

Quarterly report of the Mysore Department of Health.

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Public Health is Purchasable. Within Natural Limitations any Community
can Determine its own Death-rate.

Vol. IX]

[No. 4

QUARTERLY REPORT

OF THE

MYSORE STATE DEPARTMENT OF HEALTH

OCTOBER—DECEMBER, 1937

P. PARTHASARATHY, L.M.S., B.S.Sc., L.R.C.P.,
L.R.C.S., D.T.M., D.P.H.,
Director of Public Health.



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1938

**"Search for the Truth is the noblest occupation
of Mankind, its publication a Duty."**



QUARTERLY REPORT

OF THE

MYSORE STATE DEPARTMENT OF HEALTH.

GENERAL.

Health conditions during the quarter were normal. As in the previous quarter epidemic diseases occurred only sporadically without culminating in an epidemic in any part of the State.

In Government Order No. G. 3375-7—P. H. 92-36-4, dated October 30, 1937, Government were pleased to restore the fixed travelling allowance of Rs. 8 for the Malnad Improvement Vaccinators as a special case, with effect from July 1, 1937.

As per Government Order No. G. 4953-8—P. H. 53-37-4, dated December 24, 1937, Rs. 1,850 will be used for quinine distribution in the Malnad Districts as shown below:—

<i>District.</i>				<i>Rs.</i>
Hassan	...	...	...	400
Kadur	...	...	...	400
Mysore	...	...	...	500
Shimoga	...	...	...	550

Government have approved of the loan of the services of Dr. C. V. Natarajan for employment as Pathologist, Krishnarajendra Hospital, and Professor of Pathology, Medical College, for a period of one year from January 16, 1938, on the terms mentioned in the resolution of the University Council.

In Notification No. G. 3706—P. H. 44-37-4, dated November 11, 1937, Government are pleased to extend the provisions of the Food Adulteration Act to Hoskote Town in respect of milk, curds, butter and ghee.

The Director of Public Health toured in the Districts for 20 days in connection with the study of malaria conditions in selected places, inspection of sanitation, vaccination and of water supplies, and investigation of the possibility of cinchona plantation at Kemmangundi. He attended the meetings of the Representative Assembly.

Distinguished Visitors.—The Maharajkumar of Surguja and Srimanth Appa Saheb Pant, B.A. (Oxon), eldest son of the Raja of Aundh paid a visit to the Department to acquaint themselves with the activities carried on in the Department.

BUREAU OF ADMINISTRATION.

(a) City Health Organisations.

BANGALORE CITY.

M. G. SRINIVASA PEIDPET, L.M.S., B.S.SC.,
Health Officer.

During the quarter 2,163 births were reported in the City, of which 1,200 were attended to in the Maternity Hospitals. Fifty-seven labour cases were conducted at the Balepet Maternity Home. In the same period 1,382 deaths were reported, of which 346 occurred in the various hospitals in the City. Of these deaths 311 were of infants under one year of age.

In the quarter under report 12 attacks with 9 deaths from plague were reported. These were all imported cases and 836 anti-plague inoculations were done.

The City was free from cholera in the period under review. As a preventive measure, however, 75 anti-cholera inoculations were done.

One attack of small-pox was recorded during the entire quarter. In this connection 1,298 primary and 1,318 re-vaccinations were done.

Seventeen fatal cases of enteric fever were reported; 101 anti-typhoid inoculations were performed.

A total of 853 dogs were destroyed.

During the quarter 194 houses were disinfected.

Eighty daily conservable latrines were converted into flush latrines ; and 5 pits were got filled up and converted into daily conservable latrines.

During the quarter the health staff inspected 118 eating houses, 5 aerated water factories, 182 coffee clubs and sweetmeat shops and 21 bakeries. Of 713 notices issued against sanitary offences, 242 were complied with and the rest were pending disposal at the close of the quarter.

MYSORE CITY.

S. SESHAGIRI RAO, B.Sc., M.B.B.S., D.P.H.,
Health Officer.

In Mysore City 1,230 births and 910 deaths were reported in the quarter under report. Of the latter 169 were deaths of infants under one year of age.

Under plague 41 attacks and 18 deaths were reported, of which 3 attacks and 2 deaths were imported cases. A total of 4,854 anti-plague inoculations were done.

The City was free from small-pox and cholera during the quarter. As a preventive measure 83 anti-cholera inoculations were done and 1,079 primary and 1,447 re-vaccinations were done.

Five cases of influenza were reported.

Eighteen fatal cases of typhoid were reported ; 31 anti-typhoid inoculations were given.

During the quarter 1,064 stray dogs were destroyed.

A total of 237 houses were disinfected as against 236 in the previous quarter.

During the quarter 95 visits were paid to hotels, 263 to coffee clubs, 56 to aerated water factories, 64 to bakeries, and 238 to mutton stalls. Of 962 notices issued against sanitary offences 162 were complied with.

A systematic survey of houses as to the condition of latrines, cleanliness, etc., is being made and notices are issued for improving the defects noted. As a result, 121 flush latrines were constructed in the period considered.

During the quarter 7,597 rat traps were distributed to 4,565 houses and 5,683 rats were captured and destroyed.

The following statement shows the particulars of samples of food-stuffs analysed at the Health Office Laboratory.

No.	Sample	Number of samples examined	Number of samples found genuine	Number of samples found adulterated	Number of cases prosecuted	Number of cases withdrawn	Number of cases convicted
1	Cow's milk ...	28	25	3	8	...	7
2	Buffalo's milk ...	21	12	9	10	1	9
3	Mixed milk (cow's and buffalo's.)	4	1	3	2	...	1
4	Ghee ...	3	...	3	4	...	4
5	Butter ...	1	1	...	...	...	...
6	Coffee powder ...	3	2	1	...	2	...
	Total ...	60	41	19	24	3	21

KOLAR GOLD FIELDS.

M. RAMACHANDRA RAO, B.A., M.B.B.S., C.P.H.,

Health Officer.

In the quarter under report, 1,403 births and 657 deaths were recorded as compared with 1,430 births and 783 deaths in the corresponding quarter of the last year. Of the total deaths reported 210 were of infants under one year of age.

During the quarter 27 attacks and 14 deaths from plague were reported. As a preventive measure 3,161 anti-plague inoculations were done.

The area was free from cholera in the period under report.

One attack of small-pox was reported; and 720 primary and 526 re-vaccinations were done.

Under enteric fever 17 fatal cases were reported.

Sixteen attacks with 16 deaths were reported under influenza.

The number of houses disinfected during the quarter was 503.

A total of 1,015 dogs and 510 rats were destroyed.

At the office laboratory the following samples were examined :—

<i>Particulars.</i>	<i>Number</i>
Water examination	7
Sputum for T. B.	11
Blood smear for malaria	12
Cervix smear for G. C.	24
Motion for hook-worm	6
Spleen and liver for anthrax	26
Urine for albumin and sugar	27
Free chlorine test	2
Rats examined for plague	10
Motion for ova	9
Dog's brain sent to Coonoor	6

During the quarter 372 visits were paid to the hotels, 292 to mutton and fish-stalls, 259 to chakna stalls, 297 to coffee clubs, 209 to aerated water factories, 220 to bakeries, 35 to markets and 33 to slaughter houses.

The preventive work done during the quarter consisted of chlorination of wells in Oorgaum village colonies, intensive vaccination work and anti-plague inoculations work. Talks on prevention of epidemic diseases were given by the health staff in the villages of the Sanitary Board Area.

The following sanitary improvements were effected in the quarter under report :—

(1) Construction of 'V' shaped slab drain at Robertsonpet 4th Cross Road.

(2) Construction of 'V' shaped slab drain at 3rd Cross Road, Robertsonpet.

(3) Construction of 'V' shaped slab drain in Madhava Road, Robertsonpet.

(4) Construction of 'V' shaped slab drain in II and VI Cross Roads, Robertsonpet.

(5) Construction of five 'V' shaped slab drains in cooly colony of Oorgaum Village, and in front of arrack and toddy shops.

(6) Construction of Musafirkhana Care-taker's building and two other buildings for the use of Malis of King George Hall and Jubilee Park.

(7) Construction of an additional small room to the Health Office.

(8) Removal of rank vegetation and loose stones and filling up of existing pits wherever found.

(9) Planting of nearly 200 avenue trees on either side of B. M. Road.

(19) Repairs to road and Sanitary Board Buildings in general.

MYSORE DISTRICT.

(b) District Health Organisations.

C. V. NATARAJAN, B.SC., M.B.B.S., D.P.H.,

Health Officer.

In Mysore District 104 attacks with 67 deaths from plague were reported during the quarter. As a preventive measure 11,825 anti-plague inoculations were done.

The district was completely free from cholera. As a precautionary measure, however, 194 anti-cholera inoculations were done.

Under small-pox 140 attacks and 13 deaths were reported. A total of 6,313 primary and 2,197 re-vaccinations were done.

The District Health Officer visited 31 villages and 16 towns in connection with epidemic work and routine inspections. He also visited a school and examined 94 boys.

The bore-hole latrine work in Periyapatna Taluk was again commenced in December and by the end of the quarter the Assistant Sanitary Inspectors had visited 9 villages on propaganda work.

SHIMOGA DISTRICT.

G. N. SESHADRI, L.M.S., D.P.H. (Cal.),

Health Officer.

Statistics of births, deaths and of infant deaths are dealt with under the Bureau of Vital Statistics.

During the quarter 52 attacks and 25 deaths from plague were reported in 7 villages and 3 towns as compared with 65 attacks and 35 deaths in the previous quarter. The number of anti-plague inoculations done totalled 3,847.

Cholera accounted for 4 attacks and 3 deaths in 2 villages. As a preventive measure 102 anti-cholera inoculations were done.

Only one case of small-pox was reported. As a routine preventive measure, however, 4,860 primary and 1,912 re-vaccinations were performed.

The District Health Officer visited 25 villages and towns for routine inspection, 26 places for verification of vaccination work, 8 places on epidemic work, 5 places in connection with the reports of influenza, 4 for baby shows and 6 for health propaganda work. He visited 2 schools and examined 251 children. The common ailments noted were enlargement of the spleen and scabies.

Baby shows and health exhibitions were held in Lingadahalli, Keladi, Shivarajpur and Megarvalli at which 243 babies were examined and the mothers were given advice. Lectures on general hygiene and on epidemic diseases were given.

BUREAU OF MATERNITY AND CHILD WELFARE.

(a) State Organization.

ERIKA DEUSSEN ROSENTHAL, M.D.,

Organiser.

The Office of the Organiser, Maternity, Child and Other Welfare Works, which was working since January 1935, was closed from November 17, 1937, as per Government Order No. G. 2630-35--C. B. 164-36-1, dated April 16, 1937.

In October, the Organiser toured for 15 days in the districts of Mysore, Hassan and Shimoga, visiting Nanjangud, Bogadi (Mysore Taluk), Seringapatam, French-Rocks, Hassan, Shimoga, Bhadravati, Mandagadde (Shimoga), Gajanur, Mellur, Tirthahalli, Lingadahalli. She attended a meeting of the Mysore State Branch and another of the Mysore City Branch of the Indian Red Cross Society. She also attended the Opening Ceremony of the Red Cross Branch at Nanjangud by Miss Norah Hill, Organising Secretary, Indian Red Cross Society, Headquarters, New Delhi.

She delivered seven lectures on the following subjects in Mysore, French-Rocks, Bhadravati, Shimoga, Tirthahalli and Lingadahalli :—

- (i) Care of mother and child.
- (ii) Infectious Diseases.
- (iii) Food and Pregnancy.

- (iv) Pregnancy and Health.
- (v) Maternity and Child Welfare.
- (vi) Tasks of a Maternity Home and what a Village can do for the Maternity Home.
- (vii) Welfare of Women.

She inspected the Maternity Home at French-Rocks and the following Child Welfare Centres:—

1. Welfare Centre, Nanjangud.
2. Do Hassan.
3. Baby Clinic, Shimoga.
4. Milk Centre, Mandagadde (Shimoga).
5. Lady Mirza Ismail Milk Centre, Shimoga.
6. Maternity and Child Welfare Centres of the Gunamba Trust, Mysore.

The Organiser also inspected the Kindergarten and Nursery School, Mysore, and attended the Health and Baby Show organised at Lingadahalli (Chennagiri Taluk). Ante-natal clinics were held at Seringapatam. A maternity and baby clinic was conducted at Tirthahalli at which 300 mothers and 40 babies were examined.

(b) Voluntary Organisations.

RED CROSS SOCIETY.

Maternity and Child Welfare Work.

Appointment of Midwives.—(1) A grant of Rs. 100 was sanctioned from the Red Cross Society Funds towards the appointment of an additional midwife at Tubagere in Dodballapur Taluk.

(2) The Committee approved the proposal of appointing a lady Sub-Assistant Surgeon to Vadigenhalli Maternity Home, in place of the old arrangement of paying weekly visits to the place by a Lady Doctor working elsewhere.

(3) *Periodical inspection of Maternity Homes.*—A sum of Rs. 10 has been sanctioned towards the monthly conveyance allowance of the Lady Doctor at Nanjangud in connection with her bi-weekly visits to Thandavapura.

Ambulance.—The schemes prepared by Capt. Y. V. Ayya, I M.S., in connection with the popularisation of First Aid and Home Nursing and the formation of Ambulance and Nursing Divisions in the State were approved by the Committee and a grant of Rs. 1,000 was sanctioned for the first year.

The annual grant to the Ambulance Secretariat was raised from Rs. 300 to Rs. 500.

Grants to Maternity Homes.—The following grants to Maternity Homes were sanctioned:—

	<i>Equipment Grant.</i>	<i>Recurring Grant.</i>
	Rs.	Rs.
Maternity Home at Sarjapur ...	200 <i>plus</i> building grant Rs. 300.	...
Maternity Home at Nonavinkere... ..	...	20

Members of the Society.—The State Branch has enrolled Mr. Lachmandas, Banker, Bangalore, as an annual member of the Society.

Organisation of Baby Weeks.—A Baby Week Sub-Committee was formed to suggest measures for the organisation of Baby Weeks throughout the State on standard lines and the Committee have sent their report to the Red Cross Society for consideration.

Distinguished Visitors.—Miss Norah Hill, A.R.R.C., Organising Secretary, Indian Red Cross Society and General Secretary, St. John Ambulance Association, Headquarters, New Delhi, during her stay here, as a State Guest in the latter half of November 1937, paid visits to the different centres of Red Cross activities in the State. She was greatly impressed with the general progress made by the State Branch in its different activities. She has remarked that the Branch had been firmly established on a secure financial basis and that it has a great future before it.

Propaganda.—Arrangements are in progress to publish a special Baby Week Number of "The Mysore Arogya", published by the Department of Health, giving articles on subjects connected with Maternity and Child Welfare by experts. It is expected that the Special Number will give a fillip to the organisation of several Maternity and Child Welfare Centres and celebration of Baby Weeks on a standardised basis.

OTHER CENTRES.

Maternity and Child Welfare work done in some of the following Centres is detailed below:—

Maternity and Child Welfare Work done

No.	Place	Name of Centre	No. of Clinics held		
			Ante-natal	Post-natal	Children
1	Anekal	Maternity and Child Welfare Centre	...	...	...
2	Attibele	Do do	...	...	...
3	Bangalore	Beli-mut Creche	...	...	...
4	Do	Civic and Social Progress Association, Chamarajpet.	8	6	14
5	Do	Deena Seva Sangha, Malleswaram	...	...	...
6	Do	Mysore Spinning and Manufacturing Company Limited Creche.	...	...	...
7	Do	Mahila Seva Samaj, Basavangudi	47	47	47
8	Do	Hebbal Child Welfare Centre	4	...	18
9	Do	Child Welfare Centre (Bangalore W. C. and Silk Mills Creche).	3	...	...
10	Bethlur	Bethlur Baby Clinic, Methodist Mission.	...	...	10
11	Bowringpet	Maternity and Child Welfare Centre	...	...	...
12	Bhadravati	Bhadravati Iron Works Child Welfare Centre.	...	...	...
13	Channapatna	Maternity and Child Welfare Centre	...	...	...
14	Chitaldrug	Do do	...	...	...
15	Chikballapur	Do do	...	...	...
16	Chikmagalur	Do do	12	...	12
17	Davangere	Do do	...	...	...
18	French-Rocks.	Do do	35	...	...
19	Kengere	Gurukula Ashram	...	...	...
20	Harnahalli	Methodist Mission combined Dispensary and C. W. Centre.	...	...	...
21	Hassan	Methodist Mission combined Dispensary and C. W. Centre.	12	...	14
22	Kolar	Champion Reefs Mines	...	...	...
23	Do	Marikuppam Mines	...	...	...
24	Do	Mysore Mines	...	...	...
25	Do	Nandidroog Mines	...	...	...
26	Do	Oorgaum Mines	...	...	...
27	Do	Sanitary Board area Child Welfare Centre, Robertsonpet.	...	...	...
28	Do	Kolar Town Maternity and Child Welfare Centre.	...	...	...
29	Koppa	Maternity and Child Welfare Centre	...	...	...
30	Mysore	Civic and Social Progress Association	21	...	70
31	Do	Devaraj Centre	...	...	...
32	Do	Gajasala Centre	...	...	...
33	Do	Krishnarajendra Mills Creche	...	...	...
34	Do	Mahila Seva Samaj, Ante-natal and Child Welfare Centre.	...	...	...
35	Do	Mallamma Centre	...	...	...
36	Do	Savoy Centre	...	...	...
37	Do	Subramanyam Centre	...	...	...
38	Do	Sri Vani Vilas Milk Centre	24	...	11
39	Do	Sisuvihar Nursery School	...	...	...
40	Do	Vocational Institute for Women	...	...	...
41	Do	Toddler's School in Gajasala Centre	...	...	...
42	Do	Do in Nanjaraja Bahadur Chattram.	...	...	...
43	Do	Do in Kantharaj Urs Chowk.	...	...	...
44	Mandagadde	Maternity and Child Welfare Centre	...	...	...
45	Nanjangud	Do do	12	...	12
46	Sarjapur	Do do	...	...	...
47	Shimoga	Ante-natal and Baby Clinic, Methodist Mission.	12	12	12
48	Do	Lady Mirza Ismail Milk Centre	...	...	...
49	Do	Mary Immaculate Convent Child Welfare Centre.	...	...	...
50	Sivasamudram	Maternity and Child Welfare Centre	10	...	5
51	Tarikere	Do do	...	...	...
52	Yarnahalli	Do do	...	...	...
Total (Mysore State)			200	65	220

during the quarter ended December 30, 1937.

No. of Cases examined								No. of Children that were			No. of House Visits paid			Remarks
Pregnant women				Children				Weighed	Bathed	Given milk	First visit	Re-visits	No. of deliveries attended	
First Examination	Re-Examination	No. treated	No. referred to Hospital	First Examination	Re-Examination	No. treated	No. referred to Hospital							
...	...	...	Not	received.	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	51	67	67	...	...	...
8	6	...	5	14	...	...	...	41	41	41	270	270	8
...	...	...	...	1,020	506	1,526	1,526	...	1541	...	2,300	1,031	...
...	...	...	Not	received.	...	...	...	...	...	...	...	...	...
144	501	60	4	256	1,366	6	3	1366	25	...	300	800	80	
32	84	28	...	80	241	60	...	80	...	80	1,440	1,570	24	
9	5	...	...	8	8	8	...	8	8	8	1	...	...
...	...	...	1	1	16	14	..	8	...	6	...	...	...
...	...	...	Not	received.	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Not	received.	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
30	65	95	70	19	145	164	130	10	10	10	45	129	...	
107	70	90	Not	received.	...	...	...	...	...	...	...	...	20
...	...	...	...	56	37	40	...	62	...	6	...	...	...
...	...	...	Not	received.	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
11	36	47	1	19	217	...	18	57	57	...	58	54	...	
...	...	...	Not	received.	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
5	1	...	1	17	19	...	3	19	19	19	...	...	2
...	...	...	Not	received.	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
473	353	826	...	71	18	89	...	89	...	...	...	...	533
...	...	...	Not	received.	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
72	60	22	20	40	34	10	12	40	40	40	26	18	50	
...	...	...	Not	received.	...	...	...	...	...	...	...	...	...
81	...	...	...	124	176	...	...	180	...	...	...	...	...
...	...	...	Not	received.	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
16	36	22	22	7	7	7	17	7	...	...	29	23	14
...	...	...	Not	received	...	...	...	...	...	...	...	...	...
...	...	...	Do	...	...	...	...	...	...	...	...	...	...
988	1,167	1,190	124	1,723	2,790	1,924	1,709	2018	1808	277	4,469	3,895	731	

It will be seen that of the 52 centres on the list only 16 centres have sent in reports, the Channapatna Centre having sent a nil report. When 36 centres have yet to send the report of work done any discussion of the figures reported will be incomplete. Arrangements are being made to supply these centres with standardised printed forms and registers as per recommendations of the Mysore Committee on Vital Statistics.

BUREAU OF EPIDEMIOLOGY.

B. ANANTHASWAMI RAO, B.Sc., M.B.B.S., M.P.H.,

Superintendent.

The Superintendent visited seven places in five districts during the first half of the quarter and was on leave during the second half. The visits were made in connection with inspection of anti-malaria works, epidemic control and anti-rat campaign. The Bureau co-operated in putting up the malaria section in the Health Exhibition at Mysore during the Dasara festivities.

The preliminary malaria survey of the area commanded by the Bhadra Project was started and a detailed survey of 22 villages in Lakkavalli and Bhadravati Hoblis was done. The area surveyed so far is already hyper-endemic for malaria and all available information is being collected to study the possible adverse effects of opening fresh irrigation in the area. It is proposed when the survey is completed to recommend measures for improving the existing conditions and to prevent any possible further adverse effects due to this disease. This will enable the cost of these preventive measures being worked out as a part of the capital cost of the whole project.

Malarial surveys of Hunsur and Chickmagalur Towns were done during the quarter.

Consignments of Gambusia, the larvacidal fish, were sent to Dr. Paul F. Russell, Guindy, Madras, and to the Officer-in-charge, Malaria Unit, Ceylon.

Malaria Stations.

The quarterly spleen and blood examinations in all the study stations were done as usual.

Scientific Study.—A study of the influence of the oxygen demand of the water in the paddy fields on the

anopheline fauna in the paddy plots was started during the quarter. Laboratory trials with Dr. Barber's Kerosine-Paris-Green mixture were done and it is proposed to try this very promising and easy method of Paris-green application more extensively in the field.

There is already evidence, as previously reported, in the Mandya tank of the weeds coming back. The method of attacking the weed problem either by manual labour or otherwise is hardly promising to be permanent solution of the problem. Plans and estimates for the construction of fish ponds in the Mandya tank bed as one of the methods of tackling the weed problem as also for fixing the automatic flush syphon at Kodihalli have been prepared and it is expected that the work will be pushed through early.

The lining of canals in the three selected villages in the Irwin Canal Area was in progress in all the three villages and it is expected that the work will be completed very shortly. The lengths of channels and valleys that have so far been attended to present an entirely different appearance and it is felt this measure by itself will effectively influence the malaria in these three villages. The capital cost of these works and the annual maintenance cost will be worked out and compared with the recurring cost of anti-larval measures for the control of malaria in these village units.

Bangalore City.—The anti-mosquito work was continued in the City. The control of culex mosquitoes was not as satisfactory as expected. There were numerous complaints of recrudescence of mosquito nuisance in the City though the adult collections in the catching stations did not show this up. It is a matter for investigation to what extent the collections in the catching stations can be relied upon as a measure of effective culex control in view of the different breeding habits of the two mosquitoes. It is perhaps to be expected that the collections in the catching stations can represent only a very rough estimate of the extent of culex breeding in the whole City especially in view of the culicines being more generally house breeders.

A thorough overhauling of the work of the anti-mosquito unit and a more careful supervision seems necessary.

The routine examination of wells for stephensi breeding and the presence or absence of fish was done

during the quarter. Out of a total of 2,262 wells examined, fish were found absent in 1,896 wells and these were re-stocked.

The collection of anophelines and culicines in the catching stations during the quarter were 191 and 535 as against 339 and 659 in the corresponding quarter of last year.

Mysore City.—Anti-malaria work in the City was continued. It is reported that in certain sections of the town total mosquito control is being done by oiling. The staff inspected and re-stocked with fish 552 wells and 23 ponds and pools. It is reported that action was taken in respect of 22 wells, pools and ponds.

Central Laboratory.

The study of *A stephensi* was continued during the quarter. On account of the low temperatures prevailing in the latter two months of the quarter, egg laying and the growth of the larvæ was considerably retarded. It was found necessary to use an incubator for preserving the adult female *stephensi*. The Thermostat ordered could not be had till the end of the quarter and this considerably affected the work.

In addition to the measurement of eggs, the wings of the two types of *A stephensi* were measured to see if this would show any significant differences. The study has been reported in a special paper.

Examination of blood smears taken during the special surveys as also sample group from the malaria stations and identification of adult catches sent from Marconhalli were done as per details given below:—

Name of Place			No. examined	Results	
				Pos.	Neg.
Mudigere Malaria Station.	Control	...	99	3	96
	Peripheral	...	42	2	40
Mandya	Bevinahalli	...	31	4	27
	Sunduhalli	...	30	3	27
	Kyathangere	...	30	4	26

Adult catches sent from Marconhalli :—

5 catches	...	No. of adults	...	83
Species identified	...	<div style="display: inline-block; vertical-align: middle;"> <div style="display: inline-block; vertical-align: middle;">{</div> <div style="display: inline-block; vertical-align: middle;"> Stephensi. Culicifacies. Fluviatilis. Vagus. </div> </div>		

Spleen Surveys.

Hunsur.—A detailed malaria survey of Hunsur Town was done during the quarter. It was found during the survey that the spleen rate for the whole town was 33·8 and that the rate varied from 44·3 in one of the sections to 22·5 in another.

The anophelines identified from the collections in the town are *A. culicifacies* and *A. fluviatilis* belonging to the carrier group and a number of other non-dangerous species.

The principal anopheline breeding areas in the town were (1) Tanks, (2) River, (3) Ponds and Pools, (4) Channels, and (5) Wells.

Chickmagalur.—During the malaria survey of the town, it was found that the spleen rate for the town was 42·2. Chickmagalur town includes a few adjoining villages within its limits and a classification of the spleen rates according to the different sections showed an enormous variation from 91·3 to 24·0. The highest spleen rate was found to be in Moorumanehalli and the lowest in the town primary school.

The adult catches showed six different species prevailing at the time of the survey, and of these, only two *A. culicifacies* and *A. fluviatilis* are epidemiologically believed to be the carriers of malaria.

The types of breeding areas are (1) Tanks, (2) River and Channels, (3) Ponds, and Pools, and (4) Wells.

The river flows close on the outskirts of the main living quarters of the town and there are three irrigation channels coursing through several sections of the town.

Suitable recommendations for the control of malaria in the town have been made to the Municipality. The anti-malaria work in the town is expected to be started soon partly aided by Government funds.

Thippagondanahalli.—A scheme for the control of malaria in Thippagondanahalli was sanctioned by Government in G. O. No. P. W. 1501-3—S. dated 15th November 1937. The importance of malaria control in this place is

on account of the location of Chamarajsagar Water Works for the supply of water to Bangalore. Preliminary arrangements for starting the work were made during the quarter and systematic Paris-greening will be started from the commencement of the new year.

Hookworm Campaign.

The construction of latrines in the area where hookworm treatment was administered was very slow as the villagers were not very enthusiastic about it. It was therefore arranged to use the two Inspectors for carrying on intensive propaganda in a few restricted villages by making house to house visits and educating the people on the advantages of the use of these latrines. The Inspectors were given special training in propaganda work in the Health Centre at Closepet, for four weeks, and they have returned to the Periyapatna Taluk where the intensive propaganda for individual house latrines construction will be tried in two villages as a start.

Guineaworm Unit.

The guineaworm staff visited 266 villages during the quarter, out of which 233 were first visits, in pursuance of a programme for thoroughly surveying the whole district for checking the reported incidence of infection. They examined 136 step wells, stocked fish in 1, re-stocked in 8 and established one new fish nursery.

Control of Epidemic Diseases.

Cholera.—The State was practically free from cholera during the quarter. Infection was reported from 9 villages in three districts with 21 attacks and 16 deaths.

Plague.—Plague was the most prevalent communicable disease during the quarter. Infection was reported from six out of the eight districts, Chitaldrug and Kadur remaining free. The total number of attacks and deaths for the whole State was 947 and 487 respectively, Bangalore and Kolar districts reporting 675 attacks and 333 deaths. The total number of villages infected in the State was 193.

Smallpox.—There was reporting of sporadic cases of attacks and deaths from smallpox in 15 villages from seven districts, Kadur reporting no infection. There were 168 attacks and 17 deaths during the quarter.

The marginally noted places were visited by the Superintendent during the quarter and the object of the visit is noted against each place. A paper on "Races of *A. stephensi* liston, 1910" was sent for publication during the quarter.

Mysore	... Dasara Exhibition.
Mandya	... Joint inspection with the Executive Engineer, of the Villages under the Irwin Canal area.
Bethamangala	... Investigation of reported mosquito nuisance.
Maralwadi	... Cyanogas experiment.
Chickmagalur	... To discuss the malaria problem.
Mudigere	... Inspection of Malaria Station.
Marconhalli	... Inspection of Malaria Work.

Superintendent during the quarter and the object of the visit is noted against each place. A paper on "Races of *A. stephensi* liston, 1910" was sent

TABLE 1.

Spleen and Blood Examinations made in the Experimental Malaria Stations during the Quarter.

Spleens	0-9			10-19			20 and over			All ages		
	No. Ex.	No. Inf.	% Inf.	No. Ex.	No. Inf.	% Inf.	No. Ex.	No. Inf.	% Inf.	No. Ex.	No. Inf.	% Inf.
Spleens not examined	4	...	...	4	...	...	...	...	...	8	...	...
Spleen Negative	157	6	3.8	36	...	...	11	...	...	194	6	3.09
Spleen Palpable	16	3	18.7	3	...	...	...	...	...	19	3	15.8
1	22	3	13.6	3	...	...	1	...	...	26	3	11.5
2	14	1	7.1	4	...	...	2	...	...	20	1	5.0
3	9	2	22.2	5	1	20.0	...	...	...	14	3	21.4
4	1	...	...	...	...	...	...	...	...	1	...	...
5	...	...	...	...	...	...	...	...	...	...	...	...
All persons with palpable Spleen.	62	9	14.5	15	1	26.6	3	...	...	80	10	1.25
Grand Total—All Spleens ...	223	15	6.7	55	1	1.8	14	...	...	292	16	5.5
Spleen Rate ...	223	62	27.8	55	15	27.3	14	...	...	292	80	27.4

TABLE 2.
Adult Catches in Control and Peripheral Areas.

Species	Nagenhalli		Mudgere		Hiriyur		Nagoonhalli	
	Pd. zn.	Pl. zn.	Pd. zn.	Pl. zn.	Pd. zn.	Pl. zn.	Pd. zn.	Pl. zn.
<i>A. aconitus</i>	15	90	9	29	50	26	12	...
<i>A. annularis</i>	6	20	8	21	3	32	6	...
<i>A. barbirostris</i>	...	...	5	5	...	1	...	...
<i>A. calfacies</i>	5	109	13	19	54	234	18	...
<i>A. fluvialis</i>	90	214	6	18	112	424	9	...
<i>A. hyrcanus</i>	1	257	3	32	1	2	82	...
<i>A. jamesii</i>	...	14	7	48	...	1	1	...
<i>A. jeyporiensis</i>	...	11	342	1,262	...	...	1	...
<i>A. karwari</i>	...	...	...	8	...	...	...	...
<i>A. leucospheros</i>	...	...	...	...	...	...	...	...
<i>A. maculatus</i>	...	...	...	...	...	...	...	...
<i>A. minimus</i>	...	...	...	...	...	...	...	...
<i>A. majidi</i>	3	2	...	1	...	...	...	...
<i>A. pallidus</i>	1	1	6	31	...	1	1	...
<i>A. splendendus</i>	...	2	2	4	...	...	...	...
<i>A. stephensi</i>	78	216	...	53	102	309	...	...
<i>A. subpictus</i>	1	2	19	42	393	500	65	...
<i>A. tessallatus</i>	1	3	1	42	8	25	...	...
<i>A. turkadi</i>	34	86	...	74	...	8	...	...
<i>A. vagus</i>	...	...	19	9	37	38	14	...
<i>A. vanaa</i>	...	...	5	...	...	...	...	...

TABLE 3.

Species of Malaria Parasites.

Age				Nagenhalli							
				Total No. Inf.	B. T.		M. T.		Q.		
					No. Inf.	% Inf.	No. Inf.	% Inf.	No. Inf.	% Inf.	
1				2	3	4	5	6	7	8	
0-9	...	...	4	1	25.0	2	50.0	...	...
10-19	...	...	...	...	...	...	...	...	...
20 and over	...	...	...	...	...	...	...	...	...
All ages	...	...	4	1	25.0	2	50.0	...	...
Age				Mudgere							
				Total No. Inf.	B. T.		M. T.		Q.		
					No. Inf.	% Inf.	No. Inf.	% Inf.	No. Inf.	% Inf.	
				9	10	11	12	13	14	15	
0-9	...	...	3	1	33.3	1	33.3	...	...
10-19	...	...	...	...	...	...	...	...	...
20 and over	...	...	...	...	...	...	...	...	...
All ages	...	...	3	1	33.3	1	33.3	...	...
Age				Hiriyur							
				Total No. Inf.	B. T.		M. T.		Q.		
					No. Inf.	% Inf.	No. Inf.	% Inf.	No. Inf.	% Inf.	
				16	17	18	19	20	21	22	
0-9	...	...	5	1	20.0	2	40.0	1	20.0
10-19	...	...	1	1	100.0	...	...	...	...
20 and over	...	...	...	...	...	...	...	...	...
All ages	...	...	6	2	33.3	2	33.3	1	16.6

BUREAU OF LABORATORIES.

(a) Public Health Institute.

G. M. DOMINICK, M.R.C.S., D.P.H.,

Superintendent.

1. *Bacteriological Section.*—During the quarter 2,732 specimens were examined as against 2,427 during the last quarter:—

No.	Particulars	Number Positive	Number Negative	Special samples	Total
1	Blood for Wassermann test ...	878	1,020	...	1,898
2	Do Widal ...	63	35	...	98
3	Do M. P. ...	...	10	...	10
4	Do Blood count ...	...	...	1	1
5	Motion for cholera ...	2	6	...	8
6	Do Amœba ...	3	11	...	14
7	Do E. H. Cysts ...	...	1	...	1
8	Urine ...	...	...	8	8
9	Water for Typhoid ...	...	45	...	45
10	Sputum for T. B. ...	3	16	...	19
11	Smear for lepra-bacilli ...	...	4	...	4
12	Vomit for Cholera ...	1	2	...	3
13	Section cutting ...	...	...	3	3
14	Smear for B. Pestis ...	2	3	...	5
15	Aspirated Fluid ...	...	...	1	1
16	Water for cholera ...	...	5	...	5
17	Smear for Anthrax ...	...	1	...	1
18	Disinfectants ...	...	...	55	55
19	Smear for G. C. ...	3	3	...	6
20	Dialysate with scum ...	...	...	1	1
21	Motion for Ova ...	...	3	...	3
22	Rice ...	...	...	2	2
23	Smear for Diphtheria ...	...	1	...	1
24	Vaccine from Vaccine Institute. ...	...	...	37	37
25	Water ...	...	...	503	503
Total ...		955	1,166	611	2,732

2. *Chemical Section.*—In the Chemical Section 551 specimens were examined as against 389 during the last quarter :—

<i>Particulars.</i>			<i>Number.</i>
1	Water for Residual Chlorine	...	498
2	Opium	...	1
3	Water	...	41
4	Arrack	...	3
5	Blood sugar estimation	...	2
6	Cocoanut shell oil	...	1
7	Butter	...	1
8	Light Coautchoucine	...	1
9	Rice	...	3
Total			551

3. *Medico-legal Section.*—During the quarter 54 cases with 197 articles were examined as against 67 cases with 265 articles in the previous quarter :—

No.	Particulars	No. of cases	No. of articles
1	Mammalian Blood	23	87
2	Abortion	3	14
3	Suspected Human poisoning	23	76
4	Rape	3	11
5	Cattle (Poison) Viscera	2	9
Total		54	197

In 17 Cases Mammalian blood was detected.

„ 3 „ Datura was detected.
 „ 2 „ Nitric acid was detected.
 „ 2 „ Perchloride of mercury was detected.
 „ 2 „ Pot-Nitrate was detected.
 „ 2 „ Oleander was detected.
 „ 1 „ Pot. Chlorate and Sulphur were detected.
 „ 1 „ Yellow sulphide of arsenic was detected.
 „ 1 „ Caustic Potash was detected.
 „ 1 „ Oxalic acid was detected.

4. *Vaccines Issued.*—During the quarter 1,700 cc. of Cholera Vaccine and 697 cc. of T.A.B. vaccine were issued as compared with 1,750 cc. and 1,054 cc. respectively, in the previous quarter.

5. *Fees*.—The amounts received towards fees for examination and supply of vaccines were:—

No.	Item	Amount		
		Oct. to Dec. 1937		
		Rs. a. p.		
1	Bacteriological section ...	9	8	0
2	Chemical section ...	10	0	0
3	T. A. B. Vaccine ...	102	1	0
4	Cholera Vaccine ...	2,386	10	0
5	Other Receipts ...	...	...	...
	Total ...	2,508	3	0

July to
Sept. 1937

Rs. a. p.

21 7 0

25 0 0

92 6 0

6,985 5 6

50 0 0

7,174 2 6

(b) **Vaccine Institute.**

J. A. ISWARAMURTHY, B.A., L.M.S., B.S.SC.,

Superintendent.

General Remarks.—

- (1) Glycerine lymph was continued for general issue in the State.
- (2) Forty Glycerine samples were examined bacteriologically 111 times. Their potency was tested in serial dilution on the rabbit and clinically in the Model Range prior to issue.
- (3) Standards adopted for potency and sterility of lymph issued were continued.

Particulars.	Number.
Calves waiting on 1st October 1937 ...	14
„ replaced against those returned during the previous quarter. ...	...
„ purchased ...	19
„ waiting died ...	...
„ available for vaccination ...	33
„ waiting on 1st January 1938 ...	12
„ vaccinated ...	21
„ vaccinated and uncollected on 1st October 1937. ...	1
„ vaccinated and rejected ...	3
„ vaccinated and died (uncollected) ...	...
„ vaccinated and whose pulp was collected. ...	16
„ vaccinated and remained over for collection of lymph on 1st January 1938. ...	3

<i>Particulars.</i>	<i>Number.</i>	
Lymph produced during the quarter was 5,588 grains of pulp equivalent to ...	82,350	Cases
„ remained on 1st October 1937 enough for.	3,59,630	„
„ stock of many years which was retained for experimental purposes and observation ...	2,19,835	„
„ available enough for ...	4,41,980	„
„ issued during the quarter enough for ...	81,070	„
„ utilised for test enough for ...	2,615	„
„ issued, discarded and utilised for test, etc.	3,03,520	„
„ remained over on 1st January 1938 ...	1,38,460	„
		Rs. a. p.
Income realised, including arrears as per accounts of this office.	26	4 0
Expenditure during the quarter ..	5,997	5 1

Health of Calves.—Satisfactory. Demand for vaccine lymph was met in full during the quarter under report.

Model Range.—A total of 294 primary vaccinations was done with Glycerine lymph of varying age periods for clinical test on children before releasing for general issue and were observed to give a success rate of 84·7 per cent. The oldest Glycerine used in this range was preserved for eight months and six days from the date of production before use and freshest for about four months and two days, the average period being six months and ten days.

Percentage of successful primary cases reported during the quarter by random sampling worked out as under :—

Rural Health Unit	...	83·3 per cent.
Bangalore City	...	Not received.
Mysore „	...	76·0 per cent.
and from the rest of the State	...	77·4 per cent.

BUREAU OF HEALTH EDUCATION.

E. ANANTHA RAO, B.Sc., M.B.B.S., D.P.H.,

Superintendent.

Cinema Publicity.—During the quarter under review cinema publicity was carried on in the districts of Bangalore, Mysore, Chitaldrug and Kadur. Thirty cinema shows in all were organised to an approximate total audience of

17,120 persons. The cinema staff toured, as usual, in the departmental Van, covering a total distance of 1,301 miles.

Of the 30 cinema shows, 11 were given at the Mysore Dasara Exhibition in October 1937, ten at the villages and towns selected by Government under Rural Reconstruction Scheme, six in connection with the State Women's Conference at Chikmagalur and three in the Closepet Health Training Centre Area.

Health Talks in Schools.—The Publicity Officer, during his tours, paid visits to ten Government Primary and Middle Schools and gave health talks to teachers and pupils.

Health Exhibitions.—As in previous years, a Health Exhibition was organised during the Dasara at Mysore in October 1937. The exhibits were arranged in several sections, viz., Communicable Diseases, Sanitary Engineering, Maternity and Child Welfare, Food and Nutrition and Vital Statistics.

Health exhibitions on a small scale were put up in connection with the State Women's Conference at Chikmagalur and Central College Day Celebrations at Bangalore.

Health poster exhibitions were arranged in the following places :—

- | | |
|-----------------|--------------------|
| 1. Maradihalli. | 5. Avverahalli. |
| 2. Belaghatta. | 6. Honganoor. |
| 3. Chikjajoor. | 7. Danayakanapura. |
| 4. Dummi. | |

Newspaper Publicity.—During the quarter 14 articles on health subjects were contributed to local English and Kanarese papers.

"The Mysore Arogya".—The September 1937 issue of "The Mysore Arogya" on FOOD was printed and published. The article on MILK AS FOOD was reproduced in one of the issues of the "Health Messenger" published by the Department of Health, Philippine Islands. The Editor, "Mysore Makkalu," published the article on 'Wholesome Milk' in one of the issues. The article was illustrated. The necessary blocks relating to this article were loaned, on request, to the Secretary, National Health Association of Southern India, Madras.

Health Museum.—Two plaster-of-paris models on Child Welfare were got prepared at the Chamarajendra

Technical Institute, Mysore, for display at the Health Museum, Mysore.

Distribution of Health Propaganda Material.—One thousand and eighty-two (1,082) illustrated posters, 21,928 leaflets and 727 picture pamphlets on health subjects printed by the department were distributed. A set of 23 pictorial Red-Cross posters on health subjects were lent to the Headmaster, Fort Government High School, Bangalore, for display at the Scout Health Exhibition organised by him. Printed health propaganda materials were distributed at the Holalkere Weekly Shandy. These are distributed by the Publicity Officer whenever he goes to outside stations.

Red-Cross Propaganda.—Eleven lectures on the aims and objects of the Red-Cross Movement were delivered during the quarter.

BUREAU OF RURAL HEALTH.

(a) Health Training Centre, Closepet.

T. CHANDRASEKHARAIYA, B.A., M.B.B.S., M.P.H.,

Health Officer.

Personnel.—The staff of the Unit remained the same as in the previous quarter except for the fact that a midwife resigned. There were :—

Health Officer	...	...	1
Asst. Health Officer	...	...	1
Clerks	...	...	2
Sanitary Inspectors	...	...	5
Vaccinators	...	...	3
Public Health Nurses	...	...	5
Midwives	...	...	9
Peons	...	...	10

General Morbidity.—During the quarter 34 cases of dysentery with two deaths as against 94 attacks with 14 deaths in the previous quarter; ten cases of measles with no deaths as against 164 with three deaths; 18 cases of pulmonary tuberculosis with no deaths as against nine cases with no deaths; 18 cases of enteric fever with one death as against 18 with four deaths were registered.

Typhoid.—Of the 18 cases of typhoid that were registered 12 cases occurred in Bairapatna and two cases in Closepet town with one death, one in Devarahalli

(imported from Bairapatna), and one at Neelakantanhalli and another at Basavanpura. A total of 94 anti-typhoid inoculations was given to the contacts.

House Survey.—The house-survey was completed during the early part of the previous quarter. An extensive re-survey of the houses was started during the middle of November 1937, for noting the improvements necessary for individual houses. By the end of the quarter 3,250 houses were thus re-surveyed, and lists of improvements necessary were prepared and sent to the Village Panchayets.

Chlorination.—According to routine, all the drinking water wells and step wells were chlorinated during the quarter, the total wells chlorinated being 470.

Vital Statistics.—All the villages were visited by the Sanitary Inspectors in the second week of every month for the collection of vital statistics and the checking of births and deaths as recorded by the Patels. It was found that 94 births out of 631 (14·7 per cent) and 30 deaths out of 266 (11·3 per cent) had escaped registration. Particulars of detected births and deaths were sent to the Revenue Sub-Division Officer for taking necessary action.

The Public Health Nurses investigated and reported 104 infant deaths and four maternal deaths during the quarter.

Vaccination.—Intensive vaccination work was carried on as usual in A and B Divisions; 3,006 vaccinations as against 7,212 during the previous quarter were done. Of these 515 were primary and 2,491 re-vaccinations. The primary vaccinations gave a success rate of 68·8 per cent.

Maternity and Child Welfare.—Systematic work was carried on by the Public Health Nurses in all the Divisions. In addition to the four Clinic Centres (*viz.*, two weekly clinics at Closepet, one weekly clinic at Bannikuppe, one weekly clinic at Neelakantanhalli and one fortnightly clinic at Kailancha) another weekly clinic was started at Anakanahalli during the month of December. During the quarter 52 clinics were held at which 100 pre-natals, 300 infants and 349 pre-school children and 90 others attended as compared with 48 clinics, 117 pre-natals, 285 infants and 322 pre-school children in the previous quarter.

The five Public Health Nurses during their 6,632 home-visits, examined and registered 2,273 pre-natals, 3,597 infants and 3,520 pre-school children. The Nurses examined 843 samples of urine. They investigated 104 infant deaths out of 115 and 4 maternal deaths.

Midwives.—The Midwives of the Centre conducted 293 deliveries during the quarter and the details of the deliveries conducted in the various divisions are given below.

Divisions		Total Births recorded	Births conducted by Centre Midwives	Births conducted by untrained dais	Per cent of births conducted by Centre Midwives
A	...	153	82	71	53'6
B	...	125	47	78	37'6
C	...	132	43	89	32'6
D	...	119	63	56	52'9
E	...	107	58	49	54'2
Total	...	636	293	343	46'1

Two thousand and six post-natal visits were given by the Midwives giving an average visit of 4'6 per case as against 4'8 in the previous quarter.

Health League.—The progress of work in this direction was encouraging. Intensive work was started in Archikarahalli, Voderhalli, Aijur and Kothipura in A Division; Chickankanahalli, Dodda-ankanahalli, Kailancha and Bannikuppe in B Division; Honganur, Neelkantanhalli and Hodikeyhosahalli in C Division; Mattikere and Belakere in D Division, Ramanahalli, Abbur and Vonderguppe in the E Division. Introduction of sanitary latrines, soak-pits, soak-drains, cleaning up of rank vegetation and construction of approach roads, etc., were undertaken by the villagers.

School Medical Inspection.—School Medical Inspection was conducted in 14 schools during the quarter. Out of 607 children examined, 548 were found defective, the number of defects noted being 1,504.

Spleen Survey.—The routine spleen survey (once every four months) was done in 20 out of 24 villages selected for the purpose, in the month of November 1937. The villages situated along the river Arkavathi continued to give spleen rates of 10 and above.

Leprosy Survey.—A rapid leprosy survey was done during the quarter in the area and 17 cases were discovered.

The disease, as far as could be observed, is limited to the "D" Division. The particulars are given below:—

Name of Village	Division	No. of Lepers found	Remarks
1. Kudlur ...	C	3	Boys—one case recommended for the Leper Bangalore.
2. Hottiganhosalli ...	D	1	Advanced case
3. Bairapatna ...	D	1	do
4. Minikeredoddi ...	D	1	do
5. Kurungere ...	D	2	do
6. Chackkere ...	D	9	Four cases advanced and five in infant stage.
Total (6 villages) ...	...	17	

Laboratory.—During the quarter 22 blood samples were sent to the Public Health Institute for wassermann re-action; and 24 blood smears were examined at the Laboratory for malarial parasites. Four sputum smears for T. B., five samples of stools for ova, and 10 urine samples and two rats were also examined.

A total of 85 patients turned up at the Office for consultation. After examination they were given needful advice.

Visitors.—A Medical Committee consisting of 12 Ladies and Gentlemen with Dr. Esther Shoemaker, B.A., M.D., Superintendent, E. T. C. M. Hospital, Kolar, Miss C. Sorabji, a Fellow of the Rockefeller Foundation, Hon'ble S. Nasar Ali, Minister of Public Health, Bengal Province, with Lt. Col. A. C. Chatterji, Director of Public Health and Mr. Sen, Secretary to the Minister, visited this Unit during the quarter under report.

(b) Rural Health Unit, Mandya.

M. NARAYANA IYENGAR, L.M.P.,

Officer in Charge.

Personnel.—The Assistant Sanitary Inspector, Munilingappa, was posted to this Unit temporarily in the first week of November 1937 in place of Mr. Seetharamiah,

Assistant Sanitary Inspector, transferred to Malaria Control Station, Mudgere. The new Assistant Sanitary Inspector reported himself for duty on the 5th of November 1937, and was posted to Sathnur Range. The clerk posted to this office from the office of the District Health Officer, Mysore, reported himself for duty on December 18, 1937. The Vaccinator was on privilege leave for one month from November 8, 1937 to December 7, 1937.

Plague.—Rat falls were reported from Induvala and Sathnur Farm in the Unit area, and Thandasanahalli and Keremelkoppalu outside the Unit area. Two dead rats sent from Sathnur Farm were found positive for plague. As a preventive measure, anti-plague inoculation work was taken up immediately, and 214 inoculations were done; 48 inoculations were also done in Keremelkoppalu (outside the Unit area). Cyano-gasing of the store-room and sheds in Sathnur Farm was also done.

Cholera.—The Unit area was free from cholera.

Small-pox.—There was no case of small-pox reported. During the quarter 440 primary and 179 re-vaccinations were performed as against 774 primary and 34 re-vaccinations during the previous quarter.

Midwives' Work.—The two midwives attached to this Unit paid 136 visits to 26 villages in their jurisdiction during the quarter as against 98 visits to 24 villages in the previous quarter. They paid 557 pre-labour, 142 after-labour and 51 miscellaneous visits during the quarter, as against 493 pre-labour, 84 after-labour and 20 miscellaneous visits during the previous quarter. They conducted 10 labour cases and examined 12 urine samples. A total of 841 pre-natals was under the care of the Midwives during the quarter as against 586 during the previous quarter.

Chlorination Work.—The routine programme of chlorinating the wells in the Unit area was carried on during the quarter, and a total of 524 wells and a few ponds were chlorinated.

Dog Destruction.—Eleven stray dogs were destroyed in Mandya and Maddur Towns against 21 in the previous quarter.

Health Education.—The staff gave 1,502 talks to 7,449 persons during their visits to the villages on health subjects with a set of departmental posters as exhibits.

General Sanitation.—The services of the sweepers and scavengers were continued during this quarter also.

They visited 188 villages for intensive cleaning work which was supervised by the Assistant Sanitary Inspectors and the Health Officer.

The following places were got improved in co-operation with the Revenue Authorities.

(a) *Sivapur*.—The road from Railway Station to the Bangalore-Mysore Road was re-formed and levelled up. Compound walls were got erected to all the houses on the main road giving a decent appearance. All the houses were got white-washed. The channel water that was running in one of the side drains was deviated to a new channel in the fields, and the drain was closed up. Manure heaps in the vicinity of the Railway Station were got removed and the pits closed. Rank vegetation was removed.

(b) *Maddur Town*.—The main road was got repaired and foot-paths were provided. Compound walls were got constructed and white-washed. All the houses facing the main road were got white-washed. Manure heaps were removed and pits closed up.

(c) *Hemmanahalli*.—The Maddur-Kunigal Road was re-formed. Manure heaps in the vicinity of the village and along the road were got removed and the pits were got filled up with earth. The houses facing the road were got white-washed.

Vital Statistics.—The Assistant Sanitary Inspectors verified 54 births and 28 deaths and detected 12 births and two deaths, which had not been reported by the Patels.

Spleen Survey.—Spleen surveys of Sivapur, Hale-Budanur and Thumbakere villages were conducted during the quarter; 140 children at Hale-Budanur, 44 at Thumbakere and 60 at Sivapur were examined, giving a spleen rate of 18.5, 27.2 and 16.7 respectively.

Malaria.—Malaria took an epidemic form in the village of Thumbakere in the month of November 1937, and the village was visited four times during that month by the Health Officer and the Assistant Sanitary Inspector. Eight blood smears were taken, and on examination, two were found negative and the rest positive for malaria parasites. A total of 922 grains of quinine was distributed among 71 patients.

Laboratory Work.—Fifteen blood smears for M.P., two sputum for T. B., eight urine samples for sugar and albumin and seven spleen smears for B. Pestis were examined at the Unit Laboratory. Seven blood samples for W. R., two for Widal and one faecal sample for

cholera (suspected) were sent to the Public Health Institute, Bangalore, for examination.

Conference.—During the quarter conference of the unit staff was held six times at which the work done by the staff was discussed.

BUREAU OF SANITARY ENGINEERING.

N. KRISHNIENGAR, B.E.,

Sanitary Engineer.

The Bureau consists of five sections in addition to the two sub-divisions, one at Mysore for the City water distribution and another at Bethamangala for the Kolar Gold Field water-supply.

The five sections are :—

1. Investigation and preparation of schemes for water supplies, original construction works and annual maintenance of 24 of the existing installations all over the State, and inspecting and reporting on the working of the rest. The Bureau is not responsible for the water-supply work for Bangalore City.
2. Investigation, preparation of schemes and the constructional work of drainage works throughout the State.
3. Sanitary fittings including house connections and bore-hole latrines.
4. Preparation of town planning schemes.
5. Investigation and boring of deep bore-wells for supply of protected water supplies in towns and minor Municipalities.

1. WATER SUPPLY.

In all 53 towns have been provided with water supply. Of these the annual maintenance works of 24 towns have been taken up by this Bureau. The maintenance of the water supply of Chikmagalur Town has been handed over to this department from November 12, 1937, by the Chikmagalur Municipality. The appended list shows the works under progress and also under maintenance.

2. DRAINAGE WORKS.

(a) *Bangalore City Drainage.*—The works of main sewer line and street sewers in Arlepet and Akkipet areas are almost completed.

Estimate for main outfalls sewer line is under revision. The estimates for the different areas of the City that had been submitted for sanction of Government

were returned for furnishing certain information as pointed out by the Chief Engineer which were being attended to. The question of having a single outfall for the whole City or one main outfall with subsidiary outfalls was investigated and a note prepared and submitted to be placed before the Drainage Committee for consideration and their decision.

Preliminary arrangements for the preparation of a comprehensive drainage scheme for Bangalore City have been taken up.

(b) *Constructional Work.*—Drainage works in Tumkur, Doddballapur, Chintamani, Goribidnur, Arsikere, are under progress. The drainage works in Jagalur and Magadi are started. The statement shows the estimated amount and the outlay to the end of December 1937.

(c) *Projects Prepared.*—Comprehensive drainage projects of Sagar, Closepet, Channapatna, Hunsur and Kolar were prepared and forwarded to the respective Municipalities. Part schemes of Chamaraaj Nagar, IV stage, Anekal, Kankanhalli, Closepet, Channapatna, Kolar, Hunsur and Kadur were also prepared for working out during this year.

3. SANITARY FITTINGS INCLUDING HOUSE CONNECTIONS AND BORE-HOLE LATRINES.

In addition to the ordinary maintenance of sanitary installations of all the Government buildings in Mysore and Bangalore, the works shown in the list were under progress.

Seven bore-hole latrines were constructed during the quarter in Nandidroog Mines, Kolar Gold Field.

4. TOWN PLANNING SCHEMES.

Town planning schemes for the following were prepared :—

(1) Improvement of junction opposite to Town Hall at Chitaldrug, (2) Proposed junction opposite to Park at Kolar, (3) Extension of Malvalli Town, (4) Adikarnataka Colony at Closepet, (5) Extension opposite to Sub-Divisional Officer's quarters at Chikballapur and (6) Lay-out of colony for poor people at Chitaldrug Town.

Type designs with estimates of Slaughterhouse and Town Hall were prepared and forwarded to Doddballapur and Malur Municipalities.

Detailed surveys of Honganur, Hodakehosahalli, Kodlipura, Sunnagatta of Channapatna Taluk, were conducted for rural improvement.

5. BORE-WELLS.

During the quarter, 13 drills were working in 13 places. The number of bore-wells completed during the quarter was five.

Analysis of Water Samples.—During the quarter 123 samples of water—bacteriological 98 and chemical 25—were analysed. The number of places visited by the Chemist for the purpose was 40.

List of places where works were under progress in various stages at the end of December 1937.

No.	Places	Amount of Estimate in rupees	Outlay to the end of Dec. 1937 in rupees	Remarks
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(1) WATER SUPPLY.

(a) Capital Works.—

1	Davangere ...	1,99,000	1,92,282	
2	Vidhuraswatha Jatra	2,930	2,167	
3	Construction of filter for Chitaldrug Town Water-supply.	20,000	7,401	
4	Heskote ...	17,440	9,656	
5	Chikmagalur ...	71,381	7,562	
6	Constructing settling tank, Nanjangud.	8,000	7,801	
7	Melkote ...	10,000	4,950	
8	Laying mains from Chamaraja Road to Krishnaraja Road, Chamaraja Agrahar, Kannegowdanakoppal, Mysore.	8,830	7,435	
9	Jatra at Chunchankatte, Krishnaraja Nagar.	7,222	2,112	
10	Mudukatore Jatra ...	8,013	6,663	
11	Hemagiri Jatra ...	7,007	2,995	
12	Fig cultivation at Ganjam village.	12,500	12,985	
13	Fire Hydrants to the Carriage Workshop at Railway Central Workshop, Mysore.	2,024	861	

No.	Places	Amount of estimate in rupees	Outlay to the end of Dec. 1937 in rupees	Remarks
14	Erecting three tanks on the top terrace of the Medical College, Mysore.	1,208	736	
15	Erecting a galvanised tank on the terrace of Park House, Mysore.	349	287	
16	Water connection to Parsi Burial Ground, Mysore.	700	...	
17	Water supply to Attibele village.	8,000	3,463	
18	Improving water supply distribution system in Mysore City.	48,985	23,770	
19	Improving water supply at Hassan.	52,625	19,355	
20	Improving water supply to Saklespur Town.	29,125	16,376	
21	Water supply to Adikarnataka Colony, Mandya.	1,460	1,239	Completed.
22	Extending water supply main block No. IV, Vani Vilas Mohalla.	2,325	2,121	
23	Water supply to the extension behind electrical colony at Mandya.	1,410	1,080	Do
24	Additional taps to Chikballapur Town.	2,575	502	
25	Foundation and erection for deep well pump, to bore-well at Dobb's Bungalow at Tumkur.	1,890	664	
26	Ganjam water supply.	19,988	15,953	Do
27	Arsikere ...	33,110	26,312	
28	Closepet ...	25,850	22,569	
29	Chikballapur water supply.	3,930	3,968	
30	Water supply to Begur and Haugle village.	3,200	1,969	
31	Water supply to Jagalur town.	2,700	2,329	

No.	Places	Amount of estimate in rupees	Outlay to the end of Dec. 1937 in rupees	Remarks
32	Improving water supply to the portion in Erangere Rajput Block to the East and West of Doddapet, Lashkar Mohalla, Mysore.	6,775	1,550	
33	Laying 6" C. I. main erecting tank, Narasimharaja Mohalla, Mysore.	21,055	18,907	
34	Fixing meter in Mysore City.	25,000	18,907	
(b) Annual Maintenance.—				
1	A. M. of Vani Vilas Water Works, Mysore.	...	62,816	
2	" K. G. F. Water Works, Bethamangala.	82,500	38,460	
3	" Shimoga ...	23,997	3,723	
4	" Doddballapur ...	3,343	1,236	
5	" Robertsonpet and Andersonpet.	28,700	15,313	
6	" Hole-Narsipur	4,124	3,156	
7	" French-Rocks	1,912	138	
8	" Channapatna	...	1,581	
9	" Ghati Subramanyam Jatra.	693	16	
10	" Konanur ...	...	871	
11	" Kolar ...	4,156	1,951	
12	" Chitaldrug ...	...	1,011	
13	" Santhemarahally.	1,233	369	
14	" Seringapatam	3,150	24	
15	" Krishnaraj Nagar.	2,493	1,116	
16	" Arsikere ...	...	1,540	
17	" Kunigal ...	...	550	
18	" Mandya ...	3,000	586	
19	" Road watering in Mysore.	2,400	970	
20	" Satnur ...	...	188	
21	" Ganjam Fig cultivation.	1,800	229	
22	" Closepet ...	2,644	787	
23	" Chikmagalur.	...	116	
24	" Melkote ...	...	...

No.	Places	Amount of estimate in rupees	Outlay to the end of Dec. 1937 in rupees	Remarks
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(2) DRAINAGE.

1	Bangalore ...	2,61,385	2,63,041	
2	Chamarajnagar, 3rd stage.	10,500	8,200	Completed.
3	Banavar ...	4,098	3,402	Do
4	Goribidnur ...	6,854	6,454	Under progress.
5	Dodballapur ...	6,250	4,471	Do
6	Channarayapatna ...	3,000	2,999	Completed.
7	Chintamani ...	3,000	...	Do

(3) SANITARY FITTINGS.

1	Sanitary installations to Railway Central Workshop.	6,850	5,328	
2	Sanitary installations to Telephone Exchange.	1,120	1,196	Completed.
3	Sanitary installations to New Mental Hospital.	14,600	6,759	
4	Providing S. F. to 1st and 2nd floor of Exhibition Building at Mysore.	1,400	1,026	
5	Fixing water closet to the Radiological Block, Victoria Hospital, Bangalore.	140	138	
6	Providing sanitary installation in the new Railway Offices at Mysore.	4,200	3,060	
7	Providing S. F. with original arrangements to the Inspection Lodge at Sivasamudram.	1,780	1,564	
8	Providing S. F. in the new Counter Ward at the Vani Vilas Hospital, Mysore.	....	157	

No.	Places	Amount of Estimate in rupees	Outlay to the end of Dec. 1937 in rupees	Remarks
9	Providing Hindustani closet drainage arrangement in the proposed Lalitha-mahal, Mysore.	300	265	
10	Constructing soakage pit for the servants' latrine at Carlton House, Bangalore.	110	109	
11	Ward Nos. 5 and 6, Victoria Hospital.	834	828	Completed.
12	Providing a sink and gas connection and other alterations in the Medical College, Mysore.	463	427	
13	Providing S. F. for the quarters of the Superintendent, and Sub-Assistant Surgeon at New Mental Hospital, Bangalore.	...	704	Do
14	Improvements of sanitary arrangements in Exhibition Buildings in Mysore.	...	2,455	
15	Providing sanitary fittings and drainage arrangements in latrine, New Mental Hospital, Bangalore.	1,514	1,529	
16	Providing sanitary fittings for the White House, Mysore.	1,155	644	
17	Providing sanitary installations in the office of the Superintendent, Intermediate College, Bangalore.	790	781	Do

BUREAU OF VITAL STATISTICS.

E. R. SUNDARARAJAN, M.A. (Hons.),

Superintendent.

During the quarter, the Superintendent toured in the districts of Bangalore and Shimoga in connection with the introduction of the new system of registration and compilation of vital statistics in these two districts as per Government Order No. G. 2990-3016 - P. H. 154-36-4, dated October 7, 1937.

(a) Population.

The estimated populations of the districts and cities as on July 1, 1937 were:—

<i>District or City.</i>	<i>Estimated Population.</i>		
Bangalore	1,191,051
Chitaldrug	709,110
Hassan	605,214
Kadur	356,753
Kolar	885,195
Mysore	1,579,879
Shimoga	537,480
Tumkur	917,706
Total (Mysore State)			6,782,388

Bangalore City...	...	...	206,670
Mysore City ...	...	...	121,933
Kolar Gold Fields	...	...	83,460

(b) Parturition Statistics.

The statistics of parturition cases collected from the Maternity Hospitals and Female Dispensaries are given below:—

*Parturition Cases conducted in Maternity Hospitals
and Female Dispensaries.*

No.	Place	Institutions	Number of Labour cases conducted	Number of Maternal Deaths	Maternal Mortality rate
					Per 1,000 births.
1	Bangalore City	Vani Vilas Hospital	1,189	12	10.1
2	Mysore City	Do	535	17	31.8
3	Do	Holdsworth Memorial Hospital.	139	1	7.2
4	Kolar Gold Fields	Maternity Hospital	139	4	28.8
5	Anekal	Female Dispensary	...	...	...
6	Channapatna	Do	22	...	...
7	Chikballapur	Do	1	...	...
8	Chikmagalur	Maternity Hospital	68	5	73.5
9	Chintamani	Female Dispensary	2	...	...
10	Chitaldrug	Do	...	Not reported.	...
11	Davangere	Maternity Hospital and Female Dispensary.	156	1	6.4
12	Hassan	Female Dispensary and Maternity.	20	...	...
13	Do	R. F. Memorial Hospital.	16	1	...
14	Hebbal	Female Dispensary	8	...	...
15	Hole-Narsipur	S. N. Maternity Hospital	69	2	29.0
16	Hunsur	Female Dispensary	5	...	...
17	Kolar	Female Dispensary	14	...	...
18	Do	E. T. C. Memorial Hospital.	...	Not reported.	...
19	Koppa	Female Dispensary	2	...	...
20	Krishnarajnagar	Female Dispensary and Maternity.	49	...	...
21	Mudgere	Combined Dispensary	21	...	...
22	Mandagadde	Maternity Hospital	...	Not reported.	...
23	Nanjangud	Female Dispensary	53	...	...
24	Sagar	Do	10	...	...
25	Saklespur	Women and Children Hospital.	9	1	...
26	Shimoga	Maternity Hospital	92	4	43.5
27	Sira	Female Dispensary	51	...	...
28	Tarikere	Do	115	2	17.4
29	Tiptur	Maternity Hospital	38	1	...
30	Tirthahalli	Do	25	3	...
31	Tumkur	Do	77	3	39.0
		Total (Mysore State)	2,925	57	19.5

During the quarter, 2,925 labour cases were conducted. The number of maternal deaths reported was 57 giving a maternal mortality rate of 19.5 per 1,000 births, as compared with 6.73 in the previous quarter. The causes for such variations in the maternal mortality rates are being investigated.

(c) Epidemic Diseases.

The following table gives the number of attacks and deaths from plague, small-pox and cholera in the districts and cities, indicating the total number of places so infected and the corresponding population affected.

Plague.—During the quarter 947 attacks and 487 deaths from plague were reported as compared with 661 attacks and 366 deaths in the previous quarter. The two districts chiefly affected were Bangalore with 329 attacks and 133 deaths and Kolar with 346 attacks and 200 deaths. In all 193 places were infected as against 103 in the previous quarter.

In Bangalore City 12 attacks and 9 deaths occurred, whilst in Mysore City 41 attacks and 18 deaths were reported. In Kolar Gold Field 27 attacks and 14 deaths were registered.

Small-pox.—A further decline in the incidence of small-pox was registered. A total of 168 attacks and 17 deaths were reported in 15 places as compared with 154 attacks and 37 deaths in 25 places in the preceding quarter. One attack was reported in Bangalore City and similarly one in Kolar Gold Field.

Cholera.—*As compared with 337 attacks and 148 deaths in 42 places in the previous quarter, 21 attacks with 16 deaths in 9 infected places were reported during the quarter. The cities were free from this disease. Of the eight districts, Bangalore, Hassan and Shimoga Districts reported stray cases.

**(d) Vital Statistics reported in the previous Quarter
(July-September 1937)**

Corrected statistics reported for the quarter July—September 1937 are given below:—

			<i>Previous Quarter</i>	<i>Current Quarter</i>	<i>Corresponding quarter of previous year</i>
			<i>April-June 1937.</i>	<i>July-Sept. 1937.</i>	<i>July-Sept. 1936.</i>
Births	...	...	35,244	38,433	34,686
Still-births	...	...	538	568	547
Deaths, all Causes	...	...	22,756	22,836	22,581
Plague	...	...	500	1,500	502
Small-pox	...	...	298	196	993
Cholera	...	..	1,614	307	161
Malaria	...	...	7,095	6,989	7,110
Typhoid	...	...	1,088	1,131	1,050

* On page 45 of Vol. IX, No. 3, it has been wrongly stated that the State was free from cholera in that quarter. There were 337 attacks and 148 deaths in that quarter.

	Previous Quarter	Current Quarter	Corresponding quarter of previous year
	April-June 1937.	July-Sept. 1937.	July-Sept. 1936.
Other Fevers ...	2,485	2,553	2,627
Dysentery and Diarrhœa	1,479	1,585	2,008
Respiratory Diseases ...	1,047	1,029	1,123
Consumption ...	1,209	1,271	1,156
Leprosy ...	216	205	208
Child-birth ...	550	564	546
Suicide ...	66	60	52
Drowning ...	237	211	195
Wounds and Accidents...	179	168	160
Killed by Wild Beasts ...	14	27	12
Snake-bite ...	56	43	33
Rabies ...	14	15	17
All Other Causes ...	4,637	4,982	4,628

Births.—In the quarter under report, 38,433 births were reported giving a birth-rate of 22·67 as compared with 20·96 in the previous quarter. The rates in the districts varied from 27·74 in Kolar to 16·96 in Kadur. The rate was very high in Kolar Gold Field being 61·83 and slightly below normal in Bangalore City (38·50) and Mysore City (38·45). The rates for the districts are very low as compared with the estimated average of about 44 per mille of population.

Still-births.—The number of still-births reported was 568 giving a still-birth rate of 14·56 as against 15·04 in the previous quarter. This rate varied from 22·61 in Kadur District to 7·02 in Tumkur District. The rate was highest in Bangalore City (48·33); it was 32·20 in Mysore City and only 9·22 in Kolar Gold Field.

Deaths.—The number of deaths reported during the quarter was 22,836 giving a death-rate of 13·47 as compared with 13·53 in the previous quarter. The rates varied from 16·36 in Shimoga District to 10·26 in Tumkur District. As in the case of births, the death reporting is also incomplete and the rates are very much below the estimated rate of about 24 per mille of population.

The death rate in Kolar Gold Field was 28·80, the rates in Bangalore City and Mysore City being 23·94 and 25·69, respectively.

The maternal mortality during the quarter was 14·46 per 1,000 births (including still-births) as compared with 15·37 in the preceding quarter.

Infant Mortality.—In the quarter under report, a total of 3,530 deaths were reported of infants under one year of age, giving an infant mortality rate of 91·85 as against 88·04 in the previous quarter. The rates in the districts varied from 118·31 in Kadur District to 78·60 in Mysore District. These rates are very much below the estimated rates of 240 per 1,000 live-births.

In the case of cities, the rates were 136·25 in Bangalore City, 122·01 in Mysore City and 129·46 in Kolar Gold Field. In the case of infant deaths, the reporting in City areas appears to be as bad as in rural areas.

TABLE 1.

*Reported number of Births, Deaths and Infant Deaths in the Districts and Cities of the
Mysore State in the Quarter, July—September 1937.*

District	Estimated popula- tion as on July 1, 1937	Reported births (excluding Still-births)			Reported deaths (excluding Still-births)			Reported deaths of infants under one year of age				Reported Still births					
		July	August	Sept.	Crude birth rate	July	August	Sept.	Infant morta- lity	July	August	Sept.	Still Birth Rate				
Bangalore ...	1,191,051	2,484	2,522	2,568	25.44	1,268	1,364	1,349	13.37	219	220	237	89.25	42	55	50	19.04
Chitaldrug...	709,110	1,728	1,471	1,442	26.18	644	591	658	10.68	153	133	124	88.34	13	20	26	12.55
Hassan ...	605,214	1,020	882	1,020	19.31	752	729	892	15.68	125	96	119	116.86	16	17	23	18.80
Kadur ...	356,753	520	511	482	16.96	465	444	454	15.28	49	81	49	118.31	8	9	18	22.61
Kolar ...	885,195	2,038	1,996	2,104	27.74	1,235	1,207	1,256	16.71	204	201	210	100.20	25	18	27	11.28
Mysore ...	1,573,879	2,483	2,316	2,262	17.88	1,497	1,696	1,716	12.43	190	184	181	78.60	35	32	34	14.10
Shimoga ...	537,480	1,055	973	898	21.78	780	693	793	16.86	108	100	100	105.26	21	16	23	20.09
Tumkur ...	917,706	1,824	1,795	2,039	24.66	782	767	804	10.26	137	147	163	79.00	15	14	11	7.08
Total (Mysore State).	6,782,388	13,152	12,466	12,815	22.67	7,423	7,491	7,922	13.47	1,185	1,162	1,183	91.85	175	181	212	14.56
Total (Cities)	412,063	1,566	1,489	1,396	43.21	857	856	908	25.44	192	187	202	130.53	54	48	60	33.02
Bangalore City.	206,670	655	728	606	38.50	388	400	454	23.94	87	81	103	136.25	33	41	37	48.33
Mysore City	121,938	467	314	391	38.45	277	261	245	25.69	60	47	36	122.01	17	7	15	32.20
Kolar Gold Field.	83,460	444	447	399	61.83	197	195	209	28.80	45	59	63	129.46	4	...	...	9.22

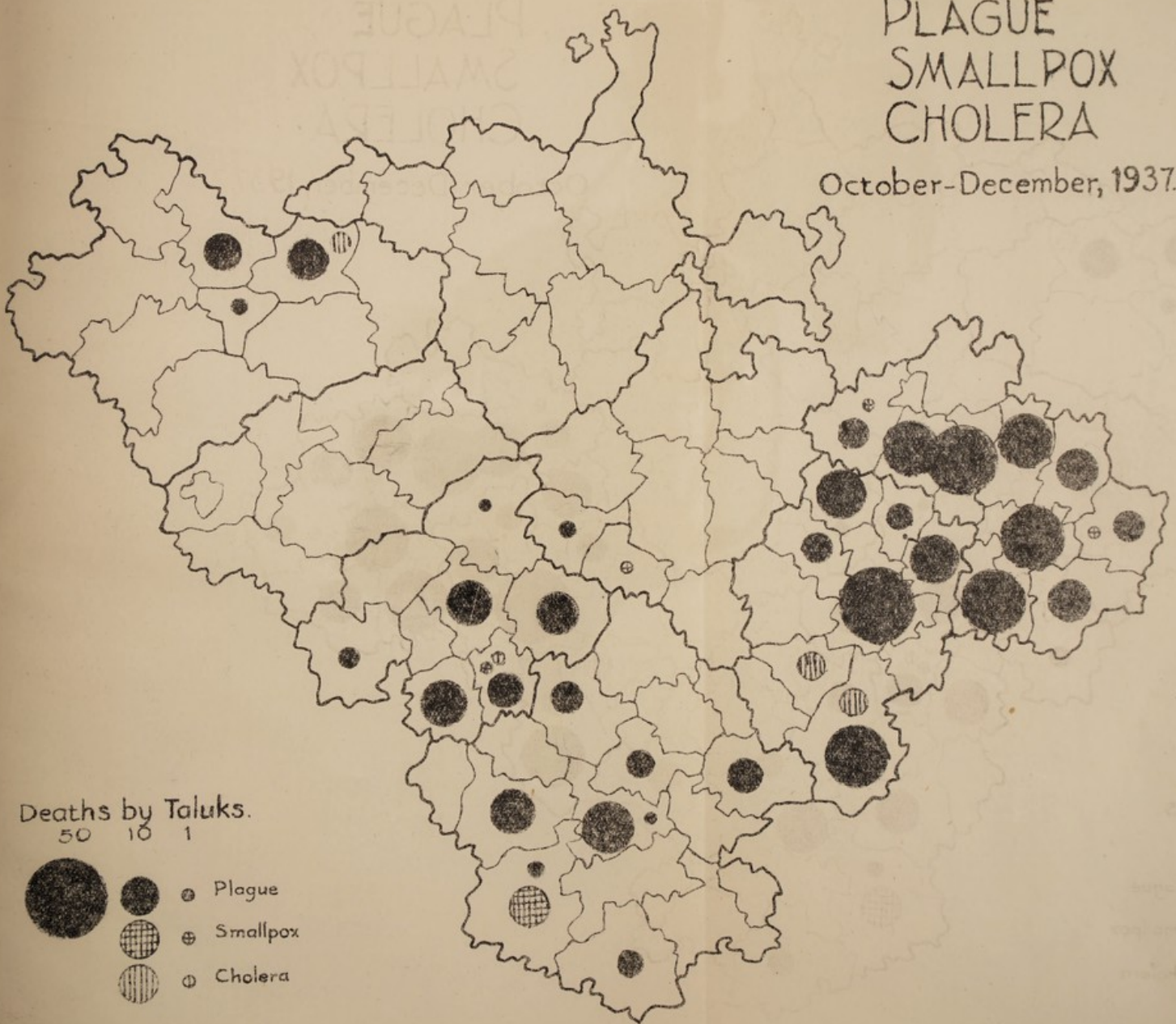
TABLE 2.
*Reported Deaths in the Districts and Cities of the Mysore State in the Quarter, July—September 1937,
 classified according to the chief Causes of Death.*

District	Plague	Small-pox	Cholera	Malaria	Typhoid	Other Fevers	Dysentery and Diarrhoea	Respiratory Diseases	Consumption	Leprosy	Child-birth	Suicide	Drowning	Wounds and Accidents	Killed by wild beasts	Snake-bite	Rabies	All other causes	Total Deaths	
																			July to Sept. 1937	April to June 1937
Bangalore	314	16	14	719	164	304	297	257	332	26	71	60	42	44	2	7	6	1,350	3,981	8,522
Chitaldurg	1	46	81	508	122	301	115	102	80	32	65	3	22	19	7	6	..	383	1,893	2,261
Hassan	192	12	12	1,276	96	138	97	50	65	8	59	4	27	11	6	3	..	317	2,373	1,969
Kadur	..	2	28	763	70	65	104	49	31	15	51	4	6	7	1	2	2	163	1,363	1,209
Kolar	441	28	2	654	119	672	217	170	185	38	65	6	40	29	1	5	1	1,025	3,698	3,573
Mysore	518	70	135	1,282	253	467	450	226	289	42	104	19	35	22	8	6	5	978	4,909	5,492
Shimoga	34	2	30	977	160	259	163	103	40	20	79	3	15	5	..	5	..	371	2,266	2,331
Tumkur	..	20	5	810	147	347	142	72	249	24	70	5	24	31	2	9	1	395	2,353	2,399
(Mysore State) Total	1,500	196	307	6,989	1,131	2,553	1,585	1,029	1,271	205	564	60	211	168	27	43	15	4,982	22,836	22,766
(Cities) Total	27	1	3	44	46	42	334	316	218	3	34	2	12	26	2	2	5	1,504	2,621	2,511
Bangalore City	4	1	3	4	28	18	152	171	113	2	11	1	6	9	2	1	2	709	1,237	1,158
Mysore City	22	..	..	25	18	3	100	63	92	1	23	..	1	7	..	1	3	424	788	724
Kolar Gold Fields...	1	..	..	15	..	21	82	82	13	..	..	1	5	10	..	..	..	371	601	629

MYSORE STATE

PLAGUE
SMALLPOX
CHOLERA

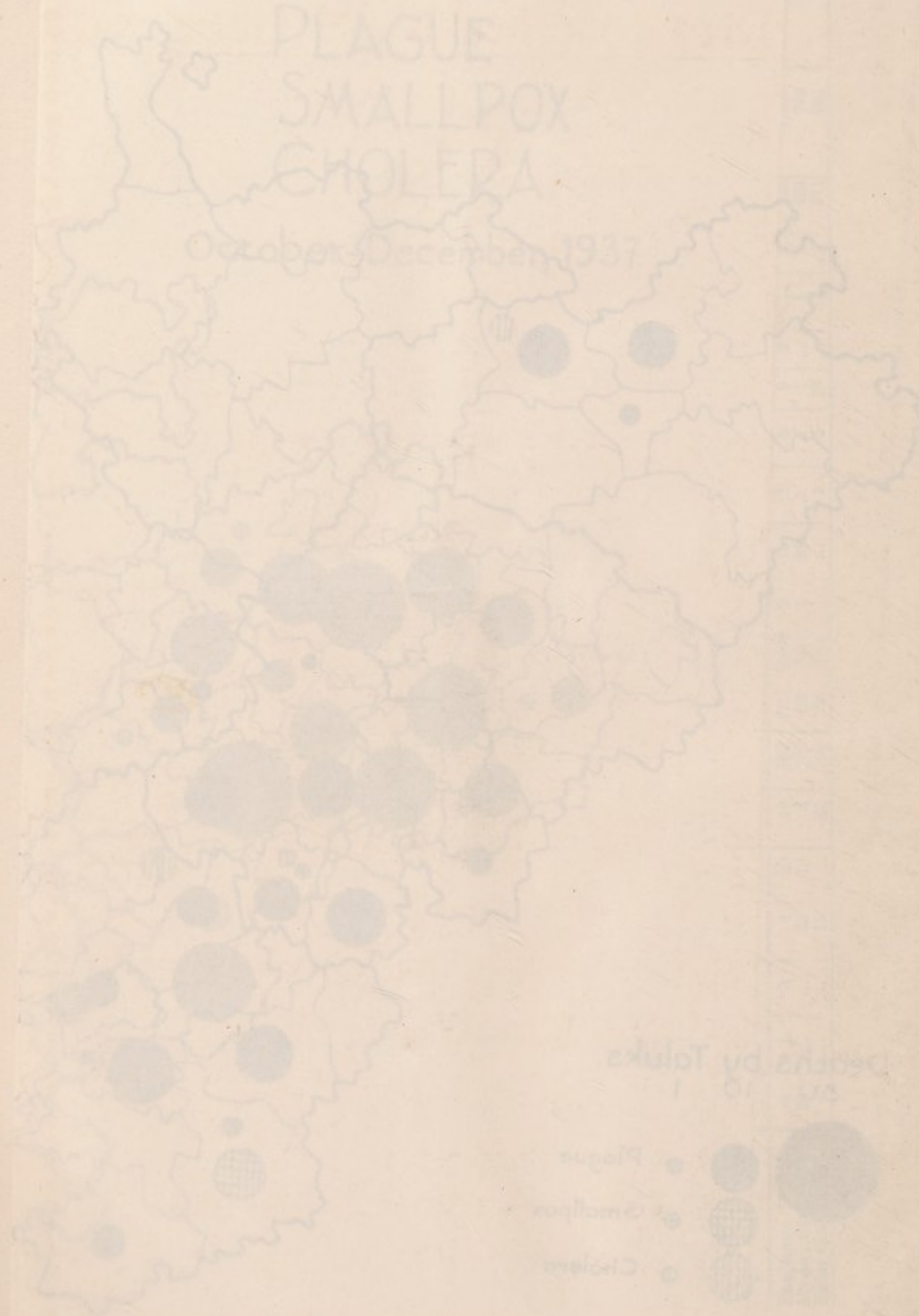
October-December, 1937.



DISTRICTS ———
TALUKS ———

PLAGUE SMALLPOX CHOLERA

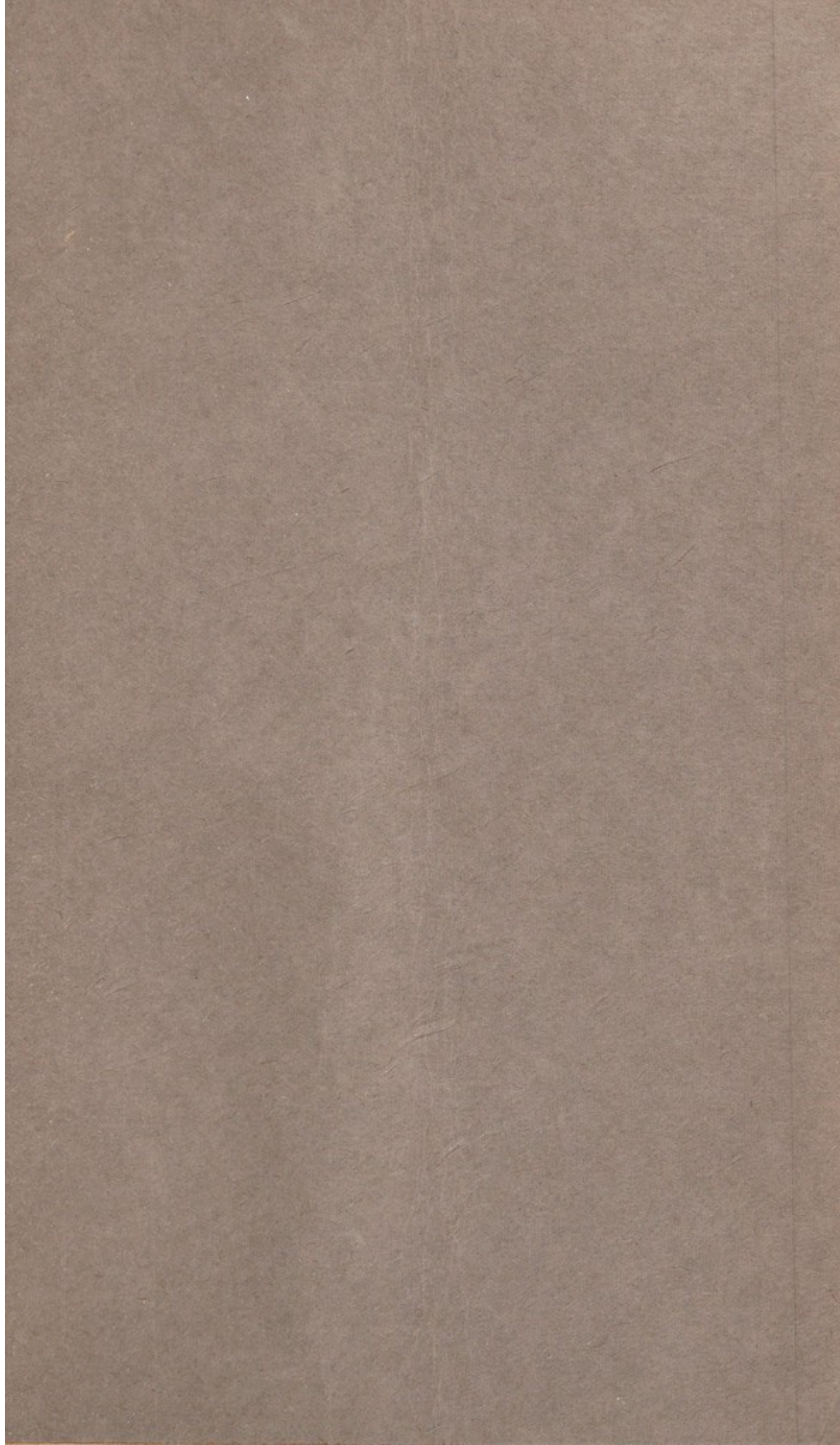
October-December 1937



Deaths by Taluks

- Plague
- Smallpox
- Cholera





MYSORE STATE DEPARTMENT OF HEALTH.

The following Bulletins are published by Government:—

- No. 1. **Report on a Health Survey of Mysore—**
By W. C. SWEET, B.Sc., M.D., Dr.P.H., Consultant in Health in Mysore, Bangalore, 1928.
- No. 2.* **Report on Tuberculosis in Mysore State—**
By P. S. CHANDRASEKHAR, M.D., sometime Officer-in-charge of Tuberculosis Survey in Mysore, 1928.
- No. 3.* **Report on a Sanitary Survey of the City of Bangalore for the Year 1927—**
By MOHAMED USMAN, L.M.S., Retired Senior Surgeon and Sanitary Commissioner, Bangalore, 1928.
- No. 4.* **Guineaworm Disease in Mysore State—**
By J. V. KARVE, M.B., CH.B., D.P.H., Retired Director of Health in Mysore, Bangalore, 1929.
- No. 5. **Report of the Delegation of the British Social Hygiene Council (Inc.), to the Government of Mysore, 1929.**
- No. 6. **Report on the Present Status of Birth, Death and Epidemic Diseases Reports in Mysore District, Bangalore City and Kolar Gold Fields, with Suggestions for Improvement—**
By E. R. SUNDARARAJAN, M.A. (Hons.), Superintendent, Bureau of Vital Statistics, Bangalore, 1929.
- No. 7. **A Survey of Mysore State for Enlarged Spleens and for Hook-worm and other Helminthic Infections—**
By W. C. SWEET, B.Sc., M.D., Dr.P.H., Consultant in Health in Mysore, Bangalore, 1929.
- No. 8. **Physician's Pocket Reference to the International List of Causes of Death, 1932.**
- No. 9. **Handbook of the Mysore State Department of Health—**
By J. V. KARVE, M.B., CH.B., D.P.H., Retired Director of Health in Mysore, Bangalore, 1933.
- No. 10. **Notes on Malaria in Mysore State—**
By W. C. SWEET, B. A. RAO and D. NURSING, 1934.
- No. 11. **Organic Manure from Street Refuse and Night Soil at Mysore City, India—**
By J. J. MIELDAZIS, B.Sc., C.E., M.A.S.C.E., Former Honorary Sanitary Engineer, 1936.
- No. 12. **Periodicity of Cholera in Mysore State—**
By P. Parthasarathy, L.M.S., B.S.Sc., L.R.C.P., L.R.C.S., D.T.M., D.P.H., Director of Public Health and E. R. Sundararajan, M.A. (Hons.), 1937.

*Not available.