
		Males.	100	133	45	25	200	98	*33	18	16	86	14	98	150	200	138	120	16	84	130	121	900	1)	19	130	83	9 907	1
	.13	Decembe	15	53	000	122	*	18	13	60	35	=	2	20	37	27	25	10	15	17	28	2	27 0	6	25	36	12	532	
	.13	Novembe	19	180	22	27 -	1	15	13	3	20	20	4	15	32	35	2 c	207	15	14	653	18	0;	14	220	200	15	546	
		October.	22	15	15	202	-	13	11	9	17	13	00	14	31	200	77	176	19	21	16	9:	cr	79 (	20 :	100	120	523	16
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		August	177	10	210	2 10		8	27	63	15	14	9	10	61	40	13	90	6	16	16	07:	1,	0	14	200	14	400	
		July.	13	27	1011	0 4	-	16	16	01	11	00	7	16	32	27	18	er or	11	00	15	21	200	77	13	02:	14	409	1
60		June.	21	93 L		× 00	0 04	23	17	C4	16	19	4	13	44	34	550	07	13	6	39	2:0	0:	1:	201	61	15	489	ı
		Мау.	16	65.	- 10	9 4	2 24	12	200	7	20	10	12	10	59	28	52	17	16	13	19	19	1	77		6.	8	467	
		.linqA	118	17	2	29 -	* :	15	91	1	10	13		6	57	OF.	56	9	12.	11	11	11	-		1	01.	1 1 2	371	
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		February	11	14	4	04.0	4	16	=	6	10	9	00	13	30	31	20	90	12	13	27	11	-	77	12	27	13	496	-
		January.		26			0 4	13		6	17	16	9	16	35	29	25	24 0	12	00	22	22	18	14	15	29	15	507	-
2	terrolo	Districts.	Royapuram	. bet	Harbour	Muthialpet	Kothwal Bazaar	Ammen Koil	Seven Wells	Sowcarnet	kenpet	Trevelyan Basin	Esplanade	Park Town	Perambur		Purasawalkam	Vepery	Kilpank	Nungambakam	Chintadripet	Tiruvateeswaranpet .	Chepauk	Triplicane	Amir Mahal	Mirsahibpet	Mylapore	Total	
-	1	Divisions	1 01	. 00 -	* 10	9 6	- x	6	10	11	12	13	14	15	16	17	18	5.00		25.5	23	24	100	26	27	28	30	1	1

Mean Ratio per 1000 during previous five years. Ratio of Deaths per. Total 4.00000 Annual Form No XVI.-Deaths registered from "INJURIES" by divisions during each month of the year 1932 0.3 0.5 Males. 25.7 Total. 66 Total Females 168 includes deaths in the Government General Hospital of Patients admitted from muffusil and distinged Males. 31 23 November. 27 October. September. 13 August 18 July. .aun 25 May JinqA. 111 27 : 24 February. 21 : :01 January. Total Districts. Tiruvateeswaranpet Katchaleswaranpet Kothawal Bazaar Sowcarpet Peddunaickenpet Vepery Egmore Kilpauk Nungambakam Trevelyan Basin Purasawalkam Washermanpet Seven Wells Chintadripet Ammen Koil Amir Mahal Mirsahibpet Royapettah Korukkupet Royapuram Park Town Tondiarpet Muthialpet Esplanade Chepauk Perambur Mylapore Harbour Choolai Divisions,

vious five years. Mean ratio per Mean ratio per Ratio of Deaths per 1,000 of Birth. 20-7 12-1 10-6 8-9 7-9 7.6 6.5 6.8 6.8 18.7 Annual Form No. XVII. - Deaths registered from "CHILD BIRTH" by divisions during each month of the year 1932. Females. Males. 279 Total. 279 Females 26 December. November. 25 October. 58 September. August. July. 53 .aun[ May. 18 .lingA 1 1 March, February. January. 1 1 11 Districts. Mathialpet Katchaleswaranpet Kothawal Bazaar Tiruvaleeswaranpet Sowcarpet Peddunaickenpet Trevelyan Basin Vepery Egmore Kilpauk Nungambakkam Chintadripet Washermanpet Purasawalkam Ammen Koil Seven Wells Triplicane Amir Mahal Korukkupet Royapuram Tondiarpet Park Town Royapettah Mylapore Mirsahibpet Esplanade Perambur Harbour Chepauk Chcolai Divisions. 32887483243871165 328874834836387165

Mean ratio per 1,000 during the previous five years, Ratio of deaths per 1000 of population, 13.5 16.3 16.3 × 61.6 Total. 17.3 Annual Form No. XVIII. - Deaths registered from other causes by divisions during each mouth of the year 1932. 12.7 16.0 Females 91 00 00 0 <del>4</del> 16.5 10-2 Males, 10,564 352 616 324 324 131 131 185 88 88 327 327 813 345 337 350 Total. Total 4.905 Females 10251116 5,659 Males. 25.45.25.25.45. 58861 956 484 486 486 646 December. 23,440,000,000 228 896 01488 233346333333333463 October. 850 86618272369 22886 94998944441591-54 September, 818 46804-11-022 0 2 2 2 2 805 luly. 0 2 2 3 3 802 00 10 10 00 'aun[ 802 May. 27 27 27 179 2226 000-000-000-000-00 Jing A 819 8 - 8 2 0 6 4 2 8 8 Матсh. 652 101583483 325 22 4866996666646694669 February. 766 ... \$1055555 \$2000 \$10 226.88 : 1 1 : 1 1 111 Total Districts. Harbour Muthialpet Katchaleswaranpet Kothwal Bazaar Tiruvateesvaraupet Sowcarpet Trevelyan Basin Nungambakkam Royapuram Tondiarpet Washermanpet Purasawalkam Ammen Koil Seven Wells Chintadripet Amir Mahal Korukkupet Mirsahibpet Royapettah Park Town Esplanade Triplicane Perambur Mylapore Chepauk Kilpauk Choolai Egmore Vepery 12221 Divisions. H-16

Includes deaths in the Government Royapuram and General Hospital of patients admitted from moffusti and desitiute.

36.3 35.8 Ratio per 1,000, 42.3 50.5 43.5 34.4 42.4 Total Deaths. 16-9,22415 16.2 22364 17-2 26715 19-4 22839 16-5 23162 14-7 23499 16-3 22290 Annual Form No. XIX.-Comparing the deaths from some of the principal diseases during the year with the deaths during the previous 5 years. Deaths. 1,000,1 All other causes. Ratio per 9116 8589 8915 10258 10708 9517 10564 Deaths. 18.9 11.6 11.8 15.4 Ratio per 1000 Births. 13.1 12.7 10-0 from child births. 318 279 293 866 299 304 Deaths. 0.5 1,000,1 7.0 0.5 0.5 7.0 70 Injuries. 3 Ratio per 8-9 275 8-7 251 328 13.0 262 242 267 Deaths. 8.5 9.6 10:1 I,000,I Other Respira-tory diseases. Ratio per 6879 5035 Respiratory Diseases. 5256 5647 5509 5324 5743 Deaths. Ratio per 1,000. culosis Pulmo-nary. 3.5 2.6 3.1 1.3 1278 2.0 3 Tuber-13 1619 1649 843 924 747 0-03 1354 Deaths. 1,000, 7.0 0.5 0.3 0.3 Tuber-culosis other than Pulmo-7.0 0.3 Ratio per 134 163 170 162 17 151 Deaths. 1,000,1 1.1 2.0 tery and 6.5 5.9 5.8 4.5 = Diar-Ratio per 3263 2746 3225 3931 3127 2644 Deaths. 1,000. Other fevers. 6.3 2.3 2.2 2.2 3.0 3.7 2.7 Ratio per 1095 1748 1618 1555 1646 1731 1961 Deaths. Ratio per 1,000, Enteric Fever. 0.3 0.5 0.3 0.50 0.5 0.3 0.2 153 991 101 164 130 126 Deaths. 1,000. Malaria. 5.6 3.0 0.3 1.3 0.4 841 1.3 0.55 Ratio per 1599 277 1367 681 283 6.5 Deaths. 0000 Plague. 1,000. : 1 1 I 1 i Ratio per : : : : : ŧ Deaths. 60.0 0.02 0-02 Measles. 0.03 1,000. 900-0 0.1 0.1 Ratio per 10 3 30 29 68 16 16 Deaths. 90.0 0.3 0.04 1,000.1 0.2 0.3 Small-Pox. 1:0 Ratio per 251 200 32 Deaths. 24 188 00081 80.0 Cholera, 1,000,1 1.0 1.3 0.3 7.0 Ratio per 512 108 286 2 Deaths. 16 53 43 Years. 5 years ... Mean of the last 1928 1927 1930 1932 1929 1931

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Annual Form No. XX—Table of deaths for 1932 arranged in accordance with the international list (Fourth Revision 1929) as adopted for use in England and Wales, Scotland and Northern Ireland.

Total.	101 176 16 18 11 11 11 11 11 11 11 11 11 11 11 11
December.	
November.	1688 241 : 684 : 682 28 91 : 68 : 4481 :
October	356 356 356 356 357 366 378 386 378 378 378 378 378 378 378 378 378 378
September.	10400 :   S   100   22   101   10   100   100   101   101
August,	4010011   1 1 1 1 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1
July.	1101881 121 1 1 2 2 2 1 1 1 1 1 2 2 1 1 1 2 2 1 1 2 2 2 1 2 2 2 1 2
June.	88   6   1   1   1   4   5   6   1   1   1   1   1   1   1   1   1
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April.	931-0 iu ifusus 4 isru is 5 susub isusu i
March.	1 1 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
February.	7-8 18 1 1877 1 11-4 5-4-1-4-1-1   0 1-4 18 1-1-1-1
January.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Causes of death.	Typhoid Fever Small-pox Measles Whooping Cough Diphtheria Influenza Cholera Dysentery Plague Erysipelas Tetanus Typhoid Fever  Diphtheria Influenza Cholera Dysentery Plague Influenza Cholera Dysentery Plague Influenza Cholera Dysentery Plague Influenza Cholera Influenza Cholera Influenza Cholera Influenza Cholera Influenza Influence I
Classification No.	25 25 25 25 25 25 25 25 25 25 25 25 25 2
	Infections and Parasitic?Diseases.

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II. CANCER AND OTHER TUMOURS.  Cancer of the buccal cavity digestive organs uterus breast nuspecified organs Non-malignant tumours Tumours of undetermined nature	TII. RHEUMATISM, DISEASES OF NUTRI- TION AND OF ENDOCRINE GLANDS AND OTHER GELIERAL DISEASES. Rheumatic Fever	ISC IISC	VI. DISEASES OF THE NERVOUS SYSTEM & SENSE ORGANS. Cerebral abscess Tabes dorsalis Cerebral haemorrhage Apoplexy Hemiplegia Other paralysis of unstated origin Other forms of insanity Epilepsy Infantile convulsion Diseases of the eye Diseases of the ear
**************************************	66 60 60 60 60 60 60 60 60 60 60 60 60 6	71 78-2 76 77	88 88 88 88 88 88 88 88 88 88 88 88 88
Cancer and other tumours.	General Diseases.	Chronic Disea- poison- ses of ing. Blood.	Diseases of the Mervons System and sense organs-

20 119 8,212 8,212 1,535 2 2 208 111 15 Total, December. Ant ual Form No. XX-Table of deaths for 1932 arranged in accordance with the international list (Third Revision 1929) as adopted for 11 25 12 22 22 22 21 12 25 12 2 1: 12-22-52-16 to September. August July. Jane. use in England and Wales, Scotland and Northern Ireland .- conid, 10 10 10 23 23 23 4 4 10 11 15 11 15 11 12 20 2 11 11 April, 12 22 22 23 111 March. 120 120 120 14 February. Jannack. 298 298 19 11 11 19 VII. DISEASES OF THE CIRCULATORY Other diseases of the Circulatory System ... Bronchitis not distinguished as acute or chronic. Endo cardifis not returned as acute or chronic. Other diseases of the Respiratory System
IX. DISEASES OF THE DIGESTIVE Diseases of the Lymphatic-System Paremonia not otherwise defined Abnormalities of blood pressure Causes of death, Pleurisy
Hypostatic congestion of lungs Diseases of the teeth and gums Unspecified Valve disease ... Arterio Sclerosis .... SYSTEM Diseases of the Oesophagas Ulcer of the Stomach Ulcer of the duodenum Heart disease undefined Broncho-Pneumonia Chronic Bronchitis Lobar Pneumonia Acute Bronchitis Angina Pectoris Cardiac Dropsy Haemorrhoids Bronchiectasis Myocarditis Emphysema Pharyngitis Classification 106-a 106-c 107 108 109 110 111-1 1113 115-1 115-8 116-1 117-8 117-6 118-1 Diseases of the Digestive System. System. Diseases of the Respiratory System. Diseases of the Circulatory

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	EASES OF THE STEEM AND	
Dilatation of Stomach Obstruction of Pylorus Diarrhoea and Enteritis Colitis Infanitle Diarrhoea Ulcer of intestine Appendicitis Hernia Strangulated Hernia Intestinal Obstruction Constipation Fristula in ano Perforation of intestine Biliary Circhosis Circhosis of Liver Hepatitis Abscess of Liver Biliary Calculi Catarrhal Jaundice	X. NON-VENEREAL DISEASES GENTTO-URINARY SYSTEM Acute Nephritis Chronic Nephritis Calculi of the bladder Cystitis Stricture of the Urethra Discases of the Prostate Hydrocele Amenorrhoea Dysmenorrhoea Menorrhogia XI. DISEASES OF PREGNANCY HIRTH AND THE PHERPERAL	Abortion Puerperal Haemorrhage Placenta praevia Post parlum haemorrhage Retained Placenta Puerperal sepsis
118-2 119-120 a-1 a-2 (b) 122 122-4 (1) 123-4 123-5 123-6 124 (b) 125-2 125-2	130 1131 1131 1133 1134 134 (5) 1135 1135 1135 1135 1135 1135 1135 11	141-2 144 (a) (b) 145
Diseases of the Digestive System-Contd.	Diseases of the Genite-Urinary System.	Puer- peral State.

Total.

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28

201 201 . . December. Annual Form No. XX—Table of deaths for 1932 arranged in accordance with the International list (Third Revision 1929) as adopted for use in England and Wales, Scotland and Northern Ireland.—Conid. 1 1 11 1 1 11 September, 1 : 1 1 August. 119111 00: :-:-July. 410 : June. - : : : - : May. 2 1 1 11111 :0 JingA 11 00 1 : 00 : 1 1 March. 1 1 February. . 4 03 :-:: 00 00 January. 1111 111111 111 XIII. DISEASES OF BONES AND ORGANS : : : : 111 DISEASES OF PREGNANCY CHILD BIRTH AND THE PUERPERAL STATE-confd. XII. DISEASES OF THE SKIN AND CEL-LULAR TISSUE. XV. DISEASES OF EARLY INFANCY. XIV. CONGENITAL MALFORMATION. OF LOCOMOTION. Causes of death. Albuminuria of Pregnancy Other Toxemias of Pregnancy Sudden death after delivery Difficult labour B Imperforate Anus .... Congenital malformation ... Asphyxia neonatorun Congenital debility Prolonged labour Marasmus Premature birth Acute Arthritis Carbuncl: Cellulitis Elephantiasis Injury at birth Atelectasis Malnutrition Eclampsia Periostitis Inanition XI. 146 (1) 146 (2) 147 147 148-b 151 152 (1) 153 151-e (8) 157-e (5) 159 160 161-a 155 156-a Classification No. 158 genital Malior-mation, Diseases of Bones & Joints. Discases of Skin and Cellular Puerperal State-Canid. infancy. Diseases of early Con-

	1138	4 71111 78857886110	423 100 100 145 145 1599 1599 1599
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-	159	HEH!	15 15 15 15 15 15 15 15 15 15 15 15 15 1
XVI. OLD AGE.	Old age	Suicide by solid or liquid poisonous and corrosive substances.  " by hanging " by drowning " by cutting or peering instruments " by cutting or peering instruments Insect bite Snake bite Stang of Scorpion Stang of Scorpion Accidental burns " Drowning " Injury Starvation Other unstated forms of accidental violence Violent deaths of unstated nature	Sudden death
101-	162-b	168 166 168 171 171 181 183 186 189 194 195	200 (2) 200 (3) 200 (3)
	old age.	Deaths from Violence.	Ill-defined diseases.

TABLE—A.

- 51	Still Births.	Destps.	1136	1274	1312	1274	1335	1105	1258	1221	1287	1260	1318	1326
: 0	11.5	Death-rate.	79.9	100·1	6-62	93.0	112-9	100-0	92.3	118.0	94.0	1.88	50.3	48.2
: "	Children between 1 and 5 yes	Deaths.	3273	4113	3272	3810	4656	4120	3806	4864	3875	3633	3767	3609
: "	tile dity year.	Death-rate.	6-182	308-0	254.0	264.1	278.8	279.3	237.6	286.8	256.6	243.3	218-3	236-5
3	Infantile mortality under 1 ye	Destus.	5468	6999	5837	6148	6431	6145	5888	9089	5933	6258	6391	6622
rears.	tory ses.	Death-rate,	8.5	8.3	8.7	1.6	12.1	12.2	12.9	16.4	12.7	12.0	8.5	8.5
ast 12 ;	Respiratory diseases.	Deaths.	4467	4911	4610	5598	6416	6470	9189	1698	6699	6331	5743	5509
the p	d d oca.	Death-rate,	7.91	6.1	5.5	0.2	9.2	7.3	6.2	1.1	5.9	5.8	4.2	4-1
during	Dysentery and Diarrhoea.	Désths.	4149	4167	3778	3700	4631	3867	3263	3331	3127	3056	2746	2614
liseases	Plague.	Desth-rate,	900-0	0.005	0.002	:	-	1	:	:	-		1	0.003
yal d	PI	Desths,	6.3	-	7	1	-	: :	:	:	100	1	:	-
incip	r ous	Death-rate.	1.3	1.3	0.7	1.9	1.3	==	:	2.0	1.2	8.0	-i4	2.5
of deaths from some of the principal diseases during the past 12 years.	Other Infectious diseases.	Dearha.	708	219	363	286	682	565	-	1052	612	411	1347	1403
ne o	L 06	Death-rate.	8.5	2.2	1.5	1.3	2.0	2.7	2.1	3.2	8.5	3.9	30	- 53 - 7
rom, sor	Other Fevers.	Desths.	1475	1325	169	189	1039	1343	1259	1732	1981	2097	1914	1747
ths f	ia.	Death-rate.	1.2	7	1.5	1.8	2.2	5.6	9.6	3.0	1.3	0.5	0.4	0-3
deat	Malaria	Deaths.	652	292	703	11.6	198	342	367	299	681	283	277	165 (
	-	Death-rate.	1.5	2:1	0.3	0.4	17	1-0	_	0.5	1.0	1.0	9-0-0	
Comparative Staement	Small- Pox.		180 1	1121 2	131	197 0	763	0 09	32 0-06	251 0	506 1	188	24 0	176 0-3
e St	-	Deaths.	-			_	-	03	0		44 (10)	- 1000	-	
rativ	Cholera	Death-rate.	0-3	2.1	0.3	f-0	1.0	6.5	1:0	1.3	0.03	80.0	0.5	0.008
mpa	Che	Deaths.	139	17	21	97	203	98	512	108	16	43	153	70
တိ		Death-tate.	38.5	12.7	37.9	11.7	47.3	45.0	42.3	20.2	42.4	43.5	35-8	34-4
	Deaths	No. of Deaths registered exclu- sive of Still Births.	20,268	22,475	19,933	21,960	25,000	23,776	22,361	26,715	22,415	22,839	23,162	22,290
		Birth-rate.	36-4	41.1	43.6	44.2	43.6	41.6	8.97	44.9	43-7	48.5	39-8	43-3
	Births.	No. of Births Registered exclusive of Still Births	19,187	21,650	22,975	23,275	23,010	22,900	24,760	23,729	23,124	25,662	25,738	27,996
		Year.	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932

200 article - 32-e Char 210:3	4th Quarter. Total.	October to December.	Inches. Inches. 32-40	31-69 51-47	27-64 52-42	25.05 Transport 18.69	3378 58-53	86.31
200 20,120 200	3rd Quarter.	July to September.	Inches.	16-15	13-72	8-71	17.94	and the second state of the second
TABLE-B. Rainfall.	2nd Quarter.	April to June.	Inches.	0.33	2.17	Dest	6.76	118 g 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
000 000 000 000	ist Quarfer.	January to March.	Inches. 0.55	3.30	8-29	Manh-min. 3-6 Touri No. of	0.03	-0.4. 69·0 million
Actus e'stan asset	Years.	Trans subjects	1927		1929	1930	1931	1932 the 1932

TABLE-C.

Table of Births, Deaths and Infantile Death-rates for different Communities in the City of Madras for 1931 and 1932.

1	Infantile Death-rate.		73-1	7-66	186-2	254.4	257-0	:	218-3
	Infantile Deaths.	4.5	4	38	254	5,347	7.18	:	6,391
	Death-rate.		6.7	25.0	26.8	36.5	39.9	1.0	35.8
1931.	Total No. of Deaths.	27.75	24	266	1,069	19,008	2,792	60	23,162
	Birth-rate.		13-4	35.8	34.5	101	911	0-3	39.8
20.00	Total No. of Births.	100	28	381	1,364	21,024	2,910	- Johnson	26,738
	Infantile Death-rate.		125-0	103.0	130-5	254-0	172.3	;	236.5
	Infautile Deaths.	4	1	41	180	5,862	532		6,622
	Desth-rate.		10-3	20.4	24.6	35.2	39-1	1.0	34.4
1932.	Total No. of Deaths.		7.00	217	979	18,313	2,741	67	22,290
	Birth-rate.		15.6	37.4	34.6	44.4	144.1		43.3
	Total No. of Births.		56	898	1,379	23,075	3,088	:	27,996
ccord-	Population a ing to the of 1931.		3,581	10,657	39,884	5,20,176	70,031	2,901	6,47,280
			1	:	:	1	-:	:	-
	Race or Caste.		Europeaus	Anglo-Indians	Indian Christians	Hindus	Mohamadans	Others	Total

TABLE-D.

Table of Birth and Death rates of principal Sub-divisions of the Hindu Community for 1931 and 1932.

and the latest of the second			100	1932	32	-	1	19	1931	2000
Name of the Communities.	1000	Population.	Total Births.	Birth Rates.	Total Deaths.	Death Rates.	Total Births.	Birth Rate.	Total Deaths.	Death Rate.
Reshmine	2 4	58 761	1 814	31.4	1.211	20.7	1.819	31-0	1,201	1.62
		37,919	1,756	46.3	1,33	35-3	1,446	28-1	1,347	35.1
Vellalah or Mudaliars	-	86,716	3,209	38.2	2,599	29-9	2,905	33.55	2,822	32.5
Balijan or Naidus	-	69,263	2,350	39-0	1,924	31-9	2,077	31.5	2,030	33-7
Vanniah or Naickers		69,650	3,452	49.6	2,538	36-0	2,965	42.6	2,827	42.0
Adi-Dravidas		73,701	2,699	36.6	2,178	29.6	3,065	41.6	3,182	13-5
Patnavars Secondar		11,309	695	41-4	416	36.8	375	33-2	535	47.3
Yadaval or Idayaıs	:	17,022	1,296	1.91	935	54-9	819	48.1	735	43-2
Viswakarma Brahmin or Kammalar	in order	15,670	181	49.8	258	36.2	713	4.005	623	39.8

TABLE-E.

Table of Birth, Death and Infantile Death-rates by months for 1931 and 1932.

						1932.		100	2			1931.		100
	Months.		Total No. of Births.	Birth rate.	Total No. of Deaths	Death rate.	Infan- tile Deaths	infantile Death rate on 1000 live births.	Total No. of Births,	Birth rate.	Total No. of Deaths.	Death rate.	Infan- tile Deaths	Infantile Death rate on 1009 live births,
January	:		2,037	37.8	2,108	39-1	559	274.4	1,902	35.3	2,841	52.7	735	386-4
February	:	:	1,613	29-9	1,753	32.5	421	261.0	1,569	29-1	2,141	37.7	492	313.6
March	:	:	1,853	34.4	1,713	31.6	441	238.0	2,100	38.9	1,944	36-0	482	229.5
April	:	1	2,200	40.8	1,572	29.1	477	8.917	2,179	F-0F	1,697	31.5	440	6-102
May	:	:	2,520	46.7	1,770	32.8	529	209-1	2,371	44.0	2,055	38-1	577	243.4
June	:		2,418	44.8	1,803	33-1	534	220-8	2,252	41.8	2,276	42.5	578	256-7
July	:	:	2,492	46.2	1,638	30-3	489	196-2	2,887	44.3	1,629	30.2	490	205-3
Augusi	:	;	2,599	18.5	1,651	9.02	523	201.3	2,188	45.6	1,861	34.5	599	273-8
September	:		2,533	47.0	1,758	32.0	009	236.9	2,071	38.4	1,588	£-62	444	214-4
October		Manual	2,710	2005	2,031	36.1	₹99	245-0	2,274	42.5	1,609	29.8	435	191-3
November	:		2,578	47.8	2,170	10-2	692	230-0	2,233	41.4	1,662	30.8	667	223.5
December		-	2,443	45-3	2,323	13.1	693	283-6	2,212	41.0	1,859	31.5	620	280-3
		Total	27,996	43.3	22,290	34.4	6,622	236-5	25,738	39.8	23,162	35.8	6,391	248.3

TABLE-F.

Ratio of deaths among Children under one year of age per 1000 Live Birth registered in each division for 1931 and 1932.

		1932.	.1	931.
Divisions.	Infantile Mortality.	Infantile Death-rates.	Infantile Mortality.	Infantile. Death-rates.
	1 8 8 8	3.351	18 1 1	
1	253	254.8	281	322-6
2	361	256.3	301	232.3
3 4	331	258-9	273	247.7
4	236	225.1	267	300.3
5	101	335.5	97	366-0
6 7	119	258-1	106	239-8
	101	196.4	104	229.1
8	50	270-2	64	357·5 213·2
9	183	223.4	168	245-3
10	222	273-7	182 53	286.5
11	59	333·8 257·1	214	245.1
12	251 189	257-1	195	279-4
13	32	310.6	33	287-0
14	156	242.9	167	259.3
15	383	198.0	430	276-0
16	393	285.1	303	244.4
17 18	273	230.9	281	265-1
19	203	241.9	203	260-3
20	292	180-4	265	178-0
21	161	184.0	183	217-9
22	174	170.0	227	227-9
23	319	259.9	293	257-2
24	365	247.6	325	207-9
25	166	206.6	167	207-5
26	184	229-1	182	241-1
27	235	249.7	225	278-5
28	327	252.5	324	272-3
29	316	235-6	293	233.1
30	187	230-8	185	259-1
Total	6,622	236-5	6,391	248-3

TABLE-G.

Table of Infantile Mortality by months in the year 1932.

	_ 1												-	
and	Total of 1921.	735	492	483	440	577	578	490	299	444	435	499	620	6,391
.:	Total.	559	421	441	477	529	534	489	523	009	199	692	693	6,622
Total of 1932.	Females.	269	196	500	216	237	212	233	234	590	294	328	334	3,084
To	Males.	290	226	232	261	292	289	256	289	310	870	998	359	3,538
*səsnı	All other es	103	89	104	104	84	19	16	18	98	16	96	101	1,082
-s£s	Respiratory tem.	185	136	119	141	184	179	161	166	181	189	220	185	2,040
fem.	Netvous sys	41	28	24	25	36	35	25	31	28	36	43	99	418
	Debility.	60	03	60	00	10	1	00	63	10	2	9	00	52
Birth.	Premature 1	144	122	135	145	133	146	136	166	184	201	208	201	1,911
pue	Dysentery	11	24	39	35	92	25	20	19	29	92	73	89	726
·s	Отрет гечет	12	91	14	1.2	56	45	19	24	47	47	41	17	853
	Malaria.	:	:	:	:	:	00	1	:	:	-			4
	Measles.	:		:		-		-		1	1		:	4
	Small-pox.		1	60	:	4	:	63	03	1	12	5	67	32
		1		:	:		:		:	:		-		Total
	1932	:				:				:			***	
		January	February	March	April	May	nue	July	August	September	October	November	December	

TABLE-H.

Table of percentage of Infantile Deaths from Principal causes in the year 1932.

Small-pox	Total	Under 7 days	7 days and under 1 month 3 0.30	1 month and under 9 0	4 months and under 7 months 9 1-	7 months and under 7 0-	10 months and under 1 year. 4 0.	Total 32 0
10 101	.oiteM		06	0 56	1.00	0-57	0-81	0.48
Measles.	Ratio.		181	15:	11 104	1 0-33	110	90.0
Malaria	Total.		:	4:	a 101	3	701	4
NA IPINAL	Ratio.		1	7461	181	0.25	0.30	90-0
Other	Total	4	20 2	92	100	119	34	353
Fevers.	Ratio.	0.38	2-02	80.4	11-09	9-74 185	6-92 1	5-33
Diarrhoea	Total	19	65	1 072	87	-	112 2	726 1
Dysentery.	Ratio.	1-31	2.44	17-06	9-62	15-14	23-42	96-01
Preruntine.	Total.	1113	57.1 5	128	11	-	21	11611
10000	Ratio.	16-71	58.68	8 09 2	8-53	80-0	4.27	28.89
Debility.	Total.	e 0.4	11 15	23 1	9	1 0	9	52 0.
0 01	Ratio,	0.41 72	1.43 82	1-45 163	0.01 42	0 08 39	0-61 20	0.79 418
Nervous System,	Ratio.	2 7-96	8.42	3 10-3	4.35	9 3.19	1 4.07	8 6-31
	Total.	78 9	8	619	5 423	9 576	7 248	11 2040
Respiratory System.	Ratio.	5.73	9-21	39.10	46.96	47-14	50-50	0 30-81
A June	Total.	153	140	295	159	181	48	30-81 1082
All other Causes.	Ratio.	10.24	14.38	18-64	17-62	23-19	9-77	16.34
Total Comment	Total.	1451	973	1583	903	1222	161	6522
Total	Ratio.	19191	14.69	16.62	13.62	19-45	tate files	. :

### VACCINATION STATEMENT No. I.

Statement showing the number of births (Divisional and Hospital) verified during the calendar year 1932 and the number of Infants under one year of age.

1082 10:31	Total I	ing	Sti		Deaths one y		Number infar	nts	Numb infants nated one y	vacci- under	Percent vaccin to bi regist	ation
Divisions.	Divisional.	Hospital.	Divisional.	Hospital.	Divisional.	Hospital.	Divisional.	Hospital.	Divisional.	Hospital.	Divisional.	Hospital.
00		-		0.		1	1		No. of	CINORE		
1	578	304	20	29	77	27	501	277	312	145	54.0	47.7
2 3	870	467	28	75	156	58	714 796	414	398	94	45.7	20.2
4	900 674	311 235	14	8	104	27 13	500	284 222	466 391	104	52·0 58·0	20-0
5	231	40	8	4	52	3	179	37	58	104	25.1	300
6	353	91	17	10	63	16	290	75	124	29	35.1	32-0
7	363	125	10	12	50	7	313	118	145	34	40.0	28.0
8	127	58	5	2	37	11	90	47	44	- 12	34-7	21.0
9	494	255	8	24	83	48	411	207	268	102	54-3	40-
10	553	189	11	23	99	35	454	154	245	66	44.3	354
11	304	66	11	16	67	17	237	49	125	24	41-1	36.
12	465	152 174	10	15	83	26	382	126	189	42	41.0	27.
13	507 74	38	19	15	101	38	406 66	136 35	285	87 15	56·2 47·3	50-
15	484	135	19	12	96	29	388	106	236	73	48.8	54.
16	1,321	278	23	20	149	30	1,172	248	875	129	66.3	46.
17	1,079	252	28	15	189	46	890	206	€52	86	60.4	34.
18	843	265	16	14	154	47	689	218	488	126	58.0	484
19	513	270	20	27	93	46	420	224	317	156	62.0	57.
20	599	904	18	114	88	51	511	853	342	250	57.1	27.
21	543	294	20	29	85	40	458	254	322	112	60.0	38
22	600	285 427	21	21	84	28	516	257	361	118	60-1	41-
23	1,072	459	18 28	27	133	83	613	344	439	139	59.0	32.
25	493	314	10	36	75	58	418	426 256	717 296	77 70	70-0 60-0	17
26	600	218	21	19	111	39	489	179	275	94	46-0	22
27	646	226	19	17	71	11	575	215	430	71	66-6	43.
28	930	392	29	50	196	62	734	330	276	101	30.0	26.
29	992	299	17	1 19	201	46	791	253	526	113	53.0	38-
30	668	153	21	19	190	20	478	133	236	37	35.3	24
	-			-		-	1	-				7
Total.	18,622	7,676	499	740	3,042	993	15 580	6,683	9,873	2,580	53.0	33-

VACCINATION STATEMENT No. 11.

Statement showing the number of Births verified in 1932 and the number of Infants Vaccinated under one year of age.

	1	-		1	1			
Year.	F "	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 attain- ing the age of one year without 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.
		64	60	4	9	q:	7	∞
	:	18,308	3,285	3,052	11,971	9,672	80.8	1062
1930 (Hospital	:	7,335	1,045	1,496	4,794	2544	53.1	898
STATE	AN ANY	HERE SERVE S		000, E	olidayod a	or political to	GENERAL OF THE	
1931 Divisional	:	18,195	2,079	8,059	12,057	2.600	83.6	973
			Tangual Tanan					
Divisional	1	18,622	3,043	3,080	12,500	9,873	0.62	1260
	:	7,676	293	1,825	4,858	2,580	53-1	218
	-			THE PARTY OF		1		- money

100		1		-	- in	and the same	1 23	0 5 5	9.3	01 -10		A STATE OF THE PARTY OF THE PAR
	1 2 2			100	100	25	10.830	Mary of the	each Vacci-	Name of the state		Primary
	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	7	Population according to the census of 1931	19.00	603	Total N Vac	o. of p	ersous d.	Vaccinated by ea		us hear of his	Total
	Districts.		to the		ž	-					וחבו ס	
	8 8	100	ccording	Depots.	Vaccinators.			The same of	of persons	Municipal	insted a	
Divisions.	18/00	and a	Population	Number of Depots.	Number of	Males.	Females.	Total.	Average No. nator.	Males.	Females.	Total.
1	2		3	4	5	6	7	8	9	10	11	12
1 2 3 4 5 6 7	Royapuram Tondiarpet Washermanpet Korukkupet Harbour Muthialpet Katchaleswaranpe	t	21,952 25,911 25,663 25,538 8,704 14,257 12,707	20.00	of a land of the same	1,238 1 406 1,000 1,184 728 500 816	1,137 1.400 799 692 321 411 440	2,375 2,806 1,799 1,876 1.049 911 1,256	profession section of secret	536 715 776 595 205 222 231	557 681 626 489 180 215 249	1,093 1,296 1,402 1,084 385 437 480
9 10 11 12 13 14 15	Kothawal Bazaar Ammen Kovil Seven Wells Sowcarpet Peddunaickenpet Trevelyan Basin Esplanade Park Town		6,550 19,202 20,294 7,194 21,547 18,916 3,906 17,183	16	50	226 727 648 125 548 462 168 556	152 706 702 112 548 408 124 456	378 1,433 1,350 237 1,096 870 293 1,012	977	140 394 384 105 425 395 91 324	103 462 465 104 485 341 92 343	243 856 849 209 910 736 183 667
16 17 18 19 20 21 22	Perambur Choolai Purasawalkam Vepery Egmore Kilpauk Nungambakkam		43,817 27,488 27,054 22,137 29,385 24,334		-	3,661 1,403 901 1,497 1,132 1,310	1,750 1,474 1,052 1,099 823 896	5,381 2,877 1,953 2,596 1,955 2,206		1,152 618 489 517 493 472	1,003 564 520 533 492 463	2,155 1,182 1,009 1,050 985 935
23 24 25 26 27 28 29	Chintadripet Firuvateeswaranp Chepank Triplicane Amir Mahal Mirsahibpet Royapettah	et	26,845 31,371			1,069 867 852 915 863 442 851 1,064	614 763 573 410 505 367 727 992	1,683 1,630 1,425 1,325 1,368 809 1,578 2,056		536 618 615 358 394 385 529 703	546 640 529 336 376 336 493 672	1,082 1,258 1,144 694 770 721 1,022 1,375
30	Mylapore	Total	21,270	Tales leg	Tally State of the same	609	21,065	1,251		389	13,270	27,976

_		-				100	777065	dios is	2						
Vacci	nation.		TO CO. D. C.	to suffice of	Re-Va	accinat	ions.	of Suc	s in h the s were	Vaccinated per 1,000 of	of pe succe Vacci durin prev	rage al No. ersons ssfully nated g the rious years.	an No de from Sn Podus the vi	rage nual o. of aths om nall- ox ring pre- ous ive ars.	Average cost of each Successful Vaccination.
Under one year.	One year and under 6 years.	Six years & above.	Total.	Unknown.	Total,	Successful.	Опкломп.	Primary.	Re-Vaccinations.	Persons Successfully Population.	Number.	Ratio per 1,000 of Population.	Number.	Ratio per 1,000 of population.	Average cost of each
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
668 919 868 647 170 301 364 120 547 539 105 593 531 112 397 1,576 887 789 965 785 987 895 481 473 568 1,007 455	407 450 483 388 206 135 110 116 309 310 104 317 192 68 262 549 294 220 85 179 125 294 252 240 192 271 131 437 355 284	17 27 51 49 7 1 4 4 2 5 29  11 4 17 5 6 10 6 16 6 25	1,092 1,396 1,492 1,084 383 437 478 240 856 849 209 910 727 182 664 2,154 1,009 1,050 985 934 1,050 1,050 2,256 1,144 679 754 721 1,021 1,368 764	2 2 3 3 3 1 1 1 14 14 1 3	1,282 1,410 397 792 664 474 776 135 577 501 28 186 134 109 345 3,226 1,695 944 1,546 970 1,271 601 372 281 631 598 88 556 681 487	394 405 27 100 59 93 54 6 101 98 3 45 33 5 5 51 596 537 285 249 220 211 319 21 5 85 273 	434 486 15 8 372 221 621 96 15 28 25 46 75 201 116 62 361  58 207  618 7	99·0 100·0 100·0 100·0 100·0 100·0 100·0 100·0 100·0 100·0 100·0 99·2 99·5 99·7 100·0 100·	46·5 43·8 7·1 12·8 20·2 36·8 34·8 15·4 18·0 20·7 10·7 25·3 30·3 7·9 19·7 34·0 32·3 16·1 36·1 16·6 58·7 12·7 17·8 79·4 65·2  25·6 18·9 14·4	67·7 69·5 55·7 46·4 50·8 37·6 49·8 46·7 29·5 44·3 40·2 47·9 41·6 62·5 47·8 62·5 47·1 51·4 47·6 36·6 44·7 52·6 36·8 42·5 45·0 39·1	1,318 1,413 1,382 1,249 378 634 630 244 945 863 252 950 779 187 604 2,465 1,366 1,152 1,243 959 1,249 1,326 1,313 694 717 770 992 1,292 824	60·0 54·5 53·9 48·9 43·4 49·5 37·2 42·5 35·0 44·0 41·1 47·8 35·3 56·3 49·4 48·2 52·0 44·3 39·4 45·8 40·6 36·6 39·2 38·9 38·7	155 77 66 99 33 22 44 23 77 88 11 66 99 10 10 66 22 44 22 55 166 66 77 55 17 99 77	0·7 0·3 0·2 0·4 0·3 0·4 0·4 0·4 0·3 0·4 0·4 0·3 0·4 0·3 0·4 0·3 0·4 0·3 0·4 0·3 0·4 0·3 0·4 0·3 0·4 0·3 0·4 0·3 0·4 0·4 0·5 0·4 0·5 0·6 0·7 0·7 0·7 0·7 0·7 0·7 0·7 0·7	Rs. 1-2-2
18,940	7,765	306	27,011	45	21,757	4,610	4,189	99-9	26.2	48.9	29,491	45.5	200	0.3	

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

Municipal Division.	Name of a	rea.	16	Length of sewers in feet laid during 1932.	Length of sewers in feet laid up to 31-12-1933.	Percentage of sewered portion up to 31-12-1932.	Percentage yet to be sewered.
23 24 25 26 27 28	Royapuram Tondiarpet Washermenpet Korukkupet Harbour Muthialpet Katchaleswaranpet Kothawal Bazaar Ammenkoil Seven wells Sowcarpet Peddunaickenpet Trevelyan Basin Esplanade Park Town Perambur Choolai Purasawakkam Vepery Egmore Kilpauk Nungambakkam Chintadripet Thiruvattiswarenpe Chepauk Triplicane Amir Mahal Mirsahibpet Royapettah Mylapore	All the Water of the Control of the American State of the American		3,279 4,168 1,230 2,453 11,924 2,648 14,272 1,624 9,981 14,057	40,833 31,486 52,541 22,401 29,938 24,104 34,410 22,058 25,244 28,766 18,045 30,597 31,909 8,896 20,489 29,179 33,039 53,825 38,165 91,466 31,079 25,921 40,623 47,271 22,026 25,638 27,262 81,811 46,027 72,526	84 68 96 65 92 94 91 98 99 100 96 96 96 96 97 85 55 55 99 80 90 53 30 95 85 85 85 85 86 86 86 86 86 86 86 86 86 86	16 32 4 35 8 6 9 2 1  4 4 4 28 15 45 45 1 20 10 47 70 5 15 10 15 15 12 50 40
		Total		65,636	10,87,575	81.06	18-94

Acres property List of Licensable trades.

9 1	1				23000 W	got karl
			Number of	Number	Num	Num-
Description.			cases dealt			ber
and the land told			with.	ed.	fused.	pend-
						ing.
						10000
						16340
Aerated water factory			37	36	1	Marail
Bakery			86	79	7	
Candles & Soap			29	28	1	
Cart-stands			20	20		
Cocoanut fibre, Flax, Hemp & Jut	te		38	38		
Cattle-yards			1727	1674	2	51
	ool a	and		-	-	THE OWNER OF THE PARTY OF
Horns	01		39	39		
Dairy			124	124		
Flour	2.47		138	134	4	E ITALIA
Guilding, Electroplating, Condime	ents, C	ar-			140	demantar.
pets			138	130	4	4
Hack-stable			75	75		The Park
Dyeing			48	47	1	
Onions and Garlic			61	61		
Oil Mill, & Oil storing			541	526	15	
Lodging house		***	68	67	1	
Markets			42	42		
Meat Stalls			282	234	48	
Spirits, Turpentine & Rosin		***	157	156	1	
Sweetmeat Bazaars, & Coffee hote	le	•••	393	377	16	
Washing soiled clothes	10	***	214	214		15.000 (C) (C)
		***	18	18		H 500 16
Fish, Fins			151	148	3	
Skins, Hides & Leather			1	1		***
Paddy boiling			12	12	***	***
Sugar, Sugarcandy			8			
Catgut, Tallow, Offal, Blood, Bones	5			8		
Pig-stye			6			
Snuff			99	96	3	
Cotton			29	29		
Brick-kiln			23	90	22	1
Lime-kiln			35	32	3	***
Eating-house, Tea-shop			891	834	57	
Total			5580	5285	189	56

menters of all

A correct and a

Counted vegetables

### List of unwholesome articles of food destroyed during 1932.

Aerated water.			6 bottles.
Apples.			391 dozens
The state of the s	eri uniz	Liscoln Cont.	158
Appams. Beef.		din	3 baskets and 220 lbs.
			158
Berries.			1 basket.
Pears.			
Biscuits.	35	1	12 lbs.
Brinjals.			16 visses and ½ basket.
Condensed Milk.		-02	144 boxes.
Cheese.			106 tins.
Chocolate.			179 boxes and 150 tablets.
Cocoanuts.		100	10
Country Guava.			85
Cucumber.			6 baskets.
Cooked rice.	Not of		3 "
Cakes (rice).		85 .	560
Dried fish.			5 baskets.
Eggs.			102 dozens.
Grapes.			58½ lbs.
Ice-cream.			67 tins.
Jack fruits.			86
Lactogen.			705
Limes.			433 dozens.
Mangoes.			1261 ,,
Melons.			97
Onions.			37 visses and 1 basket.
Oranges.			84 dozens.
Plantains.			909
Pork			82 lbs. and 1 tin.
Pottatoes.			
Rotten cabbages.			3 visses and ½ basket.
Roots boiled.			56
			2 seers.
Rotten vegetables	•		2 baskets.
Salt fish.			162 baskets and 270 tins.
Sheep head.			8
Stale mutton.			20 seers.
Seetha fruits (Cu:	strand? A	pples).	9 baskets and 57½ dozens-
Sweet cakes.			1 dozen.
Tomatoes.			178 dozens.
Syrup.			60 bottles,
Cannied vegetable	es,		21 tins.

### STATEMENT OF NOTICES ASSESSED AND DISCOSED OF TOGETHER WITH

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				and off to come to assure the	40
					100
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				to the same of	
				white to such the tree to be such in	
				Palme to constitut I drive to at la spreen	1
					(1) (3)
				Lest on and the Bangah Samples !	10
					163
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				Keeplay rebelot of fits for more than	(6)
	1.0		100	Values to copy requirem to replify the	10)
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				and the same of th	

### STATEMENT OF NOTICES ISSUED AND DISPOSED OF TOGETHER WITH

			ar.		NOTI	CES.		7
		1st	gu	1	1	lo- com	plied with	
			during				By transfer to	-
Section	Substance of Section or By-Law.	ling y 19	ed .r.	Total.	Volun	By	W.D. for Departmental	ellec
By-law.		end	issued year.		tarily.	prose- cution.	execution and	anc
		No. pending on January 1982.	No, issued the year.	1			recovery of cost.	No. cancelled.
		1000	1000	-				100
186	Failure to obey requisition to provide	(3)	(4)	(5)	1	1	6)	(7)
200	latrine or to remove latrine to another							
444	site and failure to keep latrines clean and in proper order	213	482	695	259	46	1	157
188	Failure to obey requisition to provide latrine for market, cattle stand or cart-							
	stand, or to keep them clean and in pro- per order		1	1		-		1
189	Failure to construct latrines so as to screen							
202 (1)	Allowing rubbish or filth to accumulate on	4	2	6	5	1		
(9)	premises for more than twenty-four hours, Irregular deposit of rubbish or filth		11	11	9	1		
,, (3)	Irregular removal of rubbish or filth							***
., (4)	Deposit of rubbish or filth in unauthorized place							
,, (5)	Keeping rubbish or filth for more than twenty-four hours, etc.	4	13	17	8	1		
,, (6) 260		5	30	35	26	1		
260	Failure to obey requisition to repair, etc. tank or other place dangerous to passers-	-				1		
262 (1)	by or persons-living in neighbourhood Failure to obey notice to fill up or demolish	3	1	4	3	1		
	well, etc. Failure to obey requisition to fill up etc.				***			
264	tank or well, or drain off water, etc	122	336	458	302	25		15
265	Failure to obey requisition to cleanse or close etc, tank, well or other source of							
267	Unlawful washing fishing in river, or estu-							
20.	ary after prohibition or contrary to regu-							
269	Failure to obey requisition to enclose, clear				***			-
270	or cleause untenated premises Failure to obey requisition to clear or	37	18	55	24	5	1	110
	cleanse, etc. building or land in filthy state or overgrown with prickly-pear or							
	other noxious vegetation	22	23	45	33	3		5-
272	Failure to obey requisition to lime-wash or otherwise cleanse building	84	803	387	849	3		17
273	Failure to obey requisition to execute work or take other action with respect to in-							
274 (1)	using For allowing the use of buildings	1113	2065	3178	2233	183		155
217 (1)	unfit for human habitation after prohibi-							
,, (2)	Do	***		***				
,, (3)	Do Failure to obey requestion to demolish the					***		
275 (1)	same Allowing overcrowding in building after							
	order to abate the same							
274 (4)	Failure to obey requestion to vacate over- crowded building or room							
280 (a)	Unlawful keeping of pigs							
	nuisance or dangerous							
282	Feeding of animals on filth Use of place as stable, cattle stand, etc.	***					3	***
283	Repairs to or demolishing of stable, cattle-		***					
-	shed, etc.		19	19	15			

87

### THE STATEMENT OF PROSECUTIONS INSTITUTED DURING THE YEAR 1932.

		- Sale	ALI COM		PF	ROSECUTIO	N.			
No	. pending.	No. of prosecutions pending disposal on 1st January 1982.	No. instituted du- ring the year.	Total.	Number convicted.	Fines imposed.	Number acquitted.	Number withdrawn.	No. in which par- ties were not found.	No. pending.
	(0)	1000		79.95	200		1000		100	(10)
-	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	1000		-			Rs. A. P.				
	282	20	62	82	17	40 8 0	2	32	10	21
	/ ***	1. 7		12	01			1000		THE REAL PROPERTY.
	1									
			1	1			10	1	70	See Lange
	1		1	1	1	5 0 0:				
					***		1	-		mist.
			***							10 CH
	8	1 2	6	7 2	4 2	1 12 0 3 0 0				3
			-			100				Maria Sala
		1	1	2	1	0 1 0	***	1		10 dec 910
					***					m
	116	10	42	52	7	8 0 0	1	33		11
	110	10	1-	"		Basi	-			0110521
					· · ·					Homb L.
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	. 14	2	9	11	4	12 6 0		6	1	
		100	1	217	100	200		1		Million 12
	4	2	. 9	11	5	.12 8 0		5		1
		2	153	155	54	49 10 0	4	90	CHECK THE THE	7
	18	2	100	155	34	45 10 0			The State of the Laboratory	
	607	102	280	382	125	231 12 0	5	220	2	30
						Balan	1 200	1000		Calculation and the
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				1					del	cro lo
		1	1						10.00000	Annual ) as
		225	706	931	771	4,507 10 0	6	76		78
	1	1		١	1		1	1		

### STATEMENT OF NOTICES ISSUED AND DISPOSED OF TOGETHER WITH

-	800	Dayo	81		NOTI	CES.		-
		1st	1 20		N	o. com	plied with	
Section	Substance of Section or By-Law.	982.	d during	Total.	Volun-	By	By transfer to W. D. for	fled.
By-law.	And the second of the second o	No. pending January 1	issued be year.		tarily.	prose- cution.		No. cancelled.
		No	No. is	18	50		cost.	No.
(1)	(2)	(3)	(4)	(5)	100	(	6)	(7)
	The state of the s	750						
284	Construction or maintenance of stable cattle-shed, etc. contrary to Act or subsi-	1				22	. Die	
286	Failure to remove carcass of animals		10	11	6			2
287 (3)	Use of place without license or contrary to licenses							
288 (3) 289 (a)	Disobedience of order regarding chimneys- Disobedience of order regarding hours of							
287 (b)	work Using rice-hask,etc. for fuel after prohibition							:
297	Slaughter of animals for sale or food or skinning or cutting up carcasses without			1		10	1	
304	license or contrary to license, drying skin so as to cause a nuisance							
309	Keeping open private market without a license or contrary to license			***				
310	Carrying on butcher's, fishmonger's or poulteror's trade without license, etc Sale of article in public streets after prohi-							
325	bition or contrary to regulations Burial or burning in place contrary to Act							
230	or By-laws Failure of medical practioner or owner or							
	cccupier to give information of existence of dangerous disease in private or public dwelling							
834	Failure to obey requisition to cleanse or dis- infect building or article		8	3	8			
336 (2)	Washing of infected or articles at unautho- rized places		422	422	392	1		7
841	Failure to close place of public entertain-		•••	***			-	
342 343	Sending infected child to school Use or permitting use of book from public		:::					
845	or circulating library by infected person Failure to give information of small-pox							
846	Entering city within torty days of inocula-	00						
356 (3)	Prevention of inspection of copies of rules and by-laws publicity exhibited							***
356 (4)	Destruction, etc. of board exhibited printed copies of by-laws and rules	***						
476 (1)	Failure of occupier to obey requisition to permit owner to comply with provisions						1.	
409	Unlawful removal of earth, sand or other							
	material from land vested in the Corpora- tion or deposit of matter or encroachment	-			1	-		
040 444	Action taken under the By-laws							
849 (11)	ing houses etc. and any premises to which		-	-				
940 (10)	of or drink.							
1	Sanitary control of places used for any of the purposes specified in Schedule No. VI.							
-49 (21)	Prevention of sale or exposure for sale of unwholesome meat, fish or provisions etc.	-		]				
	The second secon							-

THE STATEMENT OF PROSECUTIONS INSTITUTED DURING THE YEAR 1922

				Si . F	ROSECUTIO	DN.			
No. pending.	No. of prosecutions pending disposal on 1st January 1932.	No. instituted du- ring the year.	Total.	Number convicted.	Fines imposed.	Number acquitted.	Number withdrawn	No. in which par- ties were not found.	No. pending.
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
		233			Rs. A. P.			Belleville of	
	1000		1000	-					
1							1 :::		
	1	192	245	139	1,344 8 0	7	80	1	18
	, 58								
								- 100	
114									
	10000	-10,	1	1111	840 L		1	Highway	
100	willy !	1	1			1	-	a side of	-
	1	11	12	1	115 0 0		7	The state of	01
		35	35	28	65 4 0		2		5
	22	72	94	60	25 8 0		29	1	4
		1	1				1		-
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22	-		-					International Control	1 84 -
	17000	5	5		100		5		21
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		5	5				5		
	***								
001			14.0					The state of the s	
	1000	Piqu,	1	BAR.	OLG DE	100		STORES STORE	135
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	-	1	1		16				
				1		1	1	-	
	109	421	530	369	1,878 7 0		95	5	61
	48	145	-	133	110 12 0		47	1	12
•••	10	16			1		1		1

Statement showing the number of cases treated in the Corporation Dispensaries during 1931 and 1932.

Ser		Name of the	Dispensary.		Year in which the insti-	tres	o. of cases		of minor ons per- ned.
N	0.		Strate Strate		tution was opened.	1931.	1932.	1931.	1932.
(\$1)	1	Royapuram	Dispensary		1924	72,203	77,320	279	254
	2	Washermanpet	,,		1913	47,689	49,143	805	843
	3	Harbour Division	1 "		1929	1,03,275	1,17,887	260	280
	4	Mannady	,		1923	88,579	83,042	-531	538
at	5	Mafuskhan Garde	en "	4	1923	41,422	42,00€	451	297
	6	Mint Street	"		1923	44,557	46,946	1,502	1,200
	7	George Town	,,		1919	44,574	43,702	495	521
	8	Perambore	"		1928	23,018	23,018	455	262
-	9	Pulianthope Disp	ensary (Shif	ted	1922	33,863	32,081	1,077	699
	10	to Mambalam) Vyasarpady	Dispensary		1929	33,384	37,974	795	858
	11	Bauliah Naidu			1899	95,375	99,226	2,268	1,926
	12	Kosapet	. ,		1929	17,563	29,348	401	1,131
	13	Kilpauk	,,		1919	41,310	44,564	371	361
-10.	14	Nungambakkam	,,		1923	33,972	. 39,276	461	614
	15	Chintadripet	,,		1909	1,08,660	1,09,387	718	705
110	16	Triplicane	,		1918	1,17,576	1,25,116	481	554
	17	Pudupakkam	,,		1924	1,09,579	1,05,246	883	758
	18	Teynampet			. 1921	40,274	44,570	400	324
	19	Mylapore			1924	1,14,956	1,28,814	632	524
	20	Ayurvedic Dispen & Children, Th	sary for Won	nen	1930	30,122	33,130	245	183
	21	Siddha Dispensar	y, Chulai	٠	1931	97,880	1,17,737	143	180
	22	Unani Dispensa (new at Pulian	ry, Mambal	am	1930	32,834	31,406	450	175
	23	Unaui Dispen Sahib Street.	isary, Thay	yar	Aug. 1932	-	37,828		58

# THE INFECTIOUS DISEASES HOSPITAL, TONDIARPET (Statements). TABLE No. I. Admissions, discharges and deaths under various diseases during the year 1932.

21	8 22.							
1	Total.	10	1482	1492	1304	III	1.4	77
-	Other diseases,	- 1	7.2	73	62	=	15-1	:
-	Plague.	F=801-	-	-	:	-	100	
-i	Secondary Syph		2	24	01	1	:	:
-1:	Pulmonary Tube culosis.	i i	:	;	1	:	1	. :
	Kala-Azar.	- 4 -	1	:	:	:	:	:
-u	Pyrexia of u	11111	6	6	6	1		1
0	Malaria.	111-1-	4	+	3	- CECON	25	
	Enteric Fever.	1	1	:	:	:	110	:
i i	Pneumonia.		T I	T	T	:	1:	:
·q	Whooping Coug	1117	9	7	1	1	1	= :
	Mumps.	- I	15.	15	15	1		91
	Diarrhoea.	-,1	288	23	- 53	1	1	:
	Dysentery.	ii-	10	5	10	,	1	
- Instrument	Cholera,	ASSET	61	04	1	-	20	:
du (enoisemble	Measles.	:	49	49	48	:	:	-
Thu -	Chicken-pox.	+	764	768	763	:	:	40
-	Small-pox.	111111	529	533	365	16	181	11
		Patients remaining in the hospital on 31st December 1931 at 12 midnight Patients admitted from 1st lanuary	1932 to 31st Decem- ber 1932	Total No. Treated	No. Discharged	" Died	Mortality rate per	Patients remaining in the hospital on 31st December 1932 at 12 midnight.

TABLE No. II.

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

	90	1
Daily Average.	22.3 48 48 48 95.48 95.48 23 23 23 23 25 25 25 25 25 25 25 25 25 25 25 25 25	57.5
Total.	238 238 258 258 258 253 253 253	1663
Contacts.	0 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	181
Other Diseases.	4-681-00466	73
Secondary Syphilis.	111-1-1-1111	01
Pulmonary Tubercu-	11111111111	;
Kala-Azar.	11111111111	
Pytexia of unknown origin.	- i- : : i + i i-	6
Malaria.	! ; - ! ! ! ; - ; - ! !	4
Enteric Fever	1111111111	1
Pneumonia	- 111111111	-
Whooping Cough.	00 [01] [1] [1] [1]	9
Mamps.	4000 : 1000 - 1 : 100	15
Diarrhoea.	1-1 Louis	23
Dysentery.	1 1- 1- 1   1	10
Cholera	100 111111111	01
Measles.	18141 192-183	49
Chicken-pox.	39 182 182 10 10 11 11 11 11 12 13 14 10 10 10 10 10 10 10 10 10 10 10 10 10	191
Small-pox.	22 23 23 23 25 25 25 25 25 25 25 25 25 25 25 25 25	659
	111111111111111111111111111111111111111	529
		Total
	:::::::::	-
1932	:::::::::::::::::::::::::::::::::::::::	
	January February March April May July August September October November December	

TABLE No. III.

Admissions according to Nationality, Age and Sex.

Nationality,		Ad	ults.	Chil	dren.	-	-1-1
2 3 2 3 3 R	0	Male.	Female.	Male.	Female.	1	otal.
Europeans and Anglo-Indians Hindus Mahomadans Others		7 522 41 273	173 6 136	103 2 51	7 73 6 72	Constant.	24 871 55 532
Total		843	321	160	158	-3	1482

TABLE No. IV.

Number of Beds available in the Hospital and their Distribution.

2	2	Se	ction	 -		1	Number of Wards.	of	Beds pe	r Ward.	Total	Beds.
Indian Do		E		 -	1		2	1	149	24 20		18- 20
Do European		100				:::	7			4 2	1	28 8
~ .	25			To	tal		14		Della T	50		104

TABLE V.

Showing the Vaccinal condition of patients for Small pox in Tondiarpet Hospital-1932.

			1110										
	-	Printer of											
								37.0					
	theo-re	Mortality p	2.19	83 3	42.8	14.2	20	26.6	13-3	14.7	20		34.7
Un-vaccinated.	.pa	Recover	6.	-	+	9	4	=	13	29	1	1	19
Ju-vacc		Deatl	20	10	3	1	1	4	67	5	1	:	43
מ	.noi	ssimbA	29	9	1	1	20	15	15	34	03	-	121
		Mortality per-cent.	:	20	09	33.3	0	9	68.9	13-3	36	:	13.4
	Total.	Recovered.	03	4	63	63	1	28	81	215	16	61	353
	Tol	Death.	:	1	3	-	:	63	9	33	6	:	52
-		.noissimbA	03	10	2	60	-	30	87	218	25	63	408
Total	with isible.	Mortality per-cent.		W.	- 50	:	:	6	9.6	25.8	09	:	22.58
	Vaccinated with marks not Visible.	Death.	:	:	67	:	:	1	60	16	9	:	28
Vaccinated.	Vacc	Total admitted.	-	:	7	2	-	=	31	62	10	63	121
Vacc	ks	Mortality per-cent.	1	20	100	100	:	5.26	5.5	9.5	20	:	9.5
	Vaccinated successfully with marks Visible.	Death.	:	-	1	1	:	-	63	17	6	:	27
	ully wi	To'al admitted.	-	25	1	-	:	119	36	186	15	:	284
	visible.	10	1	1	:	:	;	-	;	56	01	:	53
	d suc	-	-	60	1	:	:	2	11	45	*	;	10
	inate	60	:	:	3	i	:	3	6	32	£	1	44
	Vacci	64	1	1	;	ŧ	1	60	18	40	1	:	69
		-	:	1	i	1	:	1	18	43	01	:	72
	Age	4	0-1	1 2	2—3	3.1	ĵ	5-10	10-20	01-03	40-60	60&upwards	

TABLE VI.

Statement showing the incidence of Small-pox among the vaccinated and the unvaccinated.

All ages.		Cases.	Deaths.	Fatality rate per cent.
Among vaccinated		284	27	9.5
Among stated to have been vaccinated but marks visible	with no	124	28	22.58
Among unvaccinated		121	42	34-7
Т	otal	529	. 97	18.8

HE PALACLICES PRESENT MODITAL REPRESENTABLE - STREET

THE INFECTIOUS DISEASES MOSPITAL, KRISHNAMPET-(STATEMENTS.)

### TABLE No. 1

Admissions, discharges and deaths under various diseases during the year 1932.

Total.	19	728	747	658	99	7.5	33
Confacts.	10	Ξ	116	114	1	:	01
Other Diseases.	61	. 13	33	26	9	18.18	1
Skin Diseases.	1	:	:	1	1	:	:
Influenzal Pneumonia.	101	1 1	:	:	:	:	Section Long.
Influenza		id ei	1	1974	Contra	1	that felan
Secondary Syphilis,	:	4	4	4	:	:	
Pulmonary Tuberculosis.	:	. :		:	:	:	:
Kala-Azar.	:	:	;	:	:	:	-
Pyrexis of unknown origin.	:	;	:	:	:		:
Malaria.	:	60	es	60	:	:	:
Enteric Fever.	:	1	-	-	:	:	:
Pneumonia.	:	:	;	:	:	:	- :
Whooping Cough.	:	:	:	:	:	:	:
·sdun <b>y</b>	;	=	==	00	:	:	60
Diatrhoea.	:	15	15	15	:	;	1
Dysentery.	:	60	90	00	:	:	:
Cholera.	:	10	10	9	64	40.0	1
Measles,	:	25	255	24	-	4.0	:
Chicken-Pox,	9	267	213	271	-	0.36	1
Small-Pox.	9	252	258	186	91	11.7	26
	Patients remaining in the Hospital on 31st December, 1931	Patients admitted from 1st January 1932 to 31st December 1932	Total No. Freated	" No. Discharged	" No. Died	Mortality rate per cent	Patients remaining in the Hospital on 31st December, 1932

TABLE No. II.

Distribution of admissions throughout the year 1932 in the Krishnampet Isolation Hospital.

Daily average.	=	53	26	525	31	11	13	18	13	-	30	53	37
Total.	35	89	126	112	90	23	7	33	43	80	52	69	728
Contacts.	10	1	1	16	00	9	6	9	6	23	00	1	111
Whooping Cough.	:	:	1	-	1	:	;	1	1	.1	:	i	;
Other diseases.	20	-	2	65	03	:	7	60	:	-	60	7	31
Skin Diseases.	;		;	:	1	:	•	:	:	;	1	:	
Influenzal Pneumonia,	0.1	:	8 :	1	i	:	:		:	184	;		, ins
lufuenza.	LF:	:	193	1.	:	1	1	i	1		:	:	de il
Secondary Syphilis,	01	:	00:	7	:	:	:	:	1	:	:	:	40
Pulmonary Tuber-	1:		10:	1	:	3	:	:	:	:	:	:	i
Kala-Azar,	19:	:	10.5	1	:	:	ar.	:	:	:	1	1	;
Pyrexia of unknown origin.	:	:	:	:	:	:	-	1	1	1	1	:	:
.eizeleM	:	:	:	:	:	:	:	-	-	-	:	:	60
Enteric fever.	:	:	:	:	:	:	:	1	:	:	:	:	1
Pneumonia.	. :	1	:	:	:	;	:	:		:	:	:	1
*sdun M	-	-	:	:	:	:	:	:	:	:	1	00	==
Diarrhoea.	:	-	:	:	:	1	:	-	60	01	4	60	15
Dysentery.	:	:	:	:	:	:	:	.:	:	1	1	-	60
Cholera.	ni il	1	70.0	:	:	. !	-	:	ini.	:	:	:	10
Measles.	:	64	60	1	:	1	1	:	1	1	01	-	25
Chicken-pox.	16	48	81.	29	13	65	1	65	80	10	1	7	267
Small-pox.	9	1	53	18	23	12	20	18	50	33	97	36	252
1	:	:	:		:	;	:	:	:	:	1	:	1
												LAP	Total
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1932													
Les	3.						-		h		1		
	January	February	March	April	May	June	July	August	September	October	November	December	
H—25		_	-									7770	

TABLE No. III.

Admissions according to nationality, Sex and Age excluding contacts for the year 1932.

1 - 3						-	Ad	ults.	Chi	ldren.	
		ation	ality.			1	Male.	Female.	Male.	Female.	Total.
					1	1	1		6 to 12 to		
Curopeans an	l Ang	glo-Ir	dian	is :			9	9	6	10	34
Hindus :							193	72	35	20	820
Mahomadans		***					26	5	2	31-120	33
Others	-		3	1			103	76	19	32	230
1 1 1	:			Total			381	162	62	62	617

TABLE No. IV.

Number of Wards and of Beds available in each Ward.

2 - 6	+1	-	-	- 1	Name		-1	01	-	100	Men		Number of Beds.
Special Ward	2.0	Ca	200		00	17.	27	3	*	2	0.19		3
General Ward			(E)	0	12	100	0	0					14
Male Ward Female Ward													16
Block No. I													4
Block No. II											1.	-	4
										•	rotal .		57

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-	, T	Mortalit per cer	75%	%19	219	Ew h	25%	:	30%	30%	100%	:	-
inated	.ed.	Recover	04	69	1	:	60	60	11	1	:	:	1
Un-vaccinated.		Death	9	4	01	:	1	:	9	63	1	:	-
	, noi	ssimbA	œ	9	60	:	7	60	20	10	1	:	
		Mortality per cent.	20%	20%	20%	:	:	15%	3%	14%	33%	:	-
	Total.	Кесочетей.	1	1	7	63	01	11	11	7.0	9	:	
	To	Death	-	-	-	:	:	.00	01	12	co	:	-
		noissimbA	94	01	2	64	04	20	73	82	0.	:	-
	with isible.	Mortality rate per-cent.	:	:	;	:	:	33%	10%	27%	75%	:	Ì
	Vaccinated with marks not Visible,	Death	:	:	:	:	:	60	63	9	63	:	Ì
Vaccinated,	Vacci	Total admitted	:	:	1	1	1	6	20	01	+	:	
Vacci	rks	Mortality rate per-cent,	202	20%	25%	:	:	:	:	10%	. :	:	
	ith ma	Death	-	-	1	:	:	:	:	9	:	:	
	Vaccinated successfully with marks	Total battimbs	01	0.5	-	1	1	11	53	09	K3	:	-
	ccessful Visible.	080	• :	:	:	:	:	:	-	-	01	;	-
	suc	-	64	1	60	:	-	63	15	19	:	:	-
	nated	60	:	:	1	:	;	3	0.	14	-	:	
	/acci	01	:	:	:	1	:	7	16	10	-	:	-
		1	:	-	:	:	:	-	12	13	-	:	
	Age.		0_1	1-2	2-3	3-4	45	5-10	10-20	2040	40-60	above 60	

Statement showing the incidence of Small-pox among the Vaccinated and the unvaccinated.

				Al	l age	s.				1	Cases.	Death.	Fa	tality rate
Amo	ng s	accin aid to	be.	vac	cinat	ted l	out w	vith 1	no m	arks	139 58 -55	14° 1.		6·5 24·1 41·8
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### List of works of a Sanitary nature executed during the year 1932.

		HOLES OF & Desired J Hasard Calculated dating site John 1902.
Serial Number.	Division	
n o	.00	Works.
Se	,io	
Z		
		Improvements to burial grounds.
1	28	Construction of a compound wall round the new platform in Krishnam-
1	20	pet Burial Ground.
2	16	Filling up the low land in the new burial ground in DeMellows Road,
3	21	Construction of a compound wall and gate in Brick Kiln Road Burial
		Ground.
4	17	Do of a waiting shed at Chulai new burial ground,
5	"	Do of waiting shed and store room at Choolai new burial
	1000	ground.
6	,,	Do of bathing ghats at Choolai burial ground.
7	,,	Do of burning platform at Choolai burial ground.
8	16	Giving sewer connection to the bath room of the new burial ground, south
		of DeMellows Road Pumping Station.
9	28	Metalling roads in the Hindu burial ground, Krishnampet.
10	,,,	Construction of gate at the entrance to Krishnampet burning ground.
11	"	Construction of cremation platform in the Hindu burial ground Krish-
70		Panyising the compound wall in Krishnamust hurisl ground
12	17	Repairing the compound wall in Krishnampet burial ground.  Construction of compound wall round Choolai burial ground—Basin
20	41	Esplanade Road,
14	21	Construction of shed at Kilpauk burial ground.
		Latrines and Bathing fountains.
1	1	Construction of flush-out latrine in Nagatha Coil Cherry.
2	2	Construction of F.O.L. in Somu Chetti 2nd Laue.
3	3	Do Korukupet.
4	5	Constructing the zinc sheet latrine with F.O.L. of 20 seats in Naraya-
		nappa Naick Street.
5	6	Construction of F.O.L, in Venkata Iyer Street.
6	7	Do Sembudoss Street.
7 8	8	Do Godown Street, Umpherson Street.
9	9	Do Pedariar Coil Lane.
9	10	Do Portuguese Church Street, Junction of Ammen Coil Street.
10		Do 1st Narayanan Street and Barracks Street.
11	12	Do at the south of Krishnappa Naick Agraharam.
12	13	Do near the urinal at China Bazaar Road.
13	,,	Do at China Bazasr Rd., Junction of Erulappen St.
14	14	Do at Memorial Hall Street junction of Mint St.,
15	15	Do at Ekambareswarar Agraharam Street.
16	22.	Do at Kesavier Lane, Ponnappa Chetti Street,
17	16	Converting the existing latrine into F.O.L. of 40 seats with bathing ghat
10	17	in Chulai burial ground.
18	17	Do do in Kuruseddi Cherry.
19	10	Converting the sanded latrine into F.O.L. of 20 seats with bathing ghat in Emu Street.
20	19	Installing single seat F.O.L. in Poonamallee High Road.
21	21	Converting the existing latrine into F.O.L. of 12 seats in Letangs Road.
22	20	Installing F.O.L. of 12 seats at South Cooum Road.
23	24	Do 32 seats at Chetti Thottam.
24	26	Do 12 seats at Hanumantharayan Coil Lane.
25	26	Do double seat F.O.L. at Alangatha Pillai St reet
26	30	Construction of corrugated iron sheet latrine in Doming Kuppam.
27	4	Installing F.O.L. of 24 seats in R. S. No. 1865/2 of Tondiarpet in The-
-00		gappa Chetti Street.
28	5	Installing F.O.L. of 6 seats with bathing ghat in 4th line Beach.
29	14	Construction of B.F. in Cochrane Basin Road 1st Lane.
30	15	Construction of 6 chamber F.O.L. behind Flower Bazaar Police Station.
01	4.0	Construction of single seat F.O.L. at Mint Street junction of Edapalayam
32	15	Do do at Samudra Mudaly Street.
33	23	Do B.F. at Cooum River Road near Guruvappa Chetti St.
34	26	Do B.F. at the west side of Temple tank, Car Street.

Serial Number.	Division.	Works.
-		Drain.
1	17	Construction of water table in Avadanam Papier Street.
2	28	Do Do in Mylapore Bazaar Road.
3	27	Do Jani Jan Khan Road and Mir Bakshali Street
	**	Do of S.W. drain in Muhammad Hussain Street.
4 5 6 7 8	29	Do do in 29th division.
6		Do do in 25th div sion.
7		Do do in 24th division.
8		Do do in 23rd division.
9		Do do in 22nd division.
10		Do do in 21st division.
11		Construction of water tables in 20th division.
12		Do 19th division.
13		Do 18th division.
14		Do 17th division.
15		Do 16th division.
16		Do 15th division.
17		Do 13th division.
18		Do 12th division.
19		Do 11th division,
20		Do 9th division.
21		Do 6th division.
22		Do 5th division.
23		Do 3rd division.
24		Do 2nd division.
25		Do 1st division.
-1-3		Imperovment of cherries.
1		Improvements to Tondiarpet cherry.
2	2	Do R.S. No. 1868/1 and 1809/1 of Toudiarpet,
3	17	Do Angalamman Coil Hutting Ground.
4	17	Do Kuruseddy cherry.
*	11	The state of the s

# ANTI-MALARIAL WORK-(STATEMENTS).

STATEMENT A.

		Ren
the year 1932.	Fines collected.	Amount.
Madras during	N. of	Prosecutions
the City of		collected.
taken re: cleaning of tanks, wells and ponds in the City of Madras during the year 1932.	No. reclaimed.	By   Private lands   Collected.   Prosecutions
cleaning of tan	No. not	complied
tatement showing the action taken re-	No. complied with	(b) By the
Statemen	No. of	Notices

1		Remarks.					
1		Rem					
1	ed.	1	18:	A.	- ∞		10.11
	Fines collected.	Amount.	Wells.	Rs.	Control of the Contro	7.5	
	S CC	li oii	KS.	A.			
	Fine	4	Tanks.	Rs. A.		-	1
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	N. of	Prosecutions instituted.		Ponds.	12 00 11		8
6	-	Pros		Tanks.			
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	9	ctec		A. P.			1000
		Amount collected.		Rs.	2,199		
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	recla	Priv by C	-	Tanks.	1		
	· o		ii.	Wells.			
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	ot	ied .		Wells.	99	111	
	No. not	complied with.		Ponds.			
1				Tanks.	50		
1		(b) By the Corporation	cost vner.	Wells.	·		100
-	with	By pora	at the cost of the owner.	Ponds.	<u> </u>	116	
1	No. complied with	23	of t	Tanks.	183		
	comp	the		Wells.	206	13	
-	No.	(a) By the	party.	Ponds.	× ×		
1		(3)		Tanks.	145		
	jo	d.		Wells.	57.2		
-	No.	Notices served.		Ponds.	8 16		
-			-	Tanks.	348		
-		noi	siviG	1	08 of I		137

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		Division.					******	002******			44 4 44 44 44 44 44 44 44 44 44 44 44 4	
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		Serial No.	HH 6406-8 6574444	112 21		*********	************	23233333382	ELSC STRUSS	######################################	12 2 22	8 288 288211

Statement "B" showing the private tanks under departmental cleaning for the year 1932 on payment of the cost by the owners. (SOUTH RANGE)

March 2014   Mar							75				
March   Marc			Remarks				*8 coolis.		Ocolies st 0.8-0.		-
March   Marc			Date of Payment.	2 dated 6-1-32 1 dated 6-1-32 2 dated 10-2-32 12 dated 19-2-32 72 dated 18-2-32 81 dated 23-3-32,	A cate to 18-3-38, 100 dated 18-3-38, 100 dated 18-3-38, 100 dated 29-2-38 dated 21-8-38 dated 21-8-38 dated 21-8-38 dated 21-8-38 dated 31-3-38 dated 31-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-	11 dated 22-63; 99 dated 12-32 99 dated 13-53 80 dated 15-6-32 80 dated 15-6-32 22 dated 20-6-32 3 dated 20-6-32 95 dated 20-6-32	155 dated 24-6-39 190 dated 88-6-37 107 dated 6-7-38 156 dated 4-7-32 190 dated 4-7-32 191 dated 18-3-32 181 dated 18-3-32 181 dated 18-3-32	200 dated \$5.77.29 dated \$5.77.29 fall dated \$8.77.29 fall dated \$8.77.20 86 dated 1-8-32 166 dated 1-8-32 166 dated 11-8-32 66 dated 11-8-32 66 dated 11-8-32 70 dated 11-8-32 70 dated 11-8-32 70 dated 11-8-32 70 dated 11-8-32	A character of the char	I dated 5-12-35. I dated 5-11-35. St dated 29-11-35. St dated 4-12-32. If dated 5-12-32. If dated 5-12-32. If dated 1-12-32. If dated 3-12-32. If dated 3-12	1
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Main and olders of the owner,   Date of   Coming Olders   Compared   Coming Olders   Coming	tono lostoni	Supervision	Amount.			24882444 2488644	481111181 180000000				1
Name and address of the owner.   Date of Commission   C	to of the act										
March   Marc	Dotai	Jeaning charges.	moun	2 10 112 2							
12   12   12   12   12   12   12   12	1	0	No. of sanings.	o - !- ! lo₁ ∞	<del></del>	****	01 01	01-10-1   1-1-0101-01-01-01-01-01-01-01-01-01-01-0			
12   12   12   12   12   12   13   13	NGB)	Date of the work	undertaken depart- mentally.	111111	29-6-31 1-7-31 3-7-31 5-7-31 5-7-31 5-4-32 25-4-32	2000 00 00 00 00 00 00 00 00 00 00 00 00	10 10 10 10 10 10 10 10 10 10 10 10 10 1			13-12-32 9-1-32 14-1-32 16-1-33 10-1-33	
22 Village Road   Locality.   Cocality.	HINOS)		the owner			buckingh				Messrs. K. Nageswar Rao C. H. Kaghava Rao C. H. Kaghava Rao Ratta. Na Selection of	
Register No.   1   1   1   1   1   1   1   1   1		Localita	cocanny.			1:::::::	111:::::		-	1	4:
		on u	Division		******	F21222851212	2888883232	NECES NEED NO.		50 00000000000000000000000000000000000	10 1
MUNICIPAL MANAGEMENT AND MANAGEMENT		0N 90	Referen	111111 1	2204/31 2204/31 2204/31 2204/31 2204/31 2204/31 2204/31 2204/31	2198/32 18/264 70 & 71/264 79 & 80/264 83 & 81/264 73/264 23/264 23/264	90 90	4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	2016/20 2016/2	61,62&63/264 51/264 56/264 44/264 22/264 22/264 22/264 22/264 22/264	
3827373737 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	-	oN :	Register	111111	1111111111111111	111111111	1111111	11111111111111111	::::::::::::::::::::::::::::::::::::::	1 1111111	-
	1	,01	Serial N		8 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	25 25 25 25 25 25 25 25 25 25 25 25 25 2	83 83 83 83 83 83 83 83 83 83 83 83 83 8	134444444444444444444444444444444444444	558 558 558 558 558 558 558 558 558 558	2 244561 80	1

# Medical Inspection of Corporation Schools,

## STATEMENT 1.

### 1932-33

	Remarks.		el de	(1000)	W buck	Ragas				
	Total of Entrants and Regulars.	- Sept	Peren	3-19 5-90 12-61	22.75 8.74 0-12	1.83 0-11 0-13	0.39 0.29 3.18	0-67	7-11	5-95
	Fotal of and Re	-pain	Detes	326 602 1308	68.83 1.0 1.0 1.0	187	222 222	80 40 80 80 80	756	500
		ntage	1931-52	5-20 9-06 23-84	1846 2-67 0-21	2.86 0.20 0.20	0-18 0-18 4-52 4-52	0.85 0.59 0.14	9-33	8-70
Girls,	Regulare.	Percentage	1932-33	3.78	21-22 3-19 0-20	2-05 0-15 0-16	0.40	0.40	2-66	6-31
		19.61	Defect	223 821 821	11 E	112	23 170 170	2000	424	349
211		ngo.	1931-32	2-70 13-51 18-84	1548 281 0.15	0-22	0.30	0.26	07 03	6-03
	Entrants.	Percentage.	932-33	2-£0 7-98 10-41	21.67 4.47 0.02	1.64	0-38 0-26 3-31	0.71 0.04 0.04	7.10	1.26
	907	.ovid	Detec	117.	209 209 1	01 + 40	112 113 156	85 G 64	332	258
	ntrants nlars.	raSur.	Percei	22-69 14-31 16-73	27.57 2-57 1-30	950	1-67 0-10 3-13	1-64 2-86 0-16	12:91	8-79
	Total of Entrants and Regulars.	.ovi	Doğuci	2475 2475 2803	4768	255	185	253	2233	1521
		98	1961-32	29.41 12.63 18-09	25-17 3-13 1-79	1-67	1-31 0-20 3-58	2°C0 8-74 0-81	13.29	9.22
	Regulara	Percentage-	1 336-36	23-54 11-28 16-13	25.09	1.67	1-10 0-15 2-89	1.89 2.79 0.14	12.59	8-03
Boya	Re	.ovii	Defect	2185 1108 1614	2563 255 130	164	108 15 284	186 274	1237	788
		186.	15.0	19-46 15-11 16-39	23.49	1.34	1.15	2-11 3-41 0-23	12-99	9-08
	Entrants.	Percentage.	1932-33 1931-83	28.27 18.29 17.12	29-51 2-53 1-26	0.00	1-03	1-30 2-98 0-17	13-33	9-81
	En	'DAIL	Defed	1789 1367 1279	2205 189 94	208	71 258 27	223 13	966	733
				111	111	111	111	111	agions	1 :
	-	Defects.		Mahnatrition Duty head, body and Nails Teeth and Mouth	Nose and Thront Eye disease Vision	Ear discuse Hearing Epeech	Circulatory System Tuberculosis Respiratory System	Andominal Organs Bones and Joints Nervous and Psychic systems	Infectious and Cents diseases	Other diseases and defects
	5	.00		H 64 60	4100	t= 00 m	211	272	16	17

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STATEMENT M-1932-33.
Height and Weight Table.

	rls.	Gir	ys.	Во		
Remarks.	Average weight in pounds.	Average height in inches.	Average weight in pounds.	Average height in inches.	ge.	Age
			22.22			
	31.59	36.70	26.80	35.48	ars	4 year
12	31.07	38.76	33.81	38-57	,	5 ,,
	33.33	40.68	36.42	41.42	,	6 ,,
	34.26	43.04	38-20	43.33	,	7 ,,
1000000	39.92	45.31	42.97	46.73	0.10	8 "
	43.58 48.82	47.62	44.24	48·43 50·52	, =	9 ,,
10000000	53-80	49.14	48.65 52.53		,	10 "
363333		50.58	53-15	51.53	,	11 ,,
100000	60·58 64·93	52·87 54·22	59.02	52·58 54·62	1	12 ,,
1	71.50	55.88	66.72	56.43		13 ,,
	80.96	58.28	70.94	58-51		14 ,,
	79.60	58.57	77.81	60-49	2 37.50	10
Tone minte	82.00	61.00	95.00	64.00	-	177
Two girls	89.50	60-50	98.00	63-69	1000	10 "
Four girls	85.20	60-00	100.00	65.00	9 10 1999	10
Two girls	116.00	59.00	100-00	64.50		-10
One girl.	110.00	33.00			9	01
Two girls.	93.50	58-50	200 313	***		00
I wo giris.		9				90
One girl.	81.00	58-50			1000	94
Two girls.	88.50	60.50			0.00 10000	9= "
One girl.	136.00	64.00				90 "
One girl.	140.00	58.00	5-1	***	4000	21
One girl.	172.00	57.00				40 "
one gir.	11200	3, 00			,,	40 ,,
1 2 2 6			1000		1000	

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### APPENDIX TO STATEMENT I.

1932-33.

Group.	No. o	No. on Roll.		Average daily attendance,		No. Examined.		No. defective.		Percentage defective.	
Group.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Entrants	19,539	12,558	16,014	9,512	{7472 9825	4,676 5,533	4,720 5,469	2,524 2,898	63·17 55·66	53·98 52·36	
Total .	. 19,539	12,558	16,014	9,512	17,297	10,209	10,189	5,422	58-91	53.02	

### TREATMENT TABLE.

1932-33.

Corporation Schools.	No. sent to Cor- poration dis- pensaries.	No. referred to General Hospital	No. referred to Ophthalmic Hos- pital.	No. referred to Tuberculosis In- stitute.	No. referred to Gosha Hospital.	No. referred to skin department of Gov- ernment General and Royaguaram Hospi- tals and Corpora- tion dispensary vya- sarpady for treatment of Leprosy.	No. of parents met.	No. of re-visits	No. of re-exami- nations of chil- dren made.	Remarks.
Boys	 9,231	€81	182	7		110	6,039	118	10,708	
Girls	 3,641	1,253	199	22	2	10	3,394	118	4,785	
Total	 12,872	1,934	381	29	2	120	9,433	236	15,493	

TEETH AND MODS'H TABLE.

1932-33.

J		Total defector	898	1488	2010	11	7	75
		No. referred to General Hospital.	70	225		21	1	61
	Girls.	No. sent to Corporation dispensaries.			204	-	!	1
Regulars.	ars.	No. Defective.	142	524	204	O1	1	61
Regu		No. referred to General Hospital.	30	09	:	6	:	01
	Boys.	No. sent to Corporation dispensaries.		274	606	:	4	1
		No. Defective.	336	439	606	6.	4	16
	No. referred to General Hospital	128	:	63	:	1		
	Girls.	No. sent to Corporation dispensaries.	oin	11:3	128	:	:	1
ints,		No. Defective.	200	271	128	04	:	1
Entrants,		No. referred to General Hospital.	4	12		•	61	93
	Boys.	No. sent to Corporation dispensaries.		187	692		1	-
	100.00	No. Defective.	305	254	692	4	67	10
1 385	Ma,et	121 200	1	1	f 109	d in	ai i	in
		Defects.	Dirty Teeth	Dental Caries	Stomatitis	Tongue Tie	Oral Sepsits	Other Conditions
		e N	-	64	00	*	20	9

N.B.- Cases not amenable to or not requiring treatment have been omitted in the treatment column.

NOSE AND THROAT TABLE.

1932-33.

H-28

The same and same		Defects,	Nasal Catarrh 58	Nasal Polypus	Enlarged Tonsils 1783	Granular Pharyux 8	Adenoids 12	Enlarged Cervical glands. 476	Bifid & Elongated Uvula 8	Other Conditions
	Boys.	No. sent to Corporation dispensances.	53	:	1684	00	1	476	:	:
Entrants	Girls.	No. referred to General Hospital.	1	:	66		12	1	-	ľ
ints.		No. Defective.	39	80	10%	:	:	66	61	:
		No. sent to Corporation dispensaties.	68	:	8111	:		. 49		:
		No. referred to General Hospital.	1	20	211	i	:	1	:	:
		No. Defective.	22	:	2020	14	89	689	12	:
100	Boys.	No. sent to Corporation dispensaries.	57	ı	1880	14	:	689	:	:
Reg		No, referred to General Hospital.	1	:	140	:	39	:	:	
Regulars.	Girls.	No. Defective.	31	5	1070	1	:	54	16	1
		No. sent to Corporation dispensaries,	53	*	583	1	:	24	10	:
-		No. referred to General Hospital.	01	5	487	:	***	:	1	1
3	o svite	Total defec			5958	1000	7	12	38	

N-B.- Cases not amenable to or not requiring treatment have been omitted in the treatment column.

EYE-TABLE,

1932-38

3	o svit	No. referred to Ophthalmic Hospital.		212 24 25 25 25 25 25 25 25 25 25 25 25 25 25
	Girls.	No. sent to Corporation dispensaries.		9:8:1111:20:1111
ılars.		No. Defective.		81.81. : : 4.4. : : : : : : : : : : : : : : :
Regulars		No. referred to Ophthalmic Hospital.		13 13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Boys.	No. sent to Corporation dispensaries.	-	8 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	3	No. Defective.	*	67 2 4 8 9 9 7 1 1 2 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1
		No. referred to Ophthalmic Hospital,		84 & 8 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Girls.	No. sent to Corporation dispensaries.		F 40 : : : : : : : : : : : : : : : : : :
ants.		No. Defective.		268888888888888888888888888888888888888
Entrants.		No. referred to Ophthalmic Hospital.		:: 8 2 :: - :: : 2 :: : 2
	Boys.	No. sent to Corporation dispensaries.	-	2 :E : : : : : : : : : : : : : : : : : :
		No. Defective.		1 : 2 : 1 : 2 · 2 : 1 : 2 · 3
			-	7111111111111
The state of the s	The self self	Defects.	40 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Conjunctivitis Blepharitis Granular lids Corneal opacity Corneal ulcer Staphyloma Dacryocystitis Cataract Xerosis Stye Squint Keratitis Ptosis Other conditions Defective Vision
200	-3	No.	100	-duance modernan

N. B .- Cases not amenable to or not requiring treatment have been omitted in treatment column,

# INFECTIOUS DISEASES TABLE,

1982-33,

		defective of boy and girls.	186 186 188 188 188 188 188 188 188 188
	1.1	No. referred to General Hospital.	11. 11111111111111111111111111111111111
	Girls.	No. sent to Corporation dispensaries.	371 115 115 115 115 115 115 115 115 115 1
ars.		No. defective.	11. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
Regulars.		No. referred to General Hospital,	; <sup>1</sup> , 11111111111111111111111111111111111
	Boys.	No. sent to Corporation dispensaries.	961 30 30 19 11 11 11 11
		No. defective.	961 899 300 800 800 81 11 11 11 11 11 11 11 11 11 11 11 11
		No. reterred to General Hospital.	11 111111
-	Girls.	No. sent to Corporation dispensaries.	888
ts.		No. defective.	882 40 : : : : : : : : : : : : : : : : : :
Entrants	-	No reterred to General Hospital.	1:\$11111 11111
	Boys.	No. sent to Corporation dispensaries.	797 85 : 31 : 31 : 1 + 1 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
-		No. defective.	788 850 700 8 1141818111
			11111111 1111111
	The same of the sa	Defects.	Scabies  Scabies  Eczema Leprosy Ringworm Lichen Dermatitis Pruritis Pruritis Pruritis Praciasis Impetigo Other infectious discases:— Malaria Hookworm Whooping Cough Influenza Mumps Congenital Syphilis Chicken-pox
1	1	No.	Hadenormo Hadenor

\* Cases advised treatment at the skin section of Government Royapuram and General Hospitals and Corporation Dispensary Vyasarpady. 
‡ Advised Xray treatment.

N.B.—Cases not amonable to or not requiring treatment have been omitted in the treatment column.

OTHER DISEASES TABLE.

1982-33.

evo ovs		Total defecting	200,1 801. 447. 124. 125. 126. 66. 66. 66. 66. 66. 66. 66. 66. 66.
		No. referred to General Hospital.	1111111111111
	Ģirls.	No. sent to Corporation dispensaries.	- 28 : 18 28 E : : : : : 1 - 23
Regulars.		No. Defective.	# # 1 10 8 E 1 4 E 1 1 1 1 4 4
Regi		No. referred to General Hospital.	[0, 1∏ 1-
	Boys.	No. sent to Corporation dispensaries.	305 479 381 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
		No. Defective.	205 4 45 4 45 117 118 117 117 117 117 117 117 117 117
		No. referred to General Hospital.	111111111111111111111111111111111111111
	Girls.	No. sent to Corporation dispensaries.	258 : 1.223 : 1 : 1 : 1 : 1 : 1
ants.		No. Defective.	238 : 1228 2 : 1 1 1 18
Entrants.	3	No. referred to General Hospital.	11:5::::::::::
	Boys.	No. sent to Corporation dispensaries.	2382 246 246 246 246 246 246 246 246 246 24
		No. Defective.	2882 246 277 277 277 277 277 277 277 277 277 27
		16. 00	ands s hes
		Defects,	Worms Wounds, cuts, ulcers, etc Undescended Testis Phimosis Enlarged Groin glands Pyrexia Boils and abscesses Keloids Leucodermic patches Lipoma Obesity Alopecia Scars Beri-beri Other Conditions
		Š.	188426011211098466548811

N.B.-Cases not an nable to or not requiring treatment have been omitted in the treatment column.

# Statement showing the details of defects found on Medical Inspection of Schools 1932-33.

			MA		No. D	efective	e.	
No.	System or Organs.	Details.		Ent	ants.	Regu	alars.	Total defec-
	-			Boys.	Girls.	Boys.	Girls.	and girls.
1	Ear	1. Otorrhoea			59	147	88	380
1	Market Co.	2. Otitis 3. Other ear diseases		4	13	12	27	56
		4. Defective hearing		5	4	6	7	22
2	Speech,	1. Stammering		19	3	41	6	69
		2. Lisping		2	1	3	1	7
	100	3. Incoherent 4. Dumb	•••	1	ï		2	1 3
3	Heart and	1. Heart Disease (a) Organ	nie	iii	4	18	9	42
	circulation.	(b) Funct		27	1	46	2	76
	3	2. Anaemia		39	13	44	10	106
4	Lungs.	Other conditions     Bronchitis (acute and chronic	٠٠٠ ا	251	150	270	164	835
	Lunga	2. Other non-tuberculous dis			5	14	6	32
		(Asthma,						
5	Tuberculosis.	1. Pulmonary (a) Definite			3	1	3	7 29
	No. of the last	(b) Suspected 2. Non-Pulmonary (a) Glands			5	14	9 5	10
	-	(b) Spine						
	1	(c) Hip						
		(d) Bones&]	oints					
		(e) Skin (f) Other F	orine		***			-
6	Abdominal	1. Enlarged Spleen	***	90	9	52	6	96
	Organs.	2. " Liver		N. Oak	2		1	6
	1 1000	3. " Spleen and Liver				1 :::	2	2
		4. Hydrocele (a) Vaginal (b) Cord	•••	0		41		59
	170	(c) Infantile						
		5. Hernia (a) Inguinal		14		40		54
	1 18	(b) Umbilical		10	1	12	2	25
		(c) Femoral	•••	0.	14	9	16	42
		7. Bowel conditions		5	7	15	7	34
		8. Other conditions		1.9		17	1	30
	1	9. Generative disorders in girls		0000			1 2	2 9
7		1. Bones (a) Fractures (b) Caries		3000		9		3
	Joints.	(c) Deformitie	s		3		2-	5
	136 11 11	(d) Diseases		. 1		100		1
		2. Joints (a) Dislocations & sp	rains	. 3	1 .	1	2 3	6
		(b) Diseases (c) Deformities	***	5	3	8	1	14
	1	3. Rickets (a) General		3000		1	1	1
	1	(b) Deformed Ch	est		14	264	14	509
8		1. Organic disease (Palsies etc.)		25	2	6 3	1	10
	System.	2. Functional disorders 3. Other conditions		1	-	1		2
9	Psychic System.	1. Mentally defective				4	3	12
10		General Deformity-		1	1	-		
		(a) Spinal Deformity			2	6 3	"i	15
	1	(b) Talipes (c) Shortened Limbs		11	î	15		27
	1 100	(d) Congential dislocation			4021.G		1	
	- 00	(e) Ankylosis, joints				1	1	3
		(f) Amoutated Limbs				ï		2 2
	11	(g) Genu Varum & Valgu (h) Supernumerary finge	rs	i	2	6	2	11
	133 1 3	(i) Flat foot				3	3	8
	-	(I) Syndactily				1 1		1
		k) Dwarf		1	1 "2	1 4	1	13
		(1) Other conditions	••	. 1	- 4	1 2	-	

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Statement of Following-up work done showing the results of Medical advice, 1932-1933.

2 Teeth & 3 Nose & 4 Eye Di 5 Vision 6 Ear Di	Mouth. D	Caries teeth tomatitis coughe Tie		 12* 72‡	546 166†	1144 76	1105 86	*Cleaned by a dentist.
3 Nose & 4 Eye Dis	Throat. N	tomatitis Cougne Tie Gumboil				76	86	
5 Vision 6 Ear Di 7 Circula	Throat. N	tomatitis Cougne Tie Gumboil		72‡				†Cleaned or
5 Vision 6 Ear Di 7 Circula	Throat. N	Yougne Tie		199	1999	45	171	washed daily. Extracted or fallen out.
5 Vision 6 Ear Di 7 Circula	Throat. N	Yougue Tie		***	775	177	279	lanen out.
5 Vision 6 Ear Di 7 Circula	Throat. N			1				1330
5 Vision 6 Ear Di 7 Circula	E	lasal Catarrh ar		1				Mast La I
5 Vision 6 Ear Di 7 Circula	E	Rbinitis.	nd		75	11	2	
5 Vision 6 Ear Di 7 Circula	E	Colarged Tonsils .		82	976	1418	1232	
5 Vision 6 Ear Di 7 Circula	C	nlarged Cervic		1	30	28	13	
5 Vision 6 Ear Di 7 Circula		Franular Pharynx.			110	19	2	Marie Da
6 Ear Di		fact at			6	23	41	
6 Ear Di					27			
6 Ear Di		Securitar lide			18	24	81	
6 Ear Di	C	Corneal ulcer .					7	
6 Ear Di		Catamant			6	1	2	
6 Ear Di		Samuel angeite					21	
7 Circula	0	Corrected vision I wearing glass.	by	15				
7 Circula	Т	Took Cod Liver O	il.		45	3		
	seases C	Manulanan	:::		29 109	50 50	12 82	
	tory Sys A	Anaemia			16	19	8	
10	F	functional disea of the heart,			8	5	9	
		Organic disease the heart. Other conditions			13.13	8	1	1000 10
8 Tuberc		Pulmonary—			1	9	20	
		(b) Definite				3	4	I CHE TO S
	(	Glands				4	6	The same of
	iratory I	Bronchitis			490	69	47	
Sys		Bronchial Asthn Broncho-Pneumon			1 1	12	7	
10 A b d Orga		Enlarged Spleen " Liver			43	27	26	
C.S.		Diarrhoea Liver			2	" 1	2	THE LAB
33		Dysentery			9	1		
1		Dyspepsia Intestinal colie			19 5	2		1
		Inguinal Hernia		2		2	1	1/4/19/19
1	11	Hydrocede		1				
1	1	Dysmenorrhoea Piles			1		1	
77	11				The same		1	Marie Control

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Statement of following-up work done showing the results of medical advice 1932-1933.—contd.

No.	Headings.	Diseases.	Operations performed after medical advice.	No. of cases, cured after treatment.	No. of cases improved after treatment.	No. of cases where treatment was continued.	Remarks.
				1		1	
11	Bones & Joints.	Fractures	. 3*				*Set right at hospitals.
		Rickety Chest		21	116	174	
		Synovitis		1	1		MAINELL -
		Rheumatism		2	1		
			1 . 164		100		knowl
12		Scabies		1085	158	89	
	Contagious Diseases.	Eczema		104	29†	16	tOne had X- Ray treat- ment.
		Leprosy		1	30	60	29 were in- different.
		Ringworm		75	22	34	TOTAL TOTAL
		Lichen		37	11	2	
		Pruritis		1			Total .
		Urticaria		1			
		Malaria		21		14	plat'
		Hookworm		10	•••		
	1000000	Whooping Cough.	1000000	6			Annual Control
	13-48	Mumps Influenza	1 10000	6	***		1
	1	Chielen nov		1			
		Chicken-pox		1			-
13	Nervous and	Palsies				4	
-		Incontinence			2	1	
	tems.	urine.	100000				
	1	Epilepsy			1		11074
114	Other diseases.	Worms		863	1000		
4.	Other diseases.	Wounds, cuts, etc		501	3	27	
	I THE REAL PROPERTY.	Boils and abscesses		50	1		
	D FIG.	Pyrexia		94			1
	Mark the second	Phimosis .	11				
		Leucodermic par			1		
	1000000	Down		2			
		Urethritis .		1			
		China Amillan		1			1
	THE			4	7	12	1
		Beri-beri .			1		1
		Prolapse ani .			1		1
	123	Enlarged groi	n	3			1
	Bank	glands. Other conditions .		5	2	1	1 100

Table I.—Showing the Monthly Average Lake Level and Rainfall at Red Hills Lake in 1932.

Months.		Lake Level expressed in feet.	Rainfall expressed in inches.	Remarks.
January		65.55	Nil	Total Rainfall in 1931 = 56·12**
February		65-28	Nil	Total Rainfall in 1932 = 39.06"
March		64.05	Nil	The state of the s
April		62.74	Nil	
May		62.57	2.95	
June		61.00	1.07	- Auditoria
July		59-53	0.34	
August		58-39	2.22	
September		57-95	4.22	
October		57-65	14.06	
November		62-12	12.37	
December		65-10	1.83	The desired to the same of
Averag	ge	61.83	3.26	

Table II-Showing the Bacteriological Results for 1932.

Distillation	Distribution system.	L. F. in Total Remarks. †60c.c. & per c.c. upwards. on n.agar % at 37°C.	12   13   14	0.0	20-0 520	0.0 610	median complete	0.0	33-3 550	092 0.0	0.0 750			0.0 670	0.0 700	5.9 629
water	tral con- est Tap.	Total colonies per c.c. on n.agar at 37°C.	11	570	620	260	520	650	650	610	092	-		200	340	578
Filtered water	from Central con- duit & Test Tap.	L. F. in †60c. c.& upwards.	10	11.8	7.7	18.0	4.0	9.1	14.3	2.9	0.0	:	:	57.1	75.0	20.4
1	s from	Total colonies per c.c. on n agar at 37°C.	6	510	260	830	630	620	989	650	650		The second	440	570	604
	Filtrates from Beds.	L. F. in †60 c.c.& upwards.	8	28.0	40.4	4.0	15.5	9.6	18.0	0.9	8.9	:	:	52.3	21.8	20.5
	nated vater.	Total L. F. in colonies +60 c.c.& per c.c. upwards. on n.agar at 37°C.	7	240	240	230	230	250	250	360	400	:		230	1 65	270
	Chlorinated Raw water.	L. F. in †60c.c.& upwards. %	9	100.0	100.0	100.0	0.06	100.0	100.0	77.8	78.0	:	:	100.0	Chamile	94.0
	end of onduit.		5	950	1,160	800	066	940	920	940	1,170	:	:	800	1,000	196
-	Kilpauk end of R. W. conduit.	L. F. in colonies 5 c.c. and per c.c. upwards. on n.agar	4	83.3	42.9	77.8	0.0	80-0	10000	9.99	40.0	:		100-0	71.4	66.2
1	s Lake.	Total L. F. in Total colonies per c.c. upwards. on n.agar at 37°C. at 37°C.	60	1,200	1,570	830		:	840	1,850	830	:		:	1,350	1,210
-	Red Hills Lake.	L.F.†in 5c.c. and upwards.	63	9-99	33.3	9-99		:	0.001	9.99	100.0	:	THE PAST	:	33.3	9.99
-	1932	Months.	1	January	February	March	April	Мау	June	July	August	September.	October	November.	December.	Average

0.080 0.080 0.094 0.0800.080 0.063 0.097 0.094 0.095 0.076 Oxygen absorbed. 18 Distribution system. 0.023 0.016 0.016 0.019 0.032 0.033 0.023 0 030 Nitrogen. 17 bionimudIA 20000 0.015 910-0 0.001 0.002 0.027 0.001 frace 0.001 .nsgortiN 16 Ammoniacal 920-0 901-0 0.110 0.129 Filtered water from Central conduit 0.113 0.093 0-117 0-157 0.131 spsorbed. 15 Oxygen & Test Tap. Table III.-Showing the Chemical Results for 1932-(expressed in parts per 100,000) 0.022 0.032 0.032 0.017 0.016 0.017 0.023 0.030 0.030 0.021 Nitrogen. 14 bionimudIA 0.010 0.012 600-0 0.011 0.015 0.014 0.031 0.013 0.001 Ammoniacal Nitrogen. 13 0.135 0.152 0.148 0.178 0.225 Oxygen absorbed. 12 Filtrates from 0.022 0-017 0-019 0-021 0-036 0-036 0-037 0-028 0.013 0.017 Nitrogen. 1 bionimudIA 0.010 0.015 0.011 0.013 0.013 0.016 0.016 0.005 0.014 0.027 Nitrogen. 10 Ammoniacal 0.132 0.106 0.119 0.122 0.135 0.150 0.146 0.163 0.140 Oxygen absorbed. 6 Chlorinated Raw-water. 0.034 Nitrogen.  $\begin{array}{c} 0.022 \\ 0.025 \\ 0.025 \end{array}$ 0.035 0.048 0.033 0.057 0.036 0.036 00 .bionimudIA 0.005 Nitrogen. 0.002 0.002 Trace 0.001 0.014 0.001 0.001 Ammoniacal 0.120 0.133 0.138 0.135 0.171 0.192 0.168 0.157 0.184 0-147 Oxygen absorbed. Kilpauk end of R. W. Conduit. 0.035 0.039 0.045 0.043 Nifrogen. 0.027 0.053 0.035 0.038 10 bionimudIA 0.003 0.005 C-001 0.005 0.010 Nitrogen. Frace Trace Trace Trace \* Ammoniacal 0.143 0-138 0.160 0-125 0.138 0.131 spsorbed. Red Hills Lake. 9 Oxygen 0.022 0.033 0.028 0.035 0.034 Nitrogen. 0.040 0.038 0.029 0.034 ŧ bionimudIA Nitrogen. 0.005 0.001 0.002 0.001 Trace 0.001 Trace ... Trace October ... Trace : Ammoniacal January ... T February... 7 April ....
May ....
June ....
July ....
August .... November. : Columns. Months 1932 Average March

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Table IV—Showing Applied Dose of Chlorine for Raw and Filtered water.

19	932.	Applied dose parts per million.	Remarks.							
January February March April	enodina en	1 0 1·0 1·0 1·0	Indiana of Warners of Warners and Indiana.							
May June July August September October November December	100-101	1.0 1.0 1.0 1.0 1.0 0.8 0.9 0.6 0.7 0.8 0.7 0.8 0.7 0.63	1st to 4th September. 5th to 8th September. 9th to 30th September. 1st to 5th October. 6th October. 7th October. 8th to 31st October. 5th December. 6th December. 7th to 31st December. From 5-12-1932 onwards filtered							

Table V-Showing the length of Filters at work during 1932.

Bed No.	Total No. of runs during the year.	Total No. of days.	* Average No. of days per run.	Remarks.
	10	252	25	Flow includes the number
1	6	244	40	of days on which the
2	7	233	33	beds ran at 12", 8", 6"
3	3	162	54	and 4".
4	7	246	35	1
5	6	259	43	
5 6 7	8	240	. 30	
-	6 1	211	35	
8 9	6 7 6 5 7	254	36	
	ė	267	44	
10	5	289	58	
11	5	192	38	
12	7	234	33	1
13	8	238	30	
14	4	183	46	the state of the s
15	2	135	68	
16	1	181	45	To the second se
17 Average	life of a filter			

<sup>\*</sup> Average worked out to the nearest integer.

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Table VI-Showing the quantity of water filtered during 1932.

	Quant	ity of water filter	Total quan-			
Bed No.	4" Vertical and below per hour.	6" Vertical per hour.	8" Vertical per hour.	12" Ver- tical per hour.	in millions gallons.	Remarks
1	37.00	89-00	147-0C	285.00	558-00	200
2	68.00	86.25	125.00	168.00	447.25	
3	35.00	63.00	158-00	231.00	487-00	
4	48.50	51.00	158-00		257.50	
5	66-00	58.50	150.00	198.00	472.50	
6	51.00	82.50	225.00	120.00	478-50	
7	37.50	75.00	132.00	259.50	504.00	
8	56.00	114.00	158-00		328.00	
9	55.00	84.00	160.00	189.00	488.00	
10	79.00	87.00	190 00	105.00	461-00	
11	50.00	49.50	293-00	177.00	569-50	
12	24.00	100-50	202.00		326-50	
13	10.50	68.60	154.50	126.00	359-60	
14	94.00	51.00	154.00	99.00	398.00	
15	39.30	56.00	309-30	36.00	440-60	
- 16	13.33	52.00	262-66		327-99	
17	21.33	45.00	366-66	20.00	452-99	

Average quantity of water filtered per day-20.1 million gallons.

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# ANNUAL REPORT ON THE WORKING OF THE CHILD WELFARE SCHEME, CORPORATION OF MADRAS FOR THE YEAR 1932.

The record of work of the Child Welfare Scheme, Corporation of Madras, during the year 1932 will testify to the fact that there has been steady progress in the various activities of the scheme. This steady growth is chiefly reflected in the increasing number of expectant mothers who attend the Centres in the Ante Natal clinics for advice and treatment and the decline in the infantile mortality rate which is 131-3 per mille as against 139-5 of the preceding year. This is lowest on record.

### PERSONNEL.

Mrs. D. Devanesen, permanent Lady Superintendent, was continuously on leave from 23rd June 1932 till the end of the year and Mrs. H. V. Kamalammal, Lady Doctor, Triplicane Centre, acted in this vacancy. Miss C. M. Leelavathy, Sub-Assistant Surgeon, was posted to do duty at the Triplicane Centre in place of the latter. Miss Cooksley, Lady Doctor, Nungambakam Centre took six months' leave on loss of pay from 16th September 1932, and Mrs. H. Mathews acted in this vacancy.

### WORK OF THE STAFF.

There were 12 Lady Doctors, 82 Mid-wives and 31 Health Visitors attached to the Scheme. During the year under review 15,108 cases of labour, i.e., 42.06 per cent, of the total number of births in the City came under the care of the Chid Welfare Scheme as against 13,514 (40.6 per cent.) in the previous year. Of these, 11,777 cases were actually conducted by the mid-wives of the Scheme, 1278 after barber women had conducted the labour and 1353 were sent to various hospitals. Of the 15,108 cases, 2802 were Mohammedans and 12,306 were Non-Mohammedans (vide statement 1).

The total number of visits paid by Lady Doctors was 16,130 as against 15,766 in 1931 (vide statement VII). The Lady Doctors treated 5263 morbid cases (puerperal) as against 4124 of the previous year vide statement III). The number of women and children treated at the out-patient clinics was 2,49,583 as against 2,37,285 of the previous year. The average daily attendance was 687.4

as against 684.3 in the preceding year (vide statement V).

The total number of visits paid by Health Visitors was 1,70,530 as against 1,48,160 in the previous year. The total number of visits paid by midwives was 1,97,711 as against 1,78,544 of the previous year (vide statement VII).

### ANTE-NATAL WORK.

The most outstanding feature of the Scheme is the Ante-natal Work. The total number of prematernity cases registered by Health Visitors was 13,476 as against 13,315 in 1931. Of these, 11,510 expectant mothers actually attended the Centres for ante natal advice and treatment as against 9442 in the previous year (vide statement II). The increase in the number of expectant mothers shows the appreciation of the ante natal work done by the Child Welfare Scheme. The Lady Doctors pay special attention to the Ante-natal

cases and treat them according to the nature of each case.

In this connection it is pointed out that the Ad Hoc Committee appointed by the Council to report on the working of the Child Welfare Scheme met on ten occasions and discussed the working of the Scheme. The Committee inspected the Child Welfare Centre at Choolai and went into the question of records, equipment and the dispensary maintained therein. After careful consideration of the present Maternity and Child Welfare work the Committee decided that the dispensary should be separated from the Maternity and Child Welfare Centre and that the activities of the Centre should be grouped under three main headings viz., 1. Ante-natal, 2. Maternity, and 3. Child Welfare. A brief account of the Ad Hoc Committee's report on the Ante-natal work, Maternity service, Booked case and Abortion is narrated below.

### ANTE-NATAL WORK.

So far as the ante-natal advice at the ante natal clinics is concerned, any pregnant mother may avail herself of the facilities of the Corporation clinics irrespective of the earning capacity.

# MATERNITY SERVICE.

So far as the Maternity Service of the Corporation is concerned, the Committee felt that there was a necessity to restrict its scope. They recommended that such maternity service should be free only to those who are indigent or whose income is Rs. 50 or less per month. There should be no maternity service by the Corporation for those whose income is above Rs. 50. In case it is brought to the notice of the Corporation that a person whose income is more than Rs. 50 is found to have utilised the Corporation Maternity Service, the Corporation should recover from such a person a sum not less than Rs. 50.

In another direction also, the Committee strongly telt that there should be a change. Preference should be given in attending on maternity cases to those who are already bocked on the registers of the ante natal clinic of the Corporation Centre. Eventually it should be the aim of the Maternity Service of the Corporation of Madras to attend at the time of delivery only to those cases that have been booked in the registers of the Ante-natal Clinic of the Child Welfare Centre.

### A BOOKED CASE.

A booked case is one which is on the rolls of an Ante-natal Clinic for at least a month before the date of confinement and which has periodically attended the Clinic and had the necessary examination conducted therein and which comes within the scope of the Corporation Maternity Service Scheme."

Some of the recommendations of the Committee which do not affect the mances such as Ante-natal Clinic, Ante-natal Work......to whom intended, Maternity service.....to whom intended, Booked cases, Abortion cases, Mothers class, Infant clinics, Conduct of operative delivery and Duties of Midwife, Health Visitor and Lady Doctor have been given effect to in 1933.

### ABORTION.

The total number of abortions treated during the year was 251 as against 274 in the previous year. Of these, 114 were conducted by the staff, 8 were taken after barber women had conducted labour and 129 difficult cases were sent to Hospitals (vide statement VI).

In this connection it should be pointed out that the Ad Hoc Committee felt that the Child Welfare staff should not undertake to conduct any case of abortion i.e., confinements which take place within 20 weeks of pregnancy, but should advise such a case as to the best possible course to adopt.

### MATERNAL MORTALITY.

Out of a total of 15,108 labour cases which came under the observation of the scheme, there were 62 cases of Maternal mortality of which 36 occurred among complicated cases sent to hospitals, 12 cases were handed over to private doctors, 2 cases went to Vydians and 3 under barber women. This leaves only 9 which actually took place under the care of the scheme (vide statement IV A to C). The Maternal Mortality rate was 41 as against 61 of the previous year.

# INFANTILE MORTALITY.

Out of 13514 labour cases which came under the observation of the Child Welfare Scheme in 1931, 7 were twins making a total of 13521 babies actually born during the said year. Of these 505 were still births and 13016 were live births which were kept under the observation of the Child Welfare Scheme during their first year of life, i.e., during 1932. Out of these live births, 1776 died. This gives an infantile mortality rate of 131·3 per mille as against 134.9 of the previous year. This is the lowest on record (vide statement VIII).

The majority of deaths was among babies born and died within 10 days on account of their low vitality at birth, i.e., 329. 362 babies died of intestinal dis-orders, 309 of fever, 271 of respiratory diseases and 144 of convulsion.

### AMBULANCE CAR.

The total number of calls answered by the car was 524 as against 581 of the previous year. This decrease is due to the fact that the car was under repair for some time.

### MILK SUPPLY.

626 babies received free milk as against 805 babies of the previous year. The fall in number was due to compulsory centre feeding which was carried on satisfactorily in all the Centres (vide statement X).

### BATH.

During the year 1,09,486 babies were given warm bath as against 1,37,394 of the previous year. The decrease in number was due to restricting baths to children of pre-school age, i.e., up to 5 years (vide statement XI).

### HEALTH PROPAGANDA.

598 lectures were delivered at the various Child Welfare Centres. Of these 286 lectures were delivered with the aid of Magic lantern, 9 lectures with Cinema films and 303 were out-door lectures. The total attendance was 56,637 as against 28,507 of the previous year (vide statement XII).

### CONCLUSION.

It is deemed expedient to draw the attention of the council to the fact that the work in George Town Centre is now being carried on under great tension. The working area of this Centre extends over 7 Municipal divisions viz., 8, and 10 to 15 divisions. The total number of births during 1932 in all those divisions was 3629 of which 2009 came under the care of the staff of the said Centre. The amount of work at the Centre is disproportionately heavy and more than enough for the present staff to cope with conscientiously. It is therefore proposed that an additional Centre be opened at Park Town. 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.

A good work has been begun and has been continued by the Scheme. It is earnestly hoped that the coming year will not only witness the removal of several of the defects pointed out in the present organisation of the scheme by the Ad Hoc Committee appointed by the Council, but also the attainment of greater success than achieved in the past.

H. V. KAMALAMMAL,

Ag. Lady Superintendent,

Child Welfare Scheme, Corporation of Madras.

STATEMENT I.

Showing the cases of labour which came under the observation of the staff of the Child Welfare Scheme from January to December 1932 with comparative statements for the years 1918; 1928 to 1932.

adan. Mon-Maho- Remarks.	737	259 1,213	36 1,114	53 1,956	43 574	239 1,233	263 908	134 1,153	268 823	610 610	53 747	55 1,138	2,802 12,306	754,11 776,5	2,017 10,573	,862 9,546	,967 8,926	
Cases. In	1,718	1,472	1,179	2,009	119	1,472	1,171	1,297	1,191	686	800	1,193	15,108	13,514	12,600	11,416	10,893	681
Taken to Hospitals.	41	148	69	166	43	284	104	183	118	65	22	77	1,353	1,244	1,129	1,027	1,136	54
Taken over after Barber Women conducted labour.	156	245	112	200	210	93	127	140	127	195	228	145	1,978	1,821	1,738	1,796	1,541	77
By Nurses of the C. W. S.	1,521	1,079	866	1,643	364	1,095	940	974	916	729	517	971	11,777	10,449	9,733	8,585	8,216	550
Centres.	Triplicane	Washermanpet	Purasawalkam	George Town	Nungambakam	Mirsaibpet	Muthialpet	Royapuram	Perambur	Egmore	Royap ettah	Choolai	Total for 1932	1261	1930	6261	1928	. 1918
Period.	From 1st January to 31st December 1932																	
	Centres. By Nurses Taken over after Taken to of the conducted Hospitals. Total Maho- Non-Maho- L. W. S. labour.	Centres. By Nurses Taken over after Taken to Of the Conducted Hospitals. Cases. Maho- Maho- madan. madan. madan. Triplicane 1,521 1521 156 41 1,718 981 737	Centres. By Nurses Taken over after Taken to of the conducted Hospitals. Cases. Maho- Maho- madan. madan. madan. Triplicane 1,521 1.64 1.472 259 1,213	Centres. By Nurses Taken over after Cases. Maho- Non-Maho- of the conducted Hospitals. Cases. madan. madan. madan. Triplicane 1,521 1.66 41 1,472 259 1,213  Purasawalkam 998 112 69 1,179 35 1,144	Centres. By Nurses Taken over after Cases. Maho- Non-Maho- of the conducted Hospitals. Cases. madan. madan. madan. Triplicane 1,521 1166 41 1,472 259 1,213 Purasawalkam 998 112 69 1,179 35 1,144 George Town 1,643 200 166 2,009 53 1,956	Centres. By Nurses Taken over siter Taken to Cases. Maho- Maho- Maho- Cases. Maho- Makam. 1,521 156 41 1,718 981 737  Washermanpet 1,679 245 148 1,472 259 1,213  Purasawalkam 998 112 69 1,179 36 1,144  George Town 1,643 200 166 2,009 53 1,956  Nungambakam 364 210 43 617 43 574	Centres. By Nurses Taken over siter and the conducted conducted Hospitals. Cases. Maho- Maho- madan. madan. madan. madan. 1,521 1,521 1,472 245 1,472 259 1,213 1,114 Ceorge Town 1,643 200 166 2,909 53 1,956 Nungambakam 364 210 43 617 43 574 Mirsaibpet 1,095 93 284 1,472 239 1,233	Centres.         By Nurses Taken over after Conducted Cases.         Taken to Cases.         Cases.         Maho- Mahomadan.         Non-Mahomadan.           Triplicane         1,521         1₹6         41         1,718         981         737           Washermanpet         1,079         245         148         1,472         259         1,213           Purasawalkam         998         112         69         1,179         36         1,144           George Town         1,643         200         166         2,009         53         1,956           Nungambakam         364         210         43         617         43         574           Mirsaibpet         1,095         93         284         1,472         239         1,233           Muthialpet         910         127         104         1,171         263         908	Centres.         By Nurses Taken over siter of the conducted and conducted labour.         Taken to conducted labour.         Non-Madon.         Taken to conducted labour.         Taken to conducted labour.	Centres.         By Nurses Faken over siter conducted and conducted labour.         Taken to conducted labour.         All the conducted labour	Centres.         By Nurses Taken over siter order women of the conducted Hospitals.         Taken to Cases.         Maho- Maho- Mon-Maho.         Non-Mahonmadan.           Triplicane         1,521         1f.6         41         1,718         981         737           Washermanpet         1,079         245         148         1,472         259         1,213           Purasawalkam         998         112         69         1,179         35         1,144           George Town         1,643         200         166         2,009         53         1,144           Nungambakam         364         210         43         617         43         574           Mithialpet         1,095         93         284         1,472         239         1,233           Royapuram         974         140         183         1,171         263         908           Perambur         946         127         118         1,191         268         823           Egmore         729         127         118         1,191         268         823           Fampur         729         127         118         1,191         268         823	Centres.         By Nurse Taken over after Cases.         Taken to cases.         Total maden.         Maho- maden.         Non-Maho- maden.            Triplicane          1,521         1.52         148         1,472         259         1,213           Purasawalkam          998         112         69         1,179         36         1,144           George Town         1,643         200         166         2,009         53         1,144           George Town         1,643         200         166         2,009         53         1,144           Murasabpet          1,095         93         284         1,472         239         1,233           Muthialpet          940         127         104         1,171         263         908           Royapuram         974         140         183         1,297         134         1,153           Perambur         729         127         118         1,191         268         928           Royapuram         7729         127         128         1,191         268         823           Royap ettah          517         889         1,319	Centres.         By Nurses Taken over after Local Cases.         Total Cases.         Maho- Mahon.         Non-Mahon.            Triplicane          1,521         1f6         41         1,718         981         737           Washermanpet          1,079         245         148         1,472         259         1,213           Purasawalkam          1,079         245         148         1,472         259         1,213           George Town          1,643         200         166         2,009         53         1,144           Musthialpet          1,095         93         284         1,472         253         1,233           Muthialpet          940         127         104         1,171         263         908           Royapuram          946         127         118         1,191         263         908           Egmore          772         127         118         1,191         268         823           Egmore          517         228         55         860         53         1,138           Choolai	Centres.         By Nurses Taken over after Cases.         Taken to conducted Labour.         Taken to c	Centres.         By Nurser Taken over site: Surface Women and the Surface Women (Cases)         Taken to Cases.         I total for 1932         I total for 1937         I total for 1932         I total for 1937         I total for 1932         I total for 1937         I tota	Centres.         By Nurses Taken over siter of Cases.         Total barber women and the confident over site of the confident over site.         Taken to confident	Centres.         By Nurses Taken over after labeling of the barber women         Total Lospitals         Andron Mach. Mach. Mon. Mach. M	Centres.         By Nurses Taken over after faken to candinate and confideration.         Taken to candinate and candinate and candinate.         Taken to candinate.

STATE

Prematernity cases registered and diseases and

Serial No.	Centres.	Constipation.	Anaemia.	Malaria.	Albuminaria.	Worms.	Bronchitis.	Dysentery.	Influenza.	Diarrhoea.	Retention of Urine.	Torpid Liver.	Oedema & swelling.	Fever.	Skin affections.	Syphilis.	T. P.	V. D. H.	Rheumatism.	Otorrhoea.	Jaundice.	A. P. H.	Pnuemonia.	General Anasarca.	Asthma.
								A													ı		1	-	
1	Triplicane	591	156	25	110	12	85	11	25	27	21		15	26	22				5	5				4	
2	Washermanpet.	197	16	23	14	2	43	16	7	6	25	1	18	13	7	1		15	10	4		2	3	3	1.
3	Purasawalkam.	267	101	45	86	75	98	67	82	22	16		74	48	1			6	41	9		2			
4	George Town	680	375	206	153	49	40	121	22	57			46	111	17			12					1.		25:
5	Nungambakam.	160	€0	16	57	38	38	15	16	2	3		11	28					1						ľ
6	Mirsaibpet	516	66	5	13		18	21	17	5		1	3	6	7			7				2		9	
7	Muthialpet	117	37	74	73	290	44	16	11	25		10	13		3			4	3	3		.5	5	21	6
8	Royapuram	729	34	15	93	4	47	19	3	16	3	7	6	9	2	1		1	1	1	1				3
9	Perambur	317	56	37	131	12	60	20	21	17	28		15	3	12		4			4	4		2	7	6
10	Egmore	208	98	28	30	€0	30	20	18	25	12		15	21	25	3		2	4	30		3	8 1	15	7
11	Royapet	103	26	12	23	1	42	12	2	12	1		9	15	6			4		4				4	2:
12	Choolai	536	10	1	72		83	35	5	18		3		50				2	22	9				1	2
											_						-	-	_		1	_	-	-	-
100	Total	4,421	1,035	487	855	544	628	388	234	232	109	22	225	330	102	5	4	53	87	69	10	14	146	4	3

Total for 1932--

<sup>1931-</sup>

<sup>1930--</sup>

<sup>1929--</sup>

<sup>1928-</sup>

MENT II.

ailments of Pregnancy treated at the Centres in 1932.

Breast Abscess.	Gastritis.	Conjunctivitis.	Flatulence,	Hysteria.	Enteritie	Difference.	Stranguary.	Morning Sickness.	Gonorrhoea.	Stomatitis.	Ear and Eye diseases.	Threatened Abortion.	Bleeding.	Eclampsia,	Dyspepsia.	Scanty Urine.	Cough.	Abdominal pain.	Nephritis.	Neurities.	Indigestion.	Adenites.	Debility.	Mastitis.	Tuburculosis.	Enlarged spleen.	Other diseases.	Total,	Total of Prematernity cases registered.
2		9				64		9	2	46					16													1,226	1,390
2	4	5	31	1		2	2	6	7	20	94		6															517	517
1	3		36					51		68				2														1,201	1,413
	25							57		91																		2,088	2,187
				1.						9											10.							455	565
3	2							6	2	13		8		1	7€	34		1	1	5	1							847	847
•••			7	0			15	1	2	116				3		10				2	11	2	49	3	12	2	16	1,069	1,745
2	13			4			4	2		1		30	4															1,061	1,061
10	9	1	1	e	-	5	5		7	35	4	6			9	20	1 7											887	818
6	12	2 10	0	-	2	4		8		2	5	1																720	702
2	1	5		1		4	1	8	3	1	7 3	100	3 9		10	2	3											342	342
1	1 2	2	-	5.		20	12			. 1	9				100	85			-			-					-	1,097	1,889
- 20	51	82	5 15	7	- 05	37	39	15	2 2	0 46	01	4 4	813	2 6	211	15	9	7	1	T	7 15	2 :	249	9 3	3 1:	2	2 16	11,510	13,476

13,476.

13,315.

11,292.

19,535.

10,915.

STATE Maternal Morbidity

Serial No.	Centres.		Anaemia.	Albuminuria.	Malaria.	V. D. H.	Bronchitis,	Dysentery.	Influenza.		Ketained Membrane.	Adherent Placenta.		Pneumonia.	Т. Р.	Na		Syphilis.	Asthma.	Diarrhoea.	Jaundice.	Indigestion.
1	<b>Priplicane</b>		300	114	14	13	35	16	22	1	10.	2	1 2	2	2				1	13		
2	Washermanpet		234	8	30	15	26	14	7	2	3	4	4 4	2	2	3	1	3	2	13	21	7
3	Purasawalkam		46	36	31	16	39	28	34	1	2	1	3 1	1	10	11	19	7		28	12	20
4	George Town		223	51	89	7	21	18		3.			2 12	1	3	19	14	!		19		
5	Nungambakam		32	17	10		17	8	8						1					1		
6	Mirsaibpet		58		2	2	13	8			1	1	. 1		2							
7	Muthialpet		41	53	30	1	11	5	3			1	1 4		11				3	8	2	
8	Royapuram		49	19	6	1	13	10	1			2	. 2		1					4		
9	Perambur		24	23	21		34	18	17		6		2 3	11	11	6	10	1	13	13	1	7
10	Egmore		130	30	10		18	9	5			2	3 4	1			2					
11	Royapet		56		22		34	10	2		2			. 1		11	2	1	2	11		4.
13	Choolai		44	***	5	3	4	2	5		2			1	3	ļ	4		3	3	-	4
	Total.	•••	1237	351	270	58	265	146	104	5	36	11	36 3	1 19	46	50	52	11	24	113	36	381

MENT III. (Puerperal) 1932.

Constipation.	Worms.	Mastitis & Breast Abscess.	Sapraemia.	A. P. H.	P. P. H.	Skin disease.	Stomatitis,	Sepsis.	Neuritis and Sciatica.	Septicaemia.	Ulcerated Vulva.	Fever and Hyperpyrexia.	After pains.	Piles.	Rheumatism.	Chicken Pox.	G. Conjunctivitis.	Other diseases.	L. P.	Gen. Anasarca.	Hysteria.	Debility.	Total.
152		26	•••	6	3	25	26	4			44	43	31			3		25					953
54	8	10			4	8	16		2			29	27	6	3	1	3	12					591
77	28	26	8	9	11	12	15	5		5	6	71	28	10			7						679
121	7	3		3	10	3	24						49		,,,,	1							703
3					***								35					***					132
3	-	6			3	1		1	1			108	2					31	35	1			280
7	8	3	3	2			94		***		12		34					59			1	77	474
1		2			4	2						9	2		2	1		1					132
64	4	25	1	8	14	13	17	10		4	8	6	28	2	4			22					451
90			1	1	1		10	1		***	1							133					452
15		4				10	4		- 6			9	50+	1								***	207
14		3				2	4					70	32	2	2	1						•••	209
601	55	108	13	29	50	76	210	21	9	9	71	345	268	21	11	7	10	283	35	1	1	77	5,263

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132 STATEMENT IV.

A

Maternal mortality (Puerperal) among cases treated by Child Welfare Scheme for 1932.

Centres.		V. D. H.	Eclampsia.	Adherent Placenta.	Shock.	Causes un-	Total.
Triplicane		 	1	1			2 2
Washermanpet		 2	•••		***		2
Purasawalkam		 ***	***			***	
George Town Nungambakkam		 1			***	ï	2
Mirsaibpet				***	***	1000	
Iuthialpet		 			- "1		ï
Royapuram		 					
erambur		 		1			
Egmore		 1		1			2
Royapet		 			***		
Choolai		 			***		
	Total	 4	1	2	1	1	9

в

Deaths among cases brought to the notice of the Child Welfare Scheme in 1932 but not under our treatment.

		Triplicane.	Washermanpet.	Purasawaikam.	George Town.	Nungambakkam.	Mirsaibpet.	Muthialpet.	Royapuram.	Perambur,	Egmore.	Royapet.	Chulai	Total.
1.	In Hospital	3	5	3	3	2	4	3	4	3	1	4	1	36
2.	Under private Doctors	1	1		1		2	2					5	12
3.	Under Vydians' treatment		1					1						2
4.	Under Barber Women		1	-					1		1			3
	Total	4	8	3	4	2	6	6	5	3	2	4	6	53

# STATEMENT IV-contd.

C

Showing the causes of death among cases brought to the notice of Child Welfare Scheme but not under our treatment in 1932.

Centres.	Eclampsia.	Adherent Placenta.	P. P. H.	V. D. H.	Anaemia.	Tub. Enteritis.	Septicaemia.	Pneumonia.	General Anasarca.	Diarrheoa.	Fever.	Causes unknown.	Typhoid.	Retained placenta.	Placenta Previa.	Sepsis.	Pyrexia	Total.
Triplicane	 2			1									1					4
Washermanpet	 1			3			1			1	1				1			8
Purasawalkam	 											3						3
George Town	 2			1									1					4
Nungambakam	 				1			1										2
Mirsaibpet	 	1	1					2		2								6
Muthialpet	 1	1			1	1										1	1	6
Royapuram	 1			. 2								2						5
Perambur	 	. 1							1					1				3
Egmore	 	. 1	١	. 1						١								2
Royapettah	 			. 1					2					1				4
-Choolai				- 4				. 2		1			-					6
Total	 -		1	113	5	1	1	-	3	3	1		2	2	1	1	1	53

A total of 62 deaths occurred among the 15,108 labour cases which came under the observation of the Child Welfare Scheme. Maternal Mortality rate for all deaths among cases brought to the notice of the Scheme is 41 per cent.

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

1928— ·52 per cent. 1929— ·49 per cent. 1930— ·49 per cent. 1931— ·61 per cent. 1932— ·41 per cent.

STATEMENT V.

		Rema		
	IA I	Average Dai	78.0 46.5 52.2 11.0 17.5 17.5 67.0 73.8 46.0 55.0 50.0 687.4 687.4 687.4 440.0 520.19	18.0
		Pregnant wor treated at Centre.	1,226 2,088 455 847 1,069 1,069 1,097 1,097 1,097 1,097 8,463 7,104 6,637	116
3 1932.	.11	Total attenda for the yea		1,558
total attendance of Children and Mothers at the Child Welfare Centres during 1932		Other causes.	25,564 3,517 1,951 1,951 1,953 1,864 3,810 1,810 1,7154 2,409 1,7154 1,030 1,7154 1,227 1,227 1,227 1,227 1,227 1,482 2,493 1,7,284 1,227 1,227 1,482 2,683 20,010 2,683 2,43,583 26,324 26,324 1,8,232 26,323 1,8,233 26,323 1,8,323	125
e Centre		Ansemia.	1,734 1,284 294 215 294 215 290 142 925 138 34 6,636 4,253 4,253 3,513	1
Welfar		Syphilis.	154 154 154 155 156 157 157 157 157 157 157 157 157 157 157	4
child:	ease.	Malaria.	325 314 853 11,434 359 379 447 797 364 604 194 26 6,316 6,316 6,026 4,845	:
rs at th	Nature of disease	Ear and Eye	570 373 435 1,098 261 261 207 755 6,006 6,006 6,006 6,006 6,006 3,980	didnu jeus
Mothe	Natur	Influenza.	861 688 896 133 482 434 476 238 557 770 273 97 97 5,313 3,634 1,808	4
ren and		Skin affection.	788 636 509 1,399 571 571 742 968 699 457 7,672 6,196 6,196	10
of Child		Alimentary.	978 2308 788 656 653 4,200 1,399 1,399 1,399 1,399 1,398 1,984 2,316 2,643 1,984 457 7,425 22,394 8,616 5,338 21,958 1,604 457 1,838 18,570 6,196 9,864 15,633 4,200	27
dance o		Respiratory.	8 8	77
al atten		NeW IstoT consbnettA		716
		Women.		235
Table showing the		5 to 10 years.	4,100 1,583 1,053 1,688 1,494 1,432 1,259 1,342 1,387 1,107 2,256 1,387 1,107 2,557 1,387 1,107 1,556 1,387 1,222 2,455 1,090 1,241 1,556 2,288 16,529 13,109 25,884 16,529 13,109 25,881 15,000 11,711 19,514 13,254 11,062 15,195 10,167 9,265	52
Table	Age.	I to 5 years.	4,100 1,583 1,688 1,494 3,293 2,547 2,216 1,259 2,216 1,259 2,216 1,259 2,597 1,424 2,517 1,424 2,516 1,365 2,465 1,090 1,556 630 29,884 16,529 27,373 18,510 23,681 15,000 19,514 13,334	207
		Under 1 year.	2,251 2,251 2,251 2,251 2,251 2,251 2,251 2,255 2,258 4,55 2,238 2,238 2,238 2,238 2,238 2,238 1,556 1,566 1	222
		31st 1932.	kam 1932 1930 1928 1928	1918
		From 1st January to 31st December 1932.	Friplicane Washermanpet Purasawalkam Seorge Town Nungambakkam Mirsaibpet Muthialpet Royapuram Perambur Egmore Royapet Choolai  , 18	2

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# STATEMENT VI.

Showing the number of abortion cases which came under the observation of the C. W. Scheme staff during the year 1932.

			He	ow Conducted.		Fall
Period.	Centres		By Nurses of C.W.S.	Taken over after B.W. conducted labour.	Taken to Hospital.	Total
From 1st January to	Triplicane		9		4	6
31st December 1932.	Washermanpet		5	2	6	13
Service Control of the Control of th	Purasawalkam		11		15	26
	George Town		14	1	22 7 8 21	37
	Nungambakam		5 7	1	7	13
	Mirsaibpet				8	15
	Muthialpet		72		21	43
	Royapuram		16		20	36
	Perambur		20	2	11	33
	Egmore		2		6 2 7	8 9 12
	Royapet		6	1	2	9
100	Choolai	***	4		7	12
TO A COLOR	Total		114	8	129	251

STATEMENT VII.

Number of visits paid by the staff of the C. W. Scheme during the year 1932.

		1	Visits paid by		
Centres		Midwives.	Health Visitors.	Lady Doctors,	Total.
Triplicane Washermanpet Purasawalkam George Town Nungambakam Mirsaibpet Muthialpet Royapuram Perambur Egmore Royapet Choolai		18,725 16,104 17,304 31,606 10,848 16,268 16,601 13,294 20,405 11,674 10,296 14,586	18,622 16,432 15,266 13,073 19,666 20,023 17,637 15,096 8,848 6,571 9,113 19,243	1,6) 1 1,429 397 1,599 1,225 1,333 1,846 1,290 1,346 1,396 924 1,191	39,001 3,965 33,467 46,278 22,679 37,624 36,984 29,580 30,599 19,641 20,333 35,020
	Total	1,97,711	1,70,530	16,130	3,84,371

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STATEMENT VII.

Ages at death of infants born during 1931 and kept under observation during the 1st year of life.

		2	Total No.			Died within	vithin	The state of the s	Total	Left City or	No. of living
From 1st January	From 1st January to 31st December 193.	193.	of cases visited.	Still born.	10 Days.	1 to 3 Months.	3 to 6 Months.	6 to 12 Months.	excluding Still births	otherwise not traceable	traceable when one year old.
Priplicate		1	1,694	48	49	17	26	81	173	367	1.10
Washermanpet		:	1,292	63	09	38	39	63	202	151	876
Purasawalkam		:	964	25	47	15	20	30	1113	146	70
George Town		:	1,862	76	78	78	61	62	306	181	1,31
mgampakam		:	699	154	13	62	16	35	93	49	49
Mirsaibpet		:	1,244	41	20.00	13	18	47	126	71	1,00
uthralpet			1,090	48	37	35	56	49	148	82	98
Royapuram			1,253	19	64	07	31	73	802	138	84
rambur			200	18	50	16	25	53	66	154	65
Egmore		1	180	22 0	56	26	27	35	114	113	5.5
Royapet			669	23	12	12	16	91	08	104	47
loolat	:	:	1,035	20	42	23	77	93	115	150	71
		- 20	1	-		1	-	-	-		1
		Total	13,521	605	520	352	329	575	1,776	1,712	9,528

City rate. 136-5 248-3 243-9 256-8	2002
131-3 per mille. 134-9 " 139-5 " 157-2 "	" " "
For infants in 1932 1930 1 1929 1 1939	
Infantile Mortality rate for do. do.	no.

STATEMENT IX.

Causes o	Centres,	Triplicane	Washermanpet	Purasawalkam	George Town	Nungambakkam	Mirsaibpet	Muthialpet	Royapuram	Perambur	Egmore	Royapettah	Choolai	Total
of Dea	The Art Hand	;	:	:	:	:	:	:	:	:	:	:	:	1
Causes of Death among infants born in 1931 and kept under observation during the 1st year of life.	Total No. of cases visited.	1,694	1,292	984	1,882	099	1,244	1,090	1,253	932	780	685	1,035	12,521
g infan	Still born.	48	63	26	91	21	41	48	19	18	55	23	52	202
ts bo	Died within 19 days.	1	09	47	18	14	:	37	<b>F9</b>	68	:	:	:	329
8	Pneumonia.	8	03	10	6	:	-	-	9	:	00	60	64	45
in	Abscess.	-	QN	:	47	1150	:	-	-	01	24	:	:	64 18 278
931	Enteritis.	26	27	12	88	24	53	23	32	11	17	8	15	818
an	Small-pox.	:	:	30	=	:	-	0.1	:	3	63	•	:	27
d ke	Bronchitis.	42	13	67	19	=======================================	4	9	32	63	20	16	:	27 151
pt	Malnutrition.	_	60	64	6	-	63	-	-	1	60	1	10	188
pun	Malaria.	-	-:		-:-	:	:	:		03	1	7	:	83 12 144
er o	Convulsion.	18	91	10	61	1	09	-	10	9	20	1	15	
bser	Whooping cough.		12	.9	131	-	2	:	:	H	10	i	-	99
rvat	Skin disease.	-4-	65	-	- = -	- :	-:		;-	4	·:-	÷	- 00	39
ion	Chicken-pox.	-:		-:	-		-	- ;	-	+	-	-:	:	1 3
duri	Fever.	46	72 .	14	19	62	82	. 53	37		13	17	15	309
ng th	Drugged with native	03	9	-	18	:	!		!	!	10	•	10	47
le 1	Dysentery.	0.1	60	67	13	:	:	3	-	10	:	:	3	32
st y	Constipation.	20 10	10	211	:	60			:	:	:	:		36
ear	Rickets	. 60	33		-	- :	27.	:	- :	0.1	01	-	60	191
of li	Gastritis. Causes unknown,		K0	:	11 22		10		24	=======================================		12	11	12 36 16 16 133
e e	.eune steriorated anus.		6	:		:	:	:	:	:	!	:	- 00	∞
	Total deaths.	173	202	1112	306	93	126	148	:08	66	111	80	115	1,776
	Left the City and not traceable.	367	151	146	181	6+	11	88	133	154	113	104	150	1,712
	No. of living children who survived the	1,106	876	700	1,319	494	1,006	806	813	651	531	418	718	9,528
	1st year of life.	10		0	-	-4		**	~	-	-	00	~	! 00

138 STATEMENT X.

Showing the number of cases taken on for Milk Supply during the year 1932.

Centres,	No. taken on for milk supply.	Yearly attendance.	Average daily attendance.
Triplicane	 43	9,884	27.0
Washermanpet	 51	13,536	37.08
Purasawalkam	 57	14,844	40.6
George Town	 44	11,831	32.4
Nungambakam	 41	13,208	36-18
Mirsaibpet	 - 58	10,712	29.0
Muthialpet	 62	12,484	34.38
Royapuram	 42	8,584	23.0
Egmore	 55.	10,410	28.0
Perambur	 89	16,790	46.0
Royapettah	 37	7,687	21.0
Choolai	 47	8,521	23.3
Total	 626	1,38,491	378-4

STATEMENT XI.

Showing the number of Children who were given free baths during the year 1932.

Centres.	000	New admissions.	No. of baths given to babies	Average daily attendance.
Triplicane		274	8,731	23-9
Washermanpet		97	10,643	29.1
Purasawalkam		480	16,006	43.7
George Town		177	6.504	17.8
Nungambakam		419	10,713	29.37
Mirsaibpet		229	5,170	14.1
Muthialpet		100	9,213	25.1
Royapuram		493	10,003	27.4
Perambur		370	8,233	22.8
Egmore		700	10,130	27.7
Royapettah		158	7,921	21.7
Choolai		292	6,219	17.1
Total		3,719	1,09,486	299-9

Showing the details of Health Propaganda Work done by the C.W., Staff in 1932,

		Remarks,		
		Total.	12 4 4 4 5 2 4 5 5 5 4 5 5 5 4	598
		Dental Care.	H4 . : H : : 1	9
		Preventive diseases.	:-:::::::::::::::::::::::::::::::::::::	-
		Ante-natal care,	24 H 100 ! !	9
		Infant feeding.		5
		Filaria.	* 1 111111111	4
		Bending the twig	1117111111	-
	7	General Sanitation.	चित्राहात : त्राच : त्राहा	-
ı	220	Influenza.	111111111111111111111111111111111111111	3 30
- "	-	Breast fed Baby.		03
	- 11 /	Insects and diseases	HH M I I I I I I	7
11	1	Cleanliness.	04 : : : : : : : : : :	01
2 1	107 15 40	Flies.	80000000000000000000000000000000000000	36
		Vaccination.		-
	-	Ventilating houses.	7   17   1   17   1	60
1	1	Other diseases,	:0: 4447 :0: 1	36
-	Subjects,	Round worms.	11:17:	7.3
- 19	bje	Plague,		64
	Su	Water-supply.	MH:00MW: :0004W	36
		Leprosy. Mosquitoes.	: 00:0000 :00 HHH	21
		Hookworm,	######################################	14
		Dysentery.	: : : : : : : : : : : : : : : : : : : :	39
18		Cholera.	F0040040F0F4	10
		Domestic Hygiene,	01 H H H H H H H H H H H H H H H H H H H	999
		Personal Hygiene.	নকা::সানজন ভৰ্ৰ	30 25 60 10 39 14 21 36
	P. P.	Maternity & Child-	01445000044650	49 3
		Tuberculosis,	ಬಲದವಾಲದದ ಮಮಲಕಲ	020
		Typhoid.	:::: H : H M :	4-5-
16	15.00	Asharia,	00044000004044	21
		Well ted baby.	7:::::::::::::::	12
	11111	Chicken-pox.	1 1111111	П
	-	Measles.		10
-	_	Small-pox.	10 24 10 10 10 10 10 10 10 10 10 10 10 10 10	522
	-oəl əq	Total attendance at the	29,691 1,792 1,792 1,979 1,979 1,979 1,551 1,890 1,890 1,890 2,536	56,637
	10 DIE	No. of lectures with the Magic Lantern.	22222222222222	987
-	· ·	Cinema shows	w	6
	Constant of the last of the la	vered, No. of iectures with the		day (Pri
	-iləb s	No. of out-door lecture	202299999999999	303
T.	270		11111111111	
-	m mm	Centres.	Triplicane Washermanpet Purasawalkam George Town Nungambakam Mirsabpet Muthialpet Royapuram Perambur Egmore	Total
H	35		CHETRANACH	

STATEMENT XIII.
Showing the Births, Infantile Mortality and Infantile Mortality rate from 1923 to 1932.

Remarks.																															
	1923	319-9	207-9	273-2	238-3	405-0	287.0	\$05.4	9x9.4	271.0	329.7	325.8	295-0	295.7	309-0	203-2	0.516	236.2	232.0	250.0	215-4	219.6	214.5	221.9	216.5	2:9.1	260.5	287.2	222.2	254.0	0.10
	1921	291.8	297.6	265.8	236.2	351.4	300-0	\$30.4	319.9	282-9	401.3	318.5	355.9	122.8	318.4	232.0	0.007	269-5	197.3	236.5	216.8	246.9	236-4	9.907	261.6	299.7	238.2	239-0	261.5	264.1	11.0
	1925	293-1	277.7	7.887	256.6	370-7	361.6	0.019	303-7	381.8	359.8	8:13.5	3311.8	1.182	371.9	195.8	0.140	258.6	231.8	274.6	250-3	258.2	235.1	162.5	247.9	272.3	282.6	267.1	318.0	278.8	12.0
ate for	1926	310.3	271-6	353-2	323.3	379-9	295-3	235.4	281.x	833-3	8408	323-4	319-4	388-2	376-7	271.8	2.407	267.6	238-9	235.6	214.6	306.8	2:1.7	204.2	2:5.1	288.3	254.3	241.3	204.0	279.3	1
Infantile Mortality rate for	1927	253.6	275.2	253.0	251-9	3:20	1.202	239.1	5.69.5	290.1	369-1	8.223	308.7	319.8	255.7	1.192	010.7	232.9	192.1	209-3	211-9	233.3	218.6	177.6	224.5	227.1	190.3	205.0	258.3	237-6	1
Infantile 1	1928	352.2	278-8	316-5	343.4	202.1	238.0	265.3	252.0	341.5	9.104	367.8	337-8	165-9	201.2	6.963	2.107	275-6	222.1	232.1	239-1	271.7	252.0	230-9	279.3	330.8	220-7	551.3	218.0	8.987	1
	1929	6.965	252.1	302-7	269.7	373.0	231-2	253.0	010.9	935-5	315-4	293.6	289.8	474.4	292.0	283.7	200.0	266-1	191-1	223.3	2.402	258.4	259.2	166-2	225.4	303.9	235.4	195.9	324.9	256.6	-
	1930	247-9	227-1	235-2	283.3	317-1	259.5	212.0	241.4	948.3	288.0	263.7	302.0	357.8	284.4	233.2	942.3	234.6	211.4	198.0	204.9	228.5	259-3	223.6	240.3	269.2	260.9	208.2	237.1	243.9	1
	1931	322.6	232.3	247.7	300-3	366.0	239.8	229-1	357.5	915.3	286.5	245-1	219-4	287.0	259-3	276-0	\$.\$\$7	1.002	178.0	217.9	227.9	2.162	6.403	207.5	241.1	278.5	272.3	233.1	259.1	218.3	1
Infantile Mortality rate.		254.8	236-3	258.9	225-1	335.5	258.1	196.4	270.2	973.7	333.3	257-1	257.1	310.6	242.9	0.861	1.097	911.0	180-4	184.0	170.0	8.693	247.6	200.6	229.1	249.7	252.5	235.6	230.8	236.5	1
Infantile Mortality.		253	361	331	236	101	611	101	183	666	59	251	189	32	156	383	033	203	292	161	174	319	365	166	181	235	327	316	187	6622	1
Still-births	1932	48	85	58	11	18	15	56	20 3	9.0	2=	30	22	7	24	99	60	44	127	51	51	53	28	48	41	36	79	220	38	1326	
No. of Births registered excluding Still-births.		993	1438	1278	1048	301	461	514	185	811	177	976	735	103	642	1934	1378	2011	1618	875	1023	1227	1474	803	803	941	1295	1341	810	27996	
	Divisi	1	199	3	*	2	9	1	000	10	21	12	13	14	15	16	100	20	20	21	22	23	24	25	26	22	28	29	30	Total	1

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STATE

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

		al 18.	of to to 32.	con-			Per	rcentage
Centre.		Municipal Divisions.	Total No. of Births from 1-1-1932 to 31-12-1932.	No.of cases con- ducted by the Corporation Mid-wives.	1932	1931	1930	1929
Royapuram	{	1	993	421	57-2	43.6	58.8	41.50
	,	2	1,408	553	51-1	38.6	50.7	38.08
Washermanpet		3 4	1,278	658	70:3	53.6	47.04	48.50
Contract Contract	. }	5	1,048	421	54.6	37.7	36.09	37.90
		6	461	171	73-1	55.8	54.9	32.37
Muthialpet		7	514	129 337	33·1 78·7	27.8	33.5	26.80
		9	819	. 303	47.9	58-1	74.4	57.60
	*	8	185	60	39.4	38-7	49.08	32.36
		10	811	448	66.3	30·1 57·6	29·3 50·8	22·06 50·41
		11	177	17	11.8	5.4	8.3	
George Town		12	976	503	61.3	52.3	44.5	3.81
Groige Town	)	13	735	351	60.2	45.5	45.2	42.21
		14	103	41	50.4	32.2	31.1	41.02
	1	15	642	223	44.1	28.5	29.1	22.51
Perambur		16	1,934	946	61.5	48-2	45.5	47.10
	1	17	1,378	673	59.2	45.4	12.5	40.76
Choolai	***	19	839	298	43.7	27.6	5.9	37.56
	3	18	1,182	623	61.3	49.1	39.5	21.46
Purasawalkam	}	21	875	375	51.8	33.8	28.4	29.67
	1	20	1,618	306	25.8	19.2	16.5	21.59
Egmore		23	1,227	423	46.4	29.5	32-1	37.85
Nungambakam		22	1,023	364	60.3	41.4	39.3	64.20
	1	24	1,474	828	62.0	54.2	65.5	55.48
Triplicane		25	805	311	42.7	37-9 [	46.3	37-24
		27	941	382	48-7	48.4	51.5	42.22
	1	26	803	197	32.7	24.3	34.4	26-22
Mirsaibpet		28	1,295	602	60.2	44.7	58.3	38.13
	U	30	810	296	52.9	28.9	42-9	27.09
Royapet		29	1,341	517	59.6	37.8	50.3	10.87
Total			27,996	11,777	42-66	40-6	41.39	37.74

MENT XIV.

the Scheme was working for one year ending with 31st December 1982.

	1		1			
1928	1927	1926	1925	1924	1923	Remarks.
39.5	41.9	39.3	20-1	13.0	7-1	
33-7	33.8	33.1	31-1	10.9	19.2	
41.9	43.4	39-6	39.4	38.3	25.5	
33.3	30-1	28.5	31.7	38.4	24.2	
32.5	21.3	15.6	12.5	6.7	5.5	
22.5	23.9	15.0	16.4	1.6	12.6	
50.6	46-3	56-7	41.3	27.6	18.0	
30.8	30.75	23.8	23.5	18.8	15.0	
16.2	18.8	11.0	3-1	13.4	19-6	
31-4	36.3	31.8	31.5	28.3	24-0	
6.7	3.8	1.1	3.9	2.5	7-6	
38-1	37.75	29.8	81-1	24.4	27-4	
85-1	31.1	28.0	23.7	19.3	20.6	
31.5	38-8	67.0	21.3	6.2	2.8	
20.8	9.4	7.4	8-5	6.4	9.3	
28.0	25-2	22.7	21.5	20.8	25.3	
40.4	37-2	31.0	30-7	22-1	26-4	
39.3	35-6	35.8	26-7	28.7	28.3	
19.6	16-1	12.9	12.95	12.0	12-9	
22.3	18.3	16.6	14.0	25.6	14.6	
8.8	5-1	5.2	5.6	3.7	4-4	
16.6	21.0	17.4	16-5	42.0	11.3	
28.9	26.0	28.5	28-1	14.5	3.8	
47.9	49.2	41.1	38-9	29-4	38.2	
35.3	32.2	32.5	25.8	11.8	36.5	
41.7	39.85	38.1	35.3	45.9	35.6	
22.6	22.15	75.9	19.3	25.1	16-8	
41.6	40.8	36.0	34.2	4.9	19-4	
27-1	26.2	22.0	14.2	21.0	4-7	
28.5	21.7	21.8	20.35	14.9	3.0	
30.5	30-0	27.3	25:1	21.0	19-0	

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

1932	1931	1930	1929	1928	1927	1925	1925	1924	1923
		41-39							

Thompson & Co., Ltd., University Printers, Madras.

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