

1877

Rev

No. 1887

dated - 4-6-1877

GOVERNMENT OF MADRAS.
REVENUE DEPARTMENT.

4th June 1877, No. 1,887.

Famine Relief.

Read the following papers:—

No. 36. From Surgeon-Major W. R. CORNISH, F.R.C.S., Sanitary Commissioner for Madras, to J. H. GARSTIN, Esq., Additional Secretary to Government, Revenue Department, Fort St. George, dated 5th May 1877.

I HAVE the honor to submit herewith, for the information of Government, copies of diaries of the Inspecting Sanitary Officers, named in the margin, for the week ending the 28th April 1877.

Surgeon Gray.
" Williams.
" Macdonald.
" Sturmer.
" McNally.

In the original diaries, I noted my own observations in the blank margin, and return them to the medical

officer concerned for information. Copies of these remarks are now entered in the diaries now submitted.

ENCLOSURE No. 1.

EXTRACTS from Diary of Inspections of Relief-works and Camps, &c., for the week ending 28th April 1877.

PALAVERAM RELIEF-CAMP.

23rd April.—I inspected the laborers and inmates this morning with Major Murray, Special Relief Officer, in charge of this camp and the one at Poouamallee.

The laborers were mustered according to their sexes and ages,—men and women, boys and girls. The numbers were as follow:—

Head Coolies	...	...	...	...	...	...	40
Men	...	...	...	...	...	...	235
Women	...	...	...	...	...	...	441
Boys	...	...	...	...	...	...	129
Girls	...	...	...	...	...	...	82
Total	...	...	...	...	...	...	937

The boys and girls were all over seven years of age.

As I walked along the ranks of men I was very forcibly struck with their ill-conditioned state. I found only 15 per cent. of them in fair condition of body.

It needed not the professional eye to read the tale of famine in their haggard faces: the sunken, listless, and peculiarly bright eye, and hollow cheeks betokened very plainly their physical retrogression. The remaining 85 per cent. were decidedly below par.

Regarding their physical condition, I noted the following points:—

(a.) Anæmia was prevalent in about 80 per cent. of those below par. I did not observe the unnatural whiteness of the sclerotic, one of the signs of anæmia; on the contrary, I noticed a yellowishness, like that observed in long-standing cases of malarial fever. The conjunctivæ were pale and the lips were bloodless and dry.

(b.) The skin moved loosely over the subjacent tissues, indicating the almost entire absence of fat in the sub-cutaneous cellular structures. In many cases the skin itself seemed thinner than normal. It was generally rough and dry.

(c.) The muscles, most noted for their bulk and which give the body its fine contour, had lost in size and consistence, their outlines being scarcely visible; they were flabby. All the other muscles had wasted in proportion. The ribs were visible; and the clavicle and sternum were very

prominently perceptible. About 50 per cent. of these men have been working on the relief-works since their commencement, and the decided opinion of both Major Murray and the Tahsildar is, that the men are steadily falling off and dwindling down to skeletons.

The women are in better condition than the men. The Tahsildar informs me that this is due to the small amount of work exacted from them. It will be observed from the strength of the laborers given already that the number of women almost doubles that of the men. This proportion necessitates the action of less labor from the former; for the small number of men is insufficient to supply earth and stones to keep the women well employed. Moreover, the boys and girls, between 12 and 7 years of age, perform the work of women (viz., carrying earth and stones). The kinds of work on which these people are employed are tank and well-digging and quarrying. About 20 to 25 per cent. of the women are in a fair condition of body. This percentage is made up principally of women of the ages of 30 and downwards. I suspected that some of the young women were not living solely on the famine allowance of 1 anna and 3 pies per day. I communicated my suspicions to the Tahsildar, and he agreed with me. He thinks as I do that these young women get further subsistence from the men in the Sepoy lines, which are not far off from the camp. Three young women were specially pointed out to me who joined the works about four months ago in very good condition. Both Major Murray and the Tahsildar say that these girls are gradually falling off. The remaining 75 per cent. of the women were below par. The women, with infants in arms, are the greatest sufferers. The infants are in a most wretched condition, mere skin and bone. To-morrow I intend to weigh them in order to show their atrophied state. The cause of the infants suffering from atrophy is plain enough, viz., want of milk. I defer writing on this subject till to-morrow.

The famine allowance of these laborers is as follows:—

Men, value of 1 lb. of grain and $\frac{1}{2}$ an anna for condiments.

Women, value of 1 lb. of grain and $\frac{1}{4}$ of an anna.

Boys and girls of 12 years and above 7, value of $\frac{1}{2}$ lb. of grain and $\frac{1}{4}$ anna.

As I mentioned before the decided opinion of both Major Murray and the Tahsildar is, that the laborers are gradually and steadily falling off on the above scale.

At present I am unable to give any decided opinion on this point, and as sanitary authorities are at variance on the question at issue, I do not feel justified in expressing any opinion at this early stage of my inspection.

Boys and girls above 12 years of age are reckoned as adults and get the adult allowance. Many of them, therefore, are in better condition than boys and girls of 12 years and under. These latter are in a bad condition, and I am confident that if this state of things continues for the next three or four months, there will be a great mortality amongst them. It is certain that at least on these works the boys and girls under 12 years of age are not thriving, especially the older ones, and it seems to me that they require a larger allowance, as they are in the period of life when growth is most rapid. Their present allowance is, value of $\frac{1}{2}$ lb. of grain and $\frac{1}{4}$ of an anna.

To-morrow I intend to weigh some of the men, women, and children.

Inmates of Relief-camps.—The inmates of the camp are better off than the laborers in point of rations. The numbers of the inmates were as follow:—

Men	...	...	...	...	...	...	...	...	138
Women	...	...	...	...	...	...	...	...	321
Boys	...	...	...	...	...	...	...	...	350
Girls	...	...	...	...	...	...	...	...	251
Total ...									1,060

Of the 1,060 inmates, 601 were composed of children, 376 of which were under 7 years of age. About 90 per cent. of the children above 2 years of age are in fair condition. Below 2 and especially below 1 year, the children are very ill-conditioned. This is to be accounted for by the fact that many of them are not able to eat rice. They have to depend on their mother's milk for their nourishment.

Of the 138 men 95 are old men, many of them are blind and lame, and some are lepers. These men must have always lived on charity. The authorised allowance for the inmates seems quite sufficient, and many of them also think so. Of the 350 women about 84 were very old. The scale of allowance for the inmates, according to G.O., No. 1,159, dated 20th March 1877, is as follows:—

- Men, 1 $\frac{1}{2}$ lb. rice, 1 $\frac{1}{2}$ oz. dholl, curry stuff, and vegetables.
- Women do. do.
- Boys and girls of 10 and 12 years, $\frac{3}{4}$ allowance of men.
- Boys and girls of from 3 to 9 years, $\frac{1}{2}$ allowance of men.
- Children 6 months to 2 years, $\frac{1}{4}$ allowance of men.

The 1 $\frac{1}{2}$ oz. dholl authorised has from some misunderstanding not been given regularly. The Tahsildar informs me that dholl is sometimes issued mixed with the half pint of pepper-water served with their evening meal. He supplies them with vegetables, as brinjals, pumpkins, greens, &c. He gives the salt-fish once a-week. On the whole, I think the inmates are sufficiently fed, and are in a very fair condition. The children of 2 years and under are with scarcely an exception in a very bad condition as I remarked before.

24th April 1877.—I visited the camp this morning in order to make a further inspection, and weigh some of the laborers who are in a fair condition. Six men and three boys above 15 years, and therefore classed as men, were weighed, and the results were as follow:—

Names.	Period at Work.	Weight. lb.
T. Moonean.	... 3 weeks	100
Moonesawmy,	... 6 days	97 $\frac{1}{2}$
Chinnacunnen,	... 3 weeks	117 $\frac{1}{2}$
P. Moonean,	... 4 months	107 $\frac{1}{2}$
A. Moorgasen,	... 3 months	106
Ponnen,	... 4 days	98 $\frac{1}{2}$
Runganaickulu, at 16 years	... 4 months	83 $\frac{1}{2}$
Francis, at 15 years	... 1 week	74 $\frac{1}{2}$
Andy, at 15 years	... 4 months	73 $\frac{1}{2}$

The heights and ages should have been recorded.—W. B. C.

These three last were in a very fair condition. They are receiving adult wages. Of the 129 boys of 12 years of age and above 7 years that are at work I could not get more than six or eight who might be said to be in a fair condition of body. These I picked out for weighing, but only four remained when I called for them to be weighed, the others have absconded. Their weights were as follow:—

Boys between 7 and 12 years.

Names.	Time at Work.	Weight. lb.
Ponnen	... 2 months	50 $\frac{1}{2}$
Moorgen	... 2 "	44 $\frac{1}{2}$
Somen	... 2 "	46 $\frac{1}{2}$
Valoo	... 2 "	36 $\frac{1}{2}$

I also weighed 6 girls between 7 and 12 years of age.

Names.	Time at work.	Weight. lb.
Ragavah	... 4 months	48 $\frac{1}{2}$
Moorvee	... 3 "	41
Erachee	... 2 "	40 $\frac{1}{2}$
Moonechee	... 4 "	46 $\frac{1}{2}$
Coopamah	... 2 "	40 $\frac{1}{2}$
Paulee	... 1 "	36 $\frac{1}{2}$

I weighed eleven women, 4 of whom had infants in arms. The infants were also weighed, and it will be seen from their weights in what an atrophied condition they are. The weights are as follow:—

Names.	Time at Work.	Weight. lb.
1. Ammayee,	... 1 week	82
Her infant, at 7 months	...	6 $\frac{1}{2}$
2. Moonechee	... 3 months	102
Her infant, at 4 months	...	8
3. Mungay	... 4 months	81 $\frac{1}{2}$
Her infant, at 7 $\frac{1}{2}$ months	...	7 $\frac{1}{2}$
4. Vulleeammah	... 4 months	80 $\frac{1}{2}$
Her infant, at 18 months	...	11 $\frac{1}{2}$
5. Chengalunco	... 1 week	93
6. Veeratha	... 2 weeks	84
7. Manicum	... 4 months	64
8. Paupa	... 4 months	84
9. Ponnee	... 1 week	78 $\frac{1}{2}$
10. P. Moonechee	... 4 months	98 $\frac{1}{2}$
11. M. Mungay	... 1 month	91

It must be remembered that these women were in a very fair condition of body, excepting those with infants in arms. The infants are the most miserable objects to be seen in these camps. The cause of this is very plain. The women with infants in arms get the same allowance as the other women, i.e., one anna and 3 pies per diem though they have to supply another human being with milk from their breasts. The result is that they have scarcely any milk for their infants, and what milk they produce is a severe drain on their systems. I cannot write too strongly on this point.

The scale authorised by the recent G.O., dated 20th March 1877, makes a provision for chil-

There was no oversight for infants above six months; the allowance of 3 pies per diem can be drawn on relief-works and in feeding camps; the mother has the additional food.—W. R. C.

made for infants under six months, whether in camp or with their mothers on relief-works. This is certainly a great oversight. Surely a woman who has to secrete milk for her child requires a larger quantity of food than other women. These women are rapidly falling off, and their infants must inevitably die. From my observations at the Palaveram camp and relief-works, I can confidently record it as my opinion that the infant mortality will be almost cent. per cent. if no early provision is made for them. I would, therefore, recommend the urgent necessity of remedying this oversight.

My object in weighing the fair conditioned of the above class of laborers is to observe, in a

Care must be taken to weigh the same individuals from time to time.—W. B. C.

to compare their weights with the standard weights of men and women in time of plenty, as the Deputy Surgeon-General, Dr. vanSomeren made some observations on this point but lately at this very camp. I purpose, however, shortly to do so.

25th April 1877.—As this is the time of the Little Mount Feast, and as I came to the knowledge of the increase of cholera and small-pox in Sydapett and Little Mount, I made an inspection of these places this morning. Both were in good sanitary order, and arrangements were being made for the thousands of pleasure-seekers in the way of water-supply and latrines. Four latrines were being built on the banks of the river on the southern side of the hill, two on each bank. I looked in at the Jail, and the Dresser in charge informs me that there is no small-pox or cholera amongst the convicts or the Jail establishment. The convicts are digging four wells for the supply of water. The streets and bazaars of the Sydapett village are clean and in good order.

The Dresser of the Sydapett Dispensary gave me the following information. There have been nineteen cases of cholera admitted since the 1st instant, and seven cases of small-pox since the 10th. There are two cholera sheds, but one of them is at present used for small-pox cases. As it is impossible, at first, to tell whether a case is one of simple diarrhoea or of cholera, all cases of diarrhoea are sent to the cholera shed; this I deem injudicious. I therefore recommended that another shed should be erected for the doubtful cases, which, when diagnosed as cholera, could be transferred to the cholera shed. The Dresser tells me another shed is to be erected, and that, when completed, he will carry out my suggestion of segregating the cases. A few cases of cholera were admitted within the last two or three days, and two of them have proved fatal. The Collector of the Chingleput District has given notice to the public intending to visit these places that as cholera and small-pox are prevalent there, it would be advisable for them not to attend.

26th April 1877.—This morning I examined specially the sanitary arrangements and health of the Palaveram camp and laborers. The health during this month has been much better than that of the last, as will be seen from the following figures :—

March.					Admissions.	Deaths.
Diarrhoea	...	...	...	...	4	3
Dysentery	...	...	...	...	9	2
Small-pox	...	...	...	...	2	0
				Total ..	<u>15</u>	<u>5</u>
April.						
Dysentery	...	...	...	...	<u>3</u>	<u>1</u>
				Total ..	<u>3</u>	<u>1</u>

This sickness and mortality belong to the inmates of the camp and the laborers on the works. Cases of cholera, small-pox, dysentery, &c., that have been admitted from other places of the Chingleput District are not included in

famine laborers, nor from villages at present. The small-pox sheds I have recommended to be removed 300 yards to the north of the camp. They are at present between thirty and fifty yards from the inmates' sheds to the south and to windward. As the prevailing winds are from the south and the sheds so near, I strongly recommended their immediate removal.

The small-pox cases in the camp hospital, all of which were admitted from the village, are doing well, and the Dresser appears to be attending them carefully.

There is no serious diarrhoea amongst the old and young, nor did I notice any cases of the true famine diarrhoea as there was no one in the camp hospital suffering in the extreme stages of famine. I observed about six cases of dropsy of the lower limbs in the very old and infirm who were inmates of the camp. No cases of sloughing ulceration of the limbs came under my observation. The Dresser brought to my notice the fact that the people working at the quarry are suffering from attacks of simple diarrhoea, which is easily arrested by chlorodyne. This diarrhoea is not prevalent amongst those who work at tanks and wells. I walked up to the quarry (a mile from camp) to see the circumstances under which these men work. For about seven hours of the day these people are exposed to the blazing sun rendered more unbearable by the reflection of the heat from the rocks; there is no water near for their use, nor is there any place for shelter during the two hours of rest between twelve and two o'clock. The other work-people, on the contrary, have the shade of trees. I am of opinion that the great heat at the quarry is the cause of this diarrhoea in people not capable of endurance in their present condition. I have recommended a temporary and movable shed to be erected for their comfort.

There is a great deficiency of water in the camp; all the water is at present obtained from a well sunk in a tank close by the camp.

POONAMALLEE CAMP.

28th April 1877.—I inspected the above relief-camp this forenoon, and examined the inmates, the hospital, and the sanitary arrangements of the place. As the laborers on the relief-works were at labor, they were not mustered for my inspection. I am to examine them on the morning of the 30th instant.

The strength of the inmates was as follows:—

Men	...	...	...	...	...	...	103
Women	...	...	...	...	...	...	198
Boys above seven years	...	...	...	...	...	...	38
" under	"	"	...	...	...	...	77
Girls above	"	"	...	...	...	...	51
" under	"	"	...	...	...	...	77

Of the 103 men, 59 consisted of very old men, only 5 of the 103 men were in a fair condition, and these were late arrivals. Of the 198 women, 70 were aged, only 11 were in fair condition.

Of the boys, none were fair conditioned, of the girls under seven, I observed the same, of the girls over seven; five were in good condition. It will be observed that the boys and girls at this camp are not in as good a condition as those at the Palaveram camp. The whole of them were suffering from anæmia, and were much emaciated. The above give the following approximate per-centages:—

Men in good condition ...	...	...	...	5 per cent.
Women " "	...	...	...	5 "
Boys " "	...	...	...	0 "
Girls " "	...	...	...	7 "

The following are the weights of some of the inmates I weighed:—

Names.							Time in Camp.	Weight.	Height.
								LEB.	FEET. INCHES.
Veerasawmy	...	...	...	...	...	...	8 Days.	89	5 9
Lutchmoodoo	...	...	...	...	...	...	4 "	85	5 8½
Moorgen	...	...	...	...	...	...	1 Month.	70	5 4
Moothapen	...	...	...	...	...	...	1½ "	101	5 11½
Oomay	...	...	...	...	...	...	2 "	68	5 5½

The weights and heights of the women were as follow :—

Names.					Time in Camp.	Weight.	Height.	
Women.						LBS.	FEET.	INCHES.
Narainee	...	...	...	...	2 Months	76	5	11
Lutchmee	...	...	...	...	20 Days.	76	5	3
Gungama	...	...	...	...	20 "	80	5	3
Alloomaloo	...	...	...	...	10 "	69	5	1
Marce	...	...	...	...	20 "	82	5	4
Ellee	...	...	...	...	2 Months.	63	4	9
Boys over seven Years.								
Coomen	...	...	...	...	5 Months.	40	4	2
Ponnen	...	...	...	...	2 "	40	3	11
Chellan	...	...	...	...	4 "	42	4	2
Boys under seven Years.								
Oomay...	...	...	...	...	3 Months.	31½	3	3
Krishten	...	...	...	...	6 Days.	26	2	11
Narainen	...	...	...	...	20 "	32	3	3
Girls over seven Years.								
Nainee	...	...	...	...	2 Months.	47	4	3
Ponnee	...	...	...	...	1 "	46½	4	3
Moorgee	...	...	...	...	10 Days.	41½	4	2½
Sundanum	...	...	...	...	1 Month.	38	4	1
Girls under seven Years.								
Thayee	...	...	...	...	2 Months.	29	3	5
Thopallee	...	...	...	...	2 "	26	3	1
Alloomaloo	...	...	...	...	2 "	22½	2	11

The men and women who were weighed were between twenty-five and thirty-five years of age, and were in a very ill condition. On the 30th instant I intend weighing men and women on the relief-works in order to draw a comparison.

At the Palaveram camp I did not weigh any adult inmates, but on my next visit I shall do so.

I did not observe any cases of dropsy or sloughing ulceration of the limbs amongst the inmates. The sickness and mortality at the camp hospital were as follow for the month of April :—

	Admissions.	Deaths.
Diarrhoea	6	...
Dysentery	14	6
Cholera	2	2
Small-pox	71	1
	93	9

Other diseases caused no mortality.

Of the above cases, six of dysentery were admitted from the camp, also forty-five of small-pox, and three of diarrhoea; no admissions from cholera. The Dresser omitted to furnish me with the mortality that occurred amongst the cases drawn from the inmates. The dysentery and small-pox cases are doing very well.

There are two cases of ascites in a very advanced stage, and require relief by paracentesis. The Dresser tells me that the instrument necessary for this operation is not in the hospital. I would advise such cases to be sent down to the General Hospital or the Monegar Choultry.

Yes, this can be done; the Superintendent will doubtless provide carriage for such cases as cannot be conveniently treated in the camp.—W. R. C.

There are two small-pox sheds about 150 yards to the leeward of the camp. They are clean and well ventilated. The cholera shed is about 300 yards from the camp. The water for the use of inmates and workers is obtained from a large well in which there are four smaller ones. The water is ample and of good quality; the water-level is fifteen feet.

(Signed) H. A. C. GRAY, M.B.,
Sanitary Medical Officer, Chingleput District.

(True Copy.)

(Signed) W. R. CORNISH, F.R.C.S.,
Sanitary Commissioner.

ENCLOSURE No. 2.

From Surgeon B. H. WILLIAMS, Sanitary Inspecting Officer, Bellary District, to Surgeon-Major W. R. CORNISH, F.R.C.S., Sanitary Commissioner, Madras, dated Darmavaram, 30th April 1877, No. 2.

I HAVE the honor to forward you my second report.

2. On the 24th April 1877 I visited a gang of coolies at work near the relief-camp at Pencondah. They were composed as follow :—

Men coolies	...	...	...	...	69
Women do.	...	...	...	...	229
Children above 7	...	...	...	...	75
Do. under 7	...	...	...	...	45
Total	...	...	...	...	418

3. I had them arranged in three rows,—the men in one, the women in another, and the children in a third; in examining each row I caused those who were in good condition and requiring no notice to fall back three paces, leaving in front those I wished more particularly to inspect: by this means I was enabled to make my inspection more quickly and satisfactorily.

4. The physical condition of this gang does not compare favorably with that of the one I reported on last week; this probably is accounted for by the fact that they were all recent comers, many of them being persons lately discharged from the relief-camp, and others who had waited to exhaust all means of livelihood before joining.

5. The work they were engaged on was very light, consisting of carrying sand and spreading it upon the ground in and around the relief-camp; owing to their want of condition, their work was not tasked, so that each received the full Government allowance.

6. Very few of the men had a robust appearance, most of them being lean and spare, though healthy looking, and in all there was a scarcity of sub-cutaneous fat.

I took the following notes of 7 men :—

Ten men anæmic, thin, but not emaciated, ribs plainly visible, wasting of the muscles of the calves of the legs, buttocks, and arms, very little sub-cutaneous fat; and in four who were between 40 and 50 the skins were baggy.

Six others presented the same appearance minus the anæmia.

One I recommended to be admitted into the relief-camp, as he seemed unfit for work, being very anæmic and weak, though not greatly emaciated.

7. The children, with the below exceptions, were all fat and healthy and in good spirits.

Eight children under 7 thin but not emaciated.

One child suckling, aged 12 months, was very emaciated. I advised that both it and its mother, who was also thin, should be taken into the relief-camp; the mother, however, would not consent.

Six children above 7 years thin with wasted arms and legs.

8. The majority of the women were well nourished, with a fair amount of sub-cutaneous fat, though, even among these traces of anæmia were often visible. The breasts of the older women are wasted and flabby, but in the middle-aged and younger women they seemed fairly prominent. The following cases I took notes of—five women anæmic but fat, twenty-three women anæmic, but not thin, wasted; one young woman rather emaciated only came to the works that day; four women, old, thin with baggy skins and no fat; five pregnant women.

In the afternoon of the same day I inspected two sets of coolies engaged at levelling earth in the cutchery and near the Head Assistant Collector's compound. Their numbers were—

Men coolies	...	...	...	...	57
Women do.	...	...	...	...	189
Children above 7	...	...	...	...	9
Do. under 7	...	...	...	...	97

Total... 352

10. The condition of the men was very good; they were all well nourished and muscular, and showed no symptoms of privation, only two of them were rather anæmic.

11. The women also were in very good condition, many of them having a good quantity of sub-cutaneous fat. Those about 50 years of age were often thin and shrivelled looking; but I saw no case of emaciation. The following are the details:—

One girl, *æt.* 15, anæmic, thin, no development of breasts or symptoms of puberty.

One girl, *æt.* 15, rather anæmic, in good condition, breasts developed; does not menstruate.

Three women, *æt.* 40, slightly anæmic, thin, breasts pendulous; skin baggy.

Two women slightly anæmic, in good condition.

Two pregnant women.

12. The children were all in good condition and most of them fat.

13. On the 25th April I visited a gang of coolies at work at excavating an old tank in the fort, Pennacondah. Their numbers were as follow:—

Men coolies	...	...	...	...	...	33
Women do.	...	...	...	...	...	102
Children above 7	...	...	...	...	...	13
Do. under 7	...	...	...	...	...	42

Total... 190

14. Amongst the men in this gang I made notes of four cases:—

One was quite a skeleton, without any sub-cutaneous fat or muscular development; the calves of his legs had quite disappeared, as well as the muscles covering his arms; and to heighten the appearance of his leanness he was very tall. He had only been on the works a few days, and I offered to recommend him for admission to the relief-camp, but he said he felt quite well and able to work, and would not go; he had no anæmia, and his pulse was better than his appearance would indicate.

Three other who, beside him, looked fat, were thin and anæmic with baggy skin.

15. The women, as a rule, were in robust condition, with a fair quantity of sub-cutaneous fat and normal prominence of the breast. The older members were lean and spare. I took the following notes:—

Three women thin and slightly anæmic; two women anæmic, but in fair condition; one woman thin with a very melancholy expression of countenance; one woman thin, with a very baggy skin; no pregnant women.

16. The children, with the following exceptions, looked fat and well.

Three thin with ribs showing, and arms wasted. One suckling, aged 12 months, was very emaciated, its mother was fat but had no milk, so I recommended both to be removed to the relief-camp, where the child should be supplied with milk.

17. 26th and 27th April.—These two days I have been occupied in preparing for my tour.

18. 28th April.—Left Pennacondah and reached Chennacottah Pully en route for Anantapur via Darmavaram.

19. 29th April.—Left Chennacotta Pully and reached Darmavaram.

20. 29th April Darmavaram.—The Tahsildar informs me that in this range of the taluq there are between 3,000 and 4,000 coolies working at eight different places, and he considers the number of works sufficient to meet the distress.

21. The supply of food is ample. The grain in present use is chiefly cholam, but in some instances mixed with raggy: that in use at ordinary times is second-sort rice and cholam and raggy. The Tahsildar has not observed any one make use of any unusual article of diet. The leaves (of which I enclose a sample) he says are used in non-famine periods by the cool population as a vegetable.

22. *Water-supply*—Many of the drinking wells are dry, and in others the yield is very small, while in others it is fairly abundant; at about $\frac{1}{2}$ of a mile from the town there is a spring near the bed of a tank which yields plenty of water and of good quality, so that there is no deficiency of water.

23. *Epidemic and other Diseases*.—At present there is a slight outbreak of small-pox, but no cholera, and as far as the Tahsildar is aware no other disease.

24. This afternoon I visited the village relief at the time of distribution of food.

The sheds where they are fed is situated in the fort in a nice open part with plenty of free space all round. The shed consists of a thatched roof supported behind by a mud and brick wall open in front, where there is a small enclosure. The shed is about 60 feet long and 15 broad. At present it is not large enough for the number who come, so that another shed of similar dimensions is about to be erected close to it.

25. They are fed twice a-day at 8 in the morning and 4 in the afternoon, and receive each time the following ration:—

From ten years upwards a quarter of a seer of cholam and raggy flour made into two balls with a little curry-stuff containing tamarind, onions, &c., but no dholl.

Why is not the standard scale used here? It should be introduced without delay.—W. R. U.

Below ten years one-eighth of a seer with curry-stuff.

26. The new scale of diet has not been received here yet, but the Collector of Bellary informs me that it is on its way, and will be put in force on its arrival.

27. I requested the Tahsildar to make me two sample balls of raggy and cholam containing the proper amount of grain and compared them with those issued to the paupers. I found it to be correct.

28. These poor people, most of whom live in the town, after finishing their meal are not detained at the shed, but permitted to return home, and doubtless many of them supplement the Government allowance by what they can procure by begging.

29. The following are the numbers receiving relief:—

Men	...	...	...	...	100
Women	...	...	...	...	143
Children above 7	...	...	...	...	5
Do. below 7	...	...	...	...	140

Total... 388

30. The majority of the men were too old and infirm to work, with lean spare frames, servile wasting of the muscles, an absence of sub-cutaneous fat, and a baggy state of the skin; they looked, however, quite healthy. The same remarks apply to the elderly ones amongst the females.

There were also others of both sexes who had been admitted for debility or some small ailment, and would be discharged to cooly-work as soon as able; there were likewise the usual number of cripples.

31. Amongst the men I noticed five with well-marked symptoms of privation, one of them being extremely emaciated that I deemed it advisable to recommend him to be supplied with an extra allowance of food, in anticipation of the receipt of the new Government scale; two others were thin and anæmic with oedema of the lower extremities.

32. Among the women there were five who attracted my notice by thin starved appearance; one of them in addition to being emaciated had general dropsy and was in a dying condition.

There were two pregnant women.

33. The children, as a rule, were fat and healthy and looked cheerful. The following is a list of those who had any appearance of wasting:—

Two children, eighteen months old, emaciated; the mother of one was dead, but the mother of the other was in good condition.

One child, *æt.* three months very thin, mother in good condition, but without milk; ordered the child to be supplied with milk.

One child, aged six months, wasted with dropsy. Ordered a milk diet.

Two children, eighteen months old, thin and wasted; mother of one in fair condition, but the mother of the other thin and anæmic.

One child three years old, thin and wasted.

Three children about two years old, thin and wasted, had small-pox lately.

One child two years old, thin and wasted; mother well nourished. One child, one year old, thin; mother well nourished; ordered a milk diet.

34. I instructed the Tahsildar that all children under nine months of age should be fed with milk if their mothers had not a proper supply.

35. I could hear of no cases of famine diarrhoea, though I made inquiry about it, and in comparison with Pennakondah there were very few cases of œdema of the extremities.

36. There is no medical aid here, though the Collector informed me that he has ordered a medical subordinate for duty, and who may be expected here in a few days.

37. This morning I visited a gang of coolies working on the Callian Droog road, about three miles from here ; they were engaged at repairing the road.

Their numbers were as follow :—

[illegible]

Total ... 577

38. A large number of the women in this gang were suffering more or less from anæmia; it was quite the exception to see a healthy redness of the conjunctiva of the lower eyelid; their tongues were generally so covered with betel leaf and areca nut that the examination of them did not afford much information; notwithstanding this prevalence of anæmia there was generally present a tolerable amount of subcutaneous fat and muscle, though it appeared to me in many instances there was an absence of tone in the muscles not found in health.

The following are the numerical details :—

- the following are the numerical details:—
- 14 women anæmic, but in fair condition with a tolerable amount of subcutaneous fat.
 - 2 women thin, anæmic, no fat, and small muscles.
 - 5 women thin, no fat, baggy skins.
 - 7 girls, from twelve to sixteen years of age, thin, anæmic, no development of breast, and no symptoms of puberty.
 - 1 girl aged sixteen anæmic, fair condition, puberty arrived.
 - 1 woman suckling was very anæmic and weak, though not very thin; her child was fat. I recommended her to be fed gratuitously, as she was unfit for work.

39. The men, though in tolerable muscular condition, had generally a deficiency of subcutaneous fat. I took the following note of cases:—

- 1 man very thin, muscles of arms and legs wasted, no subcutaneous fat, skin baggy. I recommended that he should be placed with the inefficient gang where his work would not be tasked.

- 1 man anæmic and thin,
1 " " "
1 " " " with slight wasting of the muscles of the arms and legs.

40. The children all looked well, except 1 child who was suckling was thin and wasted, and another boy aged eight was thin.

41. There were no scales and weights in the Pennakondah Taluq, so that I was unable to comply with that portion of your instructions relating to observations on the weights of selected bodies of coolies.

42. I have not yet received a copy of the diet scale which has been sanctioned by Government for the relief camps, and shall be glad if

Copy sent.
(Signed) W. E. CORNISH.

43. To-morrow I shall inspect another lot of coolies at work about five miles from here, and in the evening will send my tent on towards Anantapur, where I hope to arrive on the 3rd instant.

44. After leaving Anantapur I propose going to the western taluqs by way of Raidroog.

ENCLOSURE No. 3.

From Surgeon D. J. MACDONALD, to Surgeon-Major W. R. CORNISH, F.R.C.S., Sanitary Commissioner for Madras, dated Salem, 1st May 1877.

I HAVE the honor to inform you that during the past week I visited the following places with Mr. Tute, the Sub-Collector, to investigate the condition of the hill tribes.

The first village we went to was *Poothoor*. The people here are in a very fair condition, and do not seem to have suffered from the present famine. They live upon ragi and, when they can get it, pork, mutton, or fowl. They say that they have been reduced from three to two meals a day, each meal consisting of $\frac{1}{2}$ th measure (Madras) of grain. Most of the people are dependent upon the coffee estates for work, where they receive 2 Annas 8 Pies per diem. The cattle are suffering from foot-and-mouth disease; ten of them died lately. There are altogether about 100 heads of cattle here. They get their water-supply from a small river near by and one well in the village.

The next village was *Valavendee*. The people here do not look as they have been starving. Most of them work upon the coffee estates. A well has been dug here at Government expense. They do not want any more assistance.

Maramungalam was the next village, and the largest in this portion of the hill district. It is about 16 miles from Yercaud and situated just above the plains in a very unhealthy locality. The villagers are pretty nearly in the same condition as those already mentioned. They seem very suspicious of Government aid. The water in this place is exceedingly bad. The unfiltered water looked quite muddy, and deposited a large grey precipitate after standing some time. It had also a strong smell of spoiled eggs, which it lost after being exposed to the air, clearly indicating the presence of hydrogen sulphide. The filtered water seemed pretty clear and no marked odor about it; but after drinking it for a day Mr. Tute and myself were taken very ill with vertigo and vomiting, followed by faintness and a sensation as if the lower limbs were paralysed. After remaining here two days, during which the symptoms became more marked, we had to leave the place and go back to Yercaud. On the journey we were sick the whole way, and Mr. Tute fainted about half way. At first I thought that this was the result of exposure, as we were out the whole day in the sun; but as the servants were similarly affected after the first day, it must have been due to the water and the unhealthy locality. The next day at Yercaud I had an attack of fever, and did not get over it for three days.

On examining these villagers I could not detect any cachexia or enlarged spleens. They say that the water does not disagree with them, and that they have been drinking it for sometime.

I visited the village of *Maooth*, about 3 miles from the last station, alone, as Mr. Tate was too ill to go. This village was the worst of all we had hitherto visited. It is situated at a very little higher level than the plains. There are only about twenty huts here, and these are in a most miserable condition; that cleanliness which I found in all the other Mallayaly villages was absent here. Most of the men and women are gone to work upon the coffee plantations, and only a few old people are left to tend the cattle. They get their water-supply from Maramungalam, and state that it does not disagree with them.

I came down yesterday from Yercaud.

ENCLOSURE No. 4.

From Surgeon A. J. STURMER, to Surgeon-Major W. R. CORNISH, F.R.C.S., Sanitary Commissioner for Madras, dated Sullurpett, 29th April 1877.

I HAVE the honor to report the following extracts from my diary:—

April 25th.—Visited *Sarvopalli*, 13 miles from Nellore, a large native town, population believed to be 5,000. Badly off for water; the caste people have 1 foot in their well; the Pariahs' well contains about 3 feet of very dirty water; the Chucklers have to go more than half a mile for water. Two wells quite dry.

CHUCKLERS.

- 8 Men—1 in very good condition.
3 in fair condition.
4 in bad ..
- 21 Women—2 in good condition; one of these was pregnant.
19 in thin, skin wrinkled.
- 6 Infants—3 in good condition.
• 1 in fair ..
2 very emaciated, aged seven and ten months, respectively; mothers say they have no milk.
- 7 Children under seven years of age in fair condition.

PARIAHS.

- 15 Men—6 in good condition.
5 very anæmic.
2 in bad condition.
2 very dropsical (young men).
19 Women—1 pregnant ; majority in good condition.
32 Children—29 in fair condition.
2 in bad condition.
1 just recovering from small-pox.

These men and women said that they had been living on dead horses and cattle, which, no doubt, accounts for their condition.

Food of People —Rice and ragi; the former comes from Madras now.

Food of People—Rice and ragi; the former comes from Madras. The Village Munsif said that many deaths had occurred from starvation,* small-pox, and cholera; small-pox epidemic. The Hindus and

* Denied by Tahsildar.

Goodoor, April 26th, 1877.—I see no improvement whatever; the Tahsildar is utterly incompetent. The water used for the relief-camp is dirty, and I saw a human skull in it; they used to bury quite close to the edge of the water, so no doubt it contains a good deal of disintegrated human remains.

The regulation allowance of 20 ounces of cereal grain and 1½ ounces of dhal is now given.

The Collector has ordered the Tahsildar to send the sick for treatment to Venkatagiri, and also those in bad health from the neighbouring villages. People with dysentery are still fed on rice and pepper-water in the hospital, and no milk is given to children at the breast.

I met on the road some people of the Yenadi caste who had just been sent in from a village called Chittardoo. I do not think I have come across worse specimens anywhere: out of twenty-eight two only were in fair condition, the others were merely skeletons or wasted very much; six were dropsical. These people received rice and pepper-water, although I protested that it would be sure to bring on diarrhoea. I made the Tahsildar send the dropsical people to hospital.

At the camp out of 40 children under eight years—

16 were anæmic.

4 dropsical, and not one in fair condition.

Of 36 women—

22 were anæmic.

3 pregnant.

3 suckling.

2 children in arms were mere skeletons.

Naidooptt, 27th April.—Relief-camp—1,500 fed daily.

1-A. Physical condition of camp people bad.

B. Scarcity of water; well sunk near camp; water not very good; caste people have wells in their own compounds. Pariahs drink from channel of river, close to which is the common burial place of the village. Several basket wells have been sunk lower down for irrigation purposes; water bluish-green tint; is drunk by travellers.

C. Rice and ragi; the former comes from Madras, 9 seers the rupee; the latter 14 seers. Large quantities of rice in the town, but merchants won't sell.

D. None according to Deputy Collector.

II-1.	33 Men (fifteen to sixty years of age)	...	...	...	...	...	7 anæmic.
	44 Women (fourteen to sixty years of age)	...	...	...	...	...	17 "
	36 Children (under seven years of age)	...	...	...	...	...	11 "
	30 Infants (under one year of age)	...	...	...	...	...	12 "

143

47

2. Of 33 men—

11 were in good condition.

12 " fair "

3 " thin "

7 " emaciated "

Several of those in good condition ought to be employed on relief-works, not fit recipients of relief; worst cases Yenadis, no muscle or fat, skin loose and wrinkled.

3. Of 44 women—

11 were in good condition.

8 " fair "

3 " thin "

22 " emaciated "

Of 36 children under seven and above one year—

5 were in good condition (1 anæmic).

9 " fair " (2 ")

11 " thin " (2 ")

9 " emaciated " (5 ")

2 were dropsical and thin (1 ")

These children are in bad condition; those above seven years were in much better condition. Of 21 girls between the ages of twelve and fifteen years, 2 only had arrived at puberty; 11 had some enlargement of the breasts; in 10 no signs of puberty or of breasts.

Many women who look stout and have their breasts well developed have no milk or but very little.

4. I only saw 3 pregnant women in the camp; 2 of these were anæmic.
Of 34 infants in arms—

15 were in good condition.

5 " fair "

5 were emaciated (two markedly two dropsical).

9 " thin, dropsical, and anæmic.

5. The old people have the same food as the others; very few people live in the huts provided for them.

II-6. Government ration given; some people ought not to receive it, being quite fit to work. I saw one child with a rat in its hand which it was going to eat after the ration; green mangoes are eaten by young children very largely, and also raw rice and some kind of berry which smelt very strongly.

III. Twelve cases of small-pox in hospital; 14 cases of emaciation diarrhoea were sent in to-day from Sulurpett; majority in very bad state; they are to be transferred to Venkatagiri. The hospital sheds are built in the style of native huts, about 4 feet high and 5 broad, just like a beehive; each holds one or two people; not good for ventilation or cleaning purposes.

Relief-works.—Five hundred people (men 160, women 240, children 100, employed in repairing a tank bund. Of 50 men—

25 were in good condition.

11 " fair "

13 " thin "

1 was wasted.

Of these 50, 7 were anæmic.

Of 51 women—

30 were in good condition.

10 " fair "

8 " thin "

2 were wasted.

Eight of the 51 were anæmic.

Of 57 girls and boys above seven years—

12 were in good condition.

24 " fair "

14 " thin "

3 were wasted.

4 " anæmic.

Of 9 children above one year and below seven years—

5 were in good condition (1 anæmic).

3 " fair " (1 ")

1 was wasted and anæmic; came to the works six days ago.

Of 8 infants—

7 were in good condition.

1 was fair.

Of 5 girls between twelve and fourteen—

3 had attained puberty; in 2 mamma slightly enlarged.

2 showed no sign of puberty.

Three hundred and fifty children under seven years are said to be brought to the works. 1 only counted and saw 17.

Chief food of the laboring classes is rice and ragi and, when they can get it, meat; a good many of the people say that they have been feeding of late on carcasses of dead cattle, &c.

Sulurpett, 28th April 1877.—Relief-camp—Number fed daily said to be 1,000 (201 men, 40, women, 452 children). Camp situated in tope; not good sanitary arrangement, as all the people, foul the ground in neighbourhood, and the air does not circulate freely. Only about 50 live in camp. No latrines.

1-A. Physical condition of camp people bad, that of the villagers and relief laborers good.

B. Water becoming scanty; several of the chief wells nearly dry; contain about 6 inches of water. One just dug contains 6 feet; so if wells are constantly cleared out and new ones dug, fairly good water can be obtained. The caste people are better off than the Pariahs. At the camp a well has lately been cleared out, said to contain sweet water, but looks very dirty; advised filtration.

C. Usual food rice, ragi, and cumboo; the last not now obtainable; the first comes from Madras, and is selling at 9—9½ seers the rupee; ragi at 14 seers the rupee. Unusual diet consists (for the Pariahs) of the carcasses of dead cattle.

D. Small-pox slightly epidemic; is decreasing.

II-1. Of 32 men, 19 were anæmic; of 37 women, 12 were anæmic; of 35 children, 11 were anæmic.

2. I did not see one man in good condition.

Of 32 men—

9 were in fair condition (7 were anæmic).

10 were thin (3 anæmic).

9 „ emaciated (5 anæmic, 4 dropsical).

4 „ very emaciated (4 anæmic, 1 dropsical).

No muscles, skin loose and wrinkled, subcutaneous fat nil.

3. Of 35 children of seven years and above one year—

5 were in good condition (1 anæmic).

6 „ fair „ (2 „)

14 were thin (2 anæmic, 2 dropsical).

19 „ emaciated (6 anæmic, 2 dropsical).

Breasts of women badly developed.

Of 8 girls between twelve and fourteen—

None had attained puberty.

4 had their breasts slightly enlarged.

3 were thin.

2 „ fair.

2 „ good.

1 was emaciated.

Of 37 women—

14 were in good condition (2 anæmic, 2 pregnant).

15 were thin (8 anæmic, 1 dropsical, 1 pregnant).

4 were fair (1 anæmic, 1 pregnant).

4 were emaciated (1 very anæmic).

4. Out of 401 women at the camp only 5 were pregnant.

Of 38 children—

11 were in good condition.

10 „ fair „ (2 anæmic).

10 were thin (3 anæmic).

7 „ emaciated (2 anæmic, 1 dropsical).

5. Government ration of rice given, but only one-fourth amount of dhall; explained this to the Deputy Magistrate; drew out a diet scale for 1,000 people.

6. A native hakeem in charge advised more frequent vaccination; also that goats be kept to give milk to infants, as milk is very difficult to procure here. Cremation of dead in channel of river Kalangi; suggested the performance be executed elsewhere. Hospital fairly clean; well removed from people.

Relief-works.—People on this work show the best physique I have yet seen; they approach in aspect and figure more nearly to the boatmen of Madras; 45 men, 65 women, and 25 children on works; have to go some distance for drinking water. Advised that a barrel should be filled and brought to the works.

Food consists of rice and ragi and as much dead meat as they can get.

Of 31 men, 8 were anæmic; of 36 women, 3 were anæmic; of 37 children, 1 was anæmic.

Of 32 men—

20 were in good condition.

5 „ fair „

6 „ thin „

1 was poor; muscles flabby.

Of 13 boys—

7 were in good condition.

3 „ fair „

3 „ poor „

Of 24 girls—

10 were in good condition.

13 „ fair „

1 was in poor „

Breasts of women well developed. Of 65 women, 9 were pregnant; first time I have seen such a thing.

Of 6 girls between twelve and fourteen, 1 had arrived at puberty, 2 had glands enlarged.

Of 37 women—

30 were in good condition (8 pregnant, anæmic).

5 „ fair „ (1 anæmic)

1 indifferent (pregnant, 5 children).

1 was poor (anæmic).

Saw no young children brought to the works. People at the work presented a very marked contrast to those at the relief-camp.

Men.

Number.	Age.	Height.	Weight.	Caste.	Condition.
	YEARS.	FT. IN.	LBS.		
1	25	5 4	83½	Pariah.	Fair.
2	55	5 10	109½	Sudra.	Marked signs of wasting.
3	30	5 7	93	Shepherd.	Thin; eats rice and mutton.
4	18	5 4	91½	„	Thin.
5	35	5 8	100½	Pariah.	Good.
6	20	5 5½	96½	„	Good; ate beef yesterday.
7	30	5 5	99½	„	Very good; eats meat.
8	30	5 2½	104½	Chuckler.	Very good.
9	18	5 7½	100½	Pariah.	Not good; eats beef.
10	30	5 2½	98	„	Very good; says he eats two hand-fuls of meat daily.
11	25	5 7½	118½	„	Very good { Eat meat daily—dead
12	25	5 4½	111½	„	„ } cattle
13	30	5 4	90	„	Indifferent.
14	35	5 6	127	„	Splendid; on works since Nov.
15	40	5 7	90½	„	Signs of wasting; four days on work.
16	30	5 6½	125½	„	Splendid; eats large quantities of meat.
17	35	5 7	115	„	Good.
18	35	5 5	122	„	Very good.
19	22	5 8½	104½	„	Spare, but good muscles.
20	40	4 11	81½	„	Good.
21	40	5 4	93	Dhoby.	Not in good condition.
22	45	5 8½	128	Yenadi.	Splendid; eats mutton.
23	30	5 6½	113	Pariah.	Good.
24	20	5 7	85	„	Signs of wasting; muscles flabby.
25	30	5 8½	113	„	Fair.
26	30	5 3	93	„	Poor.
27	35	5 6½	103	„	Indifferent.
28	22	5 5½	113	„	Very good.
29	22	5 1	89	„	Good.
30	25	5 4	101½	„	„
Average ...	30½	5 5½½	103½		
Average of 30 men	28½	5 2	89½		

I have not made the remark about eating meat for all the men, but they all do so when they can get the opportunity, and so many cattle have died of late. No doubt they have subsisted chiefly on the carcasses eking out the 1½ Annas. No. 22 is the first Yenadi I have seen in at all good condition.

SULURPET.
29th April 1877.

Women.

Number.	Age.	Weight.	Height.	Caste.	Condition.
	YEARS.	LBS.	FT. IN.		
1 ...	30	101	5 5	Pariah.	Good; no children.
2 ...	18	87½	4 10½	"	Good; breasts well developed; one child.
3 ...	30	85½	5 0½	"	Indifferent; not well developed.
4 ...	30	91	5 3½	"	" " "
5 ...	35	81	5 2½	"	Poor.
6 ...	22	88½	4 11½	"	Good.
7 ...	15	62	4 11½	"	Fair.
8 ...	40	89	5 0½	"	Good.
9 ...	22	98	5 2½	"	Very good; well developed; two children.
10 ...	30	85	4 10½	"	Good; three children.
11 ...	15	89	4 10½	"	Very good; not arrived at puberty; breasts enlarged.
12 ...	35	91	5 2	"	Good; no children.
13 ...	15	76½	5 0	"	Not attained puberty; breasts enlarged.
14 ...	14	77½	4 11½	"	Good; attained puberty; breasts enlarged.
15 ...	18	92½	5 0	"	Good; no children.
16 ...	30	114½	5 2	"	Splendid; breasts well developed, no children; hercules.
17 ...	25	90½	5 3½	"	Good; one child; breast good.
18 ...	20	91½	5 2½	"	Good; breasts well developed.
19 ...	16	81½	5 3½	"	Fair; attained puberty; breasts enlarged.
20 ...	18	88½	5 0	Shepherd.	Very good; well developed; no children.
21 ...	40	107½	5 5	Pariah.	Good; no children.
22 ...	45	74½	5 0	"	Poor.
23 ...	30	98½	5 1½	"	Good; one child.
24 ...	20	81½	4 11½	"	" " "
25 ...	35	73½	4 11	"	Thin.
26 ...	36	105	5 5	"	Fair; four children.
27 ...	25	75	5 0½	Chuckler.	Fair; one child.
28 ...	14	74	4 11	Pariah.	Good; not attained puberty; breasts enlarged.
29 ...	25	86	5 2	"	Fair.
30 ...	16	78	5 1	"	Good; not married; arrived at puberty.
Average ...	25½	87½	5 0½*		
Average of 30 women ...	31½	79½	4 10*		

* Nearly.

Most of the above women eat meat. I excluded all pregnant women. The women have very few children amongst them.

Boys.

Number.	Age.	Height.	Weight.	Caste.	Condition.
	YEARS.	FT. IN.	LBS.		
1 ...	12	4 5½	45½	Chuckler.	Fair.
2 ...	12	4 7½	57	Yenadi.	Very good.
3 ...	12	4 6	46	Mahomedan.	Bad.
4 ...	12	4 8½	59	Pariah.	Good.
5 ...	13	4 7½	58½	"	Very good.
6 ...	14	4 10½	62½	"	Fair.
7 ...	11	4 4½	53	"	Good.
8 ...	13	4 10½	76½	"	"
Average of 17 cooly boys ...	12½	4 7½	57½		
	10½	4 1½	44½		
				Girls.	
1 ...	10	4 7	53½	Pariah.	Good.
2 ...	11	4 7½	58	"	"
3 ...	14	5 2½	70½	"	Poor; not attained puberty.
4 ...	10	4 6½	49	"	Thin.
5 ...	11	4 7½	58	"	Good.
6 ...	12	4 7½	59	"	"
7 ...	10	4 5	52½	"	"
8 ...	12	4 10	51½	"	Emaciated; only joined yesterday.
9 ...	13	4 9½	66½	"	Very good.
10 ...	13	4 8½	68	"	Good; slight enlargement of breasts; not attained puberty.
11 ...	10	4 6	49	"	Poor.
12 ...	10	4 6½	49	"	"
13 ...	13	4 8	56½	"	Fair.
14 ...	11	4 9½	50½	"	Indifferent.
15 ...	10	4 7½	60	"	Very good.
Average ...	11½	4 8½	63½		
Average of 14 cooly girls...	12½	4 0½	42½		

It is quite impossible to say whether the people lose weight on 1½ Annas, &c., a day or whether they do not, for besides their pay they eat large quantities of meat. They all declare that the pay is not enough to subsist upon, and the Deputy Collector says the same thing. He declares that we should see a marked difference in their condition if they only had their pay to live on.

ENCLOSURE No. 5.

Extracts from diary of Sanitary Medical Officer, Cuddapah, for the week ending 29th April 1877.

Cuddapah Railway Station, 28th April.—Visited the bund of a large tank near the railway station. It is being repaired as a relief-work. The laborers are, as a rule, in poor condition, though none seem to be actually starving. Total number 1,150, including women and children. Some of the latter are in a very emaciated state. The women are generally thinner than the men.

Cuddapah Railway Station, 29th April.—Inspected the Cuddapah Relief-camp in company with Dr. Iyasawmy, the Civil Surgeon. The camp is situate about a mile from the town on the opposite side of the river. It consists of large bamboo sheds erected within a square enclosure surrounded by a deep trench to prevent the escape of the inmates. It is in charge of an Overseer and a Hospital Assistant. The present numbers of recipients of gratuitous relief in this camp are—

Men	112
Women	125
Children	87

Total ... 324

There are 25 patients in hospital. Most of them are suffering from diarrhoea. The Hospital Assistant states that this diarrhoea is generally checked by Dover's powder or aromatic opiates, but that it speedily returns. This is to be expected from what we know of the pathology of famine diarrhoea. There are three cases of small-pox under treatment. No cholera has appeared in the camp.

This camp was first opened on the 15th of March. Since that date 637 persons have been admitted, and there have been 15 deaths.

The diet consists of cholam or ragi 1½ lbs., of dhall about 1½ oz., with vegetables and curry-stuff.

I carefully inspected all the inmates. They principally consist of old people and children, the absence of young men being remarkable. Most of them are agricultural laborers; there are very few professional vagrants. They all, without exception, exemplify various degrees of starvation. All have hollow cheeks; haggard, sunken eyes; dry, wrinkled skin; absence of subcutaneous fat, and wasting of muscular substance, the tendons and cutaneous veins standing out in skeleton-like relief in many instances. Dropsy is very frequent; in adults anasarca has often restored a fatal plumpness to withered limbs; while in children ascites is very common, giving the belly an appearance of distension in strange contrast to the spider limbs and pinched features of hunger.

I did not find more anæmia than might be accounted for by starvation—none which could be regarded as a disease *per se*.

This is a well-known symptom of scurvy, and has been repeatedly observed in troops after long sea voyages. It has not been brought to my notice in connection with relief-camps before.

(Signed) W. R. CORNISH.

emaciation, and are said to be improving. Their mothers could give them but a few drops of milk from their dried-up breasts, and an allowance of cow's milk is given to them.

The mammary glands of the few young girls in the camp are much atrophied, often apparently absent altogether. More attention should be paid to ablution; most of the paupers are in a very dirty condition. There is water close at hand, and regular "bathing parades" should be enforced. The universal complaint during my inspection was "give us meat or let us go away."

I have already reported to Government that in my opinion some meat is necessary in the camp diets. Orders are expected on this subject at an early date. The Hospital Assistant should order meat wherever he thinks it is wanted.

(Signed) W. R. CORNISH.

has leave to order it according to his discretion for special cases. The present ration may, perhaps, be sufficient to support existence in an individual not previously reduced by starvation to the lowest ebb, but it is without doubt totally inadequate for bringing starved people back to working condition. The proof of this is the miserable state of the people who have remained in the camp since it was first opened.

Every one knows that a horse in bad condition cannot be restored to working order without a much more liberal allowance than will be required to keep him in good condition.

This present ration issued to people already very much reduced by starvation appears to be little better than the substitution of chronic starvation for acute. Leaving them to the latter would almost be as merciful.

If the people now in relief-camp, especially the children, are to be discharged otherwise than as corpses, I think the rations must be improved by the issue of half a pound of meat (without bone) three times, or at least twice, a week, and some allowance, say at least one ounce per diem, of oil. It is only by such an improvement in the diet that the wasted tissues can be restored sufficiently to enable some of the present recipients of gratuitous relief to eventually earn their bread on relief-works or as agricultural laborers when the rains may terminate the present drought. I do not believe that an improved diet scale would necessarily attract the population *en masse* to relief-camps.

Let the subjects for gratuitous relief be carefully selected and be made to work as soon as their physical condition improves. At present this camp is the reverse of popular, many being retained in it against their inclinations; and, were it understood that inmates would have to work as soon as they were able, I think an improved dietary might be introduced with little fear of abuse and every prospect of benefit. The expense would, perhaps, be considerable; but, even in a financial, apart from any humanitarian, aspect the money expended would not be lost. Many lives would be saved, and many laborers be left in a condition to earn their own livelihood and to contribute to the revenues of the country when the demand for labor comes with the rains.

Dr. Iyasawmy directed my attention to the prevalence of night blindness amongst the paupers.

There are several young spider-like infants who have been born in a condition of extreme emaciation, and are said to be improving. Their mothers could give them but a few drops of milk from their dried-up breasts, and an allowance of cow's milk is given to them.

The mammary glands of the few young girls in the camp are much atrophied, often apparently absent altogether. More attention should be paid to ablution; most of the paupers are in a very dirty condition. There is water close at hand, and regular "bathing parades" should be enforced. The universal complaint during my inspection was "give us meat or let us go away."

No allowance of meat is given, although the Hospital Assistant in charge of the camp has leave to order it according to his discretion for special cases. The present ration may, perhaps, be sufficient to support existence in an individual not previously reduced by starvation to the lowest ebb, but it is without doubt totally inadequate for bringing starved people back to working condition. The proof of this is the miserable state of the people who have remained in the camp since it was first opened.

Every one knows that a horse in bad condition cannot be restored to working order without a much more liberal allowance than will be required to keep him in good condition.

This present ration issued to people already very much reduced by starvation appears to be little better than the substitution of chronic starvation for acute. Leaving them to the latter would almost be as merciful.

If the people now in relief-camp, especially the children, are to be discharged otherwise than as corpses, I think the rations must be improved by the issue of half a pound of meat (without bone) three times, or at least twice, a week, and some allowance, say at least one ounce per diem, of oil. It is only by such an improvement in the diet that the wasted tissues can be restored sufficiently to enable some of the present recipients of gratuitous relief to eventually earn their bread on relief-works or as agricultural laborers when the rains may terminate the present drought. I do not believe that an improved diet scale would necessarily attract the population *en masse* to relief-camps.

Let the subjects for gratuitous relief be carefully selected and be made to work as soon as their physical condition improves. At present this camp is the reverse of popular, many being retained in it against their inclinations; and, were it understood that inmates would have to work as soon as they were able, I think an improved dietary might be introduced with little fear of abuse and every prospect of benefit. The expense would, perhaps, be considerable; but, even in a financial, apart from any humanitarian, aspect the money expended would not be lost. Many lives would be saved, and many laborers be left in a condition to earn their own livelihood and to contribute to the revenues of the country when the demand for labor comes with the rains.

These opinions are the result of a single inspection of one relief-camp, but I think it right to record first impressions. It is probable that they may not take full cognizance of all facts, but as first impressions they have some value.

Familiarity with famine may, perhaps, hereafter cause some lower estimation of its horrors.

I recommended the Hospital Assistant in charge of the camp to be very liberal in the use of his discretionary power to order meat, and especially to let all dropsical children and others in a nearly moribund state to have a daily allowance. It was also recommended that ablution of the paupers should be more regularly attended to. The sanitary arrangements of the camp are good.

Approved.
(Signed) W. R. CORNISH.

Approved.
(Signed) W. R. CORNISH.

In the town of Cuddapah the laboring classes are generally in poor condition, especially the children, but they do not appear to be suffering from actual starvation. I am informed that many of the laborers on the works have other means of subsistence, and thus manage to keep in pretty good physique.

I saw some gangs of coolies (men, women, and children) from Kurnool and other places en route to the East Coast Canal works. They are generally in a very emaciated state, and appear only a few stages removed from "relief-camp" condition. Many of them, no doubt, will leave their bones on the roadside.

Dr. Iyasawmy informs me that five cases of cholera were reported amongst these coolies last night. He will request the Collector to take steps to prevent their passing through the town in future.

Cattle belonging to the neighbouring villages are sometimes seen in a condition of extraordinary emaciation. It is said that many have already perished. Flocks of goats are taken to graze on the neighbouring hills, where there is a little herbage still left.

Cuddapah,
30th April 1877.

(Signed) C. McNALLY, M.D., Surgeon,
Sanitary Medical Officer, Cuddapah.

No. 37. ORDER THEREON, 4th June 1877, No. 1,837.

Miscellaneous.

ORDERED that the reports submitted with the above letter be communicated to the Collectors of the districts concerned.

2. The Collector of Chingleput will take steps to ensure that nursing women, whether on works or in the relief-camps, get the same ration as adult males.
3. The attention of the Collector of Nellore is called to Dr. Sturmer's remarks regarding the Gudur Relief-camp.

(True Extract.)

(Signed) J. H. GARSTIN,
Additional Secretary to Government.

To the Sanitary Commissioner.
.. the Collector of Chingleput.
.. the " of Bellary.
.. the " of Salem.
.. the " of Nellore.
.. the " of Cuddapah.
.. the Board of Revenue.
.. the Surgeon-General, Indian Medical Department.
.. the Financial Department.

Exd. A. F. Goodall and F. R. Bantleman.

1892

Amici

I have to endorse in
Dornick's sober judgment of
his inspections of Relief Centers
in the Chungking District.
They were made in my presence
in most cases - and I will add
that at Chungking, where we
concluded an inspection together
a few days later, the results were
of the same character.

I think that the inspection of general famine administration has been too long deferred in this District, and is in some points backward

[illegible]

backward - with the usual
results, although local officers
have worked hard.

The Local Fund and
Municipal Hospitals - some
7 or 9 in number - have been allowed
to fail throughout the District
to rise to the emergency of the country
and share the burden, while
the sick have been left in camps
which can be but indifferently
supervised. The thing is greatly to be regretted.

The system of village observation
and relief is now being put
energetically in hand.

May 4/77 J. W. Brown

Proof for approval

1887
12

REVENUE DEPARTMENT.

MINUTE BY THE HON. SIR W. ROBINSON, K.C.S.I.

I HAVE to endorse Dr. Cornish's sober judgment of his inspections of relief centres in the Chingleput District. They were made in my presence in most cases—and I will add that at Chingleput, where we concluded an inspection together a few days later, the results were of the same character.

I think that the inspection of general famine administration has been too long deferred in this district, and it is in some points backward—with the usual results, although local officers have worked hard.

The Local Fund and Municipal Hospitals—some seven or nine in number—have been allowed to fail throughout the district to rise to the exigency of the country and share the burden, while the sick have been left in camps which can be but indifferently supervised. ~~The thing is greatly to be regretted, I think.~~

The system of village observation and relief is now being put energetically in hand.

4th June 1877

(Signed)

W. ROBINSON.

G. O. No. 1887 A. S. 4 June 1877

Recd
 4th June 1877
 No 1887

G.O. No. 1887A, 8 June 1877

No.

OFFICE OF SANITARY COMMISSIONER,

Madras, 5th May 1877.

From

The Sanitary Commissioner
 for Madras.

To The Additional Secretary
 to Government
 Fort Saint George.

Enclosures.

- Surgeon Gray
- Williams
- Macdonald
- Sturmer
- Mr Kelly.

Sir, I have the honor to submit herewith
 for the information of Government copies of
 diaries of the Inspecting Sanitary Officers named
 in the margin, for the week ending the 28th April
 1877.

In the original diaries I noted
 my own observations in the blank margin, and
 return them to the Medical Officer concerned for
 information. Copies of these remarks are now
 entered in the diaries now submitted.

I have the honor to be
 Sir

Your most obedient servant
 M. J. R. S.
 Sanitary Commissioner
 for Madras.

From

Dated

5^o May 1877.

FOR ORDERS

The Sanitary Commissioner

for Mrs. W.

To Additional Secretary

to Government

Dated 5

Despatched

Received

May 1877.

No.

Enclosures. 5

forward

copies of diaries of J. and J. and
Medical Officers.

The given

Camp. 1000 ft. 1000 ft.
 1000 ft. 1000 ft.
 1000 ft. 1000 ft.
 1000 ft. 1000 ft.
 1000 ft. 1000 ft.

15.9/5

I cannot locate
the Grodner report
in the papers access-
ing this
L.H.D.

The Jordan report.
not re turned
SLS-f

John

904 1/2 June 77

FOR ORDERS.

Dep. K² S.O.

Sp. 19

*Returned under
to the
10/5 1911*

*Enclosure in Board
Proceedings dated
24 June 1877 No.
3053 to the Additional
Secretary to Government
Revenue Department*

