(1) Number of pages 12

(2) Date of repair 14.5.82

(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue DEPARTMENT

G.O. No. 5874.	Press.
~~B.P. No.~~	Mis.
Dated 27.9.1877 197 .	

Not to be folded or roughly handled.

Archives 1—10,006—19-4-79.

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

14th September 1877, No. 1211.

Vital Statistics.

Read the following paper:—

No. 32. *From Surgeon-Major W. R. CORNISH, F.R.C.S., Sanitary Commissioner for Madras, to the Chief Secretary to Government, dated 5th September* 1877, *No.* 1286.

I have the honor to submit, herewith, for the information of His Grace in Council, and for publication in the *Fort St. George Gazette*, the abstract return of registration of births and deaths in the several districts of the Presidency for the month of June. A delay has been caused in the submission of this return by the non-receipt of the monthly statement from the districts in the margin, and which had to be telegraphed for.

Godavery.
Nilgiri.

2. BIRTHS.—The number of births registered was 44,074, of which 22,767 were males, and 21,307 females. The birth ratio for the month of the whole Presidency was 18·4 per mille, against 21·1 per mille, the average of the same month for the previous five years.

The highest birth ratio (36·1 per mille) is recorded in the town of Madras, but the population is so abnormally increased by influx of persons from famine areas that this ratio (calculated on the normal population) is not a true index of the birth-rate in the town. As a rule, the Famine Districts show birth ratios below the average, as will appear in the following table:—

Birth ratios in Famine Districts.

	June 1877.	Average of June registered for five previous Years.
Nellore	6·7	12·9
Chingleput	16·0	21·4
Madura	19·9	23·8
Kurnool	12·0	20·6
Cuddapah	11·9	10·2
Bellary	15·1	26·1
North Arcot	17·2	23·1
Salem	13·5	23·8
Coimbatore	12·7	15·4

3. If it be a fact (and not merely a surmise) that temporary sterility is one of the results of famine, we may expect to find the birth-rates low and decreasing in the future, and especially in the months (allowing for the natural period of gestation) corresponding with the incidence of severest famine pressure.

4. DEATHS.—The total deaths registered in June were 109,721. This number exceeds the May registration by 5,292. The disparity in the proportion of the sexes, as noticed in former reports, has continued in June. The registration gives 60,060 males, and only 49,191 females. If the female deaths had been registered in anything like the proper proportion the total would have been nearer 120,000 than 109,721.

5. Of the total deaths 25,862 are registered as due to "Cholera," 6,003 to "Small-pox," 31,278 to "Fevers," 7,692 to "Bowel complaints," 1,408 to "Violence,"

and 37,008 to "Other" causes not specified. As regards the cholera mortality it is necessary to record that it very imperfectly represents the prevalence of actual cholera. I have seen a great number of cases that have been returned as cholera, and which were simply the diarrhœa of starvation, having none of the real characteristics of epidemic cholera. At the same time epidemic cholera has prevailed in many parts of the country, attacking the strong and robust, as well as the feeble and half starved, but it has not caused anything like the amount of mortality represented by these figures.

6. On the other hand, the entries under the head of "Bowel-complaints," though in excess of the average, do not at all represent the amount of fatal diarrhœa and dysentery prevalent in the famine-stricken districts. It has been ascertained, that, in many districts, the term "bowel-complaint" has been translated into the vernacular to mean "colic" or "belly-pain," and that deaths from diarrhœa and dysentery are never registered under this head, but under "Other" diseases. Steps have been taken to correct the error, but it will be some months before the instructions on this point can reach the comprehension of the village Curnams who register the deaths, and, meanwhile, the accuracy of our figures as to the supposed causes of death are very unreliable.

7. The per mille ratios of deaths, registered in the Famine Districts, for the first half of the year, are shown in the following table:—

Districts.	January.	February	March.	April.	May.	June.
Madras	112·9	132·6	151·6	123·1	121·9	110·9
Nellore	97·1	84·1	31·7	24·1	23·02	26·3
North Arcot	83·1	74·2	58·1	40·1	51·3	59·1
Cuddapah	118·7	101·5	68·2	58·6	69·8	74·9
Bellary	67·4	93·3	100·8	72·2	73·8	91·2
Kurnool	78·2	65·6	64·1	65·8	67·6	58·4
Chingleput	78·1	55·7	52·9	38·3	46·3	58·3
Salem	62·6	63·5	78·9	72·9	93·1	86·5
Coimbatore	33·5	39·7	34·8	41·03	59·6	51·4
Madura	33·9	23·3	27·3	28·4	47·5	46·9

The death registration in the last few months, in the Nellore District, has been commented on before, and I have recently received a letter from the Collector on the subject, which I have the honor to append, in illustration of the difficulty of getting correct reports, especially in famine times, when village-officers are absent from their posts, and the registration work is not even attempted to be done. The death ratio for the town of Nellore in June was 67·3, and from the state of the district, I apprehend that the rural circles are not much more healthy than the town.

8. In the first half of the present year we have registered 629,455 deaths, or 369,822 in excess of the average for the same period of the last five years. But the excess has been greater in the Famine Districts than in the Presidency as a whole, for whereas 126,277 deaths represent the average mortality in the ten Famine Districts, 433,637 deaths have been registered in them up to the end of June, giving an excess of 307,360 over the average mortality of ten districts named in paragraph 7.

9. The deaths occurring in relief-camps are, in some cases, included in the district returns, but not so in others. Definite instructions have been given on this point; but, owing to the fact that the Village Munsifs have generally nothing to do with the camps, they, as a rule, have neglected to enter the deaths occurring in camps within the village boundaries. It is most desirable that all deaths in relief-camps should be shown in the village and taluq returns, but for the first half of the year the figures will have to be adjusted after due inquiry.

10. For the month of June I have received weekly reports of the strength and deaths in eighty-four relief-camps or centres. These figures do not represent all the

relief-camps then in existence, but they serve to indicate both the extent of mortality, and the nature of the diseases causing death, amongst the worst sufferers by the famine.

11. From these figures I observe that out of a daily strength of 80,722, 6,461 persons died during the month of June, the ratio of mortality to daily strength being in the proportion of 831·9 per mille per annum. (I am sorry to say that, so far as the returns for July and August have reached me, even this high rate of mortality is exceeded.)

12. In the returns from relief-camps the specific causes of mortality are not always given. These camps are mostly under the medical charge of subordinates who are able to recognise disease, and the almost universal entries are "Famine Diarrhœa," "Bowel-complaints," "Dropsy," and "Debility." Now and then a death from cholera or small-pox is reported, but not one-tenth of the mortality occurring in relief-camps is ascribed to any other than starvation diseases. I mention the subject because an impression has gone abroad that cholera and small-pox are the chief immediate causes of mortality in the famine-stricken. They are so to some extent, but not so much as is generally supposed.

13. As I have seen more of the country, and of the people on famine relief, than most persons who are qualified to give an opinion on this matter, I must distinctly record my opinion that the ravages of cholera and small-pox, great as they are, are insignificant, as compared with the diseased conditions induced solely by scanty and bad food, in a word by chronic starvation. Government will observe that I use the word "starvation" in its fullest sense, and not with the restricted meaning so often applied to it. I have often been gravely assured that such an one did not die of "starvation," because he was able to swallow food, but every physiologist knows that the human body may be "starved" of every essential necessary to its vitality, in spite of the ability to convey food into the stomach. If the delicate and complicated organs concerned in the digestion and assimilation of food have been thrown out of gear by a long course of wasting from under-feeding, the victuals, for all practical purposes, may be as well kept locked up in a cupboard, as thrust into the interior of a man's stomach. When a person has sunk into the condition that he cannot assimilate food, "starvation" has already done its worst.

14. Medical science recognises two distinct forms of "starvation," the one in which food and drink is absolutely withheld, the other in which the daily food is insufficient in quality or quantity for the nurture and repair of the tissues, and for the maintenance of the strength and temperature of the body. The acute form of starvation is very rapidly destructive of life. Fortunately it is but seldom seen or heard of. But the chronic, or slow form of starvation, is just as fatal in the end, and infinitely more common than the acute variety, and it is this form of privation that is at the present time causing, directly or indirectly, the great excess of mortality in the famine area and in other districts where the poor cannot procure enough of food. I have endeavoured to state the facts in regard to this matter on former occasions, but from the famine literature of the period, I gather that a great many officials, and others, still use the term "starvation" in its restricted meaning, as applicable to what I designate the "acute" variety of privation.

ENCLOSURE No. 1.

From J. GROSE, Esq., Collector of Nellore, to the Sanitary Commissioner, dated Nellore, 30th August 1877, No. 4414.

With reference to your letter of the 14th August, No. 1150, I have the honor to inform you that the registration of births and deaths is not very reliable now, many of the village-officers leaving their villages from time to time in search of food, and that it is specially unreliable in June which was a "Jummabundy" month (when Curnams assemble at the cusbah) through the greater part of the district.

2. A scrutiny of the original returns has convinced me that the following deaths at relief-camps have not been entered in them:—

Nellore (Poderiddipalem)	77
Podile	4
Venkatagiri	155
Sulurpett	13
Naidupett	57
Narravada	23
Nellorepalem	27
Allur	36
Gudur	78
Total	470

3. In all probability some others of the relief-camp deaths have not been entered in the returns, but I cannot be sure of this without making references which will cause great delay.

4. With the addition of this 470, the death-rate of Nellore will be 3,019 × $\frac{100}{11,325}$, or 26·87.

5. I return the register received with your letter.

6. A supplementary register is still due, but none of the returns from which it is to be compiled have been received yet.

No. 33. ORDER THEREON, 14th September 1877, No. 1211.

The Return will be published in the *Fort St. George Gazette*.

2. Copy of the letter will be communicated to the Revenue (Famine) Department, to the Board of Revenue, and to the Surgeon-General, Indian Medical Department.

3. A copy will be submitted to the Secretary of State.

(True Extract.)

Chief Secretary.

To the Revenue (Famine) Department.
" Board of Revenue.
" Surgeon-General, Indian Medical Department.

Exd. J. Wright.

5874.
3

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

14th September 1877, No. 1211.

Vital Statistics.

Read the following paper:—

No. 32. *From Surgeon-Major W. R. CORNISH, F.R.C.S., Sanitary Commissioner for Madras, to the Chief Secretary to Government, dated 5th September* 1877, *No.* 1286.

I have the honor to submit, herewith, for the information of His Grace in Council, and for publication in the *Fort St. George Gazette*, the abstract return of registration of births and deaths in the several districts of the Presidency for the month of June. A delay has been caused in the submission of this return by the non-receipt of the monthly statement from the districts in the margin, and which had to be telegraphed for.

Godavery.
Nilgiri.

2. BIRTHS.—The number of births registered was 44,074, of which 22,767 were males, and 21,307 females. The birth ratio for the month of the whole Presidency was 18·4 per mille, against 21·1 per mille, the average of the same month for the previous five years.

The highest birth ratio (36·1 per mille) is recorded in the town of Madras, but the population is so abnormally increased by influx of persons from famine areas that this ratio (calculated on the normal population) is not a true index of the birth-rate in the town. As a rule, the Famine Districts show birth ratios below the average, as will appear in the following table:—

Birth ratios in Famine Districts.

	June 1877.	Average of June registered for five previous Years.
Nellore	6·7	12·9
Chingleput	16·0	21·4
Madura	19·9	23·8
Kurnool	12·0	20·6
Cuddapah	11·9	10·2
Bellary	15·1	26·1
North Arcot	17·2	23·1
Salem	13·5	23·8
Coimbatore	12·7	15·4

3. If it be a fact (and not merely a surmise) that temporary sterility is one of the results of famine, we may expect to find the birth-rates low and decreasing in the future, and especially in the months (allowing for the natural period of gestation) corresponding with the incidence of severest famine pressure.

4. DEATHS.—The total deaths registered in June were 109,721. This number exceeds the May registration by 5,292. The disparity in the proportion of the sexes, as noticed in former reports, has continued in June. The registration gives 60,060 males, and only 49,191 females. If the female deaths had been registered in anything like the proper proportion the total would have been nearer 120,000 than 109,721.

5. Of the total deaths 25,862 are registered as due to "Cholera," 6,003 to "Small-pox," 31,278 to "Fevers," 7,692 to "Bowel-complaints," 1,408 to "Violence,"

and 37,008 to "Other" causes not specified. As regards the cholera mortality it is necessary to record that it very imperfectly represents the prevalence of actual cholera. I have seen a great number of cases that have been returned as cholera, and which were simply the diarrhœa of starvation, having none of the real characteristics of epidemic cholera. At the same time epidemic cholera has prevailed in many parts of the country, attacking the strong and robust, as well as the feeble and half starved, but it has not caused anything like the amount of mortality represented by these figures.

6. On the other hand, the entries under the head of "Bowel-complaints," though in excess of the average, do not at all represent the amount of fatal diarrhœa and dysentery prevalent in the famine-stricken districts. It has been ascertained, that, in many districts, the term "bowel-complaint" has been translated into the vernacular to mean "colic" or "belly-pain," and that deaths from diarrhœa and dysentery are never registered under this head, but under "Other" diseases. Steps have been taken to correct the error, but it will be some months before the instructions on this point can reach the comprehension of the village Curnams who register the deaths, and, meanwhile, the accuracy of our figures as to the supposed causes of death are very unreliable.

7. The per mille ratios of deaths, registered in the Famine Districts, for the first half of the year, are shown in the following table:—

Districts.	January.	February	March.	April.	May.	June.
Madras	112·9	132·6	151·6	123·1	121·9	110·9
Nellore	97·1	64·1	31·7	24·1	23·02	26·3
North Arcot	83·1	74·2	58·1	40·1	51·3	59·1
Cuddapah	118·7	101·5	88·2	58·6	69·8	74·9
Bellary	67·4	93·3	109·8	72·2	73·8	91·2
Kurnool	78·2	65·6	64·1	65·8	67·6	58·4
Chingleput	78·1	55·7	52·9	38·3	46·3	58·3
Salem	62·6	63·5	78·9	72·9	93·1	86·5
Coimbatore	33·5	39·7	31·8	41·03	59·6	51·4
Madura	33·9	23·3	27·3	28·4	47·5	46·9

The death registration in the last few months, in the Nellore District, has been commented on before, and I have recently received a letter from the Collector on the subject, which I have the honor to append, in illustration of the difficulty of getting correct reports, especially in famine times, when village-officers are absent from their posts, and the registration work is not even attempted to be done. The death ratio for the town of Nellore in June was 67·3, and from the state of the district, I apprehend that the rural circles are not much more healthy than the town.

8. In the first half of the present year we have registered 629,455 deaths, or 369,822 in excess of the average for the same period of the last five years. But the excess has been greater in the Famine Districts than in the Presidency as a whole, for whereas 126,277 deaths represent the average mortality in the ten Famine Districts, 433,637 deaths have been registered in them up to the end of June, giving an excess of 307,360 over the average mortality of ten districts named in paragraph 7.

9. The deaths occurring in relief-camps are, in some cases, included in the district returns, but not so in others. Definite instructions have been given on this point; but, owing to the fact that the Village Munsifs have generally nothing to do with the camps, they, as a rule, have neglected to enter the deaths occurring in camps within the village boundaries. It is most desirable that all deaths in relief-camps should be shown in the village and taluq returns; but for the first half of the year the figures will have to be adjusted after [illegible] inquiry.

10. For the month of June I have received weekly reports of the strength and deaths in eighty-four relief-camps or centres. These figures do not represent all the

relief-camps then in existence, but they serve to indicate both the extent of mortality, and the nature of the diseases causing death, amongst the worst sufferers by the famine.

11. From these figures I observe that out of a daily strength of 80,722, 6,461 persons died during the month of June, the ratio of mortality to daily strength being in the proportion of 831·9 per mille per annum. (I am sorry to say that, so far as the returns for July and August have reached me, even this high rate of mortality is exceeded.)

12. In the returns from relief-camps the specific causes of mortality are not always given. These camps are mostly under the medical charge of subordinates who are able to recognise disease, and the almost universal entries are "Famine Diarrhœa," "Bowel-complaints," "Dropsy," and "Debility." Now and then a death from cholera or small-pox is reported, but not one-tenth of the mortality occurring in relief-camps is ascribed to any other than starvation diseases. I mention the subject because an impression has gone abroad that cholera and small-pox are the chief immediate causes of mortality in the famine-stricken. They are so to some extent, but not so much as is generally supposed.

13. As I have seen more of the country, and of the people on famine relief, than most persons who are qualified to give an opinion on this matter, I must distinctly record my opinion that the ravages of cholera and small-pox, great as they are, are insignificant, as compared with the diseased conditions induced solely by scanty and bad food, in a word by chronic starvation. Government will observe that I use the word "starvation" in its fullest sense, and not with the restricted meaning so often applied to it. I have often been gravely assured that such an one did not die of "starvation," because he was able to swallow food, but every physiologist knows that the human body may be "starved" of every essential necessary to its vitality, in spite of the ability to convey food into the stomach. If the delicate and complicated organs concerned in the digestion and assimilation of food have been thrown out of gear by a long course of wasting from under-feeding, the victuals, for all practical purposes, may be as well kept locked up in a cupboard, as thrust into the interior of a man's stomach. When a person has sunk into the condition that he cannot assimilate food, "starvation" has already done its worst.

14. Medical science recognises two distinct forms of "starvation," the one in which food and drink is absolutely withheld, the other in which the daily food is insufficient in quality or quantity for the nurture and repair of the tissues, and for the maintenance of the strength and temperature of the body. The acute form of starvation is very rapidly destructive of life. Fortunately it is but seldom seen or heard of. But the chronic, or slow form of starvation, is just as fatal in the end, and infinitely more common than the acute variety, and it is this form of privation that is at the present time causing, directly or indirectly, the great excess of mortality in the famine area and in other districts where the poor cannot procure enough of food. I have endeavoured to state the facts in regard to this matter on former occasions, but from the famine literature of the period, I gather that a great many officials, and others, still use the term "starvation" in its restricted meaning, as applicable to what I designate the "acute" variety of privation.

ENCLOSURE No. 1.

From J. GROSE, Esq., Collector of Nellore, to the Sanitary Commissioner, dated Nellore, 30th August 1877, No. 4414.

With reference to your letter of the 14th August, No. 1150, I have the honor to inform you that the registration of births and deaths is not very reliable now, many of the village-officers leaving their villages from time to time in search of food, and that it is specially unreliable in June which was a "Jummabundy" month (when the Curnams assemble at the cusbah) through the greater part of the district.

2. A scrutiny of the original returns has convinced me that the following deaths at relief-camps have not been entered in them:—

Nellore (Poderiddipalem)	77
Podile	4
Venkatagiri	155
Sulurpett	13
Naidupett	57
Narravada	23
Nellorepalem	27
Allur	36
Gudur	78
Total	470

3. In all probability some others of the relief-camp deaths have not been entered in the returns, but I cannot be sure of this without making references which will cause great delay.

4. With the addition of this 470, the death-rate of Nellore will be $3{,}019 \times \frac{365}{100} \times \frac{1}{412{,}911}$ or 26·87.

5. I return the register received with your letter.

6. A supplementary register is still due, but none of the returns from which it is to be compiled have been received yet.

No. 33. ORDER THEREON, 14th September 1877, No. 1211.

The Return will be published in the *Fort St. George Gazette*.

2. Copy of the letter will be communicated to the Revenue (Famine) Department, to the Board of Revenue, and to the Surgeon-General, Indian Medical Department.

3. A copy will be submitted to the Secretary of State.

(True Extract.)

D. F. CARMICHAEL,
Chief Secretary.

To the Revenue (Famine) Department.
" Board of Revenue.
" Surgeon-General, Indian Medical Department.

Exd. J. Wright.

5874/b

F 8319

Govt. of (1877) Madras.

PUBLIC.

To

THE REVENUE (FAMINE)
DEPARTEMENT.

&c., &c., &c.

Dated September, 14th.

Issued

Rcd. —22 September. 1877.

G.O., 14th September 1877, No. 1211.

SEPTEMBER.
Nos. 32—34.

Vital Statistics.—The publication in the *Fort St. George Gazette* of the Return of Vital Statistics of the Madras Presidency for June 1877, ordered.

No 58 of 14
Sept 1877
24th Sept 1877